FAULT RUPTURE HAZARD INVESTIGATION

CLAIREMONT VILLAGE
SAN DIEGO, CALIFORNIA

GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

CLAIREMONT VILLAGE QUAD, LLC
SAN DIEGO, CALIFORNIA

NOVEMBER 12, 2021
PROJECT NO. G1992-52-03

Project No. G1992-52-01
November 12, 2021

Clairemont Village Quad, LLC
5022 Pearlman Way
San Diego, California 92130

Attention: Mr. Christopher Smith

Subject: FAULT RUPTURE HAZARD INVESTIGATION
CLAIREMONT VILLAGE
SAN DIEGO, CALIFORNIA

Dear Mr. Christopher Smith:

In accordance with your authorization, we performed a fault rupture hazard investigation for the subject property. The accompanying report presents the results of our study with conclusions and recommendations relevant to the property. Based on our evaluation of the property, we opine that an active, potentially active or inactive fault does not traverse the site.

Should you have questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

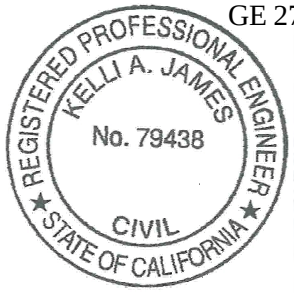
Kelli James
RCE 79438

Shawn Foy Weedon
GE 2714

Joseph P. Pagnillo
CEG 2679

KJ:SFW:JPP:arm

(e-mail) Addressee



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FAULT RUPTURE HAZARD INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of our site-specific fault rupture hazard evaluation for the existing commercial property, Clairemont Village, located in the Bay Park area of San Diego, California (see Vicinity Map). The purpose of our study is to evaluate the site for the presence of active, potentially active or inactive faulting within the designated fault study zone.

Vicinity Map

Ground surface rupture occurs when movement along a fault is sufficient to cause a gap or rupture where the upper edge of the fault zone intersects the ground or earth's surface. The purpose of our investigation is to observe site-specific subsurface geologic information in order to evaluate the age and continuity of on-site stratigraphy and to evaluate the location of faults that may impact future development of the property. We performed our investigation in accordance with the City of San Diego *Guidelines for Geotechnical Reports* (2018), and current geologic standards-of-practice for the evaluation of potential surface fault rupture.

The scope of our study included reviewing readily available published and unpublished geologic literature (see *List of References*), excavating and logging one exploratory trench, and preparing this

report. We should prepare a geotechnical investigation report for the design and construction of the planned development under separate cover. This report only provides an evaluation of the potential for faulting on the property.

2. SITE AND PROJECT DESCRIPTION

The property is located east of Clairemont Drive, northeast of Burgener Boulevard, north of Field Street and east of Cowley Way in the Clairemont area of San Diego, California. The site is currently a part of a commercial complex with accompanied asphalt concrete and Portland cement concrete parking and drive lanes. The commercial property includes a Sprouts grocery store, Carl's Jr. restaurant, Starbucks, Rite Aid, dental office, restaurant building and other retail stores. The buildings are single-story and consist of wood and stucco. We expect the structures are supported on conventional shallow foundations. Landscaping exists within planter wells in the parking lot areas and the parkways adjacent to the roadways. The retail complex is relatively flat with an elevation of about 295 feet above Mean Sea Level (MSL) in the southeast end of the property to 323 feet MSL at the northwest corner of the property. The Existing Site Map shows the site conditions.

Existing Site Plan

We understand current preliminary development plans may include constructing a new apartment building in the southeast corner of the property consisting of a 5-story apartment building over 2 levels of parking including one partially subterranean level. Using the current concept site plan, with an assumed lowest level finish floor elevation ranging from 294 to 298 feet MSL, it appears cuts of approximately up to 11 feet would be required to achieve finish floor elevation for the lower parking level.

The locations, site descriptions, and proposed development discussed herein are based on a site reconnaissance, review of published geologic literature, our field investigations and discussions with project personnel. If development plans differ from those described herein, Geocon Incorporated should be contacted for review of the plans and possible revisions to this report.

3. PREVIOUS STUDIES

Based on review of historic aerial photographs and our referenced reports, the original development of the property occurred sometime between 1953 and 1964 that consisted of construction of several commercial buildings and paved parking. Construction of the current Carl's Jr. restaurant building and an addition to the south end of the grocery store occurred around 1980 or 1981. The existing dental office and restaurant building was constructed around 1986 or 1987. Another addition to the south end of the grocery building occurred around 1985 or 1986. We did not observe the grading operations for the existing development.

We previously performed multiple geotechnical investigations for improvements to the existing commercial property (Geocon, 1990a, 1990b and 2016). The investigations included performing geotechnical borings. To our knowledge, a previous fault investigation has not been performed on the property.

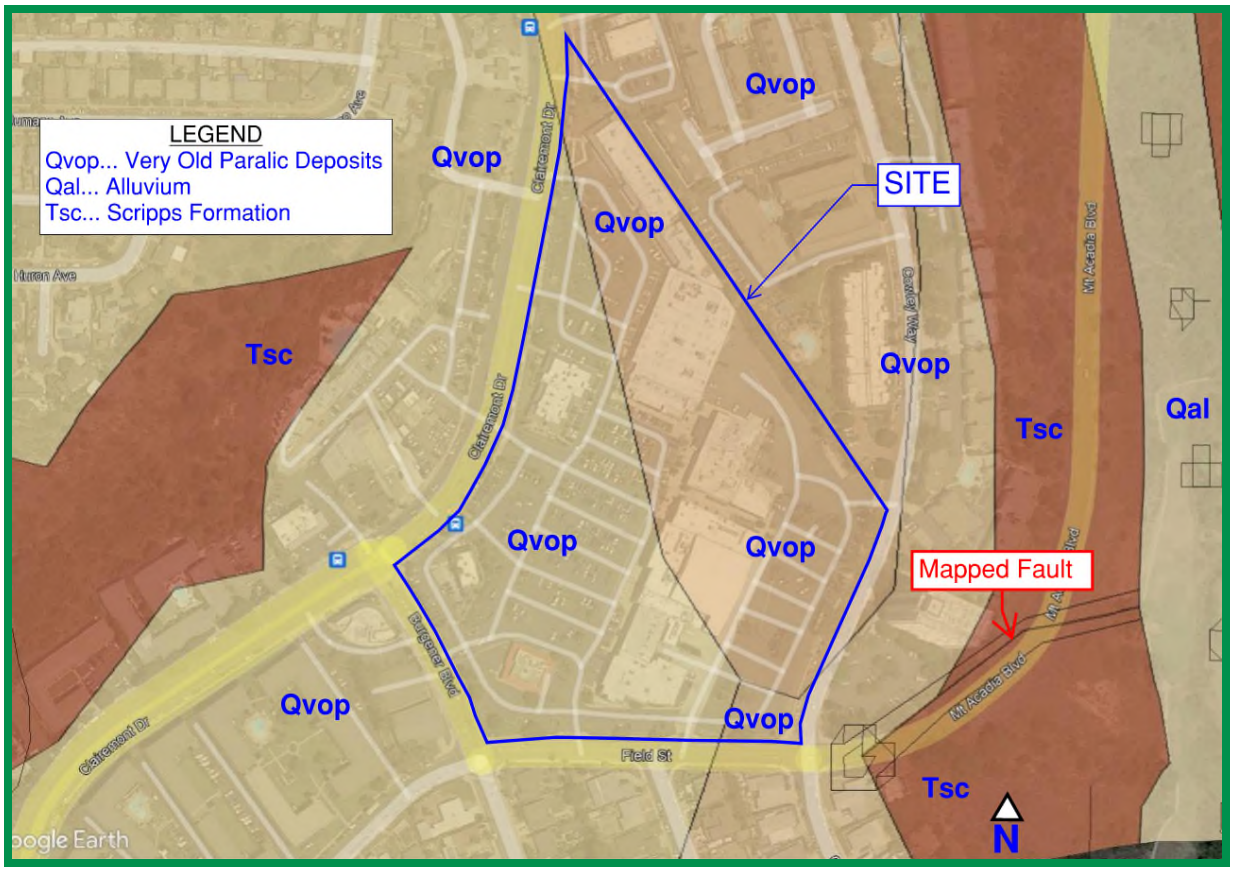
4. GEOLOGIC SETTING

Regionally, the site is located in the Peninsular Ranges geomorphic province. The province is bounded by the Transverse Ranges to the north, the San Jacinto Fault Zone on the east, the Pacific Ocean coastline on the west, and the Baja California on the south. The province is characterized by elongated northwest-trending mountain ridges separated by straight-sided sediment-filled valleys. The northwest trend is further reflected in the direction of the dominant geologic structural features of the province that are northwest to west-northwest trending folds and faults, such as the nearby Rose Canyon Fault Zone.

Locally, the site is within the coastal plain of San Diego County. The coastal plain is underlain by a thick sequence of relatively undisturbed and non-conformable sedimentary bedrock units that thicken to the west and range in age from Upper Cretaceous age through the Pleistocene age which have been deposited on Cretaceous to Jurassic age igneous and volcanic bedrock. Geomorphically, the coastal

plain is characterized by a series of twenty-one, stair-stepped marine terraces (younger to the west) that have been dissected by west flowing rivers. The coastal plain is a relatively stable block that is dissected by relatively few faults consisting of the potentially active La Nacion Fault Zone and the active Rose Canyon Fault Zone.

The site is located on the central portion of the coastal plain. Sedimentary units make up the geologic sequence at the site and consist of Eocene-age Scripps Formation and middle Pleistocene-age Very Old Paralic Deposits, Units 10 and 11 (Kennedy and Tan, 2008). The regional geology at the site is shown on the Regional Geologic Map.



Regional Geologic Map

5. SOIL AND GEOLOGIC CONDITIONS

Based on our review of previous reports and published maps, we expect the site is underlain by shallow undocumented fill (placed during the previous grading for the development) overlying formational materials of the Very Old Paralic Deposits. The fill is considered undocumented because we did not observe the placement and compaction of the fill during the grading operations during the original site development. The surficial soil and geologic units are described herein in order of

increasing age. The approximate lateral extent of the geologic conditions is presented on the Geologic Map.

5.1 Undocumented Fill (Qudf)

Based on previous geotechnical reports, we expect a relatively thin layer of undocumented fill underlies the majority of the site generally less than 3 feet thick. We encountered fill to depths of 4½ to 5 feet within the landscape areas southwest of the Carl's Jr. restaurant building. Deeper fill may exist in the areas of existing underground utilities. The fill, as encountered in our previous borings, consists of loose to very dense, dry to damp, silty to clayey, fine to coarse sand. We anticipate the fills across the site will generally have a "very low" to "low" expansion potential (expansion index of 50 or less). The existing fill soil is undocumented and is considered unsuitable for supporting new structures and pavements. Therefore, remedial grading would be required in areas to receive structural fill or improvements.

We encountered a thin layer of previously placed fill associated with the existing parking lot. In some portions of the trench, fill was not observed. In general, the fill consists of medium dense, moist, silty and clayey sand.

5.2 Very Old Paralic Deposits (Qvop)

Middle Pleistocene-age Very Old Paralic Deposits (formerly called the Lindavista Formation) underlie the existing fill soil or was observed at grade. This geologic unit consists of very dense, damp to moist, silty, fine to very coarse-grained sandstone, and was moderately to very well cemented. Excavations within this unit will likely encounter difficult digging conditions in the cemented zones and oversize material may be generated. In addition, coring and rock breaking equipment may be required to excavate the very dense and cemented sandstone layers. The Very Old Paralic Deposits are considered suitable for support of properly compacted fill and structural loading.

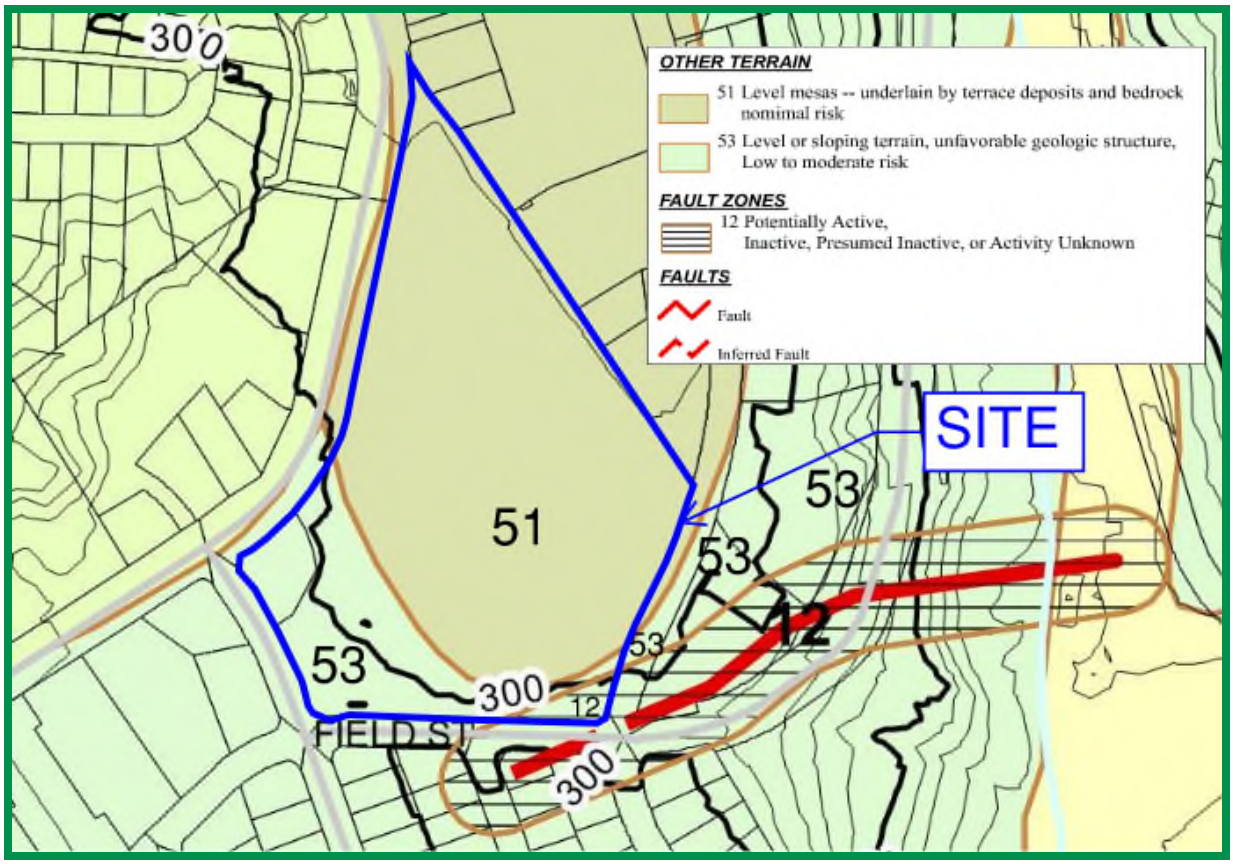
5.3 Scripps Formation (Tsc)

We expect Eocene-age Scripps Formation underlies the Qvop. This formation typically consists of a pale yellowish brown sandstone containing cobble conglomerate interbeds. We did not encounter this formation during our Fault Hazard Investigation.

6. FAULT RUPTURE HAZARD

The City of San Diego Seismic Safety Study, Geologic Hazards and Faults, Sheet 25 defines the northern portion of the site with *Hazard Category 51: Level mesas, underlain by terrace deposits and bedrock, nominal risk.* The southern portion of the site is defined as *Hazard Category 53: Level or sloping terrain, unfavorable geologic structure, low to moderate risk.* A fault is mapped southeast of

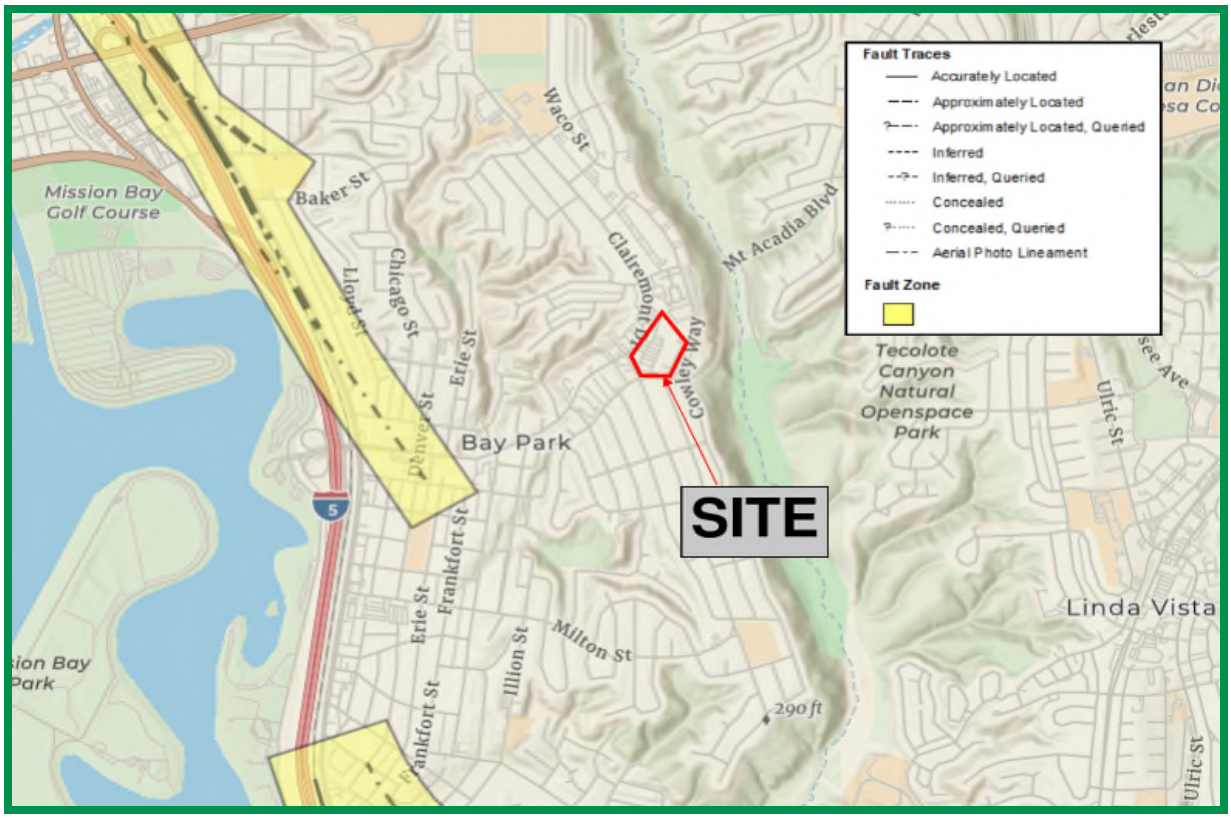
the site and is labeled as *Hazard Category 12: potentially active, inactive, presumed inactive, or activity unknown* (see Hazard Category Map).



Hazard Category Map

By definition of the California Geological Survey (CGS, 2018), an active fault is a fault that has had surface displacement within Holocene time (the last 11,700 years). A pre-Holocene fault is a fault whose recency of past movement is older than 11,700 years. According to these definitions, Earthquake Fault Zones mandated by the State of California (Alquist-Priolo) Geologic Hazards Zones Act were adopted. The purpose of this act is to assure that structures for human occupancy are not constructed across traces of active faults. The City of San Diego has a further designation of "potentially active" for faults with Quaternary displacement, but the most-recent activity is older than 11,700 years ago. The Regional Geologic Map shows the same fault southeast of the property boundary. This fault is mapped as Tertiary-age (CDMG, 1975), indicating it does not offset the Quaternary-age Qvop.

The CGS Earthquake Fault Zone Map (CGS, 2021) indicates Holocene-active faulting is not present in the immediate vicinity, projecting toward, or traversing, the subject property.



CGS Earthquake Fault Zone Map

7. SITE-SPECIFIC FAULT RUPTURE HAZARD INVESTIGATION

7.1 Historic Topographic Map and Aerial Photo Review

Topographic profiles of the ground surface depicted on a USGS topographic map from 1943 indicate that the original ground surface in the vicinity of the fault trench is on a relatively flat mesa that gently slopes south and west towards deeply incised natural canyon drainages. Where the nearby fault is mapped, southeast of the subject property, the mesa has a subtle topographic low trending in a southwest direction. Aerial photography performed in 1953 indicates the commercial property was under construction at that time. No lineaments or other features suggestive of faulting (such as sag ponds or offset drainages) were observed at the site or observed to project toward the site.

7.2 Field Exploration

We excavated an approximately 70-foot long trench across the fault zone indicated on the City of San Diego Seismic Hazard Map. The location of this trench was planned to be roughly perpendicular to the mapped fault for optimum angle of coverage.

The exploratory trench was excavated with a backhoe in an approximate northwest-southeast direction (N25W). The trench was extended to a depth of approximately 7 to 9 feet below the existing ground surface.

The surface of the natural sediments exposed on the east trench wall was cleaned of smeared earth material and observed for indications of faulting. These indications could include offset geologic units, contacts, or laminations (bedding), tectonically disturbed or deformed clay layers, clay gouge, soil- or clay-filled fractures, fissures, or striae on surfaces. Distinct geologic units, based on criteria that included lateral continuity, degree of soil development, color, lithology, texture, and degree of weathering, were delineated on the trench wall. The color of each designated geologic unit was characterized based on the Munsell color system (Munsell Soil Color Charts, 2018).

The contacts (lithologic) between the designated units, locations of fractures (if present), and unique features exposed in the trench walls were logged in the field. Detailed logging of the trench walls was performed at a scale of 1 inch equals 5 feet. Lateral stationing was established by a standard measuring tape (vertical and horizontal reference datum) were established across the trench.

7.3 Stratigraphy

The geologic unit exposed in the trench consisted of Very Old Paralic Deposits (Qvop) with minor undocumented fill mantling the native soils. For logging purposes, the sediments were divided into four separate zones based upon variable weathering profiles. Detailed descriptions of the zones are presented in the Trench Log, Figure 2.

A thin layer of undocumented fill (Qudf) exists beneath the existing asphalt improvements. The fill generally consists of medium-dense, moist, silty/clayey, fine- to coarse-grained sand, with some pebbles and gravel.

The Very Old Paralic Deposits exposed in the exploratory trench consist of near-shore marine and fluvial terrace deposits. They are comprised of red to reddish brown, moderately to very well cemented silty sandstones with clay and pebbles. This formation was subdivided into four areas of variable weathering profiles based upon texture, color, cementation, and degree of weathering. The zones between the separate areas are generally diffuse.

We observed a possible channel deposit near the south end of the trench, consisting of a very coarse sandstone, generally massive, but weakly laminated at the base of the deposit. Below this is a zone of distinct weathering where a medium-grained sandstone is colored light yellowish brown and contains abundant grayish brown mottles.

The remainder of the trench is comprised of a silty sandstone, with a distinct weathering profile change from the south end of the trench to the north. The northern portion of the trench has a higher degree of cementation and also proved more difficult to excavate. The zone indicated on the trench log at Station 0+35 to 0+45, represents approximately where the change in weathering is located.

Numerous vertical to sub-vertical, zones of preferential weathering were observed. In addition, two vertical sand features, one well cemented the other friable, were observed at Station 0+61 and 0+66, respectively. These features were not observed across to the opposite trench wall. They are discontinuous and are not fault related.

As previously indicated, the entire trench exposure was scraped and picked with hand tools and closely examined for potential lateral and vertical lithologic discontinuities, offsets, shear zones, gouge zones, clay-filled fractures or fissures, or any other fault-related features in the generally massive stratigraphic unit. The Qvop deposits were observed to be laterally and vertically continuous, undeformed and intact. These observations also apply to those portions of the excavations that only contain one mappable unit. Despite not having mappable lithologic units in this area, fault-related features were not observed upon close inspection.

7.4 Absence of Faulting

Based on our observations, we opine the middle Pleistocene age geologic unit (Kennedy and Tan, 2008) is laterally continuous across the exploratory trench. The primary evidence for the absence of faulting are:

1. No topographic or geomorphic lineaments were observed on historic topographic maps to traverse or project toward the site.

2. No faults have been documented in the surrounding blocks by other consultants to project toward the site.

3. The pre-Holocene (middle Pleistocene) Very Old Paralic Deposits (Qvop) were observed to be laterally continuous in our exploratory trench at the site and no faults or fault-related features were observed. There is no evidence of fracturing, shearing, or offset of soil features.

The age, lateral continuity, and lack of deformation of the distinct geologic unit provides clear evidence for continuous, un-faulted, pre-Holocene age sediments across the site and rules out active faulting.

7.5 Conclusions and Recommendations

Based on our observations and research, we opine active, potentially active or inactive faults are not present at the subject site. Therefore, we opine building restrictions (i.e. structural setbacks) on future development of the site are not necessary with respect to the hazard of surface fault rupture, beyond the standard seismic engineering requirements for buildings in California. Our conclusions regarding the absence of active faulting and the suitability of the site for the proposed development cannot be confirmed until our fault investigation report is reviewed by the Development Services Department Geology Division and an approval letter is issued by the city geologist.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

2. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon Incorporated should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon Incorporated.

3. This report is issued with the understanding that it is the responsibility of the owner or his representative to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

4. The findings of this report are valid as of the present date. However, changes in the conditions of a property can occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

CLAIREMONT VILLAGE NDP
SAN DIEGO, CALIFORNIA

PARCEL A

PARCEL 1

P.M. NO. 13891

EXISTING RITE AID DRUG STORE
1 STORY
3061 CLAIREMONT DRIVE
BLDG. FOOTPRINT=35,475 S.F.

EXISTING VARIOUS SHOPS
1 STORY
3051 TO 3061
CLAIREMONT DRIVE
BLDG. FOOTPRINT=15,757 S.F.

EXISTING SOLA SALON
1 STORY

EXISTING VARIOUS SHOPS
1 STORY

EXISTING KEIL'S MARKET
1 STORY
3061 CLAIREMONT DRIVE
BLDG. FOOTPRINT=49,281 S.F.

CLAIREMONT PLAZA UNIT NO. 1
MAP 2725

DEERPARK DR.

FIELD STREET

COWLEY WAY

BAY RIDGE
PM 14292

MAP 2725

FOREST PARK PLAZA
MAP 7552

CLAIREMONT VIEW SUBDIVISION
MAP 9092

OWNER: BAY RIDGE OF SAN DIEGO CONDOMINIUM HOMEOWNERS ASSN.

EXISTING APPROX. SITE BOUNDARY

FAULT TRENCH

POTENTIALLY ACTIVE FAULT

CITY OF SAN DIEGO,
HAZARD CATEGORY
ZONE 12

0' 40' 80' 120' 160'

SCALE 1"=80'(on 11x17)

GEOCON LEGEND

Qudf .....UNDOCUMENTED FILL

Qvop .....VERY OLD PARALIC DEPOSITS
(Dotted Where Buried)

.....APPROX. LOCATION OF FAULT TRENCH

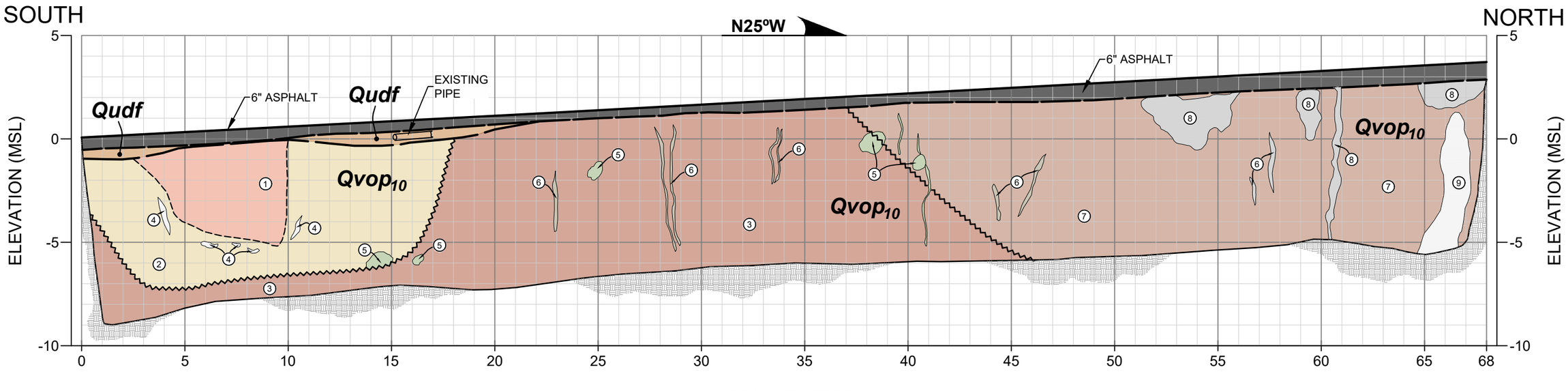
GEOCON
INCORPORATED
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS
6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974
PHONE 858 558-6900 - FAX 858 558-6159

PROJECT NO. G1992 - 52 - 03
FIGURE 1
DATE 11 - 12 - 2021

GEOLOGIC MAP

Plotted:11/12/2021 8:20AM | By:ALVIN LADRILLONO | File Location:Y:\PROJECTS\G1992-52-03 Clairemont Village NDP\SHEETS\G1992-52-03 GeoMap.dwg

CLAIREMONT VILLAGE IMPROVEMENTS
SAN DIEGO, CALIFORNIA



DISTANCE (FEET)

FAULT TRENCH FT-1 (SOUTHWEST VIEW)

SCALE: 1" = 5' (Vert. = Horiz.)

GEOCON LEGEND

Qudf .....UNDOCUMENTED FILL
Silty to Clayey, fine to coarse sand

$Qvop_{10}$ .....VERY OLD PARALIC DEPOSITS

(1) .....Red (2.5YR 5/8), Silty SANDSTONE; fine- to very coarse-grained; little clay; few pebbles; massive; poorly sorted; bottom 1 - 2" weakly laminated (possible channel deposit).

(2) .....Light yellowish brown (2.5Y 6/3), Silty SANDSTONE; fine- to medium-grained; locally coarse grained; little clay; abundant grayish brown (2.5Y 5/2) mottles; highly weathered; interface with #3 is diffuse weathering front, not a contact.

(3) .....Red (10R, 4/6), Silty SANDSTONE; fine- to very coarse-grained; few pebbles; little clay; poorly sorted; locally well sorted with horizontal zones or very coarse sand with little slit and silty, fine to medium sand; moderately to well cemented.

(4) .....Light gray, SILT, zones of preferential weathering.

(5) .....Olive gray, Silty, fine to coarse SAND; zone of preferential weathering; friable to weakly cemented; very moist

(6) .....Grayish to olive brown, very well cemented silt and sand; minor zones of vertical, preferential weathering; discontinuous vertically, and horizontally across to northeast wall of trench.

(7) .....Reddish brown (2.5YR, 5/4), Silty SANDSTONE; fine- to very coarse-grained; little clay; pebbly; very well cemented; poorly sorted with locally well sorted, low silt areas; preferential zones of highly weathered, vertical to sub-vertical zones, light gray to olive brown; mottling.

(8) .....Light gray, fine-grained, very well cemented, sand.

(9) .....Light gray, fine to medium SAND; friable to weakly cemented; some roots throughout zone; no sign of gouge, breccia or other fault related features; not observed in northeast wall of trench.

.....APPROX. LOCATION OF GEOLOGIC CONTACT

.....APPROX. LOCATION OF INTRAFORMATIONAL UNITS

.....APPROX. LOCATION OF DIFFUSE ZONE OF DIFFERRENTIAL WEATHERING; NOT A CONTACT

GEOCON INCORPORATED
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS
6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974
PHONE 858 558-6900 - FAX 858 558-6159
PROJECT NO. G1992 - 52 - 03
FIGURE 2
DATE 11 - 12 - 2021

FAULT TRENCH

Plotted:11/12/2021 8:29AM | By:ALVIN LADRILLONO | File Location:Y:\PROJECTS\G1992-52-03 Clairemont Village NDP\SHEETS\G1992-52-03 FaultTrench.dwg

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