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May 29, 2013

Mr. Michael Rabkin
Hillel of San Diego
5717 Lindo Paseo
San Diego, CA 92115

Reference: Results of a Biological Survey of the Hillel Center for Jewish Life (RECON Number 4609-1B)

Dear Mr. Rabkin:

RECON conducted a biological survey of the approximately 0.8-acre Hillel site in the community of La Jolla, San Diego, California (Figure 1). The purpose of this survey was to assess the condition of the biological resources and provide any updates to the information contained in the previous report that was conducted in 2010. All of the information contained in the 2010 biological report prepared by RECON is considered the same unless otherwise noted.

The site is in an unmarked section of Township 15 South, Range 4 West on the U.S. Geological Survey (USGS) La Jolla 7.5-Minute quadrangle (USGS 1996; Figure 2). The site is outside of a City of San Diego Multiple Habitat Planning Area (MHPA; Figure 3). As shown in the aerial photograph, the site is bounded by La Jolla Village Drive and the University of California at San Diego campus to the north, residential housing to the east and south, and Torrey Pines Road and undeveloped land to the west (see Figure 3).

This addendum is an update to the 2010 report, which provides all the necessary biological data and background information required for environmental analysis according to guidelines set forth in the City of San Diego's Multiple Species Conservation Plan (MSCP) Subarea Plan (1997) and the City of San Diego Biological Resources Guidelines (2012).

1.0 SURVEY RESULTS

A site visit was conducted on May 21, 2013, by RECON biologist Beth Procsal. The survey was conducted between 12:00 P.M. and 12:45 P.M. The air temperature was 63 degrees Fahrenheit, and wind speed ranged from 4-5 miles per hour, with gusts up to 10 miles per hour. Cloud cover during the survey was 100 percent. The vegetation communities and land cover types, disturbed and developed, on-site have not changed since the last survey in 2010 (Figure 4). New plant and wildlife species observed are listed in Table 1.

T[illegible]1

[illegible]P[illegible]T[illegible]I[illegible]I[illegible]P[illegible]I[illegible]T[illegible]I[illegible]IT[illegible]

[illegible]	[illegible]	[illegible]	[illegible]r[illegible]
[illegible]P[illegible]			
Amsinckia menziesii	Rancher's fireweed	Disturbed	N
Atriplex semibaccata	Australian saltbush	Disturbed	I
Isocoma menziesii var. *decumbens*	decumbent goldenbush	Disturbed	N
Vulpia myuros var. *myuros*	rattail fescue	Disturbed	I
Lamarckia aurea	goldentop	Disturbed	I
Taraxacum officinale	dandelion	Disturbed	I
Conyza canadensis	horseweed	Disturbed	I
[illegible]d[illegible]			
Icterus cucullatus nelsoni	hooded oriole	Disturbed	
Sayornis nigricans semiatra	black phoebe	Disturbed	
Carduelis psaltria hesperophilus	lesser goldfinch	Disturbed	

N = Native to locality; I = Introduced species from outside locality

No active bird or raptor nests were observed during the survey.

2[illegible] IMP[illegible]T[illegible]

Impacts to approximately 15-20 decumbent goldenbush individuals will occur as a result of the proposed project. Although decumbent goldenbush is a California Native Plant Society (CNPS) ranked species, impacts would not be considered significant due to the relatively low number of individuals being impacted.

Direct impacts to all other plant species observed are not considered significant.

As documented in the previous biological report (2010), the project has the potential to directly and indirectly impact nesting birds and raptors on-site if construction occurs during the typical bird breeding season (i.e., February 1–September 15). Impacts to nesting birds and raptors, including the removal of an active nest or causing nest abandonment during construction activities, would be considered significant and require mitigation.

3[illegible]MITI[illegible]TI[illegible]

To remain in compliance with the Migratory Bird Treaty Act (U.S. Fish and Wildlife Service 1998) and California Department of Fish and Wildlife Code 3503 (1991), no direct impacts shall occur to any nesting birds, their eggs, chicks, or nests during the breeding season, as mentioned above. If project grading/brush management is proposed in or adjacent to native habitat during the bird breeding season, stated above, or an active nest is noted, the project biologist shall conduct a pre-grading survey for active nests in the development area and within 300 feet of it, and submit a letter report to the City of San Diego Mitigation Monitoring Coordinator prior to the preconstruction meeting.

A. If active nests are detected, or considered likely, the report shall include mitigation in conformance with the City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction, and noise barriers/buffers, etc.) to the satisfaction of the Assistant Deputy Director (ADD) of the Entitlements Division. Mitigation requirements determined by the project biologist and the ADD shall be incorporated into the project's Biological Construction Monitoring Exhibit and monitoring results incorporated in to the final biological construction monitoring report.

B. If no nesting birds are detected per “A” above, mitigation under “A” is not required.

If you have any questions about the results of this survey, please do not hesitate to contact me.

Sincerely,

Beth Procsal
Biologist

EAP:sjg

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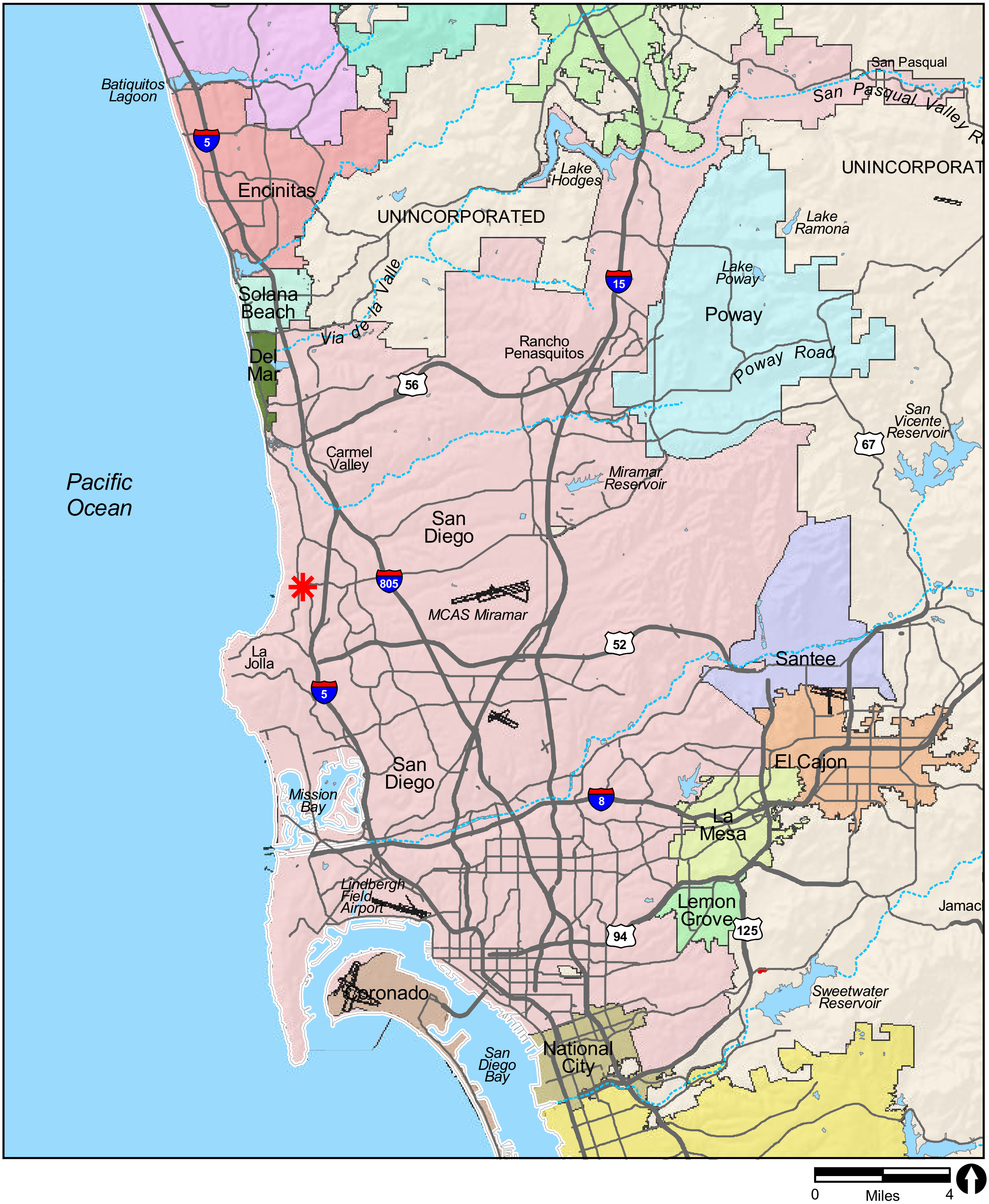
California Department of Fish and Wildlife
1991 Fish and Game Code of California.

San Diego, City of
1997 City of San Diego MSCP Subarea Plan. Community and Economic Development Department. March.
2012 Guidelines for Conducting Biological Surveys. June.

U.S. Fish and Wildlife Service
1998 Migratory Bird Treaty Act of July 3, 1918, Ch. 128, 40 Stat. 755, 16 U.S.C. §§ 703-712, as amended. October 30.

U.S. Geological Survey
1996 La Jolla Quadrangle 7.5-Minute Topographic Map.



Project Location

FIGURE 1

Regional Location

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Map Source: USGS 7.5 minute topographic map series, DEL MAR & LA JOLLA quadrangles, Pueblo Lands of San Diego

Project Boundary

FIGURE 2

Project Location on USGS Map

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Image source: (c)2009 Microsoft Corporation.

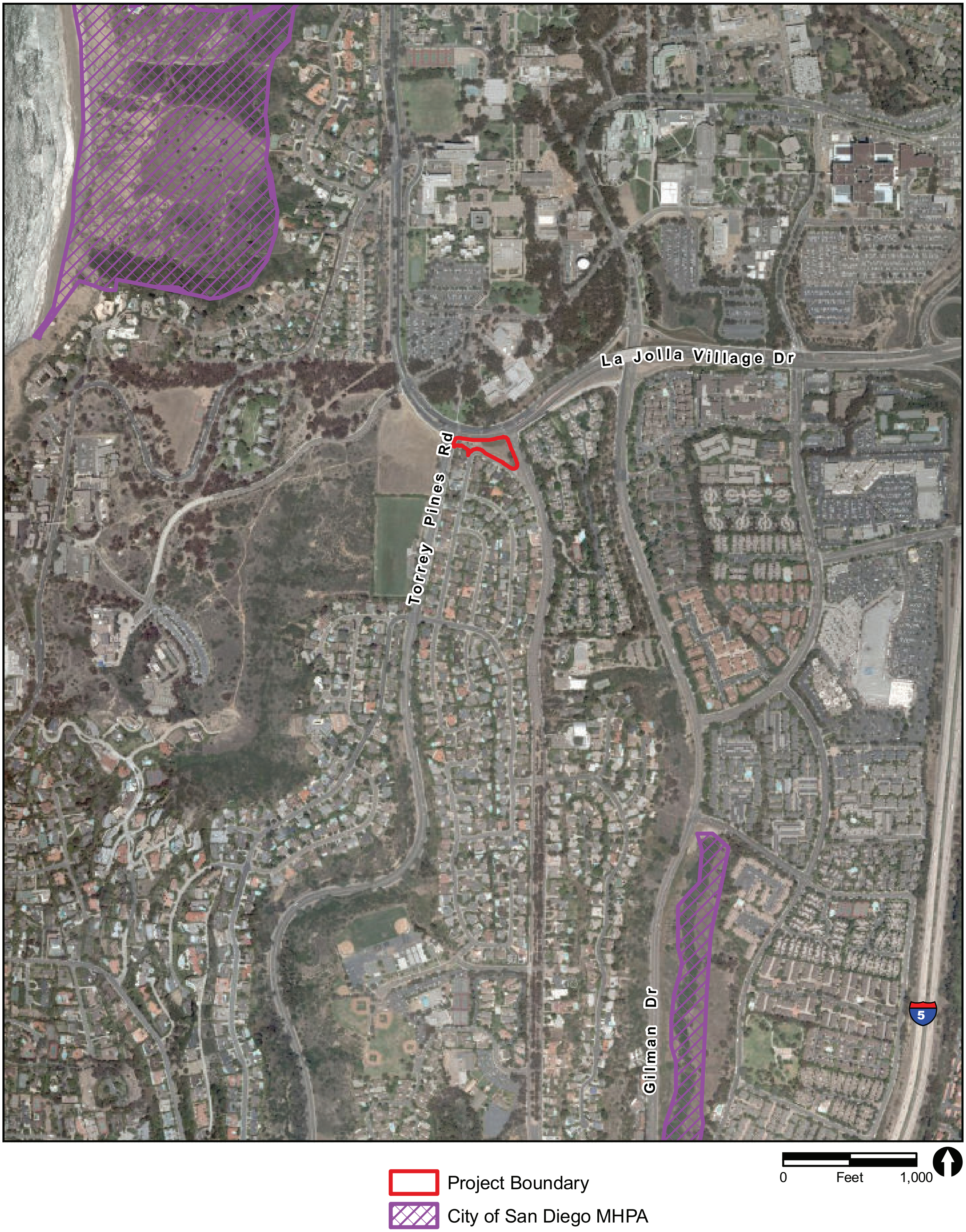

FIGURE 3
Project Location in Relation to the MHPA Boundary

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Image source: (c)2009 Microsoft Corporation.

Project Boundary

Vegetation Communities/ Land Cover Types

Developed

Disturbed

RECON

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FIGURE 4

Vegetation Communities/Land Cover Types

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A Company of Specialists

January 17, 2011

Mr. Robert Lapidus
Hillel of San Diego
5717 Lindo Paseo
San Diego, CA 92115

Reference: Results of a Biological Survey of the Hillel Site in the Community of La Jolla, San Diego, California (RECON Number 4609-1B)

Dear Mr. Lapidus:

RECON conducted three biological surveys of the approximately 0.81-acre Hillel site in the community of La Jolla, San Diego, California (Figure 1). The purpose of the first survey was to assess the potential for sensitive plants and animals to occur on-site and provide an impact analysis of the proposed development of a one-story building with one story of subterranean parking. A letter report was prepared for M.W. Steele Group, Inc., which discussed the results of the original survey (RECON 2004). A second biological survey was conducted in December 2007 to assess the condition of the biological resources and provide any updates to the information contained in the previous report. The plans for the proposed development were later altered to include three individual structures (two one-story buildings and one two-story building) and a surface parking lot, which required this update to the biology report.

The site is in an unmarked section of Township 15 South, Range 4 West on the U.S. Geological Survey (USGS) La Jolla 7.5-Minute quadrangle (USGS 1996; Figure 2). The site is outside of a City of San Diego Multiple Habitat Planning Area (MHPA; Figure 3). As shown in the aerial photograph flown in April 2007, the site is bounded by La Jolla Village Drive and the University of California at San Diego (UCSD) campus to the north, residential housing to the east and south, and Torrey Pines Road and undeveloped land to the west (see Figure 3).

This report provides all the necessary biological data and background information required for environmental analysis according to guidelines set forth in the City of San Diego's Multiple Species Conservation Plan (MSCP) Subarea Plan (1997) and the City of San Diego Biological Resources Guidelines (2002).

1.0 SURVEY METHODS

For reporting convenience, survey dates, times, and weather conditions are provided in Table 1. Vegetation communities were mapped on a 1-inch-equals-150 feet aerial photograph of the site, and a list of floral and faunal species observed was recorded. A search for sensitive plants that would have been apparent at the time of the survey was conducted in conjunction with the vegetation mapping. Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were also noted.

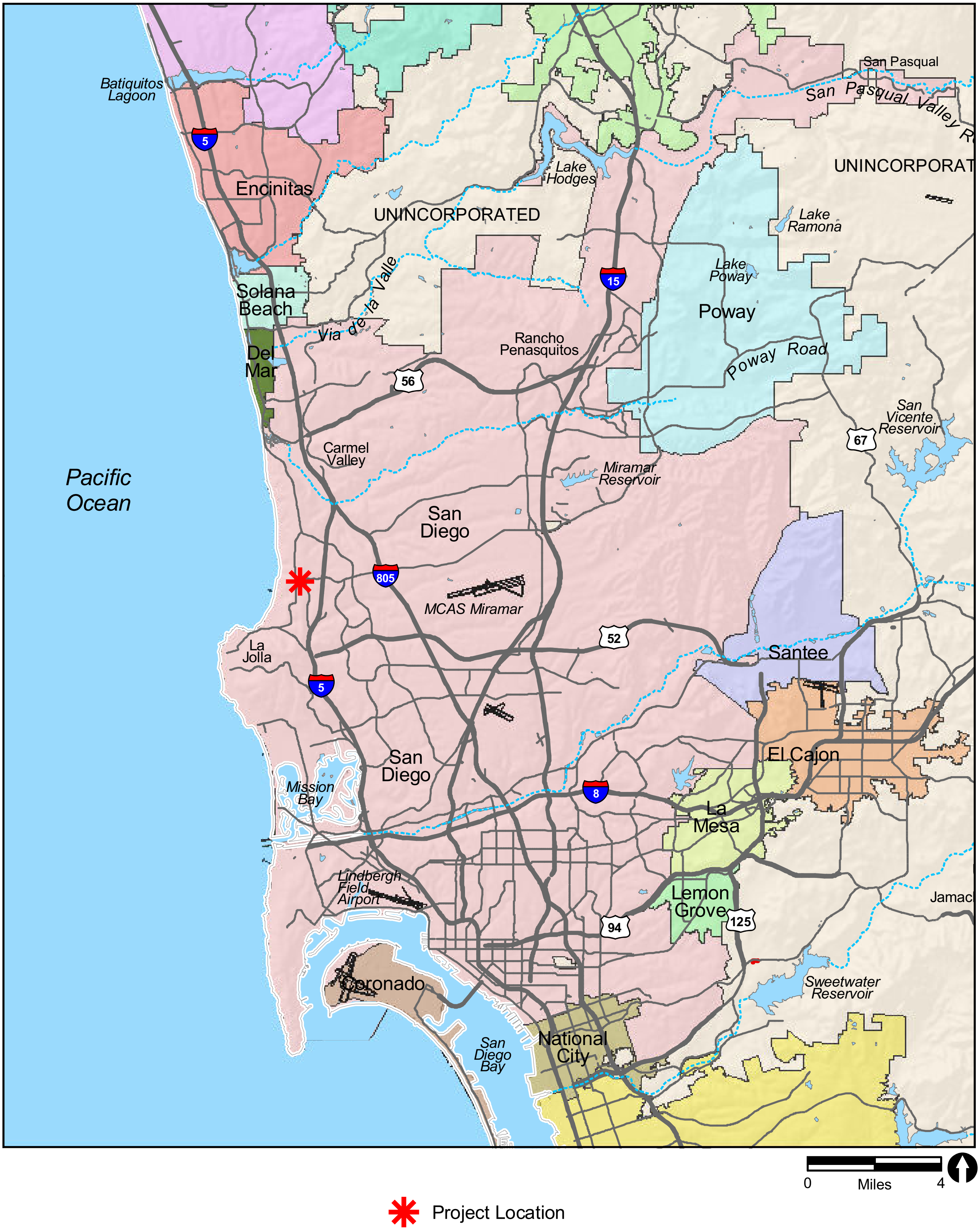

FIGURE 1

Regional Location

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Map Source: USGS 7.5 minute topographic map series, DEL MAR & LA JOLLA quadrangles, Pueblo Lands of San Diego

FIGURE 2

Project Location on USGS Map

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Image source: (c)2009 Microsoft Corporation.

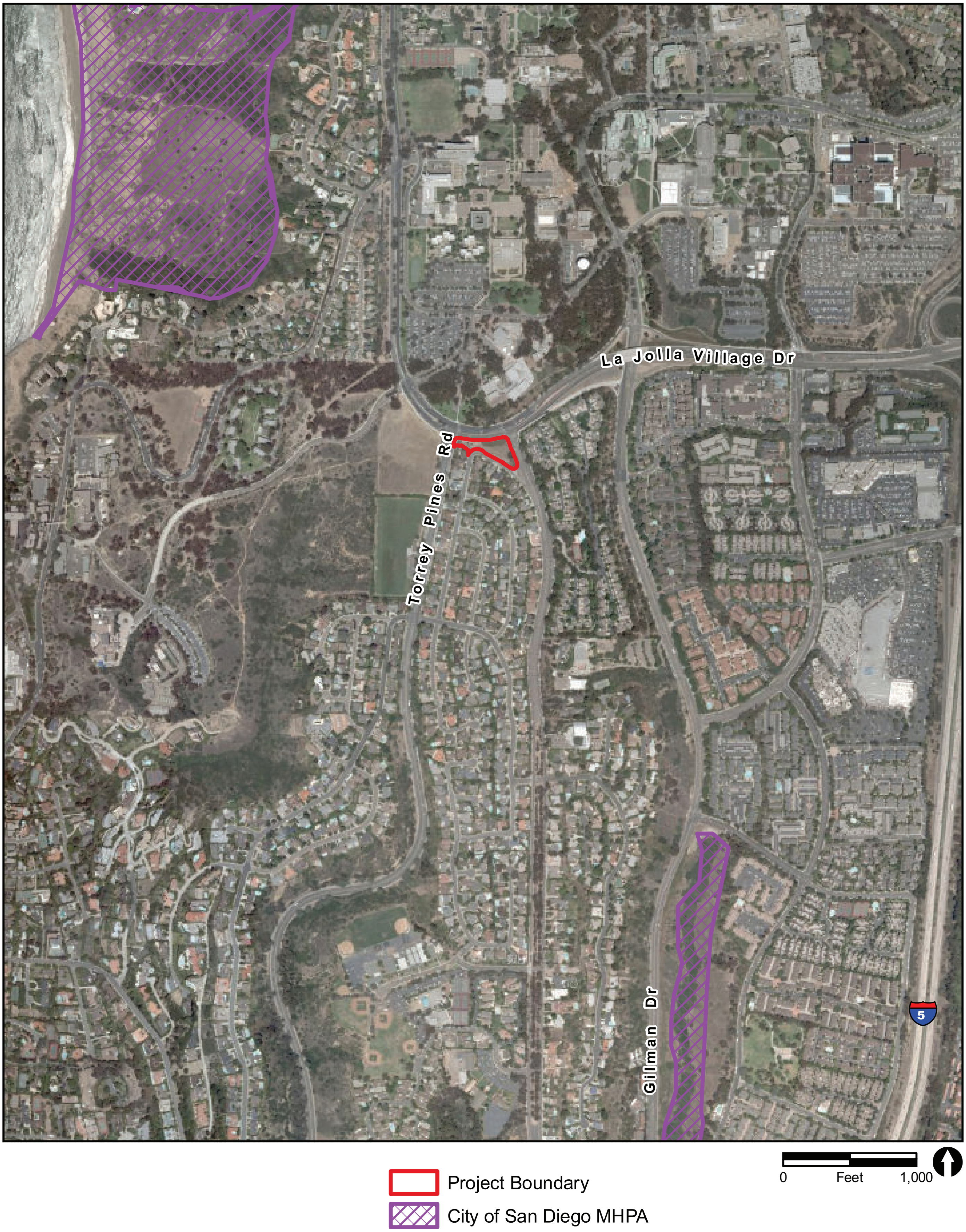

FIGURE 3
Project Location in Relation to the MHPA Boundary

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Limitations to the compilation of a comprehensive floral checklist were imposed by seasonal factors, such as blooming period, emergence of some annual species, and low seasonal rainfall. The wildlife surveys were limited by seasonal and temporal factors.

TABLE 1
SURVEY DATES, TIMES, AND WEATHER CONDITIONS

Date	Surveyors	Beginning Conditions	Ending Conditions
7/25/03	Darin Busby	11:45 A.M.; 76˚F; winds 2-6 mph; cloudy conditions, 75% cloud cover	1:45 P.M.; 77˚F; winds 2–6 mph; cloudy conditions, 75% cloud cover
12/4/07	Beth Procsal (Hoffower)	1:30 P.M.; 65˚F; winds 0–3 mph; clear conditions, 0% cloud cover	2:00 P.M.; 65˚F; winds 0–3 mph; clear conditions, 0% cloud cover
2/17/10	Beth Procsal	7:45 A.M.; 61˚F; winds 0–1 mph; cloudy conditions, 0% cloud cover	8:30 A.M.; 63˚F; winds 0–1 mph; cloudy conditions, 0% cloud cover

ºF = degrees Fahrenheit; mph = mile per hour; % = percent

Floral nomenclature for common plants follows Hickman (1993) and, for sensitive plants, California Native Plant Society (CNPS; 2001). Vegetation community classifications follow Holland (1986) as modified by Oberbauer (1996). Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Checklist (1998); for mammals with Jones et al. (1997); for amphibians and reptiles with Crother (2001) and Crother et al. (2003); and for butterflies with Brown et al. (1992). Assessments of the sensitivity of species and vegetation communities are based primarily on City of San Diego (1997, 2001, 2002, 2007), CNPS (2001), State of California (2010a–e), and Holland (1986).

2.0 SURVEY RESULTS

The 0.81-acre Hillel site is composed of disturbed and developed lands (Figure 4). The 0.70 acre onf disturbed land contains compacted soils and is dominated by ruderal and ornamental plant species (Photograph 1). The site has been graded in the past, possibly when the surrounding area was developed. The 0.11 acre of developed land consists of the western terminus of La Jolla Scenic Drive North, west of Cliffridge Avenue. The site is surrounded by roads, residential housing, and UCSD (Photograph 2).

2.1 Topography and Soils

The site contains relatively flat topography and compact soils from grading in the past. Manufactured slopes occur on the northeastern and eastern sides of the site. Elevation on-site is approximately 400 feet above mean sea level (USGS 1996).

Carlsbad-Urban soils occur on-site. The Carlsbad series consists of gravelly loamy sands that are moderately deep over a hardpan. These soils formed in material weathered in place from soft ferruginous sandstone. The soil is well drained, has slow to medium runoff, a slight to moderate erosion hazard, and has rapid permeability above the hardpan and slow permeability in the hardpan. This soil is found in areas that have been altered through cut-and-fill operations and leveling for building sites (U.S. Department of Agriculture 1973).

2.2 Vegetation

The disturbed portion of the site is dominated by the following non-native species: sea fig (*Carpobrotus chilensis*), wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), Australian saltbush (*Atriplex semibaccata*), sourclover (*Melilotus indica*), filaree (*Erodium* sp.), and Russian

Image source: (c)2009 Microsoft Corporation.

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FIGURE 4

Vegetation Communities/Land Cover Types

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PHOTOGRAPH 1
Hillel Property, Facing West, February 2010

PHOTOGRAPH 2
View of Site between La Jolla Village Drive and La Jolla Scenic Drive, Facing East, February 2010

thistle (*Salsola tragus*). One eucalyptus (*Eucalyptus* sp.), two ornamental pines (*Pinus* sp.), and one Mediterranean fan palm (*Chamaerops humilis*) occur along the perimeter of the site. Two native plant species, coast goldenbush (*Isocoma menziesii*) and rancher's fireweed (*Amsinckia menziesii*), were found on-site. Of the 19 plant species observed on-site, 17 (89 percent) are non-native and two (9 percent) are native. A complete list of plant species observed during the survey can be found in Attachment 1.

2.3 Wildlife

Five wildlife species were detected on-site. Bird species detected on-site were California towhee (*Pipilo crissalis*), house finch (*Carpodacus mexicanus frontalis*)*,* Anna's hummingbird *(Calypte anna*), northern mockingbird (*Mimus polyglottos polyglottos*), and yellow-rumped warbler (*Dendroica coronata*). These wildlife species on-site are typical of disturbed and urban habitats in coastal San Diego County. The four trees on-site were also surveyed for bird nests. No active nests of any kind were detected during the survey.

3.0 SENSITIVE BIOLOGICAL RESOURCES

3.1 Sensitivity Criteria

For purposes of this report, species will be considered sensitive if they are: (1) covered species or narrow endemic species under the City of San Diego MSCP; (2) listed by state or federal agencies as threatened or endangered or are proposed for listing; (3) on List 1B (considered endangered throughout its range) or List 2 (considered endangered in California but more common elsewhere) of the CNPS *Inventory of Rare and Endangered Vascular Plants of California* (2001); (4) considered rare, endangered, or threatened by the California Natural Diversity Data Base (CNDDB) (State of California 2010e), the City of San Diego's biology guidelines (2002), or local conservation organizations or specialists. Noteworthy plant species are considered to be those that are on List 3 (more information about the plant's distribution and rarity needed) and List 4 (plants of limited distribution) of the CNPS *Inventory*. Sensitive vegetation communities are those identified by the CNDDB (Holland 1986) or identified by the City of San Diego (2002).

Assessments for the potential occurrence of sensitive, or federally or state listed species, are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB (State of California 2010e), and species occurrence records from other sites in the vicinity of the site. Biological resource sensitivity determinations follow the guidelines presented in the Significance Determination Guidelines under the California Environmental Quality Act (CEQA) (City of San Diego 2007).

Under Section 3503 of the California Department of Fish and Game (CDFG) Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors (birds of prey) and active raptor nests are protected by CDFG Code 3503.5, which states that it is "unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird" unless authorized (CDFG 1991). The Migratory Bird Treat Act of 1918 (MBTA) was established to provide protection to the breeding activities of migratory birds throughout the U.S. The MBTA protects the take and harassment of migratory birds themselves and their breeding activities.

3.2 Sensitive Biological Resources

No sensitive plant species, narrow endemic plant species, or vegetation communities were located within the site during the biological survey or are expected to occur on-site. The site is disturbed, dominated by ruderal and ornamental plant species, and contains compacted soils. Sensitive plant species known to occur within 2 miles of the survey area based on a CNDDB review are presented in Attachment 2.

No sensitive wildlife species were located within the site during the biological survey. Due to the disturbed condition of the site, it being surrounded by urban development, and lacking suitable habitat and ground cover for wildlife, there is low potential for sensitive wildlife to occur on-site. However, there is a moderate potential that raptors may nest within the one eucalyptus tree on-site or within the eucalyptus trees east of the parcel. All wildlife species known to occur in the project vicinity (within 2 miles of the survey area) that are federally listed, threatened, endangered, or that have potential to occur based on species range are addressed in Attachment 3. Besides the potential to support nesting raptors, the lack of sensitive biological resources on-site is consistent with the surveys conducted in July 2003 and December 2007.

3.3 Multiple Species Conservation Program

The site is not within or adjacent to a City of San Diego MHPA. Development of the site will not impact any City of San Diego MHPA.

4.0 PROPOSED IMPACTS

The entire 0.81-acre site is planned for the development, which will consist of three buildings, two one-story buildings and one two-story building, and a surface parking lot (Figure 5).

4.1 Direct Impacts

Of the 0.81 acre of impacts, 0.67 acre of impacts occur within disturbed land and 0.14 acre of developed land. Impacts to disturbed and developed land are not considered significant.

The proposed project would clear the existing vegetation, including the trees on-site. This may cause small mammals and reptiles with low mobility to be inadvertently killed during grading of the site. Most birds will be able to move out of the way during grading. These impacts to general wildlife are considered less than significant.

No sensitive plant species, narrow endemic plant species, or vegetation communities were located on-site or are expected to occur on-site; therefore, no impacts are expected to occur.

4.2 Indirect Impacts

Indirect impacts associated with project construction may include an increase in noise due to an increase in vehicular traffic and human presence, and an increase in litter and pollutants. These impacts are not expected to reduce the wildlife populations on adjacent lands below self-sustaining levels; therefore, these impacts are considered less than significant.

There are several eucalyptus trees approximately 80 feet east of the Hillel parcel that may support nesting raptors. Impacts to nesting raptors, including removal of an active nest or causing nest abandonment during construction activities, would be considered significant and require mitigation.

4.3 Nesting Birds

Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Direct impacts to nesting birds using the site could occur if construction activities disrupt breeding activities or inadvertently kill birds and destroy nests. The MBTA provides more protection, on a federal level, against unlawful destruction of bird nests and from take and harassment of, specifically, migratory birds and their breeding activities. Impacts to migratory or nesting birds could be considered significant.

Image source: (c)2009 Microsoft Corporation.

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FIGURE 5

Project Impacts

5.0 MITIGATION

Mitigation is required for project impacts that are considered significant under CEQA (City of San Diego 2007), including impacts to sensitive or listed species and sensitive vegetation communities. Mitigation is intended to reduce the impacts to a level of less than significant.

No mitigation is required for impacts to developed or disturbed land, as these impacts are not considered significant. However, this project may directly and indirectly impact nesting raptors within the eucalyptus tree on-site or within the eucalyptus trees 80 feet east of the parcel if construction occurs during the breeding season. Additionally, this project may directly and indirectly impact nesting birds within the vegetation on-site.

To avoid impacts to raptors, no grading activities or removal of trees on-site shall occur during the breeding season of February 1 through September 15. If construction activities are anticipated to occur during the breeding season, then pre-construction nest surveys should be conducted to determine if raptors are nesting in trees on or within 300 feet of the site.

If active nests are present, appropriate construction setbacks of a minimum of 300 feet would be required until the young are completely independent of the nest. If no nesting raptors are detected during the pre-construction survey, no further mitigation is required.

To remain in compliance with the MBTA and CDFG Code 3503, no direct impacts shall occur to any nesting birds, their eggs, chicks, or nests during the breeding season as mentioned above. If construction activities were to occur during the bird-breeding season, both direct and indirect impacts may occur to breeding birds. Therefore, to avoid these potential impacts, pre-construction surveys would be necessary to confirm the presence or absence of breeding birds. If nests or breeding activities are located on the site, then an appropriate buffer area around the nesting site shall be maintained until the young have fledged.

Noise attenuation may be required if nests are detected during the pre-construction nest surveys and can be achieved through the use of barriers that reduce noise levels reaching breeding areas or adjacent eucalyptus trees.

If you have any questions about the results of this survey, please do not hesitate to contact me.

Sincerely,

E. Procsal

Beth Procsal
Biologist

EAP:gsk

Attachment(s)

6.0 REFERENCES CITED

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U.S. Geological Survey

1996 La Jolla Quadrangle 7.5-Minute Topographic Map.

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ATTACHMENT 1
PLANT SPECIES [illegible]

Scientific Name	Common Name	Habitat	Origin
Amsinckia menziesii	Rancher's fireweed	Disturbed	N
Atriplex semibaccata	Australian saltbush	Disturbed	I
Avena fatua	Wild oat	Disturbed	I
Brassica nigra	Black mustard	Disturbed	I
Bromus diandrus	Ripgut grass	Disturbed	I
Bromus hordeaceus	Smooth brome	Disturbed	I
Carpobrotus chilensis	Sea fig	Disturbed	I
Chamaerops humilis	Mediterranean fan palm	Disturbed	I
Chenopodium sp.	Goosefoot	Disturbed	I
Cynodon dactylon	Bermuda grass	Disturbed	I
Erodium moschatum	Green-stemmed filaree	Disturbed	I
Eucalyptus spp.	Eucalyptus	Disturbed	I
Isocoma menziesii	Coast goldenbush	Disturbed	N
Malva parviflora	Cheeseweed, little mallow	Disturbed	I
Melilotus indica	Sourclover	Disturbed	I
Mesembryanthemum crystallinum	Crystalline ice plant	Disturbed	I
Pinus sp.	Pine	Disturbed	I
Salsola tragus	Russian thistle, tumbleweed	Disturbed	I
Sonchus oleraceus	Common sow thistle	Disturbed	I

Origin
N = Native to locality
I = Introduced species from outside locality

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RECON

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Species	State/Federal Status	CNPS List	City of San Diego	Habitat/Blooming Period	Comments
				□□□I□□P□□M□□□I□□T□□	
□PI□□□□□□ □ □□□□□T□□MI□□□					
Eryngium aristulatum var. *parishii* San Diego button-celery	CE/FE	1B	NE, MSCP	Annual/perennial herb; vernal pools, mesic areas of coastal sage scrub and grasslands, blooms April–June; elevation less than 2,000 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
□□T□□□□□□□□ □ □□□□□□□ □□□□□MI□□□					
Coreopsis maritima sea dahlia	–/–	2	–	Perennial herb; coastal bluff scrub, coastal sage scrub; blooms March–May; elevation less than 500 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
Corethrogyne filaginifolia var. *incana* [=*Lessingia filaginifolia* var. *filaginifolia*] San Diego sand aster	–/–	1B	–	Perennial herb; chaparral, coastal bluff scrub, coastal sage scrub; blooms June–Sept.; elevation less than 400 feet. Known in California from only six occurrences.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
Corethrogyne filaginifolia var. *linifolia* [=*Lessingia filaginifolia* var. *filaginifolia*] Del Mar Mesa sand aster	–/–	1B	MSCP	Perennial herb; coastal bluff scrub, openings in southern maritime chaparral and coastal sage scrub, sandy soil; blooms May–Sept.; elevation less than 500 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
□□□T□□□□□□ □ □□□T□□□□MI□□□					
Bergerocactus emoryi golden-spined cereus	–/–	2	–	Succulent; closed-cone coniferous forest, chaparral, coastal sage scrub, sandy; blooms May–June; elevation less than 1,300 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
Dudleya brevifolia [=*D. blochmaniae* ssp. *brevifolia*] short-leaved dudleya	CE/–	1B	NE, MSCP	Perennial herb; southern maritime chaparral, coastal sage scrub on Torrey sandstone; blooms in April; elevation less than 1,000 feet. Known from fewer than five occurrences in the Del Mar and La Jolla areas of San Diego.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.

ATTACHMENT 2
SENSITIVE PLANT SPECIES OBSERVED (O) OR WITH POTENTIAL FOR OCCURRENCE ON THE [illegible] SITE
(continued)

Species	State/Federal Status	CNPS List	City of San Diego	Habitat/Blooming Period	Comments
Dudleya variegata variegated dudleya	–/–	1B	NE, MSCP	Perennial herb; openings in chaparral, coastal sage scrub, grasslands, vernal pools; blooms May–June; elevation less than 2,000 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.
RHAMNACEAE BUCKTHORN FAMILY					
Ceanothus verrucosus wart-stemmed ceanothus	–/–	2	MSCP	Evergreen shrub; chaparral; blooms Dec.–April; elevation less than 1,300 feet.	This species was not observed and not expected to occur due to lack of suitable habitat and to the disturbed condition of the site.

FEDERAL LISTING CATEGORIES
FE = Federally listed endangered
FT = Federally listed threatened
FC = Federal candidate for listing as endangered or threatened

STATE LISTING CATEGORIES
CE = State listed endangered
CR = State listed rare
CT = State listed threatened

CALIFORNIA NATIVE PLANT SOCIETY (CNPS) LISTS
1A = Species presumed extinct.
1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2 = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
3 = Species for which more information is needed. Distribution, endangerment, and/or taxonomic information is needed.
4 = A watch list of species of limited distribution. These species need to be monitored for changes in the status of their populations.

CITY OF SAN DIEGO
NE = Narrow endemic
MSCP = Multiple Species Conservation Program covered species

ATTACHMENT 3

ATTACHMENT 3

[illegible]

Species	Status	Habitat	Occurrence/Comments
[illegible]			
Coastal western whiptail *Cnemidophorus multiscultatus tigris*	*	Coastal sage scrub, chaparral, woodlands, and stream sides where plants are sparsely distributed.	This species was not observed and not expected to occur due to the lack of suitable habitats.
BIRDS (Nomenclature from American Ornithologists' Union 1998 and Unitt 1984)			
[illegible]			
Coastal California gnatcatcher *Polioptila californica californica*	FT, CSC, MSCP	Coastal sage scrub, maritime succulent scrub. Resident.	This species was not observed and not expected to occur on-site due to the lack of coastal sage scrub.
MAMMALS (Nomenclature from Jones et al. 1997 and Hall 1981)			
[illegible]			
Spotted bat *Euderma maculatum*	CSC	Wide variety of habitats. Caves, crevices, trees. Audible echolocation signal.	This species was not observed and not expected to occur on-site due to the lack of roosting or nesting caves, crevices, or trees.
[illegible]			
American badger *Taxidea taxus*	MSCP, *	Grasslands, Sonoran desert scrub.	This species was not observed and not expected to occur due to the lack of suitable habitat on-site.

(I) = Introduced species

STATUS CODES

Listed/Proposed

FE = Listed as endangered by the federal government
FPE = Federally proposed endangered
FPT = Federally proposed threatened
FT = Listed as threatened by the federal government

ATTACHMENT 3

[illegible]

(continued)

SE = Listed as endangered by the state of California
ST = Listed as threatened by the state of California

Other
BEPA = Bald and Golden Eagle Protection Act
CFP = California fully protected species
CSC = California Department of Fish and Game species of special concern
FC = Federal candidate for listing (taxa for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list as endangered or threatened; development and publication of proposed rules for these taxa are anticipated)
MSCP = Multiple Species Conservation Program covered species
PSE = Proposed as endangered by the state of California
* = Taxa listed with an asterisk fall into one or more of the following categories:

- Taxa considered endangered or rare under Section 15380(d) of CEQA guidelines
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range
- Population(s) in California that may be peripheral to the major portion of a taxon’s range but which are threatened with extirpation within California
- Taxa closely associated with a habitat that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands)

RECON

An Employee-Owned Company

July 26, 2016

Mr. Michael Rabkin
Hillel of San Diego
5717 Lindo Paseo
San Diego, CA 92115

Reference: Site Visit to Verify Conditions of Biological Resources on the Hillel Center for Jewish Life Project Site (RECON Number 4609-1)

Dear Mr. Rabkin:

RECON conducted a site visit to verify the condition of the biological resources on the approximately 0.8-acre Hillel site located in the community of La Jolla, San Diego, California (Figure 1). The site is bounded by La Jolla Village Drive and the University of California at San Diego campus to the north, residential housing to the east and south, and Torrey Pines Road and undeveloped land to the west (Figure 2). The purpose of this survey was to assess the condition of the biological resources and provide any updates to the information contained in the previous report that was conducted in 2013. All of the information contained in the 2013 biological report prepared by RECON is considered the same unless otherwise noted.

A site visit was conducted on June 23, 2016, by RECON biologist Gerry Scheid. The vegetation communities and land cover types, disturbed and developed, on-site have not changed since the last survey in 2013 (see Figure 2). No new biological resources were observed during the recent site visit.

If you have any questions about the results of this site visit, please do not hesitate to contact me.

Sincerely,

Gerry Scheid

Gerry Scheid
Senior Biologist

GAS:jg

Project Location

FIGURE 1
Regional Location

RECON

M:\JOBS3\4609\common_gis\fig1_bioltr_2016.mxd 7/21/2016 fmm

Image source: SANDAG (flown November 2014)

Project Boundary **Vegetation Communities/ Land Cover Types**

Developed

Disturbed

RECON

M:\jobs3\4609\common_gis\fig4.mxd 02/23/10

FIGURE 2
Project Location and
Vegetation/Land Cover Types

SOUTHERN CALIFORNIA SOIL & TESTING, INC.

SCST

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REVISED GEOLOGIC RECONNAISSANCE
HILLEL PROJECT
INTERSECTION OF LA JOLLA VILLAGE DRIVE AND LA JOLLA SCENIC WAY
LA JOLLA, CALIFORNIA

PREPARED FOR

HILLEL OF LA JOLLA
MS. JENNIFER AYALA
C/O M. W. STEELE GROUP INC.
325 FIFTEENTH STREET
SAN DIEGO, CALIFORNIA 92101

PREPARED BY:

SOUTHERN CALIFORNIA SOIL & TESTING, INC.
6280 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

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ATTACHMENTS

FIGURES

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January 20, 2011

SCS&T No. 0811008
Report No. 2

Hillel of La Jolla
Ms. Jennifer Ayala
c/o M. W. Steele Group Inc.
325 Fifteenth Street
San Diego, California 92101

Subject: REVISED GEOLOGIC RECONNAISSANCE
HILLEL PROJECT
INTERSECTION OF LA JOLLA VILLAGE DRIVE
AND LA JOLLA SCENIC WAY
LA JOLLA, CALIFORNIA

References:
1. *"Geologic Reconnaissance, Hillel Project"*; prepared by Southern California Soil and Testing, Inc.; dated January 7, 2003 (SCS&T No. 0211240-1).
2. "*Updated Geologic Reconnaissance, Hillel Project, Intersection of La Jolla Village Drive and La Jolla Scenic Way, La Jolla, California"*, prepared by Southern California Soil and Testing, Inc.; dated January 14, 2008 (SCS&T No. 0811008-1)

Dear Ms. Ayala:

In accordance with your request, we have performed an updated geologic reconnaissance to assess the geologic conditions at the site, including potential geologic hazards. The scope of the investigation consisted of a site visit by a member of our engineering geology staff, a review of available pertinent literature, and the preparation of this report that includes our findings and conclusions.

1. FINDINGS

1.1 SITE DESCRIPTION

The subject site consists of an irregular shaped property located at the southwest corner of the intersection of La Jolla Village Drive and La Jolla Scenic Way in the La Jolla community of San Diego, California. A site plan and site location map are presented on Figures 1 and 2, respectively. The site covers approximately 1.2 acres and is bounded on the east by La Jolla Scenic Way, on the west by Torrey Pines Road, on the north by La Jolla Village Drive, and on the south by La Jolla Scenic Drive North, Cliffridge Avenue and residential property. Topographically, the site is comprised of a relatively flat ground surface that slopes very gently to the south and is bounded by steep cut slopes on the north and east. The cut slopes range up to approximately 10 feet in height and the site is at elevations ranging from approximately 400 feet to 407 feet above mean sea level. It appears that drainage is accomplished via sheet flow in a general southerly direction. Vegetation is comprised of a few trees and shrubs, lawn grass, sparse native grass, and various ground coverings. A one-story single-family residential building with detached garage exists on the southwest portion of the site. Main utility lines are located along the existing streets and sidewalks adjacent to the site.

1.2 GENERAL GEOLOGY AND SUBSURFACE CONDITIONS

1.2.1 Geologic Setting and Soil Description

The subject site is located in the coastal plains portion of the Peninsular Ranges Province of California and is underlain by sediments of theTertiary-age Scripps Formation and Quaternary-age Lindavista Formation. A portion of a local geology map is presented on Figure 3. Brief descriptions of the underlying materials anticipated on site are presented below.

No significant fill materials were noted during our site reconnaissance; however minor amounts of fill associated with the public improvements may exist along the site perimeter and some fill may be associated with the existing structures. In addition, a thin veneer of topsoil/subsoil is present on most of the site.

Very old paralic deposits, commonly identified as the Lindavista Formation, are anticipated to extend to depths of approximately 30 feet below the existing ground surface. These deposits are comprised of massive to coarsely bedded, reddish-brown, silty sand with some gravel and cobble interbedded with sandy cobble conglomerate. The Lindavista Formation is often moderately to highly cemented and excavations with backhoes and other light trenching equipment will likely be slow and difficult to perform. The Lindavista Formation unconformably overlies the Scripps Formation.

The Scripps Formation, in the vicinity of the site, is comprised of tan to pale yellowish-tan, well-consolidated, fine silty sandstone. The structure of the Scripps Formation has been mapped as dipping a few degrees in a north to northwest direction.

1.2.2 Tectonic Setting

No faults have been mapped on the subject site. However, it should be noted that much of Southern California, including the San Diego area, is characterized by a series of Quaternary-age fault zones that typically consist of several individual en echelon faults that generally strike in a northerly to northwesterly direction. Some of the individual faults (within the zones) are classified as active, while others are classified as potentially active. Active faults are those that have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years) while potentially active faults have demonstrated movement during the Pleistocene Epoch

(11,000 to 1.6 million years before the present) but no movement during Holocene time. Faults that have no demonstrable movement during the last 1.6 million years are generally considered inactive.

A review of the available geologic literature indicates that the potentially active Scripps Fault is located approximately 200 meters southeast of the site. The active Rose Canyon Fault is located approximately 2.1 kilometers southwest of the site. Other active fault zones in the region that could possibly affect the subject site include the Coronado Bank, San Diego Trough and San Clemente fault zones to the west, the Elsinore and San Jacinto fault zones to the northeast, and the Agua Blanca and San Miguel fault zones to the south. A portion of a regional fault map is presented on Figure 4.

1.3 GEOLOGIC HAZARDS

1.3.1 General

The site is located in an area that is subject to some potential geologic hazards. Specific geologic hazards are discussed below.

1.3.2 Geologic Hazard Categories

As part of our investigation, we have reviewed the City of San Diego Seismic Safety Study. This study is the result of a comprehensive investigation of the city, which rates areas according to geological risk potential (nominal, low, moderate and high), and identifies any potential geotechnical hazards and/or describes geomorphic conditions. The site is located in Geologic Hazards Category 52. This category is assigned to level mesas underlain by terrace deposits and bedrock and has a nominal relative risk potential. A portion of the Seismic Safety Study Map is presented on Figure 5.

1.3.3 Seismic

Based upon the 2007 California Building Code, the following seismic design parameters are considered appropriate for the subject site:

Site Coordinates: Latitude = 32.869°
Longitude = -117.241°
Site Class: D
Spectral Response Acceleration at Short Periods S_s = 1.627
Spectral Response Acceleration at 1-Second Period S_1 = 0.634
Site Coefficient F_a = 1.0
Site Coefficient F_v = 1.5
$S_{MS}=F_aS_s = 1.627$
$S_{M1}=F_vS_1 = 0.950$
$S_{DS}=2/3^* S_{MS} = 1.085$
$S_{D1}=2/3^* S_{M1} = 0.634$

Probable groundshaking levels at the site could range from slight to strong depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the structures.

1.3.4 Surface Rupture and Soil Cracking

No active faults are known to be present at the subject site proper; therefore, the site is not considered susceptible to surface rupture. The likelihood of soil cracking caused by shaking from distant sources is considered to be minimal.

1.3.5 Landsliding

The site is located in AREA 2 as per the Landslide Hazard Identification Map No. 33. AREA 2 is classified as Marginally Susceptible to slope instability. AREA 2 includes gentle to moderate slopes, where slope angles are generally less than 15 degrees. This area includes low-lying bottoms of broad valleys and basins and large elevated surfaces of Pleistocene terrace deposits. Landslides and other slope failures are rare within this area although slope hazards are possible on some steeper slopes within the area or along its borders. It is our opinion that the potential for gross, deep-seated, slope failure to affect the project site is negligible. A portion of the Landslide Hazard Map is presented on Figure 6.

1.3.6 Liquefaction

The materials at the site are not considered subject to liquefaction due to soil density as well as lack of shallow groundwater.

1.3.7 Tsunamis

Tsunamis are great sea waves produced by a submarine earthquake or volcanic eruption. Due to the elevation of the site and distance to the shore, it is our opinion that the potential for a tsunami to affect the site is nonexistent.

1.3.8 Seiches

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. No such large bodies of standing water are located in an area that could affect the subject site.

1.3.9 Flooding

The site is located outside the boundaries of 100-year and the 500-year flood zones.

1.3.10 Groundwater

No groundwater seepage or ponding was noted within the immediate site vicinity. It should be noted that perched/ponded water may develop upon the well-cemented Lindavista Formation. It should be noted that groundwater seepage and ponding could occur after development of a site, even where none were present before development. These are often the result of alteration of the permeability characteristics of the soil, alteration in drainage patterns, and/or increased precipitation or irrigation water.

2. CONCLUSIONS

1. No geologic hazards of sufficient magnitude to preclude the proposed use of the site are known to exist.

2. The formational sediments are likely to be relatively impermeable. An appropriate drainage system should be incorporated into the development of the site.

3. The native formational materials at the site are generally competent and suitable for the support of low to mid-rise structures, if at least the minimum requirements of the local governing agency and a qualified engineer and geologist are followed. A site-specific geotechnical investigation with subsurface explorations, laboratory testing and specific recommendations will likely be required for the proposed development.

Should you have any questions regarding this document or if we may be of further service, please contact our office at your convenience.

Respectfully Submitted,
SOUTHERN CALIFORNIA SOIL & TESTING, INC.

PROFESSIONAL GEOLOGIST
DOUGLAS A. SKINNER
NO. 2472
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Douglas A. Skinner, CEG 2472
Senior Engineering Geologist

DAS:aw

(1) Addressee
(4) MW Steele Group, Inc.

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2. City of San Seismic Safety Study, 1995, Geologic Hazards and Faults, Map Sheet 29 and 30.
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16. Wesnousky, S.G., 1986, "Earthquakes, Quaternary Faults, and Seismic Hazards in California," in Journal of Geophysical Research, Volume 91, No. B12, pp 12,587 to 12,631, November 1986.

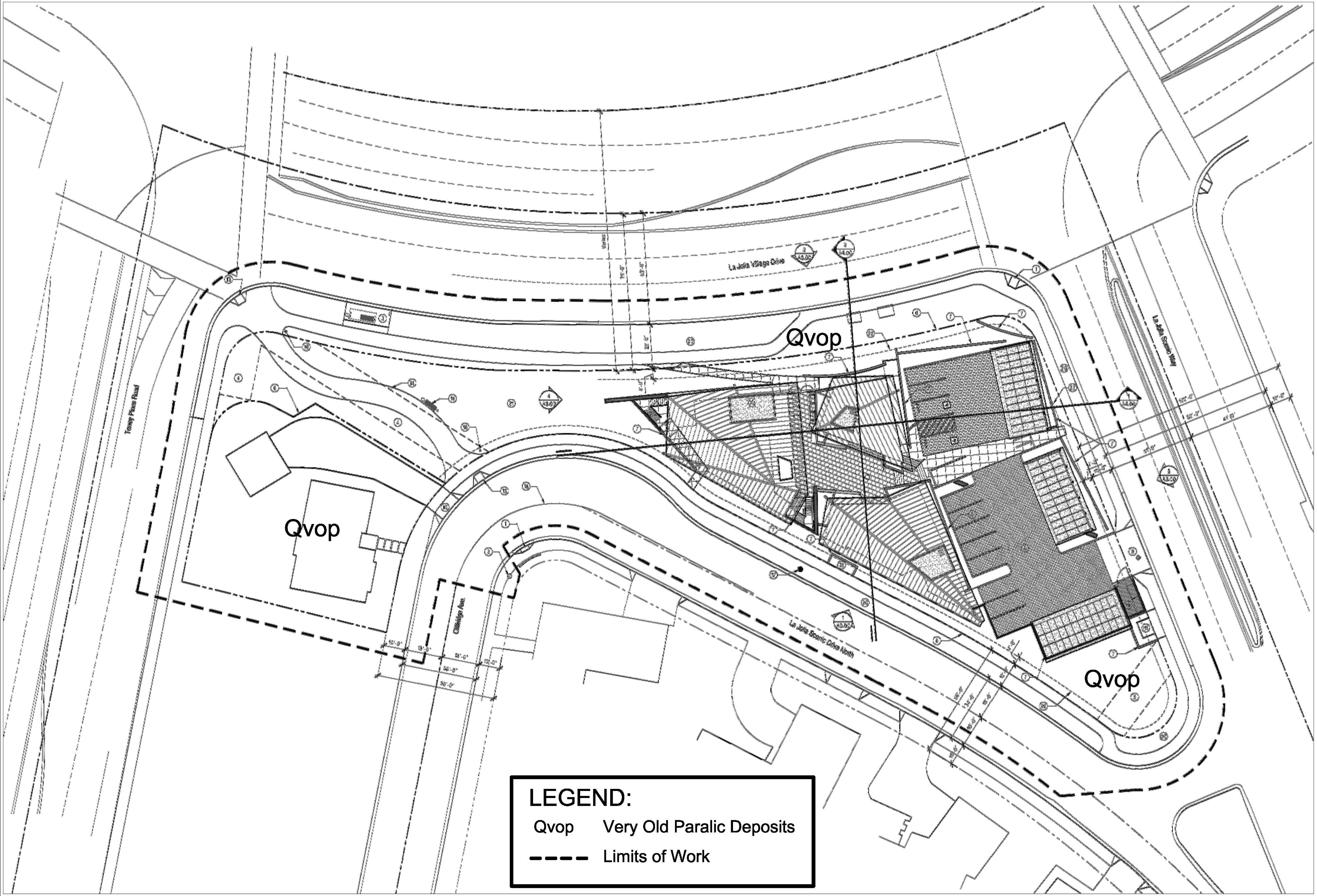
4. AERIAL PHOTOGRAPHS

1. San Diego County, 1928, Photographs 52DX 1 and 2, and 52DXA-1.
2. San Diego County, 1966, Photographs 1-48, 1-49, 1-65 and 1-66.

3. San Diego County, 1970, Flight 5, Photographs 11, 12, and 13.
4. San Diego County, 1973, Flight 30, Photographs 20 and 21.
5. San Diego County, 1974, Flight 5, Photographs 4 and 5.
6. San Diego County, 1976, Photographs 0084 and 0085.
7. San Diego County, 1978, Flight 18B, Photographs 43 and 44.
8. San Diego County, 1983, Photographs 618 and 619.
9. San Diego County, 1989, Photographs 1-201 and 1-203

5. TOPOGRAPHIC MAPS

1. County of San Diego, 1977 and 1979, Map Sheet 254-1695; Scale: 1 inch = 200 feet.
2. U.S. Geological Survey, 1953 and 1967, 7.5 Minute Topographic Map, La Jolla Quadrangle.

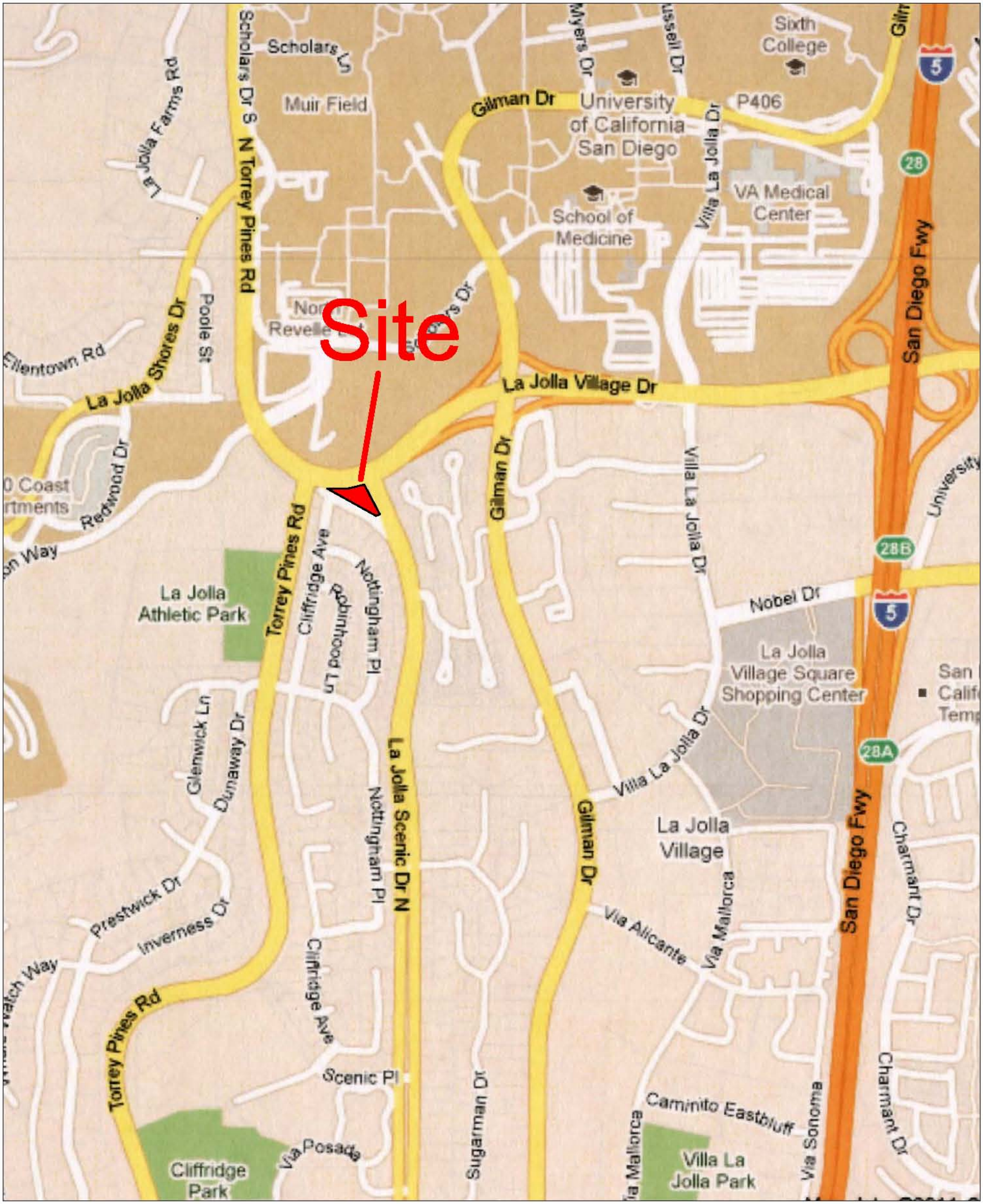


Date: 1/19/2011
By: DAS
Job No.: 0811008-2
Scale: NOT TO SCALE

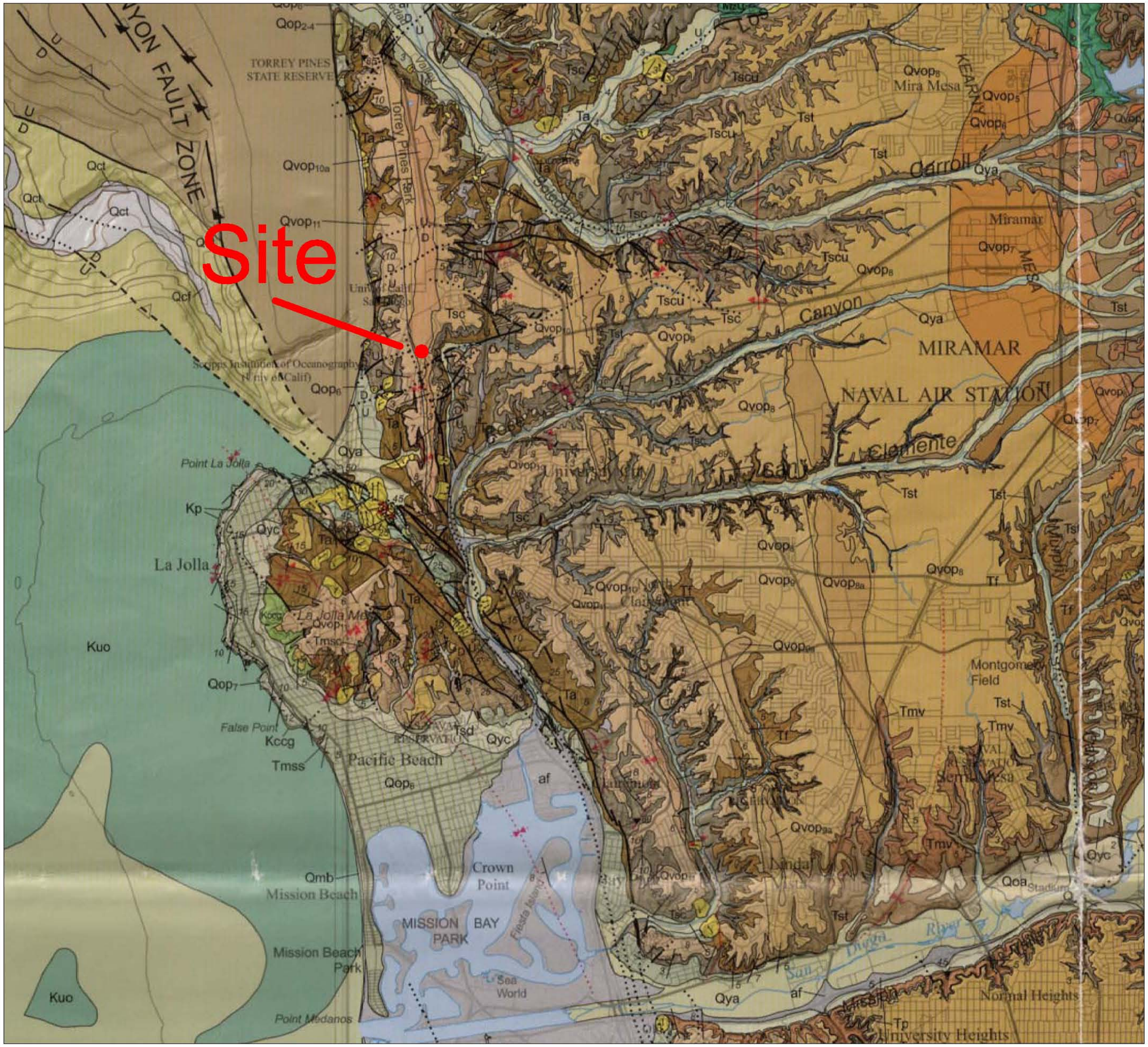
SITE PLAN
HILLEL OF SAN DIEGO
San Diego, California

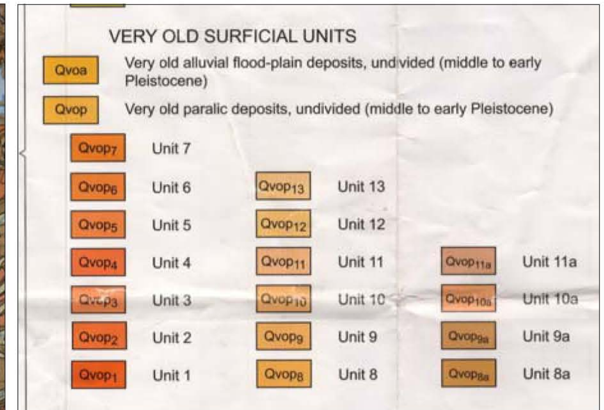
SOUTHERN CALIFORNIA
SOIL & TESTING, INC.

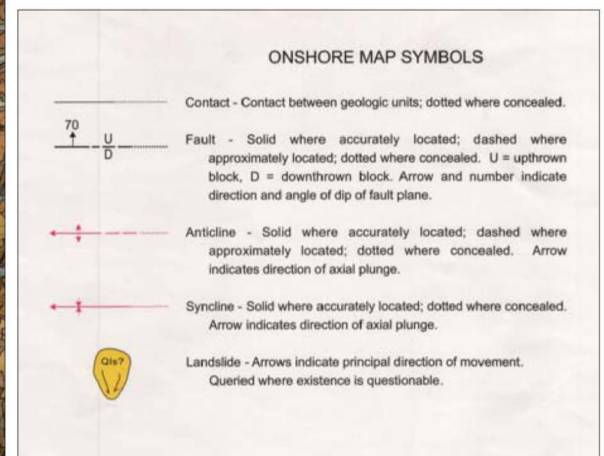
Figure:
1



SOUTHERN CALIFORNIA SOIL & TESTING, INC.	SITE LOCATION MAP HILLEL OF SAN DIEGO San Diego, California	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale	Figure: 2



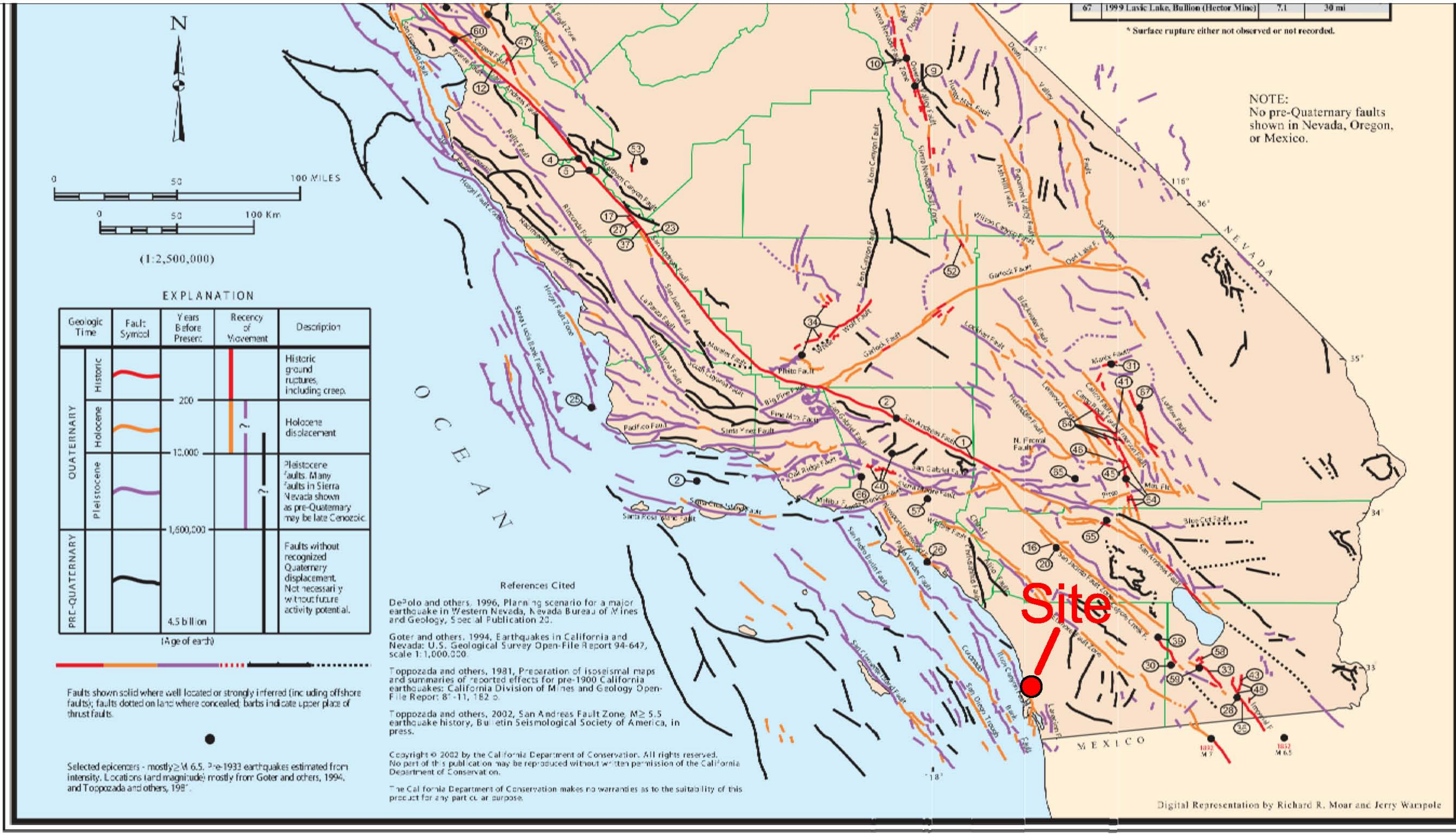




Adapted from:

Geologic Map of the San Diego 30' X 60' Quadrangle, California, by M.P. Kennedy and S.S. Tan, 2008

Figure: 3	SOUTHERN CALIFORNIA SOIL & TESTING, INC.	LOCAL GEOLOGY MAP HILLEL OF SAN DIEGO San Diego. California	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale

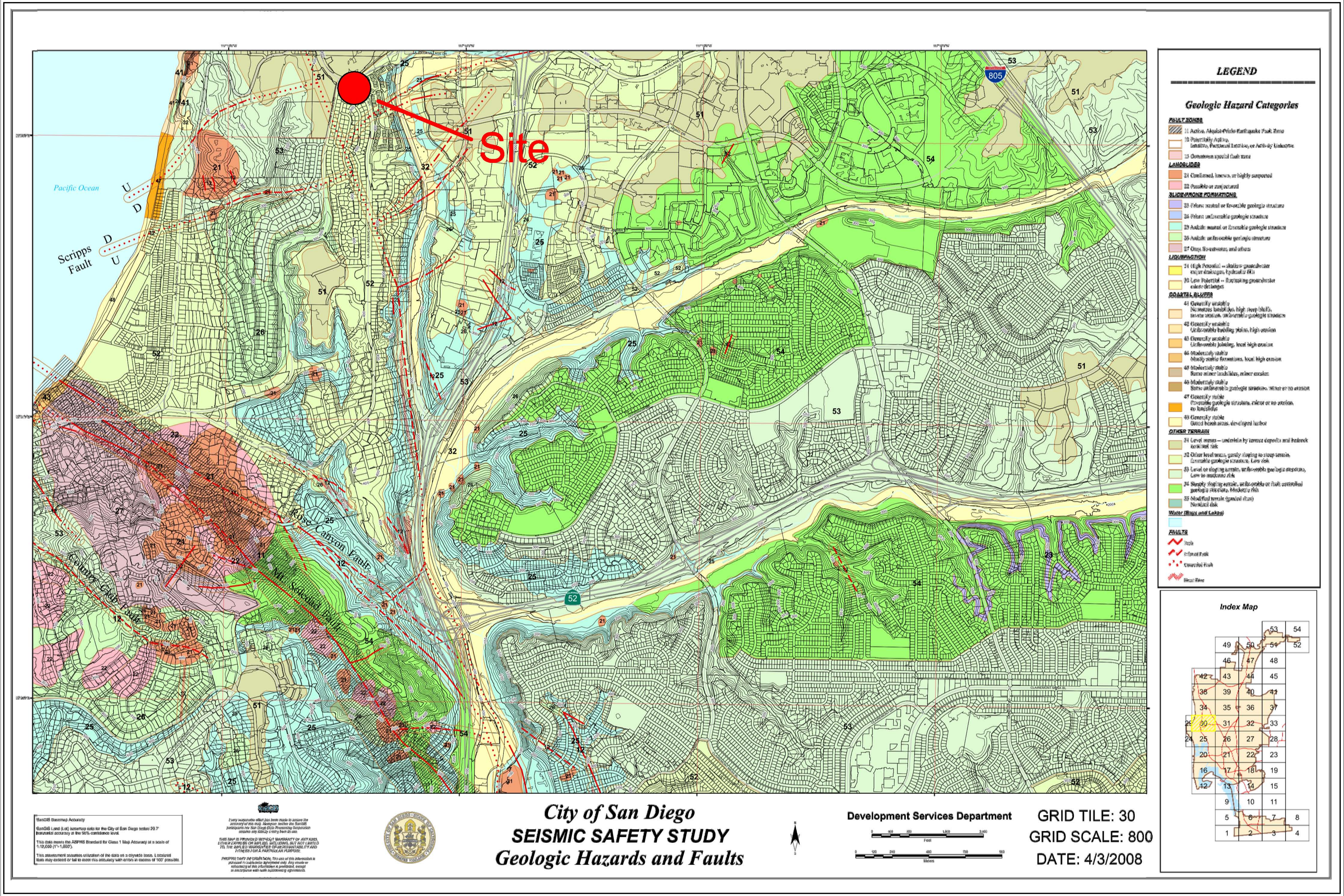


SIMPLIFIED FAULT ACTIVITY MAP OF CALIFORNIA

Compiled by Charles W. Jennings and George J. Saucedo

1999 (Revised 2002, Tousson Toppozada and David Branum)

Figure:			
4	SOUTHERN CALIFORNIA SOIL & TESTING, INC.	REGIONAL FAULT MAP HILLEL OF SAN DIEGO San Diego, California	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale



Date: 1/19/2011

By: DAS

Job No.: 0811008-2

Scale: NOT TO SCALE

SEISMIC SAFETY STUDY
HILLEL OF SAN DIEGO
San Diego, California

SOUTHERN CALIFORNIA
SOIL & TESTING, INC.

Figure: 5

Figure: 6	SOUTHERN CALIFORNIA SOIL & TESTING, INC.	**LANDSLIDE HAZARD MAP** **HILLEL OF SAN DIEGO** **San Diego, California**	Date: 1/19/2011 By: EL/WQA Job No.: 0811008-2 Scale: Not To Scale

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST INTRODUCTION

In December 2015, the City adopted a Climate Action Plan (CAP) that outlines the actions that City will undertake to achieve its proportional share of State greenhouse gas (GHG) emission reductions. The purpose of the Climate Action Plan Consistency Checklist (Checklist) is to, in conjunction with the CAP, provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA).[1]

Analysis of GHG emissions and potential climate change impacts from new development is required under CEQA. The CAP is a plan for the reduction of GHG emissions in accordance with CEQA Guidelines Section 15183.5. Pursuant to CEQA Guidelines Sections 15064(h)(3), 15130(d), and 15183(b), a project's incremental contribution to a cumulative GHG emissions effect may be determined not to be cumulatively considerable if it complies with the requirements of the CAP.

This Checklist is part of the CAP and contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

The Checklist may be updated to incorporate new GHG reduction techniques or to comply with later amendments to the CAP or local, State, or federal law.

Questions pertaining to the Checklist should be directed to Development Services Department at 619-446-5000.

[1] Certain projects seeking ministerial approval may be required to complete the Checklist. For example, projects in a Community Plan Implementation Overlay Zone may be required to use the Checklist to qualify for ministerial level review. See Supplemental Development Regulations in the project's community plan to determine applicability.

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CAP CONSISTENCY CHECKLIST SUBMITTAL APPLICATION

- The Checklist is required only for projects subject to CEQA review.[2]
- If required, the Checklist must be included in the project submittal package. Application submittal procedures can be found in [Chapter 11: Land Development Procedures](#) of the City's Municipal Code.
- The requirements in the Checklist will be included in the project's conditions of approval.
- The applicant must provide an explanation of how the proposed project will implement the requirements described herein to the satisfaction of the Planning Department.

Application Information

Contact Information

Project No./Name: UCSD Hillel for Jewish Life

Property Address: Intersection of La Jolla Village Drive and La Jolla Scenic Way, La Jolla, 93027

Applicant Name/Co.: UC San Diego Hillel

Contact Phone: 858-550-1795 Contact Email: dsinger@hillelsd.org

Was a consultant retained to complete this checklist? ☒ Yes ☐ No If Yes, complete the following

Consultant Name: Mark Steele Contact Phone: 619-230-0325

Company Name: MW Steele Group Contact Email: mark@mwsteele.com

Project Information

1. What is the size of the project (acres)? .77
2. Identify all applicable proposed land uses:
   - ☐ Residential (indicate # of single-family units):
   - ☐ Residential (indicate # of multi-family units):
   - ☐ Commercial (total square footage):
   - ☐ Industrial (total square footage):
   - ☒ Other (describe): Religious - 6,479 square feet
3. Is the project located in a Transit Priority Area? ☒ Yes ☐ No
4. Provide a brief description of the project proposed: A religious facility focused on Jewish Life. The project includes small buildings which total 6,479 square feet around a small courtyard. These buildings contain offices and meeting space for various religious study activities. The site also includes a parking area for 27 vehicles and a landscaped public open space at the corner of La Jolla Village Drive and Torrey Pines. The primary users of this facility are students at UCSD which is directly across the street, well within walking distance.

[2] Certain projects seeking ministerial approval may be required to complete the Checklist. For example, projects in a Community Plan Implementation Overlay Zone may be required to use the Checklist to qualify for ministerial level review. See Supplemental Development Regulations in the project's community plan to determine applicability.

CAP CONSISTENCY CHECKLIST QUESTIONS

Step 1: Land Use Consistency

The first step in determining CAP consistency for discretionary development projects is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the City to determine a project's consistency with the land use assumptions used in the CAP.

Step 1: Land Use Consistency		
Checklist Item (Check the appropriate box and provide explanation and supporting documentation for your answer)	Yes	No
1. Is the proposed project consistent with the existing General Plan and Community Plan land use and zoning designations?;[3] OR, 2. If the proposed project is not consistent with the existing land use plan and zoning designations, does the project include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?; OR, 3. If the proposed project is not consistent with the existing land use plan and zoning designations, and includes a land use plan and/or zoning designation amendment that would result in an increase in GHG emissions when compared to the existing designations, would the project be located in a Transit Priority Area (TPA) and implement CAP Strategy 3 actions, as determined in Step 3 to the satisfaction of the Development Services Department?	☐x	☐

If "***Yes***," proceed to Step 2 of the Checklist. For questions 2 and 3 above, provide estimated project emissions under both existing and proposed designation(s) for comparison. For question 3 above, complete Step 3.

If "***No***," in accordance with the City's Significance Determination Thresholds, the project's GHG impact is significant. The project must nonetheless incorporate each of the measures identified in Step 2 to mitigate cumulative GHG emissions impacts unless the decision maker finds that a measure is infeasible in accordance with CEQA Guidelines Section 15091. Proceed and complete Step 2 of the Checklist.

[3] This question may also be answered in the affirmative if the project is consistent with SANDAG Series 12 growth projections, which were used to determine the CAP projections, as determined by the Planning Department.

Step 2: CAP Strategies Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable strategies and actions of the CAP. Step 2 only applies to development projects that involve permits that would require a certificate of occupancy from the Building Official or projects comprised of one and two family dwellings or townhouses as defined in the California Residential Code and their accessory structures.[4] All other development projects that would not require a certificate of occupancy from the Building Official shall implement Best Management Practices for construction activities as set forth in the Greenbook (for public projects).

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
Strategy 1: Energy & Water Efficient Buildings			
1. *Cool/Green Roofs*. • Would the project include roofing materials with a minimum 3-year aged solar reflection and thermal emittance or solar reflection index equal to or greater than the values specified in the voluntary measures under California Green Building Standards Code (Attachment A)?; OR • Would the project roof construction have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 pounds per square foot as specified in the voluntary measures under California Green Building Standards Code?; OR • Would the project include a combination of the above two options? Check "N/A" only if the project does not include a roof component.	X		☐
2. *Plumbing fixtures and fittings* With respect to plumbing fixtures or fittings provided as part of the project, would those low-flow fixtures/appliances be consistent with each of the following: Residential buildings: • Kitchen faucets: maximum flow rate not to exceed 1.5 gallons per minute at 60 psi; • Standard dishwashers: 4.25 gallons per cycle; • Compact dishwashers: 3.5 gallons per cycle; and • Clothes washers: water factor of 6 gallons per cubic feet of drum capacity? Nonresidential buildings: • Plumbing fixtures and fittings that do not exceed the maximum flow rate specified in Table A5.303.2.3.1 (voluntary measures) of the California Green Building Standards Code (See Attachment A); and • Appliances and fixtures for commercial applications that meet the provisions of Section A5.303.3 (voluntary measures) of the California Green Building Standards Code (See Attachment A)? Check "N/A" only if the project does not include any plumbing fixtures or fittings.	☐X	☐	☐

[4] Actions that are not subject to Step 2 would include, for example: 1) discretionary map actions that do not propose specific development, 2) permits allowing wireless communication facilities, 3) special events permits, 4) use permits that do not result in the expansion or enlargement of a building, and 5) non-building infrastructure projects such as roads and pipelines. Because such actions would not result in new occupancy buildings from which GHG emissions reductions could be achieved, the items contained in Step 2 would not be applicable.

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
Strategy 2: Clean & Renewable Energy			
3. *Energy Performance Standard / Renewable Energy* Is the project designed to have an energy budget that meets the following performance standards when compared to the Title 24, Part 6 Energy Budget for the Proposed Design Building as calculated by [Compliance Software certified by the California Energy Commission]() (percent improvement over current code): • Low-rise residential – 15% improvement? • Nonresidential with indoor lighting OR mechanical systems, but not both – 5% improvement? • Nonresidential with both indoor lighting AND mechanical systems – 10% improvement?[5] The demand reduction may be provided through on-site renewable energy generation, such as solar, or by designing the project to have an energy budget that meets the above-mentioned performance standards, when compared to the Title 24, Part 6 Energy Budget for the Proposed Design Building (percent improvement over current code). Note: For Energy Budget calculations, high-rise residential and hotel/motel buildings are considered non-residential buildings. Check "N/A" only if the project does not contain any residential or non-residential buildings.	☐X	☐	☐
Strategy 3: Bicycling, Walking, Transit & Land Use			
4. *Electric Vehicle Charging* • Single-family projects: Would the required parking serving each new single-family residence and each unit of a duplex be constructed with a listed cabinet, box or enclosure connected to a raceway linking the required parking space to the electrical service, to allow for the future installation of electric vehicle supply equipment to provide an electric vehicle charging station for use by the resident? • Multiple-family projects of 10 dwelling units or less: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official, to allow for the future installation of electric vehicle supply equipment to provide electric vehicle charging stations at such time as it is needed for use by residents? • Multiple-family projects of more than 10 dwelling units: Would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official? Of the total listed cabinets, boxes or enclosures provided, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use by residents?	☐X	☐	☐X

[5] CALGreen defines mechanical systems as equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
• Non-residential projects: If the project includes new commercial, industrial, or other uses with the building or land area, capacity, or numbers of employees listed in Attachment A, would 3% of the total parking spaces required, or a minimum of one space, whichever is greater, be provided with a listed cabinet, box or enclosure connected to a conduit linking the parking spaces with the electrical service, in a manner approved by the building and safety official? Of the total listed cabinets, boxes or enclosures provided, would 50% have the necessary electric vehicle supply equipment installed to provide active electric vehicle charging stations ready for use? Check "N/A" only if the project is does not include new commercial, industrial, or other uses with the building or land area, capacity, or numbers of employees listed in Attachment A.			
Strategy 3: Bicycling, Walking, Transit & Land Use (Complete this section if project includes non-residential or mixed uses)			
5. *Bicycle Parking Spaces* Would the project provide more short- and long-term bicycle parking spaces than required in the City's Municipal Code (Chapter 14, Article 2, Division 5)?[6] Check "N/A" only if the project is a residential project.	☐X	☐	☐
6. *Shower facilities* If the project includes nonresidential development that would accommodate over 10 tenant occupants (employees), would the project include changing/shower facilities in accordance with the voluntary measures under the California Green Building Standards Code as shown in the table below? (see table below) Check "N/A" only if the project is a residential project, or if it does not include nonresidential development that would accommodate over 10 tenant occupants (employees).	☐	☐	X

Number of Tenant Occupants (Employees)	Shower/Changing Facilities Required	Two-Tier (12" X 15" X 72") Personal Effects Lockers Required
0-10	0	0
11-50	1 shower stall	2
51-100	1 shower stall	3
101-200	1 shower stall	4
Over 200	1 shower stall plus 1 additional shower stall for each 200 additional tenant-occupants	1 two-tier locker plus 1 two-tier locker for each 50 additional tenant-occupants

[6] Non-portable bicycle corrals within 600 feet of project frontage can be counted towards the project's bicycle parking requirements.

<table>
<tr><th colspan="4">Step 2: CAP Strategies Consistency</th></tr>
<tr><th>Checklist Item
(Check the appropriate box and provide explanation for your answer)</th><th>Yes</th><th>No</th><th>N/A</th></tr>
<tr><td>7. Designated Parking Spaces

If the project includes an employment use in a TPA, would the project provide designated parking for a combination of low-emitting, fuel-efficient, and carpool/vanpool vehicles in accordance with the following table?

<table>
<tr><th>Number of Required Parking Spaces</th><th>Number of Designated Parking Spaces</th></tr>
<tr><td>0-9</td><td>0</td></tr>
<tr><td>10-25</td><td>2</td></tr>
<tr><td>26-50</td><td>4</td></tr>
<tr><td>51-75</td><td>6</td></tr>
<tr><td>76-100</td><td>9</td></tr>
<tr><td>101-150</td><td>11</td></tr>
<tr><td>151-200</td><td>18</td></tr>
<tr><td>201 and over</td><td>At least 10% of total</td></tr>
</table>

This measure does not cover electric vehicles. See Question 4 for electric vehicle parking requirements.

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces. The required designated parking spaces are to be provided within the overall minimum parking requirement, not in addition to it.

Check “N/A” only if the project is a residential project, or if it does not include an employment use in a TPA.</td><td>X</td><td>☐</td><td>☐</td></tr>
<tr><td>8. Transportation Demand Management Program

If the project would accommodate over 50 tenant-occupants (employees), would it include a transportation demand management program that would be applicable to existing tenants and future tenants that includes:

At least one of the following components:
• Parking cash out program
• Parking management plan that includes charging employees market-rate for single-occupancy vehicle parking and providing reserved, discounted, or free spaces for registered carpools or vanpools
• Unbundled parking whereby parking spaces would be leased or sold separately from the rental or purchase fees for the development for the life of the development

And at least three of the following components:
• Commitment to maintaining an employer network in the SANDAG iCommute program and promoting its RideMatcher service to tenants/employees
• On-site carsharing vehicle(s) or bikesharing
• Flexible or alternative work hours
• Telework program
• Transit, carpool, and vanpool subsidies</td><td>☐</td><td>☐</td><td>X</td></tr>
</table>

Step 2: CAP Strategies Consistency			
Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
• Pre-tax deduction for transit or vanpool fares and bicycle commute costs • Access to services that reduce the need to drive, such as cafes, commercial stores, banks, post offices, restaurants, gyms, or childcare, either onsite or within 1,320 feet (1/4 mile) of the structure/use? Check "N/A" only if the project is a residential project or if it would not accommodate over 50 tenant-occupants (employees).			

Step 3: Project CAP Conformance Evaluation (if applicable)

The third step of the CAP consistency review only applies if Step 1 is answered in the affirmative under option 3. The purpose of this step is to determine whether a project that is located in a TPA but that includes a land use plan and/or zoning designation amendment that would result in an increase in GHG emissions when compared to the existing designations, is nevertheless consistent with the assumptions in the CAP because it would implement CAP Strategy 3 actions. The following questions must each be answered in the affirmative and fully explained.

1. ☐ **Would the proposed project implement the General Plan's City of Villages strategy in an identified Transit Priority Area (TPA) that will result in an increase in the capacity for transit-supportive residential and/or employment densities?**

   Considerations for this question:
   - Does the proposed land use and zoning designation associated with the project provide capacity for transit-supportive residential densities within the TPA?
   - Is the project site suitable to accommodate mixed-use village development, as defined in the General Plan, within the TPA?
   - Does the land use and zoning associated with the project increase the capacity for transit-supportive employment intensities within the TPA?

2. ☐ **Would the proposed project implement the General Plan's Mobility Element in Transit Priority Areas to increase the use of transit?**

   Considerations for this question:
   - Does the proposed project support/incorporate identified transit routes and stops/stations?
   - Does the project include transit priority measures?

3. ☐ **Would the proposed project implement pedestrian improvements in Transit Priority Areas to increase walking opportunities?**

   Considerations for this question:
   - Does the proposed project circulation system provide multiple and direct pedestrian connections and accessibility to local activity centers (such as transit stations, schools, shopping centers, and libraries)?
   - Does the proposed project urban design include features for walkability to promote a transit supportive environment?

4. ☐ **Would the proposed project implement the City of San Diego's Bicycle Master Plan to increase bicycling opportunities?**

   Considerations for this question:
   - Does the proposed project circulation system include bicycle improvements consistent with the Bicycle Master Plan?
   - Does the overall project circulation system provide a balanced, multimodal, "complete streets" approach to accommodate mobility needs of all users?

5. ☐ **Would the proposed project incorporate implementation mechanisms that support Transit Oriented Development?**

   Considerations for this question:
   - Does the proposed project include new or expanded urban public spaces such as plazas, pocket parks, or urban greens in the TPA?
   - Does the land use and zoning associated with the proposed project increase the potential for jobs within the TPA?
   - Do the zoning/implementing regulations associated with the proposed project support the efficient use of parking through mechanisms such as: shared parking, parking districts, unbundled parking, reduced parking, paid or time-limited parking, etc.?

6. ☐ **Would the proposed project implement the Urban Forest Management Plan to increase urban tree canopy coverage?**

   Considerations for this question:
   - Does the proposed project provide at least three different species for the primary, secondary and accent trees in order to accommodate varying parkway widths?
   - Does the proposed project include policies or strategies for preserving existing trees?
   - Does the proposed project incorporate tree planting that will contribute to the City's 20% urban canopy tree coverage goal?

CLIMATE ACTION PLAN CONSISTENCY CHECKLIST
ATTACHMENT A

This attachment provides performance standards for applicable Climate Action Pan (CAP) Consistency Checklist measures.

Table 1	**Roof Design Values for Question 1: Cool/Green Roofs supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan**			
Land Use Type	Roof Slope	Minimum 3-Year Aged Solar Reflectance	Thermal Emittance	Solar Reflective Index
Low-Rise Residential	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16
High-Rise Residential Buildings, Hotels and Motels	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16
Non-Residential	≤ 2:12	0.55	0.75	64
	> 2:12	0.20	0.75	16

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 residential and non-residential voluntary measures shown in Tables A4.106.5.1 and A5.106.11.2.2, respectively. Roof installation and verification shall occur in accordance with the CALGreen Code.

CALGreen does not include recommended values for low-rise residential buildings with roof slopes of ≤ 2:12 for San Diego's climate zones (7 and 10). Therefore, the values for climate zone 15 that covers Imperial County are adapted here.

Solar Reflectance Index (SRI) equal to or greater than the values specified in this table may be used as an alternative to compliance with the aged solar reflectance values and thermal emittance.

Table 2	**Fixture Flow Rates for Non-Residential Buildings related to Question 2: Plumbing Fixtures and Fittings supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan**
Fixture Type	**Maximum Flow Rate**
Showerheads	1.8 gpm @ 80 psi
Lavatory Faucets	0.35 gpm @60 psi
Kitchen Faucets	1.6 gpm @ 60 psi
Wash Fountains	1.6 [rim space(in.)/20 gpm @ 60 psi]
Metering Faucets	0.18 gallons/cycle
Metering Faucets for Wash Fountains	0.18 [rim space(in.)/20 gpm @ 60 psi]
Gravity Tank-type Water Closets	1.12 gallons/flush
Flushometer Tank Water Closets	1.12 gallons/flush
Flushometer Valve Water Closets	1.12 gallons/flush
Electromechanical Hydraulic Water Closets	1.12 gallons/flush
Urinals	0.5 gallons/flush

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 non-residential voluntary measures shown in Tables A5.303.2.3.1 and A5.106.11.2.2, respectively. See the California Plumbing Code for definitions of each fixture type.

Where complying faucets are unavailable, aerators rated at 0.35 gpm or other means may be used to achieve reduction.

Acronyms:
gpm = gallons per minute
psi = pounds per square inch (unit of pressure)
in. = inch

Table 3	Standards for Appliances and Fixtures for Commercial Application related to Question 2: Plumbing Fixtures and Fittings supporting Strategy 1: Energy & Water Efficient Buildings of the Climate Action Plan	
Appliance/Fixture Type	**Standard**	
Clothes Washers	Maximum Water Factor (WF) that will reduce the use of water by 10 percent below the California Energy Commissions' WF standards for commercial clothes washers located in Title 20 of the *California Code of Regulations.*	
Conveyor-type Dishwashers	0.70 maximum gallons per rack (2.6 L) (High-Temperature)	0.62 maximum gallons per rack (4.4 L) (Chemical)
Door-type Dishwashers	0.95 maximum gallons per rack (3.6 L) (High-Temperature)	1.16 maximum gallons per rack (2.6 L) (Chemical)
Undercounter-type Dishwashers	0.90 maximum gallons per rack (3.4 L) (High-Temperature)	0.98 maximum gallons per rack (3.7 L) (Chemical)
Combination Ovens	Consume no more than 10 gallons per hour (38 L/h) in the full operational mode.	
Commercial Pre-rinse Spray Valves (manufactured on or after January 1, 2006)	Function at equal to or less than 1.6 gallons per minute (0.10 L/s) at 60 psi (414 kPa) and • Be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate. • Be equipped with an integral automatic shutoff. • Operate at static pressure of at least 30 psi (207 kPa) when designed for a flow rate of 1.3 gallons per minute (0.08 L/s) or less.	

Source: Adapted from the California Green Building Standards Code (CALGreen) Tier 1 non-residential voluntary measures shown in Section A5.303.3. See the California Plumbing Code for definitions of each appliance/fixture type.

Acronyms:
L = liter
L/h = liters per hour
L/s = liters per second
psi = pounds per square inch (unit of pressure)
kPa = kilopascal (unit of pressure)

Table 4	**Size-based Trigger Levels for Electric Vehicle Charging Requirements for Non-Residential Buildings related to Question 10: Electric Vehicle Charging supporting Strategy 3: Bicycling, Walking, Transit & Land Use of the Climate Action Plan**
Land Use Type	**Size-based Trigger Level**
Hospital	500 or more beds OR Expansion of a 500+ bed hospital by 20%
College	3,000 or more students OR Expansion of a 3,000+ student college by 20%
Hotels/Motels	500 or more rooms
Industrial, Manufacturing or Processing Plants or Industrial Parks	1,000 or more employees OR 40 acres or more of land area OR 650,000 square feet or more of gross floor area
Office buildings or Office Parks	1,000 or more employees OR 250,000 square feet or more of gross floor area
Shopping centers or Trade Centers	1,000 or more employees OR 500,000 square feet or more of gross floor area
Sports, Entertainment or Recreation Facilities	Accommodate at least 4,000 persons per performance OR Contain 1,500 or more fixed seats
Transit Projects (including, but not limited to, transit stations and park and ride lots).	All
Source: Adapted from the Governor's Office of Planning and Research's (OPR's) Model Building Code for Plug-In Electric Vehicle Charging	

1. or 2. or 3. Consistency with the existing General Plan and Community Plan land use and zoning.

The subject property is designated Low Density Residential (5-9 DU/AC) in the La Jolla Community Plan and zoned LJSPD-SF (La Jolla Shores Planned District – Single Family) in the City-Wide zoning. LJSPD-SF lists in 1510.0303 Single Family Zone Permitted Use *(e) churches, temples or buildings of a permanent nature used primarily for religious purposes* as a permitted use.

1. Cool/Green Roofs

The project as proposed includes a >2:12 metal roof. The La Shores Planned District Ordinance lists copper as an approved roofing material. Cool metal roofing in copper color has an SRI of 57and an initial reflectance of .50. The thermal emittance is .50 and it meets the 3 year Energy Star Requirements for steep slopes.

2. Plumbing fixtures and fittings

All plumbing fixtures and fittings will not exceed the maximum flow rate as specified in Table 2 of the Checklist and Table A5 303.2.3.1 (voluntary measures of the California Green Building Standards Code and Appliances and fixtures for commercial applications that meet the provisions of Table 3 of the Checklist and Section A5.303.3 (voluntary measures) of the California Green Building Standards Code.

3. Energy Performance Standard/Renewable Energy

The proposed project is Nonresidential with both indoor lighting and mechanical systems: The project proposes Photovoltaic panels integrated with parking shade structures. It has been determined that this renewable energy source will provide 30% of the energy use for this project which exceeds the Title 24 requirements.

4. Electric Vehicle Charging

The proposed project is a non-residential project and does not include the new commercial, industrial, or other uses with the building or land area, capacity, or numbers of employees listed in Attachment A (Table 4).

5. Bicycle Parking Spaces

The project proposes a large bicycle rack in a secured area near the primary pedestrian entrance. The City's Municipal Code (Chapter 14, Article 2, Division 5 requires 1.35 short term bicycle parking spaces and 1.35 long term parking spaces (both calculations are based on a ratio of .05 x number of automobile parking spaces). The project proposes an bicycle parking in excess of this requirement.

6. Shower facilities

The project is a nonresidential development that does not accommodate over 10 tenant occupants (employees) therefore shower facilities are not required by the California Green Building Standards Code as reproduced in the CAP Strategies Consistency Checklist.

7. Designated Parking Spaces

The proposed project includes employees and would be required to conform to the requirement for designating parking spaces carpool and fuel efficient vehicles. As detailed in the project's EIR (Sections 3.4.2.1 and 4.2.4.1), the project includes a deviation request that would allow the project to provide parking based on the specific needs of the facility as determined by existing comparable facilities. The total number of parking to be provided would be 27 spots, inclusive of carpool designated and preferred parking for electric vehicles..

8. Transportation Demand Management Program

The proposed project is a non-residential project that does not accommodate over 50 tenant-occupants (employees).

A CULTURAL RESOURCES STUDY FOR THE HILLEL OF SAN DIEGO STUDENT CENTER – LA JOLLA PROJECT

LA JOLLA, CITY OF SAN DIEGO, CALIFORNIA

Submitted to:

City of San Diego
Development Services Department
Land Development Review
1222 First Avenue, MS 501
San Diego, California 92101

Prepared for:

M. W. Steele Group, Inc.
Architecture | Urban Planning
1805 Newton Avenue, Suite A
San Diego, California 92113

Prepared by:

Brian F. Smith & Associates, Inc.
14010 Poway Road, Suite A
Poway, California 92064

February 10, 2010

National Archaeological Data Base Information

Authors:	Brian F. Smith
Consulting Firm:	Brian F. Smith and Associates, Inc. 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
Report Date:	February 10, 2010
Report Title:	A Cultural Resources Study for the Hillel of San Diego Student Center – La Jolla Project
Submitted to:	City of San Diego Development Services Department Land Development Review 1222 First Avenue, MS 501 San Diego, California 92101
Prepared for:	M. W. Steele Group, Inc. 1805 Newton Avenue, Suite A San Diego, California 92113
Submitted by:	Brian F. Smith and Associates, Inc. 14010 Poway Road, Suite A Poway, California 92064 (858) 484-0915
USGS Quadrangle:	*La Jolla*, California (7.5 minute)
Study Area:	Approximately 1.2 acres
Key Words:	USGS *La Jolla* quadrangle (7.5 minute); survey; test; negative; disturbed; no monitoring recommended.

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List of Appendices

**Confidential Appendix; bound separately*

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List of Abbreviations

AMSL	Above Mean Sea Level
APE	Area of Potential Effect
BFSA	Brian F. Smith and Associates
CEQA	California Environmental Quality Act
DPR	(California) Department of Parks and Recreation
SCIC	South Coastal Information Center
SDSU	San Diego State University
YBP	Years Before Present

1.0 MANAGEMENT SUMMARY/ABSTRACT

The following report describes an archaeological study and institutional records search conducted by Brian F. Smith and Associates (BFSA) for the 1.2-acre Hillel of San Diego Student Center – La Jolla Project, located at the intersections of La Jolla Village Drive, La Jolla Scenic Drive, and La Jolla Scenic Way in the University of California, San Diego area of the City of San Diego. The Hillel facility will consist of 6,600 square feet of offices, meeting rooms, study areas and other facilities to support the use of a student center. The parking lot will include 27 spaces and will be screened from the street views through a combination of new landscaping and partial height walls. The facility will be composed of three smaller individual structures situated around a central outdoor courtyard space. By designing three different structures, two one-story buildings and one two-story building, the project will more closely relate in scale to the adjacent single family residences along La Jolla Scenic Drive North.

As part of the preparation of environmental review documents required by the City of San Diego, a cultural resources assessment was required to document the extent of cultural sites within the project area and to evaluate the potential impacts to cultural sites by the development plans.

The initial archaeological study was conducted on September 11, 2003 and included an archaeological records search, a pedestrian survey of the project area, and a subsurface testing program. The testing program was conducted to assess the potential for buried archaeological material within the parcel. Testing included the excavation of 20 shovel test pits that were distributed across the entire project area. To bring the archaeological evaluation of the property up to current City cultural resource guidelines, an additional survey was conducted on November 7, 2007 and the archaeological records search was updated. A representative of the Kumeyaay Nation, Clint Linton of Red Tail Monitoring and Research, Inc. accompanied BFSA staff during the 2007 survey. The archaeological study was directed by Brian F. Smith. Subsequently, in 2010, the project was revised and the City required that the archaeological study be updated for a third time to reflect the revised project description and a current archaeological records search.

Institutional records searches were conducted at the South Coastal Information Center (SCIC) at San Diego State University (SDSU) in 2003, 2007, and again in 2010 (for the current report revision). A review of the combined archaeological records confirmed that 20 cultural resource sites are located within a one-mile radius of the project area, although no cultural resources have been recorded on the subject property. In addition, a Museum of Man records search was conducted on November 12, 2007 that reported 16 cultural resources sites located within a one-mile radius of the project area. No previously recorded sites were reported within the project boundary. A Sacred Lands File search was conducted by the Native American Heritage Commission on November 15, 2007 that failed to reveal any prerecorded Native American cultural resources in the immediate project area.

Based on the results of the study, no significant archaeological resources have been identified within the project area. The testing program revealed highly disturbed soils with modern trash debris present within a fill deposit. It appears that dirt and gravel were imported onto the lot and a portion of the parcel was leveled by previous grading activities. Because of the disturbed soil and lack of cultural resources, no further archaeological testing is recommended. Archaeological monitoring of the property is not recommended as a condition of project approval. All notes and other materials related to this project will be curated at the archaeological laboratory of BFSA in Poway, California.

2.0 UNDERTAKING INFORMATION/INTRODUCTION

The Hillel of San Diego Student Center – La Jolla Project is situated in the northern portion of the City of San Diego, California (Figure 2.0–1), in the community of La Jolla. The project boundary is depicted on the appropriate portion of the USGS *La Jolla* 7.5-minute topographic quadrangle (Figure 2.0–2) and the 800-foot-scale City Engineering Map (Figure 2.0–3). The property is situated in Township 15 South, Range 4 West, of the San Bernardino Meridian. The scope of work for this project included an archaeological study (survey and testing) and archaeological records searches. The archaeological study was required by the City of San Diego because of the density of archaeological sites within this area of La Jolla. The study was conducted in accordance with the California Environmental Quality Act (CEQA).

The proposed development consists of the construction of a 12,000-square-foot Jewish student center situated above a subterranean 68-space parking garage measuring 17,000 square feet in area. The student center will include a multi-purpose space for 200 people, general administration offices for Hillel staff, study rooms, student workrooms, library, and catering kitchen (Figure 2.0–4).

The archaeological field team on September 11, 2003 consisted of Brian F. Smith, Principal Investigator; Charles Callahan, Field Supervisor; James Clifford, Project Archaeologist; and, Field Technicians Jeff Szysmanski and Chris Powell. The project area was resurveyed on November 7, 2007 by Seth A. Rosenberg, Project Archaeologist, under the supervision of Brian Smith. Clint Linton of Red Tail Monitoring and Research, Inc. assisted with the survey as a representative of the Kumeyaay Nation. James Clifford and Seth Rosenberg drafted the text of the 2007 report, Melanie Lytle completed report editing, and Clint Callahan created the report graphics. The 2010 report revisions were prepared by Brian Smith and the final document was edited by Karen E. Doose with graphics revisions provided by Adrian Moreno.

Figure 2.0–1
General Location Map
The Hillel of San Diego Student Center-La Jolla Project

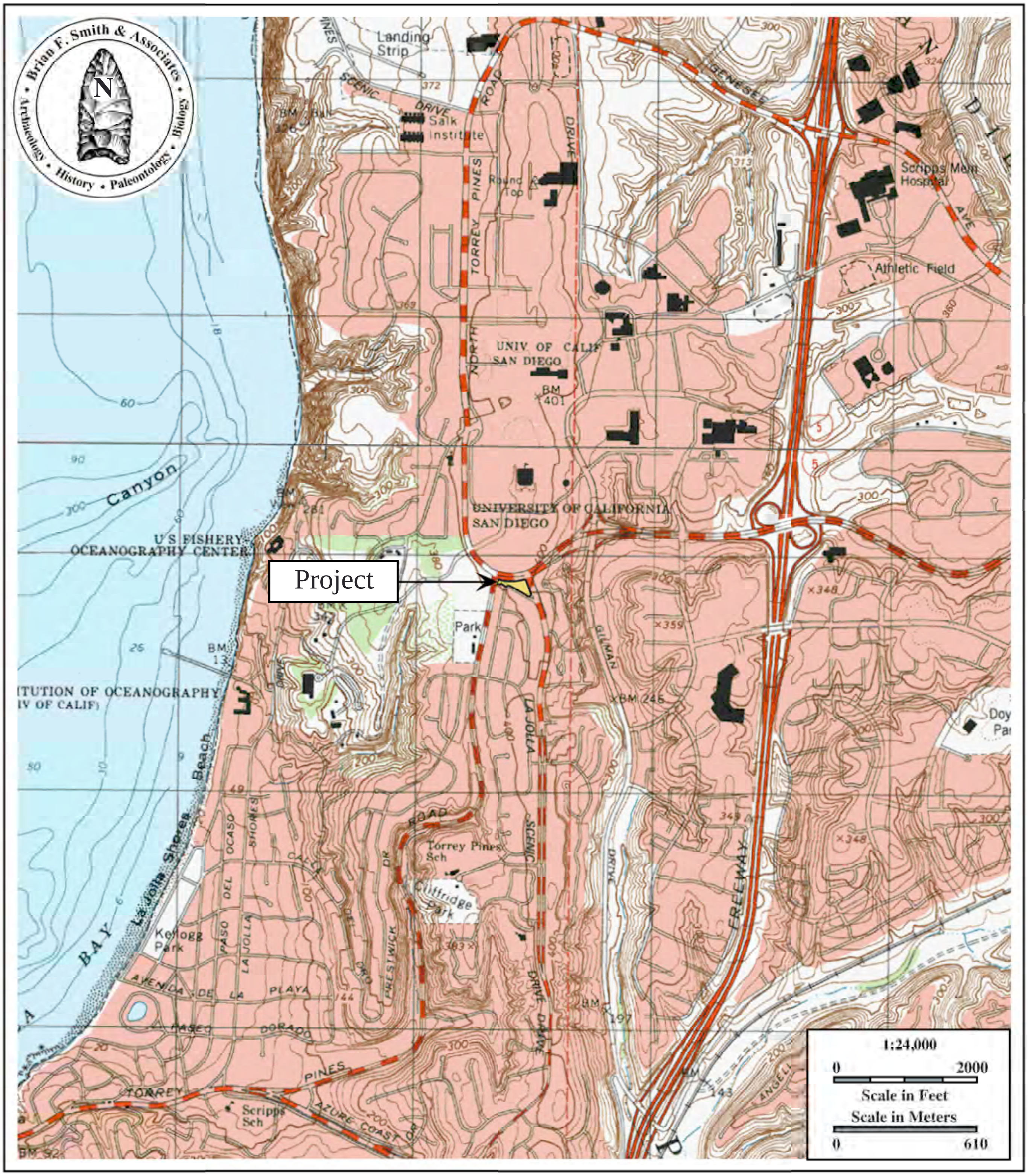

Figure 2.0–2
Project Location Map

The Hillel of San Diego Student Center-La Jolla Project

USGS *La Jolla* Quadrangle (7.5 minute series)

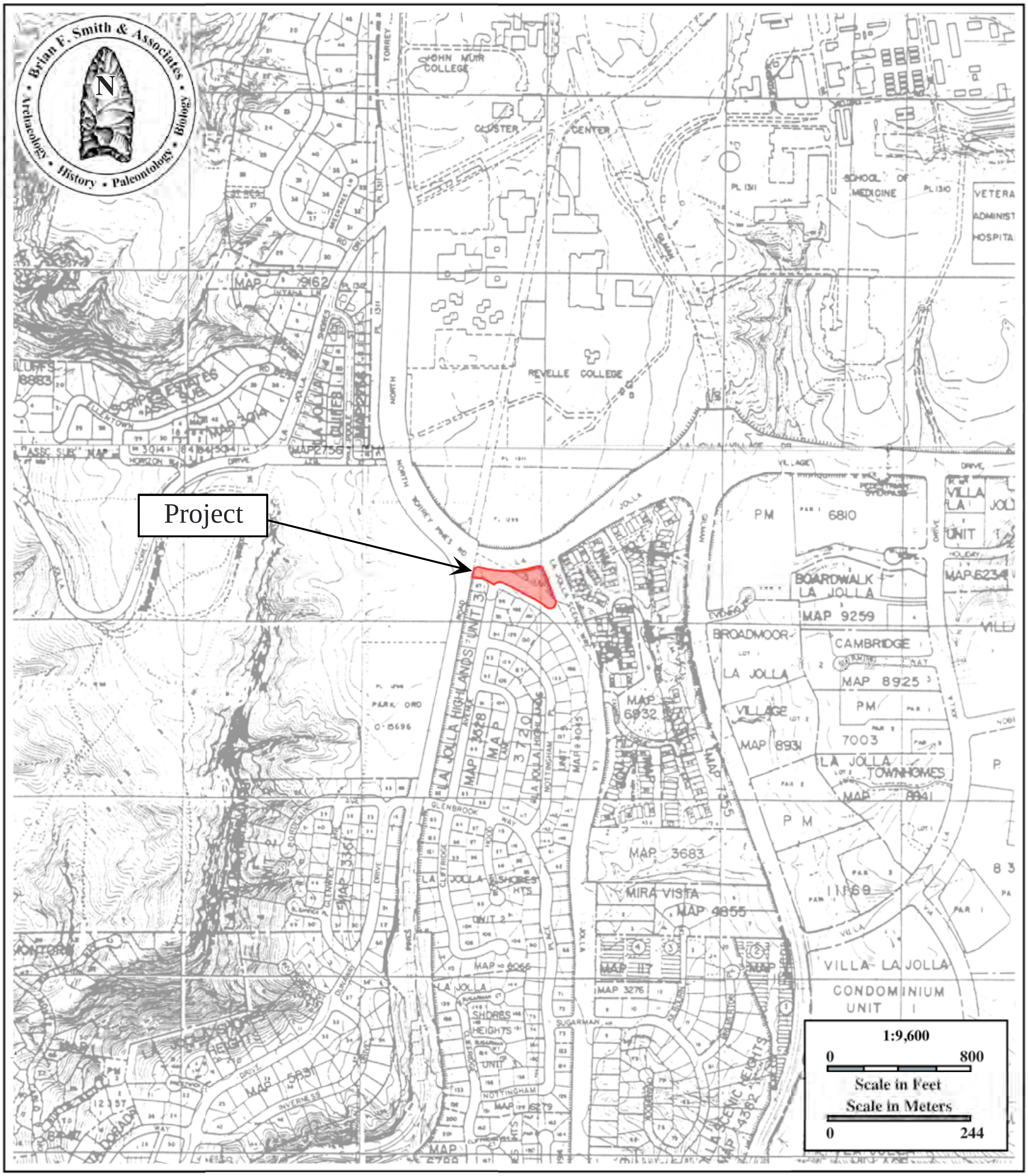

Figure 2.0–3
800' Scale Engineering Map
The Hillel of San Diego Student Center-La Jolla Project
Shown on the City of San Diego Engineering and Development Department 800' Scale Map

Figure 2.0–4
Project Development Map
The Hillel of San Diego Student Center-La Jolla Project

3.0 SETTING

The project setting includes both physical and biological contexts of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area. The following section discusses both the environmental and cultural settings of the study area, the relationship between the two, and the relevance of that relationship to the project.

3.1 Natural Setting

The 1.2-acre project area is located in the community of La Jolla in the City of San Diego, near the University of California, San Diego (UCSD). The parcel is situated on a marine-cut terrace at approximately 400 feet above mean sea level. The terrain is relatively flat, as most of the project area has been artificially flattened by grading activities. Soil in the immediate vicinity is characterized as Chesterton series soils that consist of well-drained fine sandy loams with a sandy clay subsoil (Bowman 1973). These soils are formed from sandstone that has weathered in place.

The biological setting observed in the area of the project consisted of a vegetative community dominated by non-native shrubs and grasses with some eucalyptus and Torrey pine trees, representing a disturbed landscape. Historically, the property may have contained species representative of the coastal sage scrub community (Beauchamp 1986).

Animals that inhabited the coastal mesas during prehistoric times include mammals such as rabbit, squirrel, gopher, mouse, rat, deer, and coyote, in addition to a variety of reptiles and amphibians. The estuary and cove food resources included a variety of waterfowl, fish, shellfish, and marine mammals that occupied the cove, estuary, and adjacent rocky headland. Fish in the cove would have included a variety of nearshore species such as sheephead (*Semicossyphus pulcher*), bass (*Serranidae* fam.), croakers (*Sciaenidae* fam.), and a variety of sharks and rays (*Chondrichthys* fam.) (Smith 1992; Winterrrowd and Cardenas 1987). Shellfish species that were available include abalone (*Haliotis* sp.), oysters (*Ostrea lurida*), and mussels (*Mytilus* sp.) along the rocky foreshore areas of the coastline, and species such as clams (*Chione* sp. and *Donax* sp.), scallops (*Argopecten* sp.), oysters (*Ostrea lurida*), and marine snails (*Astraea* sp.) in the cove.

The La Jolla area would have fostered a rich environment capable of supporting a moderately dense prehistoric population of hunter/gatherers, such as the La Jolla cultural horizon and the more recent Kumeyaay (Smith and Moriarty 1983, 1985). Such population densities likely required considerable foraging along the shoreline and in the surrounding drainages and mesas to sustain seasonal occupations. This would have included the area currently under study, as well as on the adjacent mesas. The institutional records searches substantiate prehistoric foraging sites in the vicinity of the project area.

Plate 3.0–1. Project overview, facing east.

Plate 3.0–2. Project overview, facing west.

3.2 Cultural Setting

The area of western San Diego County has a rich and extensive record of both prehistoric and historic human activity. The cultures that have been identified in the general vicinity of the project area include the Paleo-Indian manifestation of the San Dieguito Complex, the Archaic Stage and Early Milling Stone horizons represented by the La Jolla Complex, and the Late Prehistoric Kumeyaay Native Americans. Following the Hispanic Intrusion into the region (1769), the Presidio of San Diego, the Mission San Diego de Alcalá, and the Pueblo of San Diego were established and the project area was possibly used in conjunction with the agricultural activities of the mission until the period of mission secularization. The pastoral activities of the Mexican Period (1822 to 1846) likely included use of the areas near the project for grazing purposes. Farming also blossomed and gradually replaced cattle ranching in many of the coastal areas. A brief discussion of the prehistoric and historic cultural elements documented for the project area is provided in the following subsections.

3.2.1 Prehistory

The prehistoric record of San Diego County has been documented in many reports and studies, several of which represent the earliest scientific works concerning the recognition and interpretation of the archaeological manifestations present in this region. Malcolm Rogers initiated the recordation of sites in the area during the 1920s and 1930s, using his field notes to construct the first cultural sequences based upon artifact assemblages and stratigraphy (Rogers 1966). Subsequent scholars expanded the information gathered by Rogers and offered more academic interpretations of the prehistoric record. Moriarty (1966, 1967, 1969), Warren (1964, 1966), and True (1958, 1966) all produced works that critically defined the various cultures present in this region (Moratto 1984).

The San Dieguito Complex

The San Dieguito Complex represented the remains of a group of people who occupied sites in this region between 10,000 and 8,000 years before present (YBP), and who were related to or contemporaneous with the Paleo-Indian groups in the Great Basin area and the Midwest. The artifacts recovered from San Dieguito Complex sites duplicate the typology attributed to the Western Pluvial Lakes Tradition (Moratto 1984; Davis et al. 1969). These artifacts generally include scrapers, choppers, bifaces and large projectile points, but few or no milling tools. Tools recovered from sites of the San Dieguito Complex, along with the general pattern of their site locations, indicate that the San Dieguito Complex people were a wandering, hunting and gathering society (Moriarty 1969; Rogers 1966).

The San Dieguito Complex is the least understood of the cultures that have inhabited the San Diego County region. This is primarily because of the fact that San Dieguito sites rarely contain stratigraphic information or datable material. Currently, controversy exists among researchers that centers upon the relationship of the San Dieguito Complex and the subsequent cultural manifestation in the area, the La Jolla Complex. Firm evidence has not yet been discovered to indicate whether the San Dieguito Complex "evolved" into the La Jolla Complex, or if the La Jolla Complex people moved into the area and assimilated with the San Dieguito Complex people, or if the San Dieguito Complex people retreated from the area because of environmental or cultural pressures. Recent identification of the San Dieguito assemblage as an inland manifestation of the La Jolla Complex may clarify the relationship of coastal and inland assemblages as a function of lithic sources and subsistence media (Byrd and Serr 1993; Pigniolo 1996), but the origins of the earliest local inhabitants remains unclear.

The La Jolla Complex

At approximately 9,000 to 8,500 YBP, a major cultural tradition was established in the San Diego region, primarily along the coast. The shoreline at that time was located farther west than at present, because of the lowering of sea level during the end of the last ice age (Pierson et al. 1987). This cultural tradition has been locally called the La Jolla Complex (the Archaic), and radiocarbon dates from sites attributed to this culture span a period of over 7,000 years. The La Jolla Complex is best recognized for its pattern of shell middens and grinding tools closely associated with the marine resources, and flexed burials (Shumway et al. 1961; Smith and Moriarty 1985). Recently, increasing numbers of inland sites have been identified as dating to the Archaic Period and focused on terrestrial subsistence (Cardenas 1986; Smith 1996; Raven-Jennings and Smith 1999a and b).

The tool typology of the La Jolla Complex displays a wide range of sophistication in the lithic manufacturing techniques used to create the tools found at their sites. Scrapers, the dominant flaked tool type, were created either by splitting cobbles or by finely flaking quarried material. After about 8,200 YBP, milling tools appear in La Jolla Complex sites. Inland sites of the La Jolla Complex generally lack marine-related food refuse and contain large quantities of milling tools and food bone. The lithic tool assemblage shifts slightly to encompass the procurement and processing of terrestrial resources, suggesting seasonal migration from the coast to the inland valleys (Smith 1986).

The Late Prehistoric Kumeyaay Native Americans

Approximately 1,100 YBP, the Kumeyaay Native Americans, a Yuman-speaking people from the Colorado River Basin region, moved into San Diego County. Firm evidence has not yet been recovered to indicate whether the La Jolla Complex people were present when the Kumeyaay migrated into the coastal zone, although stratigraphic information recovered from site SDI-4,609 in Sorrento Valley suggests a hiatus of 650 ± 100 years between the occupation of the coastal area by the La Jolla Complex (1,730 ± 75 YBP is the youngest date for the La Jolla Complex at SDI-4,609) and Late Prehistoric cultures (Smith and Moriarty 1983).

The Kumeyaay were a seasonal hunting and gathering people, with cultural elements that were very distinct from the La Jolla Complex culture, including cremation, the use of bows and arrows, and adaptation to the use of the acorn as a main food staple (Moratto 1984). Along the coast, the Kumeyaay made use of the marine resources available by fishing and collecting shellfish for food. Plant food resources that were seasonally available and game were also sources of nourishment for the Kumeyaay. By far, the most important food resource for these people was the acorn. The acorn represented a storable surplus, which in turn allowed for seasonal sedentism and its attendant expansion of social phenomena.

3.2.2 History

Exploration Period (1530-1769)

The historic period around San Diego Bay began with the landing of Juan Rodriguez Cabrillo and his men in 1542 (Chapman 1925). Sixty years after the Cabrillo expeditions (1602-1603), an expedition under Sebastian Vizcaíno made an extensive and thorough exploration of the Pacific Coast. Although the voyage did not extend beyond the northern limits of the Cabrillo track, Vizcaíno had the most lasting effect on the nomenclature of the coast. Many of the names he gave to places have survived, whereas nearly all of Cabrillo's have faded from use. Cabrillo gave the name of "San Miguel" to the first port where he stopped in what is now the United States; 60 years later, Vizcaíno changed the name to "San Diego" (Rolle 1969).

Spanish Colonial Period (1769-1821)

The Spanish occupation of the claimed territory of Alta California took place during the reign of King Carlos III of Spain (Engelhardt 1920). A powerful representative of the king in Mexico, Jose de Gálvez, conceived the plan to colonize Alta California and thereby secure the area for the Spanish crown (Rolle 1969). The effort involved both a military and religious contingent, where the overall intent of establishing forts and missions was to gain control of the land and the native inhabitants through conversion. Actual colonization of the San Diego area began on July 16, 1769 when the first Spanish exploring party, commanded by Gaspar de Portolá (with Father Junípero Serra in charge of religious conversion of the native populations), arrived by the overland route to San Diego to secure California for the Spanish crown (Palou 1926). The natural attraction of the harbor at San Diego and the establishment of a military presence in the area solidified the importance of San Diego to the Spanish colonization of the region and the growth of the civilian population. Missions were constructed from San Diego to as far north as San Francisco. The mission locations were based on a number of important territorial, military, and religious considerations. Grants of land were made to persons who applied, but many tracts reverted back to the government for lack of use. As an extension of territorial control by the Spanish empire, each mission was placed so as to command as much territory and as large a population as possible. While primary access to California during the Spanish Period was by sea, the route of El Camino Real served as the land route for transportation, commercial, and military activities within the colony. This route was considered to be the most direct path between the missions (Rolle 1969; Caughey 1970). As increasing numbers of Spanish and Mexican peoples, as well as the later Americans during the Gold Rush, settled in the area, the Native American populations diminished as they were displaced or decimated by disease (Carrico and Taylor 1983).

Mexican Period (1821-1846)

On September 16, 1810, the priest Father Miguel Hidalgo y Costilla started a revolt against Spanish rule. He and his untrained Native American followers fought against the Spanish, but his revolt was unsuccessful and Father Hidalgo was executed. After this setback, Father José Morelos led the revolutionaries, and he too failed and was executed. These two men are still symbols of Mexican liberty and patriotism. After the Mexican-born Spanish and the Catholic Church joined the revolution, Spain was finally defeated in 1821. Mexican Independence Day is celebrated on September 16 each year, the anniversary of the start of Father Hidalgo's revolt. The revolution had repercussions in the northern territories, and by 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization. Without proper maintenance the missions quickly began to disintegrate, and after 1836, missionaries ceased to make regular visits inland to minister the needs of the Native Americans (Engelhardt 1920). Large tracts of land continued to be granted to persons who applied for them or who had gained favor with the Mexican government. Grants of land were also made to settle government debts. The Mexican government was also called upon to reaffirm some older Spanish land grants shortly before the Mexican-American War of 1846 (Moyer 1969).

Anglo-American Period (1846-Present)

California was invaded by United States troops during the Mexican-American War of 1846–1848. The acquisition of strategic Pacific ports and California land was one of the principal objectives of the war (Price 1967). At the time, the inhabitants of California were practically defenseless, and they quickly surrendered to the United States Navy in July 1847 (Bancroft 1886).

The cattle ranchers of the "counties" of southern California had prospered during the cattle boom of the early 1850s. They were able to "reap windfall profit…pay taxes and lawyer's bills…and generally live according to custom" (Pitt 1966). Cattle raising soon declined, however, contributing to the expansion of agriculture. With the passage of the "No Fence Act," San Diego's economy shifted from stock raising to farming (Robinson 1948). The act allowed for the expansion of unfenced farms, which was crucial in an area where fencing material was practically unavailable. Five years after its passage, most of the arable lands in San Diego County had been patented as either ranchos or homesteads, and growing grain crops replaced raising cattle in many of the County's inland valleys (Blick 1976; Elliott 1883 [1965]).

By 1870, farmers had learned to dry farm and were coping with some of the peculiarities of San Diego County's climate (*San Diego Union*, February 6, 1868; Van Dyke 1886). Between 1869 and 1871, the amount of cultivated acreage in the County rose from less than 5,000 acres to more than 20,000 (*San Diego Union*, January 2, 1872). Of course, droughts continued to hinder the development of agriculture (Crouch 1915; *San Diego Union*, November 10, 1870; Shipek 1977). Large-scale farming in San Diego County was limited by a lack of water and the small size of arable valleys. The small urban population and poor roads also restricted commercial crop growing. Meanwhile, cattle continued to be grazed in parts of inland San Diego County. In the Otay Mesa area, for example, the "No Fence Act" had little effect on cattle farmers because ranches were spaced far apart and natural ridges kept the cattle out of nearby growing crops (Gordinier 1966).

During the first two decades of the twentieth century, the population of San Diego County continued to grow. The population of the inland part of the County declined during the 1890s, but between 1900 and 1910, it rose by about 70 percent. The pioneering efforts were over, the railroads had broken the relative isolation of southern California, and life in San Diego County became similar to other communities throughout the west. After World War I, the history of San Diego County was primarily determined by the growth of San Diego Bay. In 1919, the United States Navy decided to make the bay the home base for the Pacific Fleet (Pourade 1967). During the 1920s, the aircraft industry also established itself at the bay (Heiges 1976). The establishment of these industries led to the growth of the County as a whole; however, most of the civilian population growth occurred in the north county coastal areas, where the population almost tripled between 1920 and 1930. During this time period, the history of inland San Diego County was subsidiary to that of the City of San Diego, which had become a Navy center and industrial city (Heiges 1976). In inland San Diego County, agriculture became specialized, and recreational areas were established in the mountain and desert areas. Just before World War II, urbanization began to spread to the inland parts of the County.

History of the La Jolla Area

A limited research effort was initiated in order to characterize the circumstances of the early development of La Jolla so that the current project could be placed in context with the surrounding community. Several early land developments contributed to the overall disturbance to the major prehistoric sites in the area of the project. However, small development projects continuously encounter pockets of cultural sites that have survived grading and construction impacts over the years.

The origin of the name La Jolla, most researchers agree, is a variation of the original "La Hoya," literally translated from Spanish as "pit, hole, grave, or valley." The equivalent American translation is "river basin" (Castillo and Bond 1975). The City Surveyor, James Pascoe, spelled it "La Joya" on his map of city land in 1870, which translates as "the jewel." The location of La Hoya (or La Joya) was consistently shown as the canyon in which the southern portion of Torrey Pines Road is located today. The first post office was established on February 28, 1888 and closed on March 31, 1893, but reopened as "Lajolla" (one word) on August 17, 1894. On June 19, 1905, the name of this post office was changed to "La Jolla" (two words) (Salley 1975).

The first purchase of Pueblo Lands in this area occurred on February 27, 1869, when the City of San Diego sold Pueblo Lot 1261 to Samuel Sizer. On the same day, the City sold Pueblo Lot 1259 to Daniel Sizer. These lots sold for $1.25 per acre. Both lots were located south of "La Hoya Valley." The San Diego Union (March 31, 1869) referred to the canyon as "La Hoya" when describing Sizer's agricultural development to the south. By the 1870s, excursions to the point and cove were offered by the Horton House in their Concord Coach, a stagecoach drawn by four horses (*San Diego Union*, August 9, 1932).

The boom of the 1880s extended to La Jolla in the form of the construction of a hotel and rental cottages (Randolph 1955). Initially, water supplies were unreliable, consisting of only two sources; a small well in Rose Canyon and a small pipeline connected to the Pacific Beach water supply. Reliable transportation to La Jolla came with the extension of the San Diego, Old Town, and Pacific Beach Railway to La Jolla in 1894. This narrow-gauge railroad was responsible for bringing passengers and prefabricated cottages (on flat cars) to the growing community (Randolph 1955). The railroad was dismantled in 1919, but not before an unsuccessful experiment with a gasoline-powered rail car (known locally as the "Red Devil") was conducted.

As the number of residences and businesses increased in La Jolla, so did the need for public services. On July 10, 1888, the San Diego City Council passed an ordinance providing for the disposal for garbage, night soil, dead animals, ashes, and rubbish (Document 101817). In 1909, natural gas was brought to La Jolla, and in 1911 electricity was available to the community (Randolph 1955). An electric railway provided service to La Jolla between 1924 and 1940. In 1918, street paving began, and by 1922, the Girard Street business section was completely paved.

Visitors to La Jolla enjoyed the park at Alligator Head from the earliest days of stagecoach excursions. Trees and shrubs were planted around the park, but a months-long failure of the water supply during 1890 caused many of the plants to die. During the 1890s, the park was also the focus of construction for guest cottages and hotels, such as the La Jolla Beach House, which indicates that developmental impacts to prehistoric archaeological resources, as well as impacts from increased visitation, occurred from this early period. Randolph (1955) wrote about a Native American settlement at La Jolla (probably SDI-39/W-1), which was supported by Native American informants and by the recovery of several artifacts including metates, stone utensils, and other relics from La Jolla Cove. As the development of La Jolla continued, other subdivisions and plots were converted from farming and/or grazing to residential use. The "La Jolla Vista" subdivision of 1923, the location of the current project, was one of those subdivisions (San Diego County Engineering Map Records).

The earliest notable development in this area was the construction of the Spindrift Inn southwest of the subject property in the 1920s. Also at this time, the initial development of the La Jolla Beach and Tennis Club (originally the La Jolla Beach and Yacht Club) took place to the southwest of the subject parcel. These early facilities gained in popularity and were successful in spite of the Depression that gripped the Country between the stock market crash of 1929 and the opening of World War II. The La Jolla Vista subdivision, on the other hand, was slow in building to capacity, possibly because of the real estate bust of 1925-1926 (Brandes et al. 1999).

Two military training camps came to La Jolla during World War II, Camp Callan and Camp Elliot. In addition, two emplacements on Mount Soledad and one on the beach in La Jolla were established during the war years (Pierson 2001). Although these military installations were replaced after the Korean War with the University of California Campus and the expansion of Scripps Institution of Oceanography, the economic base of La Jolla grew to include a substantial business element. Today, this trend continues with the ever-present tourism playing a significant part in the local economy. Throughout the history of this community, the residential population has included both permanent and seasonal residents, many of whom have achieved a significant degree of financial and historical notoriety and success.

4.0 RESEARCH DESIGN

In addition to the intensive survey of the project area for unidentified cultural resources, BFSA conducted a testing program for identified cultural resources within the project area. The scope of work included an evaluation of significance for a previously unrecorded multi-component deposit. Statutory requirements of CEQA and subsequent legislation (Section 15064.5), as well as the City of San Diego guidelines were followed in evaluating the significance of the cultural resource. Specific definitions for archaeological resource type(s) used in this report are those established by the State Historic Preservation Office (SHPO 1995). For a cultural resource to be eligible for nomination to the California Register of Historical Resources (California Register), it must be important at the local, state, or national levels based upon one of the following four criteria:

1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of history and cultural heritage of California and the United States.
2. It is associated with the lives of persons important to the nation or to California's past.
3. It embodies the distinctive characteristic of a type, period, region, or method of construction; it represents the work of an important creative individual; or it possesses high artistic values.
4. It has yielded, or may be likely to yield, information important to the prehistory or history of the state and the nation.

The archaeological study of the project area also conformed to City of San Diego Cultural Resource Guidelines and project specific requirements for the City Planning Department. According to the City's guidelines, a cultural resource is considered significant when it:

1. Exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering, or architectural history;
2. Is identified with person or events significant in local, state, or national history;
3. Embodies distinctive characteristics of a style, type, period, or method of construction, is a valuable example of the use of indigenous materials or craftsmanship, or is representative of a notable work of an acclaimed builder, designer, or architect;

4. Is an archaeological, paleontological, botanical, geological, topographical, ecological, or geographical site, which has the potential of yielding information of scientific value; or,
5. Is a geographically definable area possessing concentration of site, buildings, structures, improvements, or objects linked historically through location, design, setting, materials, workmanship, feeling, and/or association, in which the collective value of the improvements may be greater than the value of each individual improvement.

The significance evaluation program for the project area required subsurface testing of the parcel. Primary objectives such as the determination of site boundaries, depth of any archaeological deposit, stratigraphy, integrity, content, and spatial distribution of any subsurface artifacts and cultural ecofacts, were essential to the current test phase/significance evaluation program. Normally, a research orientation transcends these goals by expanding the meaning of information extracted from a site through the use of archaeological questions important in current scientific research; regional and temporal research issues should be taken into consideration when posing such questions. However, because the cultural material identified during survey represents only an isolated surface deposit combined with the small size of the project area, the research design will be limited in scope. The topics and associated research questions posed below address concerns specific to the project.

Significance

Determination of significance for archaeological sites typically is associated with the potential of a site to yield or likely yield information important to the prehistory of the area. Two very general but common research topics in San Diego County are cultural sequence and subsistence strategy.

In looking for and identifying separate cultural horizons, the premise can be that different people occupied the area at different times, or it may be that a group or groups changed enough through time such that they appear to be different in retrospect. A tripartite theoretical cultural sequence has been the traditional operational hypothesis for San Diego County (Moriarty 1966; Moratto 1984). The *San Dieguito Complex* sequence has been presented as the oldest, followed by the *La Jolla Complex* or Archaic period, followed by the Late Prehistoric *Luiseño* in northwestern San Diego County and *Diegueño* (Kumeyaay) in southern and eastern San Diego County. While a substantial amount is known about the Late Prehistoric peoples because of numerous sites with good preservation and historical accounts (ethnohistory), the earlier occupants are more enigmatic because of a lack of preservation and ethnohistory. The earliest residents and their age and origins have been, and continue to be, the subject of much debate.

The presence of artifact types thought to be representative of specific cultural horizons would give an indication as to whether a cultural assignment can be attributed to the project area. Without a cultural affiliation, it could be argued that the research potential of this deposit is particularly limited. Diagnostic artifacts include small arrow points and ceramics for the Late Prehistoric Period and dart points and an abundance of portable milling tools for the Archaic Period. The San Dieguito Complex has been more difficult to assign temporally diagnostic artifacts, but they have included the crescentic, elongated bifacial knives and intricate leaf-shaped points. If no diagnostic artifacts are present, the potential for datable material (charcoal, marine shell, or animal bone) should be determined.

Many of the earliest La Jolla Complex sites are located in northern portions of San Diego County and are the same sites as those reported for the San Dieguito Complex (Rancho San Diego, Agua Hedionda, and the Harris Site). Both cultures, as well as the Late Prehistoric, made use of coastal and inland resources including plants, animals, shellfish, and fish. One of the primary differences between these cultures is the lack of milling implements attributed to the San Dieguito Complex occupation of these sites, indicating that grinding was not a prominent aspect of the economy (Moriarty 1967; Kaldenberg 1982; Gallegos and Carrico 1984). Because of the similarity of the resources procured during the San Dieguito and La Jolla periods, discriminating between the subsistence practices is central to the issue of adaptive change through the early prehistory of San Diego County. The Late Prehistoric Period, on the other hand, comprised the widest range of resource utilization. In particular, it is necessary to document, whenever possible, the actual resources taken through the collection and analysis of ecofactual data and tool varieties. Site characteristics that could perhaps contribute to future research regarding subsistence strategies include marine shell, animal bone, bone tools, and a wider variety of lithic materials and tool types.

Research Questions:

- What cultural groups are represented based on diagnostic artifacts? Is datable material present within the project area?
- Based on the testing program, would the culturally diagnostic information available at the site be able to contribute to future research of the site and other sites in the region?
- How do the testing results for this deposit compare to other archaeological investigations in the region?
- What activities were undertaken within the project area, and what resources were exploited?
- Can faunal or marine shellfish remains provide information about the subsistence strategy of the occupants and, perhaps, the season of use of the site?
- In what manner were subsistence resources processed and prepared?

- Based on the testing program, would the remains at the site be able to contribute to future research regarding prehistoric subsistence strategies in the region?

Integrity

In order for the site to be considered significant, it must be established that enough of the deposit remains to retain integrity. This is particularly true in the case of this project, where the deposit being tested is located within a heavily disturbed area from urban development. For example, road construction along the project's entire periphery may have had additional impacts to site integrity. According to the California Register, *integrity* is defined as, "...the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance."

The surface of the site should be investigated for any evidence of ground disturbances, perhaps resulting in uneven ground surfaces compared to adjacent lots, evidence of the movement of soil, or vehicle activity. All subsurface excavations should be thoroughly investigated and their profiles and soil descriptions compared to ascertain the existing state of the stratigraphy of the site. The soil profiles should then be compared to the soil profiles observed during the data recovery of the adjacent property. Any observed disturbances should be weighed against the quality and quantity of data that was gathered during the current testing program.

Research Questions:

- How has the project area been disturbed?
- Does this deposit retain adequate integrity to yield important information?
- Are observed disturbances superficial or have they impacted the deposit to a greater depth?
- How does the existing topography compare to adjacent properties?
- Have any disturbances compromised the ability to analyze material culture contextually?

Data Needs:

1. Surface observations and recordation (preferably through photographs as well as field notes).
2. Subsurface test excavations that would determine the presence and extent of any subsurface deposits (shovel tests), as well as document the qualitative and quantitative elements of the deposit (test unit[s]).
3. Documentation of soil profiles (soil conditions and stratification).
4. Recovery of artifacts to be quantified and cataloged by artifact type.
5. Recovery of ecofacts to be quantified and cataloged by ecofact type and, if possible, by scientific classification.

6. Examination of the horizontal and vertical distribution of artifact recovery.
7. Comparison of current testing results with the adjacent data recovery investigation.

5.0 METHODOLOGY

The archaeological program for the current project consisted of an archaeological survey and testing program, and archaeological records searches. This archaeological study conformed to the City of San Diego Historical Resources Guidelines and project-specific requirements of the City. Statutory requirements of CEQA were followed in evaluating potential impacts.

5.1 Field Methodology

The archaeological surveys took place on September 11, 2003 and November 7, 2007. The survey of the property included an intensive archaeological reconnaissance consisting of a series of parallel transects, spaced at five meter intervals, which covered the entire 1.2 acres. The archaeological testing program consisted of the collection of surface artifacts and the excavation of a series of 20 shovel test pits across the entire project area. The shovel test pits were excavated to test for the presence of any subsurface cultural deposit. The shovel test pit dimensions measured 50 by 30 centimeters and were excavated to depths of 50 centimeters or until native sterile soils were encountered. Soils removed from the shovel tests were screened through one-eighth-inch mesh screens.

5.2 Archaeological Records Searches

An archaeological records search was requested by BFSA from the SCIC at SDSU and from the Museum of Man, the results of which were reviewed by BFSA. The records searches were updated in February 2010. The review consisted of identifying any prerecorded cultural resources within a one-mile radius of the project area. In addition, the boundaries of previously conducted archaeological inventories were reviewed to determine if the project area, or portions thereof, has been previously surveyed by archaeologists. A summary of the results is provided in Section 6.1 of this report, while the complete records search results are provided in Appendix I.

5.3 Native American Consultation

A search of the Sacred Lands File was requested from the Native American Heritage Commission to identify any cultural resources within, or in proximity to the project area. The search failed to indicate the presence of cultural resources within a one-mile radius of the project (Appendix II). Based on current City of San Diego guidelines, the 2007 survey of the property included the participation of Clint Linton of Red Tail Monitoring and Research, Inc, a representative of the Kumeyaay Nation.

6.0 REPORT OF FINDINGS

6.1 Archaeological Records Search Results

Archaeological records searches for the project were conducted at the SCIC at SDSU and the Museum of Man in 2003 and updated in 2007 and 2010. These record searches revealed that no previously recorded cultural resources are located within the project boundary. The SCIC reported 20 sites within one mile of the project area, although several of these sites have been combined (Table 6.0–1). The Museum of Man reported 16 sites (the same as those reported by SCIC) within one mile of the project area. The prehistoric sites in the vicinity of the project area consist of habitation and resource extraction and processing locations generally associated with both the Archaic and Late Prehistoric subsistence strategies. According to the SCIC records search, 89 studies have been previously conducted within the project area, two of which overlay the project area (Gallegos et al. 1989 and Hanna 1980). The Musuem of Man records search results reported 14 studes within one mile of the project area. The complete results of the records searches are provided in Appendix I.

Table 6.0-1
Cultural Resources Located within One Mile of the Project Area

Sites	Descriptions
SDI-201	No information on site form
SDI-525	Habitation site with hearths and human burials
SDI-4669	Habitation site with hearths and human burials
SDI-4623/4670	Habitation site with hearths and human burials
SDI-5456	Lithic scatter with milling
SDI-7952/8468/8469	Temporary camp with historic component
SDI-8470	Habitation site with historic component
SDI-8471	Lithic and shell scatter
SDI-11019	Temporary camp with historic component
SDI-11075	Habitation site
SDI-16093	Lithic scatter
SDI-17373	Lithic and shell scatter
SDI-17384	Habitation site
SDI-18610	Shell scatter with one fire-affected rock
SDI-19605	Lithic scatter with milling
37-026509	Isolated sandstone bowl
37-017276	Historical structure

6.2 Survey and Testing Results

The initial survey of the property was conducted by BFSA on September 11, 2003 and focused on the inspection of the entire 1.2-acre parcel. The survey was repeated on November 7, 2007 to include a Native American representative. The entire parcel was inspected for artifacts, ecofacts, and features. Limitations on the archaeological program included site disturbances resulting from previous grading activities and dumping of trash and gravel within the project area. The majority of the property was disturbed by previous grading activities. Ground visibility was good because of a lack of vegetation, but soil that was visible revealed little evidence of cultural resources. Three isolated artifacts observed on the surface of the parcel were mapped and collected. The artifacts consisted of three small pieces of lithic production waste. Two of the flakes were made from medium-grained metavolcanic material, while the remaining flake was made from quartzite. Detailed locational information for the surface artifacts recovered is provided in Table 6.0–2. In addition to the isolated surface artifacts, a very sparse scatter of less than ten small pieces of marine shell was observed on the surface of the parcel. The shells consisted primarily of *Chione* sp. fragments and other unidentifiable specimens. Because the shell fragments were so sparsely and widely scattered, they were noted but not collected.

Because of the number of previously recorded sites in the immediate vicinity of the project area and the extensive use of this area by prehistoric groups, as noted by the recorded presence of major occupation sites on Torrey Pines Mesa, the potential for cultural materials on this property was sufficient enough to mandate a subsurface assessment. The subsurface testing was completed on September 11, 2003. Datum A was established near the center of the project area at a point from which the surface artifacts and excavations could be measured. A total of 20 shovel test pits were excavated within the parcel. The excavation of the shovel tests demonstrated that the soils on the property are mixed and heavily disturbed. No cultural resources were recovered from the shovel tests, and many of the excavations contained pieces of modern trash. The locations of the datum, surface collections, and excavations are shown in Figure 6.0–1. Detailed locational information for the shovel test excavations is provided in Table 6.0–3.

The archaeological survey and testing program did not result in the discovery of any archaeological sites or features. However, three isolated artifacts were collected from the surface of the project area. No cultural deposits were located and no historic sites or structures were identified within the project area.

<u>Figure 6.0–1</u>
Excavation Location Map

(*Deleted for Public Review; Bound Separately*)

<u>Table 6.0–2</u>
Surface Recovery Data

Recovery Location	Location from Datum A (Azimuth/Range)	Quantity	Recovery	Material	Cat. No.
1	292°/69 Feet	1	Flake	Quartzite	1
2	290°/108 Feet	1	Flake	MGM	2
		1	Flake	MGM	3

<u>Table 6.0–3</u>
Shovel Test Excavation Data

Shovel Test	Location from Datum A (Azimuth/Range)	Depth	Recovery
1	291°/238 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
2	291°/170 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
3	291°/105 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
4	275°/56 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
5	323°/63 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery

<u>Table 6.0–3 cont'd.</u>
Shovel Test Excavation Data

Shovel Test	Location from Datum A (Azimuth/Range)	Depth	Recovery
6	191°/29 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
7	12°/20 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
8	9°/60 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
		30-40 cm.	No Recovery
9	281°/109 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
10	306°/107 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
		30-40 cm.	No Recovery
11	101°/97 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
12	127°/123 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
13	0°/0 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
		30-40 cm.	No Recovery

Table 6.0–3 cont'd.
Shovel Test Excavation Data

Shovel Test	Location from Datum A (Azimuth/Range)	Depth	Recovery
14	140°/109 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
15	123°/60 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
16	69°/44 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
17	46°/91 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
18	80°/87 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
19	112°/110 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery
20	127°/162 Feet	0-10 cm.	No Recovery
		10-20 cm.	No Recovery
		20-30 cm.	No Recovery

7.0 MANAGEMENT CONSIDERATIONS

The archaeological study at the Hillel of San Diego Student Center – La Jolla Project indicated that no significant cultural resources are present within the project area. Therefore, the proposed project will not have an impact on any cultural resources, and no further archaeological considerations are recommended. Over the course of time, during which this project was revised and updated, cultural resources studies were completed; however, no additional or new archaeological issues were identified. The property does sit within an area known to contain significant archaeological sites; however, this particular location has not produced any data to indicate that intact cultural deposits are present.

8.0 CERTIFICATION

The information provided in this document is correct, to the best of my knowledge, and has been compiled in accordance with specific criteria contained in CEQA and the City of San Diego Historical Resources Guidelines.

Brian F. Smith Principal Investigator	February 10, 2010 Date

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APPENDIX I

Archaeological Records Search

Deleted for public review; bound separately

APPENDIX II

NAHC Sacred Lands File Search Results

Deleted for public review; bound separately

APPENDIX III

Confidential Map

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POTENTIAL HISTORIC REVIEW

II. SUPPLEMENTAL SUBMITTAL REQUIRMENTS

TABLE OF CONTENTS:

COUNTY ASSESSOR
SAN DIEGO CO. CALIFORNIA

RESIDENTIAL BUILDING RECORD

ADDRESS 8976 CLIFFRIDGE AVE

PARCEL 344-131-1
SHEET 1 OF 1 SHEETS

D75

DESCRIPTION OF BUILDING

CLASS & SHAPE: ~~D7.0~~ B, ~~D7.5~~ B

ARCHITECTURE: \Stories

TYPE

Use		Design
X	Single	X
	Double	
	Duplex	
	Apartment	
	Flat-Court	
	Motel	
	Units	

CONSTRUCTION

	Light
	Sub-Standard
X	Standard
	Above-Standard
	Special

FOUNDATION

Y	Concrete
	Reinforced
	Brick
	Wood
	Piers
	Light / Heavy

STRUCTURAL

X	Frame
X	2"x4"-16"
	Sheathing
	Concrete Block
	B.& B. / T.& G.
	Brick
	Adobe
X	Floor Joist:
X	1st: 2"x6"-16"
	2nd: "x "-
Y	Sub-Floor
	Concrete Floor
	Insulated Ceilings
	Insulated Walls

EXTERIOR

½	Stucco on LW
	Siding "x "
	Shingle
	Shake
½	B.& B. / T.& G.
	Brick
	Stone

WINDOWS

	D.H.
X	Casement
X	Metal Sash
X	Screens

ROOF

	Flat	/6 Pitch
	Gable	/6
X	Hip	4/6 M
	Shed	/6
	Cut Up	
	Dormers	
X	Raft. 2"x6"-24"	
	Gutters	
Y	Shingle	
	Shake	
	Tile	
	Tile Trim	
	Compo.;	
	Compo. Shingle	

LIGHTING

Wiring

	K.T.		Conduit
	B.X.	X	Cable

Fixtures

	Few		Cheap
	Avg.		Med.
X	Many	X	Special

PLUMBING

	Poor / Std. / ^ Spec.
X	Sink
X	Laundry
X	Water Htr.-Auto.
	Water-Softner

AIR CONDITION

Y	Heating	Cooling
X	Forced	Clean'g
	Gravity	Humid.
	Wall Unit	
	Floor Unit	
	Zone Unit	
X	Control-	
	Oil Burner	
	M-B.T.U.	
X	Fireplace	

ROOM AND FINISH DETAIL

ROOMS	Floors B	Floors 1	Floors 2	Floor Finish Material	Floor Finish Grade	TRIM	Interior Finish Walls	Interior Finish Ceilings
All		Y		CARP	G	OR	PL & PT	PL & PT
Ent. Hall		1						
Living		1						
Dining		1						
Bed		2						
Bed		1					PAPER	
DEN		1						
Kitchen		1		LINO			PL & E	PL & E

Drain Bd. Material: MI Lgth: 20 Ft. Splash: MI

CONSTRUCTION RECORD

Permit No.	Permit For	Amount	Date	EFFEC. YEAR	APPR. YEAR	Age	Remain'g Life	Table	%	Cond.	Arch. Attr.	Func. Plan	Conform	Storage Space Cupb'd	Storage Space Closet	Work-m'nshp
87973	RES	17,000	6-3-57	1957	1958	0	60	R60	100	E	G	G	E	G	G	G
M-15999	CONV. GAR.	2400	9-20-72	1957	1964	7	53	R60	93	A	A	A	G	A-G	A	A
					1969	12	48	R60	93	G	A		G			A
					1972	15	46	R60	89	G	G		G			A
					1973	16		R-60	88							

BATH DETAIL

Fl.	No.	Finish Floors	Finish Walls	Wc.	La.	Tub	Type	Grade	St.	O.T.	G.D.	Shower Finish
1	1¾	AT	PL & PT	2	2	1	MOD	G	1	1	1	TILE

SPECIAL FEATURES

	Book Cases		Built in Refrig.		Venetian Blinds
	Shutters	X	" " Oven & Plate	X	DISPOSAL
X	Vent Fan & Hood	X	" " Dishwasher		

COMPUTATION

Appraiser & Date		1-23-58 RCKINS		Janette 7-24-63		Hunt 6-11-68		1972		1/73	
Unit	Area	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost	Unit Cost	Cost
Res	1740	9.30	16182	9.40	16356	11.00	19140	12.70	22098	→	22098
~~GAR~~ STUDY	484	2.90	1404	2.60	1258		1258	5.15	2493	7.00	3388
AC			730		600		600		660		660
FP			600		500		500		550		550
FLAT (CONC)	600	.40	240	.40	240		240	.50	300		300
YD. IMPS.			464		464		464		464		464
~~[illegible]~~					120	—	—		—		
			19620								
			110								
TOTAL			21582		19538		22202		26565		27460
NORMAL % GOOD			100		93		93		89		
R.C.L.N.D			21582		18170		20648		23643		24164

A-11 8-56 5439

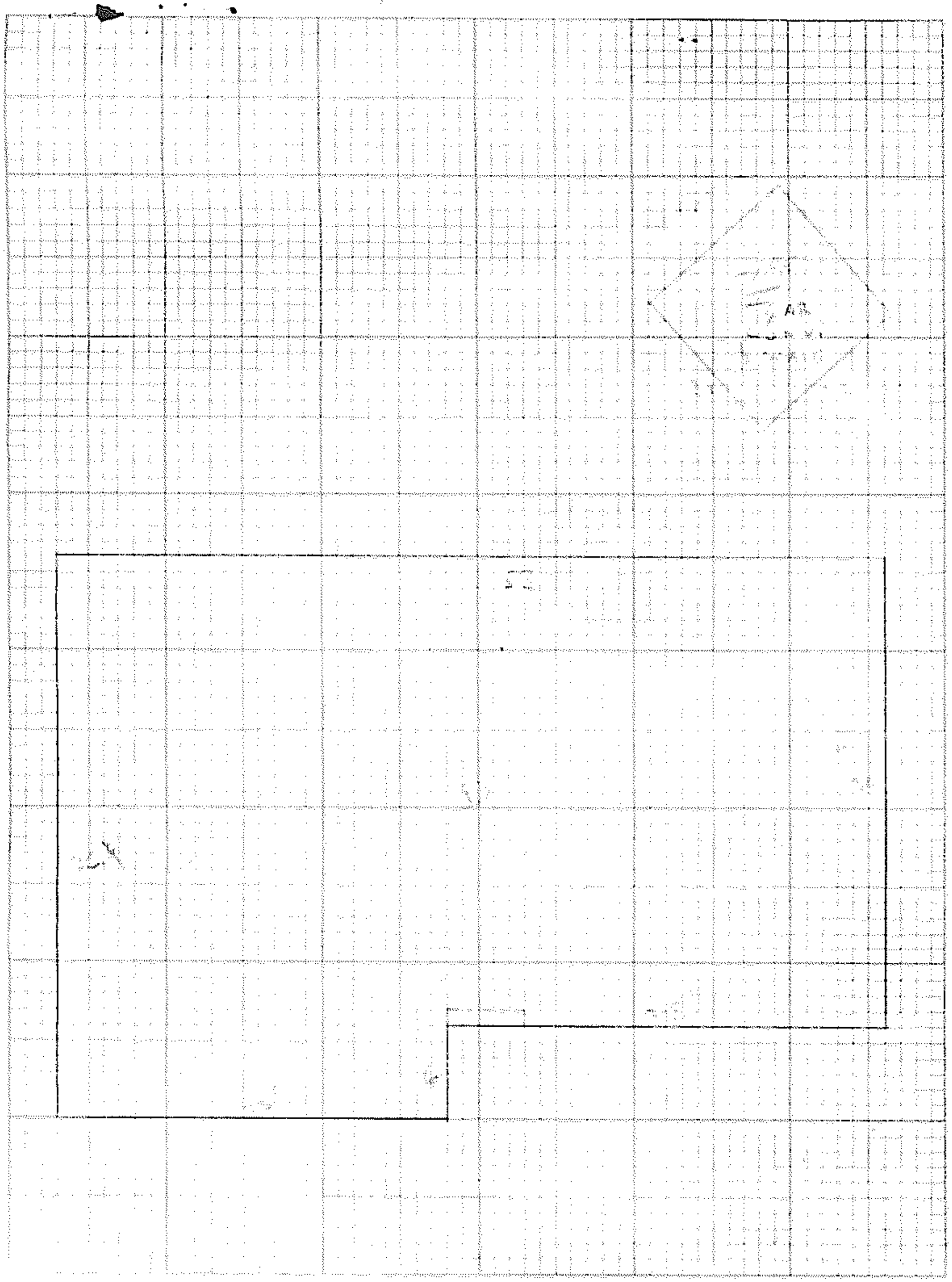
MISCELLANEOUS STRUCTURES

Structure	Found.	Cons.	Ext.	Roof	Floor	Int.	Size, etc.
AR							

COMPUTATIONS

x 6 = 150
x 30 = 1590
1740

Remarks:



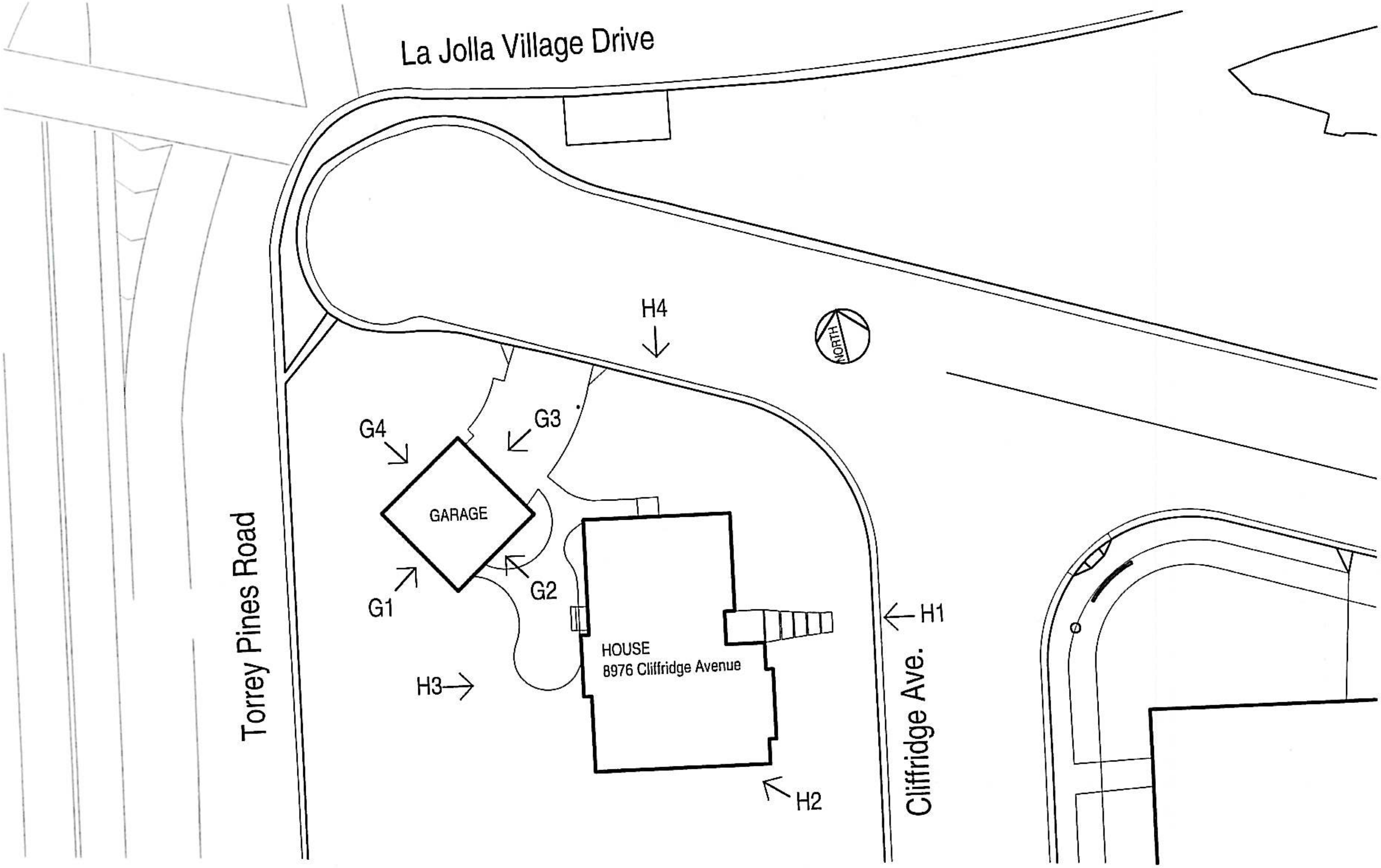


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Photo Survey Key Plan

8976 Cliffridge Avenue

11 December 2012

H1

H2

H3

H4

G1

G2

G3

G4

UCSD Hillel Center for Jewish Life

- Street Vacation
- Right of Way Dedication
- La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
- Change of Occupancy Permit
- Sustainable Expedite Program

Hillel of San Diego, is organized as a California non-profit religious corporation and is identified as a 501 (c) 3 non profit organization. We strive to be a vibrant Jewish campus presence and to involve Jewish students in ways that foster a lasting commitment to Jewish life. Our UCSD Hillel Center will allow us to pursue our mission by nurturing the religious, spiritual, and intellectual growth of Jewish students at UCSD in a pluralistic setting through community building, Jewish learning and spiritual counseling. We anticipate utilizing the UCSD Hillel Center for a variety of compelling religious programs such as meditation and prayer circles, programs relating to the observance of Jewish holidays and festivals, study of Torah and traditional Jewish texts, programs relating to Israel as the Jewish homeland and other Jewish religious, cultural and social interactions. We endeavor to build a strong sense of belonging and Jewish identity among the students we serve and to develop a culture infused by Jewish values.

Abbreviations

A.B.	Anchor Bolt
A.C.	Asphaltic Concrete or Air Conditioning
A.C.T.	Acoustical Ceiling Tile
Acous.	Acoustic
A.D.	Access Door
Add.	Addendum
Adj.	Adjustable
A.F.F.	Above Finish Floor
Al.	Aluminum
Alt.	Alternative
Anod.	Anodized
Arch.	Architectural
@	At
Bd., Bo.	Board
Bet.	Between
B.F.	Bottom of Footing
Bldg.	Building
Blkg.	Blocking
Bm.	Beam
B.N.	Boundary Nail
Bot.	Bottom
Brg.	Bearing
Bsmt.	Basement
B.U.	Built Up
Cab.	Cabinet
C.L.	Center Line
Clr.	Clear
Cer.	Ceramic
C.F.C.I.	Contractor Furnished, Contractor Install
C.F.O.I.	Contractor Furnished, Owner Install
C.J.	Control Joint
Clg.	Ceiling
C.M.U.	Concrete Masonry Unit
Col.	Column
Conc.	Concrete
Constr.	Construction
Cont.	Continuous
Coor'd	Coordinate
Corr.	Corridor
Cpt.	Carpet
Csk.	Countersink
Ctr.	Counter
C.T.	Ceramic Tile
C.	Channel
d	Penny (nail)
Dbl.	Double
Demo.	Demolition
Dept.	Department
Det.	Detail
Dia.	Diameter
Diag.	Diagonal
Diaph.	Diaphragm
D.F.	Drinking Fountain or Douglas Fir
Dim.	Dimension
D.L.	Dead Load
Dn.	Down
D.S.	Downspout
Dwg.	Drawing
Dwls.	Dowels
Dwr.	Drawer
E.	East
Ea.	Each
E.B.	Expansion Bolt
E.J.	Expansion Joint
El.	Elevator
Elev.	Elevation
Elec.	Electric(al)
Emer.	Emergency
E.N.	Edge Nail
Enc.	Enclosure
Engr.	Engineer
Eq.	Equal
Equip.	Equipment
E.W.	Each Way
Exh.	Exhaust
Exp.	Expansion
Ext.	Exterior
Exst.	Existing
F.B.	Flat Bar
F.D.	Floor Drain
F.F.	Finish Floor
Fin. Flr.	Finish Floor
Fdn.	Foundation
F.E.	Fire Extinguisher
F.E.C.	Fire Extinguisher Cabinet
F.F.E.	Finish Floor Elevation
F.H.C.	Fire Hose Cabinet
Fin.	Finish
Flex.	Flexible
Flr.	Floor
Fluor.	Fluorescent
F.N.	Field Nailing
F.O.	Face of (Item)
F.O.B.	Face of Brick
F.O.C.	Face of Concrete
F.O.M.	Face of Masonry
F.O.P.	Face of Panel
F.O.S.	Face of Stud
Fp.	Fireproofing
Ft.	Foot or Feet
F.S.	Floor Sink
Ga.	Gauge
Galv.	Galvanized
G.I.	Galvanized Iron
Gl.	Glass
G.L.B.	Glue Laminated Beam
Gyp. Bd.	Gypsum Board
H.B.	Hose Bibb
H.C.	Hollow Core
Hdr.	Header
Hdwr.	Hardware
Hgr.	Hanger
H.M.	Hollow Metal
Horiz.	Horizontal
Hr.	Hour
Ht.	Height
H.V.A.C.	Heating, Ventilating, and Air Conditioning
H.W.	Hot Water
I.D.	Inside Diameter
In.	Inch
Incl.	Included
I.E.	Invert Elevation
Insul.	Insulation
Int.	Interior
Jan.	Janitor
Jst.	Joist
Jt.	Joint
Kit.	Kitchen
Lam.	Laminated
Lb.(s)	Pound(s)
L.B.	Lag Bolts
L.L.	Live Load
L.L.H.	Long Leg Horizontal
L.L.V.	Long Leg Vertical
Longit.	Longitudinal
L.P.	Low Point
Lt.	Light
L.W.C.	Light Weight Concrete
Mas.	Masonry
Mat'l	Material
Max.	Maximum
Mech.	Mechanical
Memb.	Membrane
Met. or Mtl.	Metal
Mfr.	Manufacturer
Min.	Minimum
Misc.	Miscellaneous
Mtd.	Mounted
N.	North
N.I.C.	Not in Contract
No.	Number
Nom.	Nominal
N.T.S.	Not to Scale
O.C.	On Center
O.D.	Outside Diameter
O.F.	Over Flow or Outside Face
O.F.C.I.	Owner Furnished, Contractor Installed
O.F.O.I.	Owner Furnished, Owner Installed
O.H.	Opposite Hand
Opg.	Opening
Opp.	Opposite
Ovhd.	Overhead
P.C.	Pre-Cast
Pl.	Plate
P.L.	Property Line
Plbg.	Plumbing
Pnt.	Paint
Pwd.	Plywood
P.S.F.	Pound(s) per Square Foot
P.S.I.	Pound(s) per Square Inch
P.T.	Pressure Treated
Ptd.	Painted
P.T.S.	Post Tension Slab
Perim.	Perimeter
Perp.	Perpendicular
Plas.	Plaster
Plast.	Plastic
Qty.	Quantity
R.	Rise or Riser
R.C.P.	Reflected Ceiling Plan
R.D.	Roof Drain
Ref.	Reference
Reinf.	Reinforcing
Req.(d)	Require or Required
Reqmts.	Requirements
Resil.	Resilient
Ret.	Retain(ing)
Rev.	Revision
Rfg.	Roofing
Rm.	Room
R.O.	Rough Opening
R.O.W.	Right of Way
R.P.	Radius Point
R.T.U.	Roof Top HVAC Unit
S.	South
S.C.	Solid Core
Sched.	Schedule
Sht.	Sheet
S.F.	Square Feet
Sim.	Similar
S.P.	Stand Pipe
Sp'g.	Spacing
Spec.	Specification
Sq.	Square
S.S.	Stainless Steel
Stagg.	Staggered
Std.	Standard
Stiff.	Stiffened
Str.	Structural
Stl.	Steel
Susp.	Suspended
Sym.	Symmetrical
T.	Tread
T. & G.	Tongue and Groove
Temp.	Tempered
Thr.	Threshold
T.J.	Tooled Joint
T.N.	Toe Nail
T.O.	Top of (Item)
T.O.C.	Top of Curb or Top of Concrete
T.O.D.	Top of Drain
T.O.F.	Top of Footing
T.O.P.	Top of Parapet
Topo.	Topography
T.O.R.	Top of Roof
T.O.S.	Top of Slab
T.O.W.	Top of Wall
Trans.	Transverse
Typ.	Typical
U.N.O.	Unless Noted Otherwise
U.B.C.	Uniform Building Code
Vac.	Vacuum
V.A.T.	Vinyl Asbestos Tile
V.B.	Vapor Barrier
V.C.T.	Vinyl Composition Tile
Vent.	Ventilation
Vert.	Vertical
V.I.F.	Verify in Field
W.	West
W/	With
Wd.	Wood
W. Gl.	Wire Glass
W.H.	Water Heater
W.O.	Where Occurs
W/O	Without
Wp.	Waterproof
W.P.J.	Weakened Plane Joint
W.R.	Water Resistant
Wt.	Weight
W.W.F.	Welded Wire Fabric
Yd.	Yard

Scope of Work

The project consists of 2 phases of work.

Phase 1: Includes the occupancy of Hillel of San Diego in the single family home located at 8976 Cliffridge Avenue. Phase 1 has 2 parking plan alternatives. The preferred alternative is the temporary parking alternative during the construction of phase 2. Should phase 2 not be approved, the project consists of converting the single family home into the permanent office for Hillel of San Diego.

Phase 2: Includes the construction of 3 buildings totaling roughly 6,600 s.f. to be occupied as a new student center for Jewish students at the University of California San Diego. A 27 space surface parking lot is located along the east portion of the site. Also included in phase 2 development is the construction of a park like amenity near the corner of La Jolla Village Drive and Torrey Pines Road.

Address & Site Information

Phase 1:
8976 Cliffridge Avenue
La Jolla, CA 92037

Phase 2:
Intersection of La Jolla Village Drive, La Jolla Scenic Way, and La Jolla Scenic Drive North

Phase 1 Legal Description:
Lot 67 of La Jolla Highlands unit no. 3, in the city of San Diego, county of San Diego, state of California, according to the map there of no. 3528, filed in the office of the County Recorder of San Diego County, October 19, 1956.

Phase 1 Assessor's Parcel Number:
344-131-01

Phase 2 Legal Description:
Portion of Lot 1299, Miscellaneous Map 36, Pueblo Lands

Phase 2 Assessor's Parcel Number:
344-120-26

Project Data

Phase 1: Building Code
2007 California Building Code
Construction Type: Type V, B
Occupancy: B

Phase 2: Building Code
2007 California Building Code
Construction Type: Type V, B with sprinklers
Occupancy: A-3 and B

Zoning Information
La Jolla Community Plan
La Jolla Shores Planned District
Single-family Zone
Coastal Height Limit: Proposition "D"
Plum-line 30'-0" height limit
Maximum coverage restriction of 60%
4'-0" side property line setback for buildings with openings
Refer to site plan for property line relationship to face of curb
Campus Impact Area of the Parking Impact Overlay Zone

Site Information
Geologic Hazard Category 52

Phase 1: Existing Use
Single Family House

Phase 1: Proposed Use
Hillel of San Diego
Office use of single family house
Building used primarily for religious purposes as allowed in single-family zone of La Jolla Shores Planned District (SDMC Section 103.0304.1(e))

Phase 2: Existing Use
Previously disturbed vacant land

Phase 2: Proposed Use
New student center and surface parking lot for primarily religious purposes.
To be utilized by Jewish students attending the University of California San Diego.

Project SDP Deviations

1. Phase 1 – Temporary Parking Plan (during construction of phase 2): Required 24'-0" driveway curb cut. 12'-0" wide temporary curb cut provided. Deviation of 12'-0". Refer to Architectural sheet A2.00.
2. Phase 1 – Maximum Paving and Hardscape in Residential Zones: Per the Campus Parking Impact Overlay Zone, paving and hardscape for vehicular use on lots less than 10,000 s.f. shall be limited to off-street, surface parking for a maximum of 4 vehicles. If Phase 2 is not approved, and the Existing with Improvements plan for Phase 1 is implemented, a deviation is required to provide the required 6 on site parking spaces for office use. Refer to architectural sheet A2.01.

Project Calculations

Phase 1:

Coverage Calculations:
Proposed Coverage (Temporary Parking): 2,288 s.f./8,358 s.f. = 27% (If Phase 2 is not approved)
Proposed Coverage (Permanent Parking): 2,288 s.f./9,166 s.f. = 25% (If Phase 2 is approved)

Site/Building Area Calculations:
Existing/Proposed Site Area = 8,358 s.f. (If Phase 2 is not approved)
Proposed Site Area = 9,166 s.f. (If Phase 2 is approved)

Total Gross Building Area (Including garage and storage) = 2,288 s.f.
Total Gross House Area = 1,792 s.f.

Total Net Building Area (Including storage) = 2,035 s.f.
Total Net House Area = 1,529 s.f.

Occupancy Calculations (per CBC Table 1004.1.1):
Occupancy Load Factor for Business Areas = 1 occupant per 100 gross s.f.
Gross House Area = 1,792 s.f.
Total Occupancy = 1,792 s.f. / 100 s.f. = 17.92 = 18 Total Occupants

Phase 2:

Coverage Calculations:
Existing Site Area = 15,350 s.f. (without the street vacation)
Proposed Site Area = 33,541 s.f. (with the street vacation & right of way dedication)
Proposed Site Area after the subtraction of 10,000 s.f. landscaped area = 23,541 s.f.
Proposed Gross Ground Floor Area:

HCJL Student Center	2,494 s.f.
Library/Chapel	984 s.f.
Professional Leadership Building	1,813 s.f.
Total Proposed Ground Floor Area	5,291 s.f.

Maximum Allowable Lot Coverage = 60%

Proposed Lot Coverage (with 10,000 s.f. of landscaped area) = 5,291 s.f. / 33,541 s.f. = 15.8%
Proposed Lot Coverage (without 10,000 s.f. of landscaped area) = 5,291 s.f. / 23,541 s.f. = 22.5%

Building Area Calculations:

HCJL Student Center:

Ground Floor Net S.F.:

Student Lounge (includes Lobby)	1,213 S.F.
Kitchen	298 S.F.
Meeting Room	116 S.F.
Meeting Room	116 S.F.
Men's Restroom	193 S.F.
Women's Restroom	202 S.F.
Storage	13 S.F.
Elevator	65 S.F.
Elevator Control Room	36 S.F.
Total Net S.F.	2,252 S.F.

Second Floor Net S.F.:

Student Activity Space (includes Lobby)	674 S.F.
Board Room	233 S.F.
Storage	74 S.F.
Elevator	65 S.F.
Total Net S.F.	1,046 S.F.

Library/Chapel:

Ground Floor Net S.F.:

Main Library Room	676 S.F.
Study/Conference Room	148 S.F.
Storage	33 S.F.
Total Net S.F.	857 S.F.

Professional Leadership Building:

Ground Floor Net S.F.:

Open Office Area (includes Copy Area)	667 S.F.
Conference Room	192 S.F.
Office	133 S.F.
Office	133 S.F.
Office	133 S.F.
Restroom	49 S.F.
Storage	265 S.F.
Electrical Room	45 S.F.
Total Net S.F.	1,617 S.F.

Total Net S.F.:

HCJL Student Center	3,298 S.F.
Library/Chapel	857 S.F.
Professional Leadership Building	1,617 S.F.
Total Net S.F.	5,772 S.F.

Total Gross Floor Area:

HCJL Student Center (Includes Phantom Floor)	4,287 S.F.
Library/Chapel	984 S.F.
Professional Leadership Building	1,813 S.F.
Total Gross Floor Area With Phantom Floor	7,084 S.F.
(Total Gross Floor Area Without Phantom Floor	6,479 S.F.)

Calculations for Informational Purposes Only (Not Required by Code):

Proposed Landscape Area = 14,906 s.f.
Proposed Landscape Site Coverage = 14,906 s.f. / 33,541 s.f. = 44%

Proposed Floor Area Ratio (FAR) = 7,084 s.f. / 33,541 s.f. = 0.21 FAR

Parking Calculations

Phase 1:

Parking Required:
Per SDMC Section 142.0530 Table 142-05F.
For Business and Professional Office Uses:
3.3 parking spaces per 1,000 s.f. of floor area.
1,792 s.f. gross house area.
1,792 s.f. / 1,000 s.f. = 1.792 x 3.3 = 5.9 = 6 spaces required

Temporary Parking Provided (if Phase 2 is approved):
5 standard parking spaces
1 van accessible parking space
6 total parking spaces (Refer to sheet A2.00)

Permanent Parking Provided (if Phase 2 is not approved):
5 standard parking spaces
1 van accessible parking space
6 total parking spaces (Refer to sheet A2.01)

Permanent Motorcycle Parking Required (if Phase 2 is not approved):
Per SDMC Section 142.0530(g).
2% of the minimum number of automobile parking spaces required or 2 spaces, whichever is greater.
6 automobile spaces required.
6 x 0.02 = 0.12 spaces < 2 spaces
2 motorcycle spaces required

Motorcycle Parking Proposed:
2 motorcycle spaces proposed

Bicycle Parking Required:
Per SDMC Section 142.0530 Table 142-05F.
0.03 bike spaces per 1,000 s.f. of floor area and 0.03 bike lockers with shower per 1,000 s.f. or 2 spaces, whichever is greater.
1,792 s.f. gross house area.
1,792 s.f. / 1,000 s.f. = 1.792 x 0.03 = 0.05 spaces < 2 spaces
2 bicycle spaces required
1,792 s.f. / 1,000 s.f. = 1.792 x 0.03 = 0.05 bicycle lockers < 2 spaces
2 bicycle lockers required

Bicycle Parking Proposed:
4 bicycle spaces proposed

Parking Assessment
Currently, no specific parking code exists for this type of facility in the City of San Diego Municipal Code. Therefore, a site-specific study was conducted to determine the parking supply needed to adequately serve the patrons and staff of the facility. Consideration was given to the types of events/programs to be held at the facility, the amount of people expected to attend these events, the staff needed to serve the facility, survey data of existing UCSD Hillel student members, and survey and statistical data gathered from other similar Hillel facilities in California (UCLA, UCSB, and CSUN). The following is a detailed discussion of this approach.

UCSD Hillel Student Center
Program Log and Event Attendance
As mentioned in the trip generation section of this report, a monthly program guide was provided by the client indicating the dates and times of the social events to be held at the subject facility. Shabbat service, typically held on Friday evenings, would be held on campus at their current location (and not at the proposed facility), and would therefore not affect on site parking. Typical site activities consist of small study groups, lectures, meetings, student computer access and general administrative activities. It is expected that the majority of programs to be held at the site will attract 50 or less students. Only on rare occasion, such as a grand opening, would the site draw a greater amount of attendees. It is also expected that 7 full time staff members would serve the student center.

Appendix D contains the anticipated program guide.

Transportation Modes
As discussed in the trip generation section of this report, a survey was conducted in March 2010 among the students who currently attend Hillel related activitiesat the UCSD campus. The UCSD survey collected responses from 115 students. The results of this survey found that approximately 80% of the students stated in their response that they would walk to the hillel facility at its proposed location. Of the approximate 80% of walking students, just over 50% of the respondents suggested they would carpool. Using the results of this survey, if 50 students were to attend a typical Hillel program at the San Diego student center, only 20% would drive to the facility. Of the 20% of students who would drive, half of those trips would be carpool trips. Therefore, under these assumptions, only five parking spaces would be needed to serve the student patrons of the facility. Assuming all 7 sttaff are onsite at one time and each drive individually, an additional seven spaces would be required for a total of 12 spaces needed to acommodate the facility during a typical Hillel program. In conducting the AM and PM peak hour intersection and daily street segment analyses, a maximum of 100 students was assumed to frequent the site during the peak 4 hour period of the day. If the same transportation mode split percentages are applied to the 100 students, only 10 spaces would be necessary to acommodate student patrons (assuming all 100 students are on site at one time). An additional 7 spaces for staff would necessitate 17 spaces, well below the 27 spaces proposed as part of the project. Appendix F contains the transportation mode survey data collected for UCSD.

Comparable Hillel Facilities
A list of other existing comparable Hillel facilities within California was developed to aid in estimating the subject facility's parking demand. The following facilities were selected for further data collection: Hillel at UCLA, Santa Barbara Hillel at UCSB, and CSU Northridge Hillel.

Parking Rate Summary

Campus	Hillel Location	Surrounding Uses	Approx. Square Footage	Number of Parking Spaces Provided	Parking Spaces Provided per KSF
UCSD (Project Site)	Adjacent to Campus	Upscale Residential	7,084	27	3.7
UCLA	Adjacent to Campus	Upscale Residential	25,000	13	0.5
UCSB	Off Campus	Urban Residential/Mixed Use	12,000	28	2.3
CSUN	Off Campus	Upscale Residential	5,000	17	3.4

Sheet Index

Architectural
A0.00 Title Sheet/Sheet Index/Project Data & Calculations
A1.00 Existing Site Plan
A1.01 Phasing Plan
A1.02 Proposed Site Plan
A1.03 Accessibility Plans

Civil
C1 Existing Topography
C2 Proposed Street Vacation, Street and Utility Easement Dedications
C3 Existing and Proposed Boundaries
C4 Conceptual Grading Plan

Landscape
L-1 Landscape Concept Plan
L-2 Landscape Concept Plan
L-3 Landscape Concept Plan

Architectural
A2.00 Phase 1: Temporary Parking Plan (During Construction of Phase 2)
A2.01 Phase 1: Existing with Improvements (If Phase 2 Proposal is not Approved)
A2.02 Phase 2: Enlarged Courtyard & Surface Parking Plan
A2.03 Phase 2: Ground Floor Building Plans
A2.04 Phase 2: Second Floor Building Plan
A2.05 Phase 2: Roof Plan
A3.00 Building Elevations
A4.00 Site/Building Sections

Project Team Directory

Owners
Site 653
Hillel of San Diego
8976 Cliffridge Ave., La Jolla, CA 92037
Contact: Robert Lapidus; Phone: 858.357.4746; E-mail: rlapidus@sherlap.com

8976 Cliffridge Ave.
Robert Marshall, property owner
Contact: Robert Lapidus; Phone: 858.357.4746; E-mail: rlapidus@sherlap.com

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Biology
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Noise
Recon
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Energy Consulting
Alliance Consulting Engineers, Inc.
9665 Chesapeake Dr., Suite 365, San Diego, CA 92123
Contact: Tamara Badkerhanian-Ganev; Phone: 858.268.2323; Fax: 858.279.2626;
E-mail: tamara@alliance-engineers.com

City of San Diego Cycle Issue Notes

1. Prior to the issuance of the first foundation, building or grading permit, the Owner/Permittee shall cut, plug and abandon the existing public 12-inch water facilities within the La Jolla Scenic Drive North right-of-way to be vacated, from La Jolla Scenic Way to Torrey Pines Road, in a manner satisfactory to the Director of Public Utilities and the City Engineer.
2. Prior to the issuance of the first building permit, the Owner/Permittee shall assure, by permit and bond, the design and construction of public 16-inch water facilities and the cut, plug and abandonment of the existing public 8-inch water facilities within the La Jolla Scenic Drive North right-of-way, from La Jolla Scenic Way to Torrey Pines Road, and connect to the 16-inch mains all existing water services still in service adjacent to the project, in a manner satisfactory to the Director of Public Utilities and the City Engineer.
3. Prior to the issuance of the first building permit, the Owner/Permittee shall assure, by permit and bond, the design and construction of new water service(s), including domestic, fire and irrigation, and the disconnection at the mains of all existing unused water services adjacent to the project site, in a manner satisfactory to the Director of Public Utilities and the City Engineer.
4. Prior to the issuance of any building permits, the Owner/Permittee shall apply for plumbing permit(s) for the installation of private back flow prevention device(s) on all water services to the development, including all domestic, fire and irrigation services, in a manner satisfactory to the Water Department Director and the City Engineer. All backflow prevention devices shall be located above grade and outside of any private structures.
5. Prior to the first final inspection of any building permit for the Hillel of San Diego project, the Owner/Permittee shall install and/or replace fire hydrants at locations satisfactory to the Fire Marshal, the Director of Public Utilities and the City Engineer.
6. 'It is the sole responsibility of the Owner/Permittee for any damage caused to City of San Diego public water and sewer facilities, adjacent to the project site, due to the construction activities associated with this project. In the event any such facility loses integrity then, the Owner/Permittee shall reconstruct any damaged public water and sewer facility in a manner satisfactory to the Director of Public Utilities and the City Engineer."
7. Prior to the first final inspection of any building permit for the Hillel of San Diego project, the Owner/Permittee shall grant an acceptable water easement over the proposed 16-inch water facilities within the vacated La Jolla Scenic Drive North right-of-way, from Cliffridge Avenue to Torrey Pines Road, for exclusive use of public water mains with no appurtenances, in a manner satisfactory to the Director of Public Utilities and the City Engineer. Minimum water easement width, for exclusive use of public water mains with no appurtenances, shall be 15-feet wide.
8. Prior to issuance of any building permits, the developer shall assure, by permit and bond, the design and construction of the realignment of the existing 8" public sewer main at the intersection of La Jolla Scenic Drive North and Cliffridge Avenue, satisfactory to the Director of Public Utilities and the City Engineer.
9. Prior to the issuance of any certificate of occupancy, the developer shall abandon the existing public sewer mains located in the proposed street vacation, satisfactory to the Director of Public Utilities and the City Engineer.
10. Proposed private underground sewer facilities located within a single lot shall be designed to meet the requirements of the California Uniform Plumbing Code and shall be reviewed as part of the building permit plan check.
11. Prior to the first final inspection of any building permit for the Hillel of San Diego project, all public water and sewer facilities necessary to serve this development shall be complete and operational in a manner satisfactory to the Director of Public Utilities and the City Engineer.
12. The Owner/Permittee shall design and construct all proposed public water and sewer facilities in accordance with established criteria in the current edition of the City of San Diego Water and Sewer Facility Design Guidelines and City regulations, standards and practices.
13. The Owner/Permittee shall process encroachment maintenance and removal agreements, for all acceptable encroachments into the water easement, including but not limited to structures, enhanced paving, or landscaping.
14. No structures or landscaping shall be installed in or over any water easement that would inhibit vehicular access to replace a section of main or provide access to any appurtenance or isolated section of main.
15. No trees shall be installed within ten feet of any water facilities or in any water easement. No shrubs exceeding three feet in height at maturity shall be installed within 10 feet of any public water main or within access easements.

22. CDFG Code 3503 stats: 'It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

24. A grading permit will be required as a condition of the development permit.

25. The drainage system proposed for this development is private and subject to approval by the City Engineer.

Sustainable Design Information

This project will comply with City Council Sustainable Building Policy Number 900-14.

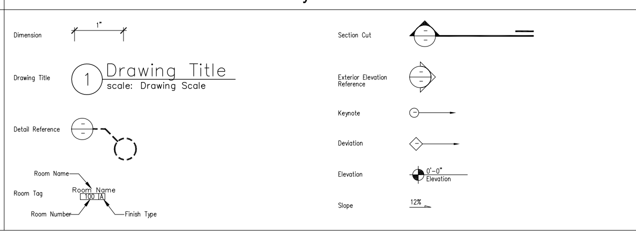
This project plans to incorporate the U.S. Green Building Council (USGBC), Leadership in Energy and Environmental Design (LEED) 2009 Rating System to achieve a development consistent with the requirements for a Silver Level Certification.

Targeted LEED and Sustainable Design Features:
- Public transportation access
- Priority parking for low-emitting and fuel-efficient vehicles
- Maximizing open space
- Quality and quantity control for stormwater design
- Non-roof heat island effect
- Light pollution reduction
- Water efficient landscaping
- Innovative wastewater technologies
- Water use reduction
- Optimized energy performance
- On-site renewable energy
- Enhanced commissioning
- Use of recycled content
- Use of regional materials
- Use of certified wood
- Site and facility smoking restrictions
- Low-emitting materials
- Controllability of systems
- Enhanced thermal comfort
- Maximized daylighting

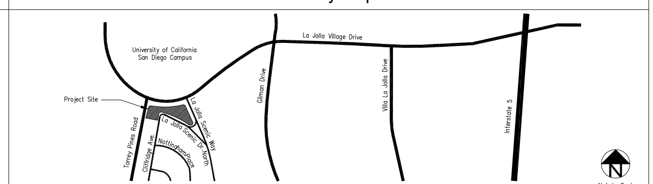
General Notes

1. Do not scale drawings. Notify architect immediately of any discrepancies
2. All work shall comply with applicable codes including but not limited to the UBC, UFC, UPC, UEC, CAC, CBC, FHA, and ADA.
3. These drawings are divided into sections for convenience only.
4. All dimensions shall take precedence over scale shown on plans, sections, and details. Dimensions are to face of studs or slab unless noted otherwise on drawings.
5. All larger scale drawings & details shall take precedence over those of smaller scale.
6. All existing site items including curb, walks, ramps, etc. are HCA compliant, subject to field verification.
7. Address shall be provided for all new and existing buildings in a position as to be plainly visible and legible from the street or road fronting the property. (CFC 901.4.4)
8. All required permits must be obtained from the fire plan check before the building is occupied.
9. At least one fire extinguisher with a minimum rating of 2-a-10b:c shall be provided within 75 feet maximum travel distance for each 6,000 s.f. or portion thereof. (CFC sec. 1002, UFC standard 10-1, Cal. Code regs., title 19, sec. 3.29)
10. All existing structures to be upgraded as required to meet all applicable CBC requirements if not currently in conformance.
11. The single family house for Phase 1 will be brought up to code at the time of building permit submittal including wall and opening protection for the intended temporary commercial use.
12. In the event that the existing single family garage is utilized for accessible parking, the minimum vertical clearnace will be 8'-2".
13. During the building permitting phase the single family garage will be evaluated for its feasibility of housing the accessible parking space with regards to it possibly being deemed an unreasonable hardship, due to its short term use and its anticipated return to a single family residential garage upon the completion of Phase 2.

Symbols



Vicinity Map



This parcel of land is located in an area identified as the La Jolla Shores Planned District in the La Jolla Community Plan (LJCP). It is formerly city land, and the city has subsequently sold the land to Hillel of San Diego pursuant to City Council Resolution R-301433. The land is designated for residential land use in the La Jolla Community Plan, and in the La Jolla Shores Planned District. "Churches, temples, or buildings of a permanent nature, used primary for religious purposes" are consistent with that designation.

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

Street Vacation
Right of Way Dedication
La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
Change of Occupancy Permit
Sustainable Expedite Program

Project Number:	0915
Original Date:	June 8, 2010
Drawn:	KW
Checked:	KW

Revision 1: 06.08.10 Completeness Check
Revision 2: 06.24.10 MIR Submittal
Revision 3: 10.18.12 Revisions Cycle 50
Revision 4:
Revision 5:
Revision 6:
Revision 7:
Revision 8:
Revision 9:
Revision 10:
Revision 11:
Revision 12:

UCSD Hillel Center for Jewish Life

San Diego, California

Phase 1:
8976 Cliffridge Avenue
La Jolla, California 92037

Phase 2:
Intersection of La Jolla Scenic Way,
La Jolla Village Drive
and La Jolla Scenic Drive
La Jolla, California 92037

NOT FOR CONSTRUCTION

Title Sheet, Sheet Index, Project Data, Keymap, Project Calculations, & Design Team Directory

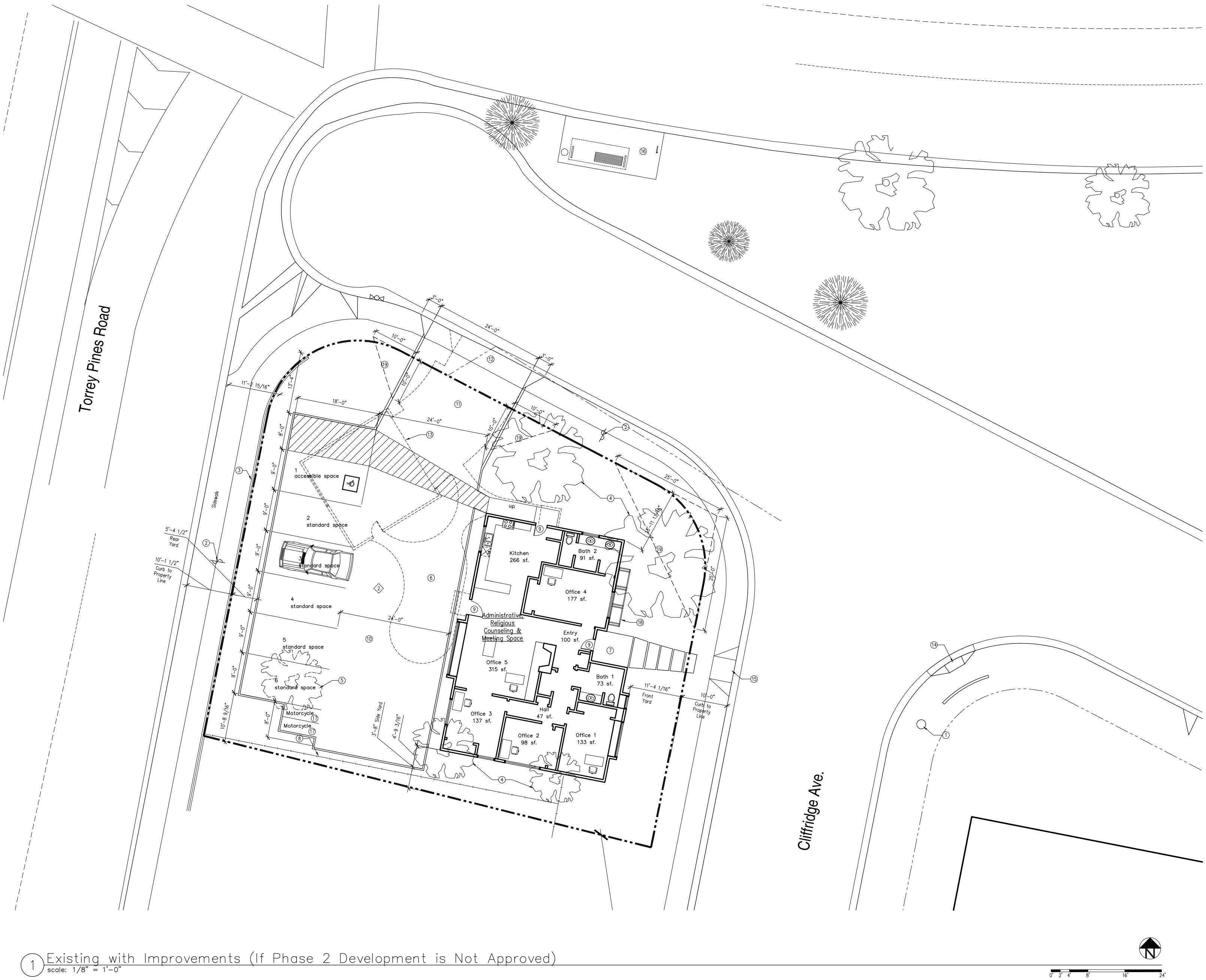
No Scale

A0.00

Sheet No. 1 of 20

UCSD Hillel Center for Jewish Life

- Street Vacation
- Right of Way Dedication
- La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
- Change of Occupancy Permit
- Sustainable Expedite Program



1 Existing with Improvements (If Phase 2 Development is Not Approved)
scale: 1/8" = 1'-0"

Existing w/Improvements Notes

1. Existing stop sign to remain.
2. Existing sign to remain.
3. Existing concrete masonry wall.
4. Existing tree to remain.
5. Existing tree to be removed.
6. Existing patio to be removed.
7. Existing walkway.
8. Existing fence.
9. Exit door (3'-0" x 6'-8").
10. New permanent paving for surface parking lot.
11. New concrete driveway.
12. New curb cut.
13. Existing detached garage to be demolished.
14. Existing pedestrian curb ramp to remain.
15. Proposed pedestrian curb ramp.
16. Existing bus stop to remain.
17. Motorcycle parking space.
18. Bicycle rack.
19. Visibility Area Trianles per SDMC Sec. 113.0273, diagram 113-02RR for street intersections and driveways.

General Notes

1. Existing With Improvements, provides parking for the existing permanent office use of the single family residence at 8976 Cliffridge Ave., La Jolla, CA 92037, should the application for Phase 2 on site 653 be denied. This parking alternative provides 6 parking spaces in a new surface parking lot with a new driveway connecting to the existing cul-de-sac. The alternative also involves the constructoin of a new pedestrian curb ramp on Cliffridge Ave. This alternative is only applicable if Hillel's application for the site 653 Site Development Permit and application for street vacation is denied.
2. Refer to Architectural Sheet A2.00 for the temporary parking alternative regarding Phase 1 should the Site Development Permit for Phase 2 be approved. This alternative brings the existing single family house at 8976 Cliffridge Ave., La Jolla, CA 92037 currently occupied as an office use for Hillel of San Diego up to all applicable code requirements for the intended temporary use and occupancy.

LICENSED ARCHITECT
MARK W. STEELE
No. C 10097
REN 11-11
STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

Street Vacation
Right of Way Dedication
La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
Change of Occupancy Permit
Sustainable Expedite Program

Project Number:	0915
Original Date:	June 8, 2010
Drawn:	KW
Checked:	KW

Revision 1:	06.08.10 Completeness Check
Revision 2:	06.24.10 MIR Submittal
Revision 3:	10.18.12 Revisions Cycle 50
Revision 4:	
Revision 5:	
Revision 6:	
Revision 7:	
Revision 8:	
Revision 9:	
Revision 10:	
Revision 11:	
Revision 12:	

UCSD Hillel Center for Jewish Life

San Diego, California

Phase 1:
8976 Cliffridge Avenue
La Jolla, California 92037

Phase 2:
Intersection of La Jolla Scenic Way, La Jolla Village Drive and La Jolla Scenic Drive
La Jolla, California 92037

NOT FOR CONSTRUCTION

Existing With Improvements (If Phase 2 Development is Not Approved)
1/8" = 1'-0"

A2.01

Sheet No. 14 of 20

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

11 [illegible] r 2 [illegible] 12

P [illegible] r [illegible] r [illegible] I [illegible]
[illegible] ITI [illegible] M [illegible] T [illegible]

1 [illegible] ITT [illegible] IPTI [illegible] P [illegible] P [illegible] T [illegible]

The property addressed 8976 Cliffridge Avenue, La Jolla, CA consists of a wood frame single story, single family structure, which currently houses the administrative offices of The Hillel Of San Diego UCSD, a student religious facility. This structure was built in 1957 and is typical of track development homes at that time. The primary exterior material is painted cement plaster but the street elevation is board and baton wood siding. It has vinyl replacement windows and wood French doors and an asphalt shingle hipped roof with exposed eaves. There is a brick chimney seen at the roof ridge from the front and rear elevations.

There is also a detached single story wood framed garage structure on site accessed by a concrete driveway located to the north of the house. It is a gable roof building with asphalt shingles, exposed eaves, with a painted cement plaster exterior. It has vinyl windows and a French door. This structure was built in 1972. It is currently being used as additional office and storage space. It was converted from a garage by the previous owner.

The property is bounded by a painted Concrete Masonry Wall at Torrey Pines Road and has wood fencing at the side yards.

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ARCHITECTURE | PLANNING

[illegible]

[illegible]

[illegible]

[illegible]

8976 Cliffridge Avenue, La Jolla CA 92037

[illegible]	[illegible]
1972	GARAGE CONSTRUCTED
UNKNOWN	GARAGE DOOR REMOVED, WINDOWS AND FRENCH DOOR ADDED TO MAKE SPACE USEBLE FOR OFFICE / STOREAGE
UNKNOWN	WOOD WINDOWS REPLACED WITH INSULATED WHITE VINYL

020 This notice must be recorded within 10 days after completion. Individual, Partnership and Corporation form.

BOOK 6756 PAGE 449

NOTICE OF COMPLETION

SECURITY TITLE COURTESY FILING

Notice is hereby given that:

1. The undersigned is owner of the interest stated below in the property hereinafter described;

2. The NAME (including that of the undersigned), ADDRESS and NATURE OF TITLE of every person owning any interest in such property is as follows:

FULL NAME	FULL ADDRESS	NATURE OF TITLE
H & B Construction Corp. (Name of Undersigned)	2170 Avenida de la Playa, (Street and Number) La Jolla, California (City and State)	
(Names of other owners, if any)	(Street and Number) (City and State)	
	(Street and Number) (City and State)	
	(Street and Number) (City and State)	

3. A work of improvement on the property hereinafter described was COMPLETED on September 13, 1957;

4. The name of the CONTRACTOR, if any, for such work of improvement as a whole was H & B Construction Corp.;
(If no Contractor for work of improvement as a whole, insert "None.")

5. The property on which said work of improvement was completed is in the City of San Diego, County of San Diego, State of California, and is described as follows:

Lot 67, La Jolla Highlands Unit #3

6. The street address of said property in said County and State is: 8976 Cliffridge Avenue, La Jolla, California
(Street and number) (City)
(If no street address has been assigned by the proper governmental authority, insert "none assigned")

Dated: September 17, 1957
(If executed by a corporation affix corporation seal.)

H & B CONSTRUCTION CORP.
Signature of Owner or Owners: Frank B. Jackson, Vice President

STATE OF CALIFORNIA, County of San Diego. } ss.

.... being duly sworn, says: That ....he is the owner of the aforesaid estate or interest in the property described in the foregoing notice; that ....he has read the same, and knows the contents thereof, and that the facts stated therein are true.

SUBSCRIBED AND SWORN TO before me

On..........

(Seal).......... Notary Public in and for said County and State.

SPACE BELOW FOR RECORDER'S USE ONLY

DOCUMENT NO. 144163
RECORDED REQUEST OF
SECURITY TITLE INSURANCE CO.
SEP 20 9 01 AM '57
BOOK 6756 PAGE 449
OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
ROBERT H. HOWE, RECORDER

2 80

This instrument was recorded as an accomodation only, without examination as to its correctness or sufficiency by Security Title Insurance Company, which assumes no responsibility for its effects

(If executed by a corporation use Corporation form verification on reverse side.)
(If executed by a partnership use Partnership form of verification on reverse side.)

BOOK 6756 PAGE 450

NOTICE OF COMPLETION

VERIFICATION—(CORPORATION)

STATE OF CALIFORNIA, } ss.
County of San Diego. }

Frank R. Jackson, being duly sworn, says: That he is an officer, to-wit, Vice President of H & B Construction Corp. a corporation, the owner of the property described in the foregoing notice; that he has read the same and knows the contents thereof and that the facts stated therein are true; that he makes this verification for and on behalf of said corporation.

SUBSCRIBED AND SWORN TO before me

On September 17, 1957

(Seal) [signature]
Notary Public in and for said County and State.

[signature: Frank R. Jackson]

VERIFICATION—(PARTNERSHIP)

STATE OF CALIFORNIA, } ss.
County of San Diego. }

...., being duly sworn, says: That he is one of the partners of ....a partnership, the owner of the property described in the foregoing notice; that he has read the same and knows the contents thereof and that the facts therein stated are true; that he makes this verification for and on behalf of said partnership.

SUBSCRIBED AND SWORN TO before me

On.. ....

(Seal)..
Notary Public in and for said County and State.

DO NOT RECORD

Title Company Requirements as to Notice of Completion

A notice of completion must be filed for record *within 10 days* after completion of the work of improvement (to be computed exclusive of the day of completion), as provided in section 1193.1, Code of Civil Procedure. If the land is registered under the Land Title Law (Torrens), the notice must be both recorded and registered.

The "owner" who must file for record a notice of completion of a building or other work of improvement means the owner (or his successor in interest at the date the notice is filed) on whose behalf the work was done, though his ownership is less than the fee title. For example, if A is the owner in fee, and B, lessee under a lease, causes a building to be constructed, then B, or whoever has succeeded to his interest at the date the notice is filed, must file the notice.

If the ownership is in *two or more persons as joint tenants or tenants in common*, the notice may be signed by any one of the co-owners but the names and addresses of the other co-owners must be stated in paragraph 2 of the form.

In paragraph 2 the full addresses called for must include street number, city and state.

In paragraph 4 of the notice, insert the name of the general contractor for the work of improvement as a whole. No contractor's name need be given if there is no such general contractor, e.g., on so-called "owner-builder-jobs", but insert word "none". But if this notice is given only of completion of a particular contract (e.g., the foundation work), rather than the whole improvement, the name of the contractor under such contract must be stated.

In paragraph 5 insert the *full, legal* description, not the street address or tax description. Use description in deed or policy of title insurance. If the space provided for description is not sufficient, a rider may be attached.

In paragraph 6 insert the *full* street address of the property.

940 THIRD "ON THE PLAZA"
SAN DIEGO, CALIFORNIA
BE 9-6181

SECURITY TITLE Insurance COMPANY

Dated.............................., 19....

END

NOTICE OF COMPLETION

Mail to..............................

RECORDING REQUESTED BY
CHICAGO TITLE COMPANY
AND WHEN RECORDED MAIL TO

Robert A. Marshall
8976 Cliffridge Avenue
La Jolla, CA 92037

DOC # 2002-0504546

JUN 14, 2002 8:00 AM

001534

OFFICIAL RECORDS
SAN DIEGO COUNTY RECORDER'S OFFICE
GREGORY J. SMITH, COUNTY RECORDER
FEES: 766.00
OC: OC

Escrow No. 28011785 - N42
Order No. 28011785 - P05

2002-0504546

SPACE ABOVE THIS LINE FOR RECORDER'S USE

344-131-01-00

GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S)
DOCUMENTARY TRANSFER TAX IS $759.00

☐ unincorporated area ☐ City of

☒ computed on the full value of the interest or property conveyed, or is

☐ computed on the full value less the value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

SHEILA CHANDRASEKHAR, TRUSTEE OF THE SRIPATI CHANDRASEKHAR AND ANN D. CHANDRASEKHAR FAMILY TRUST, UNDER DECLARATION OF TRUST DATED SEPTEMBER 30, 1992.

hereby GRANT(S) to

Robert Marshall, Trustee UDT Dated June 1, 2002

the following described real property in the
County of SAN DIEGO , State of California:

LOT 67 OF LA JOLLA HIGHLANDS UNIT NO. 3, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 3528, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 19, 1956.

Dated May 22, 2002

STATE OF CA
COUNTY OF Alameda) SS.
On May 30, 2002 before me,
Ann S. Kraynak
a Notary Public in and for said County and State, personally appeared
Sheila Chandrasekhar

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

WITNESS my hand and official seal.

[signature]

Sheila Chandrasekhar, Trustee

ANN S. KRAYNAK
COMM #1251649
NOTARY PUBLIC-CALIFORNIA
COUNTY OF ALAMEDA
My Comm. Expires Feb 19, 2004

Ann S Kraynak
Signature of Notary

2/19/04
Date My Commission Expires

FOR NOTARY SEAL OR STAMP

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE: IF NO PARTY SO SHOWN, MAIL AS DIRECTED ABOVE

Name | Street Address | City, State & Zip

GD1 -05/30/97bk

RECORDING REQUESTED BY
Attorney

10133 DOC # 2002-0237536

AND WHEN RECORDED MAIL TO
SHEILA CHANDRASEKHAR, Trustee
5838 Amy Drive
Oakland, CA 94618

MAR 21, 2002 2:15 PM

MAIL TAX STATEMENTS TO
Same as above

2002-0237536

OFFICIAL RECORDS
SAN DIEGO COUNTY RECORDER'S OFFICE
GREGORY J. SMITH, COUNTY RECORDER
FEES: 8.00
OC: OC

Trust Transfer Deed

Grant Deed (Excluded from Reappraisal Under Proposition 13, i.e., Calif. Const. Art 13A§1 et seq.)
The undersigned Grantor declares under penalty of perjury that the following is true and correct:
THERE IS NO CONSIDERATION FOR THIS TRANSFER.
Documentary transfer tax is $ 0. **This is not pursuant to a sale.**
___Computed on full value of property conveyed, or _____ computed on full value less value of liens and encumbrances remaining at time of sale or transfer.
xx There is no Documentary transfer tax due. (state reason and give Code § or Ordinance number): **Change of Trustee holding title only.**
xx City of San Diego, County of San Diego and State of California.
This is a Trust Transfer under §62 of the Revenue and Taxation Code and Grantor(s) has (have) checked the applicable exclusion:
xx Change of trustee holding title;
xx Other: No change in trust beneficiary, which remains the surviving trustor.

GRANTOR: ANN D. CHANDRASEKHAR, as Trustee, or any Successor Trustee, under Declaration of Trust Dated September 30, 1992, or any amendments thereto wherein Sripati Chandrasekhar and Ann D. Chandrasekhar are the Trustors

hereby **GRANTS** to SHEILA CHANDRASEKHAR, Trustee of THE SRIPATI CHANDRASEKHAR AND ANN D. CHANDRASEKHAR FAMILY TRUST, under Declaration of Trust, dated September 30, 1992

the following described real property in the City of San Diego, County of San Diego, State of California

Lot 67 LaJolla Highlands Unit #3, Map No. 3528 filed in the Office of the San Diego County Recorder October 19, 1956.

APN: 344-131-01-00

Dated February 20th, 2002

Ann D. Chandrasekhar
ANN D. CHANDRASEKHAR, Trustee

STATE OF CALIFORNIA)
COUNTY OF SAN DIEGO)
On Feb. 20, 02 before me, PAUL T. DUNPHY, personally appeared ANN D. CHANDRASEKHAR, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose names are subscribed to the within instrument and acknowledged that she executed the same in her authorized capacity, and that by her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Paul T. Dunphy
NOTARY PUBLIC

PAUL T. DUNPHY
Commission # 1294820
Notary Public - California
San Diego County
My Comm. Expires Mar 22, 2005

DOC # 1997-0491755
OCT 02, 1997 2:07 PM

OFFICIAL RECORDS
SAN DIEGO COUNTY RECORDER'S OFFICE
GREGORY J. SMITH, COUNTY RECORDER
FEES: 7.00
OC: OC

97-0491755

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENT TO:

Name Sripati Chandrasekhar, Trustee
Street Address 8976 Cliffridge Ave
City & State Zip San Diego, Ca 92037

956

Title Order No. ________ Escrow No. ________

FO

SPACE ABOVE THIS LINE FOR RECORDER'S USE

T 355 Legal (2-94)

Grant Deed

THE UNDERSIGNED GRANTOR(s) DECLARE(s)
DOCUMENTARY TRANSFER TAX IS $NONE Transfer to revocable trust
☐ ______ unincorporated area ☐ City of ________
Parcel No. 344 131 01 00
☐ computed on full value of interest or property conveyed, or
☐ computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, Sripati Chandrasekhar and Ann Downes Chandrasekhar, husband and wife, owners of community property.

hereby GRANT(S) to Sripati Chandrasekhar and Ann D. Chandrasekhar, as Trustees, or any Successor Trustee, under Declaration of Trust Dated September 30, 1992 or any amendments thereto wherein Sripati Chandrasekhar and Ann D. Chandrasekhar are the Trustors.

the following described real property in the county of San Diego, state of California:

Lot 67 LaJolla Highlands Unit #3, Map No. 3528 filed in the Office of the San Diego County Recorder October 19, 1956.

Dated March 8, 1996

Sripati Chandrasekhar
Sripati Chandrasekhar
Ann Downes Chandrasekhar
Ann Downes Chandrasekhar
Husband and Wife with community property

STATE OF CALIFORNIA
COUNTY OF SAN DIEGO } S.S.

On March 8, 1996 before me, John F Potter a Notary Public in and for said County and State, personally appeared Sripati Chandrasekhar and Ann Downes Chandrasekhar, husband and wife. personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature ________

PWR1 JOHN F. POTTER Comm. # 970064 NOTARY PUBLIC - CALIFORNIA San Diego County My Comm. Expires Jul. 26, 1996 PWR1

(This area for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE

Name Street Address City & State

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

Name Sripati Chandrasekhar
Address 8976 Cliffrodge
City & State La Jolla, CA 92037

MAIL TAX STATEMENTS TO

Name Same as above
Address
City & State

1577

FILE/PAGE NO. 138752
BOOK 1972
RECORDED REQUEST OF
TRANSAMERICA TITLE CO.

JUN 1 1972 9 A.M.

OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
HARLEY F. BLOOM
RECORDER

$3.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

Documentary transfer tax $ 10.45
☐ Computed on full value of property conveyed, or
☒ Computed on full value less liens & encumbrances remaining thereon at time of sale.

Earl R. Whitney Norman J. Hedge
EARL R. WHITNEY NORMAN J. HEDGE
Signature of declarant or agent determining tax - firm name
☐ Unincorporated area City of San Diego

344-131-01

Grant Deed

TRANSFER TAX PAID
HARLEY F. BLOOM, RECORDER

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

EARL R. WHITNEY, an unmarried man, and NORMAN J. HEDGE, a married man,

hereby GRANT(S) to

SRIPATI CHANDRASEKHAR and ANN DOWNES CHANDRASEKHAR, husband and wife, as joint tenants,

the following described real property in the City of San Diego
county of San Diego, state of California:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of said County, October 19, 1956.

Dated May 5, 1972

Earl R. Whitney
EARL R. WHITNEY

Norman J. Hedge
NORMAN J. HEDGE

STATE OF CALIFORNIA
COUNTY OF SAN DIEGO } SS.
On May 5, 1972 before me, the undersigned, a Notary Public in and for said County and State, personally appeared EARL R. WHITNEY and NORMAN J. HEDGE

known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

Signature of Notary

Name (Typed or Printed) of Notary

FOR NOTARY SEAL OR STAMP

HAROLD E. REMIER
NOTARY PUBLIC
Principal Office, San Diego Co. Calif.
My Commission Expires December 27, 1975

Title Order No. 312,559 Escrow No.

C-18

MAIL TAX STATEMENTS AS DIRECTED ABOVE

RECORDING REQUESTED BY

852

FILE/PAGE NO. 56742
BOOK 1972
RECORDED REQUEST OF
TRANSAMERICA TITLE CO.

MAR 9 1972 9 A.M.

OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
HARLEY F. BLOOM
RECORDER
$3.00

AND WHEN RECORDED MAIL TO

Name: Norman J. Hedge & Earl R. Whitney
Address: 7742 Herschel Ave.
City & State: La Jolla, California 92037

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO

Name: Great Western Savings & Loan
Address: 1900 Camino del Rio
City & State: San Diego, California 92108

Documentary transfer tax $ 57.75
☒ Computed on full value of property conveyed, or
☐ Computed on full value less liens & encumbrances remaining thereon at time of sale.

June O. Andresen U. S. National Bank
Signature of declarant or agent determining tax - firm name
☐ Unincorporated area City of San Diego

Tax Parcel No. 8001-344-131-01

Grant Deed

TRANSFER TAX PAID
HARLEY F. BLOOM, RECORDER

L.I.

THIS FORM FURNISHED BY SECURITY TITLE INSURANCE COMPANY

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

FAY S. WHITNEY, An Unmarried Woman

hereby GRANT(S) to NORMAN J. HEDGE, A Married Man, As His Sole and Separate Property, As To An Undivided One-Half Interest and EARL R. WHITNEY, An Unmarried Man, As To An Undivided One-Half Interest.

the following described real property in the City of San Diego
county of San Diego, state of California:

LOT SIXTY-SEVEN OF LA JOLLA HIGHLANDS UNIT NO. THREE, ACCORDING TO MAP THEREOF NO. 3528, FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 19, 1956.

Dated March 6, 1972

Fay S. Whitney
Fay S. Whitney

STATE OF CALIFORNIA
COUNTY OF San Diego } SS.
On March 7, 1972 before me, the undersigned, a Notary Public in and for said County and State, personally appeared Fay S. Whitney known to me to be the person whose name is subscribed to the within instrument and acknowledged that she executed the same.

June O. Andresen
Signature of Notary

June O. Andresen
Name (Typed or Printed) of Notary

FOR NOTARY SEAL OR STAMP

OFFICIAL SEAL
JUNE O. ANDRESEN
NOTARY PUBLIC-CALIFORNIA
SAN DIEGO COUNTY
My Commission Expires May 17, 1972
P. O. Box 9338, San Diego, Calif. 92109

Title Order No. 301182 T Escrow No. 11-1719

1.1 (GS) (Rev. 5-67) 8 pt.

MAIL TAX STATEMENTS AS DIRECTED ABOVE

OFFICIAL RECORDS COUNTY OF SAN DIEGO HARLEY F. BLOOM RECORDER

853

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

Name Norman J. Hedge
Street Address 7742 Herschel Ave.
City & State La Jolla, California 92037

FILE/PAGE NO. 56743
BOOK 1972
RECORDED REQUEST OF
TRANSAMERICA TITLE CO.

MAR 9 1972 9 A.M.

OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
HARLEY F. BLOOM
RECORDER
$3.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

MAIL TAX STATEMENTS TO

Name Great Western Savings & Loan Assoc. of San Diego
Street Address 1900 Camino del Rio
City & State San Diego, California 92108

Tax Parcel No. 8001-344-131-01

No Documentary transfer Tax.
No consideration hereon.
Consideration being paid with
Deed recording concurrently herewith.
June O. Andresen U.S. Nat'l. Bk.
City of San Diego

TO 402 CA (6-67)

Quitclaim Deed

AFFIX $______ I. R. STAMPS ABOVE

THIS FORM FURNISHED BY TITLE INSURANCE AND TRUST COMPANY

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

I, RUTH ELLEN HEDGE

hereby REMISE(S), RELEASE(S) AND FOREVER QUITCLAIM(S) to

My Husband, NORMAN J. HEDGE, As His Sole and Separate Property,

the following described real property in the City of San Diego county of San Diego state of California:

LOT SIXTY-SEVEN OF LA JOLLA HIGHLANDS UNIT NO. THREE, ACCORDING TO MAP THEREOF NO. 3528, FILED FOR RECORD IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 19, 1956,

Dated February 16, 1972

Ruth Ellen Hedge
Ruth Ellen Hedge

STATE OF CALIFORNIA
COUNTY OF San Diego } SS.

On February 23, 1972 before me, the undersigned, a Notary Public in and for said State, personally appeared RUTH ELLEN HEDGE known to me to be the person whose name is subscribed to the within Instrument and acknowledged that she executed the same.

WITNESS my hand and official seal.

Signature June O. Andresen

June O. Andresen
Name (Typed or Printed)

If executed by a Corporation the Corporation Form of Acknowledgment must be used.

OFFICIAL SEAL
JUNE O. ANDRESEN
NOTARY PUBLIC-CALIFORNIA
~~SAN DIEGO COUNTY~~
My Commission Expires May 12, 1972
P. O. Box 9338, San Diego, Calif. 92109

OFFICIAL SEAL
JUNE O. ANDRESEN
NOTARY PUBLIC-CALIFORNIA
SAN DIEGO COUNTY
My Commission Expires May 12, 1972
P. O. Box 9338, San Diego, Calif. 92109

(This area for official notarial seal)

Title Order No. 301182 Escrow or Loan No. 11-1719

MAIL TAX STATEMENTS AS DIRECTED ABOVE

RECORDING REQUESTED BY

AND WHEN RECORDED MAIL TO

Name Fay S. Whitney
Street Address 7959 Paseo del Ocaso
City & State La Jolla, CA 92037

MAIL TAX STATEMENTS TO

Name
Street Address Same
City & State

879

267474

FILE/PAGE NO.
BOOK 1971
RECORDED REQUEST OF
TRANSAMERICA TITLE CO.

NOV 17 1971 9 A.M.

OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
HARLEY F. BLOOM
RECORDER

$2.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

DOCUMENTARY TRANSFER TAX $ 49.50
X COMPUTED ON FULL VALUE OF PROPERTY CONVEYED,
OR COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES REMAINING AT TIME OF SALE.
Betty Ann Morrison
Signature of Declarant or Agent determining tax. Firm Name
BETTY ANN MORRISON

CITY OF SAN DIEGO

TRANSFER TAX PAID
HARLEY F. BLOOM, RECORDER

Grant Deed

TO 408.1 CA (1-70)

THIS FORM FURNISHED BY TITLE INSURANCE AND TRUST COMPANY

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

BETTY ANN MORRISON, a married woman,

hereby GRANT(S) to

FAY S. WHITNEY, an unmarried woman,

the following described real property in the City of San Diego
County of San Diego, State of California:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of said County, October 19, 1956.

344-131-01

Dated September 14, 1971

Betty Ann Morrison
BETTY ANN MORRISON

STATE OF CALIFORNIA
COUNTY OF SAN DIEGO } SS.

On September 15, 1971 before me, the undersigned, a Notary Public in and for said State, personally appeared BETTY ANN MORRISON known to me to be the person whose name is subscribed to the within instrument and acknowledged that she executed the same.

WITNESS my hand and official seal.

Signature Eileen R. Fennell

Eileen R. Fennell
Name (Typed or Printed)

EILEEN R. FENNELL
NOTARY PUBLIC
Principal Office, San Diego Co. Calif.
My Commission Expires September 22, 1974

(This area for official notarial seal)

Title Order No. 300 986 Escrow or Loan No.

MAIL TAX STATEMENTS AS DIRECTED ABOVE

38

527

TITLE ORDER NO. 252911-K

ESCROW NO. S-15654 G

AFTER RECORDING MAIL TO

(34) Betty Ann Morrison

7951 Paseo del Ocaso

La Jolla, California 92037

156312

FILE/PAGE NO.

RECORDED REQUEST OF

LAND TITLE INSURANCE CO.

SEP 11 9:00 AM'68

SERIES 9 BOOK 1968

OFFICIAL RECORDS

SAN DIEGO COUNTY, CALIF.

A. S. GRAY, RECORDER

$2.00

SPACE ABOVE FOR RECORDER'S USE ONLY

DOCUMENTARY TRANSFER TAX $ 39.60

Grant Deed

TRANSFER TAX PAID
A. S. GRAY, COUNTY RECORDER

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

CURTIS A. WILSON and REBECCA M. WILSON, husband and wife, and JACK R. MORRISON, husband of Betty Ann Morrison

hereby GRANT(S) to

BETTY ANN MORRISON, a married woman, as her sole and separate property

the following described real property in the City of San Diego
County of San Diego, State of California:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of San Diego County, October 19, 1956

Dated August 28, 1968

Curtis A. Wilson
Curtis A. Wilson

Rebecca M. Wilson
Rebecca M. Wilson

Jack R. Morrison
Jack R. Morrison

STATE OF CALIFORNIA
COUNTY OF San Diego } SS.

On September 3, 1968 before me, the undersigned, a Notary Public in and for said County and State, personally appeared CURTIS A. WILSON and REBECCA M. WILSON and JACK R. MORRISON, known to me to be the person s whose name s are subscribed to the within instrument and acknowledged that they executed the same.

Name (Typed or Printed)

Notary Public in and for said County and State

FOR NOTARY SEAL OR STAMP

MAIL TAX STATEMENTS TO same as shown above

Name Street

City State Zip

FORM 425, - REV., - 6-66

MAIL TAX STATEMENTS TO RETURN ADDRESSES AS ABOVE

TO 447 C
(Individual)

TI

528

STATE OF CALIFORNIA
COUNTY OF SAN DIEGO } SS.

On September 3, 1968 before me, the undersigned, a Notary Public in and for said State, personally appeared CURTIS A. WILSON and REBECCA M. WILSON and JACK R. MORRISON

to be the person s whose name s are subscribed to the within instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

Signature

Name (Typed or Printed)

STAPLE HERE

BETTY GAY
NOTARY PUBLIC
Principal Office, San Diego Co. Calif.
My Commission Expires June 30, 1972

(This area for official notarial seal)

OFFICIAL RECORDS COUNTY OF SAN DIEGO

(47)

TITLE ORDER NO. 645 294-R

ESCROW NO. S-14343 G

AFTER RECORDING MAIL TO

Mr. and Mrs. Curtis A. Wilson

8976 Cliffridge Avenue

La Jolla, California

108456

FILE/PAGE NO.
RECORDED REQUEST OF
FIRST AMERICAN TITLE CO.
JUL 1 9:0_ AM '66
SERIES 7 BOOK 1966
OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
A.S. GRAY, COUNTY RECORDER
$2.00

824

SPACE ABOVE FOR RECORDER'S USE ONLY

Grant Deed

Affix IRS $11.00

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

WILLIAM O. PAULY and EVELYN F. PAULY, husband and wife

hereby GRANT(S) to

CURTIS A. WILSON and REBECCA M. WILSON, husband and wife, as joint tenants

the following described real property in the City of San Diego County of San Diego, State of California:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of San Diego County, October 19, 1956

Dated June 22, 1966

William O. Pauly
William O. Pauly

Evelyn F. Pauly
Evelyn F. Pauly

STATE OF ~~CALIFORNIA~~ Colorado } SS.
COUNTY OF Boulder

On June 27, 1966 before me, the undersigned, a Notary Public in and for said County and State, personally appeared WILLIAM O. PAULY and EVELYN F. PAULY, known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

Paulene A. Jefferies

Paulene A. Jefferies
Name (Typed or Printed)
Notary Public in and for said County and State

FOR NOTARY SEAL OR STAMP

My Commission Expires August 5, 1969

MAIL TAX STATEMENTS TO Mr. and Mrs. Curtis A. Wilson (Name) 8976 Cliffridge Avenue (Street)
La Jolla (City) California (State) 92037 (Zip)

FORM 408 REV. - 1/68

10246-K

I.R.S. $34.65 116
712610

ISIDORE P. SMITH and ANNA D. SMITH, husband and wife

DO HEREBY GRANT TO WILLIAM O. PAULY and EVELYN F. PAULY, husband and wife, as joint tenants

ALL THAT REAL PROPERTY situated in the City of San Diego

County of San Diego, State of California, bounded and described as follows:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of San Diego County, October 19, 1956

1206558

WITNESS my hand and seal this 8th day of August 1960

Isidore P. Smith (Seal)
Isidore P. Smith

(Seal)

Anna D. Smith (Seal)
Anna D. Smith

State of California
County of San Diego } ss.

On August 10 1960 before me, the undersigned, a Notary Public in and for said County and State, personally appeared ISIDORE P. SMITH and ANNA D. SMITH known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

(Seal) Floriene Keener
Notary Public in and for said County and State.
FLORIENE KEENER
My Commission Expires Feb. 15, 1964

After recording, mail to:
Grantee: 8976 Cliffridge
La Jolla, California

SPACE BELOW FOR RECORDER'S USE ONLY

171040

FILE/PAGE NO.
RECORDED REQUEST OF
UNION TITLE INSURANCE CO.
AUG 23 9:00 AM '60
SERIES 1 BOOK 1960
OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
ROGER N. HOWE, RECORDER

700

OFFICIAL RECORDS - COUNTY OF SAN DIEGO - ROGER N. HOWE, COUNTY RECORDER

9351-K

I.R.S. $34.10 WF 6

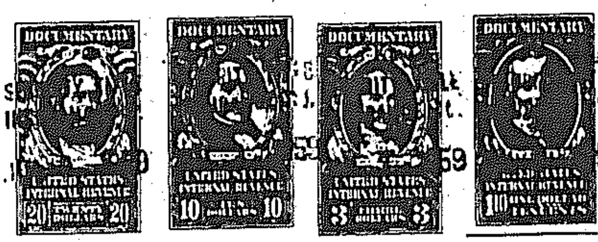
BOOK 7752 PAGE 279

DONNA K. GARSTANG, a married woman, and LILLIAN S. KIFT, a widow, as joint tenants

DO HEREBY GRANT TO ISIDORE P. SMITH and ANNA D. SMITH, husband and wife as joint tenants

ALL THAT REAL PROPERTY situated in the City of San Diego County of San Diego, State of California, bounded and described as follows:

Lot 67 of LA JOLLA HIGHLANDS UNIT NO. 3, according to Map thereof No. 3528, filed in the office of the County Recorder of San Diego County, October 19, 1956.



WITNESS my hand and seal this 29th day of June 19 59

Donna K. Garstang (Seal)

(Seal)

Lillian S. Kift (Seal)

After recording, mail to:
Grantees: 8976 Cliffridge Avenue
La Jolla, California

State of California }
County of Orange } SS.

On June 29th, 1959 before me, the undersigned, a Notary Public in and for said County and State, personally appeared Donna K. Garstang and Lillian S. Kift

known to me to be the person s whose name s subscribed to the within instrument and acknowledged that they executed the same.
WITNESS my hand and official seal.

(Seal) Mary D. Bigelow
Notary Public in and for said County and State
My Commission Expires February 29, 1960

SPACE BELOW FOR RECORDER'S USE ONLY

DOCUMENT NO. 134983
RECORDED AT REQUEST OF
SECURITY TITLE INSURANCE COMPANY
JUL 3 1959 at 9:00 A.M.
BOOK 7752 PAGE 279
OFFICIAL RECORDS
SAN DIEGO COUNTY, CALIF.
ROGER H. HOWE, RECORDER

2 cc H

FNB Form 409 - 2,500 - 10/57

BOOK 7002 PAGE 484

DOCUMENTARY UNITED STATES INTERNAL REVENUE 20 TWENTY DOLLARS 20 — DOCUMENTARY UNITED STATES INTERNAL REVENUE 10 TEN DOLLARS 10 — DOCUMENTARY UNITED STATES INTERNAL REVENUE 2 TWO DOLLARS 2 — DOCUMENTARY 40 CENTS 40 — DOCUMENTARY 5

THIS SPACE

306539

Grant Deed

(Corporation)

I. R. S. $ 32.45

H & B CONSTRUCTION CORPORATION, a corporation,
(GRANTOR)

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

Does Hereby Grant To DONNA K. GARSTANG, a married woman, and LILLIAN S. KIFT, a widow, as joint tenants

the real property in the City of San Diego

County of San Diego, State of California, described as follows:

Lot 67 of La Jolla Highlands Unit
No 3, City of San Diego, County of
San Diego, State of California,
according to Map thereof No. 3528,
filed in the office of the County
Recorder of San Diego County, October
19, 1956.

Dated February 24 1958

H & B CONSTRUCTION CORPORATION

BY: [signature]
Vice-President

STATE OF CALIFORNIA
COUNTY OF San Diego } SS.

On this 27th day of February in the year one thousand nine hundred fifty-eight, before me, N. L. Sheridan a Notary Public in and for said County and State, personally appeared Harry L. Summers known to me to be the Vice President, and known to me to be the Secretary of the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.
WITNESS my hand and official seal the day and year in this certificate first above written.

(Seal) N. L. Sheridan
Notary Public in and for said County and State.
My Commission Expires May 22, 1961

WHEN RECORDED, PLEASE MAIL THIS INSTRUMENT TO
Mrs. Donna K. Garstang & Lillian S. Kift
8976 Cliffridge Ave., La Jolla, California
ORDER No. 306539 ESCROW No. 2536

SPACE BELOW FOR RECORDER'S USE ONLY

DOCUMENT 45589
RECORDED REQUEST OF
SECURITY TITLE INSURANCE COMPANY
MAR 21 1958
at 9:00 A.M.
BOOK 7002 PAGE 484
OFFICIAL RECORDS
County of San Diego, California
Fee $ 2.00 Folios 1
ROGER N. HOWE, County Recorder
By [signature] Deputy

L-2 (G.S.) 11-16-55 15M Photo Form (8pL.)
(Rev. 9-51)

BOOK 7002 PAGE 485

306539

PLACE INTERNAL REVENUE STAMPS IN THIS SPACE

Quitclaim Deed

(Individual)

I.R.S.S. 0

RALPH R. GARSTANG, husband of the Grantee herein (GRANTOR - GRANTORS)

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

does hereby remise, release and forever quitclaim to DONNA K. GARSTANG

the real property in the City of SanDiego

County of San Diego, State of California, described as follows:

Lot 67 of La Jolla Highlands Unit No. 3,
City of San Diego, County of San Diego,
State of California, according to Map
thereof No. 3528, filed in the office of
the County Recorder of San Diego County,
October 19, 1956

Dated February 24 1958

Ralph R. Garstang
RALPH R. GARSTANG

STATE OF CALIFORNIA
COUNTY OF San Diego } SS.

On March 4th 1958 before me, a Notary Public in and for said County and State, personally appeared Ralph R. Garstang

known to me to be the person whose name is subscribed to the within Instrument and acknowledged that he executed the same.

WITNESS my hand and official seal.

(Seal) [signature]
Notary Public in and for said County and State.

My Commission Expires Aug. 7-1960

WHEN RECORDED, PLEASE MAIL THIS INSTRUMENT TO
Mrs. Donna K. Garstang
8976 Cliffridge Ave., La Jolla, California
ORDER No. 306539 ESCROW No. 2536

SPACE BELOW FOR RECORDER'S USE ONLY

45590
DOCUMENT RECORDED REQUEST OF SECURITY TITLE INSURANCE COMPANY
MAR 21 1958
at 9:00 A.M.
BOOK 7002 PAGE 485
OFFICIAL RECORDS
County of San Diego, California
Fee $ 2.00 Folios 1
ROGER N. HOWE, County Recorder
By [signature] Deputy

L-11-A (G.S.) 4-25-56 (8 pt.)
(Rev. 12-47)

[illegible]

[illegible]

[illegible]

[illegible]

8976 Cliffridge Avenue, La Jolla CA 92037

[illegible]	[illegible]
1958-1960	VACANT
1961-1965	Pauly Wm O
1966	VACANT
1967-1968	Wilson Curtis A
1969-1970	VACANT
1971-1972	Weber Tom Dr
1973-1984	Chandrasekhar S Dr
1986-2003	Chandrasekhar S Dr Chandrasekhar Ann
2004-Present	Hillel of San Diego Jewish Campus Center

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

[illegible]

[illegible]
[illegible]

[illegible]

There were no historic photographs on record at the San Diego Historical Society Archives per attached email from Carol Myers, Photograph Archivist, who performed the search on our behalf.

M.W. STEELE
GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

[illegible]

[illegible]

[illegible]

[illegible]

8976 Cliffridge Avenue, La Jolla CA 92037

The property listed above is not mapped in any published year of the Sanborn Maps

Noise Technical Report for the Hillel Center for Jewish Life Project, City of San Diego Project Number 212995

Prepared for

Hillel of San Diego
5717 Lindo Paseo
San Diego, CA 92115
Contact: Robert Lapidus

Prepared by

RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334

RECON Number 4609-1N
July 18, 2013

Jessica Fleming

Jessica Fleming, Acoustical Analyst

TABLE OF CONTENTS

FIGURES

TABLE OF CONTENTS (cont.)

TABLES

ATTACHMENTS

1.0 Summary

The proposed Hillel Center for Jewish Life project is located adjacent to La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way in the city of San Diego. The project would construct Hillel Center for Jewish Life. This report focuses on the potential traffic noise impacts to the project due to traffic on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road. Measures are indicated as needed to ensure compliance with the City's noise standards.

As discussed below, exterior noise levels at the exterior use areas are not projected to exceed 65 community noise equivalent level (CNEL). However, exterior noise levels at the faces of the proposed buildings are projected to exceed 60 CNEL across the entire project site. Therefore, specific construction techniques are required to ensure that interior noise levels do not exceed 45 CNEL.

When building plans are available for the proposed buildings and prior to the issuance of building permits, a detailed acoustical analysis shall demonstrate that interior noise levels due to exterior sources would be at or below the 45-CNEL standard. Specifically, the interior acoustical analysis shall determine the Sound Transmission Class (STC) values for the window and door components that would be necessary to ensure that interior noise levels due to exterior source would be at or below 45 CNEL. Additionally, where exterior noise levels are projected to exceed 60 CNEL, it would be necessary to close the windows to achieve the necessary exterior-to-interior noise reduction. Consequently, the design for the proposed buildings shall include a ventilation or air conditioning system to provide a habitable interior environment, when the windows are closed.

On-site noise sources would be those associated with typical student activities at the courtyard and patios. Noise levels generated during larger gatherings at the proposed facility are not projected to exceed noise ordinance standards at the adjacent residential uses.

The proposed buildings would require heating, ventilation, and air conditioning (HVAC) for heating and cooling. These HVAC units would be located on the rooftops of the proposed buildings. Noise levels due to these units were calculated. Noise levels are not projected to exceed noise ordinance standards at the adjacent residential uses.

2.0 Introduction

The project is located on the lot at the intersections of La Jolla Village Drive at Torrey Pines Road and La Jolla Village Drive at La Jolla Scenic Way in the city of San Diego, California. The project would construct a student center including meeting rooms, offices, a lounge, a kitchen, a library/chapel, and a courtyard. Figure 1 shows the regional location of the project and Figure 2 is an aerial photograph of the project vicinity. Figure 3 shows the site plan for the project.

Impacts are assessed in accordance with the guidelines, policies, and standards established by the City of San Diego. Measures are recommended, as required, to avoid adverse impacts to noise-sensitive areas.

3.0 Analysis Methodology

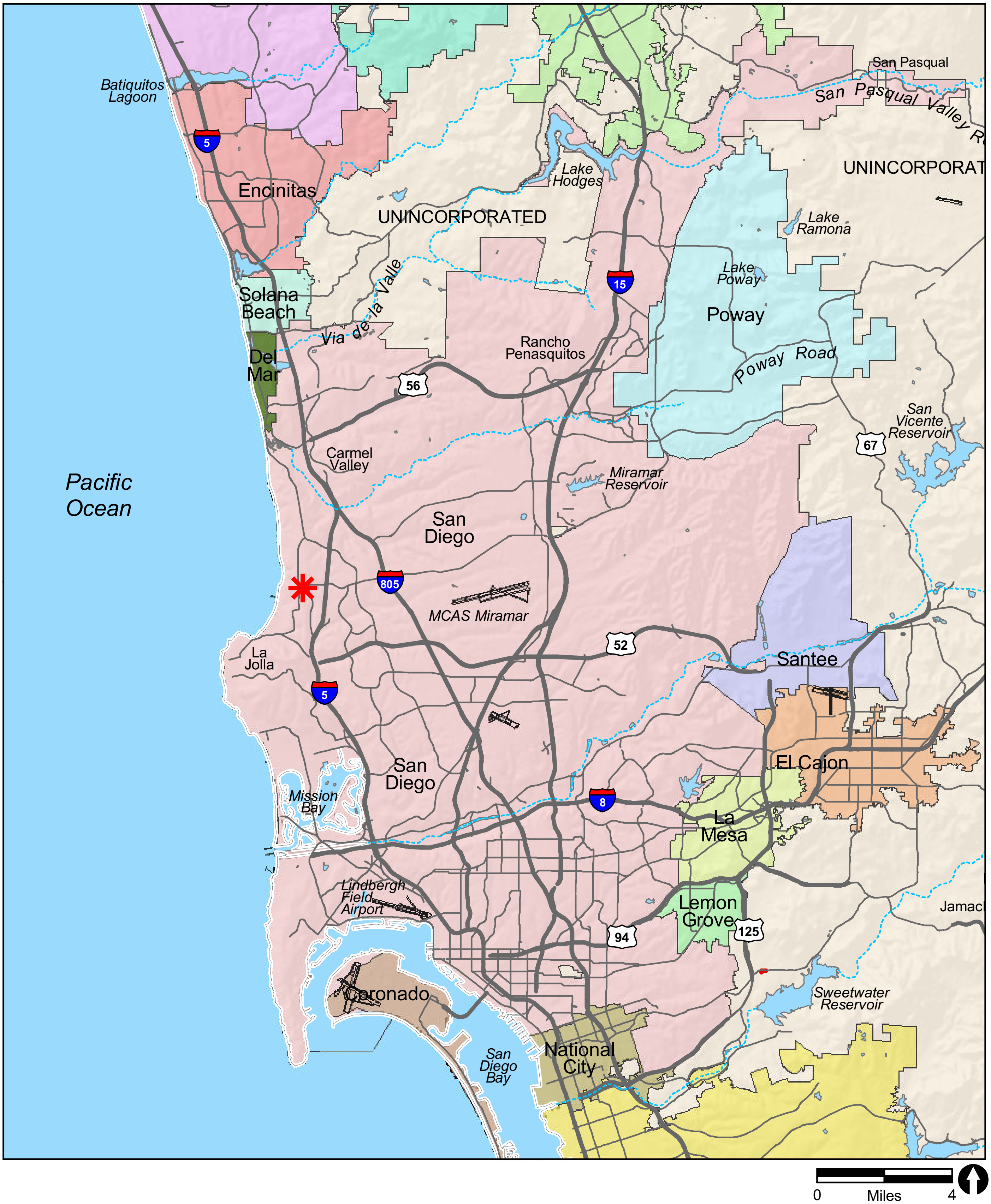
3.1 Applicable Standards and Definitions of Terms

3.1.1 Fundamentals of Traffic Noise and Noise Descriptors

The actual impact of noise is not a function of loudness alone. The time of day which noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the one-hour average equivalent noise level ($L_{eq[1]}$), and the community noise equivalent level (CNEL).

The CNEL is a 24-hour A-weighted average sound level from midnight to midnight obtained after the addition of 5 decibels (dB) to sound levels occurring between 7:00 P.M. and 10:00 P.M., and 10 dB to sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Sound from a small localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance (6 dB(A)/DD).



Project Location

FIGURE 1

Regional Location

RECON

M:\jobs3\4609\common_gis\fig1.mxd 12/07/07

Image source: (c)2009 Microsoft Corporation.

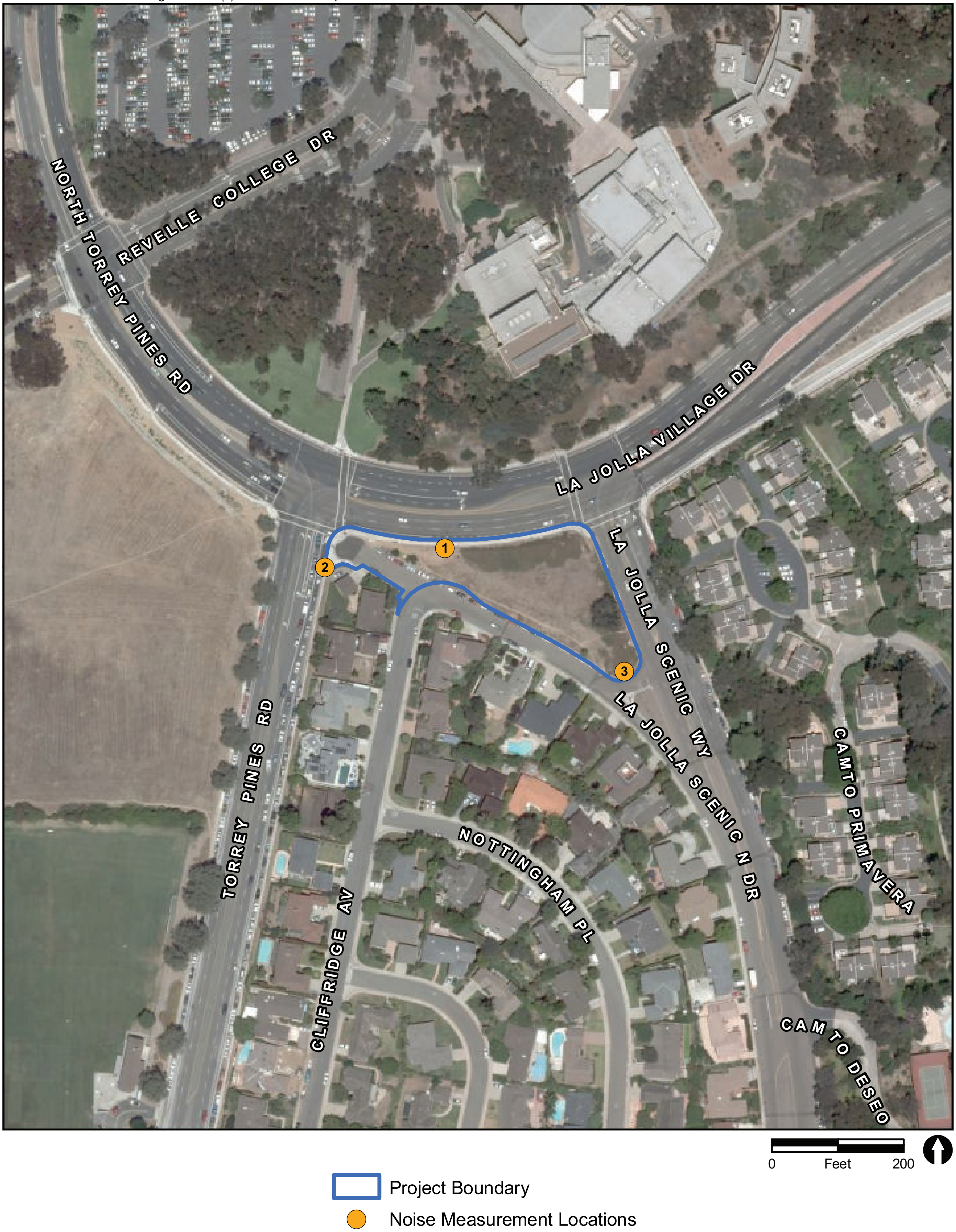
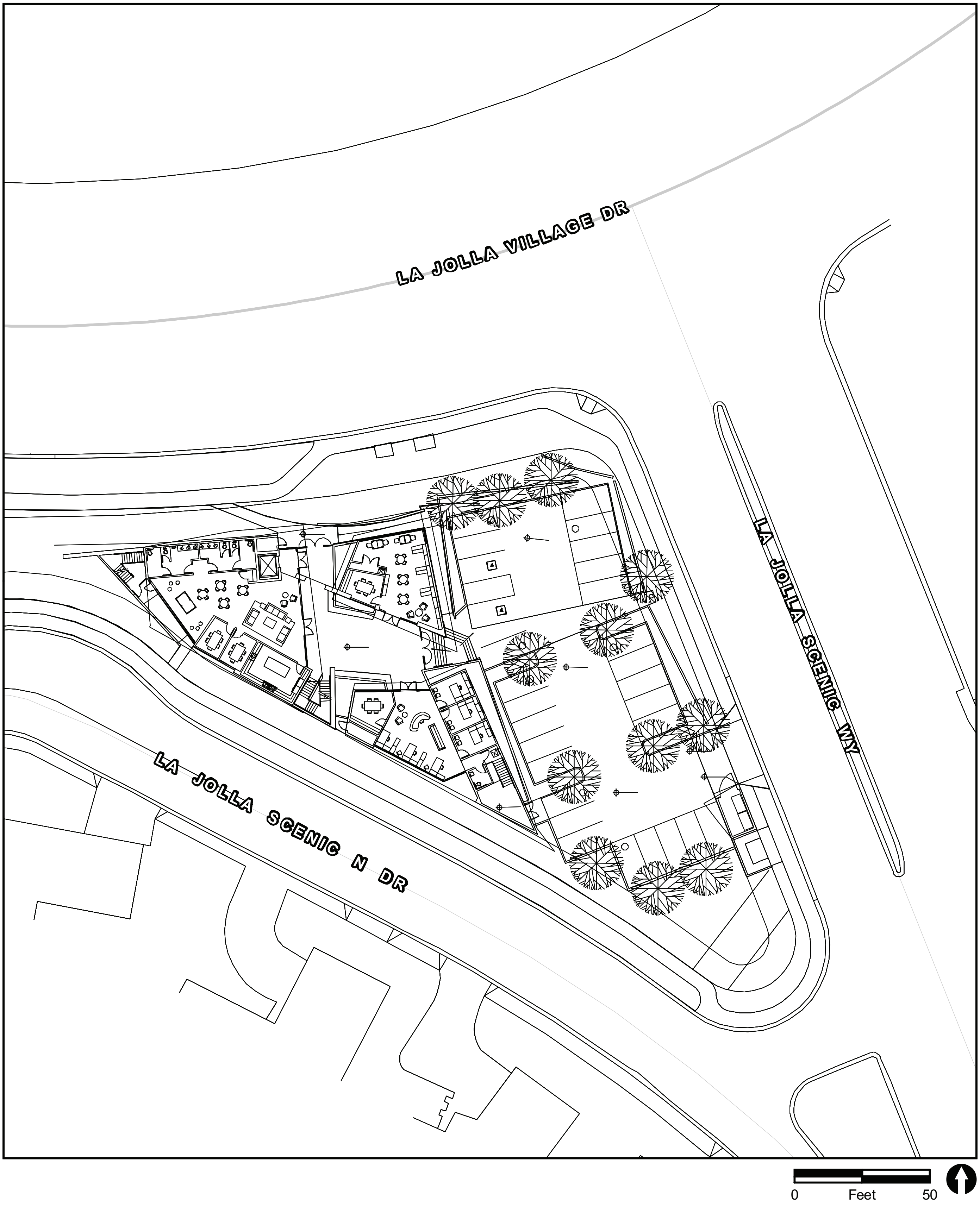


FIGURE 2
Aerial Photograph of the Project and
Vicinity and Noise Measurement Locations

M:\jobs3\4609\common_gis\fig2_nos.mxd 02/23/10



Project Lines

FIGURE 3
Proposed Site Plan

RECON

M:\jobs3\4609\common_gis\fig3_nos.mxd 02/10/10

However, highway traffic noise is not a single, stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB(A)/DD.

Change in noise levels is perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise.

3.1.2 Standards Applicable to Traffic Noise

Impacts to future sensitive receivers were evaluated in relation to the noise level standards promulgated in the City of San Diego General Plan (2008). Table 1 shows the land use noise compatibility guidelines. Hillel is a Jewish organization for graduate and undergraduate students. The Hillel Center for Jewish Life is led by professional Jewish educators and several of its staff members have advanced training and/or education in Jewish studies and education. The Hillel Center for Jewish Life would act as a center for Jewish spirituality, learning and religious growth. The facility would also provide offices and meeting spaces for staff to fulfill a religious mission. Therefore, the project would construct meeting rooms for religious study, a lounge, a kitchen, a courtyard, and a library that would serve as a chapel. The project would also include the operation of religious offices, including an office for the rabbi. As shown in Table 1, there are two Institutional standards that could apply to the project. The exterior noise standard for places of worship is 65 CNEL. The exterior noise standard for higher education institutional facilities is 70 CNEL. These standards are applicable at exterior usable areas. To be conservative, an exterior noise standard of 65 CNEL for a place of worship was used for this analysis. Noise-sensitive interior spaces have an interior standard of 45 CNEL.

The City of San Diego assumes that standard construction techniques would provide a 15-dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 CNEL or less when exterior sources are 60 CNEL or less. When exterior noise levels are greater than 60 CNEL, consideration of specific construction techniques is required.

For this study, the exterior usable area was considered to be the center courtyard.

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Land Use Category	Exterior Noise Exposure [CNEL] 60	65	70	75	80
Open Space, Parks, and Recreational	□	□	□	□	□
Community and Neighborhood Parks; Passive Recreation	□	□	□	□	□
Regional Parks; Outdoor Spectator Sports, Golf Courses; Athletic Fields; Water Recreational Facilities; Horse Stables; Park Maintenance Facilities	□	□	□	□	□
Agricultural	□	□	□	□	□
Crop Raising and Farming; Aquaculture, Dairies; Horticulture Nurseries and Greenhouses; Animal Raising, Maintaining and Keeping; Commercial Stables	□	□	□	□	□
Residential	□	□	□	□	□
Single Units; Mobile Homes; Senior Housing	□	**4**□□	□	□	□
Multiple Units; Mixed-Use Commercial/Residential; Live Work; Group Living Accommodations	□	**4**□□	**4**□□	□	□
Institutional	□	□	□	□	□
Hospitals; Nursing Facilities; Intermediate Care Facilities; Kindergarten through Grade 12 Educational Facilities; Libraries; Museums; Places of Worship; Child Care Facilities	□	**4**□□	□	□	□
Vocational or Professional Educational Facilities; Higher Education Institution Facilities (Community or Junior Colleges, Colleges, or Universities)	□	**4**□□	**4**□□	□	□
Cemeteries	□	□	□	□	□
Sales	□	□	□	□	□
Building Supplies/Equipment; Food, Beverage, and Groceries; Pets and Pet Supplies; Sundries, Pharmaceutical, and Convenience Sales; Wearing Apparel and Accessories	□	□	□□□	□□□	□
Commercial Services	□	□	□	□	□
Building Services; Business Support; Eating and Drinking; Financial Institutions; Assembly and Entertainment; Radio and Television Studios; Golf Course Support	□	□	□□□	□□□	□
Visitor Accommodations	□	**4**□□	**4**□□	**4**□□	□
Offices	□	□	□	□	□
Business and Professional; Government; Medical, Dental, and Health Practitioner; Regional and Corporate Headquarters	□	□	□□□	□□□	□
Vehicle and Vehicular Equipment Sales and Services Use	□	□	□	□	□
Commercial or Personal Vehicle Repair and Maintenance; Commercial or Personal Vehicle Sales and Rentals; Vehicle Equipment and Supplies Sales and Rentals; Vehicle Parking	□	□	□	□	□
Wholesale, Distribution, Storage Use Category	□	□	□	□	□
Equipment and Materials Storage Yards; Moving and Storage Facilities; Warehouse; Wholesale Distribution	□	□	□	□	□
Industrial	□	□	□	□	□
Heavy Manufacturing; Light Manufacturing; Marine Industry; Trucking and Transportation Terminals; Mining and Extractive Industries	□	□	□	□	□
Research and Development	□	□	□	□□□	□

Notes:

Compatible	Indoor Uses	Standard construction methods should attenuate exterior noise to an acceptable indoor noise level.
	Outdoor Uses	Activities associated with the land use may be carried out.
Conditionally Compatible	Indoor Uses	Building structure must attenuate exterior noise to the indoor noise level indicated by the number for occupied areas.
	Outdoor Uses	Feasible noise mitigation techniques should be analyzed and incorporated to make the outdoor activities acceptable.
Incompatible	Indoor Uses	New construction should not be undertaken.
	Outdoor Uses	Severe noise interference makes outdoor activities unacceptable.

SOURCE: City of San Diego 2008

3.1.3 Standards Applicable to On-site Generated Noise

Section 59.5.0401 of the City's Noise Abatement and Control Ordinance states that:

A. It shall be unlawful for any person to cause noise by any means to the extent that the one-hour average sound level exceeds the applicable limit.

B. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts…

The applicable noise limits are summarized in Table 2.

TABLE 2
STATIONARY NOISE LEVEL LIMITS

Land Use	Time of Day	One-Hour Average Sound Level [dB(A) L_{eq}]
Single Family Residential	7:00 A.M. to 7:00 P.M.	50
	7:00 P.M. to 10:00 P.M.	45
	10:00 P.M. to 7:00 A.M.	40
Multi-Family Residential (up to a maximum density of 1 unit/2,000 square feet)	7:00 A.M. to 7:00 P.M.	55
	7:00 P.M. to 10:00 P.M.	50
	10:00 P.M. to 7:00 A.M.	45
All Other Residential	7:00 A.M. to 7:00 P.M.	60
	7:00 P.M. to 10:00 P.M.	55
	10:00 P.M. to 7:00 A.M.	50
Commercial	7:00 A.M. to 7:00 P.M.	65
	7:00 P.M. to 10:00 P.M.	60
	10:00 P.M. to 7:00 A.M.	60
Industrial or Agricultural	Anytime	75

Single family residential uses are located adjacent to the project site. The most restrictive noise limit for single family uses is 40 dB(A) L_{eq}.

3.1.4 Standards Applicable to Construction Noise

Section 59.5.0404 of the City's Noise Abatement and Control Ordinance states that:

A. It shall be unlawful for any person, between the hours of 7:00 P.M. of any day and 7:00 A.M. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise. . . .

B. . . . it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 A.M. to 7:00 P.M.

3.2 Existing Noise Level Measurements

To assess the potential impacts of noise resulting from traffic on adjacent roadways, noise measurements were taken at the project site on February 11, 2008. Noise measurements were taken with one Larson-Davis Model 720 Type 2 Integrating Sound Level Meter, serial number 0266. The following parameters were used:

Filter:	A-weighted
Response:	Fast
Time History Period:	5 seconds

The meter was calibrated prior to the day's measurements. Three ground-floor measurements (five feet above the ground) were taken at three locations at the project site. Additionally, while the ground-floor measurements were being made, traffic counts were taken on La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way.

3.3 Traffic Noise Analysis

3.3.1 Traffic Parameters

Existing and future (Year 2030) traffic volumes on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road in the project vicinity were obtained from the traffic report prepared for the project (Linscott, Law & Greenspan, Engineers 2008).

La Jolla Village Drive is a six-lane prime arterial roadway with a posted speed of 40 miles per hour (mph). The existing traffic volume on La Jolla Village Drive between Torrey Pines Road and La Jolla Scenic Way is 40,500 average daily traffic (ADT). The future traffic volume on La Jolla Village Drive is 49,200 ADT. The traffic mix for La Jolla Village Drive was based on field traffic counts. The traffic mix was assumed to be 98.8 percent autos, 0.2 percent motorcycles, 0.3 percent medium trucks, 0.5 percent buses, and 0.2 percent heavy trucks.

La Jolla Scenic Way is a four-lane local collector roadway with a posted speed of 35 mph. The existing traffic volume on La Jolla Scenic Way is 9,200 ADT and the future traffic volume is 10,660 ADT. The traffic mix for La Jolla Scenic was based on field traffic counts and was adjusted to include a small percentage of heavy trucks that were not observed during the measurement period. The traffic mix was assumed to be 97.4 percent autos, 0.9 percent motorcycles, 0.6 percent medium trucks, 0.6 percent buses, and 0.5 percent heavy trucks.

Torrey Pines Road is a four-lane major arterial roadway with a posted speed of 45 mph. The existing traffic volume on Torrey Pines Road is 28,100 ADT and the future traffic volume is 32,240 ADT. The traffic mix for Torrey Pines Road was based on field traffic counts. The traffic mix was assumed to be 97.9 percent autos, 0.3 percent motorcycles, 0.9 percent medium trucks, 0.3 percent buses, and 0.6 percent heavy trucks.

As discussed below, the posted traffic speeds discussed above were found to be slightly higher than the observed speeds and the speeds that match the noise measurement data well for La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road. This is due to heavy traffic volumes and the close proximity of several busy intersections with traffic lights. To be conservative, the posted speeds were used for modeling future traffic noise levels.

Table 3 below summarizes the future traffic parameters used in this analysis.

TABLE 3
YEAR 2030 ROADWAY TRAFFIC PARAMETERS

		Percent					
Roadway	ADT	Autos	Motor-cycles	Medium Trucks	Buses	Heavy Trucks	Speed (mph)
La Jolla Village Drive	49,200	98.8	0.2	0.3	0.5	0.2	40
La Jolla Scenic Way	10,660	97.4	0.9	0.6	0.6	0.5	35
Torrey Pines Road	28,100	97.9	0.3	0.9	0.3	0.6	45

The day, evening, and nighttime traffic distribution for all roadways was assumed to be 77 percent daytime traffic, 10 percent evening traffic, and 13 percent nighttime traffic. With these assumptions, the CNEL is approximately 2 dB above the average daytime hourly equivalent noise level.

3.3.2 Analysis of Traffic Noise

Noise generated by future traffic was modeled using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) Version 2.5. The TNM program calculates noise levels at selected receiver locations using input parameter estimates such as projected hourly average traffic rates; vehicle mix, distribution, and speed;

roadway lengths and gradients; distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures.

Locations and elevations of the project site and adjacent properties and roadways were obtained from CAD drawing files (MW Steele Group, Inc. 2010).

Receivers, roadways, and barriers are input into the TNM model using three-dimensional coordinates. The Y-axis pointed north and the X-axis pointed east.

The TNM model allows the user to choose from a number of ground conditions. As seen in the aerial photograph shown in Figure 2, the project site is currently a mobile vacant dirt lot. For this reason, hard soil conditions were assumed in the modeling of noise measurement conditions. Pavement ground conditions were assumed for the analysis of future conditions, since a large portion of the site would be paved. The average annual temperature in the project area is 64 degrees Fahrenheit. The average relative humidity was assumed to be 69 percent based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center [WRCC] 2006).

Exterior traffic noise levels to first-floor receivers were calculated. First-floor receivers were placed at five feet above ground level. Calculations were completed for a daytime hour, and the resulting hourly L_{eq}s were weighted and combined into CNEL values. Projected CNEL values based on the traffic distributions used here are approximately 2 dB higher than the daytime hourly L_{eq} calculated by TNM as indicated above.

3.4 On-Site Generated Noise Analysis

The proposed buildings would require HVAC for heating and cooling. A mechanical equipment well would be located on the roof of each of the three buildings. The equipment wells would be shielded by a 3.5-foot parapet wall on top of the roofs. It is not known at this time which manufacturer, brand, or model of unit or units will be selected for use in the project. Assuming that a unit with a capacity of 1 ton would be required for 1,000 square feet of building space, it was conservatively calculated that a 5-ton unit would be required for each of the three buildings.

Based on review of various manufacturer specifications for example units, a representative noise level for a 5-ton unit would be a sound power level of 82 dB. This is approximately equal to a sound pressure level of 73 dB(A) L_{eq} at 3 feet. For a 5-ton unit, the representative noise level of 73 dB(A) L_{eq} at 3 feet was used for this analysis.

The inverse square law was used to adjust the representative noise level for distance, assuming the noise can be treated as a point source. The equation for this calculation is as follows:

$H = 20 \log (R_o \backslash R)$

where

H = total noise attenuation due to distance
R = distance from source
R_o = reference distance from source

This calculated attenuation was then subtracted from the representative noise level to determine the noise level at the desired distance.

As discussed, equipment wells would be shielded by a 3.5-foot parapet wall on top of the roofs. To calculate the noise reduction provided by the parapet walls, first a Fresnel number and the insertion loss must be calculated. Sound waves can bend around barriers to a degree essentially governed by a non-dimensional parameter called the Fresnel number. The insertion loss (i.e., noise reduction) is a function of the Fresnel number. Using the location and heights of the HVAC units, receivers, and walls, the Fresnel number and insertion loss was calculated for each HVAC unit and receiver.

4.0 Existing Conditions

The project site is a vacant lot covered with grasses and ice plant. Land in the project area comprises primarily developed land. Residential developments are located to the south and east, the University of California San Diego (UCSD) is located to the north, and soccer fields and a grass field are located to the west (see Figure 2). Ambient noise levels are primarily due to traffic on La Jolla Village Drive, La Jolla Scenic Way, and Torrey Pines Road.

Three measurements were made at the project site. Figure 2 shows the locations of these measurements. Noise measurement data are contained in Attachment 1.

Measurement 1 was located on the project site adjacent to La Jolla Village Drive. During the measurement period, traffic on La Jolla Village Drive was affected by the traffic lights located at the intersection of La Jolla Village Drive and Torrey Pines Road and the intersection of La Jolla Village Drive and La Jolla Scenic Way. The posted speed on La Jolla Village Drive is 40 mph. However, during the measurement period, the average observed traffic speed was 30 mph past the project site. This is because of the heavy traffic volumes and the close proximity of several busy intersections with traffic lights. Noise levels were measured for 15 minutes and traffic on La Jolla Village Drive was counted during the interval. Traffic on La Jolla Village Drive was the dominant noise source. The average measured noise level was 67.4 dB(A) L_{eq} at Measurement Location 1.

Measurement 2 was located just south of the project site adjacent to Torrey Pines Road. Traffic on Torrey Pines Road and La Jolla Village Drive were the dominant noise sources. Noise levels were measured for 15 minutes, and traffic on Torrey Pines Road was counted during the interval. The average measured noise level was 70.9 dB(A) L_{eq} at Measurement Location 2.

Measurement 3 was located on the project site adjacent to the intersection of La Jolla Scenic Way and La Jolla Scenic Drive North. Traffic on La Jolla Scenic Way and traffic on La Jolla Village Drive were the dominant noise sources. Noise levels were measured for 15 minutes, and traffic on La Jolla Scenic Way was counted during the interval. The average measured noise level was 61.2 dB(A) L_{eq} at Measurement Location 3. The traffic counts are summarized in Table 4.

TABLE 4
15-MINUTE TRAFFIC COUNTS

Measurement Location	Cars	Motorcycles	Medium Trucks	Buses	Heavy Trucks
Measurement 1					
WB La Jolla Village Drive	346	1	1	2	1
EB La Jolla Village Drive	289	0	1	1	1
Measurement 2					
NB Torrey Pines Road	171	1	1	1	1
SB Torrey Pines Road	138	0	1	0	2
Measurement 3					
NB La Jolla Scenic Way	66	0	0	1	0
SB La Jolla Scenic Way	45	1	1	0	0

WB = westbound, EB = eastbound, NB = northbound; SB = southbound.

To determine whether or not the computer-modeled parameters to be used were reasonable, the TNM model was run using the observed traffic volumes and mix data indicated in Table 4 for Measurement Locations 1, 2, and 3, along with the existing topography.

The average traffic speeds for La Jolla Village Drive, Torrey Pines Road, and La Jolla Scenic Way were varied until the output reasonably matched the noise measurements.

Table 5 shows the measured noise levels compared with the modeled noise levels using the field traffic counts and average speeds of 30 mph on La Jolla Village Drive, 40 mph on Torrey Pines Road, and 30 mph on La Jolla Scenic Way, which are consistent with the speeds observed by traffic following adjacent to the project site. The model output should be close to the same level as the measured value, if the model is accurately representing the existing physical conditions. As shown in Table 5, it can be seen that the modeled parameters are 0.5 to 1.0 decibels different from the measured conditions. TNM input and output data for modeling the measured conditions are provided in Attachment 2.

TABLE 5
COMPARISON OF MEASURED AND MODELED NOISE LEVELS
[dB(A) L_{eq}]

Measurement Location	Measured Noise Level	Modeled Noise Levels	Difference
1	67.4	66.4	1.0
2	70.9	70.1	0.8
3	61.2	61.7	0.5

5.0 Future Acoustical Environment and Impacts

5.1 Traffic Noise

5.1.1 Exterior Noise

The methods used in the analysis of future conditions are described in the Analysis Methodology section of this report. The traffic parameters used are discussed above.

Noise levels were modeled for a series of 50 ground-floor receivers located throughout the project area to determine the future noise contours over the project site due to traffic on the area roadways.

TNM input and output are provided in Attachment 3. The resulting noise contours at five feet above the ground are shown in Figure 4. These noise contours include the effects of future grading on the property, but do not take into account any shielding provided by the proposed buildings. “Pavement” ground conditions were used in modeling noise levels at these receivers to account for the future site condition. To be conservative, the posted traffic speeds were used for modeling future traffic noise levels. As discussed above, the observed speeds were slower than the posted speeds.

As seen from Figure 4, future traffic noise levels are projected to exceed 65 CNEL across the entire project site. Noise levels are projected to exceed 70 CNEL on the northern half of the project site adjacent to La Jolla Village Drive.

Noise levels were also modeled for six receivers located at the courtyard, the second floor patio, and the northern entry way as shown in Figure 5. Noise levels were modeled at first-floor receivers 1 through 5 five feet above ground level; and at the second-floor receiver 6, five feet above the elevation of the patio. Receivers 1 through 4 and Receiver 6 are located at the exterior usable areas to determine compliance with the 65 CNEL

Image source: Copyright 2010 GlobeXplorer, All Rights Reserved (flown March 2010)

FIGURE 4
Future Traffic Noise Contours

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Map Source: M.W. Steele Group, Inc., February 2010

Model Receiver

0 Feet 16

FIGURE 5

Modeled Receivers

RECON

exterior noise standard. Receiver 5 is located at the northern entry to the courtyard and does not represent exterior usable space. Noise levels were modeled at this location to determine the need for an interior noise analysis. TNM input and output are provided in Attachment 4. Noise levels at these locations include the effects of topography and shielding provided by the proposed building.

Table 6 below indicates the projected future noise levels at the six modeled receivers. As seen from this table, the noise levels are not projected to exceed 65 CNEL at the exterior usable areas. Exterior noise impacts would be less than significant and no mitigation would be required.

TABLE 6
FUTURE PROJECTED NOISE LEVELS (CNEL)

Receiver	Location	Projected Noise Level
1	Ground Floor Courtyard	56
2	Ground Floor Courtyard	60
3	Ground Floor Courtyard	59
4	Ground Floor Courtyard	63
5	Northern Entry to Courtyard*	68
6	Second Floor Patio	61

* Not exterior usable space

5.1.2 Interior Noise

As discussed above, noise-sensitive interior spaces have an interior standard of 45 CNEL. The City of San Diego conservatively assumes that standard construction materials would provide a 15-dB reduction of exterior noise levels to an interior receiver. With these criteria, standard construction could be assumed to result in interior noise levels of 45 CNEL or less when exterior sources are 60 CNEL or less. As shown in Table 6, exterior noise levels are projected to exceed 60 CNEL; hence, interior noise levels could exceed 45 CNEL. Interior noise impacts are potentially significant without mitigation.

5.2 On-Site Generated Noise

5.2.1 Student Noise

On-site noise sources would be those associated with typical student activities at the courtyard and patios. These activities typically consist of conversations, meetings, and general social gatherings and are not anticipated to exceed the applicable noise ordinance standards. In addition, as seen in Table 5, measured noise levels due to traffic on surrounding roadways exceed 60 dB(A) and are as high as 70 dB(A). Noise due to student activities would not be significant when compared to existing and future traffic noise levels.

On rare occasions, the facility would have larger gatherings. Based on information provided by the applicant, it is expected that with the proposed facility, a typical Hillel program would draw between 10 and 30 students and, at most, 50 patrons to the site. A normal speaking voice has a sound power level of 65 dB. This is approximately equal to a sound pressure level of 56 dB(A) L_{eq} at 3 feet. Assuming all 50 patrons were speaking at the same time, it was calculated that the noise level would be 73 dB(A) L_{eq} at 3 feet. The center of this noise source was assumed to be the center of the proposed courtyard. A noise level of 73 dB(A) L_{eq} at 3 feet would attenuate to 43.4 dB(A) L_{eq} at the closest adjacent residential receiver 90 feet away. This is less than the daytime and evening noise ordinance limits of 50 and 45 dB(A) L_{eq}, respectively, for single family residential uses. The facility would not operate past 10:00 P.M.

5.2.2 HVAC Noise

The specific design of the HVAC system has not been completed at this stage of design. For analysis purposes, it was assumed that a 5-ton HVAC unit would be required for each of the three buildings. These units would be located on the building rooftops and would be surrounded by 3.5-foot high parapet walls. Noise levels were modeled for a series of 9 receivers located at the adjacent residential properties.. Receiver and source locations are shown in Figure 6. A sound level of 73 dB(A) L_{eq} at 3 feet was chosen as a representative noise level for each 5-ton unit.

Noise levels at the property lines due to the HVAC units were calculated as described in the Analysis Methodology Section. The noise level of 73 dB(A) L_{eq} at 3 feet for the units on each proposed building was adjusted for the distance and height from the proposed HVAC units to the adjacent residential property lines. Noise reduction provided by the parapet walls were determined first by calculating the Fresnel number and then converting this to an insertion loss. HVAC noise calculations are presented in Attachment 5. Table 7 summarizes the HVAC noise levels at each receiver. As shown, HVAC noise levels are not projected to exceed 40 dB(A) L_{eq} at the adjacent residential properties.

Project Boundary

Project Lines

HVAC Receiver

HVAC Location

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FIGURE 6

HVAC Locations and Modeled Receivers

TABLE 7
HVAC NOISE LEVELS [dB(A) L_{eq}]

Receiver	HVAC 1 Noise Level	HVAC 2 Noise Level	HVAC 3 Noise Level	Total Noise Level
1	25	25	23	29
2	28	29	28	33
3	27	29	32	35
4	25	27	31	33
5	22	24	27	29
6	21	23	24	28
7	21	23	25	28
8	22	25	25	29
9	22	25	25	29

5.3 Construction Noise

Noise associated with the earthwork, excavation, construction, and surface preparation for the project would result in short-term impacts to adjacent residential properties. A variety of noise-generating equipment would be used during the construction phase of the project, such as scrapers, dump trucks, backhoes, front-end loaders, jackhammers, and concrete mixers, along with others.

Construction of the project would include the recompaction and export of 4,000 cubic yards of soil, excavation for footings and utilities, fine site grading, deliveries, and building construction. The loudest noise levels would occur during grading operations. Table 7 summarizes the equipment that would be required during grading operations, the maximum noise levels, the usage factors, and the average hourly noise level produced by each piece of equipment. The usage factor is the percentage of time that the equipment would produce the maximum noise level at full power.

TABLE 7
CONSTRUCTION EQUIPMENT

Equipment[1]	Maximum Noise Level [dB(A) L_{eq}] at 50 Feet[2]	Usage Factor[2]	Average Hourly Noise Level at 50 Feet [dB(A) $L_{eq(1)}$]	Average Hourly Noise Level at 100 Feet [dB(A) $L_{eq(1)}$]
Dozer	81.7	40%	77.7	73.7
Loader	79.1	40%	75.1	69.1
Water Truck	76.5	40%	72.5	66.5
Dump Truck	76.5	40%	72.5	66.5
TOTAL			79.8	73.8

[1]SOURCE: Kovtun pers.com. 2010
[2]SOURCE: FHWA 2006

For a worst-case analysis, it was assumed that all the equipment listed in Table 7 would operate simultaneously. As shown, the worst-case average hourly noise level at 100 feet would be 73.8 dB(A) $L_{eq(1)}$.

Grading would occur over the entire site and would not be situated at any one location for a long period. Therefore, the acoustic center of the construction activity was assumed to be the center of the entire project site. As can be seen in Figure 2, neighboring uses are more than 100 feet from the center of the project site. Therefore, construction noise levels are projected to be within City standards and impacts would be less than significant.

5.4 Ground-Borne Vibration/Noise

The project does not propose any uses that would generate ground-borne vibration or noise. Project construction would not require pile driving. Ground-borne vibration impacts would be less than significant.

6.0 Conclusion

6.1 Traffic Noise

As discussed above, noise levels are not projected to exceed 65 CNEL at the exterior use areas. Impacts are less than significant. Therefore, no exterior noise mitigation is required.

Noise-sensitive interior spaces have an interior standard of 45 CNEL. The City of San Diego assumes that standard construction techniques would provide a 15 dB reduction of exterior noise levels to an interior receiver. As shown in Table 6, exterior noise levels are projected to exceed 60 CNEL. Therefore, specific construction techniques are required to ensure that interior noise levels do not exceed 45 CNEL.

The exterior to interior noise reduction provided by the building structure is partially a function of the STC values of the window and door components used in the building. The STC is an integer rating of how well a building partition attenuates sound. The greater the STC value, generally the greater the noise reduction. Window and door manufacturers produce windows and doors with a range of STC values.

Interior Noise Mitigation

> When building plans are available for the proposed buildings and prior to the issuance of building permits, a detailed acoustical analysis shall

demonstrate that interior noise levels due to exterior sources will be at or below the 45-CNEL standard. Specifically, the interior acoustical analysis shall determine the STC values for the window and door components that would be necessary to ensure that interior noise levels due to exterior source would be at or below 45 CNEL.

Additionally, where exterior noise levels are projected to exceed 60 CNEL, it will be necessary to close the windows to achieve the necessary exterior-to-interior noise reduction. Consequently, the design for the proposed buildings shall include a ventilation or air conditioning system to provide a habitable interior environment when the windows are closed.

6.2 On-Site Generated Noise

On-site noise sources would be those associated with typical student activities at the courtyard and patios. As discussed, noise levels generated during larger gatherings at the proposed facility are not projected to exceed noise ordinance standards at the adjacent residential uses.

The proposed buildings would require HVAC for heating and cooling. These HVAC units would be located on the rooftops of the proposed buildings. Noise levels due to these units were calculated. As shown, noise levels are not projected to exceed noise ordinance standards at the adjacent residential uses.

6.3 Construction Noise

Construction shall be limited to the hours of 7:00 A.M. to 7:00 P.M. Monday through Saturday as stated in the City of San Diego's Noise Abatement and Control Ordinance. In accordance with the City's noise ordinance, no construction shall take place on Sundays or on legal holidays specified in Section 21.04 of the San Diego Municipal Code with the exception of Columbus Day and George Washington's Birthday. No other abatement measures are required.

7.0 References Cited

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2008 Traffic Impact Analysis for the Hillel Facility. LLG Ref. 3-08-1807. April 7.

MW Steele Group, Inc.

2010 CAD files of Project Site Plan sent to Bobbi Herdes, RECON. February 8.

San Diego Association of Governments

2008 Traffic Volume Forecast Internet Site: http://maximus.sandag.org /tfic/trfic30.html. Accessed February 14.

San Diego, City of

2008 City of San Diego General Plan.

Western Regional Climate Center

2006 Western U.S. Climate Historical Summaries: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0968 and http://www.wrcc.dri.edu/cgi-bin/clilcd.pl?ca23188. Accessed December 4.

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ATTACHMENTS

ATTACHMENT 1

C:\NOISE\LARDAV\SLMUTIL\11FEB_12.bin Time History Data
Sample Period (sec): 5.000

Site Location	Meas Number	Date	Time	Level	Lmax	SEL
Run Key						
Measurement 1						
0	0	11Feb 11	12:32:20	63.0	65.3	70.0
0	0	11Feb 11	12:32:25	64.0	65.6	71.0
0	0	11Feb 11	12:32:30	65.0	68.1	72.0
0	0	11Feb 11	12:32:35	63.2	65.3	70.2
0	0	11Feb 11	12:32:40	57.1	60.6	64.0
0	0	11Feb 11	12:32:45	56.7	59.8	63.7
0	0	11Feb 11	12:32:50	56.7	60.3	63.7
0	0	11Feb 11	12:32:55	56.6	59.9	63.6
0	0	11Feb 11	12:33:00	57.0	59.7	64.0
0	0	11Feb 11	12:33:05	58.0	60.4	65.0
0	0	11Feb 11	12:33:10	55.9	59.6	62.8
0	0	11Feb 11	12:33:15	57.9	63.7	64.9
0	0	11Feb 11	12:33:20	71.1	76.3	78.1
0	0	11Feb 11	12:33:25	69.3	71.3	76.3
0	0	11Feb 11	12:33:30	65.1	69.7	72.1
0	0	11Feb 11	12:33:35	75.9	79.6	82.9
0	0	11Feb 11	12:33:40	69.7	74.1	76.7
0	0	11Feb 11	12:33:45	66.2	67.0	73.2
0	0	11Feb 11	12:33:50	65.4	66.4	72.4
0	0	11Feb 11	12:33:55	63.2	65.6	70.2
0	0	11Feb 11	12:34:00	57.0	58.9	64.0
0	0	11Feb 11	12:34:05	58.8	61.6	65.8
0	0	11Feb 11	12:34:10	59.3	61.3	66.3
0	0	11Feb 11	12:34:15	58.5	59.4	65.5
0	0	11Feb 11	12:34:20	62.8	65.2	69.8
0	0	11Feb 11	12:34:25	65.7	67.8	72.7
0	0	11Feb 11	12:34:30	68.4	71.1	75.3
0	0	11Feb 11	12:34:35	65.9	68.8	72.9
0	0	11Feb 11	12:34:40	68.9	70.6	75.8
0	0	11Feb 11	12:34:45	67.1	70.7	74.0
0	0	11Feb 11	12:34:50	71.0	73.9	78.0
0	0	11Feb 11	12:34:55	67.2	70.7	74.2
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0	0	11Feb 11	12:35:05	63.7	65.5	70.6
0	0	11Feb 11	12:35:10	69.3	71.1	76.2
0	0	11Feb 11	12:35:15	69.2	70.8	76.2
0	0	11Feb 11	12:35:20	67.0	69.6	74.0
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0	0	11Feb 11	12:35:30	67.2	68.7	74.1
0	0	11Feb 11	12:35:35	64.2	68.1	71.2
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0	0	11Feb 11	12:36:35	66.7	67.8	73.7
0	0	11Feb 11	12:36:40	67.3	68.3	74.3
0	0	11Feb 11	12:36:45	68.6	69.7	75.6
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0	0	11Feb 11	12:37:00	68.0	69.1	75.0
0	0	11Feb 11	12:37:05	73.7	77.8	80.7
0	0	11Feb 11	12:37:10	72.3	74.9	79.3
0	0	11Feb 11	12:37:15	73.6	76.5	80.6
0	0	11Feb 11	12:37:20	69.8	73.4	76.8
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0	0	11Feb 11	12:38:25	57.3	58.5	64.3
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0	0	11Feb 11	12:38:50	65.5	66.0	72.5
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0	0	11Feb 11	12:41:30	61.7	62.8	68.7
0	0	11Feb 11	12:41:35	61.3	62.3	68.3
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0	0	11Feb 11	12:42:10	66.0	69.3	73.0
0	0	11Feb 11	12:42:15	66.8	67.6	73.8
0	0	11Feb 11	12:42:20	66.3	68.3	73.3
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0	0	11Feb 11	12:42:40	63.1	67.3	70.[illegible]
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0	0	11Feb 11	12:42:50	60.7	63.4	67.7
0	0	11Feb 11	12:42:55	56.3	57.5	63.3
0	0	11Feb 11	12:43:00	59.0	60.5	66.0
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0	0	11Feb 11	12:44:15	70.4	73.4	77.4
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0	0	11Feb 11	12:44:35	69.5	71.7	76.5
0	0	11Feb 11	12:44:40	69.3	71.4	76.2
0	0	11Feb 11	12:44:45	65.3	67.2	72.3
0	0	11Feb 11	12:44:50	59.9	64.9	66.9
0	0	11Feb 11	12:44:55	61.6	62.5	68.6
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0	0	11Feb 11	12:45:10	58.7	60.4	65.7
0	0	11Feb 11	12:45:15	62.5	66.5	69.5
0	0	11Feb 11	12:45:20	58.3	60.8	65.3
0	0	11Feb 11	12:45:25	59.5	61.0	66.5
0	0	11Feb 11	12:45:30	57.8	60.3	64.7
0	0	11Feb 11	12:45:35	57.3	59.2	64.3
0	0	11Feb 11	12:45:40	67.8	71.4	74.7
0	0	11Feb 11	12:45:45	70.1	71.7	77.1
0	0	11Feb 11	12:45:50	68.1	71.2	75.1
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0	0	11Feb 11	12:46:00	78.5	85.3	85.5
0	0	11Feb 11	12:46:05	69.0	70.0	76.0
0	0	11Feb 11	12:46:10	68.9	70.8	75.8
0	0	11Feb 11	12:46:15	71.2	74.9	78.2
0	0	11Feb 11	12:46:20	66.4	68.0	73.4
0	0	11Feb 11	12:46:25	62.8	66.0	69.8
0	0	11Feb 11	12:46:30	65.2	68.9	72.2
0	0	11Feb 11	12:46:35	69.6	70.5	76.6
0	0	11Feb 11	12:46:40	71.2	73.4	78.2
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0	0	11Feb 11	12:47:15	57.6	59.7	64.5
0	0	11Feb 11	12:47:20	58.0	60.9	65.0
0	0	11Feb 11	12:47:25	57.7	60.3	64.7
0	0	11Feb 11	12:47:30	61.3	65.5	68.3
0	0	11Feb 11	12:47:35	59.5	61.8	66.5
0	0	11Feb 11	12:47:40	66.0	69.8	73.0
0	0	11Feb 11	12:47:45	67.2	68.7	74.2
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0	0	11Feb 11	12:48:15	65.0	66.0	72.0
0	0	11Feb 11	12:48:20	67.9	70.7	74.9
0	0	11Feb 11	12:48:25	70.7	71.4	77.7
0	0	11Feb 11	12:48:30	70.5	71.9	77.5
0	0	11Feb 11	12:48:35	70.7	72.8	77.7
0	0	11Feb 11	12:48:40	70.9	74.5	77.8
0	0	11Feb 11	12:48:45	66.8	69.3	73.7
0	0	11Feb 11	12:48:50	67.9	69.7	74.9
0	0	11Feb 11	12:48:55	66.2	67.7	73.2
0	0	11Feb 11	12:49:00	68.5	69.9	75.5
0	0	11Feb 11	12:49:05	68.2	69.4	75.2
0	0	11Feb 11	12:49:10	64.7	68.7	71.7
0	0	11Feb 11	12:49:15	62.2	65.7	69.2
0	0	11Feb 11	12:49:20	57.9	60.4	64.9
0	0	11Feb 11	12:49:25	59.9	62.5	66.9
0	0	11Feb 11	12:49:30	59.8	62.6	66.8
0	0	11Feb 11	12:49:35	57.3	59.0	64.3
0	0	11Feb 11	12:49:40	58.8	60.4	65.8
0	0	11Feb 11	12:49:45	60.3	63.5	67.3
0	0	11Feb 11	12:49:50	60.6	63.7	67.6
0	0	11Feb 11	12:49:55	60.6	62.3	67.6
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0	0	11Feb 11	12:50:10	64.6	66.8	71.6
0	0	11Feb 11	12:50:15	63.1	65.2	70.1
0	0	11Feb 11	12:50:20	65.5	69.3	72.5
0	0	11Feb 11	12:50:25	70.1	74.3	77.1
0	0	11Feb 11	12:50:30	71.9	75.2	78.8
0	0	11Feb 11	12:50:35	73.2	80.0	80.2
0	0	11Feb 11	12:50:40	68.1	71.3	75.1
0	0	11Feb 11	12:50:45	71.3	75.4	78.3
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0	0	11Feb 11	12:50:55	67.9	69.3	74.9
0	0	11Feb 11	12:51:00	66.3	71.0	73.3
0	0	11Feb 11	12:51:05	64.8	64.8	71.8
Stop Key						
Run Key						
Measurement 2						
0	0	11Feb 11	12:53:40	65.7	66.8	72.6
0	0	11Feb 11	12:53:45	66.2	70.5	73.2
0	0	11Feb 11	12:53:50	65.5	67.9	72.5
0	0	11Feb 11	12:53:55	64.9	65.9	71.9
0	0	11Feb 11	12:54:00	64.8	65.5	71.8
0	0	11Feb 11	12:54:05	67.4	71.5	74.4
0	0	11Feb 11	12:54:10	73.5	75.4	80.5
0	0	11Feb 11	12:54:15	71.1	75.0	78.0
0	0	11Feb 11	12:54:20	69.7	71.6	76.7
0	0	11Feb 11	12:54:25	69.1	71.9	76.1
0	0	11Feb 11	12:54:30	70.4	72.0	77.3
0	0	11Feb 11	12:54:35	69.5	71.8	76.5
0	0	11Feb 11	12:54:40	71.5	73.2	78.5
0	0	11Feb 11	12:54:45	80.9	85.6	87.9
0	0	11Feb 11	12:54:50	73.6	82.5	80.5
0	0	11Feb 11	12:54:55	69.7	73.6	76.7
0	0	11Feb 11	12:55:00	68.2	72.6	75.2
0	0	11Feb 11	12:55:05	60.0	64.2	67.0
0	0	11Feb 11	12:55:10	63.3	64.6	70.3
0	0	11Feb 11	12:55:15	62.2	64.0	69.2
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0	0	11Feb 11	12:55:25	59.5	61.9	66.5
0	0	11Feb 11	12:55:30	58.0	63.1	65.0
0	0	11Feb 11	12:55:35	57.5	64.1	64.5
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0	0	11Feb 11	12:55:50	61.1	68.4	[illegible]
0	0	11Feb 11	12:55:55	71.0	76.0	[illegible]
0	0	11Feb 11	12:56:00	58.4	61.7	[illegible]

0	0	11Feb 11	12:56:05	57.3	58.1	64.3
0	0	11Feb 11	12:56:10	61.9	66.9	68.9
0	0	11Feb 11	12:56:15	59.7	63.7	66.6
0	0	11Feb 11	12:56:20	68.6	71.2	75.6
0	0	11Feb 11	12:56:25	75.5	86.5	82.5
0	0	11Feb 11	12:56:30	72.2	79.6	79.2
0	0	11Feb 11	12:56:35	73.0	78.2	80.0
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0	0	11Feb 11	12:56:55	67.6	69.2	74.6
0	0	11Feb 11	12:57:00	66.9	69.0	73.9
0	0	11Feb 11	12:57:05	64.8	66.6	71.8
0	0	11Feb 11	12:57:10	66.9	69.2	73.9
0	0	11Feb 11	12:57:15	68.0	73.8	75.0
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0	0	11Feb 11	12:57:45	58.2	59.5	65.2
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0	0	11Feb 11	12:57:55	61.4	65.3	68.4
0	0	11Feb 11	12:58:00	64.6	68.6	71.6
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0	0	11Feb 11	12:58:10	58.6	60.8	65.6
0	0	11Feb 11	12:58:15	56.7	57.7	63.6
0	0	11Feb 11	12:58:20	56.4	57.0	63.4
0	0	11Feb 11	12:58:25	57.2	60.0	64.2
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0	0	11Feb 11	12:58:35	69.7	71.7	76.7
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0	0	11Feb 11	12:58:50	68.8	72.2	75.8
0	0	11Feb 11	12:58:55	66.2	68.6	73.2
0	0	11Feb 11	12:59:00	65.6	67.1	72.6
0	0	11Feb 11	12:59:05	65.4	66.7	72.3
0	0	11Feb 11	12:59:10	66.3	67.5	73.3
0	0	11Feb 11	12:59:15	62.0	64.7	69.0
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0	0	11Feb 11	12:59:25	59.3	62.6	66.3
0	0	11Feb 11	12:59:30	71.1	75.5	78.1
0	0	11Feb 11	12:59:35	69.5	72.7	76.5
0	0	11Feb 11	12:59:40	64.1	65.2	71.1
0	0	11Feb 11	12:59:45	62.3	63.6	69.3
0	0	11Feb 11	12:59:50	60.8	62.2	67.7
0	0	11Feb 11	12:59:55	59.0	67.1	66.0
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0	0	11Feb 11	13:00:25	70.0	70.7	77.0
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0	0	11Feb 11	13:01:25	69.2	72.1	76.2
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0	0	11Feb 11	13:01:55	54.2	55.7	61.1
0	0	11Feb 11	13:02:00	62.9	68.8	69.9
0	0	11Feb 11	13:02:05	68.6	70.5	75.5
0	0	11Feb 11	13:02:10	72.1	74.4	79.1
0	0	11Feb 11	13:02:15	67.9	72.2	74.9
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0	0	11Feb 11	13:03:40	59.6	62.0	66.5
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0	0	11Feb 11	13:04:20	56.8	58.2	63.8
0	0	11Feb 11	13:04:25	59.5	62.4	66.5
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0	0	11Feb 11	13:04:45	69.7	72.7	76.7
0	0	11Feb 11	13:04:50	67.2	69.0	74.2
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0	0	11Feb 11	13:05:00	68.3	73.5	75.3
0	0	11Feb 11	13:05:05	71.9	74.2	78.9
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0	0	11Feb 11	13:05:15	89.6	94.7	96.6
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0	0	11Feb 11	13:06:00	53.1	54.2	60.1
0	0	11Feb 11	13:06:05	53.9	54.7	60.9
0	0	11Feb 11	13:06:10	56.2	61.4	63.2
0	0	11Feb 11	13:06:15	62.5	63.5	69.5
0	0	11Feb 11	13:06:20	65.9	69.1	72.8
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0	0	11Feb 11	13:06:50	61.0	63.6	68.0
0	0	11Feb 11	13:06:55	60.7	63.4	67.6
0	0	11Feb 11	13:07:00	61.7	66.6	68.7
0	0	11Feb 11	13:07:05	66.3	70.6	73.3

0	0	11Feb 11	13:07:10	60.6	62.3	67.5
0	0	11Feb 11	13:07:15	69.3	77.9	76.3
0	0	11Feb 11	13:07:20	71.7	78.6	78.7
0	0	11Feb 11	13:07:25	65.8	66.9	72.8
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0	0	11Feb 11	13:07:35	66.2	67.1	73.2
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0	0	11Feb 11	13:07:45	71.2	79.4	78.2
0	0	11Feb 11	13:07:50	74.2	78.4	81.2
0	0	11Feb 11	13:07:55	72.5	74.3	79.5
0	0	11Feb 11	13:08:00	71.1	72.5	78.0
0	0	11Feb 11	13:08:05	69.1	70.4	76.1
0	0	11Feb 11	13:08:10	66.5	67.9	73.5
0	0	11Feb 11	13:08:15	71.5	77.1	78.5
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0	0	11Feb 11	13:08:30	65.0	67.9	72.0
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0	0	11Feb 11	13:08:55	65.4	70.3	72.4
0	0	11Feb 11	13:09:00	63.7	67.9	70.7
0	0	11Feb 11	13:09:05	64.2	69.0	71.2
0	0	11Feb 11	13:09:10	63.3	66.2	70.3
0	0	11Feb 11	13:09:15	63.5	66.0	70.5
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0	0	11Feb 11	13:09:40	72.1	74.3	79.1
0	0	11Feb 11	13:09:45	70.3	73.3	77.3
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0	0	11Feb 11	13:10:00	79.2	84.6	86.2
0	0	11Feb 11	13:10:05	77.4	83.6	84.4
0	0	11Feb 11	13:10:10	73.3	75.4	80.3
0	0	11Feb 11	13:10:15	72.8	78.4	79.8
0	0	11Feb 11	13:10:20	72.4	77.3	79.4
0	0	11Feb 11	13:10:25	67.4	70.3	74.4
0	0	11Feb 11	13:10:30	64.2	66.6	71.2
0	0	11Feb 11	13:10:35	64.4	66.5	71.4
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0	0	11Feb 11	13:10:45	61.1	62.8	68.1
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0	0	11Feb 11	13:10:55	63.8	64.9	70.8
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0	0	11Feb 11	13:11:05	63.6	65.8	70.6
0	0	11Feb 11	13:11:10	64.7	66.6	71.7
0	0	11Feb 11	13:11:15	60.9	62.4	67.9
0	0	11Feb 11	13:11:20	62.0	63.1	69.0
0	0	11Feb 11	13:11:25	61.0	61.9	68.0
0	0	11Feb 11	13:11:30	60.7	62.1	67.7
0	0	11Feb 11	13:11:35	59.5	60.8	66.5
0	0	11Feb 11	13:11:40	60.9	62.6	67.9
0	0	11Feb 11	13:11:45	63.0	69.0	70.0
0	0	11Feb 11	13:11:50	61.7	62.5	68.7
0	0	11Feb 11	13:11:55	62.9	64.5	69.9
0	0	11Feb 11	13:12:00	64.5	64.5	71.5
Stop Key						
Run Key						
Measurement 3						
0	0	11Feb 11	13:19:00	60.2	64.8	67.2
0	0	11Feb 11	13:19:05	58.8	62.4	65.8
0	0	11Feb 11	13:19:10	58.6	62.4	65.6
0	0	11Feb 11	13:19:15	52.6	53.5	59.5
0	0	11Feb 11	13:19:20	53.6	54.9	60.6
0	0	11Feb 11	13:19:25	59.7	61.9	66.7
0	0	11Feb 11	13:19:30	53.8	56.3	60.7
0	0	11Feb 11	13:19:35	53.5	55.5	60.5
0	0	11Feb 11	13:19:40	52.7	54.5	59.7
0	0	11Feb 11	13:19:45	51.8	52.9	58.8
0	0	11Feb 11	13:19:50	53.3	54.5	60.3
0	0	11Feb 11	13:19:55	55.2	57.9	62.2
0	0	11Feb 11	13:20:00	53.8	55.5	60.7
0	0	11Feb 11	13:20:05	54.0	54.8	61.0
0	0	11Feb 11	13:20:10	54.0	55.5	61.0
0	0	11Feb 11	13:20:15	58.3	64.4	65.3
0	0	11Feb 11	13:20:20	60.5	63.5	67.5
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0	0	11Feb 11	13:20:55	69.2	71.7	76.1
0	0	11Feb 11	13:21:00	69.4	71.3	76.4
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0	0	11Feb 11	13:21:10	53.6	54.8	60.6
0	0	11Feb 11	13:21:15	57.0	63.8	64.0
0	0	11Feb 11	13:21:20	64.1	68.0	71.1
0	0	11Feb 11	13:21:25	54.0	56.8	61.0
0	0	11Feb 11	13:21:30	50.8	52.2	57.8
0	0	11Feb 11	13:21:35	51.8	52.7	58.8
0	0	11Feb 11	13:21:40	51.6	52.2	58.6
0	0	11Feb 11	13:21:45	53.4	55.7	60.4
0	0	11Feb 11	13:21:50	53.8	55.3	60.8
0	0	11Feb 11	13:21:55	54.0	56.5	61.0
0	0	11Feb 11	13:22:00	58.8	62.0	65.8
0	0	11Feb 11	13:22:05	57.6	62.2	64.5
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0	0	11Feb 11	13:22:30	55.8	57.3	62.8
0	0	11Feb 11	13:22:35	57.8	60.3	64.8
0	0	11Feb 11	13:22:40	60.2	61.6	67.2
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0	0	11Feb 11	13:23:15	71.4	72.8	78.4
0	0	11Feb 11	13:23:20	76.1	81.3	83.1
0	0	11Feb 11	13:23:25	67.2	70.1	74.2
0	0	11Feb 11	13:23:30	57.4	62.8	64.4
0	0	11Feb 11	13:23:35	52.4	53.9	59.4
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0	0	11Feb 11	13:24:10	53.8	55.2	60.8
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0	0	11Feb 11 13:25:40	74.4	81.0	81.4
0	0	11Feb 11 13:25:45	67.9	73.7	74.9
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0	0	11Feb 11 13:25:55	56.7	59.6	63.7
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0	0	11Feb 11 13:26:15	57.2	60.6	64.2
0	0	11Feb 11 13:26:20	56.4	59.8	63.4
0	0	11Feb 11 13:26:25	52.0	55.9	59.0
0	0	11Feb 11 13:26:30	55.2	57.8	62.2
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0	0	11Feb 11 13:26:40	53.7	54.6	60.7
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0	0	11Feb 11 13:27:25	61.9	62.9	68.9
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0	0	11Feb 11 13:30:30	54.1	56.0	61.1
0	0	11Feb 11 13:30:35	55.8	60.6	62.8
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0	0	11Feb 11 13:31:05	55.5	56.8	62.5
0	0	11Feb 11 13:31:10	54.7	56.6	61.7
0	0	11Feb 11 13:31:15	55.2	56.6	62.2
0	0	11Feb 11 13:31:20	59.2	61.8	66.2
0	0	11Feb 11 13:31:25	64.5	68.6	71.5
0	0	11Feb 11 13:31:30	60.8	63.7	67.7
0	0	11Feb 11 13:31:35	53.6	54.9	60.6
0	0	11Feb 11 13:31:40	54.3	57.3	61.3
0	0	11Feb 11 13:31:45	57.4	59.1	64.4
0	0	11Feb 11 13:31:50	54.5	58.6	61.5
0	0	11Feb 11 13:31:55	53.9	55.3	60.9
0	0	11Feb 11 13:32:00	54.6	56.2	61.5
0	0	11Feb 11 13:32:05	51.6	53.6	58.6
0	0	11Feb 11 13:32:10	49.5	50.8	56.5
0	0	11Feb 11 13:32:15	51.8	53.3	58.8
0	0	11Feb 11 13:32:20	52.5	53.8	59.5
0	0	11Feb 11 13:32:25	61.3	64.2	68.3
0	0	11Feb 11 13:32:30	62.1	68.8	69.1
0	0	11Feb 11 13:32:35	65.4	69.2	72.4
0	0	11Feb 11 13:32:40	57.4	62.5	64.4
0	0	11Feb 11 13:32:45	56.5	60.2	63.5
0	0	11Feb 11 13:32:50	62.0	65.7	69.0
0	0	11Feb 11 13:32:55	52.7	54.7	59.7
0	0	11Feb 11 13:33:00	53.8	56.7	60.8
0	0	11Feb 11 13:33:05	55.6	57.2	62.5
0	0	11Feb 11 13:33:10	55.6	58.0	62.5
0	0	11Feb 11 13:33:15	54.0	56.1	61.0
0	0	11Feb 11 13:33:20	53.4	55.0	60.4
0	0	11Feb 11 13:33:25	55.3	57.3	62.3
0	0	11Feb 11 13:33:30	57.2	58.7	64.2
0	0	11Feb 11 13:33:35	57.2	59.2	64.2
0	0	11Feb 11 13:33:40	54.7	58.7	61.7
0	0	11Feb 11 13:33:45	53.2	54.8	60.2
0	0	11Feb 11 13:33:50	52.5	55.0	59.5
0	0	11Feb 11 13:33:55	51.7	52.7	58.6
0	0	11Feb 11 13:34:00	55.7	60.2	62.7
0	0	11Feb 11 13:34:05	61.2	63.6	68.2
0	0	11Feb 11 13:34:10	52.3	54.7	59.3
0	0	11Feb 11 13:34:15	51.8	52.6	58.8
0	0	11Feb 11 13:34:20	53.4	55.1	60.4
0	0	11Feb 11 13:34:25	51.5	52.7	58.5
0	0	11Feb 11 13:34:30	50.3	51.2	57.2
0	0	11Feb 11 13:34:35	49.5	50.6	56.5
0	0	11Feb 11 13:34:40	49.4	50.2	56.4
0	0	11Feb 11 13:34:45	51.2	53.8	58.2
0	0	11Feb 11 13:34:50	59.2	63.7	66.2
0	0	11Feb 11 13:34:55	56.6	63.1	63.6
0	0	11Feb 11 13:35:00	61.4	68.3	68.4
0	0	11Feb 11 13:35:05	61.0	68.0	68.0
0	0	11Feb 11 13:35:10	67.2	71.3	74.2
0	0	11Feb 11 13:35:15	66.7	71.7	73.7
0	0	11Feb 11 13:35:20	58.4	59.7	65.4
0	0	11Feb 11 13:35:25	55.7	58.3	62.7
0	0	11Feb 11 13:35:30	53.9	55.6	60.9
0	0	11Feb 11 13:35:35	57.3	58.7	64.2
0	0	11Feb 11 13:35:40	62.0	65.8	69.0
0	0	11Feb 11 13:35:45	56.6	61.0	63.5
0	0	11Feb 11 13:35:50	53.9	55.2	60.9
0	0	11Feb 11 13:35:55	58.0	[illegible]	65.0

0	0	11Feb 11 13:36:00	59.3	61.3	66.3
0	0	11Feb 11 13:36:05	57.3	58.7	64.3
0	0	11Feb 11 13:36:10	57.1	58.5	64.1
0	0	11Feb 11 13:36:15	56.1	58.7	63.1
0	0	11Feb 11 13:36:20	53.2	55.1	60.2
0	0	11Feb 11 13:36:25	53.4	56.5	60.4
0	0	11Feb 11 13:36:30	55.6	58.8	62.6
0	0	11Feb 11 13:36:35	59.9	62.5	66.9
0	0	11Feb 11 13:36:40	51.9	55.7	58.9
0	0	11Feb 11 13:36:45	51.6	54.3	58.5
0	0	11Feb 11 13:36:50	54.7	56.0	61.7
0	0	11Feb 11 13:36:55	51.2	53.5	58.2
0	0	11Feb 11 13:37:00	50.8	51.7	57.8
0	0	11Feb 11 13:37:05	52.2	58.1	59.2
0	0	11Feb 11 13:37:10	66.8	70.3	73.7
0	0	11Feb 11 13:37:15	65.4	70.0	72.4
0	0	11Feb 11 13:37:20	60.0	63.3	67.0
0	0	11Feb 11 13:37:25	57.0	58.7	64.0
0	0	11Feb 11 13:37:30	63.3	67.2	70.3
0	0	11Feb 11 13:37:35	63.7	66.7	70.7
0	0	11Feb 11 13:37:40	60.0	63.0	67.0
0	0	11Feb 11 13:37:45	55.8	58.2	62.8
0	0	11Feb 11 13:37:50	59.9	61.7	66.9
0	0	11Feb 11 13:37:55	57.5	59.3	64.5
0	0	11Feb 11 13:38:00	56.1	58.6	63.1
0	0	11Feb 11 13:38:05	53.5	56.8	60.5
0	0	11Feb 11 13:38:10	53.9	56.9	60.9
0	0	11Feb 11 13:38:15	55.8	58.2	62.8
0	0	11Feb 11 13:38:20	61.7	64.1	68.6
0	0	11Feb 11 13:38:25	59.2	62.0	66.2
0	0	11Feb 11 13:38:30	59.6	62.6	66.6
0	0	11Feb 11 13:38:35	56.3	57.8	63.2
0	0	11Feb 11 13:38:40	56.1	60.1	63.1
0	0	11Feb 11 13:38:45	58.3	62.2	65.3
0	0	11Feb 11 13:38:50	63.1	65.8	70.1
0	0	11Feb 11 13:38:55	53.9	57.8	60.9
0	0	11Feb 11 13:39:00	53.2	54.2	60.2
0	0	11Feb 11 13:39:05	51.2	52.5	58.2
0	0	11Feb 11 13:39:10	50.2	52.1	57.2
0	0	11Feb 11 13:39:15	50.7	51.8	57.7
0	0	11Feb 11 13:39:20	52.0	53.1	59.0
0	0	11Feb 11 13:39:25	54.0	57.1	61.0
0	0	11Feb 11 13:39:30	66.5	70.5	73.5
0	0	11Feb 11 13:39:35	69.7	72.7	76.7
0	0	11Feb 11 13:39:40	63.9	69.8	70.9
0	0	11Feb 11 13:39:45	54.8	59.0	61.8
0	0	11Feb 11 13:39:50	58.1	59.5	65.1
0	0	11Feb 11 13:39:55	59.7	62.2	66.6
0	0	11Feb 11 13:40:00	52.6	56.2	59.5
0	0	11Feb 11 13:40:05	54.7	57.7	61.7
0	0	11Feb 11 13:40:10	59.3	62.1	66.3
0	0	11Feb 11 13:40:15	57.4	62.0	64.4
0	0	11Feb 11 13:40:20	49.9	51.5	56.9
0	0	11Feb 11 13:40:25	48.9	49.7	55.9
0	0	11Feb 11 13:40:30	49.0	50.0	56.0
0	0	11Feb 11 13:40:35	49.4	50.3	56.4
0	0	11Feb 11 13:40:40	49.0	50.2	56.0
0	0	11Feb 11 13:40:45	50.0	51.2	57.0
0	0	11Feb 11 13:40:50	50.8	52.3	57.8
0	0	11Feb 11 13:40:55	51.5	52.5	58.5
0	0	11Feb 11 13:41:00	52.9	54.8	59.9
0	0	11Feb 11 13:41:05	53.2	54.8	60.2
0	0	11Feb 11 13:41:10	53.3	54.2	60.3
0	0	11Feb 11 13:41:15	53.6	54.5	60.5
0	0	11Feb 11 13:41:20	53.4	54.7	60.4
0	0	11Feb 11 13:41:25	54.9	59.2	61.9
0	0	11Feb 11 13:41:30	64.0	68.0	71.0
0	0	11Feb 11 13:41:35	53.2	58.0	60.2
0	0	11Feb 11 13:41:40	51.7	53.6	58.7
0	0	11Feb 11 13:41:45	60.7	66.7	67.7
0	0	11Feb 11 13:41:50	67.1	68.5	74.1
0	0	11Feb 11 13:41:55	75.4	78.5	82.4
0	0	11Feb 11 13:42:00	66.3	72.7	73.3
0	0	11Feb 11 13:42:05	55.1	56.6	62.0
0	0	11Feb 11 13:42:10	53.1	54.3	60.1
0	0	11Feb 11 13:42:15	53.5	54.8	60.5
0	0	11Feb 11 13:42:20	54.5	58.1	61.5
0	0	11Feb 11 13:42:25	63.1	65.3	70.1
0	0	11Feb 11 13:42:30	59.4	62.1	66.4
0	0	11Feb 11 13:42:35	63.2	66.2	70.2
0	0	11Feb 11 13:42:40	60.6	62.9	67.6
0	0	11Feb 11 13:42:45	54.9	58.5	61.8
0	0	11Feb 11 13:42:50	52.1	52.7	59.1
0	0	11Feb 11 13:42:55	52.2	53.2	59.2
0	0	11Feb 11 13:43:00	57.1	61.2	64.1
0	0	11Feb 11 13:43:05	63.8	67.8	70.8
0	0	11Feb 11 13:43:10	52.0	54.7	59.0
0	0	11Feb 11 13:43:15	51.6	52.5	58.5
0	0	11Feb 11 13:43:20	54.2	55.6	61.2
0	0	11Feb 11 13:43:25	57.1	60.1	64.1
0	0	11Feb 11 13:43:30	58.3	59.8	65.3
0	0	11Feb 11 13:43:35	57.6	59.9	64.5
0	0	11Feb 11 13:43:40	55.0	58.3	62.0
0	0	11Feb 11 13:43:45	52.0	54.1	59.0
0	0	11Feb 11 13:43:50	57.1	61.8	64.1
0	0	11Feb 11 13:43:55	58.7	61.7	65.7
0	0	11Feb 11 13:44:00	66.3	70.8	73.3
0	0	11Feb 11 13:44:05	61.6	67.1	68.6
0	0	11Feb 11 13:44:10	52.2	54.7	59.2
0	0	11Feb 11 13:44:15	49.8	51.0	56.8
0	0	11Feb 11 13:44:20	49.9	50.7	56.9
0	0	11Feb 11 13:44:25	52.7	54.2	59.7
0	0	11Feb 11 13:44:30	67.1	72.2	74.1
0	0	11Feb 11 13:44:35	71.2	74.0	78.2
0	0	11Feb 11 13:44:40	69.6	70.7	76.6
0	0	11Feb 11 13:44:45	69.5	72.2	76.5
0	0	11Feb 11 13:44:50	57.7	60.2	64.7
0	0	11Feb 11 13:44:55	60.6	63.1	67.5
0	0	11Feb 11 13:45:00	54.0	55.8	61.0
0	0	11Feb 11 13:45:05	52.7	53.5	59.6
0	0	11Feb 11 13:45:10	55.9	57.8	62.9
0	0	11Feb 11 13:45:15	54.9	57.1	61.8
0	0	11Feb 11 13:45:20	57.2	59.8	64.2
0	0	11Feb 11 13:45:25	55.3	59.0	62.3
0	0	11Feb 11 13:45:30	51.2	52.5	58.2
0	0	11Feb 11 13:45:35	54.7	56.1	61.7
0	0	11Feb 11 13:45:40	53.5	55.5	60.5
0	0	11Feb 11 13:45:45	50.7	52.2	57.7
0	0	11Feb 11 13:45:50	50.5	53.0	57.5
0	0	11Feb 11 13:45:55	52.0	54.1	59.0
0	0	11Feb 11 13:46:00	55.5	57.0	62.5
0	0	11Feb 11 13:46:05	59.1	61.2	66.1
0	0	11Feb 11 13:46:10	54.4	57.7	61.4
0	0	11Feb 11 13:46:15	51.7	52.7	58.7
0	0	11Feb 11 13:46:20	54.1	57.1	61.1
0	0	11Feb 11 13:46:25	60.8	62.4	67.8
0	0	11Feb 11 13:46:30	59.7	61.4	66.7
0	0	11Feb 11 13:46:35	67.6	70.2	74.5
0	0	11Feb 11 13:46:40	66.8	69.2	73.8
0	0	11Feb 11 13:46:45	61.9	67.1	68.9
0	0	11Feb 11 13:46:50	57.4	63.4	64.4
0	0	11Feb 11 13:46:55	53.3	53.8	60.3
0	0	11Feb 11 13:47:00	53.8	55.2	60.8

0	0	11Feb	11	13:47:05	54.0	55.3	61.0
0	0	11Feb	11	13:47:10	55.6	61.3	62.5
0	0	11Feb	11	13:47:15	55.4	56.3	62.4
0	0	11Feb	11	13:47:20	57.4	62.3	64.4
0	0	11Feb	11	13:47:25	61.8	63.6	68.8
0	0	11Feb	11	13:47:30	64.5	67.6	71.5
0	0	11Feb	11	13:47:35	56.8	61.7	63.8
0	0	11Feb	11	13:47:40	66.5	71.3	73.5
0	0	11Feb	11	13:47:45	62.9	65.0	69.8
0	0	11Feb	11	13:47:50	56.2	58.2	63.2
0	0	11Feb	11	13:47:55	60.3	61.8	67.3
0	0	11Feb	11	13:48:00	57.6	60.9	64.6
0	0	11Feb	11	13:48:05	62.3	63.6	69.3
0	0	11Feb	11	13:48:10	56.7	60.5	63.7
0	0	11Feb	11	13:48:15	55.2	58.2	62.2
0	0	11Feb	11	13:48:20	55.9	57.0	62.9
0	0	11Feb	11	13:48:25	55.6	58.2	62.6
0	0	11Feb	11	13:48:30	58.2	61.0	65.2
0	0	11Feb	11	13:48:35	58.0	61.3	65.0
0	0	11Feb	11	13:48:40	55.4	56.2	62.4
0	0	11Feb	11	13:48:45	57.3	61.2	64.3
0	0	11Feb	11	13:48:50	66.4	71.2	73.4
0	0	11Feb	11	13:48:55	69.8	71.7	76.8
0	0	11Feb	11	13:49:00	59.9	65.1	66.9
0	0	11Feb	11	13:49:05	60.6	62.1	67.6
0	0	11Feb	11	13:49:10	61.1	62.8	68.1
0	0	11Feb	11	13:49:15	58.4	61.2	65.4
0	0	11Feb	11	13:49:20	55.3	56.1	62.3
0	0	11Feb	11	13:49:25	55.6	56.8	62.6
0	0	11Feb	11	13:49:30	57.9	60.0	64.8
0	0	11Feb	11	13:49:35	60.2	62.0	67.2
0	0	11Feb	11	13:49:40	55.6	58.3	62.6
0	0	11Feb	11	13:49:45	54.9	56.5	61.9
0	0	11Feb	11	13:49:50	53.7	55.2	60.7
0	0	11Feb	11	13:49:55	55.7	58.7	62.6
0	0	11Feb	11	13:50:00	57.0	57.0	64.0

Stop Key

ATTACHMENT 2

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

INPUT: ROADWAYS

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00			Average
		2	66	6,256,852.5	1,897,015.2	389.00			Average
		3	67	6,256,896.5	1,897,249.1	393.00			Average
		4	68	6,256,941.0	1,897,480.8	396.00			Average
		5	69	6,256,995.5	1,897,721.2	400.00			Average
		6	70	6,257,013.5	1,897,815.4	402.00			Average
		7	71	6,257,019.0	1,897,872.8	402.00			
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00			Average
		2	73	6,256,571.0	1,898,447.8	403.00			Average
		3	74	6,256,598.0	1,898,327.5	402.00			Average
		4	75	6,256,647.5	1,898,165.1	402.00			Average
		5	76	6,256,708.5	1,898,070.9	402.00			Average
		6	77	6,256,793.0	1,897,967.0	402.00			Average
		7	78	6,256,869.5	1,897,902.0	403.00			Average
		8	79	6,256,972.5	1,897,837.0	402.00			Average
		9	80	6,257,013.5	1,897,815.4	402.00			Average
		10	81	6,257,091.5	1,897,798.1	401.00			Average
		11	82	6,257,222.5	1,897,789.4	399.00			Average
		12	83	6,257,338.5	1,897,803.5	394.00			Average
		13	84	6,257,420.5	1,897,822.6	389.00			Average
		14	85	6,257,458.0	1,897,839.8	386.00			Average
		15	86	6,257,539.0	1,897,889.0	380.00			Average
		16	87	6,257,652.5	1,897,973.5	370.00			Average
		17	88	6,257,798.5	1,898,096.9	359.00			Average
		18	89	6,257,962.0	1,898,238.8	351.00			Average
		19	90	6,258,069.5	1,898,310.1	347.00			Average
		20	91	6,258,184.5	1,898,364.2	344.00			Average
		21	92	6,258,327.0	1,898,406.1	342.00			
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00			Average
		2	94	6,258,178.0	1,898,391.2	346.00			Average
		3	95	6,258,057.5	1,898,338.5	350.00			Average
		4	96	6,257,942.5	1,898,274.9	353.00			Average
		5	97	6,257,770.5	1,898,143.6	359.00			Average
		6	98	6,257,617.5	1,898,015.0	369.00			Average
		7	99	6,257,512.0	1,897,937.9	377.00			Average
		8	100	6,257,434.0	1,897,890.0	384.00			Average
		9	101	6,257,395.5	1,897,873.4	386.00			Average
		10	102	6,257,332.0	1,897,854.0	391.00			Average

	11	103	6,257,225.0	1,897,843.1	396.00	Average
	12	104	6,257,090.0	1,897,854.0	401.00	Average
	13	105	6,257,019.0	1,897,872.8	402.00	Average
	14	106	6,256,981.0	1,897,886.8	402.00	Average
	15	107	6,256,897.5	1,897,939.2	402.00	Average
	16	108	6,256,823.0	1,897,998.8	400.00	Average
	17	109	6,256,743.5	1,898,089.4	399.00	Average
	18	110	6,256,689.5	1,898,181.5	400.00	Average
	19	111	6,256,631.0	1,898,337.1	400.00	Average
	20	112	6,256,611.0	1,898,453.5	400.00	Average
	21	113	6,256,606.5	1,898,542.8	401.00	

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	222	30	2	30	1	30	2	30	2	30
	2	36	222	30	2	30	1	30	2	30	2	30
	3	37	222	30	2	30	1	30	2	30	2	30
	4	38	222	30	2	30	1	30	2	30	2	30
	5	39	222	30	2	30	1	30	2	30	2	30
	6	40	222	30	2	30	1	30	2	30	2	30
	7	41	222	30	2	30	1	30	2	30	2	30
	8	42	222	30	2	30	1	30	2	30	2	30
	9	43	222	30	2	30	1	30	2	30	2	30
	10	44										
NB La Jolla Scenic	1	45	222	30	2	30	1	30	2	30	2	30
	2	46	222	30	2	30	1	30	2	30	2	30
	3	47	222	30	2	30	1	30	2	30	2	30
	4	48	222	30	2	30	1	30	2	30	2	30
	5	49	222	30	2	30	1	30	2	30	2	30
	6	50	222	30	2	30	1	30	2	30	2	30
	7	51	222	30	2	30	1	30	2	30	2	30
	8	52										
SB Torrey Pines	1	58	618	40	22	40	4	40	2	40	2	40
	2	59	618	40	22	40	4	40	2	40	2	40
	3	60	618	40	22	40	4	40	2	40	2	40
	4	61	618	40	22	40	4	40	2	40	2	40

	5	62	618	40	22	40	4	40	2	40	2	40
	6	63	618	40	22	40	4	40	2	40	2	40
	7	64										
NB Torry Pines	1	65	618	40	22	40	4	40	2	40	2	40
	2	66	618	40	22	40	4	40	2	40	2	40
	3	67	618	40	22	40	4	40	2	40	2	40
	4	68	618	40	22	40	4	40	2	40	2	40
	5	69	618	40	22	40	4	40	2	40	2	40
	6	70	618	40	22	40	4	40	2	40	2	40
	7	71										
EB La Jolla Village	1	72	1270	30	4	30	4	30	6	30	2	30
	2	73	1270	30	4	30	4	30	6	30	2	30
	3	74	1270	30	4	30	4	30	6	30	2	30
	4	75	1270	30	4	30	4	30	6	30	2	30
	5	76	1270	30	4	30	4	30	6	30	2	30
	6	77	1270	30	4	30	4	30	6	30	2	30
	7	78	1270	30	4	30	4	30	6	30	2	30
	8	79	1270	30	4	30	4	30	6	30	2	30
	9	80	1270	30	4	30	4	30	6	30	2	30
	10	81	1270	30	4	30	4	30	6	30	2	30
	11	82	1270	30	4	30	4	30	6	30	2	30
	12	83	1270	30	4	30	4	30	6	30	2	30
	13	84	1270	30	4	30	4	30	6	30	2	30
	14	85	1270	30	4	30	4	30	6	30	2	30
	15	86	1270	30	4	30	4	30	6	30	2	30
	16	87	1270	30	4	30	4	30	6	30	2	30
	17	88	1270	30	4	30	4	30	6	30	2	30
	18	89	1270	30	4	30	4	30	6	30	2	30
	19	90	1270	30	4	30	4	30	6	30	2	30
	20	91	1270	30	4	30	4	30	6	30	2	30
	21	92										
WB La Jolla Village	1	93	1270	30	4	30	4	30	6	30	2	30
	2	94	1270	30	4	30	4	30	6	30	2	30
	3	95	1270	30	4	30	4	30	6	30	2	30

4	96	1270	30	4	30	4	30	6	30	2	30
5	97	1270	30	4	30	4	30	6	30	2	30
6	98	1270	30	4	30	4	30	6	30	2	30
7	99	1270	30	4	30	4	30	6	30	2	30
8	100	1270	30	4	30	4	30	6	30	2	30
9	101	1270	30	4	30	4	30	6	30	2	30
10	102	1270	30	4	30	4	30	6	30	2	30
11	103	1270	30	4	30	4	30	6	30	2	30
12	104	1270	30	4	30	4	30	6	30	2	30
13	105	1270	30	4	30	4	30	6	30	2	30
14	106	1270	30	4	30	4	30	6	30	2	30
15	107	1270	30	4	30	4	30	6	30	2	30
16	108	1270	30	4	30	4	30	6	30	2	30
17	109	1270	30	4	30	4	30	6	30	2	30
18	110	1270	30	4	30	4	30	6	30	2	30
19	111	1270	30	4	30	4	30	6	30	2	30
20	112	1270	30	4	30	4	30	6	30	2	30
21	113										

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	1	1	6,257,197.5	1,897,748.1	402.00	5.00	0.00	66	10.0	8.0	Y
2	2	1	6,257,015.0	1,897,719.5	401.00	5.00	0.00	66	10.0	8.0	Y
3	4	1	6,257,469.5	1,897,561.5	402.00	5.00	0.00	66	10.0	8.0	Y

Recon Environmental
Jessica Fleming

15 February 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 4609N
RUN: Hillel - Measured Receivers
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 64 deg F, 69% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	1	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
2	2	1	0.0	70.1	66	70.1	10	Snd Lvl	70.1	0.0	8	-8.0
3	4	1	0.0	61.7	66	61.7	10	----	61.7	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	3	0.0	0.0	0.0
All Impacted	2	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ATTACHMENT 3

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00	Average
		2	66	6,256,852.5	1,897,015.2	389.00	Average
		3	67	6,256,896.5	1,897,249.1	393.00	Average
		4	68	6,256,941.0	1,897,480.8	396.00	Average
		5	69	6,256,995.5	1,897,721.2	400.00	Average
		6	70	6,257,013.5	1,897,815.4	402.00	Average
		7	71	6,257,019.0	1,897,872.8	402.00	
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00	Average
		2	73	6,256,571.0	1,898,447.8	403.00	Average
		3	74	6,256,598.0	1,898,327.5	402.00	Average
		4	75	6,256,647.5	1,898,165.1	402.00	Average
		5	76	6,256,708.5	1,898,070.9	402.00	Average
		6	77	6,256,793.0	1,897,967.0	402.00	Average
		7	78	6,256,869.5	1,897,902.0	403.00	Average
		8	79	6,256,972.5	1,897,837.0	402.00	Average
		9	80	6,257,013.5	1,897,815.4	402.00	Average
		10	81	6,257,091.5	1,897,798.1	401.00	Average
		11	82	6,257,222.5	1,897,789.4	399.00	Average
		12	83	6,257,338.5	1,897,803.5	394.00	Average
		13	84	6,257,420.5	1,897,822.6	389.00	Average
		14	85	6,257,458.0	1,897,839.8	386.00	Average
		15	86	6,257,539.0	1,897,889.0	380.00	Average
		16	87	6,257,652.5	1,897,973.5	370.00	Average
		17	88	6,257,798.5	1,898,096.9	359.00	Average
		18	89	6,257,962.0	1,898,238.8	351.00	Average
		19	90	6,258,069.5	1,898,310.1	347.00	Average
		20	91	6,258,184.5	1,898,364.2	344.00	Average
		21	92	6,258,327.0	1,898,406.1	342.00	
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00	Average
		2	94	6,258,178.0	1,898,391.2	346.00	Average
		3	95	6,258,057.5	1,898,338.5	350.00	Average
		4	96	6,257,942.5	1,898,274.9	353.00	Average
		5	97	6,257,770.5	1,898,143.6	359.00	Average
		6	98	6,257,617.5	1,898,015.0	369.00	Average
		7	99	6,257,512.0	1,897,937.9	377.00	Average
		8	100	6,257,434.0	1,897,890.0	384.00	Average
		9	101	6,257,395.5	1,897,873.4	386.00	Average
		10	102	6,257,332.0	1,897,854.0	391.00	Average

	11	103	6,257,225.0	1,897,843.1	396.00		Average
	12	104	6,257,090.0	1,897,854.0	401.00		Average
	13	105	6,257,019.0	1,897,872.8	402.00		Average
	14	106	6,256,981.0	1,897,886.8	402.00		Average
	15	107	6,256,897.5	1,897,939.2	402.00		Average
	16	108	6,256,823.0	1,897,998.8	400.00		Average
	17	109	6,256,743.5	1,898,089.4	399.00		Average
	18	110	6,256,689.5	1,898,181.5	400.00		Average
	19	111	6,256,631.0	1,898,337.1	400.00		Average
	20	112	6,256,611.0	1,898,453.5	400.00		Average
	21	113	6,256,606.5	1,898,542.8	401.00		

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	333	35	2	35	2	35	2	35	3	35
	2	36	333	35	2	35	2	35	2	35	3	35
	3	37	333	35	2	35	2	35	2	35	3	35
	4	38	333	35	2	35	2	35	2	35	3	35
	5	39	333	35	2	35	2	35	2	35	3	35
	6	40	333	35	2	35	2	35	2	35	3	35
	7	41	333	35	2	35	2	35	2	35	3	35
	8	42	333	35	2	35	2	35	2	35	3	35
	9	43	333	35	2	35	2	35	2	35	3	35
	10	44										
NB La Jolla Scenic	1	45	333	35	2	35	2	35	2	35	3	35
	2	46	333	35	2	35	2	35	2	35	3	35
	3	47	333	35	2	35	2	35	2	35	3	35
	4	48	333	35	2	35	2	35	2	35	3	35
	5	49	333	35	2	35	2	35	2	35	3	35
	6	50	333	35	2	35	2	35	2	35	3	35
	7	51	333	35	2	35	2	35	2	35	3	35
	8	52										
SB Torrey Pines	1	58	883	45	8	45	5	45	3	45	3	45
	2	59	883	45	8	45	5	45	3	45	3	45
	3	60	883	45	8	45	5	45	3	45	3	45
	4	61	883	45	8	45	5	45	3	45	3	45

	5	62	883	45	8	45	5	45	3	45	3	45
	6	63	883	45	8	45	5	45	3	45	3	45
	7	64										
NB Torry Pines	1	65	883	45	8	45	5	45	3	45	3	45
	2	66	883	45	8	45	5	45	3	45	3	45
	3	67	883	45	8	45	5	45	3	45	3	45
	4	68	883	45	8	45	5	45	3	45	3	45
	5	69	883	45	8	45	5	45	3	45	3	45
	6	70	883	45	8	45	5	45	3	45	3	45
	7	71										
EB La Jolla Village	1	72	1560	40	5	40	3	40	8	40	3	40
	2	73	1560	40	5	40	3	40	8	40	3	40
	3	74	1560	40	5	40	3	40	8	40	3	40
	4	75	1560	40	5	40	3	40	8	40	3	40
	5	76	1560	40	5	40	3	40	8	40	3	40
	6	77	1560	40	5	40	3	40	8	40	3	40
	7	78	1560	40	5	40	3	40	8	40	3	40
	8	79	1560	40	5	40	3	40	8	40	3	40
	9	80	1560	40	5	40	3	40	8	40	3	40
	10	81	1560	40	5	40	3	40	8	40	3	40
	11	82	1560	40	5	40	3	40	8	40	3	40
	12	83	1560	40	5	40	3	40	8	40	3	40
	13	84	1560	40	5	40	3	40	8	40	3	40
	14	85	1560	40	5	40	3	40	8	40	3	40
	15	86	1560	40	5	40	3	40	8	40	3	40
	16	87	1560	40	5	40	3	40	8	40	3	40
	17	88	1560	40	5	40	3	40	8	40	3	40
	18	89	1560	40	5	40	3	40	8	40	3	40
	19	90	1560	40	5	40	3	40	8	40	3	40
	20	91	1560	40	5	40	3	40	8	40	3	40
	21	92										
WB La Jolla Village	1	93	1560	40	5	40	3	40	8	40	3	40
	2	94	1560	40	5	40	3	40	8	40	3	40
	3	95	1560	40	5	40	3	40	8	40	3	40

	4	96	1560	40	5	40	3	40	8	40	3	40
	5	97	1560	40	5	40	3	40	8	40	3	40
	6	98	1560	40	5	40	3	40	8	40	3	40
	7	99	1560	40	5	40	3	40	8	40	3	40
	8	100	1560	40	5	40	3	40	8	40	3	40
	9	101	1560	40	5	40	3	40	8	40	3	40
	10	102	1560	40	5	40	3	40	8	40	3	40
	11	103	1560	40	5	40	3	40	8	40	3	40
	12	104	1560	40	5	40	3	40	8	40	3	40
	13	105	1560	40	5	40	3	40	8	40	3	40
	14	106	1560	40	5	40	3	40	8	40	3	40
	15	107	1560	40	5	40	3	40	8	40	3	40
	16	108	1560	40	5	40	3	40	8	40	3	40
	17	109	1560	40	5	40	3	40	8	40	3	40
	18	110	1560	40	5	40	3	40	8	40	3	40
	19	111	1560	40	5	40	3	40	8	40	3	40
	20	112	1560	40	5	40	3	40	8	40	3	40
	21	113										

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	6	1	6,257,451.0	1,897,570.5	402.00	5.00	0.00	66	10.0	8.0	Y
2	7	1	6,257,472.0	1,897,598.0	403.00	5.00	0.00	66	10.0	8.0	Y
3	8	1	6,257,444.5	1,897,601.4	403.00	5.00	0.00	66	10.0	8.0	Y
4	9	1	6,257,457.0	1,897,633.4	403.00	5.00	0.00	66	10.0	8.0	Y
5	10	1	6,257,417.0	1,897,618.6	403.00	5.00	0.00	66	10.0	8.0	Y
6	11	1	6,257,400.0	1,897,598.0	402.00	5.00	0.00	66	10.0	8.0	Y
7	12	1	6,257,361.0	1,897,618.6	402.00	5.00	0.00	66	10.0	8.0	Y
8	13	1	6,257,385.0	1,897,642.6	403.00	5.00	0.00	66	10.0	8.0	Y
9	14	1	6,257,429.5	1,897,649.5	403.00	5.00	0.00	66	10.0	8.0	Y
10	15	1	6,257,446.5	1,897,690.6	396.00	5.00	0.00	66	10.0	8.0	Y
11	16	1	6,257,413.5	1,897,687.1	403.00	5.00	0.00	66	10.0	8.0	Y
12	17	1	6,257,428.5	1,897,735.1	394.00	5.00	0.00	66	10.0	8.0	Y
13	18	1	6,257,411.0	1,897,720.4	403.00	5.00	0.00	66	10.0	8.0	Y
14	19	1	6,257,375.5	1,897,700.9	403.00	5.00	0.00	66	10.0	8.0	Y
15	20	1	6,257,366.5	1,897,671.1	403.00	5.00	0.00	66	10.0	8.0	Y
16	21	1	6,257,334.5	1,897,656.2	403.00	5.00	0.00	66	10.0	8.0	Y
17	22	1	6,257,298.0	1,897,652.9	402.00	5.00	0.00	66	10.0	8.0	Y
18	23	1	6,257,317.5	1,897,686.0	403.00	5.00	0.00	66	10.0	8.0	Y
19	24	1	6,257,342.5	1,897,707.8	403.00	5.00	0.00	66	10.0	8.0	Y
20	25	1	6,257,372.5	1,897,730.6	403.00	5.00	0.00	66	10.0	8.0	Y
21	26	1	6,257,350.5	1,897,754.6	403.00	5.00	0.00	66	10.0	8.0	Y
22	27	1	6,257,394.0	1,897,748.9	403.00	5.00	0.00	66	10.0	8.0	Y

INPUT: RECEIVERS

23	28	1	6,257,401.0	1,897,777.5	394.00	5.00	0.00	66	10.0	8.0	Y
24	29	1	6,257,303.5	1,897,759.2	398.00	5.00	0.00	66	10.0	8.0	Y
25	30	1	6,257,319.5	1,897,731.8	403.00	5.00	0.00	66	10.0	8.0	Y
26	31	1	6,257,276.5	1,897,720.4	403.00	5.00	0.00	66	10.0	8.0	Y
27	32	1	6,257,273.0	1,897,683.8	403.00	5.00	0.00	66	10.0	8.0	Y
28	33	1	6,257,235.0	1,897,688.2	402.00	5.00	0.00	66	10.0	8.0	Y
29	34	1	6,257,246.5	1,897,714.6	403.00	5.00	0.00	66	10.0	8.0	Y
30	35	1	6,257,257.0	1,897,740.9	403.00	5.00	0.00	66	10.0	8.0	Y
31	36	1	6,257,236.5	1,897,753.5	400.00	5.00	0.00	66	10.0	8.0	Y
32	37	1	6,257,202.0	1,897,760.4	400.00	5.00	0.00	66	10.0	8.0	Y
33	38	1	6,257,209.0	1,897,732.9	403.00	5.00	0.00	66	10.0	8.0	Y
34	39	1	6,257,186.0	1,897,714.6	403.00	5.00	0.00	66	10.0	8.0	Y
35	40	1	6,257,170.0	1,897,728.4	403.00	5.00	0.00	66	10.0	8.0	Y
36	41	1	6,257,171.0	1,897,750.0	403.00	5.00	0.00	66	10.0	8.0	Y
37	42	1	6,257,146.0	1,897,762.6	401.00	5.00	0.00	66	10.0	8.0	Y
38	43	1	6,257,103.5	1,897,764.9	401.00	5.00	0.00	66	10.0	8.0	Y
39	44	1	6,257,118.5	1,897,722.6	402.00	5.00	0.00	66	10.0	8.0	Y
40	45	1	6,257,090.0	1,897,745.5	402.00	5.00	0.00	66	10.0	8.0	Y
41	46	1	6,257,091.0	1,897,727.1	402.00	5.00	0.00	66	10.0	8.0	Y
42	47	1	6,257,038.5	1,897,734.0	402.00	5.00	0.00	66	10.0	8.0	Y
43	48	1	6,257,047.5	1,897,766.0	402.00	5.00	0.00	66	10.0	8.0	Y
44	49	1	6,257,059.0	1,897,753.5	402.00	5.00	0.00	66	10.0	8.0	Y
45	50	1	6,257,070.5	1,897,729.5	402.00	5.00	0.00	66	10.0	8.0	Y
46	51	1	6,257,299.0	1,897,698.6	403.00	5.00	0.00	66	10.0	8.0	Y
47	52	1	6,257,402.0	1,897,664.2	403.00	5.00	0.00	66	10.0	8.0	Y
48	53	1	6,257,456.0	1,897,658.6	398.00	5.00	0.00	66	10.0	8.0	Y
49	54	1	6,257,133.5	1,897,706.6	402.00	5.00	0.00	66	10.0	8.0	Y
50	55	1	6,257,222.5	1,897,711.1	403.00	5.00	0.00	66	10.0	8.0	Y

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Contour Receivers
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 64 deg F, 69% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	6	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
2	7	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
3	8	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
4	9	1	0.0	66.5	66	66.5	10	Snd Lvl	66.5	0.0	8	-8.0
5	10	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0
6	11	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0
7	12	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
8	13	1	0.0	65.6	66	65.6	10	----	65.6	0.0	8	-8.0
9	14	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
10	15	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
11	16	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
12	17	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
13	18	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0
14	19	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
15	20	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
16	21	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	8	-8.0
17	22	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
18	23	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
19	24	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	8	-8.0
20	25	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0
21	26	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0
22	27	1	0.0	68.9	66	68.9	10	Snd Lvl	68.9	0.0	8	-8.0
23	28	1	0.0	70.9	66	70.9	10	Snd Lvl	70.9	0.0	8	-8.0

RESULTS: SOUND LEVELS

24	29	1	0.0	70.4	66	70.4	10	Snd Lvl	70.4	0.0	8	-8.0
25	30	1	0.0	68.5	66	68.5	10	Snd Lvl	68.5	0.0	8	-8.0
26	31	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
27	32	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
28	33	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
29	34	1	0.0	68.2	66	68.2	10	Snd Lvl	68.2	0.0	8	-8.0
30	35	1	0.0	69.4	66	69.4	10	Snd Lvl	69.4	0.0	8	-8.0
31	36	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	8	-8.0
32	37	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
33	38	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
34	39	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	8	-8.0
35	40	1	0.0	69.1	66	69.1	10	Snd Lvl	69.1	0.0	8	-8.0
36	41	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
37	42	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	-8.0
38	43	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
39	44	1	0.0	69.2	66	69.2	10	Snd Lvl	69.2	0.0	8	-8.0
40	45	1	0.0	70.5	66	70.5	10	Snd Lvl	70.5	0.0	8	-8.0
41	46	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0
42	47	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
43	48	1	0.0	72.3	66	72.3	10	Snd Lvl	72.3	0.0	8	-8.0
44	49	1	0.0	71.4	66	71.4	10	Snd Lvl	71.4	0.0	8	-8.0
45	50	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	8	-8.0
46	51	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
47	52	1	0.0	66.1	66	66.1	10	Snd Lvl	66.1	0.0	8	-8.0
48	53	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
49	54	1	0.0	68.6	66	68.6	10	Snd Lvl	68.6	0.0	8	-8.0
50	55	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	8	-8.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	50	0.0	0.0	0.0
All Impacted	44	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

ATTACHMENT 4

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
SB La Jolla Scenic	36.0	1	35	6,257,395.5	1,897,873.4	386.00				Average	
		2	36	6,257,420.5	1,897,822.6	389.00				Average	
		3	37	6,257,467.0	1,897,706.2	394.00				Average	
		4	38	6,257,516.0	1,897,562.5	400.00				Average	
		5	39	6,257,589.5	1,897,389.9	404.00				Average	
		6	40	6,257,596.0	1,897,365.9	404.00				Average	
		7	41	6,257,632.0	1,897,274.9	404.00				Average	
		8	42	6,257,681.0	1,897,023.2	405.00				Average	
		9	43	6,257,697.5	1,896,892.2	404.00				Average	
		10	44	6,257,695.5	1,896,733.6	402.00					
NB La Jolla Scenic	36.0	1	45	6,257,743.5	1,896,732.2	403.00				Average	
		2	46	6,257,738.0	1,896,893.5	406.00				Average	
		3	47	6,257,722.5	1,897,025.8	407.00				Average	
		4	48	6,257,661.5	1,897,303.2	406.00				Average	
		5	49	6,257,616.5	1,897,451.2	404.00				Average	
		6	50	6,257,508.0	1,897,720.9	393.00				Average	
		7	51	6,257,458.0	1,897,839.8	386.00				Average	
		8	52	6,257,434.0	1,897,890.0	384.00					
SB Torrey Pines	36.0	1	58	6,256,981.0	1,897,886.8	402.00				Average	
		2	59	6,256,972.5	1,897,837.0	402.00				Average	
		3	60	6,256,954.0	1,897,727.8	400.00				Average	
		4	61	6,256,908.5	1,897,485.2	396.00				Average	
		5	62	6,256,863.0	1,897,254.5	393.00				Average	
		6	63	6,256,817.5	1,897,018.5	389.00				Average	
		7	64	6,256,774.5	1,896,797.6	387.00					

INPUT: ROADWAYS

NB Torry Pines	36.0	1	65	6,256,808.0	1,896,794.4	387.00	Average
		2	66	6,256,852.5	1,897,015.2	389.00	Average
		3	67	6,256,896.5	1,897,249.1	393.00	Average
		4	68	6,256,941.0	1,897,480.8	396.00	Average
		5	69	6,256,995.5	1,897,721.2	400.00	Average
		6	70	6,257,013.5	1,897,815.4	402.00	Average
		7	71	6,257,019.0	1,897,872.8	402.00	
EB La Jolla Village	48.0	1	72	6,256,568.5	1,898,540.8	403.00	Average
		2	73	6,256,571.0	1,898,447.8	403.00	Average
		3	74	6,256,598.0	1,898,327.5	402.00	Average
		4	75	6,256,647.5	1,898,165.1	402.00	Average
		5	76	6,256,708.5	1,898,070.9	402.00	Average
		6	77	6,256,793.0	1,897,967.0	402.00	Average
		7	78	6,256,869.5	1,897,902.0	403.00	Average
		8	79	6,256,972.5	1,897,837.0	402.00	Average
		9	80	6,257,013.5	1,897,815.4	402.00	Average
		10	81	6,257,091.5	1,897,798.1	401.00	Average
		11	82	6,257,222.5	1,897,789.4	399.00	Average
		12	83	6,257,338.5	1,897,803.5	394.00	Average
		13	84	6,257,420.5	1,897,822.6	389.00	Average
		14	85	6,257,458.0	1,897,839.8	386.00	Average
		15	86	6,257,539.0	1,897,889.0	380.00	Average
		16	87	6,257,652.5	1,897,973.5	370.00	Average
		17	88	6,257,798.5	1,898,096.9	359.00	Average
		18	89	6,257,962.0	1,898,238.8	351.00	Average
		19	90	6,258,069.5	1,898,310.1	347.00	Average
		20	91	6,258,184.5	1,898,364.2	344.00	Average
		21	92	6,258,327.0	1,898,406.1	342.00	
WB La Jolla Village	48.0	1	93	6,258,328.0	1,898,430.5	342.00	Average
		2	94	6,258,178.0	1,898,391.2	346.00	Average
		3	95	6,258,057.5	1,898,338.5	350.00	Average
		4	96	6,257,942.5	1,898,274.9	353.00	Average
		5	97	6,257,770.5	1,898,143.6	359.00	Average
		6	98	6,257,617.5	1,898,015.0	369.00	Average
		7	99	6,257,512.0	1,897,937.9	377.00	Average
		8	100	6,257,434.0	1,897,890.0	384.00	Average
		9	101	6,257,395.5	1,897,873.4	386.00	Average
		10	102	6,257,332.0	1,897,854.0	391.00	Average

	11	103	6,257,225.0	1,897,843.1	396.00			Average
	12	104	6,257,090.0	1,897,854.0	401.00			Average
	13	105	6,257,019.0	1,897,872.8	402.00			Average
	14	106	6,256,981.0	1,897,886.8	402.00			Average
	15	107	6,256,897.5	1,897,939.2	402.00			Average
	16	108	6,256,823.0	1,897,998.8	400.00			Average
	17	109	6,256,743.5	1,898,089.4	399.00			Average
	18	110	6,256,689.5	1,898,181.5	400.00			Average
	19	111	6,256,631.0	1,898,337.1	400.00			Average
	20	112	6,256,611.0	1,898,453.5	400.00			Average
	21	113	6,256,606.5	1,898,542.8	401.00			

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Roadway Name	Points Name	No.	Segment Autos V veh/hr	Autos S mph	MTrucks V veh/hr	MTrucks S mph	HTrucks V veh/hr	HTrucks S mph	Buses V veh/hr	Buses S mph	Motorcycles V veh/hr	Motorcycles S mph
SB La Jolla Scenic	1	35	333	35	2	35	2	35	2	35	3	35
	2	36	333	35	2	35	2	35	2	35	3	35
	3	37	333	35	2	35	2	35	2	35	3	35
	4	38	333	35	2	35	2	35	2	35	3	35
	5	39	333	35	2	35	2	35	2	35	3	35
	6	40	333	35	2	35	2	35	2	35	3	35
	7	41	333	35	2	35	2	35	2	35	3	35
	8	42	333	35	2	35	2	35	2	35	3	35
	9	43	333	35	2	35	2	35	2	35	3	35
	10	44										
NB La Jolla Scenic	1	45	333	35	2	35	2	35	2	35	3	35
	2	46	333	35	2	35	2	35	2	35	3	35
	3	47	333	35	2	35	2	35	2	35	3	35
	4	48	333	35	2	35	2	35	2	35	3	35
	5	49	333	35	2	35	2	35	2	35	3	35
	6	50	333	35	2	35	2	35	2	35	3	35
	7	51	333	35	2	35	2	35	2	35	3	35
	8	52										
SB Torrey Pines	1	58	883	45	8	45	5	45	3	45	3	45
	2	59	883	45	8	45	5	45	3	45	3	45
	3	60	883	45	8	45	5	45	3	45	3	45
	4	61	883	45	8	45	5	45	3	45	3	45

	5	62	883	45	8	45	5	45	3	45	3	45
	6	63	883	45	8	45	5	45	3	45	3	45
	7	64										
NB Torry Pines	1	65	883	45	8	45	5	45	3	45	3	45
	2	66	883	45	8	45	5	45	3	45	3	45
	3	67	883	45	8	45	5	45	3	45	3	45
	4	68	883	45	8	45	5	45	3	45	3	45
	5	69	883	45	8	45	5	45	3	45	3	45
	6	70	883	45	8	45	5	45	3	45	3	45
	7	71										
EB La Jolla Village	1	72	1560	40	5	40	3	40	8	40	3	40
	2	73	1560	40	5	40	3	40	8	40	3	40
	3	74	1560	40	5	40	3	40	8	40	3	40
	4	75	1560	40	5	40	3	40	8	40	3	40
	5	76	1560	40	5	40	3	40	8	40	3	40
	6	77	1560	40	5	40	3	40	8	40	3	40
	7	78	1560	40	5	40	3	40	8	40	3	40
	8	79	1560	40	5	40	3	40	8	40	3	40
	9	80	1560	40	5	40	3	40	8	40	3	40
	10	81	1560	40	5	40	3	40	8	40	3	40
	11	82	1560	40	5	40	3	40	8	40	3	40
	12	83	1560	40	5	40	3	40	8	40	3	40
	13	84	1560	40	5	40	3	40	8	40	3	40
	14	85	1560	40	5	40	3	40	8	40	3	40
	15	86	1560	40	5	40	3	40	8	40	3	40
	16	87	1560	40	5	40	3	40	8	40	3	40
	17	88	1560	40	5	40	3	40	8	40	3	40
	18	89	1560	40	5	40	3	40	8	40	3	40
	19	90	1560	40	5	40	3	40	8	40	3	40
	20	91	1560	40	5	40	3	40	8	40	3	40
	21	92										
WB La Jolla Village	1	93	1560	40	5	40	3	40	8	40	3	40
	2	94	1560	40	5	40	3	40	8	40	3	40
	3	95	1560	40	5	40	3	40	8	40	3	40

INPUT: TRAFFIC FOR LAeq1h Volumes

4609N

	4	96	1560	40	5	40	3	40	8	40	3	40
	5	97	1560	40	5	40	3	40	8	40	3	40
	6	98	1560	40	5	40	3	40	8	40	3	40
	7	99	1560	40	5	40	3	40	8	40	3	40
	8	100	1560	40	5	40	3	40	8	40	3	40
	9	101	1560	40	5	40	3	40	8	40	3	40
	10	102	1560	40	5	40	3	40	8	40	3	40
	11	103	1560	40	5	40	3	40	8	40	3	40
	12	104	1560	40	5	40	3	40	8	40	3	40
	13	105	1560	40	5	40	3	40	8	40	3	40
	14	106	1560	40	5	40	3	40	8	40	3	40
	15	107	1560	40	5	40	3	40	8	40	3	40
	16	108	1560	40	5	40	3	40	8	40	3	40
	17	109	1560	40	5	40	3	40	8	40	3	40
	18	110	1560	40	5	40	3	40	8	40	3	40
	19	111	1560	40	5	40	3	40	8	40	3	40
	20	112	1560	40	5	40	3	40	8	40	3	40
	21	113										

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
1	57	1	6,257,287.0	1,897,696.5	403.00	5.00	0.00	66	10.0	8.0	Y
2	58	1	6,257,346.0	1,897,664.5	403.00	5.00	0.00	66	10.0	8.0	Y
3	59	1	6,257,393.5	1,897,748.5	403.00	5.00	0.00	66	10.0	8.0	Y

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers

Barrier Name	Type	Height Min	Height Max	If Wall $ per Unit Area	If Berm $ per Unit Vol.	If Berm Top Width	If Berm Run:Rise	Add'tnl $ per Unit Length	Points Name	No.	Coordinates (bottom) X	Coordinates (bottom) Y	Coordinates (bottom) Z	Height at Point	Segment Seg Ht Perturbs Incre-ment	Segment #Up	Segment #Dn	On Struct?	Important Reflec-tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Building	W	0.00	99.99	0.00				0.00	1	6	6,257,256.5	1,897,739.8	403.00	23.00	0.00	0	0		
									2	7	6,257,265.5	1,897,739.8	403.00	23.00	0.00	0	0		
									3	8	6,257,265.5	1,897,741.2	403.00	23.00	0.00	0	0		
									4	9	6,257,319.5	1,897,740.8	403.00	23.00	0.00	0	0		
									5	10	6,257,319.5	1,897,740.2	403.00	23.00	0.00	0	0		
									6	11	6,257,340.0	1,897,743.6	403.00	23.00	0.00	0	0		
									7	12	6,257,339.0	1,897,749.9	403.00	23.00	0.00	0	0		
									8	13	6,257,369.5	1,897,754.9	403.00	23.00	0.00	0	0		
									9	14	6,257,372.5	1,897,738.9	403.00	23.00	0.00	0	0		
									10	15	6,257,382.0	1,897,739.0	403.00	23.00	0.00	0	0		
									11	16	6,257,389.0	1,897,730.8	403.00	23.00	0.00	0	0		
									12	17	6,257,400.0	1,897,722.8	403.00	23.00	0.00	0	0		
									13	18	6,257,409.0	1,897,718.5	403.00	23.00	0.00	0	0		
									14	19	6,257,411.5	1,897,713.1	403.00	23.00	0.00	0	0		
									15	20	6,257,417.0	1,897,714.9	403.00	23.00	0.00	0	0		
									16	21	6,257,449.5	1,897,632.5	403.00	23.00	0.00	0	0		
									17	22	6,257,430.0	1,897,616.4	403.00	23.00	0.00	0	0		
									18	23	6,257,394.0	1,897,638.2	403.00	23.00	0.00	0	0		
									19	24	6,257,391.5	1,897,634.1	403.00	23.00	0.00	0	0		
									20	25	6,257,355.5	1,897,656.2	403.00	23.00	0.00	0	0		
									21	26	6,257,366.0	1,897,673.6	403.00	23.00	0.00	0	0		
									22	27	6,257,362.5	1,897,682.1	403.00	23.00	0.00	0	0		
									23	28	6,257,345.0	1,897,681.8	403.00	23.00	0.00	0	0		
									24	29	6,257,344.5	1,897,670.2	403.00	23.00	0.00	0	0		
									25	30	6,257,320.0	1,897,669.9	403.00	23.00	0.00	0	0		
									26	31	6,257,320.0	1,897,685.8	403.00	23.00	0.00	0	0		
									27	32	6,257,291.5	1,897,686.0	403.00	23.00	0.00	0	0		
									28	33	6,257,292.5	1,897,702.0	403.00	23.00	0.00	0	0		
									29	34	6,257,265.5	1,897,702.2	403.00	23.00	0.00	0	0		
									30	35	6,257,266.0	1,897,719.0	403.00	23.00	0.00	0	0		
									31	36	6,257,256.0	1,897,719.1	403.00	23.00	0.00	0	0		
									1	37	6,257,256.5	1,897,739.8	403.00	23.00					
Barrier	W	0.00	99.99	0.00				0.00	1	38	6,257,370.0	1,897,754.1	403.00	6.00	1.00	3	3		
									2	39	6,257,389.5	1,897,757.5	403.00	6.00	1.00	3	3		
									3	40	6,257,402.5	1,897,751.0	403.00	6.00	1.00	3	3		

					4	41	6,257,415.5	1,897,719.8	403.00	6.00		

Recon Environmental
Jessica Fleming

29 April 2008
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS

PROJECT/CONTRACT: 4609N
RUN: Hillel - Modeled Receivers
BARRIER DESIGN: INPUT HEIGHTS

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 64 deg F, 69% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
1	57	1	0.0	58.8	66	58.8	10	----	58.8	0.0	8	-8.0
2	58	1	0.0	57.9	66	57.9	10	----	57.9	0.0	8	-8.0
3	59	1	0.0	68.6	66	68.6	10	Snd Lvl	58.9	9.7	8	1.7

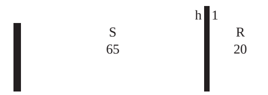
Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	3	0.0	3.2	9.7
All Impacted	1	9.7	9.7	9.7
All that meet NR Goal	1	9.7	9.7	9.7

□TT□□□M□□T□□□

fresnel = 2*delta/wave length
wave length = speed of sound/frequency

freq	wave l- m	wave l - ft	check
500	0.66	2.17	3.280797
1000	0.33	1.09	3.280797
2000	0.17	0.54	3.280797
250	1.32	4.35	3.280797

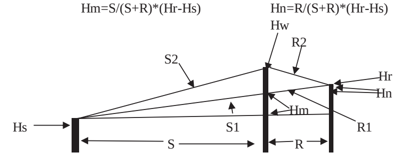
Receptor									at 500 Hz	at 1000 Hz			
											Approximate	Unabated	Resultant
Location	S	R	Hs	Hw	Hr	Hm	Hn	delta	**fresnel**	fresnel	IL	Noise Level	Noise Level
R1-S1	10	171	430.5	432.5	407	-1.30	-22.20	0.570	**0.52**	1.05	12	37.3	25.3
R1-S2	10	212	418.5	420.5	407	-0.52	-10.98	0.330	**0.30**	0.61	11	35.6	24.6
R1-S3	10	256	418.5	420.5	407	-0.43	-11.07	0.305	**0.28**	0.56	11	34.0	23.0
R2-S1	10	89	430.5	432.5	407	-2.37	-21.13	1.028	**0.95**	1.89	14	42.4	28.4
R2-S2	10	113	418.5	420.5	407	-0.93	-10.57	0.465	**0.43**	0.86	12	40.7	28.7
R2-S3	10	126	418.5	420.5	407	-0.85	-10.65	0.434	**0.40**	0.80	12	39.8	27.8
R3-S1	10	125	430.5	432.5	407	-1.74	-21.76	0.742	**0.68**	1.37	13	39.8	26.8
R3-S2	10	115	418.5	420.5	407	-0.92	-10.58	0.460	**0.42**	0.85	12	40.5	28.5
R3-S3	10	63	418.5	420.5	407	-1.58	-9.92	0.728	**0.67**	1.34	13	45.2	32.2
R4-S1	10	188	430.5	432.5	407	-1.19	-22.31	0.530	**0.49**	0.98	12	36.6	24.6
R4-S2	10	165	418.5	420.5	407	-0.66	-10.84	0.372	**0.34**	0.68	11	37.6	26.6
R4-S3	10	88	418.5	420.5	407	-1.17	-10.33	0.555	**0.51**	1.02	12	42.7	30.7
R5-S1	10	266	430.5	432.5	407	-0.85	-22.65	0.419	**0.39**	0.77	12	33.7	21.7
R5-S2	10	239	418.5	420.5	407	-0.46	-11.04	0.314	**0.29**	0.58	11	34.6	23.6
R5-S3	10	159	418.5	420.5	407	-0.68	-10.82	0.379	**0.35**	0.70	11	37.9	26.9
R6-S1	10	332	430.5	432.5	407	-0.69	-22.81	0.369	**0.34**	0.68	11	31.8	20.8
R6-S2	10	303	418.5	420.5	407	-0.37	-11.13	0.287	**0.26**	0.53	10	32.6	22.6
R6-S3	10	224	418.5	420.5	407	-0.49	-11.01	0.322	**0.30**	0.59	11	35.1	24.1
R7-S1	10	300	430.5	432.5	403	-0.89	-26.61	0.428	**0.39**	0.79	12	32.7	20.7
R7-S2	10	260	418.5	420.5	403	-0.57	-14.93	0.342	**0.31**	0.63	11	33.9	22.9
R7-S3	10	203	418.5	420.5	403	-0.73	-14.77	0.388	**0.36**	0.71	11	35.9	24.9
R8-S1	10	254	430.5	432.5	401	-1.12	-28.38	0.501	**0.46**	0.92	12	34.0	22.0
R8-S2	10	213	418.5	420.5	401	-0.78	-16.72	0.403	**0.37**	0.74	11	35.6	24.6
R8-S3	10	174	418.5	420.5	401	-0.95	-16.55	0.457	**0.42**	0.84	12	37.2	25.2
R9-S1	10	220	430.5	432.5	395	-1.54	-33.96	0.648	**0.60**	1.19	13	35.2	22.2
R9-S2	10	181	418.5	420.5	395	-1.23	-22.27	0.545	**0.50**	1.00	12	36.8	24.8
R9-S3	10	180	418.5	420.5	395	-1.24	-22.26	0.548	**0.50**	1.01	12	36.9	24.9



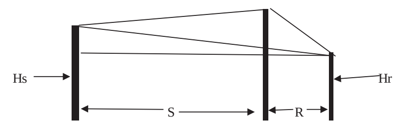
Source & receiver both at same height

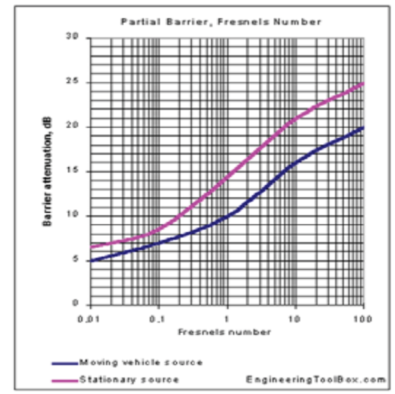
Hn=R/(S+R)*(Hr-Hs)
delta = (sqrt(S^2+(Hw-Hs)^2)+(sqrt(R^2+(Hw-Hr)^2))-(sqrt(S^2+Hm^2)+(sqrt(R^2+Hn^2))

delta = (S2+R2)-(S1+R1)
delta = (sqrt(S^2+(Hw-Hs)^2)+(sqrt(R^2+(Hw-Hr)^2))-(sqrt(S^2+Hm^2)+(sqrt(R^2+(Hr-Hs-Hm)^2))
Hm/(Hr-Hs)=S/(S+R) Hn/(Hr-Hs)=R/(S+R)
Hm=S/(S+R)*(Hr-Hs) Hn=R/(S+R)*(Hr-Hs)



Source & receiver both at different heights





Sound Power = 82

73	3	feet
48.6	50	feet

HVAC Requirement

1 ton per 500 square feet
6500 square feet
13 tons
*Assume 15 tons total, 5 tons per buidling

Receiver	X	Y	Z (Zo+5)
1	6257103.04881000000	1897701.85025000000	407
2	6257226.65992000000	1897639.35025000000	407
3	6257316.24325000000	1897589.35025000000	407
4	6257383.60436000000	1897549.76691000000	407
5	6257450.27103000000	1897500.46136000000	407
6	6257502.35436000000	1897457.40580000000	407
7	6257572.49325000000	1897608.10025000000	403
8	6257544.02103000000	1897678.93358000000	401
9	6257507.90992000000	1897768.51691000000	395

HVAC	X	Y	Z (Zroof+1.5)
1	6257283.04013000000	1897720.25303000000	430.5
2	6257324.18596000000	1897714.78428000000	418.5
3	6257362.72763000000	1897645.51344000000	418.5

	DISTANCE			NOISE WITHOUT PARAPET WALL				NOISE WITHPARAPET WALL			
Receiver	HVAC 1 Distance	HVAC 2 Distance	HVAC 3 Distance	HVAC 1 Noise	HVAC 2 Noise	HVAC 3 Noise	Total Noise	HVAC 1 Noise	HVAC 2 Noise	HVAC 3 Noise	Total Noise
1	182	222	266	37.3	35.6	34.0	40.6	25.3	24.6	23.0	29.2
2	101	124	137	42.4	40.7	39.8	45.9	28.4	28.7	27.8	33.1
3	137	126	74	39.8	40.5	45.2	47.3	26.8	28.5	32.2	34.5
4	199	176	99	36.6	37.6	42.7	44.6	24.6	26.6	30.7	32.8
5	277	249	170	33.7	34.6	37.9	40.6	21.7	23.6	26.9	29.4
6	343	313	235	31.8	32.6	35.1	38.2	20.8	22.6	24.1	27.5
7	312	271	214	32.7	33.9	35.9	39.2	20.7	22.9	24.9	28.0
8	266	223	185	34.0	35.6	37.2	40.6	22.0	24.6	25.2	28.9
9	233	193	192	35.2	36.8	36.9	41.1	22.2	24.8	24.9	28.9

	FLAT DISTANCE			FRESNEL (500 Hz)			INSERTION LOSS (500 Hz)		
Receiver	HVAC 1 Distance	HVAC 2 Distance	HVAC 3 Distance	HVAC 1 Fresnel	HVAC 2 Fresnel	HVAC 3 Fresnel	HVAC 1 IL	HVAC 2 IL	HVAC 3 IL
1	181	222	266	0.52	0.30	0.28	12	11	11
2	99	123	136	0.95	0.43	0.40	14	12	12
3	135	126	73	0.68	0.42	0.67	13	12	13
4	198	175	98	0.49	0.34	0.51	12	11	12
5	276	249	169	0.39	0.29	0.35	12	11	11
6	342	313	234	0.34	0.26	0.30	11	10	11
7	310	270	213	0.39	0.31	0.36	12	11	11
8	264	223	184	0.46	0.37	0.42	12	11	12
9	230	191	190	0.60	0.50	0.50	13	12	12

The City of San Diego

PRIORITY DEVELOPMENT PROJECT (PDP) STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR

Hillel Center for Jewish Life
Project no. 212995
Drawing Number (If Applicable) & Internal Order Number (If Applicable)

ENGINEER OF WORK:

REGISTERED PROFESSIONAL ENGINEER
ARNOLD J. WHITAKER
C 59320
Exp. 6/17
CIVIL
STATE OF CALIFORNIA

Arnold J. Whitaker, RCE no. 59320 Exp. 06-30-17
Provide Wet Signature and Stamp Above Line

PREPARED FOR:

Hillel of San Diego
8976 Cliffridge Ave
La Jolla, CA 92037

PREPARED BY:

ATLAS CIVIL DESIGN

Atlas Civil Design
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
888-364-1973

DATE:

January 11, 2017

Approved by: City of San Diego　　　　Date

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Project Name: Hillel Center for Jewish Life

TABLE OF CONTENTS

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ACRONYMS

APN	Assessor's Parcel Number
ASBS	Area of Special Biological Significance
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CGP	Construction General Permit
DCV	Design Capture Volume
DMA	Drainage Management Areas
ESA	Environmentally Sensitive Area
GLU	Geomorphic Landscape Unit
GW	Ground Water
HMP	Hydromodification Management Plan
HSG	Hydrologic Soil Group
HU	Harvest and Use
INF	Infiltration
LID	Low Impact Development
LUP	Linear Underground/Overhead Projects
MS4	Municipal Separate Storm Sewer System
N/A	Not Applicable
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
PDP	Priority Development Project
PE	Professional Engineer
POC	Pollutant of Concern
SC	Source Control
SD	Site Design
SDRWQCB	San Diego Regional Water Quality Control Board
SIC	Standard Industrial Classification
SWPPP	Stormwater Pollutant Protection Plan
SWQMP	Storm Water Quality Management Plan
TMDL	Total Maximum Daily Load
WMAA	Watershed Management Area Analysis
WPCP	Water Pollution Control Program
WQIP	Water Quality Improvement Plan

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Project Name: Hillel Center for Jewish Life

CERTIFICATION PAGE

Project Name: Hillel Center for Jewish Life
Permit Application Number: Insert Permit Application Number

I hereby declare that I am the Engineer in Responsible Charge of design of storm water BMPs for this project, and that I have exercised responsible charge over the design of the project as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with the requirements of the Storm Water Standards, which is based on the requirements of SDRWQCB Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100 (MS4 Permit).

I have read and understand that the City Engineer has adopted minimum requirements for managing urban runoff, including storm water, from land development activities, as described in the Storm Water Standards. I certify that this PDP SWQMP has been completed to the best of my ability and accurately reflects the project being proposed and the applicable source control and site design BMPs proposed to minimize the potentially negative impacts of this project's land development activities on water quality. I understand and acknowledge that the plan check review of this PDP SWQMP by the City Engineer is confined to a review and does not relieve me, as the Engineer in Responsible Charge of design of storm water BMPs for this project, of my responsibilities for project design.

C59320 1/12/17

Engineer of Work's Signature, PE Number & Expiration Date

Arnold J. Whitaker

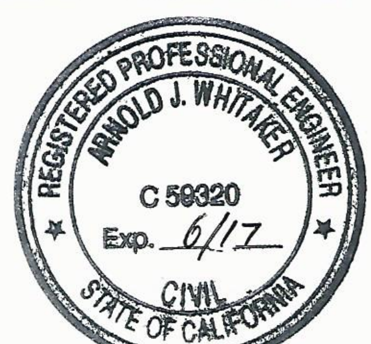
Print Name

Atlas Civil Design

Company

January 11, 2017

Date



Engineer's Stamp

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Project Name: **Hillel Center for Jewish Life**

SUBMITTAL RECORD

Use this Table to keep a record of submittals of this PDP SWQMP. Each time the PDP SWQMP is re-submitted, provide the date and status of the project. In last column indicate changes that have been made or indicate if response to plancheck comments is included. When applicable, insert response to plancheck comments.

Submittal Number	Date	Project Status	Changes
1	3/10/16	◉ Preliminary Design/Planning/CEQA ○ Final Design	Initial Submittal
2	9/21/16	◉ Preliminary Design/Planning/CEQA ○ Final Design	2nd SUBMITTAL
3	1/11/17	◉ Preliminary Design/Planning/CEQA ○ Final Design	3rd Submittal
4	Enter a date.	◉ Preliminary Design/Planning/CEQA ○ Final Design	Click here to enter text.

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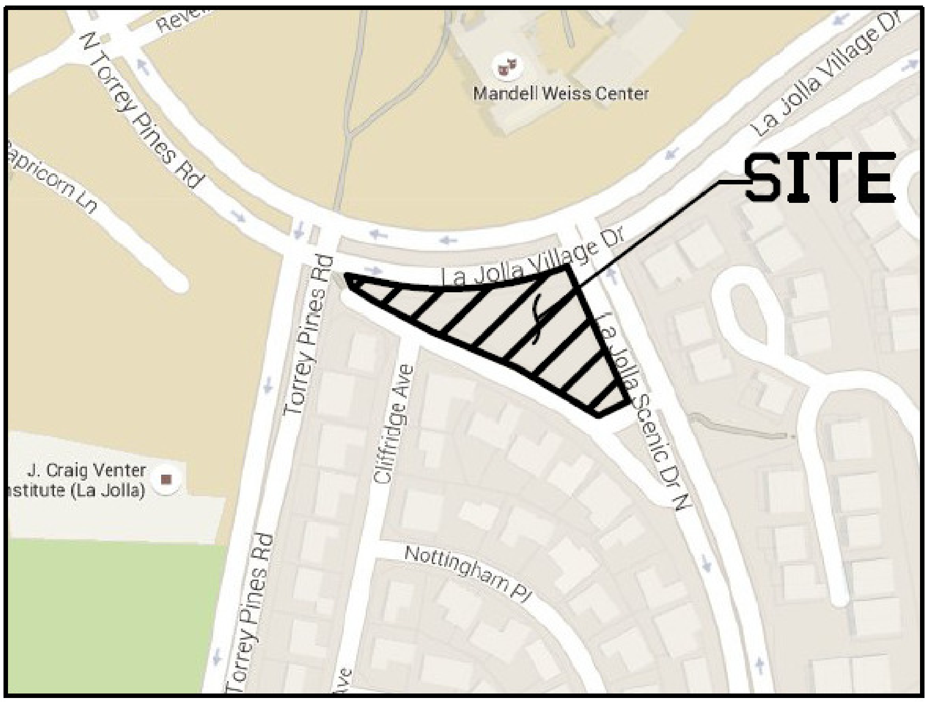
Project Name: Hillel Center for Jewish Life

PROJECT VICINITY MAP

Project Name: Hillel Center for Jewish Life
Permit Application Number: Insert Application Number.



VICINITY MAP

N.T.S

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Project Name: Hillel Center for Jewish Life

THE CITY OF SAN DIEGO	City of San Diego **Development Services** 1222 First Ave., MD-302 San Diego, CA 92101 (619) 446-5000	**Storm Water Requirements Applicability Checklist**	FORM **DS-560** February 2016

Project Address: 8976 Cliffridge Ave, La Jolla, Ca 92037	Project Number *(for the City Use Only)*: 212995

SECTION 1. Construction Storm Water BMP Requirements:

All construction sites are required to implement construction BMPs in accordance with the performance standards in the Storm Water Standards Manual. Some sites are additionally required to obtain coverage under the State Construction General Permit (CGP)[1], which is administrated by the State Water Resources Control Board.

For all projects complete PART A: If project is required to submit a SWPPP or WPCP, continue to PART B.

PART A: Determine Construction Phase Storm Water Requirements.

1. Is the project subject to California's statewide General NPDES permit for Storm Water Discharges Associated with construction activities, also known as the State Construction General Permit (CGP)? (Typically projects with land disturbance greater than or equal to 1 acre.)

   ☒ Yes; SWPPP required, skip questions 2-4 ☐ No; next question

2. Does the project propose construction or demolition activity, including but not limited to, clearing, grading, grubbing, excavation, or any other activity that results in ground disturbance and contact with storm water runoff?

   ☒ Yes; WPCP required, skip questions 3-4 ☐ No; next question

3. Does the project propose routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of the facility? (projects such as pipeline/utility replacement)

   ☒ Yes; WPCP required, skip questions 4 ☐ No; next question

4. Does the project only include the following Permit types listed below?
   - Electrical Permit, Fire Alarm Permit, Fire Sprinkler Permit, Plumbing Permit, Sign Permit, Mechanical Permit, Spa Permit.
   - Individual Right of Way Permits that exclusively include one of the following activities and associated curb/ sidewalk repair: water services, sewer lateral, storm drain lateral, or dry utility service.
   - Right of Way Permits with a project footprint less than 150 linear feet that exclusively include only ONE of the following activities: curb ramp, sidewalk and driveway apron replacement, curb and gutter replacement, and retaining wall encroachments.

   ☐ Yes; no document required

Check one of the boxes to the right, and continue to PART B:

x If you checked "Yes" for question 1,
a SWPPP is REQUIRED. Continue to PART B

☐ If you checked "No" for question 1, and checked "Yes" for question 2 or 3,
a WPCP is REQUIRED. If the project processes less than 5,000 square feet of ground disturbance AND has less than a 5-foot elevation change over the entire project area, a Minor WPCP may be required instead. **Continue to PART B.**

☐ If you checked "No" for all question 1-3, and checked "Yes" for question 4
PART B **does not apply and no document is required. Continue to Section 2.**

More information on the City's construction BMP requirements as well as CGP requirements can be found at:
www.sandiego.gov/stormwater/regulations/swguide/constructing.shtml

PART B: Determine Construction Site Priority.
This prioritization must be completed within this form, noted on the plans, and included in the SWPPP or WPCP. The city reserves the right to adjust the priority of projects both before and after construction. Construction projects are assigned an inspection frequency based on if the project has a "high threat to water quality." The City has aligned the local definition of "high threat to water quality" to the risk. Determination approach of the Stat e Construction General Permit (CGP). The CGP determines risk level based on project specific sediment risk and receiving water risk. Additional inspection is required for projects within the Areas of Special Biological Significance (ASBS) watershed. **NOTE:** The construction priority does **NOT** change construction BMP requirements that apply to projects; rather, it determines the frequency of inspections that will be conducted by city staff.

Complete PART B and continued to Section 2

1. ☐ **ASBS**
   a. Projects located in the ASBS watershed. A map of the ASBS watershed can he found here *<placeholder for ASBS map link>*

2. × **High Priority**
   a. Projects 1 acre or more determined to be Risk Level 2 or Risk Level 3 per the Construction General Permit and not located in the ASBS watershed.
   b. Projects 1 acre or more determined to be LUP Type 2 or LUP Type 3 per the Construction General Permit and not located in the ASBS watershed.

3. ☐ **Medium Priority**
   a. Projects 1 acre or more but not subject to an ASBS or high priority designation.
   b. Projects determined to be Risk Level 1 or LUP Type 1 per the Construction General Permit and not located in the ASBS watershed.

4. ☐ **Low Priority**
   a. Projects not subject to ASBS, high or medium priority designation.

SECTION 2. Permanent Storm Water BMP Requirements.

Additional information for determining the requirements is found in the Storm Water Standards Manual.

PART C: Determine if Not Subject to Permanent Storm Water Requirements.
Projects that are considered maintenance, or otherwise not categorized as "new development projects" or "redevelopment projects" according to the Storm Water Standards Manual are not subject to Permanent Storm Water BMPs.

If "yes" is checked for any number in Part C, proceed to Part F and check "Not Subject to Permanent Storm Water BMP Requirements".

If "no" is checked for all of the numbers in Part C continue to Part D.

1.	Does the project only include interior remodels and/or is the project entirely within an existing enclosed structure and does not have the potential to contact storm water?	☐ Yes ☒ No
2.	Does the project only include the construction of overhead or underground utilities without creating new impervious surfaces?	☐ Yes ☒ No
3.	Does the project fall under routine maintenance? Examples include, but are not limited to: roof or exterior structure surface replacement, resurfacing or reconfiguring surface parking lots or existing roadways without expanding the impervious footprint, and routine replacement of damaged pavement (grinding, overlay, and pothole repair).	☐ Yes ☒ No

PART D: PDP Exempt Requirements.

PDP Exempt projects are required to implement site design and source control BMPs.

If "yes" was checked for any questions in Part D, continue to Part F and check the box labeled "PDP Exempt."
If "no" was checked for all questions in Part D, continue to Part E.

1. Does the project ONLY include new or retrofit sidewalks, bicycle lanes, or trails that:

   • Are designed and constructed to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas? Or;
   • Are designed and constructed to be hydraulically disconnected from paved streets and roads? Or;
   • Are designed and constructed with permeable pavements or surfaces in accordance with the Green Streets guidance in the City's Storm Water Standards manual?

   ☐ Yes; PDP exempt requirements apply ☒ No; next question

2. Does the project ONLY include retrofitting or redeveloping existing paved alleys, streets or roads designed and constructed in accordance with the Green Streets guidance in the City's Storm Water Standards Manual?

   ☐ Yes; PDP exempt requirements apply ☒ No; PDP not exempt. PDP requirements apply.

PART E: Determine if Project is a Priority Development Project (PDP). Projects that match one of the definitions below are subject to additional requirements including preparation of a Storm Water Quality Management Plan (SWQMP).

If "yes" is checked for any number in PART E, continue to PART F and check the box labeled "Priority Development Project".
If "no" is checked for every number in PART E, continue to PART F and check the box labeled "Standard Project".

1.	**New Development that creates 10,000 square feet or more of impervious surfaces collectively over the project site.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.	☒ Yes ☐ No
2.	**Redevelopment project that creates and/or replaces 5,000 square feet or more of impervious surfaces on an existing site of 10,000 square feet or more of impervious surfaces.** This includes commercial, industrial, residential, mixed-use, and public development projects on public or private land.	☐ Yes ☒ No
3.	**New development or redevelopment of a restaurant.** Facilities that sell prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC 5812), and where the land development creates and/or replace 5,000 square feet or more of impervious surface.	☐ Yes ☒ No
4.	**New development or redevelopment on a hillside.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site) and where the development will grade on any natural slope that is twenty-five percent or greater.	☒ Yes ☐ No

Project Name: Hillel Center for Jewish Life

5. **New development or redevelopment of a parking lot that creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site).**	○ Yes ◉ No
6. **New development or redevelopment of streets, roads, highways, freeways, and driveways.** The project creates and/or replaces 5,000 square feet or more of impervious surface (collectively over the project site).	◉ Yes ○ No
7. **New development or redevelopment discharging directly to an Environmentally Sensitive Area.** The project creates and/or replaces 2,500 square feet of impervious surface (collectively over project site), and discharges directly to an Environmentally Sensitive Area (ESA). "Discharging- directly to" includes flow that is conveyed overland a distance of 200 feet or less from the project to the ESA, or conveyed in a pipe or open channel any distance as an isolated flow from the project to the ESA (i.e. not commingled with flows from adjacent lands).	○ Yes ◉ No
8. **New development or redevelopment projects of a retail gasoline outlet that creates and/or replaces 5,000 square feet of impervious surface.** The development project meets the following criteria: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic of 100 or more vehicles per day.	○ Yes ◉ No
9. **New development or redevelopment projects of an automotive repair shops that creates and/or replaces 5,000 square feet or more of impervious surfaces.** Development projects categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.	○ Yes ◉ No
10. **Other Pollutant Generating Project.** The project is not covered in the categories above, results in the disturbance of one or more acres of land and is expected to generate pollutants post construction, such as fertilizers and pesticides. This does not include projects creating less than 5,000 sf of impervious surface and where added landscaping does not require regular use of pesticides and fertilizers, such as slope stabilization using native plants. Calculation of the square footage of impervious surface need not include linear pathways that are for infrequent vehicle use, such as emergency maintenance access or bicycle pedestrian use, if they are built with pervious surfaces of if they sheet flow to surrounding pervious surfaces.	○ Yes ◉ No
PART F: Select the appropriate category based on the outcomes of PART C through PART E.	
1. The project is **NOT SUBJECT TO STORM WATER REQUIREMENTS**.	☐
2. The project is a **STANDARD PROJECT**. Site design and source control BMP requirements apply. See the Storm Water Standards Manual for guidance.	☐
3. The project is **PDP EXEMPT**. Site design and source control BMP requirements apply. See the Storm Water Standards Manual for guidance.	☐
4. The project is a **PRIORITY DEVELOPMENT PROJECT**. Site design, source control, and structural pollutant control BMP requirements apply. See the Storm Water Standards Manual for guidance on determining if project requires hydromodification management.	☐
Name of Owner or Agent *(Please Print)*: Julian Blevins	Title: Project Manager
Signature:	Date: January 11, 2017

<table>
<tr><td colspan="2">Applicability of Permanent, Post-Construction Storm Water BMP Requirements
(Storm Water Intake Form for all Development Permit Applications)</td><td>**Form I-1**</td></tr>
<tr><td colspan="3">Project Identification</td></tr>
<tr><td colspan="3">Project Name: Hillel Center for Jewish Life</td></tr>
<tr><td colspan="2">Permit Application Number: Insert Application Number.</td><td>Date: 9/15/16</td></tr>
<tr><td colspan="3">Determination of Requirements</td></tr>
<tr><td colspan="3">The purpose of this form is to identify permanent, post-construction requirements that apply to the project. This form serves as a short summary of applicable requirements, in some cases referencing separate forms that will serve as the backup for the determination of requirements.

Answer each step below, starting with Step 1 and progressing through each step until reaching "Stop". Refer to Part 1 of Storm Water Standards sections and/or separate forms referenced in each step below.</td></tr>
<tr><td>Step</td><td>Answer</td><td>Progression</td></tr>
<tr><td rowspan="2">Step 1: Is the project a "development project"? See Section 1.3 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.</td><td>☒ Yes</td><td>Go to Step 2.</td></tr>
<tr><td>☐ No</td><td>Stop.
Permanent BMP requirements do not apply. No SWQMP will be required. Provide discussion below.</td></tr>
<tr><td colspan="3">Discussion / justification if the project is not a "development project" (e.g., the project includes only interior remodels within an existing building):
Click or tap here to enter text.</td></tr>
<tr><td rowspan="3">Step 2: Is the project a Standard Project, Priority Development Project (PDP), or exception to PDP definitions?
To answer this item, see Section 1.4 of the BMP Design Manual (Part 1 of Storm Water Standards) in its entirety for guidance, AND complete Storm Water Requirements Applicability Checklist.</td><td>☐ Standard Project</td><td>Stop.
Standard Project requirements apply.</td></tr>
<tr><td>☒ PDP</td><td>PDP requirements apply, including PDP SWQMP.
Go to Step 3.</td></tr>
<tr><td>☐ PDP Exempt</td><td>Stop.
Standard Project requirements apply. Provide discussion and list any additional requirements below.</td></tr>
</table>

Discussion / justification, and additional requirements for exceptions to PDP definitions, if applicable: Click or tap here to enter text.

Project Name: **Hillel Center for Jewish Life**

Form I-1 Page 2		
Step	**Answer**	**Progression**
Step 3. Is the project subject to earlier PDP requirements due to a prior lawful approval? See Section 1.10 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☐ Yes	Consult the City Engineer to determine requirements. Provide discussion and identify requirements below. Go to Step 4.
	☒ No	BMP Design Manual PDP requirements apply. Go to Step 4.
Discussion / justification of prior lawful approval, and identify requirements (<u>not required if prior lawful approval does not apply</u>): Click or tap here to enter text.		
Step 4. Do hydromodification control requirements apply? See Section 1.6 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☒ Yes	PDP structural BMPs required for pollutant control (Chapter 5) and hydromodification control (Chapter 6). Go to Step 5.
	☐ No	Stop. PDP structural BMPs required for pollutant control (Chapter 5) only. Provide brief discussion of exemption to hydromodification control below.
Discussion / justification if hydromodification control requirements do <u>not</u> apply: Click or tap here to enter text.		
Step 5. Does protection of critical coarse sediment yield areas apply? See Section 6.2 of the BMP Design Manual (Part 1 of Storm Water Standards) for guidance.	☐ Yes	Management measures required for protection of critical coarse sediment yield areas (Chapter 6.2). Stop.
	☒ No	Management measures not required for protection of critical coarse sediment yield areas. Provide brief discussion below. Stop.

Project Name: Hillel Center for Jewish Life

Discussion / justification if protection of critical coarse sediment yield areas does not apply: No CCSYAs because management standards are implemented by reducing impervious area and providing project stabiliztion. No CCSYAs upstream therefore the pathway is in compliance.

Project Name: Hillel Center for Jewish Life

Site Information Checklist For PDPs	Form I-3B
Project Summary Information	
Project Name	Hillel Center for Jewish Life
Project Address	8976 Cliffridge Ave, La Jolla CA 92037
Assessor's Parcel Number(s) (APN(s))	344-131-01, 344-120-26
Permit Application Number	Project Nbr: 212995
Project Watershed	Select One: ☐ San Dieguito River ☒ Penasquitos ☐ Mission Bay ☐ San Diego River ☐ San Diego Bay ☐ Tijuana River
Hydrologic subarea name with Numeric Identifier up to two decimal paces (9XX.XX)	906.30
Project Area (total area of Assessor's Parcel(s) associated with the project or total area of the right-of-	1.43 Acres ([SQFT] Square Feet)
Area to be disturbed by the project (Project Footprint)	1.43 Acres (70,416 Square Feet)
Project Proposed Impervious Area (subset of Project Footprint)	0.33 Acres (14,553 Square Feet)
Project Proposed Pervious Area (subset of Project Footprint)	0.47 Acres (20,556 Square Feet)
Note: Proposed Impervious Area + Proposed Pervious Area = Area to be Disturbed by the Project. This may be less than the Project Area.	
The proposed increase or decrease in impervious area in the proposed condition as compared to the pre-project condition.	41.25 %

Form I-3B Page 2 of 11
Description of Existing Site Condition and Drainage Patterns
Current Status of the Site (select all that apply): × Existing development ☐ Previously graded but not built out ☐ Agricultural or other non-impervious use × Vacant, undeveloped/natural Description / Additional Information: The complete project consist of 2 parcels. The lot on the northwest corner has 2 small structure and some hardscape and generally drains towards the public Street on three sides. The Second lot generally drains from north to southwest.
Existing Land Cover Includes (select all that apply): × Vegetative Cover ☐ Non-Vegetated Pervious Areas x Impervious Areas Description / Additional Information: The first lot constist of 2 small structures and some hardscape. The second lot consist of some ground cover.
Underlying Soil belongs to Hydrologic Soil Group (select all that apply): ☐ NRCS Type A ☐ NRCS Type B ☐ NRCS Type C × NRCS Type D
Approximate Depth to Groundwater (GW): ○ GW Depth < 5 feet ○ 5 feet < GW Depth < 10 feet ● 10 feet < GW Depth < 20 feet ○ GW Depth > 20 feet
Existing Natural Hydrologic Features (select all that apply): ☐ Watercourses ☐ Seeps ☐ Springs ☐ Wetlands x None Description / Additional Information: Click or tap here to enter text.

Project Name: Hillel Center for Jewish Life

Form I-3B Page 3 of 11
Description of Existing Site Topography and Drainage:
How is storm water runoff conveyed from the site? At a minimum, this description should answer: 1. Whether existing drainage conveyance is natural or urban; 2. If runoff from offsite is conveyed through the site? If yes, quantification of all offsite drainage areas, design flows, and locations where offsite flows enter the project site and summarize how such flows are conveyed through the site; 3. Provide details regarding existing project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, and natural and constructed channels; 4. Identify all discharge locations from the existing project along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide summary of the pre-project drainage areas and design flows to each of the existing runoff discharge locations.
Description / Additional Information:

The existing 1.43 Acre site consists of a single undeveloped, landscape triangular area. The existing site is composed of 3 basins. The existing grades permit positive runoff from all areas of the site. The largest basin, Basin 100, surface runoff enters the public drainage system at an existing 10' Type "A" curb inlet west of the intersection of La Jolla Scenic Way and La Jolla Village Drive. Basin 300 surface runoff flows back into the end of the cul-de-sac where it enters into a ditch that discharges to the Torrey Pines Road gutter.

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Form I-3B Page 4 of 11
Description of Proposed Site Development and Drainage Patterns
Project Description / Proposed Land Use and/or Activities: The UCSD Hillel Center for Jewish Life (hereafter referred to as the Hillel Center) project site is a 1.41 acre triangle piece of land sectioned off northeasterly by La Jolla Village Drive, La Jolla Scenic Way to the east and La Jolla Scenic Drive North to the south. The site will be composed of a building, a cul-de-sac which will be vacated, a park and walking paths, and landscaping. The facility is planned to include meeting rooms, offices for clergy for students and staff; lounges and recreational areas, a kosher kitchen, a computer room and a library. The Center will be over 7,000 square feet of building space and included twenty six surface parking spaces. This project will also involve the vacation of public right of way and the removal of the westerly cul-de-sac- on La Jolla Scenic Drive North. Meandering walks and large landscape belts are proposed for these areas improving the curb appeal for the surrounding community. The project neighbor on Lot 67, whose current access is off of La Jolla Scenic Drive North, shall be provided with a new driveway access on Cliffridge Avenue.
List/describe proposed impervious features of the project (e.g., buildings, roadways, parking lots, courtyards, athletic courts, other impervious features): The following are impervious features on this project: Building structures, Private sidewalk, Driveway, Retaining Wall.
List/describe proposed pervious features of the project (e.g., landscape areas): The pervious features on site will include, landscape areas, pervious pavers and two biofiltration basins.
Does the project include grading and changes to site topography? ☒ Yes ☐ No Description / Additional Information: The project proposes to construct serveral buildings along with covered and uncovered parking along with vacating a Cul-De-Sac, construction of a park and walking paths along with site landscape. This will require site grading but the drainage pattern will generally stay the same.

Form I-3B Page 5 of 11

Does the project include changes to site drainage (e.g., installation of new storm water conveyance systems)?

☑ Yes

☐ No

If yes, provide details regarding the proposed project site drainage conveyance network, including storm drains, concrete channels, swales, detention facilities, storm water treatment facilities, natural and constructed channels, and the method for conveying offsite flows through or around the proposed project site. Identify all discharge locations from the proposed project site along with a summary of the conveyance system size and capacity for each of the discharge locations. Provide a summary of pre and post-project drainage areas and design flows to each of the runoff discharge locations. Reference the drainage study for detailed calculations.

Description / Additional Information:
The 1.43 Acre site is divided into 3 basins (100, 200 and 300). Basin 100 is composed of the building site, parking area (pervious paving) and the associated landscaping Planters areas. The building site comprises the western portion of the site and the runoff off is collected by means of an underground storm drain system and discharged to the east before entering a biofiltration basin. The eastern portion of the site is comprised of the parking area to the east. The parking area, covering the eastern portion of this basin, also drain to the bioretention basins. The flow from basin 100 enters the biofiltration basin then discharges to an underground detention pipe before discharging to the existing 18" storm drain pipe. Basin 200 consist of the flow from the public right of way along La Jolla Village Drive and La Jolla Scenic Way. Basin 300 is primarily landscaping, driveway area and a public Bike path that surfaces flows to a biofiltration basin before discharging into a storm drain system.

The project also proposes to capture and store the (DCV) volume in the Biofiltration basin. The Biofiltration basin is design to allow for storage under the perforated pipe. This accounts for the 85% Percentile storm event. The Basin is sized to account for the without impermeable liner. Which means the project will meet the requirements of the Regional Quality Control Board Order R9-2013-0001.

Project Name: **Hillel Center for Jewish Life**

Form I-3B Page 6 of 11
Identify whether any of the following features, activities, and/or pollutant source areas will be present (select all that apply): × On-site storm drain inlets ☐ Interior floor drains and elevator shaft sump pumps ☐ Interior parking garages ☐ Need for future indoor & structural pest control × Landscape/Outdoor Pesticide Use ☐ Pools, spas, ponds, decorative fountains, and other water features × Food service × Refuse areas ☐ Industrial processes ☐ Outdoor storage of equipment or materials ☐ Vehicle and Equipment Cleaning ☐ Vehicle/Equipment Repair and Maintenance ☐ Fuel Dispensing Areas ☐ Loading Docks × Fire Sprinkler Test Water × Miscellaneous Drain or Wash Water × Plazas, sidewalks, and parking lots ☐ Large Trash Generating Facilities ☐ Animal Facilities ☐ Plant Nurseries and Garden Centers ☐ Automotive-related Uses Description / Additional Information: Click or tap here to enter text.

Form I-3B Page 7 of 11
Identification and Narrative of Receiving Water
Narrative describing flow path from discharge location(s), through urban storm conveyance system, to receiving creeks, rivers, and lagoons and ultimate discharge location to Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable) Click or tap here to enter text.
Provide a summary of all beneficial uses of receiving waters downstream of the project discharge locations. Click or tap here to enter text.
Identify all ASBS (areas of special biological significance) receiving waters downstream of the project discharge locations. Click or tap here to enter text.
Provide distance from project outfall location to impaired or sensitive receiving waters. Click or tap here to enter text.
Sumarize information regarding the proximity of the permanent, post-construction storm water BMPs to the City's Multi-Habitat Planning Area and environmentally sensitive lands Click or tap here to enter text.

Project Name: **Hillel Center for Jewish Life**

Form I-3B Page 8 of 11

Identification of Receiving Water Pollutants of Concern

List any 303(d) impaired water bodies within the path of storm water from the project site to the Pacific Ocean (or bay, lagoon, lake or reservoir, as applicable), identify the pollutant(s)/stressor(s) causing impairment, and identify any TMDLs and/or Highest Priority Pollutants from the WQIP for the impaired water bodies:

303(d) Impaired Water Body	Pollutant(s)/Stressor(s)	TMDLs/ WQIP Highest Priority Pollutant
Scripps		PCPs
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

Identification of Project Site Pollutants*

*Identification of project site pollutants is only required if flow-thru treatment BMPs are implemented onsite in lieu of retention or biofiltration BMPs (note the project must also participate in an alternative compliance program unless prior lawful approval to meet earlier PDP requirements is demonstrated)

Identify pollutants anticipated from the project site based on all proposed use(s) of the site (see BMP Design Manual (Part 1 of Storm Water Standards) Appendix B.6):

Pollutant	Not Applicable to the Project Site	Anticipated from the Project Site	Also a Receiving Water Pollutant of Concern
Sediment	○	◉	○
Nutrients	○	◉	○
Heavy Metals	◉	○	○
Organic Compounds	◉	○	○
Trash & Debris	○	◉	○
Oxygen Demanding Substances	○	◉	○
Oil & Grease	○	◉	○
Bacteria & Viruses	◉	○	○

Project Name: Hillel Center for Jewish Life

Pesticides	○	●	○

Form I-3B Page 9 of 11
Hydromodification Management Requirements
Do hydromodification management requirements apply (see Section 1.6 of the BMP Design Manual)? ☒ Yes, hydromodification management flow control structural BMPs required. ☐ No, the project will discharge runoff directly to existing underground storm drains discharging directly to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. ☐ No, the project will discharge runoff directly to conveyance channels whose bed and bank are concrete-lined all the way from the point of discharge to water storage reservoirs, lakes, enclosed embayments, or the Pacific Ocean. ☐ No, the project will discharge runoff directly to an area identified as appropriate for an exemption by the WMAA for the watershed in which the project resides. Description / Additional Information (to be provided if a 'No' answer has been selected above): Click or tap here to enter text.
Critical Coarse Sediment Yield Areas* *This Section only required if hydromodification management requirements apply
Based on Section 6.2 and Appendix H does CCSYA exist on the project footprint or in the upstream area draining through the project footprint? ☐ Yes ☒ No, No critical coarse sediment yield areas to be protected based on WMAA maps Discussion / Additional Information: Click or tap here to enter text.

Form I-3B Page 10 of 11
Flow Control for Post-Project Runoff* *This Section only required if hydromodification management requirements apply
List and describe point(s) of compliance (POCs) for flow control for hydromodification management (see Section 6.3.1). For each POC, provide a POC identification name or number correlating to the project's HMP Exhibit and a receiving channel identification name or number correlating to the project's HMP Exhibit. POC (See HMP Exhibit, for the 2 locations
Has a geomorphic assessment been performed for the receiving channel(s)? ☒ No, the low flow threshold is 0.1Q2 (default low flow threshold) ☐ Yes, the result is the low flow threshold is 0.1Q2 ☐ Yes, the result is the low flow threshold is 0.3Q2 ☐ Yes, the result is the low flow threshold is 0.5Q2 If a geomorphic assessment has been performed, provide title, date, and preparer: Click or tap here to enter text.
Discussion / Additional Information: (optional) Click or tap here to enter text.

Project Name: **Hillel Center for Jewish Life**

Form I-3B Page 11 of 11
Other Site Requirements and Constraints
When applicable, list other site requirements or constraints that will influence storm water management design, such as zoning requirements including setbacks and open space, or local codes governing minimum street width, sidewalk construction, allowable pavement types, and drainage requirements. Streets on all sides of the project, a steep slope and limitation in landscape area limit the location and type of treatment.
Optional Additional Information or Continuation of Previous Sections As Needed
This space provided for additional information or continuation of information from previous sections as needed. Click or tap here to enter text.

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Project Name: **Hillel Center for Jewish Life**

Source Control BMP Checklist for All Development Projects			Form I-4
Source Control BMPs			
All development projects must implement source control BMPs SC-1 through SC-6 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual (Part 1 of the Storm Water Standards) for information to implement source control BMPs shown in this checklist. Answer each category below pursuant to the following. • "Yes" means the project will implement the source control BMP as described in Chapter 4 and/or Appendix E of the BMP Design Manual. Discussion / justification is not required. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project has no outdoor materials storage areas). Discussion / justification may be provided.			
Source Control Requirement	Applied?		
SC-1 Prevention of Illicit Discharges into the MS4	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-1 not implemented: Click or tap here to enter text.			
SC-2 Storm Drain Stenciling or Signage	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-2 not implemented: Click or tap here to enter text.			
SC-3 Protect Outdoor Materials Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-3 not implemented: Click or tap here to enter text.			
SC-4 Protect Materials Stored in Outdoor Work Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒ Yes	☐ No	☐ N/A
Discussion / justification if SC-4 not implemented: Click or tap here to enter text.			
SC-5 Protect Trash Storage Areas from Rainfall, Run-On, Runoff, and Wind Dispersal	☒ Yes	☐ No	☐ N/A

Discussion / justification if SC-5 not implemented: Click or tap here to enter text.

Project Name: Hillel Center for Jewish Life

Form I-4 Page 2 of 2			
Source Control Requirement	Applied?		
SC-6 Additional BMPs Based on Potential Sources of Runoff Pollutants (must answer for each source listed below)			
On-site storm drain inlets	☒ Yes	☐ No	☐ N/A
Interior floor drains and elevator shaft sump pumps	☐ Yes	☐ No	☒ N/A
Interior parking garages	☐ Yes	☐ No	☒ N/A
Need for future indoor & structural pest control	☐ Yes	☐ No	☒ N/A
Landscape/Outdoor Pesticide Use	☒ Yes	☐ No	☐ N/A
Pools, spas, ponds, decorative fountains, and other water features	☐ Yes	☐ No	☒ N/A
Food service	☒ Yes	☐ No	☐ N/A
Refuse areas	☒ Yes	☐ No	☐ N/A
Industrial processes	☐ Yes	☐ No	☒ N/A
Outdoor storage of equipment or materials	☐ Yes	☐ No	☒ N/A
Vehicle/Equipment Repair and Maintenance	☐ Yes	☐ No	☒ N/A
Fuel Dispensing Areas	☐ Yes	☐ No	☒ N/A
Loading Docks	☐ Yes	☐ No	☒ N/A
Fire Sprinkler Test Water	☐ Yes	☐ No	☒ N/A
Miscellaneous Drain or Wash Water	☐ Yes	☐ No	☒ N/A
Plazas, sidewalks, and parking lots	☐ Yes	☐ No	☒ N/A
SC-6A: Large Trash Generating Facilities	☐ Yes	☐ No	☒ N/A
SC-6B: Animal Facilities	☐ Yes	☐ No	☒ N/A
SC-6C: Plant Nurseries and Garden Centers	☐ Yes	☐ No	☒ N/A
SC-6D: Automotive-related Uses	☐ Yes	☐ No	☒ N/A
Discussion / justification if SC-6 not implemented. Clearly identify which sources of runoff pollutants are discussed. Justification must be provided for <u>all</u> "No" answers shown above. Click or tap here to enter text.			

Project Name: Hillel Center for Jewish Life

Site Design BMP Checklist for All Development Projects	Form I-5		
Site Design BMPs			
All development projects must implement site design BMPs SD-1 through SD-8 where applicable and feasible. See Chapter 4 and Appendix E of the BMP Design Manual (Part 1 of Storm Water Standards) for information to implement site design BMPs shown in this checklist. Answer each category below pursuant to the following. • "Yes" means the project will implement the site design BMP as described in Chapter 4 and/or Appendix E of the BMP Design Manual. Discussion / justification is not required. • "No" means the BMP is applicable to the project but it is not feasible to implement. Discussion / justification must be provided. • "N/A" means the BMP is not applicable at the project site because the project does not include the feature that is addressed by the BMP (e.g., the project site has no existing natural areas to conserve). Discussion / justification may be provided. A site map with implemented site design BMPs must be included at the end of this checklist.			
Site Design Requirement	Applied?		
SD-1 Maintain Natural Draiange Pathways and Hydrologic Features	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-1 not implemented: Click or tap here to enter text.			
1-1 Are existing natural drainage pathways and hydrologic features mapped on the site map?	☒ Yes	☐ No	☐ N/A
1-2 Are street trees implemented? If yes, are they shown on the site map?	☒ Yes	☐ No	☐ N/A
1-3 Implemented street trees meet the design criteria in SD-1 Fact Sheet (e.g. soil volume, maximum credit, etc.)?	☐ Yes	☐ No	☒ N/A
1-4 Is street tree credit volume calculated using Appendix B.2.2.1 and SD-1 Fact Sheet in Appendix E?	☐ Yes	☐ No	☒ N/A
SD-2 Have natural areas, soils and vegetation been conserved?	☒ Yes	☐ No	☐ N/A

Discussion / justification if SD-2 not implemented:

Project Name: Hillel Center for Jewish Life

Form I-5 Page 2 of 4			
Site Design Requirement	Applied?		
SD-3 Minimize Impervious Area	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-3 not implemented: Click or tap here to enter text.			
SD-4 Minimize Soil Compaction	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-4 not implemented: Click or tap here to enter text.			
SD-5 Impervious Area Dispersion	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-5 not implemented: Click or tap here to enter text.			
5-1 Is the pervious area receiving runon from impervious area identified on the site map?	☒ Yes	☐ No	
5-2 Does the pervious area satisfy the design criteria in SD-5 Fact Sheet in Appendix E (e.g. maximum slope, minimum length, etc.)	☒ Yes	☐ No	

5-3	Is impervious area dispersion credit volume calculated using Appendix B.2.1.1 and SD-5 Fact Sheet in Appendix E?	☒ Yes	☐ No	

Form I-5 Page 3 of 4			
Site Design Requirement	Applied?		
SD-6 Runoff Collection	☐ Yes	☐ No	☒ N/A
Discussion / justification if SD-6 not implemented: Click or tap here to enter text.			
6a-1 Are green roofs implemented in accordance with design criteria in SD-6A Fact Sheet? If yes, are they shown on the site map?	☐ Yes	☐ No	☒ N/A
6a-2 Is green roof credit volume calculated using Appendix B.2.1.2 and SD-6A Fact Sheet in Appendix E?	☐ Yes	☐ No	☒ N/A
6b-1 Are permeable pavements implemented in accordance with design criteria in SD-6B Fact Sheet? If yes, are they shown on the site map?	☒ Yes	☐ No	☐ N/A
6b-2 Is permeable pavement credit volume calculated using Appendix B.2.1.3 and SD-6B Fact Sheet in Appendix E?	☒ Yes	☐ No	☐ N/A
SD-7 Landscaping with Native or Drought Tolerant Species	☒ Yes	☐ No	☐ N/A
Discussion / justification if SD-7 not implemented: Click or tap here to enter text.			
SD-8 Harvesting and Using Precipitation	☐ Yes	☐ No	☒ N/A
Discussion / justification if SD-8 not implemented: Click or tap here to enter text.			

8-1	Are rain barrels implemented in accordance with design criteria in SD-8 Fact Sheet? If yes, are they shown on the site map?	☐ Yes	☐ No	☒ N/A
8-2	Is rain barrel credit volume calculated using Appendix B.2.2.2 and SD-8 Fact Sheet in Appendix E?	☐ Yes	☐ No	☒ N/A

Form I-5 Page 4 of 4
Insert Site Map with all site design BMPs identified:
Insert Site Map Here.

Project Name: Hillel Center for Jewish Life

Summary of PDP Structural BMPs	Form I-6
PDP Structural BMPs	
All PDPs must implement structural BMPs for storm water pollutant control (see Chapter 5 of the BMP Design Manual, Part 1 of Storm Water Standards). Selection of PDP structural BMPs for storm water pollutant control must be based on the selection process described in Chapter 5. PDPs subject to hydromodification management requirements must also implement structural BMPs for flow control for hydromodification management (see Chapter 6 of the BMP Design Manual). Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural BMP(s). PDP structural BMPs must be verified by the City at the completion of construction. This includes requiring the project owner or project owner's representative to certify construction of the structural BMPs (complete Form DS-563). PDP structural BMPs must be maintained into perpetuity (see Chapter 7 of the BMP Design Manual). Use this form to provide narrative description of the general strategy for structural BMP implementation at the project site in the box below. Then complete the PDP structural BMP summary information sheet (page 3 of this form) for each structural BMP within the project (copy the BMP summary information page as many times as needed to provide summary information for each individual structural BMP).	

Describe the general strategy for structural BMP implementation at the site. This information must describe how the steps for selecting and designing storm water pollutant control BMPs presented in Section 5.1 of the BMP Design Manual were followed, and the results (type of BMPs selected). For projects requiring hydromodification flow control BMPs, indicate whether pollutant control and flow control BMPs are integrated or separate.

Step 1 The a majority of the Site is not Self Mitigating or Sel Retaining due to the Siteplan constraints.

Therefore Step 1B estimating DCV.

Step 2 Harvest and Use is not Feasible due to the Siteplan constraints.

Step 3 Infiltration is not Feasible due to the very poor Perc Rates (refer to the Soils report)

Therefore Step 3A and B with not Infiltration, before Step 3C before

Step 4 yes BMP be designed for the remaining DCV which brings us to Step 4A and the site is compliant with pollutant control BMP Sizing Requirements.

Some of the factors considered when sizing and design the treatment devices are hydraulic loading rate to maximizing storm water retention and pollutant removal, as well as the prevent erosion, scour, and channeling with in the BMP. The BMPs were sized to treat at 1.5 times the DVC.

(Continue on page 2 as necessary.)

Project Name: **Hillel Center for Jewish Life**

Form I-6 Page 2 of X
(Page reserved for continuation of description of general strategy for structural BMP implementation at the site)
(Continued from page 1) Click or tap here to enter text.

Project Name: **Hillel Center for Jewish Life**

Form I-6 Page 3 of X (Copy as many as needed)	
Structural BMP Summary Information	
Structural BMP ID No. BF-1 for DMA 1.0 &2.0)	
Construction Plan Sheet No. Sheet C2.0	
Type of structural BMP: ☐ Retention by harvest and use (HU-1) ☐ Retention by infiltration basin (INF-1) ☐ Retention by bioretention (INF-2) ☐ Retention by permeable pavement (INF-3) ☒ Partial retention by biofiltration with partial retention (PR-1) ☐ Biofiltration (BF-1) ☐ Flow-thru treatment control with prior lawful approval to meet earlier PDP requirements (provide (BMP type/description in discussion section below) ☐ Flow-thru treatment control included as pre-treatment/forebay for an onsite retention or biofiltration BMP (provide BMP type/description and indicate which onsite retention or biofiltration BMP it serves in discussion section below) ☐ Flow-thru treatment control with alternative compliance (provide BMP type/description in discussion ☐ Detention pond or vault for hydromodification management ☐ Other (describe in discussion section below)	
Purpose: ☐ Pollutant control only ☐ Hydromodification control only ☒ Combined pollutant control and hydromodification control ☐ Pre-treatment/forebay for another structural BMP ☐ Other (describe in discussion section below)	
Who will certify construction of this BMP? Provide name and contact information for the party responsible to sign BMP verification form DS-563	Click or tap here to enter text.
Who will be the final owner of this BMP?	Hillel of San Diego
Who will maintain this BMP into perpetuity?	Hillel of San Diego
What is the funding mechanism for maintenance?	Hillel of San Diego

Project Name: Hillel Center for Jewish Life

Form I-6 Page 4 of X (Copy as many as needed)
Structural BMP ID No. BF-1 (DMA 1.0
Construction Plan Sheet No. C2.0
Discussion (as needed): Click or tap here to enter text.

Project Name: Hillel Center for Jewish Life

THE CITY OF SAN DIEGO	City of San Diego **Development Services** 1222 First Ave., MD-302 San Diego, CA 92101 (619) 446-5000	**Permenant BMP Construction** **Self Certification Form**	FORM DS-563 January 2016

Date Prepared: Sept 15, 2016	Project No.: 212995
Project Applicant: Hillel of San Diego	Phone: 858-550-1792
Project Address: 8976 Cliffridge Ave, La Jolla, Ca 92037	
Project Engineer: Arnold J. Whitaker	Phone: 888-364-1973

The purpose of this form is to verify that the site improvements for the project, identified above, have been constructed in conformance with the approved Storm Water Quality Management Plan (SWQMP) documents and drawings.

This form must be completed by the engineer and submitted prior to final inspection of the construction permit. Completion and submittal of this form is required for all new development and redevelopment projects in order to comply with the City's Storm Water ordinances and NDPES Permit Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100. Final inspection for occupancy and/or release of grading or public improvement bonds may be delayed if this form is not submitted and approved by the City of San Diego.

CERTIFICATION:

As the professional in responsible charge for the design of the above project, I certify that I have inspected all constructed Low Impact Development (LID) site design, source control and structural BMP's required per the approved SWQMP and Construction Permit No. Click here to enter text.; and that said BMP's have been constructed in compliance with the approved plans and all applicable specifications, permits, ordinances and Order No. R9-2013-0001 as amended by R9-2015-0001 and R9-2015-0100 of the San Diego Regional Water Quality Control Board.

I understand that this BMP certification statement does not constitute an operation and maintenance verification.

Signature: ______________________________

Date of Signature: _ Insert Date___

Printed Name: _Click here to enter text._

Title: _Click here to enter text._

Phone No. _Click here to enter text._

Engineer's Stamp

DS-563 (12-15)

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ATTACHMENT 1
BACKUP FOR PDP POLLUTANT CONTROL BMPS

This is the cover sheet for Attachment 1.

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Project Name: Hillel Center for Jewish Life

Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 1a	DMA Exhibit (Required) See DMA Exhibit Checklist.	X Included
Attachment 1b	Tabular Summary of DMAs Showing DMA ID matching DMA Exhibit, DMA Area, and DMA Type (Required)* *Provide table in this Attachment OR on DMA Exhibit in Attachment 1a	☐ Included on DMA Exhibit in Attachment 1a ☐ Included as Attachment 1b, separate from DMA Exhibit
Attachment 1c	Form I-7, Harvest and Use Feasibility Screening Checklist (Required unless the entire project will use infiltration BMPs) Refer to Appendix B.3-1 of the BMP Design Manual to complete Form I-7.	☐ Included ☐ Not included because the entire project will use infiltration BMPs
Attachment 1d	Form I-8, Categorization of Infiltration Feasibility Condition (Required unless the project will use harvest and use BMPs) Refer to Appendices C and D of the BMP Design Manual to complete Form I-8.	☐ Included ☐ Not included because the entire project will use harvest and use BMPs
Attachment 1e	Pollutant Control BMP Design Worksheets / Calculations (Required) Refer to Appendices B and E of the BMP Design Manual for structural pollutant control BMP design guidelines and site design credit calculations	× Included

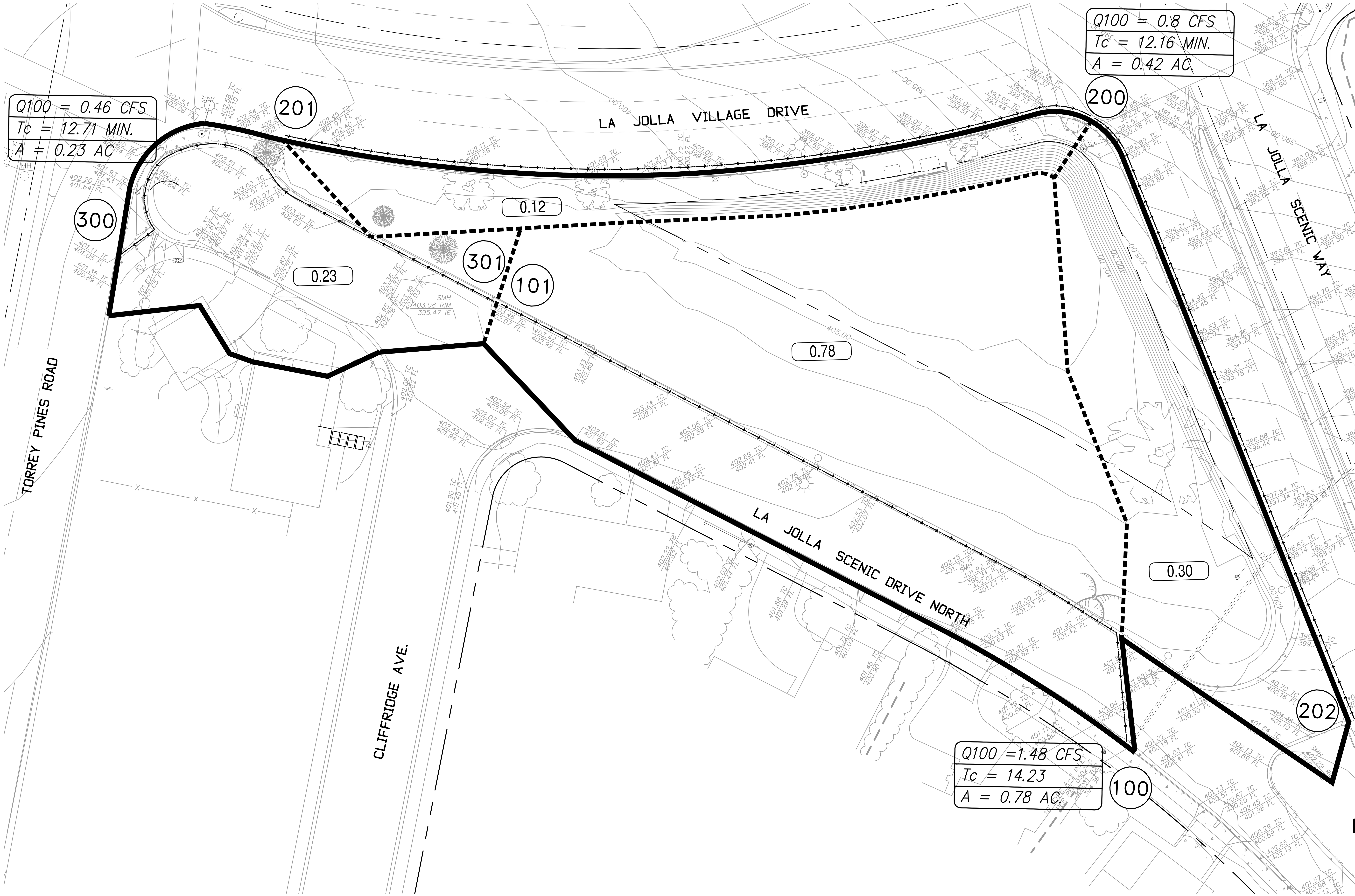
Project Name: Hillel Center for Jewish Life

Use this checklist to ensure the required information has been included on the DMA Exhibit:

The DMA Exhibit must identify:

× Underlying hydrologic soil group
× Approximate depth to groundwater
× Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☐ Critical coarse sediment yield areas to be protected
× Existing topography and impervious areas
× Existing and proposed site drainage network and connections to drainage offsite
× Proposed grading
× Proposed impervious features
× Proposed design features and surface treatments used to minimize imperviousness
× Drainage management area (DMA) boundaries, DMA ID numbers, and DMA areas (square footage or acreage), and DMA type (i.e., drains to BMP, self-retaining, or self-mitigating)
☐ Potential pollutant source areas and corresponding required source controls (see Chapter 4, Appendix E.1, and Form I-3B)
× Structural BMPs (identify location, type of BMP, and size/detail)

HILLEL CENTER FOR JEWISH LIFE
DMA EXHIBIT
PRE DEVELOPMENT CONDITION



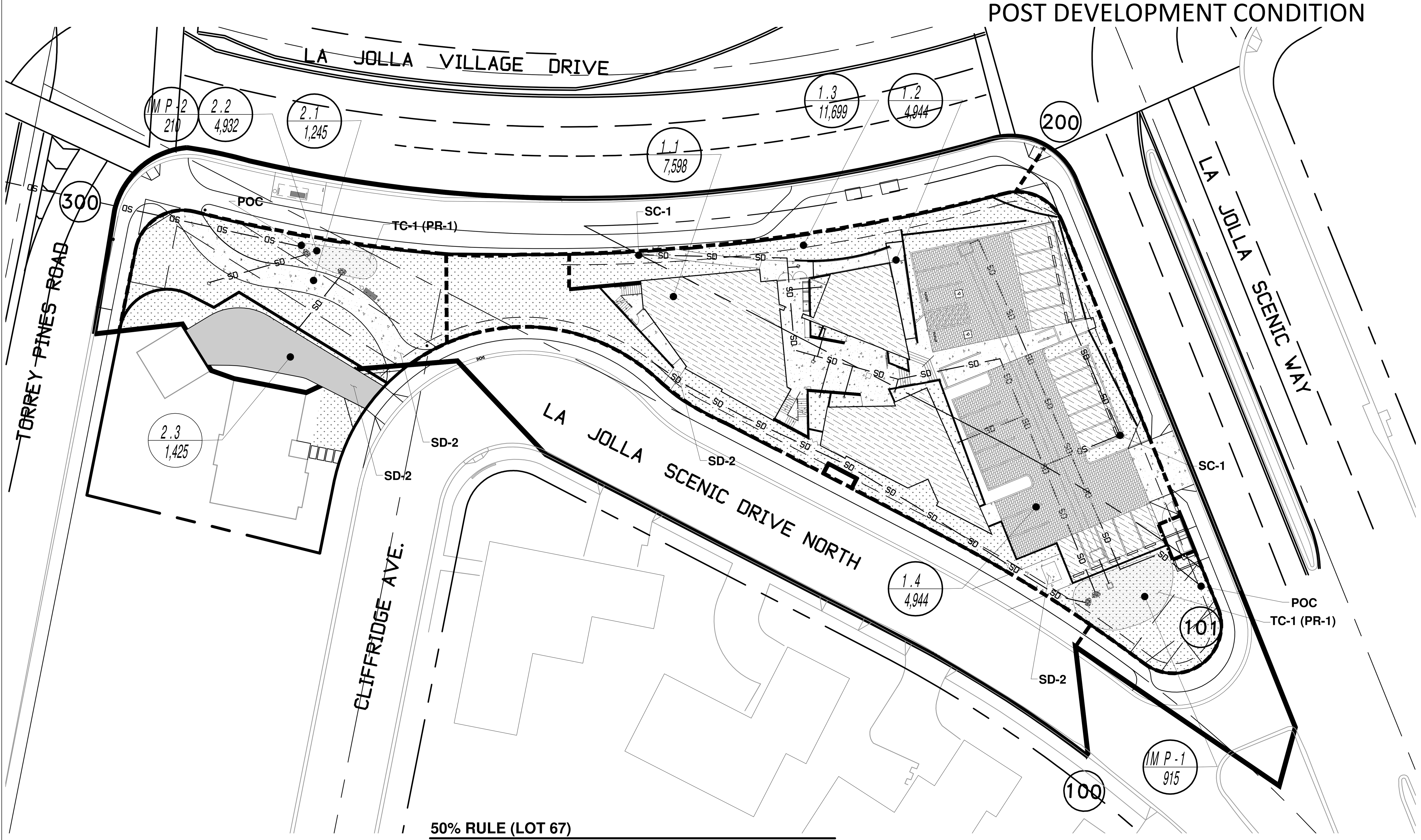
LEGEND

100	NODE
Q50 = X.XX CFS Tc = X.XX MIN. A = X.XX AC.	50-YEAR FREQUENCY DISCHARGE TIME OF CONCENTRATION AREA
	MAJOR BASIN BOUNDARY
	SUBBASIN BOUNDARY
	FLOW PATH
0.20	BASIN AREA

EXHIBIT '1A'
PRE-DEVELOPMENT
DMA EXHIBIT

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

HILLEL CENTER FOR JEWISH LIFE
DMA EXHIBIT
POST DEVELOPMENT CONDITION



LEGEND

	ROOF		DRAINAGE BASIN BOUNDARY (DRAINING INTO BIORETENTION BASIN)
	BIORETENTION BASIN/FLOW-THRU PLANTER		PROPERTY LINE
	LANDSCAPE AREA (SELF MITIGATING DMA)		TRASH ENCLOSURE (DRAINS TO BIORETENTION BASIN)
			FLOW PATH
	PERVIOUS PAVERS W/O LINER		DIRECTION OF FLOW
	PCC PAVING	SD	STORM DRAIN
	AC PAVING		STORM DRAIN INLET/CLEANOUTS WITH STENCILING
			AREA DRAINS
		100	DRAINAGE NODE DISCHARGE LOCATIONS
		0.20	DRAINAGE BASIN AREA
		1.1	DRAINAGE MANAGEMENT AREA
		XX,XXX	SQUARE FEET

UCSD HILLEL BMP SIZING SUMMARY

DMA (DRAINAGE MANAGMENT AREA)	AREA (S.F.)	* * BMP	REMOVAL EFFICIENCY FOR NUTRIENTS, BACTERIA AND VIRUSES	V-BASED (V) OR FLOW BASED (F) DESIGN (A) AREA BASE DESIGN	IMPERVIOUS % (SF)	PERVIOUS % (SF)	* CATEGORY	AREA REQUIRED ***	TREATMENT AREA PROVIDED OR TREATMENT VOLUME PROVIDED***
1.1 (ROOF)	7,598 SF	–	X	–			IMP		
1.2 (PCC)	4,285 SF	–	X	–			IMP		
1.3 (LANDSCAPE)	11,699 SF	–	X	–			IMP		
1.4 (PAVERS)	4,944 SF	–	X	–			IMP		
IMP-1	28,526 SF	PR–1	M	A	42% (11,883)	58% (16,643)	IMP	913	915
2.1 (PCC)	1.245 SF	–	X	–			IMP		
2.2 (LANDSCAPE)	4,932 SF	–	X	–			IMP		
2.3 (AC PAVEMENT)	1,425 SF	–	X	–			IMP		
IMP-2	7,602 SF	PR–1	M	A	35.1% (2,670)	64.9% (4,932)	IMP	206	210

* CATEGORY
ST=SELF TREATING, SELF RETAINING (ZERO–DISCHARGE)
SD=DRAINING TO SELF RETAINING.
IMP=DRAINING TO IMP (INTEGRATED MANAGEMENT PRACTICE)

* * BMP
PR–1 BIOFILTRATION W/ PARTIAL RETENTION
*** BASED ON HMP SIZING

50% RULE (LOT 67)

STEPS:

1–TOTAL IMPERVIOUS AREA (EXISTING)=4,210 SF ±
2–EXISTING PERVIOUS AREA REPLACED WITH NEW IMPERVIOUS AREA=601 SF ±
3–NEW IMPERVIOUS AREA CREATED IN AREAS THAT ARE PREVIOUS IN THE EXISTING CONDITION=829 SF ±
4–TOTAL CREAT AND/OR REPLACED IMPERVIOUS SURFACE=(STEP 2 + STEP 4)=1,425 SF±
5–50% RULE TEST: STEP 4 < 50% OF STEP 1
THEREFORE TREAT ONLY STEP 4=1,425 SF ±

NOTES:

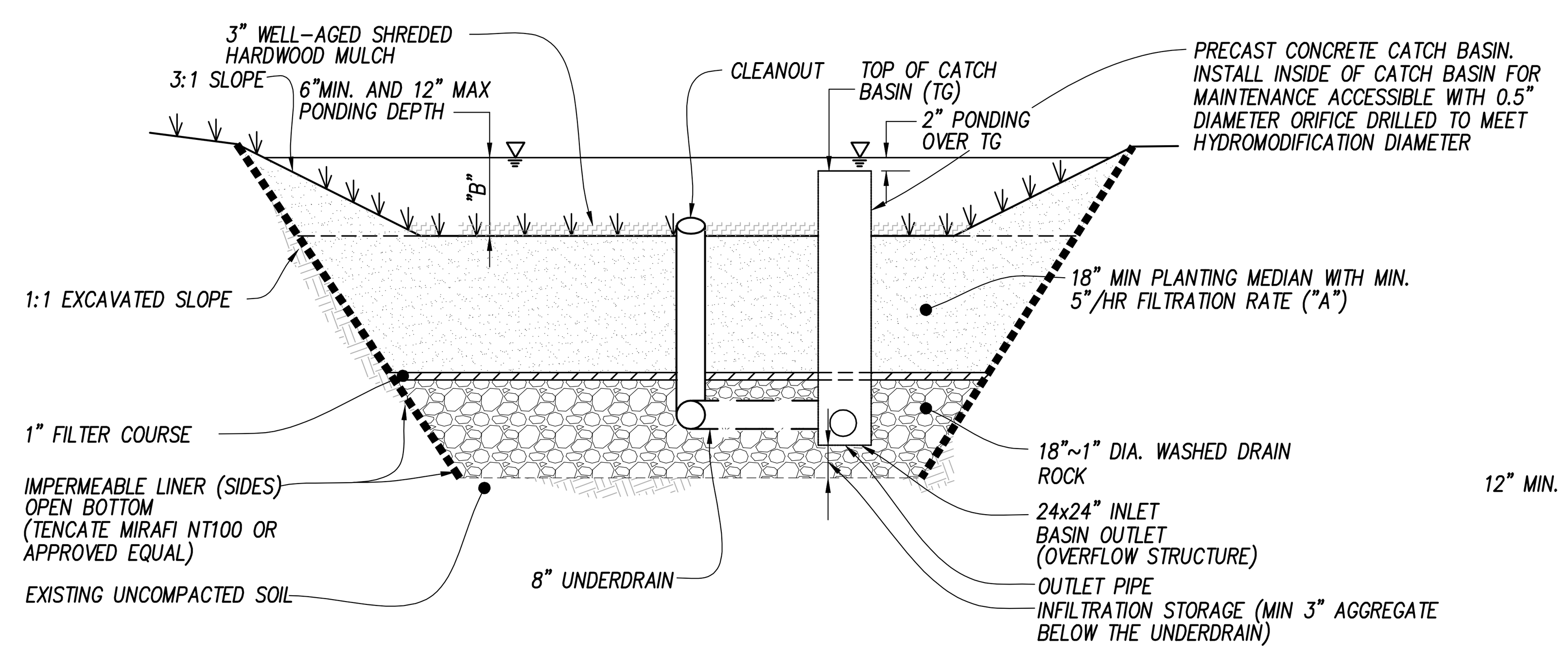
1. USE INTEGRATED PEST MANAGEMENT, EFFICIENT IRRIGATION, AND DROUGHT–TOLERANT DESIGN IN LANDSCAPING AREAS.
2. ALL INTERIOR FLOOR DRAINS SHALL BE CONNECT TO SANITARY SEWER
3. SOIL GROUP: "D"
4. APPROXIMATE DEPTH OF GROUND WATER: OVER 10 FEET

PERMANENT PROJECT BMPs

SITE DESIGN / LID	
SYMBOL	DESCRIPTION
SD-2	PITCH PAVEMENTS TOWARDS LANDSCAPING
SD-3	DOWNSPOUTS TO SWALE OR LANDSCAPING
SD-4	SOIL AMENDMENTS
SD-5	SMART IRRIGATION SYSTEMS
SD-6	COLLECT CONCENTRATED FLOWS IN STABILIZED DRAINS AND CHANNELS

SOURCE CONTROL	
SYMBOL	DESCRIPTION
SC-1	ON-SITE STORM DRAIN INLETS
SC-2	LANDSCAPED DESIGNED TO MINIMIZE IRRIGATION AND RUNOFF
SC-3	NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL
SC-4	FIRE SPRINKLER TEST WATER WILL BE DRAINED TO THE SANITARY SEWER
SC-5	MISCELLANEOUS DRAIN OR WASH WATER
SC-6	ROOFING, GUTTERS, AND TRIM MATERIALS SHALL NOT BE MADE OF COPPER WHERE FEASIBLE
SC-7	SIDEWALKS, AND PARKING LOTS TO BE SWEPT REGULARLY

TREATMENT CONTROL	
SYMBOL	DESCRIPTION
TC-1	BIOFILTRATION W/ PARTIAL RETENTION BASINS (PR–1)

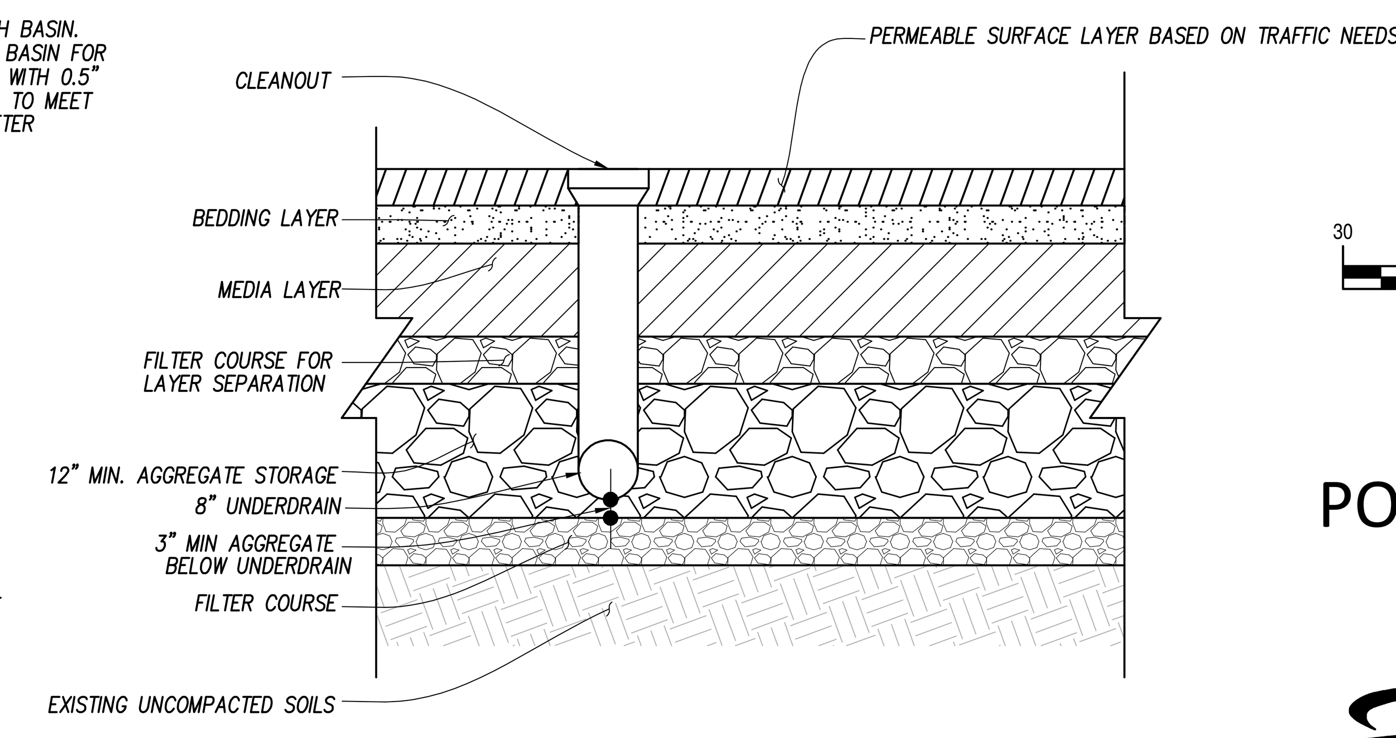


BIOFILTRATION BASIN #	PONDING DEPTH "B"	SOIL AMENDMENT DEPTH "A"	ORIFICE DIAMETER SIZE
#1.0	10"	18"	0.45"
#2.0	10"	18"	0.25"

NOTE: DESIGN PARAMETER PER BMP DESIGN MANUAL (JANUARY 2016 EDITION) APPENDIX E.12

BIOFILTRATION W/ PARTIAL RETENTION BASINS (PR-1)

NOT TO SCALE



NOTE: DESIGN THICKNESS TO BE DEFINED AT MINISTERIAL PERMIT

PERVIOUS PAVERS W/O LINER

NOT TO SCALE

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30'

EXHIBIT '1A'
POST-DEVELOPMENT DMA EXHIBIT

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

BF-1 FOR DMA 1.0

Worksheet B.2-1 DCV

Design Capture Volume		Worksheet B.2-1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.50	inches
2	Area tributary to BMP (s)	A=	0.65	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.44	unitless
4	Trees Credit Volume	TCV=	0	cubic-feet
5	Rain barrels Credit Volume	RCV=	0	cubic-feet
6	Calculate DCV = (3630 x C x d x A) – TCV - RCV	DCV=	519	cubic-feet

LANDSCAPE=11,699 SF=0.27 ACRES
ROOF=7,598 SF = 0.17 ACRES
HARDSCAPE 4,285 SF = 0.10 ACRES
PERVIOUS PAVERS=4,944 SF = 0.11 ACRES

C={(0.1x0.27)+(0.9x0.17)+(0.9x0.1)(0.2x0.11)}/0.65=0.44

BF-1 (DMA 1.0)

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 1 of 2)	
1	Remaining DCV after implementing retention BMPs	519	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.07	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]	2.52	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain [Line 4/ Line 5]	6.30	inches
7	Assumed surface area of the biofiltration BMP	915	sq-ft
8	Media retained pore storage	0.1	in/in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7	329.4	cubic-feet
10	DCV that requires biofiltration [Line 1 – Line 9]	189.6	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	10	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18	inches
13	Aggregate Storage above underdrain invert (12 inches typical) – use 0 inches for sizing if the aggregate is not over the entire bottom surface area	12	inches
14	Freely drained pore storage	0.2	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate which will be less than 5 in/hr.)	3.5	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6	hours
17	Depth filtered during storm [Line 15 x Line 16]	21	inches
18	Depth of Detention Storage [Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5)]	18.4	inches
19	Total Depth Treated [Line 17 + Line 18]	39.4	inches

Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)

Line 2-See Worksheet and attached Perc. test

Line 7-Based on HMP sizing (ATTACHEMENT 2)

Line 9 [[2.52+(18*0.1)]/12]*915=252.72 CF

BF-1 FOR DMA 1.0

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs (continued)

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 2 of 2)	
Option 1 – Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	284.4	cubic-feet
21	Required Footprint [Line 20/ Line 19] x 12	86.6	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	142.2	cubic-feet
23	Required Footprint [Line 22/ Line 18] x 12	92.7	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	28,526	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.44	
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03	
27	Minimum BMP Footprint [Line 24 x Line 25 x Line 26]	377	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	377	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition] N/A			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	0.635	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	0.375	unitless
31	Is the retained DCV ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☒ Yes ☐ No	

Note:

1. Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)
2. The DCV fraction of 0.375 is based on a 40% average annual percent capture and a 36-hour drawdown time.
3. The increase in footprint for volume reduction can be optimized using the approach presented in Appendix B.5.2. The optimized footprint cannot be smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2.
4. If the proposed biofiltration BMP footprint is smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2, but satisfies Option 1 or Option 2 sizing, it is considered a compact biofiltration BMP and may be allowed at the discretion of the City Engineer, if it meets the requirements in Appendix F.

Worksheet D.5-1: Factor of Safety and Design Infiltration Rate Worksheet

Factor of Safety and Design Infiltration Rate Worksheet			Worksheet D.5-1		
Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	2	0.5
		Predominant soil texture	0.25	3	0.75
		Site soil variability	0.25	2	0.5
		Depth to groundwater / impervious layer	0.25	2	0.5
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			2.25
B	Design	Level of pretreatment/ expected sediment loads	0.5	3	1.5
		Redundancy/resiliency	0.25	3	0.75
		Compaction during construction	0.25	3	0.75
		Design Safety Factor, $S_B = \Sigma p$			3.0
Combined Safety Factor, $S_{total} = S_A \times S_B$				6.75	
Observed Infiltration Rate, inch/hr, $K_{observed}$ (corrected for test-specific bias)				0.5	
Design Infiltration Rate, in/hr, $K_{design} = K_{observed} / S_{total}$				0.07	
Supporting Data					
Briefly describe infiltration test and provide reference to test forms: Using the recommended perc rates basedd on the test provided by SCST, Inc dated October 4, 2016 (SCST No. 160133N)					

PR-1 FOR DMA 2.0

Worksheet B.2-1 DCV

Design Capture Volume		Worksheet B.2-1		
1	85th percentile 24-hr storm depth from Figure B.1-1	d=	0.50	inches
2	Area tributary to BMP (s)	A=	0.17	acres
3	Area weighted runoff factor (estimate using Appendix B.1.1 and B.2.1)	C=	0.38	unitless
4	Trees Credit Volume	TCV=	0	cubic-feet
5	Rain barrels Credit Volume	RCV=	0	cubic-feet
6	Calculate DCV = (3630 x C x d x A) – TCV - RCV	DCV=	118	cubic-feet

LANDSCAPE=4, 4,932 SF=0.11 ACRES

HARDSCAPE 2,670 SF = 0.06 ACRES

C={(0.1x0.11)+(0.9x0.06)}/0.17=0.38

BF-1 (DMA 2.0)

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 1 of 2)	
1	Remaining DCV after implementing retention BMPs	118	cubic-feet
Partial Retention			
2	Infiltration rate from Worksheet D.5-1 if partial infiltration is feasible	0.07	in/hr.
3	Allowable drawdown time for aggregate storage below the underdrain	36	hours
4	Depth of runoff that can be infiltrated [Line 2 x Line 3]	2.52	inches
5	Aggregate pore space	0.40	in/in
6	Required depth of gravel below the underdrain [Line 4/ Line 5]	6.30	inches
7	Assumed surface area of the biofiltration BMP	210	sq-ft
8	Media retained pore storage	0.1	in/in
9	Volume retained by BMP [[Line 4 + (Line 12 x Line 8)]/12] x Line 7	75.6	cubic-feet
10	DCV that requires biofiltration [Line 1 – Line 9]	42.4	cubic-feet
BMP Parameters			
11	Surface Ponding [6 inch minimum, 12 inch maximum]	10	inches
12	Media Thickness [18 inches minimum], also add mulch layer thickness to this line for sizing calculations	18	inches
13	Aggregate Storage above underdrain invert (12 inches typical) – use 0 inches for sizing if the aggregate is not over the entire bottom surface area	12	inches
14	Freely drained pore storage	0.2	in/in
15	Media filtration rate to be used for sizing (5 in/hr. with no outlet control; if the filtration rate is controlled by the outlet use the outlet controlled rate which will be less than 5 in/hr.)	3.5	in/hr.
Baseline Calculations			
16	Allowable Routing Time for sizing	6	hours
17	Depth filtered during storm [Line 15 x Line 16]	21	inches
18	Depth of Detention Storage [Line 11 + (Line 12 x Line 14) + (Line 13 x Line 5)]	18.4	inches
19	Total Depth Treated [Line 17 + Line 18]	39.4	inches

Note: Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)

Line 2-See Worksheet and attached Perc. test

Line 7-based on HMP sizing (ATTACHMENT 2)

Line 9 [[2.52+(18*0.1)]/12]*210=75.6 CF

BF-1 FOR DMA 2.0

Worksheet B.5-1: Simple Sizing Method for Biofiltration BMPs (continued)

Simple Sizing Method for Biofiltration BMPs		Worksheet B.5-1 (Page 2 of 2)	
Option 1 – Biofilter 1.5 times the DCV			
20	Required biofiltered volume [1.5 x Line 10]	63.5	cubic-feet
21	Required Footprint [Line 20/ Line 19] x 12	19.3	sq-ft
Option 2 - Store 0.75 of remaining DCV in pores and ponding			
22	Required Storage (surface + pores) Volume [0.75 x Line 10]	31.8	cubic-feet
23	Required Footprint [Line 22/ Line 18] x 12	20.7	sq-ft
Footprint of the BMP			
24	Area draining to the BMP	7602	sq-ft
25	Adjusted Runoff Factor for drainage area (Refer to Appendix B.1 and B.2)	0.38	
26	BMP Footprint Sizing Factor (Default 0.03 or an alternative minimum footprint sizing factor from Worksheet B.5-2, Line 11)	0.03	
27	Minimum BMP Footprint [Line 24 x Line 25 x Line 26]	86	sq-ft
28	Footprint of the BMP = Maximum(Minimum(Line 21, Line 23), Line 27)	86	sq-ft
Check for Volume Reduction [Not applicable for No Infiltration Condition] N/A			
29	Calculate the fraction of DCV retained in the BMP [Line 9/Line 1]	0.641	unitless
30	Minimum required fraction of DCV retained for partial infiltration condition	0.375	unitless
31	Is the retained DCV ≥ 0.375? If the answer is no increase the footprint sizing factor in Line 26 until the answer is yes for this criterion.	☒ Yes	☐ No

Note:

1. Line 7 is used to estimate the amount of volume retained by the BMP. Update assumed surface area in Line 7 until its equivalent to the required biofiltration footprint (either Line 21 or Line 23)
2. The DCV fraction of 0.375 is based on a 40% average annual percent capture and a 36-hour drawdown time.
3. The increase in footprint for volume reduction can be optimized using the approach presented in Appendix B.5.2. The optimized footprint cannot be smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2.
4. If the proposed biofiltration BMP footprint is smaller than the alternative minimum footprint sizing factor from Worksheet B.5-2, but satisfies Option 1 or Option 2 sizing, it is considered a compact biofiltration BMP and may be allowed at the discretion of the City Engineer, if it meets the requirements in Appendix F.

Worksheet D.5-1: Factor of Safety and Design Infiltration Rate Worksheet

Factor of Safety and Design Infiltration Rate Worksheet				Worksheet D.5-1	
Factor Category		Factor Description	Assigned Weight (w)	Factor Value (v)	Product (p) p = w x v
A	Suitability Assessment	Soil assessment methods	0.25	2	0.5
		Predominant soil texture	0.25	3	0.75
		Site soil variability	0.25	2	0.5
		Depth to groundwater / impervious layer	0.25	2	0.5
		Suitability Assessment Safety Factor, $S_A = \Sigma p$			2.25
B	Design	Level of pretreatment/ expected sediment loads	0.5	3	1.5
		Redundancy/resiliency	0.25	3	0.75
		Compaction during construction	0.25	3	0.75
		Design Safety Factor, $S_B = \Sigma p$			3.0
Combined Safety Factor, $S_{total} = S_A \times S_B$				6.75	
Observed Infiltration Rate, inch/hr, $K_{observed}$ (corrected for test-specific bias)				0.5	
Design Infiltration Rate, in/hr, $K_{design} = K_{observed} / S_{total}$				0.07	
Supporting Data					
Briefly describe infiltration test and provide reference to test forms: Using higher of the 2 perc rates based on the test provided by SCST, Inc dated October 4, 2016 (SCST No. 160133N)					

Harvest and Use Feasibility Checklist	Form I-7

1. Is there a demand for harvested water (check all that apply) at the project site that is reliably present during the wet season?

☒ Toilet and urinal flushing
☒ Landscape irrigation 1,470 GALLON/ 36 HR PERIOD
☐ Other:______________

2. If there is a demand; estimate the anticipated average wet season demand over a period of 36 hours. Guidance for planning level demand calculations for toilet/urinal flushing and landscape irrigation is provided in Section B.3.2.

[Provide a summary of calculations here]

ETWU=ETowet x[(PFxHA)/IE]+SLA]x0.015
ETowet=2.7 inch/month
PF=0.3
HA=10,319 sf
IE=(0.9x16,555)=14,890
SLA=10,319 sf
ETWU=418

3. Calculate the DCV using worksheet B-2.1.
DCV = 979 (cubic feet)

3a. Is the 36 hour demand greater than or equal to the DCV?	3b. Is the 36 hour demand greater than 0.25DCV but less than the full DCV?	3c. Is the 36 hour demand less than 0.25DCV?
☐ Yes / ☒ No ⇨ ⇩	☒ Yes / ☐ No ⇨ ⇩	☐ Yes ⇩
Harvest and use appears to be feasible. Conduct more detailed evaluation and sizing calculations to confirm that DCV can be used at an adequate rate to meet drawdown criteria.	Harvest and use may be feasible. Conduct more detailed evaluation and sizing calculations to determine feasibility. Harvest and use may only be able to be used for a portion of the site, or (optionally) the storage may need to be upsized to meet long term capture targets while draining in longer than 36 hours.	Harvest and use is considered to be infeasible.

Is harvest and use feasible based on further evaluation?

☐ Yes, refer to Appendix E to select and size harvest and use BMPs.
☐ No, select alternate BMPs.

Categorization of Infiltration Feasibility Condition			Form I-8
Part 1 - Full Infiltration Feasibility Screening Criteria Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
1	Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☐	☑
Provide basis: The tested infiltration rates range from less than 0.1 to 0.9 inch per hour. Three of the four infiltration tests resulted in rates below 0.5 inch per hour. The tested material is believed to be generally representative of the material that will be encountered below the proposed BMP locations. The tested infiltration rates do not support allowing infiltration greater than 0.5 inch per hour. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☐	☑
Provide basis: The tested infiltration rate at the site does not support allowing infiltration greater than 0.5 inch per hour. Allowing infiltration greater than 0.5 inch per hour will increase the risk of geotechnical hazards. Given the relatively impermeable nature of the very old paralic deposits beneath the site, allowing infiltration greater than 0.5 inch/hour will result in uncontrolled lateral migration of groundwater through permeable bedding material of utilities within the public right-of-way. SCST does not recommend allowing infiltration greater than 0.5 inch/hour at the site. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			

Form I-8 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☑
Provide basis: The tested infiltration rate at the site does not support allowing infiltration greater than 0.5 inch per hour. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		
Provide basis: The project design engineer is responsible for completing criterion 4. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "Yes" a full infiltration design is potentially feasible. The feasibility screening category is Full Infiltration If any answer from row 1-4 is "No", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

Form I-8 Page 3 of 4			
Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☑	☐
Provide basis: The tested infiltration rates range from 0.0 to 0.9 inch per hour. The tested material is believed to be generally representative of the material that will be encountered below the proposed BMP locations. The tested infiltration rates support allowing partial infiltration based on the City of San Diego's definition of any appreciable quantity (greater than 0.01 inch per hour). Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☑	☐
Provide basis: To mitigate the increased risk associated with infiltration at the bottom of the proposed BMP basins to an acceptable level and reduce the potential for groundwater migration and adverse impacts to adjacent structures and improvements, cutoff walls or vertical cutoff membranes consisting of 30 mil HDPE or PVC should be installed along the sides of the BMPs, and a subdrain should be placed at the bottom of the basins and connected to a storm drain. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			

Form I-8 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☑	☐
Provide basis: Without pre-treatment, infiltration of stormwater pollutants could migrate laterally and adversely affect down-gradient sites. SCST would recommend pre-treatment of stormwater runoff. In SCST's opinion, allowing infiltration of pre-treated stormwater runoff in any appreciable quantity does not pose a significant risk to the regional groundwater table. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☐
Provide basis: The project design engineer is responsible for completing criterion 8. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration. If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.		

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

ATTACHMENT 2
BACKUP FOR PDP HYDROMODIFICATION CONTROL MEASURES

This is the cover sheet for Attachment 2.

☐ Mark this box if this attachment is empty because the project is exempt from PDP hydromodification management requirements.

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Project Name: **Hillel Center for Jewish Life**

Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 2a	Hydromodification Management Exhibit (Required)	× Included See Hydromodification Management Exhibit Checklist.
Attachment 2b	Management of Critical Coarse Sediment Yield Areas (WMAA Exhibit is required, additional analyses are optional) See Section 6.2 of the BMP Design Manual.	☐ Exhibit showing project drainage boundaries marked on WMAA Critical Coarse Sediment Yield Area Map (Required) Optional analyses for Critical Coarse Sediment Yield Area Determination ☐ 6.2.1 Verification of Geomorphic Landscape Units Onsite ☐ 6.2.2 Downstream Systems Sensitivity to Coarse Sediment ☐ 6.2.3 Optional Additional Analysis of Potential Critical Coarse Sediment Yield Areas Onsite
Attachment 2c	Geomorphic Assessment of Receiving Channels (Optional) See Section 6.3.4 of the BMP Design Manual.	◉ Not Performed ○ Included ○ Submitted as separate stand-alone document
Attachment 2d	Flow Control Facility Design and Structural BMP Drawdown Calculations (Required) Overflow Design Summary for each structural BMP See Chapter 6 and Appendix G of the BMP Design Manual	○ Included ◉ Submitted as separate stand-alone document
Attachment 2e	Vector Control Plan (Required when structural BMPs will not drain in 96 hours)	○ Included ◉ Not required because BMPs will drain in less than 96 hours

Project Name: Hillel Center for Jewish Life

Use this checklist to ensure the required information has been included on the Hydromodification Management Exhibit:

The Hydromodification Management Exhibit must identify:

× Underlying hydrologic soil group
× Approximate depth to groundwater
× Existing natural hydrologic features (watercourses, seeps, springs, wetlands)
☐ Critical coarse sediment yield areas to be protected
× Existing topography
× Existing and proposed site drainage network and connections to drainage offsite
× Proposed grading
× Proposed impervious features
× Proposed design features and surface treatments used to minimize imperviousness
× Point(s) of Compliance (POC) for Hydromodification Management
× Existing and proposed drainage boundary and drainage area to each POC (when necessary, create separate exhibits for pre-development and post-project conditions)
× Structural BMPs for hydromodification management (identify location, type of BMP, and size/detail)

SUMMARY

The project is subject to hydromodification requirements. Under the Model BMP Design Manual San Diego Region, the existing impervious surfaces within the project footprint are assumed to be pervious. Other than this, the hydromodification sizing calculations are performed in the same manner as prior to the Model BMP Design Manual, San Diego Region.

Hydromodification sizing has been performed for the proposed Biofiltration w/ Partial Retention & Biofiltration w/o Impermeable Liner using the County's BMP Sizing Spreadsheet. The Biofiltration was used because of the soil condition and the cost efficient and easy to maintain. The drainage management areas are delineated on the WQTR BMP exhibit. The calculations are attached and provide a surface area of 915 square feet and 210 square feet. The Bioretention Surface Area and Surface Volume has been satisfied for Hydromodification.

BMP Sizing Spreadsheet V2.0			
Project Name:	Hillel of San Diego	Hydrologic Unit:	Penasquitos
Project Applicant:	Hillel of San Diego	Rain Gauge:	Oceanside
Jurisdiction:	City of San Diego	Total Project Area:	33,864
Parcel (APN):	344-131-01, 344-120-26	Low Flow Threshold:	0.1Q2
BMP Name:	BF-1 (DMA 1.0)	BMP Type:	Biofiltration w/ Partial Retention & Biofiltration w/o Impermeable Liner
BMP Native Soil Type:	D	BMP Infiltration Rate (in/hr):	0.024

Areas Draining to BMP						HMP Sizing Factors			Minimum BMP Size		
DMA Name	Area (sf)	Soil Type	Pre-project Slope	Post Project Surface Type	Runoff Factor (Table G.2-1)[1]	Bioretention Surface Area	Surface Volume	Subsurface Volume	Bioretention Surface Area (sf)	Surface Volume (cf)	N/A
Roof	7,598	D	Steep	Roof	1.0	0.065	0.0542	0.039	494	412	296
Landscape	11,699	D	Steep	Landscape	0.1	0.065	0.0542	0.039	76	63	46
PCC	4,285	D	Steep	PCC	1.0	0.065	0.0542	0.039	279	232	167
Pervious Pavers	4,944	D	Steep	Pavers	0.2	0.065	0.0542	0.039	64	54	39
Total BMP Area	28,526										
								Minimum BMP Size	912.7105	761	548
								Proposed BMP Size*	915	763	549
								Soil Matrix Depth	18.00	in	
								Minimum Ponding Depth	9.98	in	
								Maximum Ponding Depth	29.52	in	
								Selected Ponding Depth	10.00	in	

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual, Febı

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, February 2016. For questions or concerns please contact the jurisdiction in which your project is located.

BMP Sizing Spreadsheet V2.0			
Project Name:	Hillel of San Diego	Hydrologic Unit:	Penasquitos
Project Applicant:	Hillel of San Diego	Rain Gauge:	Oceanside
Jurisdiction:	City of San Diego	Total Project Area:	33,864
Parcel (APN):	344-131-01, 344-120-26	Low Flow Threshold:	0.1Q2
BMP Name:	BF-1 (DMA 2.0)	BMP Type:	Biofiltration w/ Partial Retention & Biofiltration w/o Impermeable Liner
BMP Native Soil Type:	D	BMP Infiltration Rate (in/hr):	0.024

Areas Draining to BMP						HMP Sizing Factors			Minimum BMP Size		
DMA Name	Area (sf)	Soil Type	Pre-project Slope	Post Project Surface Type	Runoff Factor (Table G.2-1)[1]	Bioretention Surface Area	Surface Volume	Subsurface Volume	Bioretention Surface Area (sf)	Surface Volume (cf)	N/A
PCC	1,245	D	Steep	Roof	1.0	0.065	0.0542	0.039	81	67	49
Landscape	4,932	D	Steep	Landscape	0.1	0.065	0.0542	0.039	32	27	19
AC Pavement	1,425	D	Steep	AC Pavement	1.0	0.065	0.0542	0.039	93	77	56
Total BMP Area	7,602							Minimum BMP Size	205.608	171	123
								Proposed BMP Size*	210	175	126
								Soil Matrix Depth	18.00	in	
								Minimum Ponding Depth	9.80	in	
								Maximum Ponding Depth	39.70	in	
								Selected Ponding Depth	10.00	in	

Notes:

1. Runoff factors which are used for hydromodification management flow control (Table G.2-1) are different from the runoff factors used for pollutant control BMP sizing (Table B.1-1). Table references are taken from the San Diego Region Model BMP Design Manual, Febr

Describe the BMP's in sufficient detail in your PDP SWQMP to demonstrate the area, volume, and other criteria can be met within the constraints of the site.

BMP's must be adapted and applied to the conditions specific to the development project such as unstable slopes or the lack of available head.
Designated Staff have final review and approval authority over the project design.

This BMP Sizing Spreadsheet has been updated in conformance with the San Diego Region Model BMP Design Manual, February 2016. For questions or concerns please contact the jurisdiction in which your project is located.

BMP Sizing Spreadsheet V2.0			
Project Name:	Hillel of San Diego	Hydrologic Unit:	Penasquitos
Project Applicant:	Hillel of San Diego	Rain Gauge:	Oceanside
Jurisdiction:	City of San Diego	Total Project Area:	33,864
Parcel (APN):	344-131-01, 344-120-26	Low Flow Threshold:	0.1Q2
BMP Name	BF-1 (DMA 1.0)	BMP Type:	Biofiltration w/ Partial Retention & Biofiltration w/o Impermeable Liner

DMA Name	Rain Gauge	Pre-developed Condition			Q_2 Sizing Factor	DMA Area (ac)	Orifice Flow - $\%Q_2$	Orifice Area
		Soil Type	Cover	Slope	(cfs/ac)		(cfs)	(in^2)
Roof	Oceanside	D	Scrub	Steep	0.244	0.174	0.004	**0.10**
Landscape	Oceanside	D	Scrub	Steep	0.244	0.269	0.007	**0.16**
PCC	Oceanside	D	Scrub	Steep	0.244	0.098	0.002	**0.06**
Pervious Pavers	Oceanside	D	Scrub	Steep	0.244	0.113	0.003	**0.07**
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					

0.016	**0.39**	**0.70**
Tot. Allowable Orifice Flow (cfs)	**Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.007	**0.16**	**0.45**
Actual Orifice Flow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	32.5

BMP Sizing Spreadsheet V2.0			
Project Name:	Hillel of San Diego	Hydrologic Unit:	Penasquitos
Project Applicant:	Hillel of San Diego	Rain Gauge:	Oceanside
Jurisdiction:	City of San Diego	Total Project Area:	33,864
Parcel (APN):	344-131-01, 344-120-26	Low Flow Threshold:	0.1Q2
BMP Name	BF-1 (DMA 2.0)	BMP Type:	Biofiltration w/ Partial Retention & Biofiltration w/o Impermeable Liner

DMA Name	Rain Gauge	Pre-developed Condition			Q_2 Sizing Factor	DMA Area (ac)	Orifice Flow - $\%Q_2$	Orifice Area
		Soil Type	Cover	Slope	(cfs/ac)		(cfs)	(in^2)
PCC	Oceanside	D	Scrub	Steep	0.244	0.029	0.001	**0.02**
Landscape	Oceanside	D	Scrub	Steep	0.244	0.113	0.003	**0.07**
AC Pavement	Oceanside	D	Scrub	Steep	0.244	0.033	0.001	**0.02**
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					
			Scrub					

0.004	**0.10**	**0.36**
Tot. Allowable Orifice Flow (cfs)	**Tot. Allowable Orifice Area (in^2)**	**Max Orifice Diameter (in)**

0.002	**0.05**	**0.25**
Actual Orifice Flow (cfs)	Actual Orifice Area (in^2)	Selected Orifice Diameter (in)

Drawdown (Hrs)	24.2

HILLEL CENTER FOR JEWISH LIFE
HYDROMODIFICATION EXHIBIT
PRE DEVELOPMENT CONDITION

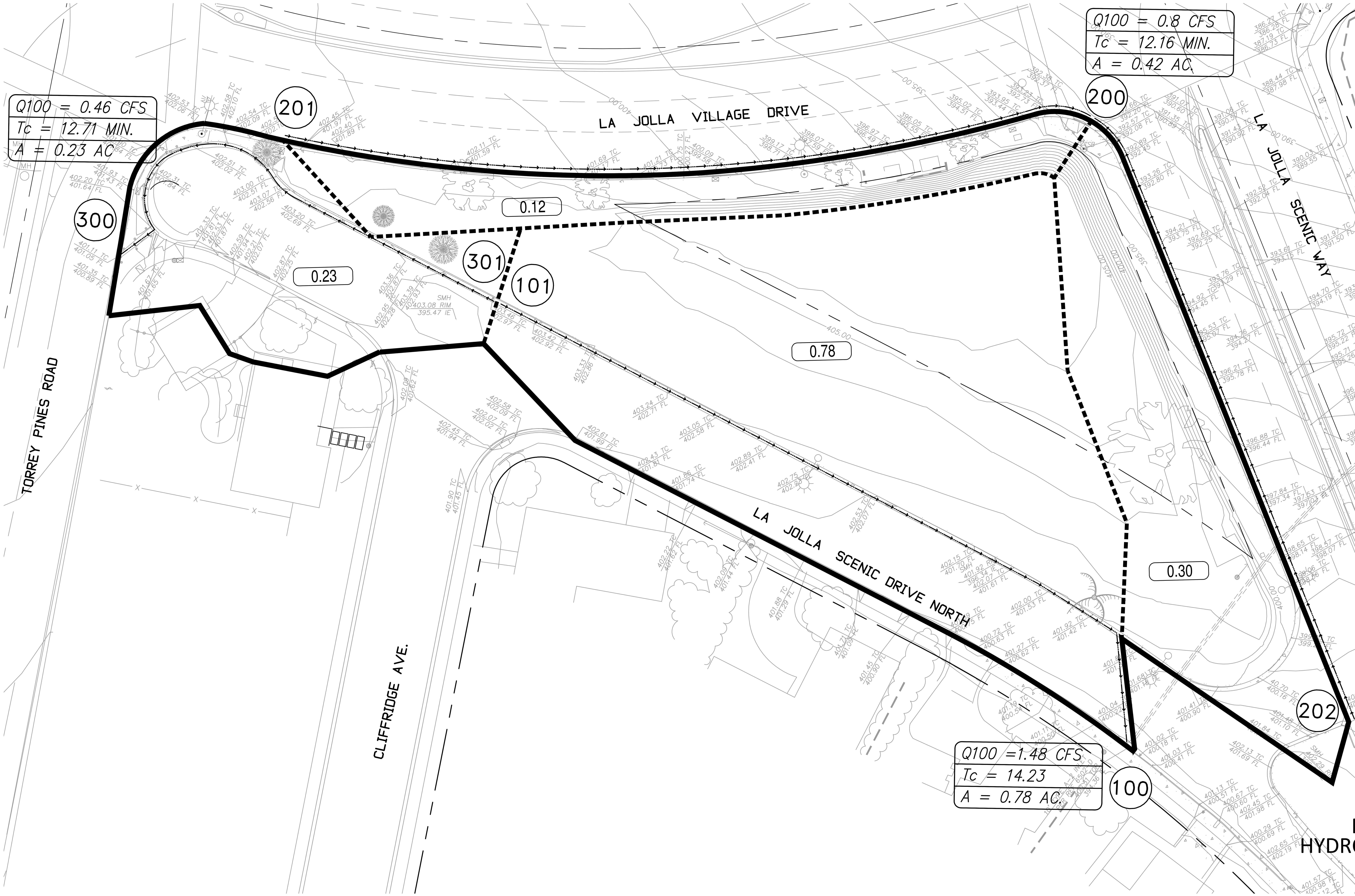

EXHIBIT '2A'
PRE-DEVELOPMENT
HYDROMODIFICATION EXHIBIT

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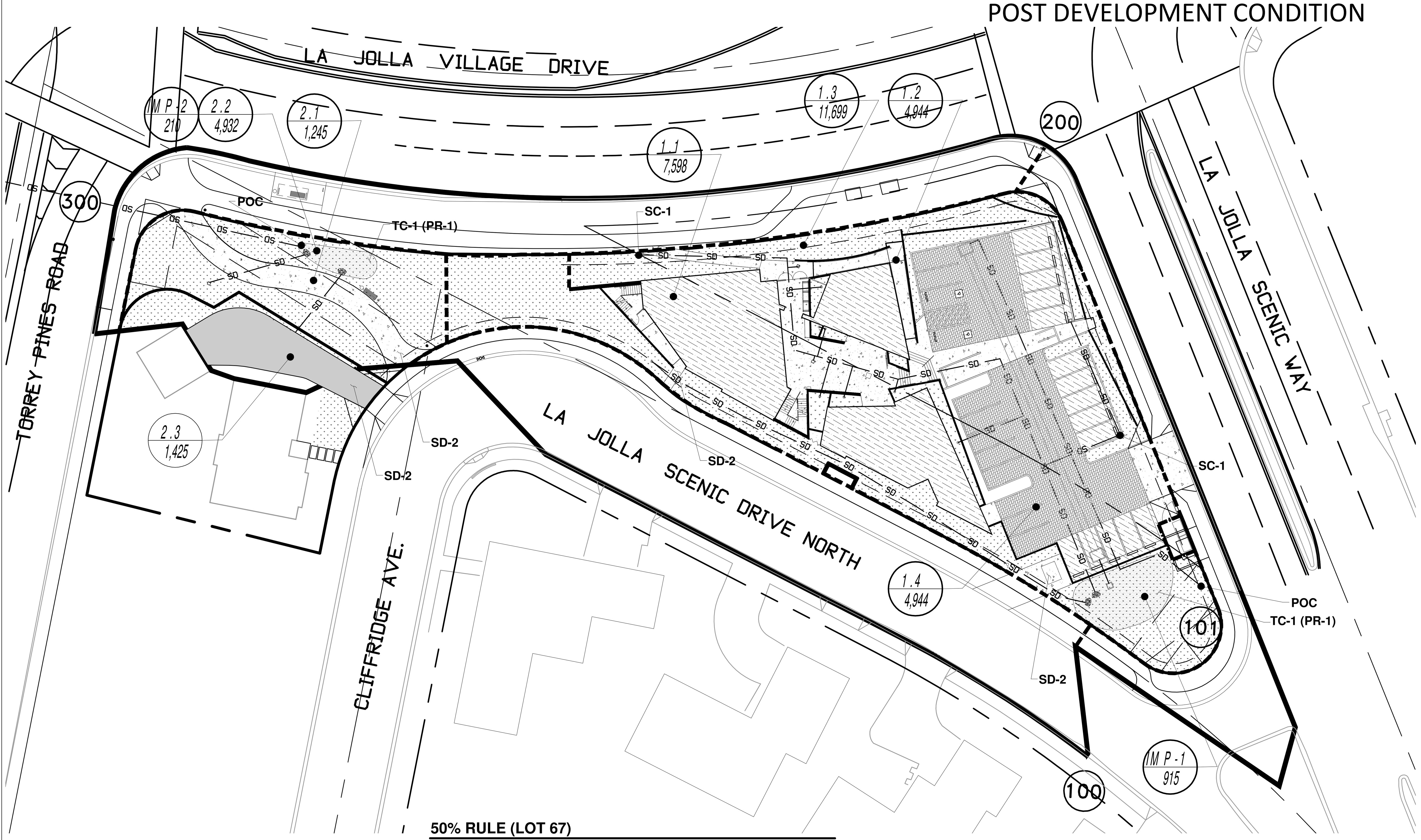
Oceanside, CA 92054
Tel: 888-364-1973

HILLEL CENTER FOR JEWISH LIFE
HYDROMODIFICATION EXHIBIT
POST DEVELOPMENT CONDITION



LEGEND

- ROOF
- BIORETENTION BASIN/FLOW-THRU PLANTER
- LANDSCAPE AREA (SELF MITIGATING DMA)
- PERVIOUS PAVERS W/O LINER
- PCC PAVING
- AC PAVING
- DRAINAGE BASIN BOUNDARY (DRAINING INTO BIORETENTION BASIN)
- PROPERTY LINE
- TRASH ENCLOSURE (DRAINS TO BIORETENTION BASIN)
- FLOW PATH
- DIRECTION OF FLOW
- SD — STORM DRAIN
- STORM DRAIN INLET/CLEANOUTS WITH STENCILING
- AREA DRAINS
- 100 — DRAINAGE NODE DISCHARGE LOCATIONS
- 0.20 — DRAINAGE BASIN AREA
- 1.1 — DRAINAGE MANAGEMENT AREA
- XX,XXX — SQUARE FEET

UCSD HILLEL
BMP SIZING SUMMARY

DMA (DRAINAGE MANAGMENT AREA)	AREA (S.F.)	* * BMP	REMOVAL EFFICIENCY FOR NUTRIENTS, BACTERIA AND VIRUSES	V-BASED (V) OR FLOW BASED (F) DESIGN (A) AREA BASE DESIGN	IMPERVIOUS % (SF)	PERVIOUS % (SF)	* CATEGORY	AREA REQUIRED ***	TREATMENT AREA PROVIDED OR TREATMENT VOLUME PROVIDED***
1.1 (ROOF)	7,598 SF	–	X	–			IMP		
1.2 (PCC)	4,285 SF	–	X	–			IMP		
1.3 (LANDSCAPE)	11,699 SF	–	X	–			IMP		
1.4 (PAVERS)	4,944 SF	–	X	–			IMP		
IMP-1	28,526 SF	PR-1	M	A	42% (11,883)	58% (16,643)	IMP	913	915
2.1 (PCC)	1.245 SF	–	X	–			IMP		
2.2 (LANDSCAPE)	4,932 SF	–	X	–			IMP		
2.3 (AC PAVEMENT)	1,425 SF	–	X	–			IMP		
IMP-2	7,602 SF	PR-1	M	A	35.1% (2,670)	64.9% (4,932)	IMP	206	210

* CATEGORY
ST=SELF TREATING, SELF RETAINING (ZERO-DISCHARGE)
SD=DRAINING TO SELF RETAINING.
IMP=DRAINING TO IMP (INTEGRATED MANAGEMENT PRACTICE)

* * BMP
PR-1 BIOFILTRATION W/ PARTIAL RETENTION
*** BASED ON HMP SIZING

NOTES:

1. USE INTEGRATED PEST MANAGEMENT, EFFICIENT IRRIGATION, AND DROUGHT-TOLERANT DESIGN IN LANDSCAPING AREAS.
2. ALL INTERIOR FLOOR DRAINS SHALL BE CONNECT TO SANITARY SEWER
3. SOIL GROUP: "D"
4. APPROXIMATE DEPTH OF GROUND WATER: OVER 10 FEET

50% RULE (LOT 67)

STEPS:

1–TOTAL IMPERVIOUS AREA (EXISTING)=4,210 SF ±
2–EXISTING PERVIOUS AREA REPLACED WITH NEW IMPERVIOUS AREA=601 SF ±
3–NEW IMPERVIOUS AREA CREATED IN AREAS THAT ARE PREVIOUS IN THE EXISTING CONDITION=829 SF ±
4–TOTAL CREAT AND/OR REPLACED IMPERVIOUS SURFACE=(STEP 2 + STEP 4)=1,425 SF±
5–50% RULE TEST: STEP 4 < 50% OF STEP 1
THEREFORE TREAT ONLY STEP 4=1,425 SF ±

PERMANENT PROJECT BMPs

SITE DESIGN / LID

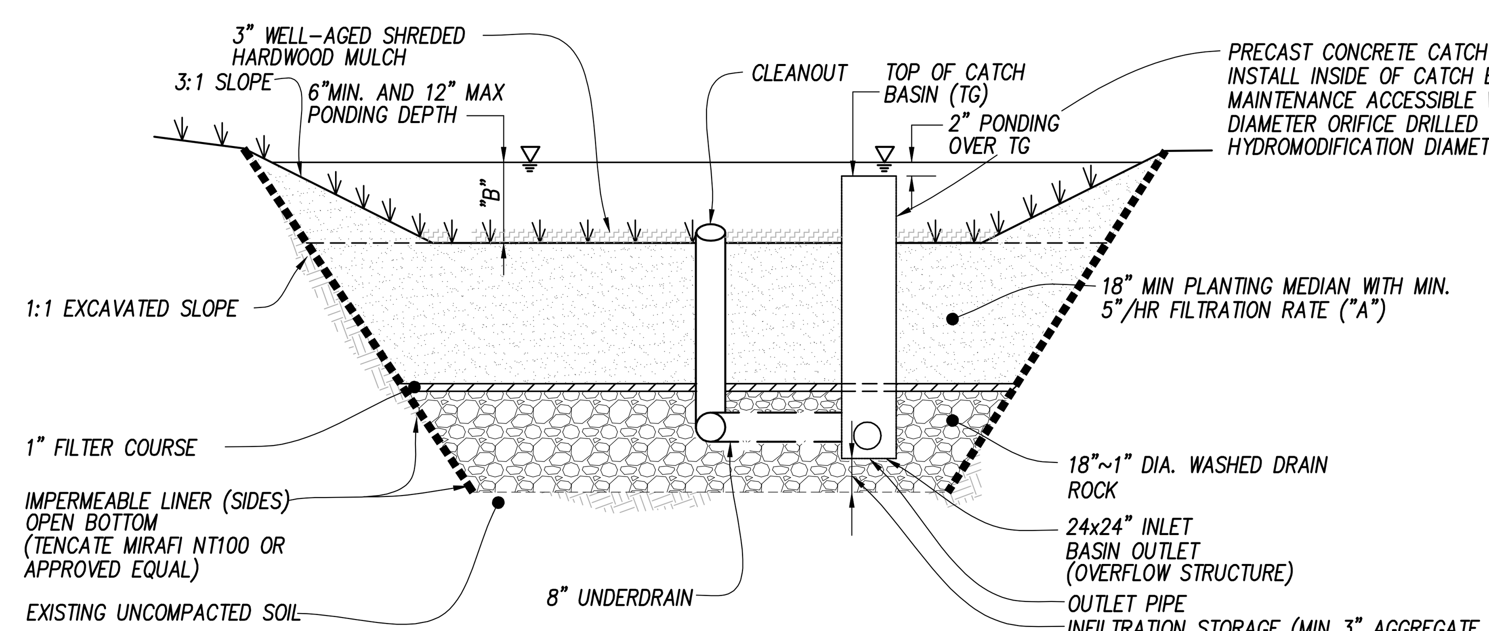
SYMBOL	DESCRIPTION
SD-2	PITCH PAVEMENTS TOWARDS LANDSCAPING
SD-3	DOWNSPOUTS TO SWALE OR LANDSCAPING
SD-4	SOIL AMENDMENTS
SD-5	SMART IRRIGATION SYSTEMS
SD-6	COLLECT CONCENTRATED FLOWS IN STABILIZED DRAINS AND CHANNELS

SOURCE CONTROL

SYMBOL	DESCRIPTION
SC-1	ON-SITE STORM DRAIN INLETS
SC-2	LANDSCAPED DESIGNED TO MINIMIZE IRRIGATION AND RUNOFF
SC-3	NEED FOR FUTURE INDOOR & STRUCTURAL PEST CONTROL
SC-4	FIRE SPRINKLER TEST WATER WILL BE DRAINED TO THE SANITARY SEWER
SC-5	MISCELLANEOUS DRAIN OR WASH WATER
SC-6	ROOFING, GUTTERS, AND TRIM MATERIALS SHALL NOT BE MADE OF COPPER WHERE FEASIBLE
SC-7	SIDEWALKS, AND PARKING LOTS TO BE SWEPT REGULARLY

TREATMENT CONTROL

SYMBOL	DESCRIPTION
TC-1	BIOFILTRATION W/ PARTIAL RETENTION BASINS (PR-1)

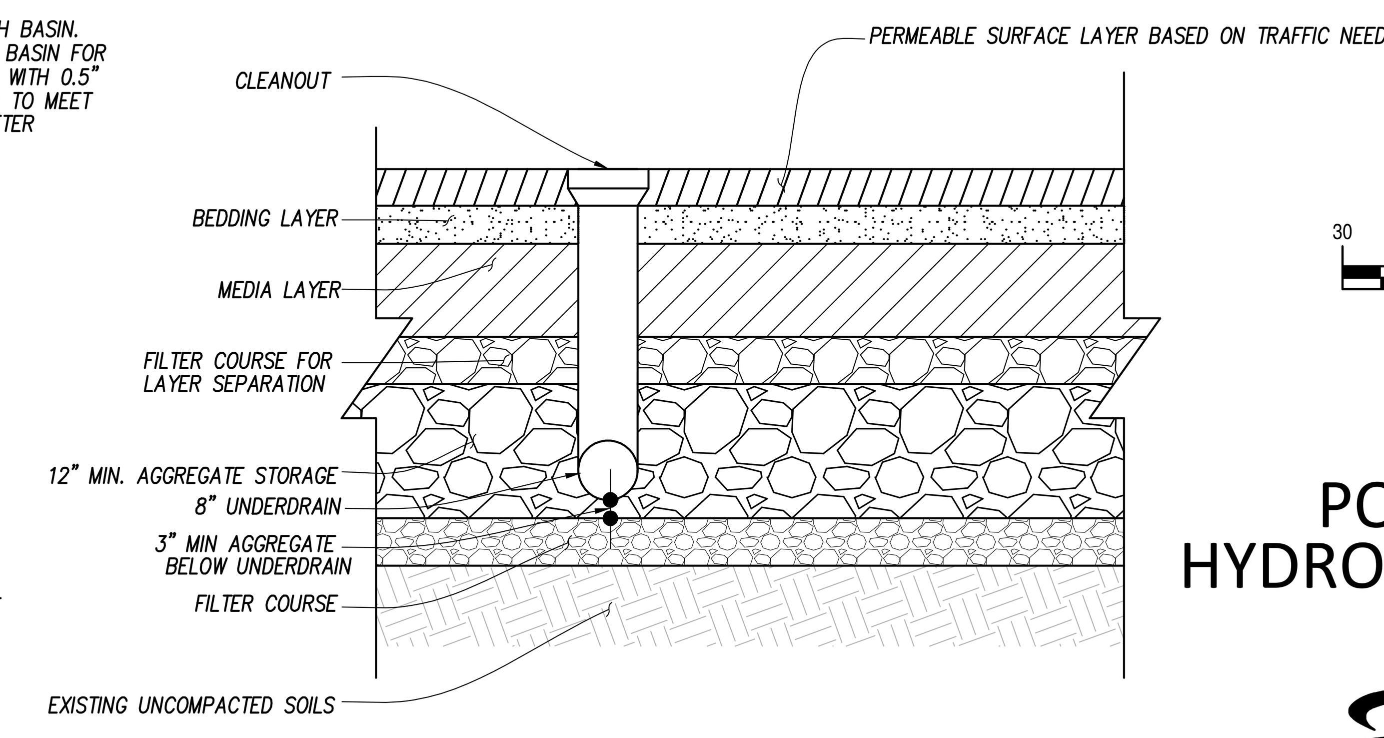


BIOFILTRATION BASIN #	PONDING DEPTH "B"	SOIL AMENDMENT DEPTH "A"	ORIFICE DIAMETER SIZE
#1.0	10"	18"	0.45"
#2.0	10"	18"	0.25"

NOTE: DESIGN PARAMETER PER BMP DESIGN MANUAL (JANUARY 2016 EDITION) APPENDIX E.12

BIOFILTRATION W/ PARTIAL RETENTION BASINS (PR-1)

NOT TO SCALE



NOTE: DESIGN THICKNESS TO BE DEFINED AT MINISTERIAL PERMIT

PERVIOUS PAVERS W/O LINER

NOT TO SCALE

GRAPHIC SCALE
30 0 30 60
(IN FEET)
1" = 30'

EXHIBIT '2A'
POST-DEVELOPMENT HYDROMODIFICATION EXHIBIT

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ATTACHMENT 3
STRUCTURAL BMP MAINTENANCE INFORMATION

This is the cover sheet for Attachment 3.

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Project Name: Hillel Center for Jewish Life

Indicate which Items are Included:

Attachment Sequence	Contents	Checklist
Attachment 3a	Structural BMP Maintenance Thresholds and Actions (Required)	☐ Included See Structural BMP Maintenance Information Checklist.
Attachment 3b	Maintenance Agreement (Form DS-3247) (when applicable)	○ Included ◉ Not Applicable

Project Name: Hillel Center for Jewish Life

Use this checklist to ensure the required information has been included in the Structural BMP Maintenance Information Attachment:

Preliminary Design / Planning / CEQA level submittal:

- Attachment 3a must identify:
  - ☐ Typical maintenance indicators and actions for proposed structural BMP(s) based on Section 7.7 of the BMP Design Manual
- Attachment 3b is not required for preliminary design / planning / CEQA level submittal.

Final Design level submittal:

Attachment 3a must identify:

- ☐ Specific maintenance indicators and actions for proposed structural BMP(s). This shall be based on Section 7.7 of the BMP Design Manual and enhanced to reflect actual proposed components of the structural BMP(s)
- ☐ How to access the structural BMP(s) to inspect and perform maintenance
- ☐ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
- ☐ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
- ☐ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
- ☐ When applicable, frequency of bioretention soil media replacement
- ☐ Recommended equipment to perform maintenance
- ☐ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management

Attachment 3b: For private entity operation and maintenance, Attachment 3b must include a Storm Water Management and Discharge Control Maintenance Agreement (Form DS-3247). The following information must be included in the exhibits attached to the maintenance agreement:

- ☐ Vicinity map
- ☐ Site design BMPs for which DCV reduction is claimed for meeting the pollutant control obligations.
- ☐ BMP and HMP location and dimensions
- ☐ BMP and HMP specifications/cross section/model
- ☐ Maintenance recommendations and frequency
- ☐ LID features such as (permeable paver and LS location, dim, SF).

THE CITY OF SAN DIEGO RECORDING REQUESTED BY: **THE CITY OF SAN DIEGO** AND WHEN RECORDED MAIL Click or tap here to enter text. Click or tap here to enter text. Click or tap here to enter text.	(THIS SPACE IS FOR THE RECORDER'S USE ONLY)

STORM WATER MANAGEMENT AND DISCHARGE CONTROL MAINTENANCE AGREEMENT

APPROVAL NUMBER:	ASSESSOR'S PARCEL NUMBER:	PROJECT NUMBER:
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

This agreement is made by and between the City of San Diego, a municipal corporation [City] and Click or tap here to enter text.

the owner or duly authorized representative of the owner [Property Owner] of property located at:

Click or tap here to enter text.

(PROPERTY ADDRESS)

and more particularly described as: Click or tap here to enter text.

(LEGAL DESCRIPTION OF PROPERTY)

in the City of San Diego, County of San Diego, State of California.

Property Owner is required pursuant to the City of San Diego Municipal Code, Chapter 4, Article 3, Division 3, Chapter 14, Article 2, Division 2, and the Land Development Manual, Storm Water Standards to enter into a Storm Water Management and Discharge Control Maintenance Agreement [Maintenance Agreement] for the installation and maintenance of Permanent Storm Water Best Management Practices [Permanent Storm Water BMP's] prior to the issuance of construction permits. The Maintenance Agreement is intended to ensure the establishment and maintenance of Permanent Storm Water BMP's onsite, as described in the attached exhibit(s), the project's Storm Water Quality Management Plan [SWQMP] and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s): Click or tap here to enter text.

Property Owner wishes to obtain a building or engineering permit according to the Grading and/or Improvement Plan Drawing No(s) or Building Plan Project No(s): Click or tap here to enter text.

Continued on Page 2

NOW, THEREFORE, the parties agree as follows:

1. Property Owner shall have prepared, or if qualified, shall prepare an Operation and Maintenance Procedure [OMP] for Permanent Storm Water BMP's, satisfactory to the City, according to the attached exhibit(s), consistent with the Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s):Click or tap here to enter text..

2. Property Owner shall install, maintain and repair or replace all Permanent Storm Water BMP's within their property, according to the OMP guidelines as described in the attached exhibit(s), the project's WQTR and Grading and/or Improvement Plan Drawing No(s), or Building Plan Project No(s)Click or tap here to enter text..

3. Property Owner shall maintain operation and maintenance records for at least five (5) years. These records shall be made available to the City for inspection upon request at any time.

This Maintenance Agreement shall commence upon execution of this document by all parties named hereon, and shall run with the land.

Executed by the City of San Diego and by Property Owner in San Diego, California.

See Attached Exhibits(s):Click or tap here to enter text.

(Owner Signature)

Click or tap here to enter text.

(Print Name and Title)

Click or tap here to enter text.

(Company/Organization Name)

Click or tap to enter a date.

(Date)

THE CITY OF SAN DIEGO

APPROVED:

(City Control engineer Signature

(Print Name)

(Date)

NOTE: ALL SIGNATURES MUST INCLUDE NOTARY ACKNOWLEDMENTS PER CIVIL CODE SEC. 1180 ET.SEQ

ATTACHMENT 4
COPY OF PLAN SHEETS SHOWING PERMANENT STORM WATER BMPS

This is the cover sheet for Attachment 4.

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Project Name: Hillel Center for Jewish Life

Use this checklist to ensure the required information has been included on the plans:

The plans must identify:

☐ Structural BMP(s) with ID numbers matching Form I-6 Summary of PDP Structural BMPs
☐ The grading and drainage design shown on the plans must be consistent with the delineation of DMAs shown on the DMA exhibit
☐ Details and specifications for construction of structural BMP(s)
☐ Signage indicating the location and boundary of structural BMP(s) as required by the City Engineer
☐ How to access the structural BMP(s) to inspect and perform maintenance
☐ Features that are provided to facilitate inspection (e.g., observation ports, cleanouts, silt posts, or other features that allow the inspector to view necessary components of the structural BMP and compare to maintenance thresholds)
☐ Manufacturer and part number for proprietary parts of structural BMP(s) when applicable
☐ Maintenance thresholds specific to the structural BMP(s), with a location-specific frame of reference (e.g., level of accumulated materials that triggers removal of the materials, to be identified based on viewing marks on silt posts or measured with a survey rod with respect to a fixed benchmark within the BMP)
☐ Recommended equipment to perform maintenance
☐ When applicable, necessary special training or certification requirements for inspection and maintenance personnel such as confined space entry or hazardous waste management
☐ Include landscaping plan sheets showing vegetation requirements for vegetated structural BMP(s)
☐ All BMPs must be fully dimensioned on the plans
☐ When propritery BMPs are used, site specific cross section with outflow, inflow and model number shall be provided. Broucher photocopies are not allowed.

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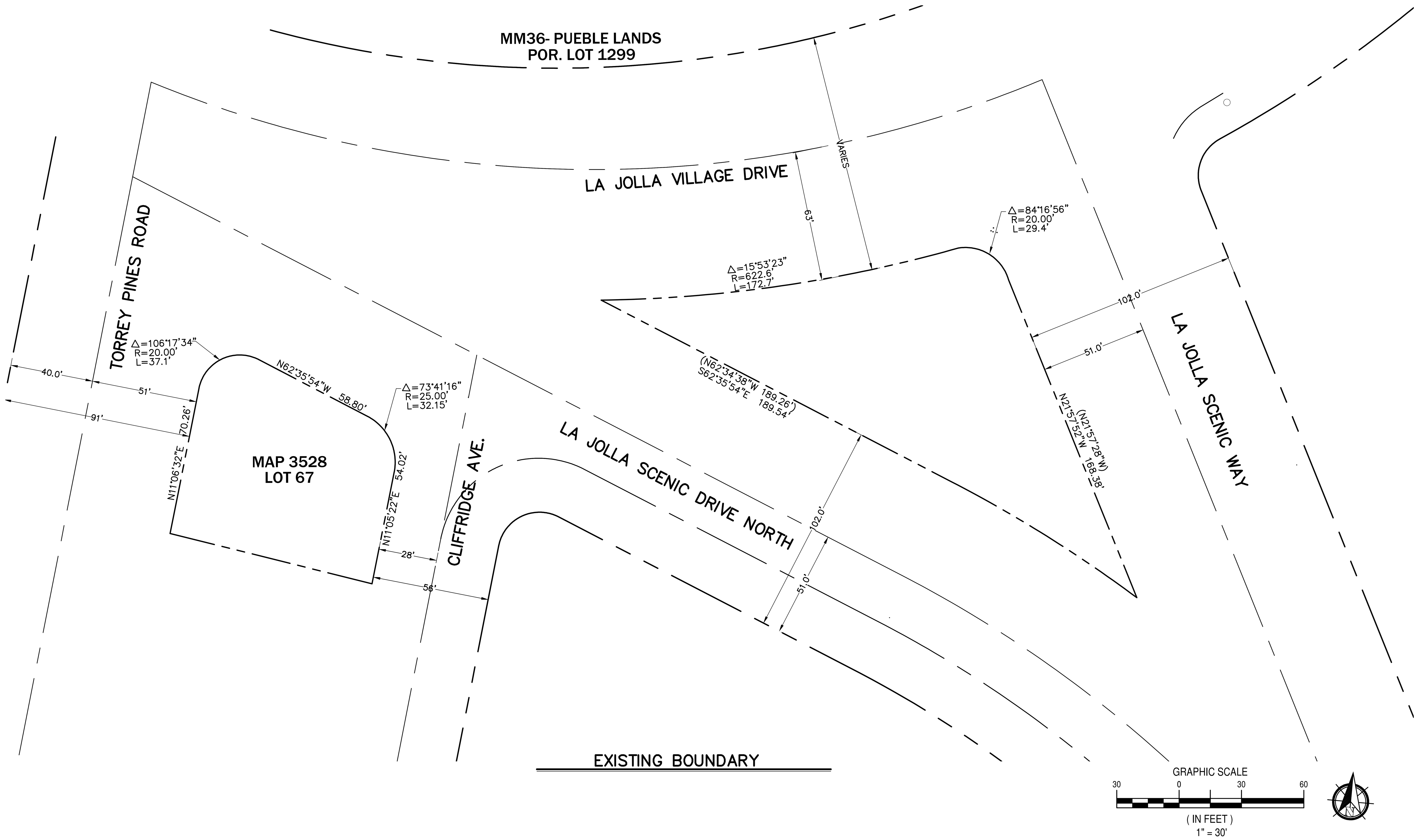
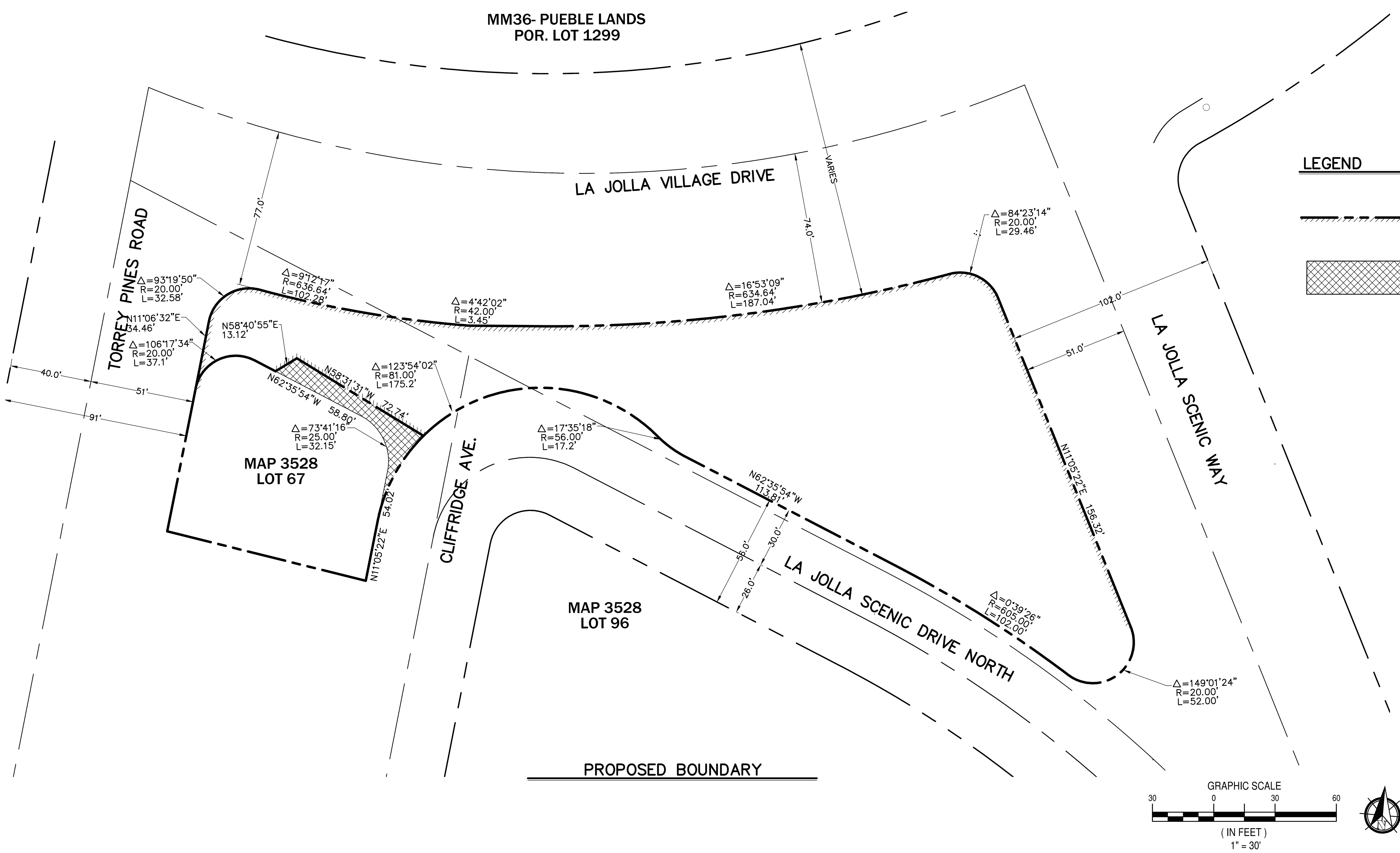
UCSD Hillel Center for Jewish Life

- Street Vacation
- Right of Way Dedication
- La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
- Change of Occupancy Permit
- Sustainable Expedite Program





LEGEND

INDICATES ABUTTER'S ACCESS RIGHTS OF ACCESS TO BE RELIQUISHED

INDICATES PORTION OF LA JOLLA SCENIC DRIVE NORTH VACATION TO REMAIN WITH LOT 67

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FACSIMILE 619 230 0335
www.mwsteele.com
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Street Vacation
Right of Way Dedication
La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
Change of Occupancy Permit
Sustainable Expedite Program

Project Number:	0915
Original Date:	June 8, 2010
Drawn:	
Checked:	

Revision 1:	06.08.10 Completeness Check
Revision 2:	06.24.10 MIR Submittal
Revision 3:	10.18.12 Revisions Cycle 50
Revision 4:	11-18-16 Revisions
Revision 5:	01-12-17 Revisions
Revision 6:	
Revision 7:	
Revision 8:	
Revision 9:	
Revision 10:	
Revision 11:	
Revision 12:	

UCSD Hillel Center for Jewish Life

San Diego, California

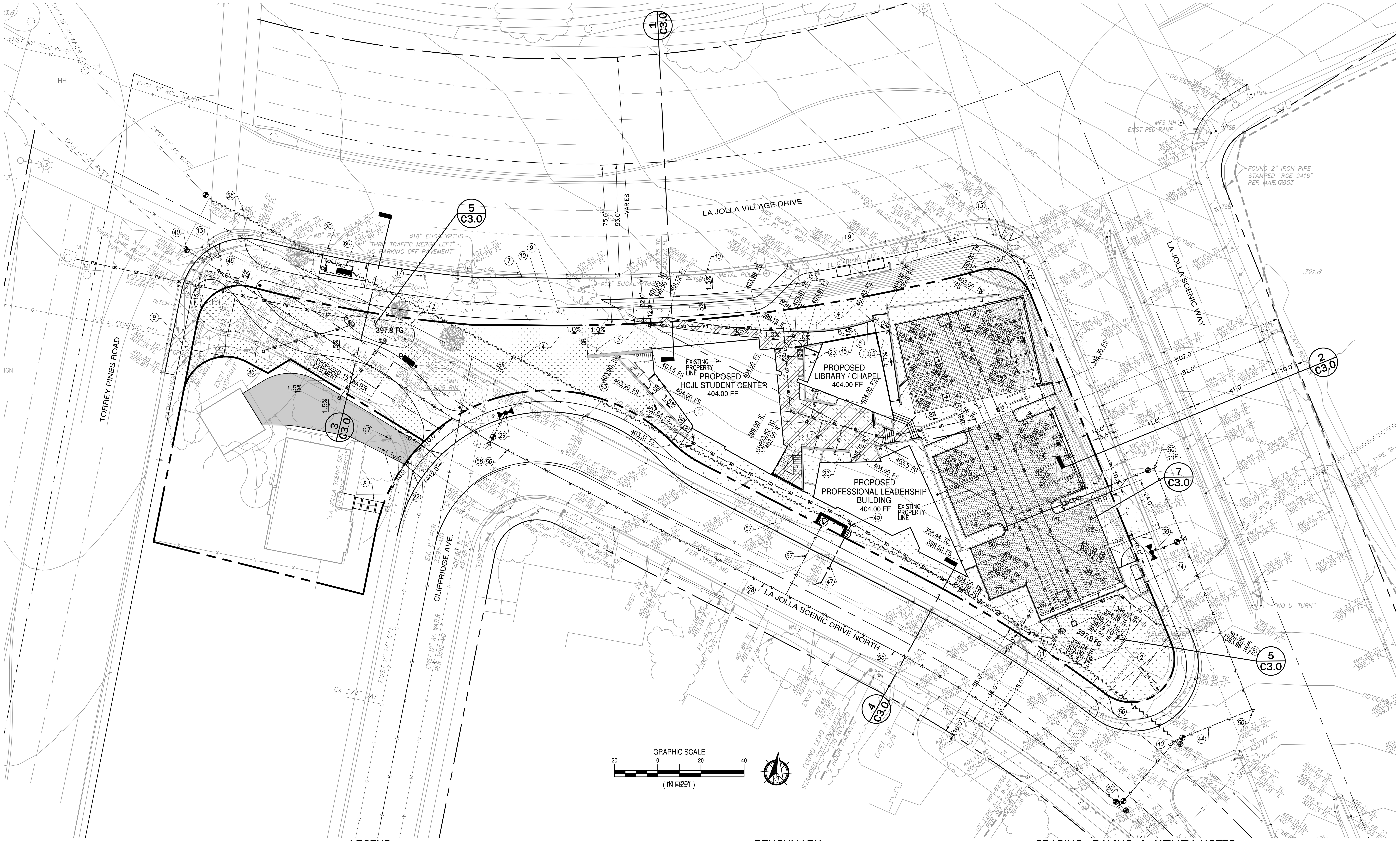
Phase 1:
8976 Cliffridge Avenue
La Jolla, California 92037

Phase 2:
Intersection of La Jolla Scenic Way, La Jolla Village Drive and La Jolla Scenic Drive
La Jolla, California 92037

NOT FOR CONSTRUCTION

EXISTING & PROPOSED BOUNDARY

C1.0



UCSD Hillel Center for Jewish Life

- Street Vacation
- Right of Way Dedication
- La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
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PROJECT INFORMATION:

OWNER	:	HILLEL OF SAN DIEGO 8976 CLIFFRIDGE AVENUE LA JOLLA, CA 92037 858-550-1792
LOT AREA	:	1.61± ACRE (±70,416 SF)
DISTURBED AREA:		1.43± ACRE (62,291 SF)
SITE ADDRESS	:	PHASE 1: 8976 CLIFFRIDGE AVENUE LA JOLLA, CALIFORNIA 92037 PHASE 2: INTERSECTION OF LA JOLLA SCENIC WAY, LA JOLLA VILLAGE DRIVE AND LA JOLLA SCENIC DRIVE LA JOLLA, CALIFORNIA 92037
APN NO.	:	344-131-01, 344-120-26
FLOOD ZONE	:	X (OTHER AREAS)
MAP #	:	06073C0734H

LEGAL DESCRIPTION

APN: 344-131-01
LOT 67 OF LA JOLLA UNIT NO. 3 IN CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO THE MAP THERE OF NO. 3528, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, OCTOBER 19, 1956

APN: 344-120-26
PORTION OF LOT 1299, MISCELLANEOUS MAP 36, PUEBLO LANDS

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED NEW PROPERTY LINE
- EXISTING CENTERLINE
- CONSTRUCTION FENCE
- EXISTING SITE FENCE
- 250 — EXISTING CONTOURS
- X 142.72' — EXISTING SPOT ELEVATION
- EXISTING BUILDING
- EXISTING TREE
- EXISTING WALL
- PROPOSED STORM DRAIN INLET
- PROPOSED AREA DRAIN
- PROPERTY LINE
- LIMIT OF WORK
- EXISTING BLOCK WALL
- XXX.XX' — EXISTING CONTOURS
- W — EX . WATER LINE
- S — EX . SEWER LINE
- SD — EX . STORM DRAIN
- HYD — EX. FIRE HYDRANT
- EXISTING BUILDING
- EXISTING TREE
- WV — EXISTING WATER VALVE
- NEW DDCA WITH PIV, FDC
- W — PROPOSED WATER LINE
- S — PROPOSED SEWER LINE
- SD — PROPOSED SEWER LINE
- PROPOSED FIRE HYDRANT
- M — PROPOSED WATER METER
- B — PROPOSED BACKFLOW ASSEMBLY

DEFINED TERMS:

AB	– AGGREGATE BASE	NTS	– NOT TO SCALE
AC	– ASPHALT CONCRETE	PCC	– PORTLAND CEMENT CONCRETE
BC	– BACK OF CURB	PL	– PROPERTY LINE
CF	– CURB FACE	R	– RADIUS
CL	– CENTERLINE	RL	– RIDGE LINE
E	– EAST	R/W	– RIGHT-OF-WAY
E'LY	– EASTERLY	S	– SEWER OR SOUTH
EP	– EDGE OF PAVEMENT	STD.	– STANDARD
EX.	– EXISTING	TC	– TOP OF CURB
FF	– FINISHED FLOOR	TG	– TOP OF GRATE
FG	– FINISHED GRADE	IE	– INVERT ELEVATION
FL	– FLOW LINE	TYP.	– TYPICAL
FS	– FINISHED SURFACE	O.C.	– ON CENTER
GB	– GRADE BREAK	W	– WATER OR WEST
HI PT	– HIGH POINT	W'LY	– WESTERLY
INV	– INVERT	XXX.XX	– PROPOSED ELEVATION
MH	– MANHOLE	(XXX.XX)	– EXISTING ELEVATION
N	– NORTH		

BENCHMARK:

CITY OF SAN DIEGO BENCH MARK ON S.E. CURB AT LA JOLLA SCENIC & LA JOLLA VILLAGE DR.
ELEV.=388.554

EARTHWORK:

FILL:	225 C.Y.
CUT:	870 ± C.Y.
EXPORT:	645 ± C.Y.
MAX. CUT:	4.5' ±
MAX. FILL:	4.0' ±

UTILITY NOTES

THE UNDERGROUND UTILITIES AS SHOWN HEREON HAVE BEEN LOCATED FROM OBSERVED FIELD SURVEY EVIDENCE AND EXISTING DRAWINGS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: PLANS PROVIDED BY THE CLIENT, UTILITY COMPANIES, AND MUNICIPAL AGENCIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES NOT CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

GRADING, PAVING & UTILITY NOTES

1. PROPOSED SIDEWALK/PCC
2. PROPOSED BIOFILTRATION WITH PARTIAL RETENTION
3. PROPOSED AC PAVING
4. PROPOSED LANDSCAPE
5. PROPOSED PAVERS
6. PROPOSED 6" CURB
7. PROPOSED CURB AND GUTTER
8. PROPOSED RETAINING WALL
9. PROPOSED PUBLIC SIDEWALK
10. PROPOSED PUBLIC PARKWAY
11. PROPOSED RIP RAP
12. PROPOSED TRUNCATED DOMES
13. PROPOSED CURB RAMP PER CITY STANDARDS
14. PROPOSED TRASH ENCLOSURE
15. PROPOSED ACCESSIBLE RAMP WITH HANDRAILS
16. PROPOSED STRIPING
17. EXISTING STREET SIGNS TO BE RELOCATED
18. PROPOSED 4" PVC RISER WITH ATRIUM GRATE
19. EXISTING WALL TO REMAIN
20. EXISTING CURB, GUTTER AND PAVEMENT TO BE REMOVED
21. EXISTING UTILITY BOXES TO REMAIN
22. PROPOSED NEW DRIVEWAY PER CITY STANDARD
23. PROPOSED PLANTERS
24. PROPOSED WHEEL STOP
25. CLEAR AREA BASED ON VISIBILITY TRIANGLE
26. PROPOSED STORM DRAIN CLEANOUT
27. PROPOSED NEW TRANSFORMER
28. PROPOSED NEW 16" WATERLINE ROUTE
29. RELOCATED FIRE HYDRANT
30. PROPOSED 6" SUBDRAIN
31. PROPOSED 6" SUBDRAIN CLEANOUT
32. PROPOSED 4" PVC RISER WITH ATRIUM GRATE
33. PROPOSED 12" STORM DRAIN
34. PROPOSED STORM DRAIN INLET
35. PROPOSED A-5 STORM DRAIN CLEANOUT
36. PROPOSED 4" STORM DRAIN
37. PROPOSED POINT OF CONNECTION-WATER SERVICE
38. PROPOSED FDC/PIV PER CITY STANDARD
39. PROPOSED FIRE HYDRANT PER CITY STANDARD
40. CONNECT TO EXISTING WATER LINE
41. PROPOSED DDCA PER CITY STANDARD
42. PROPOSED NEW PUBLIC WATER METER.
43. PROPOSED 8" FIRE SERVICE
44. PROPOSED 8" WATER LINE
45. PROPOSED POINT OF CONNECTION – SEWER
46. EXISTING FIRE HYDRANT TO BE RELOCATED
47. PROPOSED 6" SEWER SERVICE
48. CONNECT TO EXISTING 8" PUBLIC SEWER
49. PROPOSED STORM WATER DETENTION FACILITY
50. PROPOSED THRUST BLOCK
51. CONNECT TO EXISTING STORM DRAIN
52. PROPOSED 24"X24" CATCH BASIN
53. PROPOSED 12"X12" CATCH BASIN
54. PROPOSED 8"X 8" CATCH BASIN
55. REMOVE EXISTING 8" PUBLIC WATERLINE
56. REMOVE EXISTING 12" PUBLIC WATERLINE
57. PROPOSED 2" WATER METER WITH BACKFLOW
58. EXISTING STREET LIGHT TO BE RELOCATED
59. EXISTING STREET LIGHT TO BE REMAIN
60. EXISTING BUS STOP TO REMAIN

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Oceanside, CA 92054
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REGISTERED PROFESSIONAL ENGINEER ARNOLD J. WHITTAKER No. 59320 Exp. 06-30-17 CIVIL STATE OF CALIFORNIA NOT FOR CONSTRUCTION

Street Vacation
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Project Number:	0915
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Revision 1:	06.08.10 Completeness Check
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Revision 3:	10.18.12 Revisions Cycle 50
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Revision 5:	01-12-17 Revisions
Revision 6:	
Revision 7:	
Revision 8:	
Revision 9:	
Revision 10:	
Revision 11:	
Revision 12:	

UCSD Hillel Center for Jewish Life

San Diego, California

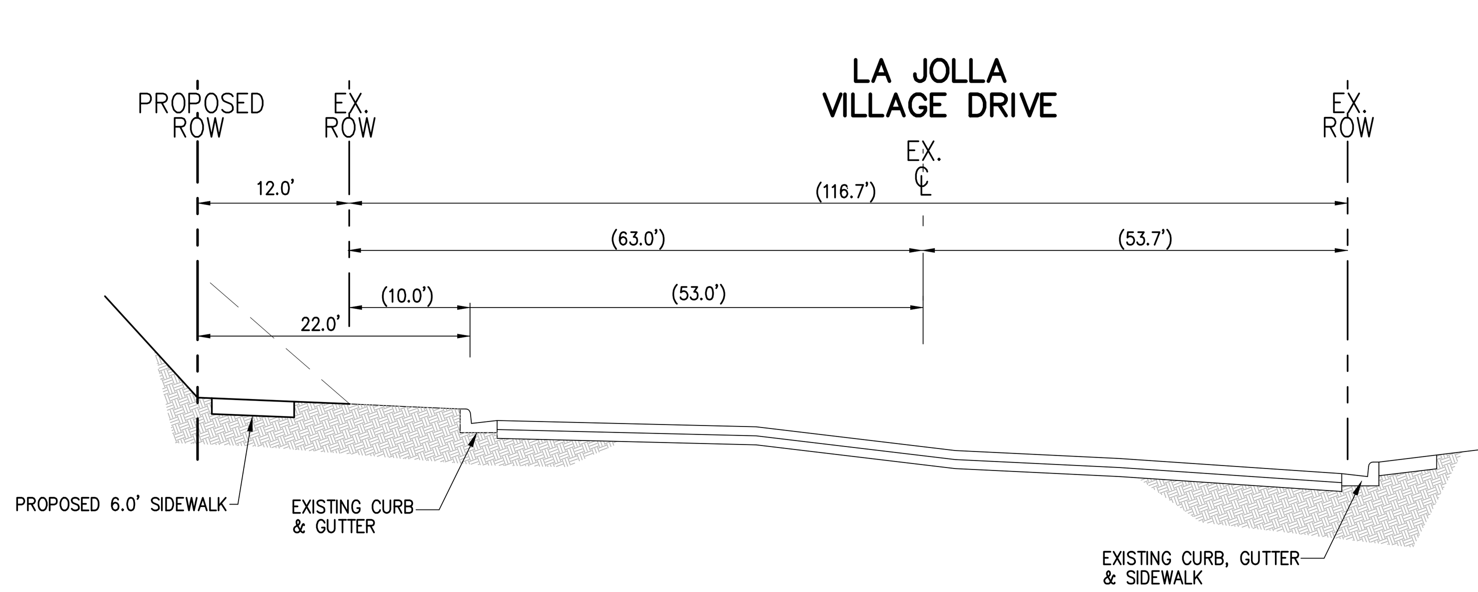
Phase 1:
8976 Cliffridge Avenue
La Jolla, California 92037

Phase 2:
Intersection of La Jolla Scenic Way,
La Jolla Village Drive
and La Jolla Scenic Drive
La Jolla, California 92037

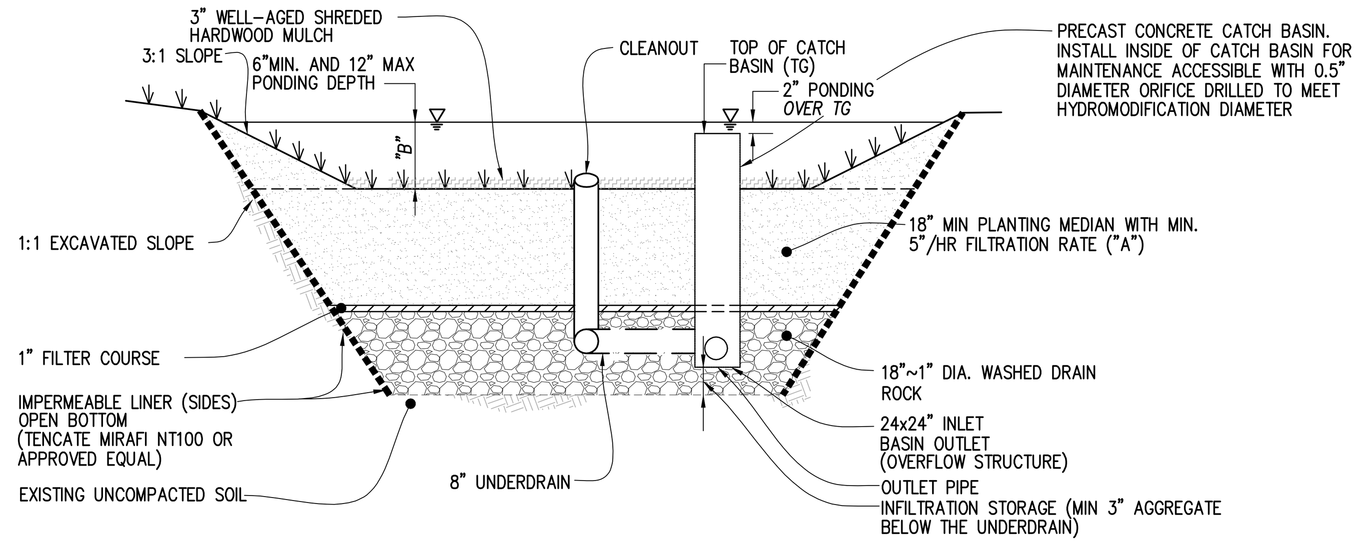
NOT FOR CONSTRUCTION

PRELIMINARY GRADING, DRAINAGE AND UTILITY PLAN

C2.0



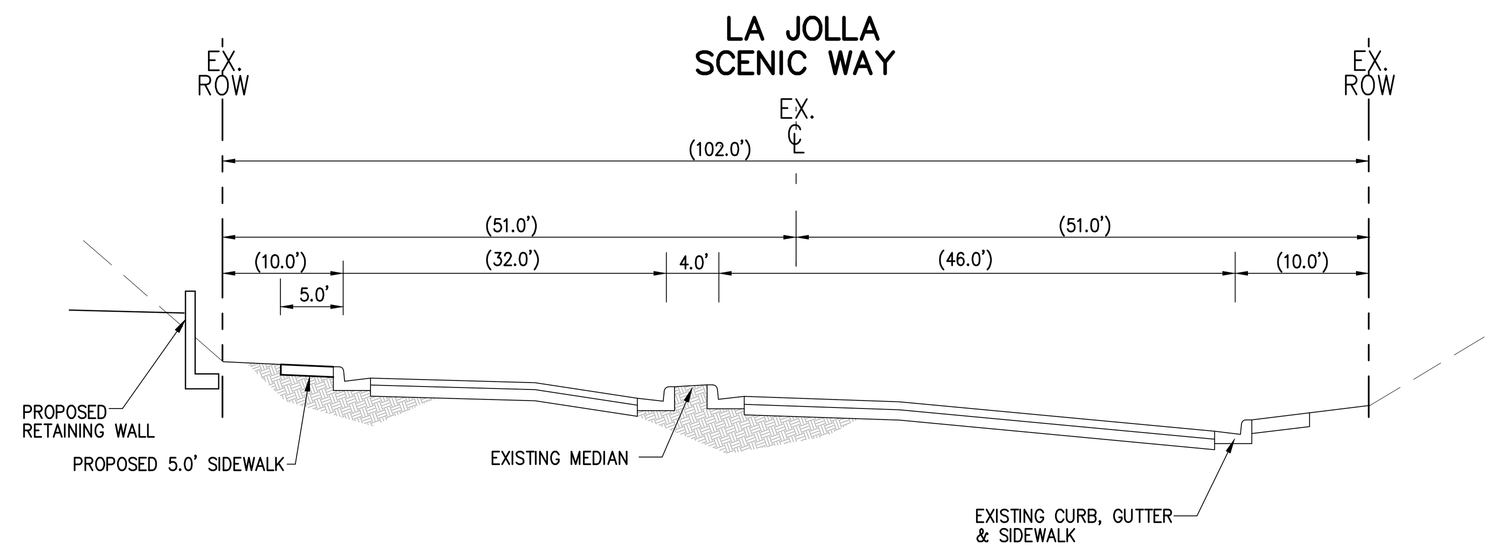
1 / C2.0 SECTION 1-1 (LA JOLLA VILLAGE DRIVE)
NOT TO SCALE



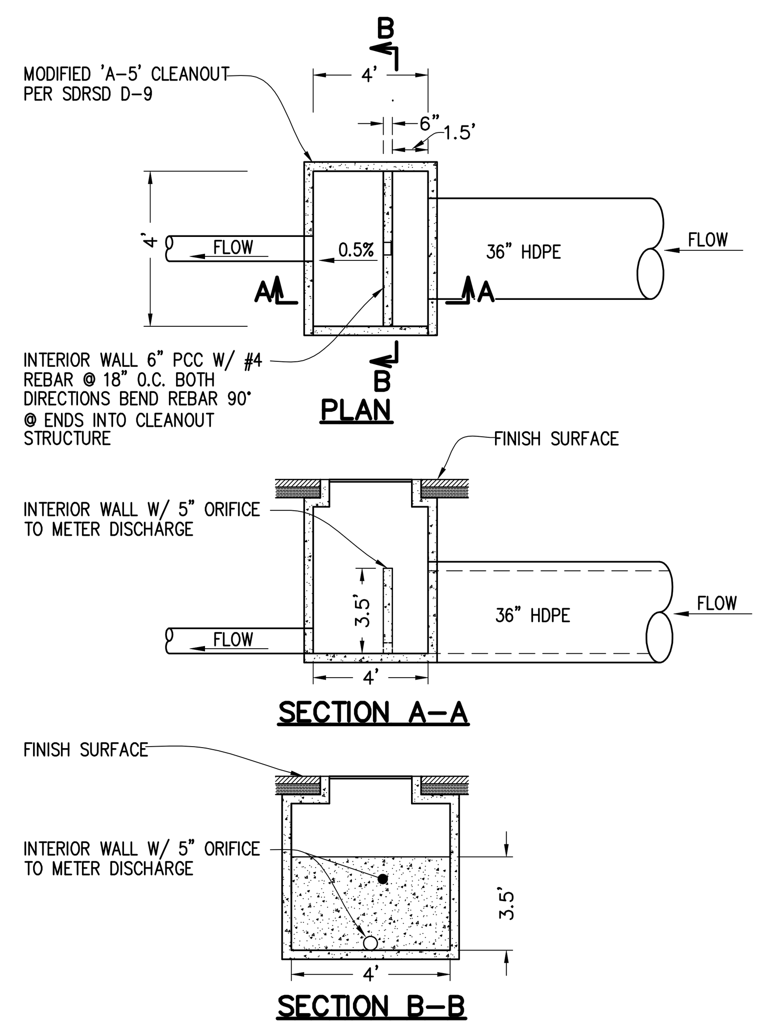
BIOFILTRATION BASIN #	PONDING DEPTH "B"	SOIL AMENDMENT DEPTH "A"	ORIFICE DIAMETER SIZE
#1.0	10"	18"	0.45"
#2.0	10"	18"	0.25"

NOTE: DESIGN PARAMETER PER BMP DESIGN MANUAL (JANUARY 2016 EDITION) APPENDIX E.12

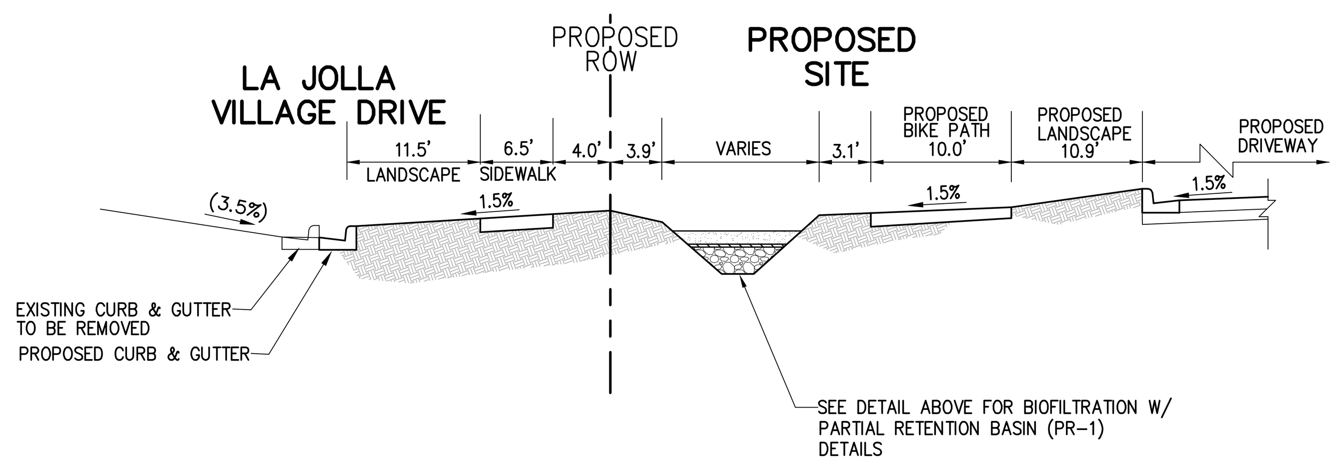
5 / C2.0 BIOFILTRATION W/ PARTIAL RETENTION BASINS (PR-1)
NOT TO SCALE



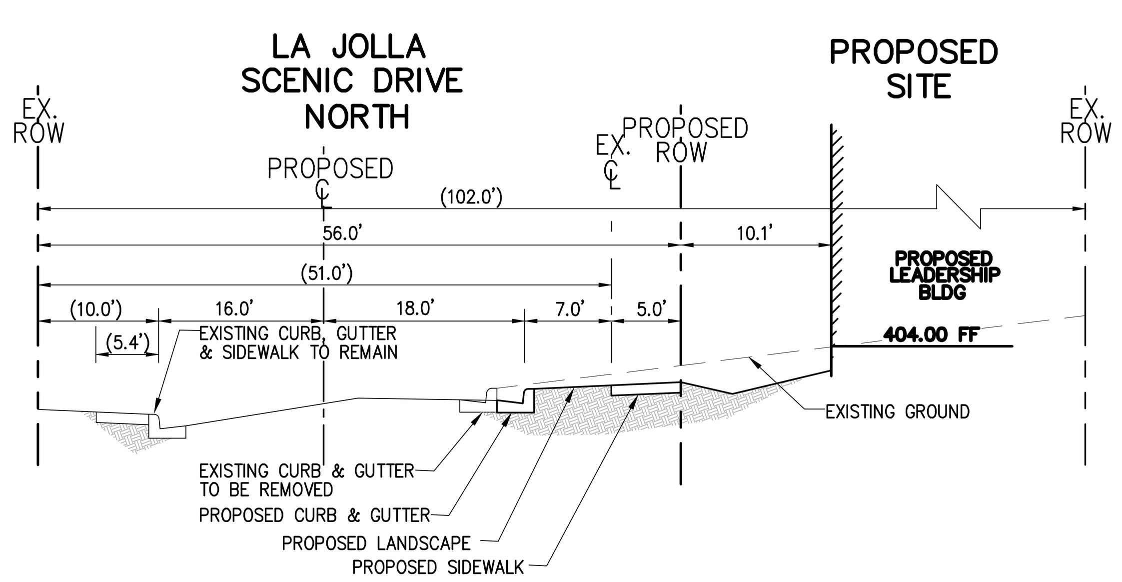
2 / C2.0 SECTION 2-2 (LA JOLLA SCENIC WAY)
NOT TO SCALE



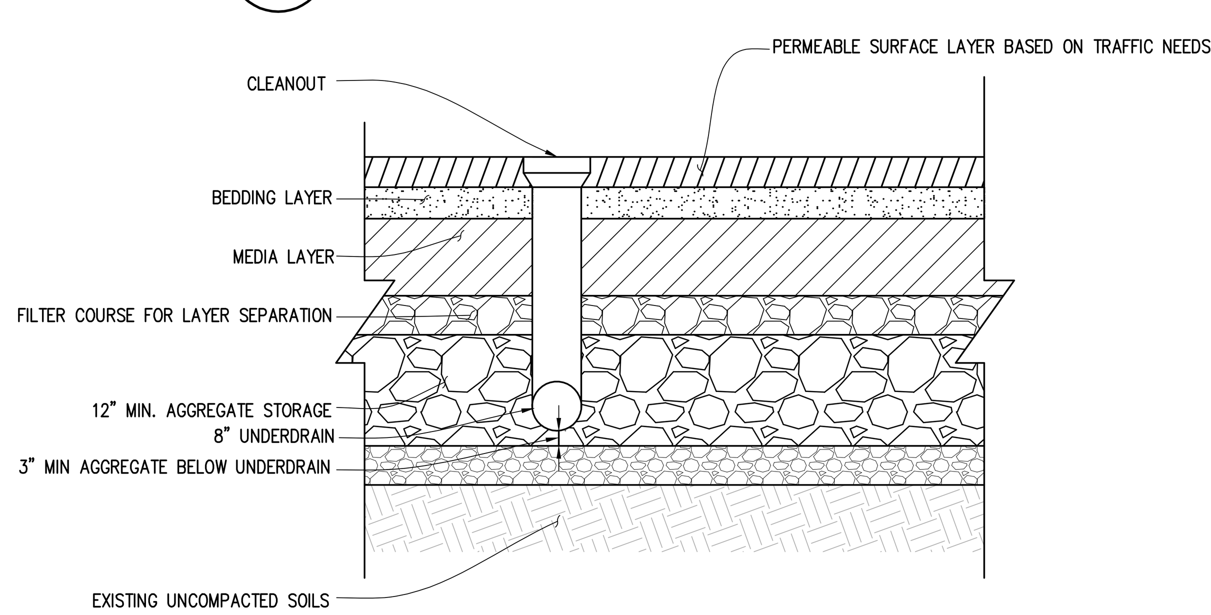
6 / C2.0 MODIFIED TYPE 'A-4' CLEANOUT
NOT TO SCALE



3 / C2.0 SECTION 3-3
NOT TO SCALE



4 / C2.0 SECTION 4-4 (LA JOLLA SCENIC DR. NORTH)
NOT TO SCALE



NOTE: DESIGN THICKNESS TO BE DEFINED AT MINISTERIAL PERMIT

7 / C2.0 PERVIOUS PAVEMENT
NOT TO SCALE

UCSD Hillel Center for Jewish Life

- Street Vacation
- Right of Way Dedication
- La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
- Change of Occupancy Permit
- Sustainable Expedite Program

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER
CIVIL
STATE OF CALIFORNIA

M.W. STEELE GROUP, INC.
1805 NEWTON AVENUE | SUITE A
SAN DIEGO | CA | 92113
TELEPHONE 619 230 0325
FACSIMILE 619 230 0335
www.mwsteele.com
ARCHITECTURE | PLANNING

Street Vacation
Right of Way Dedication
La Jolla Shores Site Development Permit for Sustainable Building Development with Deviations from Development Regulations
Change of Occupancy Permit
Sustainable Expedite Program

Project Number:	0915
Original Date:	June 8, 2010
Drawn:	
Checked:	

Revision 1:	06.08.10 Completeness Check
Revision 2:	06.24.10 MIR Submittal
Revision 3:	10.18.12 Revisions Cycle 50
Revision 4:	11-18-16 Revisions
Revision 5:	01-12-17 Revisions
Revision 6:	
Revision 7:	
Revision 8:	
Revision 9:	
Revision 10:	
Revision 11:	
Revision 12:	

UCSD Hillel Center for Jewish Life
San Diego, California

NOT FOR CONSTRUCTION

Phase 1:
8976 Cliffridge Avenue
La Jolla, California 92037

Phase 2:
Intersection of La Jolla Scenic Way, La Jolla Village Drive and La Jolla Scenic Drive
La Jolla, California 92037

PRELIMINARY CROSS-SECTIONS

C3.0

ATTACHMENT 5
DRAINAGE REPORT

Attach project's drainage report. Refer to Drainage Design Manual to determine the reporting requirements.

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DRAINAGE STUDY

FOR

UCSD HILLEL CENTER

San Diego, California
Project # 212995
Grading Drawing # ________-D
I.O. #

Engineer:

ATLAS Civil Design
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
P: 888-364-1973
F: 760-231-1378
PN: 15-107

Prepared by: ______________________ Date: 11/18/16
Arnold J. Whitaker RCE# 59320 Exp. 06-30-17

REGISTERED PROFESSIONAL ENGINEER
ARNOLD J. WHITAKER
C 59320
Exp. 6/17
CIVIL
STATE OF CALIFORNIA

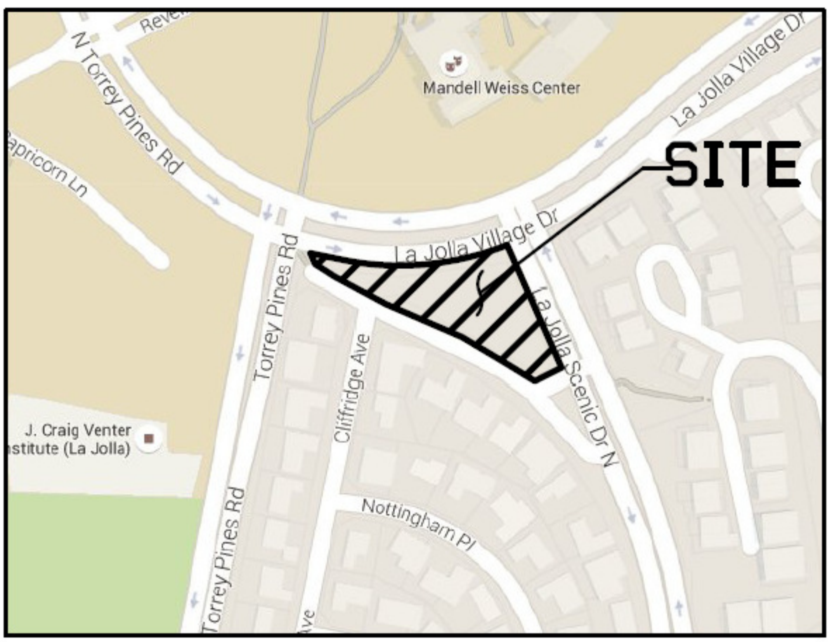
Date	**Comments**
03-10-16	Original, planning
11-18-16	Approved, Planning

TABLE OF CONTENTS

1.0 PROJECT DESCRIPTION

The UCSD Hillel Center for Jewish Life (hereafter referred to as the Hillel Center) project site is a 1.43 Acre triangle piece of land sectioned off northeasterly by La Jolla Village Drive, La Jolla Scenic Way to the east and La Jolla Scenic Drive North to the south. The site will be composed of a building, a cul-de-sac which will be vacated, a park and walking paths, and landscaping. The property is identified as lot 26 of the much larger Pueblo lot 1299 of the Pueblo Lands of San Diego, Map No. 36. The Hillel Center will accommodate religious, educational, social and cultural activities for Jewish students at UCSD. The facility is planned to include meeting rooms, offices for clergy for students and staff; lounges and recreational areas, a kosher kitchen, a computer room and a library. The Center will be over 7,000 square feet of building space and included twenty-six surface parking spaces.

This project will also involve the vacation of public right of way and the removal of the westerly cul-de-sac- on La Jolla Scenic Drive North. Meandering walks and large landscape belts are proposed for these areas improving the curb appeal for the surrounding community. The project neighbor on Lot 67, whose current access is off of La Jolla Scenic Drive North, shall be provided with a new driveway access on Cliffridge Avenue.



VICINITY MAP

N.T.S

2.0 PURPOSE

The purpose of this study is to determine the peak runoff rates and velocities for the pre-development and post-development conditions. Comparisons will be made at the same discharge points for each drainage basin affecting the site and adjacent properties.

3.0 METHODOLOGY

The Rational Method as outlined in the City of San Diego Drainage Manual, dated April 1984, was used to determine the runoff flow rate. The 100-year frequency storm event was analyzed to determine peak runoff rates discharging the site for both the existing and post-development condition.

Runoff coefficients,"C", were determined from Table 2 – Runoff Coefficients (Rational Method) located in Appendix A. Soil type 'D' was used for the analysis. Modified "C" values were calculated using the actual imperviousness of the site. This calculation is included in Appendices B and C.

4.0 HYDROLOGY

4.1 Pre-Development Conditions

A Pre-Development Hydrology Map delineating basin areas, flow paths, and concentration points has been prepared and is attached to this report as Exhibit "A". Pre-development hydrology calculations can be found in Appendix B.

The existing 1.43 Acre site consists of a single undeveloped, landscape triangular area. The existing site is composed of 3 basins. The existing grades permit positive runoff from all areas of the site. The largest basin, Basin 100, surface runoff enters the public drainage system at an existing 10' Type "A" curb inlet west of the intersection of La Jolla Scenic Way and La Jolla Village Drive. Basin 300 surface runoff flows back into the end of the cul-de-sac where it enters into a ditch that discharges to the Torrey Pines Road gutter.

4.2 Post-Development Conditions

A Post-Development Hydrology Map delineating basin areas, flow paths and concentration points has been prepared for the tributary basins and is located in the back of this report as Exhibit 'B'. Post-developed hydrology calculations can be found in Appendix C.

The 1.43 Acre site is broken into 3 basins (100, 200 and 300). Basin 100 is composed of the building site, parking area (pervious paving) and the associated landscaping Planters areas. The building site comprises the western portion of the site and the runoff off is collected by means of an underground storm drain system and discharged to the east before entering a bioretention basin. The eastern portion of the site is comprised of the parking area to the east. The parking area, covering the eastern portion of this basin, also drain to the bioretention basins. The flow from basin 100 enters the bioretention basin then discharges to an underground detention pipe before discharging to the existing 18" storm drain pipe. Basin 200 consist of the flow from the public right of way along La Jolla Village Drive and La Jolla Scenic Way. Basin

300 is primarily landscaping, driveway area and a public Bike path that surfaces flows to a bioretention basin before discharging into a storm drain system.

5.0 CONCLUSION

The development of the project site will minimally increase the pre-development flow rate of storm water runoff by 0.58 cfs (basin 100) in the 100-year storm event; however, the increased flow rate will be mitigated by onsite underground detention facilities. Detention volume calculations can be found in Appendix E. Table 1 below provides a summary of the pre- and post-development areas and flows at key locations without detention. Table 2 provides a summary of the same pre- and post-development areas and 100-year peak flows with detention applied.

Table 1 – Pre and Post-Development Areas and Flows (without Detention)

	Area (ac)		**Q_{100} (cfs)**		
Basin / Node	**Pre-Dev**	**Post-Dev**	**Pre-Dev**	**Post-Dev**	**+/-**
100	0.78	0.95	1.48	2.06	+0.58
200	0.42	0.68	0.80	0.68	-0.12
300	0.23	0.17	0.46	0.40	-0.06
Total	1.43	1.43	2.74	3.14	0.22

Table 2 – Pre and Post-Development Areas and Flows (with Detention)

	Area (ac)		**Q_{100} (cfs)**		
Basin / Node	**Pre-Dev**	**Post-Dev**	**Pre-Dev**	**Post-Dev**	**+/-**
100	0.78	0.95	1.48	1.36	-0.12
200	0.42	0.68	0.80	0.68	-0.12
300	0.23	0.17	0.46	0.40	-0.06
Total	1.43	1.43	2.74	3.14	-0.30

Since the increased flow rate will be mitigated by an onsite underground detention facility, there will be no negative impacts to any adjacent properties.

REFERENCES

City of San Diego Drainage Design Manual (April 1984).

City of San Diego Municipal Code*. Land development Manual – Storm Water Standards* (March 24, 2008).

APPENDIX A

Reference Charts

WEIGHTED RUNOFF COEFFICIENT CALCULATIONS

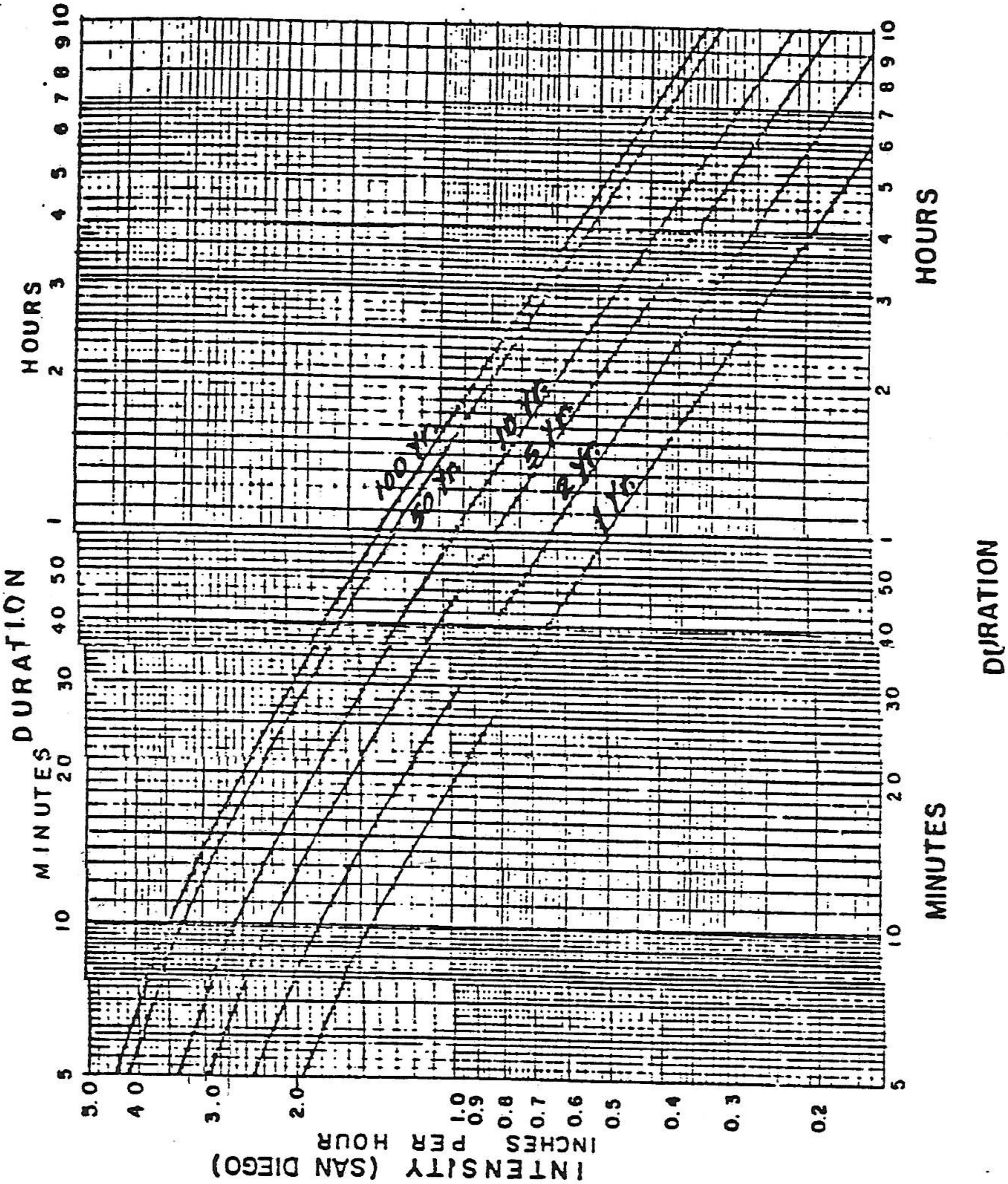
HILLEL-POST DEVELOPED

Landscaping & Pervious Pavement		Buildings & Impervious Pavement			
A_1 (acres)	C_1	A_2 (acres)	C_2	Total Area A_T (acres)	Weighed C C_W
0.69	0.45	0.74	0.95	1.43	0.71

WEIGHTED RUNOFF COEFFICIENT CALCULATIONS

HILLEL-PRE DEVELOPED

Landscaping & Pervious Pavement		Buildings & Impervious Pavement			
A_1 (acres)	C_1	A_2 (acres)	C_2	Total Area A_T (acres)	Weighed C C_W
0.90	0.45	0.53	0.95	1.43	0.64



ELEV.	FACTOR
0–1500	1.00
1500–3000	1.25
3000–4000	1.42
4000–5000	1.60
5000–6000	1.70
DESERT	1.25

To obtain correct intensity, multiply intensity on chart by factor for design elevation.

RAINFALL

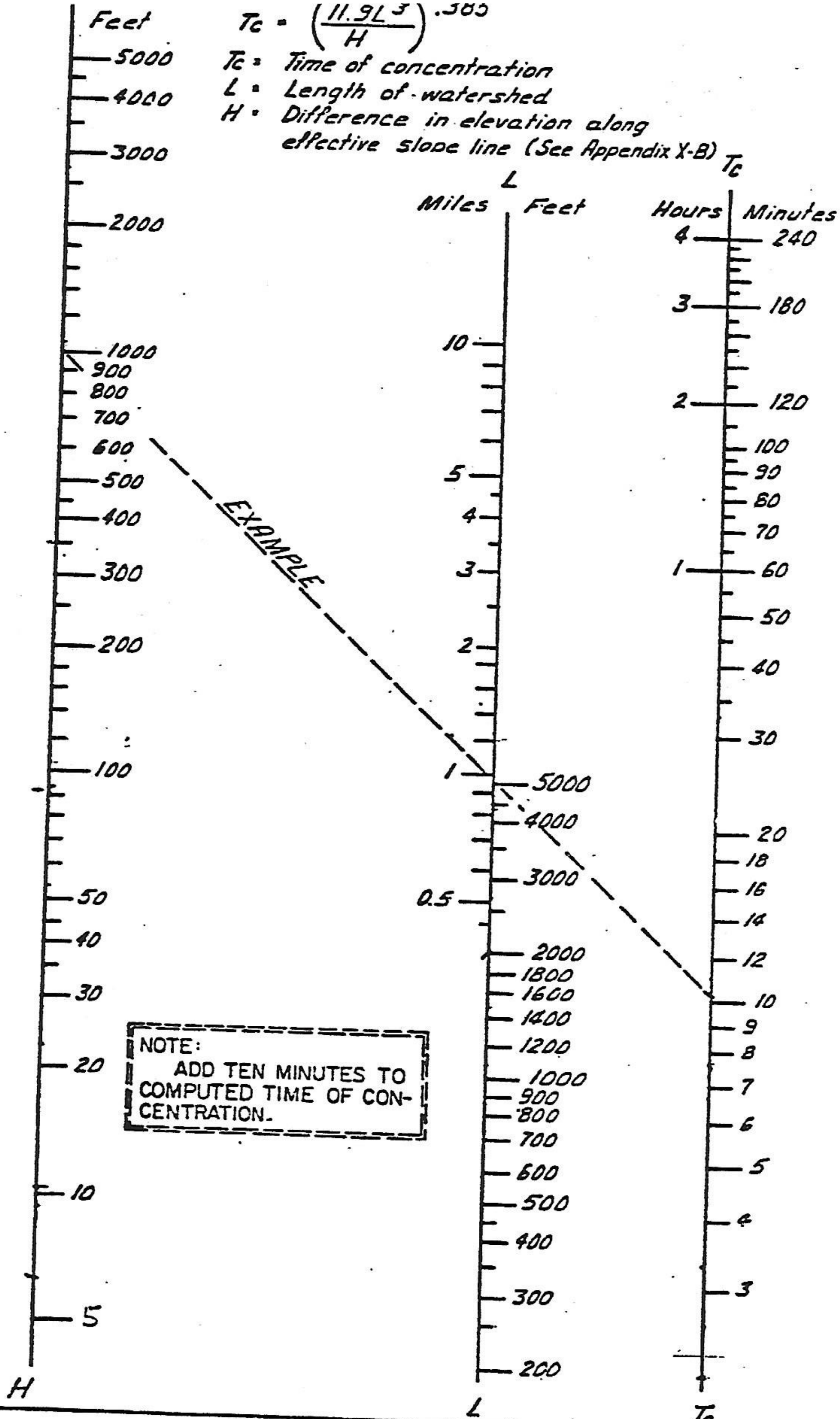
INTENSITY – DURATION – FREQUENC

CURVES

for

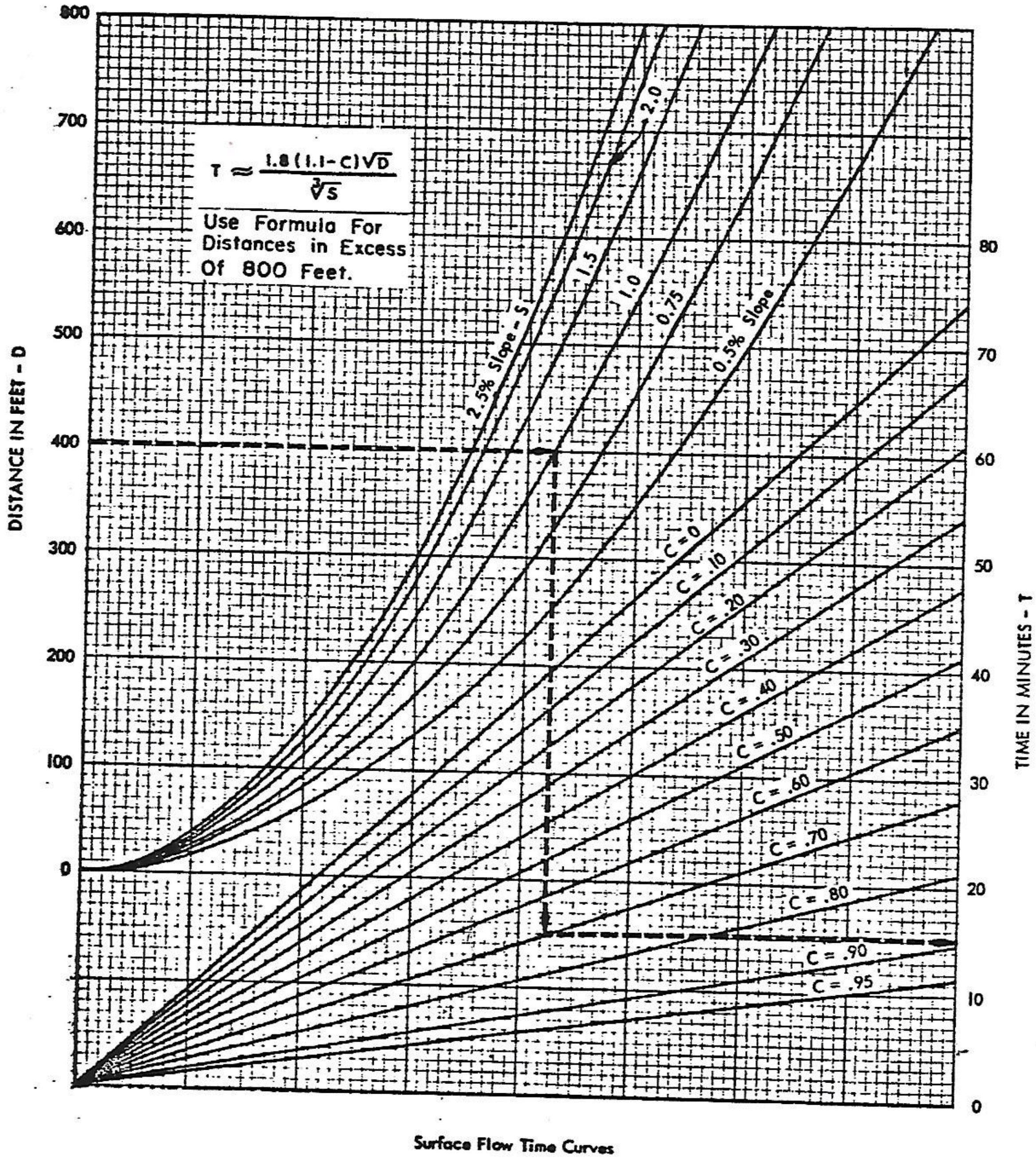
COUNTY OF SAN DIEGO

APPENDIX



SAN DIEGO COUNTY DEPARTMENT OF SPECIAL DISTRICT SERVICES DESIGN MANUAL	NOMOGRAPH FOR DETERMINATION OF TIME OF CONCENTRATION (Tc) FOR NATURAL WATERSHEDS	
APPROVED ______	DATE ______	APPENDIX

URBAN AREAS OVERLAND TIME OF FLOW CURVES



Surface Flow Time Curves

EXAMPLE:

GIVEN: LENGTH OF FLOW = 400 FT.
SLOPE = 1.0 %
COEFFICIENT OF RUNOFF C = .70

READ: OVERLAND FLOWTIME = 15 MINUTES

TABLE 2

RUNOFF COEFFICIENTS (RATIONAL METHOD)

DEVELOPED AREAS (URBAN)

Land Use	Coefficient, C Soil Type (1) D
Residential:	
Single Family	.55
Multi-Units	.70
Mobile Homes	.65
Rural (lots greater than 1/2 acre)	.45
Commercial (2) 80% Impervious	.85
Industrial (2) 90% Impervious	.95

NOTES:

(1) Type D soil to be used for all areas.

(2) Where actual conditions deviate significantly from the tabulated imperviousness values of 80% or 90%, the values given for coefficient C, may be revised by multiplying 80% or 90% by the ratio of actual imperviousness to the tabulated imperviousness. However, in no case shall the final coefficient be less than 0.50. For example: Consider commercial property on D soil.

Actual imperviousness = 50%

Tabulated imperviousness = 80%

$$\text{Revised C} = \frac{50}{80} \times 0.85 = 0.53$$

APPENDIX B

Pre-Development Hydrology Calculations

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 100

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 101.000 to Point/Station 100.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 326.000(Ft.)

Highest elevation = 402.970(Ft.)

Lowest elevation = 400.220(Ft.)

Elevation difference = 2.750(Ft.)

TC=[(11.9*0.0617^3)/(2.75)]^.385= 4.23 + 10 min. = 14.23 min.

Rainfall intensity (I) = 2.964(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 1.480(CFS)

Total initial stream area = 0.780(Ac.)

End of computations, total study area = 0.780 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 200

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 202.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 266.000(Ft.)

Highest elevation = 400.800(Ft.)

Lowest elevation = 392.200(Ft.)

Elevation difference = 8.600(Ft.)

TC=[(11.9*0.0504^3)/(8.60)]^.385= 2.16 + 10 min. = 12.16 min.

Rainfall intensity (I) = 3.143(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.604(CFS)

Total initial stream area = 0.300(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.300(Ac.)

Runoff from this stream = 0.604(CFS)

Time of concentration = 12.16 min.

Rainfall intensity = 3.143(In/Hr)

++

Process from Point/Station 201.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 475.000(Ft.)

Highest elevation = 400.890(Ft.)

Lowest elevation = 392.200(Ft.)

Elevation difference = 8.690(Ft.)

TC=[(11.9*0.0900^3)/(8.69)]^.385= 4.19 + 10 min. = 14.19 min.

Rainfall intensity (I) = 2.967(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.228(CFS)

Total initial stream area = 0.120(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.120(Ac.)

Runoff from this stream = 0.228(CFS)

Time of concentration = 14.19 min.

Rainfall intensity = 2.967(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.604	12.16	3.143
2	0.228	14.19	2.967

Qmax(1) =

1.000 * 1.000 * 0.604) +

1.000 * 0.856 * 0.228) + = 0.799

Qmax(2) =

0.944 * 1.000 * 0.604) +

1.000 * 1.000 * 0.228) + = 0.798

Total of 2 streams to confluence:

Flow rates before confluence point:

0.604 0.228

Maximum flow rates at confluence using above data:

0.799 0.798

Area of streams before confluence:

0.300 0.120

Results of confluence:

Total flow rate = 0.799(CFS)

Time of concentration = 12.156 min.

Effective stream area after confluence = 0.420(Ac.)

End of computations, total study area = 0.420 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 300

100 YEAR STORM

PREPARED BY: PHS DAE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 301.000 to Point/Station 300.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 202.000(Ft.)

Highest elevation = 402.970(Ft.)

Lowest elevation = 400.890(Ft.)

Elevation difference = 2.080(Ft.)

TC=[(11.9*0.0383^3)/(2.08)]^.385= 2.71 + 10 min. = 12.71 min.

Rainfall intensity (I) = 3.092(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.455(CFS)

Total initial stream area = 0.230(Ac.)

End of computations, total study area = 0.230 (Ac.)

APPENDIX C

Post-Development Hydrology Calculations

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 (NODE 102-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 102.000 to Point/Station 101.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 293.000(Ft.)

Highest elevation = 404.500(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 6.600(Ft.)

TC=[(11.9*0.0555^3)/(6.60)]^.385= 2.67 + 10 min. = 12.67 min.

Rainfall intensity (I) = 3.096(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.308(CFS)

Total initial stream area = 0.140(Ac.)

End of computations, total study area = 0.140 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 (NODE 107-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 107.000 to Point/Station 106.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 144.000(Ft.)

Highest elevation = 401.500(Ft.)

Lowest elevation = 400.000(Ft.)

Elevation difference = 1.500(Ft.)

TC=[(11.9*0.0273^3)/(1.50)]^.385= 2.08 + 10 min. = 12.08 min.

Rainfall intensity (I) = 3.151(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.112(CFS)

Total initial stream area = 0.050(Ac.)

++

Process from Point/Station 106.000 to Point/Station 104.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 399.500(Ft.)

Downstream point/station elevation = 389.560(Ft.)

Pipe length = 188.13(Ft.) Manning's N = 0.013

No. of pipes = 1 Required pipe flow = 0.112(CFS)

Nearest computed pipe diameter = 3.00(In.)

Calculated individual pipe flow = 0.112(CFS)

Normal flow depth in pipe = 1.59(In.)

Flow top width inside pipe = 2.99(In.)

Critical Depth = 2.42(In.)

Pipe flow velocity = 4.24(Ft/s)

Travel time through pipe = 0.74 min.

Time of concentration (TC) = 12.82 min.

++

Process from Point/Station 104.000 to Point/Station 104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.050(Ac.)

Runoff from this stream = 0.112(CFS)

Time of concentration = 12.82 min.

Rainfall intensity = 3.082(In/Hr)

++

Process from Point/Station 105.000 to Point/Station 104.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 114.000(Ft.)

Highest elevation = 404.500(Ft.)

Lowest elevation = 403.500(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0216^3)/(1.00)]^.385= 1.85 + 10 min. = 11.85 min.

Rainfall intensity (I) = 3.172(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.360(CFS)

Total initial stream area = 0.160(Ac.)

++

Process from Point/Station 104.000 to Point/Station 104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.160(Ac.)

Runoff from this stream = 0.360(CFS)

Time of concentration = 11.85 min.

Rainfall intensity = 3.172(In/Hr)

++

Process from Point/Station 103.000 to Point/Station 104.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 54.000(Ft.)

Highest elevation = 400.000(Ft.)

Lowest elevation = 399.000(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0102^3)/(1.00)]^.385= 0.78 + 10 min. = 10.78 min.

Rainfall intensity (I) = 3.283(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.583(CFS)

Total initial stream area = 0.250(Ac.)

++

Process from Point/Station 104.000 to Point/Station 104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 3

Stream flow area = 0.250(Ac.)

Runoff from this stream = 0.583(CFS)

Time of concentration = 10.78 min.

Rainfall intensity = 3.283(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.112	12.82	3.082
2	0.360	11.85	3.172
3	0.583	10.78	3.283

Qmax(1) =

1.000 * 1.000 * 0.112) +

0.972 * 1.000 * 0.360) +

0.939 * 1.000 * 0.583) + = 1.009

Qmax(2) =

1.000 * 0.925 * 0.112) +

1.000 * 1.000 * 0.360) +

0.966 * 1.000 * 0.583) + = 1.027

Qmax(3) =

1.000 * 0.841 * 0.112) +

1.000 * 0.910 * 0.360) +

1.000 * 1.000 * 0.583) + = 1.005

Total of 3 streams to confluence:

Flow rates before confluence point:

0.112 0.360 0.583

Maximum flow rates at confluence using above data:

1.009 1.027 1.005

Area of streams before confluence:

0.050 0.160 0.250

Results of confluence:

Total flow rate = 1.027(CFS)

Time of concentration = 11.855 min.

Effective stream area after confluence = 0.460(Ac.)

++

Process from Point/Station 104.000 to Point/Station 101.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 398.560(Ft.)

Downstream point/station elevation = 398.040(Ft.)

Pipe length = 105.00(Ft.) Manning's N = 0.013

No. of pipes = 1 Required pipe flow = 1.027(CFS)

Nearest computed pipe diameter = 9.00(In.)

Calculated individual pipe flow = 1.027(CFS)

Normal flow depth in pipe = 6.56(In.)

Flow top width inside pipe = 8.00(In.)

Critical Depth = 5.58(In.)

Pipe flow velocity = 2.97(Ft/s)

Travel time through pipe = 0.59 min.

Time of concentration (TC) = 12.44 min.

End of computations, total study area = 0.460 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100(NODE 108-100)

100 YEAR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 108.000 to Point/Station 100.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 338.000(Ft.)

Highest elevation = 422.970(Ft.)

Lowest elevation = 400.180(Ft.)

Elevation difference = 22.790(Ft.)

TC=[(11.9*0.0640^3)/(22.79)]^.385= 1.95 + 10 min. = 11.95 min.

Rainfall intensity (I) = 3.163(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.674(CFS)

Total initial stream area = 0.300(Ac.)

End of computations, total study area = 0.300 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 9NODE 109-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 1.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 109.000 to Point/Station 101.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 120.000(Ft.)

Highest elevation = 398.900(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0227^3)/(1.00)]^.385= 1.97 + 10 min. = 11.97 min.

Rainfall intensity (I) = 1.256(In/Hr) for a 1.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.045(CFS)

Total initial stream area = 0.050(Ac.)

End of computations, total study area = 0.050 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 200 9NODE 201-200)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

+++

Process from Point/Station 201.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 265.000(Ft.)

Highest elevation = 400.770(Ft.)

Lowest elevation = 392.080(Ft.)

Elevation difference = 8.690(Ft.)

TC=[(11.9*0.0502^3)/(8.69)]^.385= 2.14 + 10 min. = 12.14 min.

Rainfall intensity (I) = 3.145(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.268(CFS)

Total initial stream area = 0.120(Ac.)

+++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.120(Ac.)

Runoff from this stream = 0.268(CFS)

Time of concentration = 12.14 min.

Rainfall intensity = 3.145(In/Hr)

++

Process from Point/Station 202.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 342.000(Ft.)

Highest elevation = 400.890(Ft.)

Lowest elevation = 392.080(Ft.)

Elevation difference = 8.810(Ft.)

TC=[(11.9*0.0648^3)/(8.81)]^.385= 2.85 + 10 min. = 12.85 min.

Rainfall intensity (I) = 3.079(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.415(CFS)

Total initial stream area = 0.190(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.190(Ac.)

Runoff from this stream = 0.415(CFS)

Time of concentration = 12.85 min.

Rainfall intensity = 3.079(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.268	12.14	3.145
2	0.415	12.85	3.079

Qmax(1) =

1.000 * 1.000 * 0.268) +

1.000 * 0.944 * 0.415) + = 0.660

Qmax(2) =

0.979 * 1.000 * 0.268) +

1.000 * 1.000 * 0.415) + = 0.678

Total of 2 streams to confluence:

Flow rates before confluence point:

0.268 0.415

Maximum flow rates at confluence using above data:

0.660 0.678

Area of streams before confluence:

0.120 0.190

Results of confluence:

Total flow rate = 0.678(CFS)

Time of concentration = 12.855 min.

Effective stream area after confluence = 0.310(Ac.)

End of computations, total study area = 0.310 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 300 (NODE 302-300)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 302.000 to Point/Station 301.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 70.000(Ft.)

Highest elevation = 401.500(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 3.600(Ft.)

TC=[(11.9*0.0133^3)/(3.60)]^.385= 0.64 + 10 min. = 10.64 min.

Rainfall intensity (I) = 3.299(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.398(CFS)

Total initial stream area = 0.170(Ac.)

++

Process from Point/Station 301.000 to Point/Station 300.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 394.000(Ft.)

Downstream point/station elevation = 392.000(Ft.)

Pipe length = 60.00(Ft.) Manning's N = 0.013

No. of pipes = 1 Required pipe flow = 0.398(CFS)

Nearest computed pipe diameter = 6.00(In.)

Calculated individual pipe flow = 0.398(CFS)

Normal flow depth in pipe = 2.59(In.)

Flow top width inside pipe = 5.94(In.)

Critical Depth = 3.85(In.)

Pipe flow velocity = 4.89(Ft/s)

Travel time through pipe = 0.20 min.

Time of concentration (TC) = 10.85 min.

End of computations, total study area = 0.170 (Ac.)

APPENDIX D

Hydraulic Calculations

APPENDIX E

Detention Calculations

100-Year Rational Method
Hydrograph Calculations for
UCSD Hillel

		Q100=	1.39	cfs				
		Tc=	10	min	C=	0.71		
#=	42	$P_{100,6}$=	2	in	A=	0.65	acres	

		*(7.44*P6*D^-.645)*	*(I*D/60)*	*(V1-V0)*	*(Δ V/Δ T)*	*(Q=ciA)*		*(Re-ordered)*
#	**D (MIN)**	**I (IN/HR)**	**VOL (IN)**	**ΔVOL (IN)**	**I (INCR) (IN/HR)**	**Q (CFS)**	**VOL (CF)**	**ORDINATE SUM=**
0	0	0.00	0.00	0.56	3.37	1.39	834	0.00
1	10	3.37	0.56	0.16	0.94	0.43	260	0.06
2	20	2.15	0.72	0.11	0.67	0.31	185	0.06
3	30	1.66	0.83	0.09	0.54	0.25	148	0.06
4	40	1.38	0.92	0.08	0.45	0.21	126	0.06
5	50	1.19	0.99	0.07	0.40	0.18	110	0.06
6	60	1.06	1.06	0.06	0.36	0.17	99	0.06
7	70	0.96	1.12	0.05	0.33	0.15	90	0.07
8	80	0.88	1.18	0.05	0.30	0.14	83	0.07
9	90	0.82	1.23	0.05	0.28	0.13	78	0.07
10	100	0.76	1.27	0.04	0.26	0.12	73	0.07
11	110	0.72	1.32	0.04	0.25	0.11	69	0.08
12	120	0.68	1.36	0.04	0.23	0.11	65	0.08
13	130	0.64	1.40	0.04	0.22	0.10	62	0.09
14	140	0.61	1.43	0.04	0.21	0.10	59	0.09
15	150	0.59	1.47	0.03	0.20	0.09	57	0.10
16	160	0.56	1.50	0.03	0.20	0.09	54	0.10
17	170	0.54	1.54	0.03	0.19	0.09	52	0.11
18	180	0.52	1.57	0.03	0.18	0.08	50	0.12
19	190	0.50	1.60	0.03	0.18	0.08	49	0.14
20	200	0.49	1.63	0.03	0.17	0.08	47	0.15
21	210	0.47	1.66	0.03	0.17	0.08	46	0.18
22	220	0.46	1.68	0.03	0.16	0.07	44	0.21
23	230	0.45	1.71	0.03	0.16	0.07	43	0.31
24	240	0.43	1.74	0.03	0.15	0.07	42	0.43
25	250	0.42	1.76	0.02	0.15	0.07	41	1.39
26	260	0.41	1.79	0.02	0.14	0.07	40	0.25
27	270	0.40	1.81	0.02	0.14	0.07	39	0.17
28	280	0.39	1.83	0.02	0.14	0.06	38	0.13
29	290	0.38	1.86	0.02	0.13	0.06	37	0.11
30	300	0.38	1.88	0.02	0.13	0.06	37	0.09
31	310	0.37	1.90	0.02	0.13	0.06	36	0.08
32	320	0.36	1.92	0.02	0.13	0.06	35	0.08
33	330	0.35	1.94	0.02	0.12	0.06	34	0.07
34	340	0.35	1.96	0.02	0.12	0.06	34	0.07
35	350	0.34	1.98	0.02	0.12	0.06	33	0.06
36	360	0.33	2.00	0.00	0.00	0.00	0	0.06
						SUM=	**3231**	**cubic feet**
							0.07	**acre-feet**

Check: $V = C*A*P_6$

V= 0.08 acre-feet

OK

UCSD HILLEL

Stage-Discharge Table

RISER DETAILS: 5" Orifice Oulet

100-YR PEAK DISCHARGE, Q100 = 1.36 cfs

ORIFICE EQUATION: $Q = CA(2gH)^{1/2}$

where: C = Orifice Coefficient
= 0.60
A = Cross Sectional Area of Orifice (ft^2)
g = Gravitational Constant (32.2 ft/s^2)
H = Water Height over Centroid of Orifice (ft)

Water Height (in)	Water Height (ft)	Radius (ft)	Orifice Coeff.	Orifice Area (ft^2)	Orifice Flow (cfs)
1.0	0.08	0.2	0.6	0.1	0.1894
2.0	0.17	0.2	0.6	0.1	0.2679
3.0	0.25	0.2	0.6	0.1	0.3281
4.0	0.33	0.2	0.6	0.1	0.3789
5.0	0.42	0.2	0.6	0.1	0.4236
6.0	0.50	0.2	0.6	0.1	0.4640
7.0	0.58	0.2	0.6	0.1	0.5012
8.0	0.67	0.2	0.6	0.1	0.5358
9.0	0.75	0.2	0.6	0.1	0.5683
10.0	0.83	0.2	0.6	0.1	0.5990
11.0	0.92	0.2	0.6	0.1	0.6283
12.0	1.00	0.2	0.6	0.1	0.6562
13.0	1.08	0.2	0.6	0.1	0.6830
14.0	1.17	0.2	0.6	0.1	0.7088
15.0	1.25	0.2	0.6	0.1	0.7337
16.0	1.33	0.2	0.6	0.1	0.7577
17.0	1.42	0.2	0.6	0.1	0.7810
18.0	1.50	0.2	0.6	0.1	0.8037
19.0	1.58	0.2	0.6	0.1	0.8257
20.0	1.67	0.2	0.6	0.1	0.8472
21.0	1.75	0.2	0.6	0.1	0.8681
22.0	1.83	0.2	0.6	0.1	0.8885
23.0	1.92	0.2	0.6	0.1	0.9085
24.0	2.00	0.2	0.6	0.1	0.9280
25.0	2.08	0.2	0.6	0.1	0.9472
26.0	2.17	0.2	0.6	0.1	0.9659
27.0	2.25	0.2	0.6	0.1	0.9843
28.0	2.33	0.2	0.6	0.1	1.0024
29.0	2.42	0.2	0.6	0.1	1.0201
30.0	2.50	0.2	0.6	0.1	1.0376

UCSD HILLEL

31.0	2.58	0.2	0.6	0.1	1.0547
32.0	2.67	0.2	0.6	0.1	1.0716
33.0	2.75	0.2	0.6	0.1	1.0882
34.0	2.83	0.2	0.6	0.1	1.1046
35.0	2.92	0.2	0.6	0.1	1.1207
36.0	3.00	0.2	0.6	0.1	1.1366

UCSD HILLEL

UCSD HILLEL

PIPE ELEVATION-STORAGE CALCULATOR
FLAT DETENTION PIPE

INPUT

PIPE DIA =	48	inches
LENGTH =	150	feet

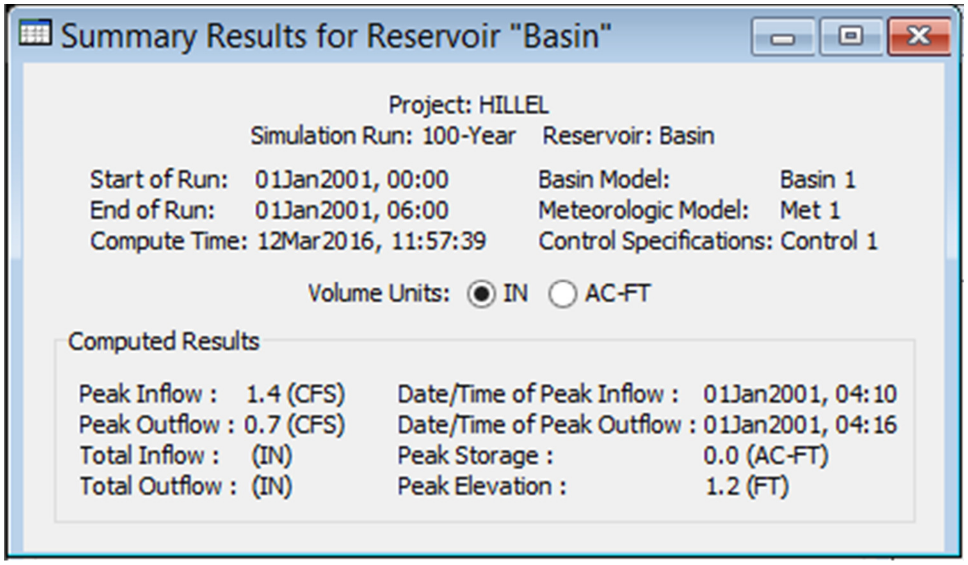
CALCULATE

RADIUS =	24	inches
TOTAL AREA =	12.57	sq. feet

				AREA 1				
ELEVATION (in)	AREA (sq ft)	AREA (acres)	STORAGE (acre-ft)	h	θ (deg)	θ (rad)	K (sq in)	K (sq ft)
1	0.06	0.00000146	0.000220	1	33	0.58	9	0.06
2	0.18	0.00000411	0.000617	2	47	0.82	26	0.18
3	0.33	0.00000751	0.001126	3	58	1.01	47	0.33
4	0.50	0.00001148	0.001722	4	67	1.17	72	0.50
5	0.69	0.00001594	0.002391	5	75	1.31	100	0.69
6	0.91	0.00002081	0.003122	6	83	1.45	131	0.91
7	1.13	0.00002605	0.003907	7	90	1.57	163	1.13
8	1.38	0.00003160	0.004741	8	96	1.68	198	1.38
9	1.63	0.00003744	0.005617	9	103	1.79	235	1.63
10	1.90	0.00004354	0.006531	10	109	1.90	273	1.90
11	2.17	0.00004987	0.007480	11	114	2.00	313	2.17
12	2.46	0.00005640	0.008460	12	120	2.09	354	2.46
13	2.75	0.00006311	0.009467	13	125	2.19	396	2.75
14	3.05	0.00007000	0.010499	14	131	2.28	439	3.05
15	3.36	0.00007702	0.011553	15	136	2.37	483	3.36
16	3.67	0.00008418	0.012627	16	141	2.46	528	3.67
17	3.98	0.00009145	0.013717	17	146	2.55	574	3.98
18	4.30	0.00009881	0.014822	18	151	2.64	620	4.30
19	4.63	0.00010626	0.015939	19	156	2.72	667	4.63
20	4.96	0.00011378	0.017066	20	161	2.81	714	4.96
21	5.29	0.00012135	0.018202	21	166	2.89	761	5.29
22	5.62	0.00012896	0.019343	22	170	2.97	809	5.62
23	5.95	0.00013659	0.020489	23	175	3.06	857	5.95
24	6.28	0.00014424	0.021636	24	180	3.14	905	6.28
25	6.62	0.00015189	0.022784	23	175	3.06	857	5.95
26	6.95	0.00015953	0.023929	22	170	2.97	809	5.62
27	7.28	0.00016714	0.025071	21	166	2.89	761	5.29
28	7.61	0.00017471	0.026206	20	161	2.81	714	4.96

29	7.94	0.00018223	0.027334	19	156	2.72	667	4.63
30	8.26	0.00018967	0.028451	18	151	2.64	620	4.30
31	8.58	0.00019704	0.029556	17	146	2.55	574	3.98
32	8.90	0.00020431	0.030646	16	141	2.46	528	3.67
33	9.21	0.00021146	0.031719	15	136	2.37	483	3.36
34	9.52	0.00021849	0.032773	14	131	2.28	439	3.05
35	9.82	0.00022537	0.033806	13	125	2.19	396	2.75
36	10.11	0.00023209	0.034813	12	120	2.09	354	2.46
37	10.39	0.00023862	0.035793	11	114	2.00	313	2.17
38	10.67	0.00024494	0.036741	10	109	1.90	273	1.90
39	10.94	0.00025104	0.037656	9	103	1.79	235	1.63
40	11.19	0.00025688	0.038532	8	96	1.68	198	1.38
41	11.43	0.00026244	0.039365	7	90	1.57	163	1.13
42	11.66	0.00026767	0.040151	6	83	1.45	131	0.91
43	11.87	0.00027254	0.040882	5	75	1.31	100	0.69
44	12.07	0.00027700	0.041550	4	67	1.17	72	0.50
45	12.24	0.00028098	0.042147	3	58	1.01	47	0.33
46	12.39	0.00028437	0.042656	2	47	0.82	26	0.18
47	12.50	0.00028702	0.043053	1	33	0.58	9	0.06
48	12.57	0.00028848	0.043273	0	0	0.00	0	0.00

UCSD HILLEL
100-YEAR HEC-HMS OUTPUT



Summary Results for Reservoir "Basin"

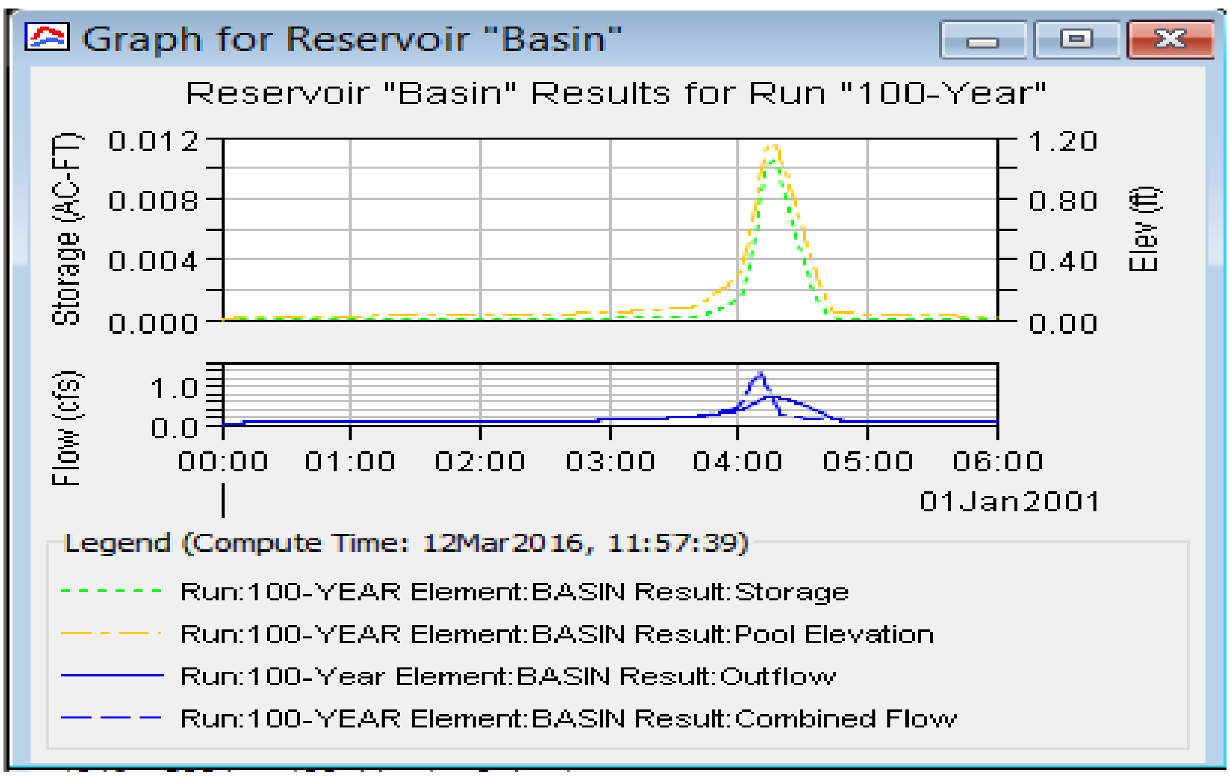
Project: HILLEL
Simulation Run: 100-Year   Reservoir: Basin

Start of Run:	01Jan2001, 00:00	Basin Model:	Basin 1
End of Run:	01Jan2001, 06:00	Meteorologic Model:	Met 1
Compute Time:	12Mar2016, 11:57:39	Control Specifications:	Control 1

Volume Units: (●) IN ( ) AC-FT

Computed Results

Peak Inflow :	1.4 (CFS)	Date/Time of Peak Inflow :	01Jan2001, 04:10
Peak Outflow :	0.7 (CFS)	Date/Time of Peak Outflow :	01Jan2001, 04:16
Total Inflow :	(IN)	Peak Storage :	0.0 (AC-FT)
Total Outflow :	(IN)	Peak Elevation :	1.2 (FT)



Project: HILLEL
Simulation Run: 100-Year Reservoir: Basin

Start of Run: 01Jan2001, 00:00 Basin Model: Basin 1
End of Run: 01Jan2001, 06:00 Meteorologic Model: Met 1
Compute Time: 12Mar2016, 11:57:39 Control Specifications: Cor

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:00	0.0	0.0	0.0	0.0
01Jan2001	00:01	0.0	0.0	0.0	0.0
01Jan2001	00:02	0.0	0.0	0.0	0.0
01Jan2001	00:03	0.0	0.0	0.0	0.0
01Jan2001	00:04	0.0	0.0	0.0	0.0
01Jan2001	00:05	0.0	0.0	0.0	0.0
01Jan2001	00:06	0.0	0.0	0.0	0.0
01Jan2001	00:07	0.0	0.0	0.0	0.0
01Jan2001	00:08	0.0	0.0	0.0	0.0
01Jan2001	00:09	0.1	0.0	0.0	0.0
01Jan2001	00:10	0.1	0.0	0.0	0.1
01Jan2001	00:11	0.1	0.0	0.0	0.1
01Jan2001	00:12	0.1	0.0	0.0	0.1
01Jan2001	00:13	0.1	0.0	0.0	0.1
01Jan2001	00:14	0.1	0.0	0.0	0.1
01Jan2001	00:15	0.1	0.0	0.0	0.1
01Jan2001	00:16	0.1	0.0	0.0	0.1
01Jan2001	00:17	0.1	0.0	0.0	0.1
01Jan2001	00:18	0.1	0.0	0.0	0.1
01Jan2001	00:19	0.1	0.0	0.0	0.1
01Jan2001	00:20	0.1	0.0	0.0	0.1
01Jan2001	00:21	0.1	0.0	0.0	0.1
01Jan2001	00:22	0.1	0.0	0.0	0.1
01Jan2001	00:23	0.1	0.0	0.0	0.1
01Jan2001	00:24	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:25	0.1	0.0	0.0	0.1
01Jan2001	00:26	0.1	0.0	0.0	0.1
01Jan2001	00:27	0.1	0.0	0.0	0.1
01Jan2001	00:28	0.1	0.0	0.0	0.1
01Jan2001	00:29	0.1	0.0	0.0	0.1
01Jan2001	00:30	0.1	0.0	0.0	0.1
01Jan2001	00:31	0.1	0.0	0.0	0.1
01Jan2001	00:32	0.1	0.0	0.0	0.1
01Jan2001	00:33	0.1	0.0	0.0	0.1
01Jan2001	00:34	0.1	0.0	0.0	0.1
01Jan2001	00:35	0.1	0.0	0.0	0.1
01Jan2001	00:36	0.1	0.0	0.0	0.1
01Jan2001	00:37	0.1	0.0	0.0	0.1
01Jan2001	00:38	0.1	0.0	0.0	0.1
01Jan2001	00:39	0.1	0.0	0.0	0.1
01Jan2001	00:40	0.1	0.0	0.0	0.1
01Jan2001	00:41	0.1	0.0	0.0	0.1
01Jan2001	00:42	0.1	0.0	0.0	0.1
01Jan2001	00:43	0.1	0.0	0.0	0.1
01Jan2001	00:44	0.1	0.0	0.0	0.1
01Jan2001	00:45	0.1	0.0	0.0	0.1
01Jan2001	00:46	0.1	0.0	0.0	0.1
01Jan2001	00:47	0.1	0.0	0.0	0.1
01Jan2001	00:48	0.1	0.0	0.0	0.1
01Jan2001	00:49	0.1	0.0	0.0	0.1
01Jan2001	00:50	0.1	0.0	0.0	0.1
01Jan2001	00:51	0.1	0.0	0.0	0.1
01Jan2001	00:52	0.1	0.0	0.0	0.1
01Jan2001	00:53	0.1	0.0	0.0	0.1
01Jan2001	00:54	0.1	0.0	0.0	0.1
01Jan2001	00:55	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:56	0.1	0.0	0.0	0.1
01Jan2001	00:57	0.1	0.0	0.0	0.1
01Jan2001	00:58	0.1	0.0	0.0	0.1
01Jan2001	00:59	0.1	0.0	0.0	0.1
01Jan2001	01:00	0.1	0.0	0.0	0.1
01Jan2001	01:01	0.1	0.0	0.0	0.1
01Jan2001	01:02	0.1	0.0	0.0	0.1
01Jan2001	01:03	0.1	0.0	0.0	0.1
01Jan2001	01:04	0.1	0.0	0.0	0.1
01Jan2001	01:05	0.1	0.0	0.0	0.1
01Jan2001	01:06	0.1	0.0	0.0	0.1
01Jan2001	01:07	0.1	0.0	0.0	0.1
01Jan2001	01:08	0.1	0.0	0.0	0.1
01Jan2001	01:09	0.1	0.0	0.0	0.1
01Jan2001	01:10	0.1	0.0	0.0	0.1
01Jan2001	01:11	0.1	0.0	0.0	0.1
01Jan2001	01:12	0.1	0.0	0.0	0.1
01Jan2001	01:13	0.1	0.0	0.0	0.1
01Jan2001	01:14	0.1	0.0	0.0	0.1
01Jan2001	01:15	0.1	0.0	0.0	0.1
01Jan2001	01:16	0.1	0.0	0.0	0.1
01Jan2001	01:17	0.1	0.0	0.0	0.1
01Jan2001	01:18	0.1	0.0	0.0	0.1
01Jan2001	01:19	0.1	0.0	0.0	0.1
01Jan2001	01:20	0.1	0.0	0.0	0.1
01Jan2001	01:21	0.1	0.0	0.0	0.1
01Jan2001	01:22	0.1	0.0	0.0	0.1
01Jan2001	01:23	0.1	0.0	0.0	0.1
01Jan2001	01:24	0.1	0.0	0.0	0.1
01Jan2001	01:25	0.1	0.0	0.0	0.1
01Jan2001	01:26	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	01:27	0.1	0.0	0.0	0.1
01Jan2001	01:28	0.1	0.0	0.0	0.1
01Jan2001	01:29	0.1	0.0	0.0	0.1
01Jan2001	01:30	0.1	0.0	0.0	0.1
01Jan2001	01:31	0.1	0.0	0.0	0.1
01Jan2001	01:32	0.1	0.0	0.0	0.1
01Jan2001	01:33	0.1	0.0	0.0	0.1
01Jan2001	01:34	0.1	0.0	0.0	0.1
01Jan2001	01:35	0.1	0.0	0.0	0.1
01Jan2001	01:36	0.1	0.0	0.0	0.1
01Jan2001	01:37	0.1	0.0	0.0	0.1
01Jan2001	01:38	0.1	0.0	0.0	0.1
01Jan2001	01:39	0.1	0.0	0.0	0.1
01Jan2001	01:40	0.1	0.0	0.0	0.1
01Jan2001	01:41	0.1	0.0	0.0	0.1
01Jan2001	01:42	0.1	0.0	0.0	0.1
01Jan2001	01:43	0.1	0.0	0.0	0.1
01Jan2001	01:44	0.1	0.0	0.0	0.1
01Jan2001	01:45	0.1	0.0	0.0	0.1
01Jan2001	01:46	0.1	0.0	0.0	0.1
01Jan2001	01:47	0.1	0.0	0.0	0.1
01Jan2001	01:48	0.1	0.0	0.0	0.1
01Jan2001	01:49	0.1	0.0	0.0	0.1
01Jan2001	01:50	0.1	0.0	0.0	0.1
01Jan2001	01:51	0.1	0.0	0.0	0.1
01Jan2001	01:52	0.1	0.0	0.0	0.1
01Jan2001	01:53	0.1	0.0	0.0	0.1
01Jan2001	01:54	0.1	0.0	0.0	0.1
01Jan2001	01:55	0.1	0.0	0.0	0.1
01Jan2001	01:56	0.1	0.0	0.0	0.1
01Jan2001	01:57	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	01:58	0.1	0.0	0.0	0.1
01Jan2001	01:59	0.1	0.0	0.0	0.1
01Jan2001	02:00	0.1	0.0	0.0	0.1
01Jan2001	02:01	0.1	0.0	0.0	0.1
01Jan2001	02:02	0.1	0.0	0.0	0.1
01Jan2001	02:03	0.1	0.0	0.0	0.1
01Jan2001	02:04	0.1	0.0	0.0	0.1
01Jan2001	02:05	0.1	0.0	0.0	0.1
01Jan2001	02:06	0.1	0.0	0.0	0.1
01Jan2001	02:07	0.1	0.0	0.0	0.1
01Jan2001	02:08	0.1	0.0	0.0	0.1
01Jan2001	02:09	0.1	0.0	0.0	0.1
01Jan2001	02:10	0.1	0.0	0.0	0.1
01Jan2001	02:11	0.1	0.0	0.0	0.1
01Jan2001	02:12	0.1	0.0	0.0	0.1
01Jan2001	02:13	0.1	0.0	0.0	0.1
01Jan2001	02:14	0.1	0.0	0.0	0.1
01Jan2001	02:15	0.1	0.0	0.0	0.1
01Jan2001	02:16	0.1	0.0	0.0	0.1
01Jan2001	02:17	0.1	0.0	0.0	0.1
01Jan2001	02:18	0.1	0.0	0.0	0.1
01Jan2001	02:19	0.1	0.0	0.0	0.1
01Jan2001	02:20	0.1	0.0	0.0	0.1
01Jan2001	02:21	0.1	0.0	0.0	0.1
01Jan2001	02:22	0.1	0.0	0.0	0.1
01Jan2001	02:23	0.1	0.0	0.0	0.1
01Jan2001	02:24	0.1	0.0	0.0	0.1
01Jan2001	02:25	0.1	0.0	0.0	0.1
01Jan2001	02:26	0.1	0.0	0.0	0.1
01Jan2001	02:27	0.1	0.0	0.0	0.1
01Jan2001	02:28	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	02:29	0.1	0.0	0.0	0.1
01Jan2001	02:30	0.1	0.0	0.0	0.1
01Jan2001	02:31	0.1	0.0	0.0	0.1
01Jan2001	02:32	0.1	0.0	0.0	0.1
01Jan2001	02:33	0.1	0.0	0.0	0.1
01Jan2001	02:34	0.1	0.0	0.0	0.1
01Jan2001	02:35	0.1	0.0	0.0	0.1
01Jan2001	02:36	0.1	0.0	0.0	0.1
01Jan2001	02:37	0.1	0.0	0.0	0.1
01Jan2001	02:38	0.1	0.0	0.0	0.1
01Jan2001	02:39	0.1	0.0	0.0	0.1
01Jan2001	02:40	0.1	0.0	0.0	0.1
01Jan2001	02:41	0.1	0.0	0.0	0.1
01Jan2001	02:42	0.1	0.0	0.0	0.1
01Jan2001	02:43	0.1	0.0	0.0	0.1
01Jan2001	02:44	0.1	0.0	0.0	0.1
01Jan2001	02:45	0.1	0.0	0.0	0.1
01Jan2001	02:46	0.1	0.0	0.0	0.1
01Jan2001	02:47	0.1	0.0	0.0	0.1
01Jan2001	02:48	0.1	0.0	0.0	0.1
01Jan2001	02:49	0.1	0.0	0.0	0.1
01Jan2001	02:50	0.1	0.0	0.0	0.1
01Jan2001	02:51	0.1	0.0	0.0	0.1
01Jan2001	02:52	0.1	0.0	0.0	0.1
01Jan2001	02:53	0.1	0.0	0.0	0.1
01Jan2001	02:54	0.1	0.0	0.0	0.1
01Jan2001	02:55	0.1	0.0	0.0	0.1
01Jan2001	02:56	0.1	0.0	0.0	0.1
01Jan2001	02:57	0.1	0.0	0.0	0.1
01Jan2001	02:58	0.1	0.0	0.0	0.1
01Jan2001	02:59	0.1	0.0	0.0	0.1

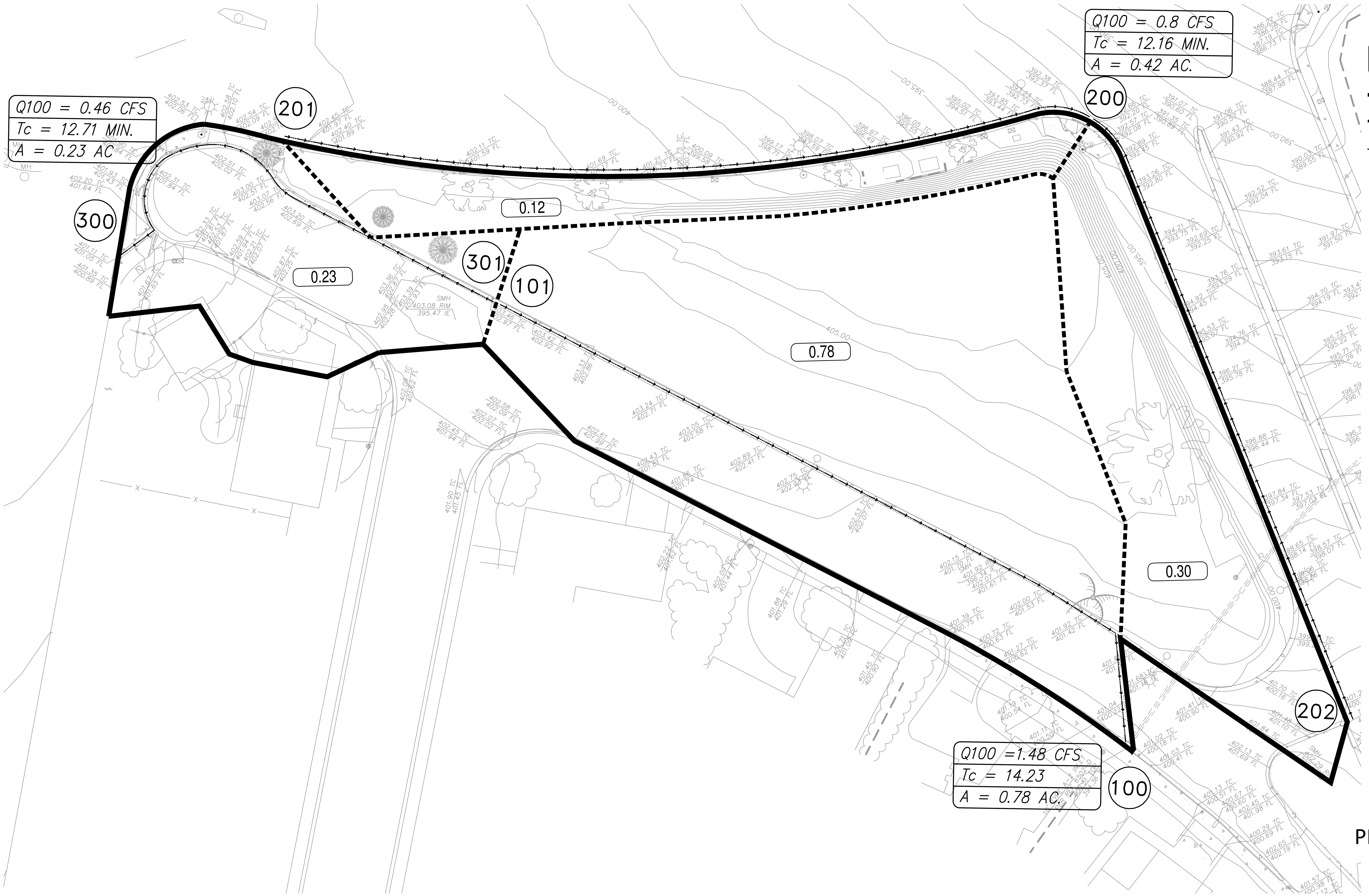
Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	03:00	0.1	0.0	0.1	0.1
01Jan2001	03:01	0.1	0.0	0.1	0.1
01Jan2001	03:02	0.1	0.0	0.1	0.1
01Jan2001	03:03	0.1	0.0	0.1	0.1
01Jan2001	03:04	0.1	0.0	0.1	0.1
01Jan2001	03:05	0.1	0.0	0.1	0.1
01Jan2001	03:06	0.1	0.0	0.1	0.1
01Jan2001	03:07	0.1	0.0	0.1	0.1
01Jan2001	03:08	0.1	0.0	0.1	0.1
01Jan2001	03:09	0.1	0.0	0.1	0.1
01Jan2001	03:10	0.1	0.0	0.1	0.1
01Jan2001	03:11	0.1	0.0	0.1	0.1
01Jan2001	03:12	0.1	0.0	0.1	0.1
01Jan2001	03:13	0.1	0.0	0.1	0.1
01Jan2001	03:14	0.1	0.0	0.1	0.1
01Jan2001	03:15	0.1	0.0	0.1	0.1
01Jan2001	03:16	0.1	0.0	0.1	0.1
01Jan2001	03:17	0.1	0.0	0.1	0.1
01Jan2001	03:18	0.1	0.0	0.1	0.1
01Jan2001	03:19	0.1	0.0	0.1	0.1
01Jan2001	03:20	0.2	0.0	0.1	0.1
01Jan2001	03:21	0.2	0.0	0.1	0.2
01Jan2001	03:22	0.2	0.0	0.1	0.2
01Jan2001	03:23	0.2	0.0	0.1	0.2
01Jan2001	03:24	0.2	0.0	0.1	0.2
01Jan2001	03:25	0.2	0.0	0.1	0.2
01Jan2001	03:26	0.2	0.0	0.1	0.2
01Jan2001	03:27	0.2	0.0	0.1	0.2
01Jan2001	03:28	0.2	0.0	0.1	0.2
01Jan2001	03:29	0.2	0.0	0.1	0.2
01Jan2001	03:30	0.2	0.0	0.1	0.2

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	03:31	0.2	0.0	0.1	0.2
01Jan2001	03:32	0.2	0.0	0.1	0.2
01Jan2001	03:33	0.2	0.0	0.1	0.2
01Jan2001	03:34	0.2	0.0	0.1	0.2
01Jan2001	03:35	0.2	0.0	0.1	0.2
01Jan2001	03:36	0.2	0.0	0.1	0.2
01Jan2001	03:37	0.2	0.0	0.1	0.2
01Jan2001	03:38	0.2	0.0	0.1	0.2
01Jan2001	03:39	0.2	0.0	0.1	0.2
01Jan2001	03:40	0.2	0.0	0.1	0.2
01Jan2001	03:41	0.2	0.0	0.1	0.2
01Jan2001	03:42	0.2	0.0	0.1	0.2
01Jan2001	03:43	0.2	0.0	0.1	0.2
01Jan2001	03:44	0.2	0.0	0.1	0.2
01Jan2001	03:45	0.3	0.0	0.1	0.2
01Jan2001	03:46	0.3	0.0	0.1	0.2
01Jan2001	03:47	0.3	0.0	0.1	0.2
01Jan2001	03:48	0.3	0.0	0.2	0.3
01Jan2001	03:49	0.3	0.0	0.2	0.3
01Jan2001	03:50	0.3	0.0	0.2	0.3
01Jan2001	03:51	0.3	0.0	0.2	0.3
01Jan2001	03:52	0.3	0.0	0.2	0.3
01Jan2001	03:53	0.3	0.0	0.2	0.3
01Jan2001	03:54	0.4	0.0	0.2	0.3
01Jan2001	03:55	0.4	0.0	0.2	0.3
01Jan2001	03:56	0.4	0.0	0.2	0.3
01Jan2001	03:57	0.4	0.0	0.3	0.3
01Jan2001	03:58	0.4	0.0	0.3	0.3
01Jan2001	03:59	0.4	0.0	0.3	0.3
01Jan2001	04:00	0.4	0.0	0.3	0.4
01Jan2001	04:01	0.5	0.0	0.3	0.4

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	04:02	0.6	0.0	0.4	0.4
01Jan2001	04:03	0.7	0.0	0.4	0.4
01Jan2001	04:04	0.8	0.0	0.5	0.4
01Jan2001	04:05	0.9	0.0	0.5	0.5
01Jan2001	04:06	1.0	0.0	0.6	0.5
01Jan2001	04:07	1.1	0.0	0.7	0.5
01Jan2001	04:08	1.2	0.0	0.7	0.6
01Jan2001	04:09	1.3	0.0	0.8	0.6
01Jan2001	04:10	1.4	0.0	0.9	0.6
01Jan2001	04:11	1.3	0.0	1.0	0.7
01Jan2001	04:12	1.2	0.0	1.1	0.7
01Jan2001	04:13	1.0	0.0	1.1	0.7
01Jan2001	04:14	0.9	0.0	1.1	0.7
01Jan2001	04:15	0.8	0.0	1.2	0.7
01Jan2001	04:16	0.7	0.0	1.2	0.7
01Jan2001	04:17	0.6	0.0	1.2	0.7
01Jan2001	04:18	0.5	0.0	1.1	0.7
01Jan2001	04:19	0.4	0.0	1.1	0.7
01Jan2001	04:20	0.2	0.0	1.1	0.7
01Jan2001	04:21	0.2	0.0	1.0	0.7
01Jan2001	04:22	0.2	0.0	1.0	0.6
01Jan2001	04:23	0.2	0.0	0.9	0.6
01Jan2001	04:24	0.2	0.0	0.9	0.6
01Jan2001	04:25	0.2	0.0	0.8	0.6
01Jan2001	04:26	0.2	0.0	0.8	0.6
01Jan2001	04:27	0.2	0.0	0.7	0.6
01Jan2001	04:28	0.2	0.0	0.7	0.5
01Jan2001	04:29	0.2	0.0	0.6	0.5
01Jan2001	04:30	0.2	0.0	0.6	0.5
01Jan2001	04:31	0.2	0.0	0.5	0.5
01Jan2001	04:32	0.2	0.0	0.5	0.5

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	04:33	0.2	0.0	0.5	0.4
01Jan2001	04:34	0.2	0.0	0.4	0.4
01Jan2001	04:35	0.2	0.0	0.4	0.4
01Jan2001	04:36	0.1	0.0	0.3	0.4
01Jan2001	04:37	0.1	0.0	0.3	0.3
01Jan2001	04:38	0.1	0.0	0.2	0.3
01Jan2001	04:39	0.1	0.0	0.2	0.3
01Jan2001	04:40	0.1	0.0	0.2	0.3
01Jan2001	04:41	0.1	0.0	0.1	0.2
01Jan2001	04:42	0.1	0.0	0.1	0.2
01Jan2001	04:43	0.1	0.0	0.1	0.2
01Jan2001	04:44	0.1	0.0	0.1	0.1
01Jan2001	04:45	0.1	0.0	0.1	0.1
01Jan2001	04:46	0.1	0.0	0.1	0.1
01Jan2001	04:47	0.1	0.0	0.0	0.1
01Jan2001	04:48	0.1	0.0	0.0	0.1
01Jan2001	04:49	0.1	0.0	0.0	0.1
01Jan2001	04:50	0.1	0.0	0.0	0.1
01Jan2001	04:51	0.1	0.0	0.0	0.1
01Jan2001	04:52	0.1	0.0	0.0	0.1
01Jan2001	04:53	0.1	0.0	0.0	0.1
01Jan2001	04:54	0.1	0.0	0.0	0.1
01Jan2001	04:55	0.1	0.0	0.0	0.1
01Jan2001	04:56	0.1	0.0	0.0	0.1
01Jan2001	04:57	0.1	0.0	0.0	0.1
01Jan2001	04:58	0.1	0.0	0.0	0.1
01Jan2001	04:59	0.1	0.0	0.0	0.1
01Jan2001	05:00	0.1	0.0	0.0	0.1
01Jan2001	05:01	0.1	0.0	0.0	0.1
01Jan2001	05:02	0.1	0.0	0.0	0.1
01Jan2001	05:03	0.1	0.0	0.0	0.1

HILLEL
DRAINAGE MAP
PRE DEVELOPMENT CONDITION



LEGEND

(100)	NODE
Q50 = X.XX CFS Tc = X.XX MIN. A = X.XX AC.	50-YEAR FREQUENCY DISCHARGE TIME OF CONCENTRATION AREA
	MAJOR BASIN BOUNDARY
	SUBBASIN BOUNDARY
	FLOW PATH
0.20	BASIN AREA

GRAPHIC SCALE

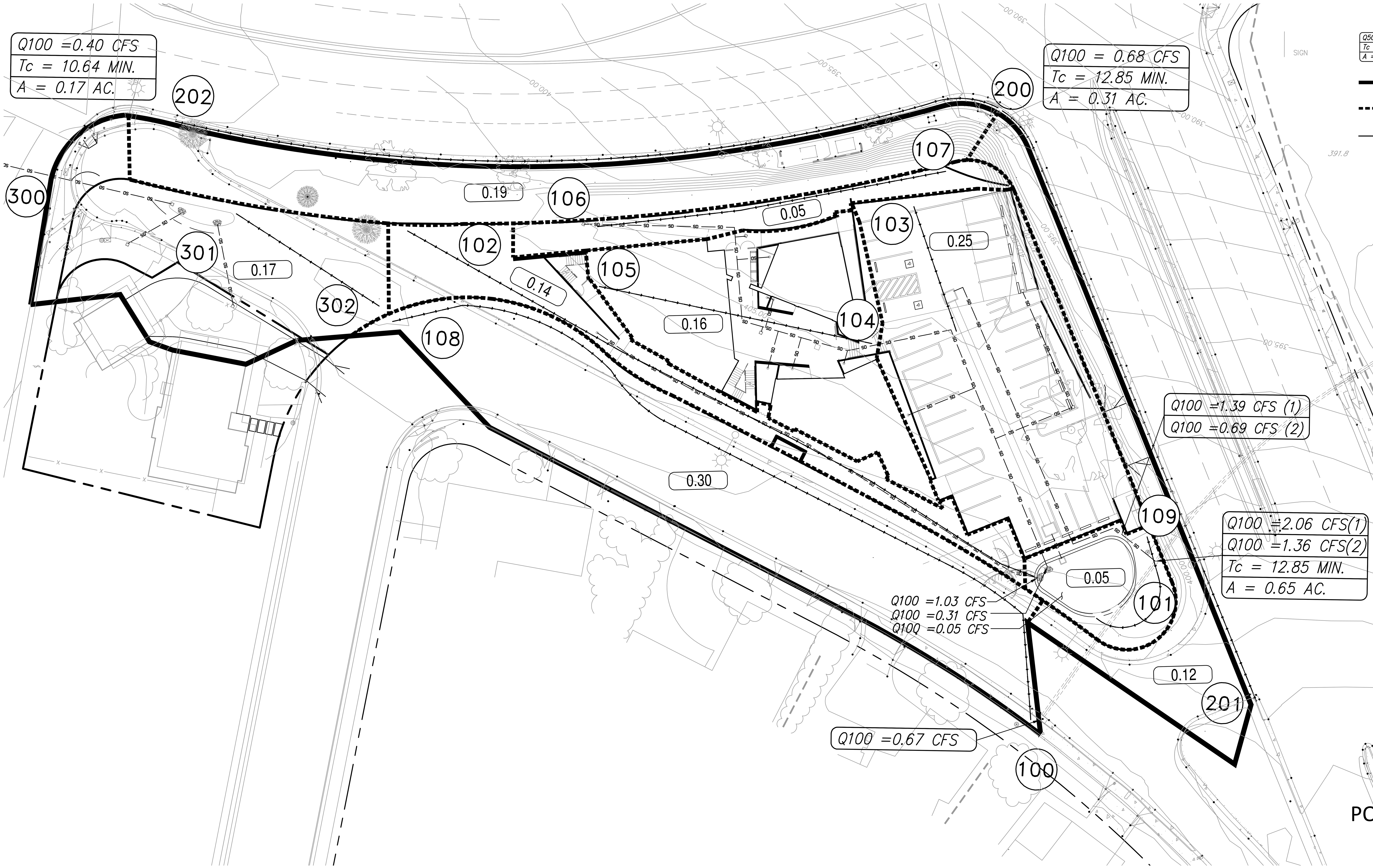
20 0 20 40

(IN FEET)
1" = 20'

EXHIBIT 'A'
PRE-DEVELOPMENT
DRAINAGE MAP

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

HILLEL
DRAINAGE MAP
POST DEVELOPMENT CONDITION



LEGEND

100	NODE
Q50 = X.XX CFS / Tc = X.XX MIN. / A = X.XX AC.	50-YEAR FREQUENCY DISCHARGE / TIME OF CONCENTRATION / AREA
	MAJOR BASIN BOUNDARY
	SUBBASIN BOUNDARY
	FLOW PATH
0.20	BASIN AREA
(1)	TOTAL FLOW BEFORE DETENTION
(2)	TOTAL FLOW AFTER DETENTION

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1" = 20'

EXHIBIT 'B'
POST-DEVELOPMENT
DRAINAGE MAP

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

ATTACHMENT 6
GEOTECHNICAL AND GROUNDWATER INVESTIGATION REPORT

Attach project's geotechnical and groundwater investigation report. Refer to Appendix C.4 to determine the reporting requirements.

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SCST, Inc.
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SDVOSB . DVBE

October 4, 2016 [illegible]

[illegible]

[illegible]

Subject: INFILTRATION RATE TESTING
UCSD HILLEL CENTER FOR JEWISH LIFE
INTERSECTION OF LA JOLLA SCENIC WAY
AND LA JOLLA VILLAGE DRIVE
SAN DIEGO, CALIFORNIA

Dear Mr. Rabkin:

This report presents the results the infiltration feasibility assessment SCST, Inc. (SCST) performed for the subject project. We understand the project will consist of the design and construction of the Hillel Center for Jewish Life Campus and associated improvements. Two bio-retention basins are planned for the project. Our scope consisted of excavating 4 test pits using a rubber tire backhoe and performing four infiltration tests in the area of the proposed basin. Figure 1 presents a site location map and Figure 2 presents the approximate locations of the infiltration testing and exploratory test pits.

[illegible]

The project site consists of an irregular shaped property located at the intersection of La Jolla Village Drive and La Jolla Scenic Way in the La Jolla Community of San Diego, California. The site is bordered by La Jolla Scenic Way on the east, Torrey Pines Road on the west, La Jolla Village Drive on the north, and La Jolla Scenic Drive North on the south. The site is comprised of a relatively flat ground surface that slopes gently to the south and is bounded by steep cut slopes on the north and east. The cut slopes range up to approximately 10 feet in height and the site is at elevations ranging from approximately 400 feet to 408 feet above mean sea level.

[illegible]

We explored the subsurface conditions by excavating four test pits to depths of about 9 feet below the existing ground surface using a rubber tired back hoe. An SCST engineer logged the borings and collected samples for laboratory testing. The logs of the exploratory borings are presented in Appendix I. Soils are classified according to the Unified Soil Classification System illustrated on Figure I-1. No groundwater or seepage was encountered in the borings.

INFILTRATION RATE TESTING

Double ring infiltration testing was performed at four locations at a depth of approximately 2 feet below the existing ground surface, as shown as I-1 though I-2 on Figure 2. Infiltration testing was performed in general accordance with ASTM D3385. Material encountered at all four infiltration testing locations consisted of medium dense to dense silty sandstone. Table 1 presents the infiltration rate test results. Results of the field and laboratory testing are presented in Appendix I.

Table 1 Infiltration Rate Test Results

Test Location	**Approximate Test Depth (ft)**	**Material Type at Test Location**	**Infiltration Rate (inches per hour)**
I-1	2	Medium Dense to Dense SILTY SANDSTONE	0.4
I-2	2	Dense SILTY SANDSTONE	<0.1
I-3	2	Medium Dense to Dense SILTY SANDSTONE	0.9
I-4	2	Dense SILTY SANDSTONE	<0.1

Analysis of the field and laboratory test results was performed in accordance with worksheet C.4-1 of Appendix C of the Model BMP Design Manual San Diego Region.

- Worksheet C-4-1 Criteria 1: The estimated reliable infiltration rate for near-surface proposed facilities and proposed facilities to 6 feet below the ground surface is not greater than 0.5 inches per hour.
- Worksheet C.4-1 Criteria 5: Soil and geologic conditions do not allow for infiltration of appreciable rate or volume, based on presence of relatively dense soils.

Based on the testing performed at the locations described, infiltration is considered *infeasible*, and the sites Feasibility Screening Category is *No Infiltration*.

If you have any questions, please call us at 619-280-4321.

Respectfully Submitted,
□□□T□I□□□□

REGISTERED PROFESSIONAL ENGINEER
EMIL RUDOLPH
No. 2767
Exp. 6/30/17
GEOTECHNICAL
STATE OF CALIFORNIA

Evan Morrill
Staff Engineer

Emil Rudolph, PE, GE 2767
Principal Engineer

EM:ER:aw

Attachments:

<u>Figures</u>
Figure 1 – Site Vicinity Map
Figure 2 – Subsurface Exploration Map

<u>Appendices</u>
Appendix I – Test Pit Logs
Appendix II – Laboratory Testing
Appendix III – Infiltration Rate Test Results
Appendix IV – Worksheet C.4-1: Categorization of Infiltration Feasibility Condition

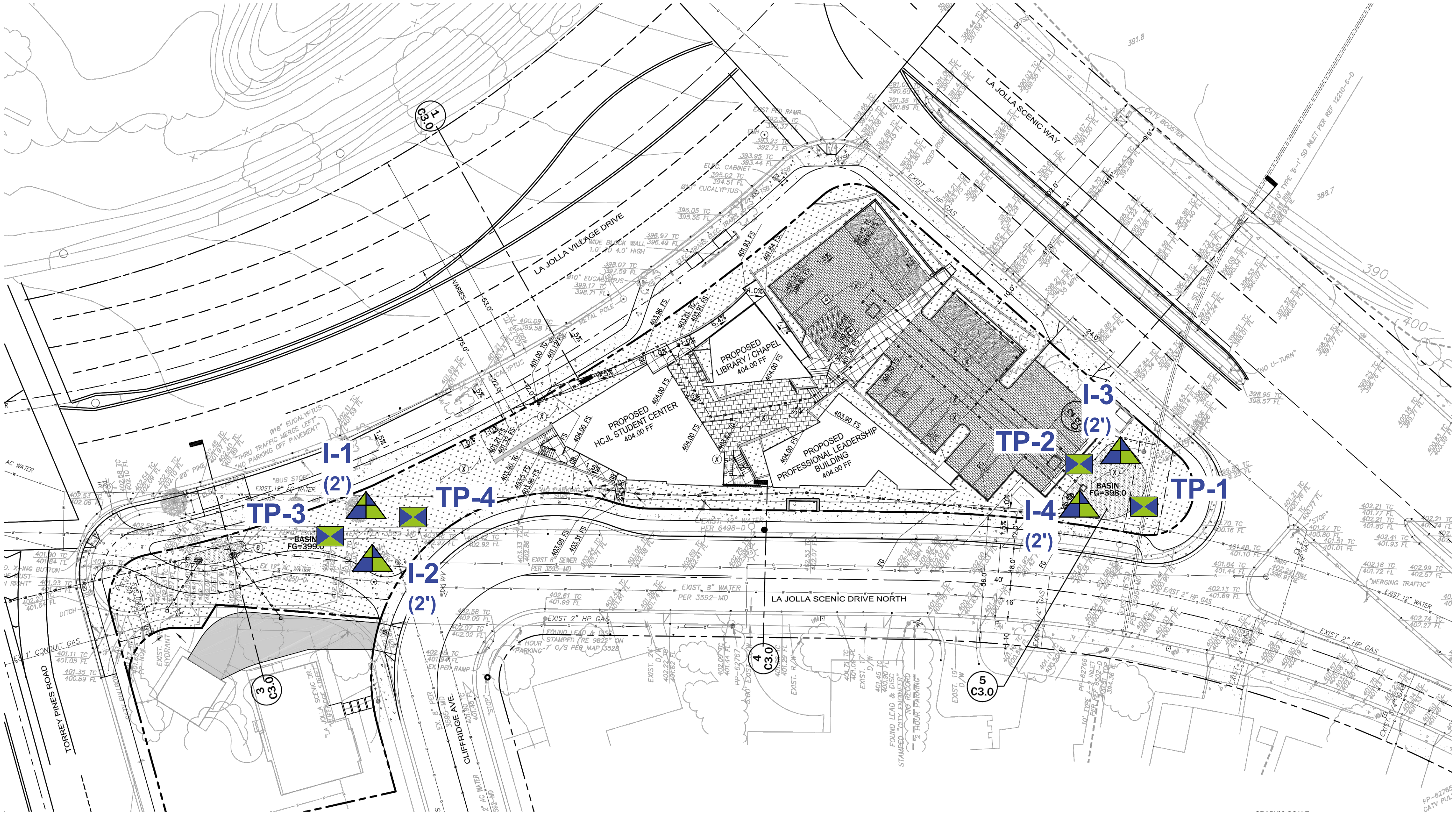
(1) Addressee via e-mail: mrabkin@hillelsd.org

SCST, Inc.

SITE VICINITY MAP
UCSD Hillel Center for Jewish Life
San Diego, California

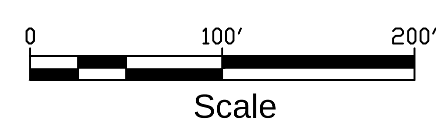
Date:	March, 2016
By:	JCU
Job No.:	160133N-1

Figure:
1



SCST LEGEND:

TP-4	Approximate Location of Test Pit	I-4 (2')	Approximate Location of Infiltration Test with Depth (in Feet)



SCST, Inc.

SUBSURFACE EXPLORATION MAP

UCSD Hillel Center for Jewish Life

San Diego, California

Date: March, 2016

By: JCU

Job No.: 160133N-1

Figure: 2

APPENDIX I
SUBSURFACE EXPLORATION

The subsurface conditions were explored by excavating 4 test pits on February 8, 2016 to depths of about 9 feet below the existing ground surface using a rubber tired back hoe. Figure 2 shows the approximate locations of the test pits. The field investigation was performed under the observation of an SCST engineer who also logged the borings and obtained samples of the materials encountered.

The soils are classified in accordance with the Unified Soil Classification System as illustrated on Figure I-1. Logs of the borings are presented on Figures I-2 through I-5.

[illegible]

[illegible]

SOIL DESCRIPTION		GROUP SYMBOL	TYPICAL NAMES
I. COARSE GRAINED, more than 50% of material is larger than No. 200 sieve size.			
GRAVELS More than half of coarse fraction is larger than No. 4 sieve size but smaller than 3".	CLEAN GRAVELS	GW	Well graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly graded gravels, gravel sand mixtures, little or no fines.
	GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, poorly graded gravel-sand-silt mixtures.
		GC	Clayey gravels, poorly graded gravel-sand, clay mixtures.
SANDS More than half of coarse fraction is smaller than No. 4 sieve size.	CLEAN SANDS	SW	Well graded sand, gravelly sands, little or no fines.
		SP	Poorly graded sands, gravelly sands, little or no fines.
		SM	Silty sands, poorly graded sand and silty mixtures.
		SC	Clayey sands, poorly graded sand and clay mixtures.
II. FINE GRAINED, more than 50% of material is smaller than No. 200 sieve size.			
	SILTS AND CLAYS (Liquid Limit less than 50)	ML	Inorganic silts and very fine sands, rock flour, sandy silt or clayey-silt-sand mixtures with slight plasticity.
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		OL	Organic silts and organic silty clays or low plasticity.
	SILTS AND CLAYS (Liquid Limit greater than 50)	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
		CH	Inorganic clays of high plasticity, fat clays.
		OH	Organic clays of medium to high plasticity.
III. HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils.

SAMPLE SYMBOLS

- Bulk Sample
- CAL - Modified California sampler
- CK - Undisturbed Chunk sample
- MS - Maximum Size of Particle
- ST - Shelby Tube
- SPT - Standard Penetration Test sampler

GROUNDWATER SYMBOLS

- Water level at time of excavation or as indicated
- Water seepage at time of excavation or as indicated

LABORATORY TEST SYMBOLS

AL - Atterberg Limits
CON - Consolidation
COR - Corrosivity Tests (Resistivity, pH, Chloride, Sulfate)
DS - Direct Shear
EI - Expansion Index
MAX - Maximum Density
RV - R-Value
SA - Sieve Analysis
UC - Unconfined Compression

SCST ENGINEERING	[illegible]	UCSD Hillel Center for Jewish Life San Diego, California			
		By:	EM	Date:	March, 2016
		Job Number:	160133N-1	Figure:	I-1

[illegible] TP-1

Date Drilled:	2/8/2016	Logged by:	EM
Equipment:	CAT 420D Back Hoe	Project Manager:	DAS
Elevation (ft):	Estimated 406	Depth to Groundwater (ft):	Unknown

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES: DRIVEN	SAMPLES: BULK	DRIVING RESISTANCE (blows/ft of drive)	N_{60}	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
0–3	SM	[illegible]: SILTY SAND, dark brown, fine to medium grained, moist, some organic material, medium dense to dense.		X					
3–5		[illegible]: SILTY SANDSTONE, light orangish brown, fine to coarse grained, moist, dense.		X					
5–9		dark orangish brown, very dense.		X					
9		[illegible]							

UCSD Hillel Center for Jewish Life, San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N	Figure:	I-2

[illegible]

TP-2

Date Drilled:	2/8/2016	Logged by:	EM
Equipment:	CAT 420D Back Hoe	Project Manager:	DAS
Elevation (ft):	Estimated 408	Depth to Groundwater (ft):	Unknown

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES DRIVEN	SAMPLES BULK	DRIVING RESISTANCE (blows/ft of drive)	N_{60}	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
0–3	SM	SILTY SAND, dark brown, fine to medium grained, moist, some organic material, medium dense to dense.		X					
3–9		SILTY SANDSTONE, light orangish brown, fine to coarse grained, moist, dense.		X					
5		dark orangish brown, very dense.		X					
9–20									

UCSD Hillel Center for Jewish Life

San Diego, California

By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	I-3

TP-3

Date Drilled:	2/8/2016	Logged by:	EM
Equipment:	CAT 420D Back Ho	Project Manager:	DAS
Elevation (ft):	Estimated 406	Depth to Groundwater (ft):	Unknown

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES DRIVEN	SAMPLES BULK	DRIVING RESISTANCE (blows/ft of drive)	N_{60}	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
0–2	SM	SILTY SAND, dark brown, fine to medium grained, moist, some organic material, medium dense to dense.		X					
2–4		SILTY SANDSTONE, light orangish brown, fine to coarse grained, moist.		X					
4–9		dark orangish brown, very dense.		X					
9									
10–20									

UCSD Hillel Center for Jewish Life San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	I-4

[illegible] TP-4

Date Drilled:	2/8/2016	Logged by:	EM
Equipment:	CAT 420D Back H[illegible]	Project Manager:	DAS
Elevation (ft):	Estimated 408	Depth to Groundwater (ft):	Unknown

DEPTH (ft)	USCS	SUMMARY OF SUBSURFACE CONDITIONS	SAMPLES: DRIVEN	SAMPLES: BULK	DRIVING RESISTANCE (blows/ft of drive)	N_{60}	MOISTURE CONTENT (%)	DRY UNIT WEIGHT (pcf)	LABORATORY TESTS
0–2	SM	[illegible] SILTY SAND, dark brown, fine to medium grained, moist, some organic material, medium dense to dense.		X					
2–4		[illegible] SILTY SANDSTONE, light orangish brown, fine to coarse grained, moist, dense.		X					
4–9		dark orangish brown, very dense.		X					
9		[illegible]							

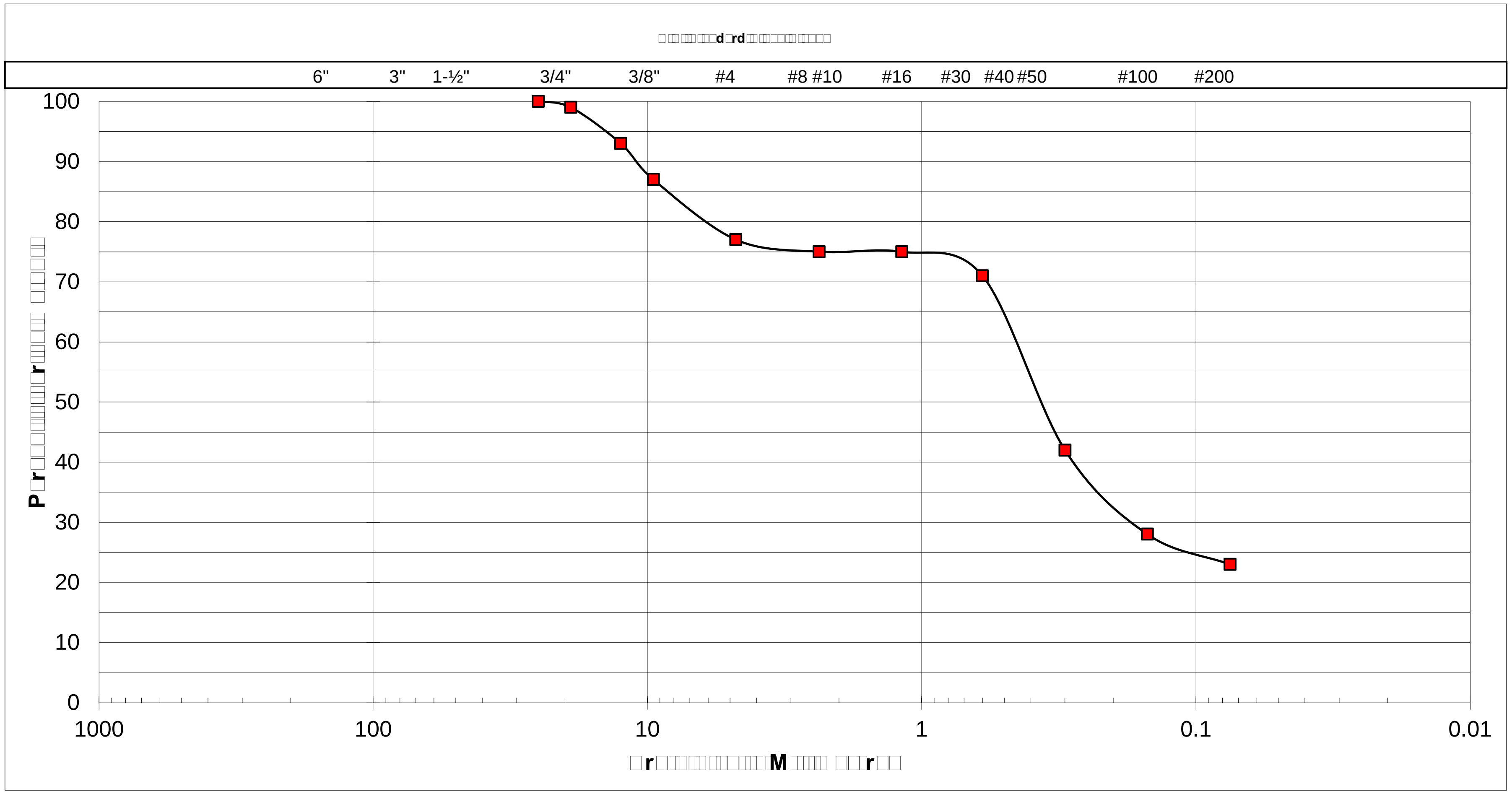
Depth scale: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

[illegible]	UCSD Hillel Center for Jewish Life San Diego, California		
	By: EM	Date:	March, 2016
	Job Number: 160133N-1	Figure:	I-5

APPENDIX II
LABORATORY TESTING

Laboratory tests were performed to provide geotechnical parameters for engineering analyses. The following tests were performed:

- **CLASSIFICATION:** Field classifications were verified in the laboratory by visual examination. The final soil classifications are in accordance with the Unified Soil Classification System.
- **GRAIN SIZE DISTRIBUTION:** The grain size distribution was determined on four samples in accordance with ASTM D422. Figures II-1 through II-4 present the test results.

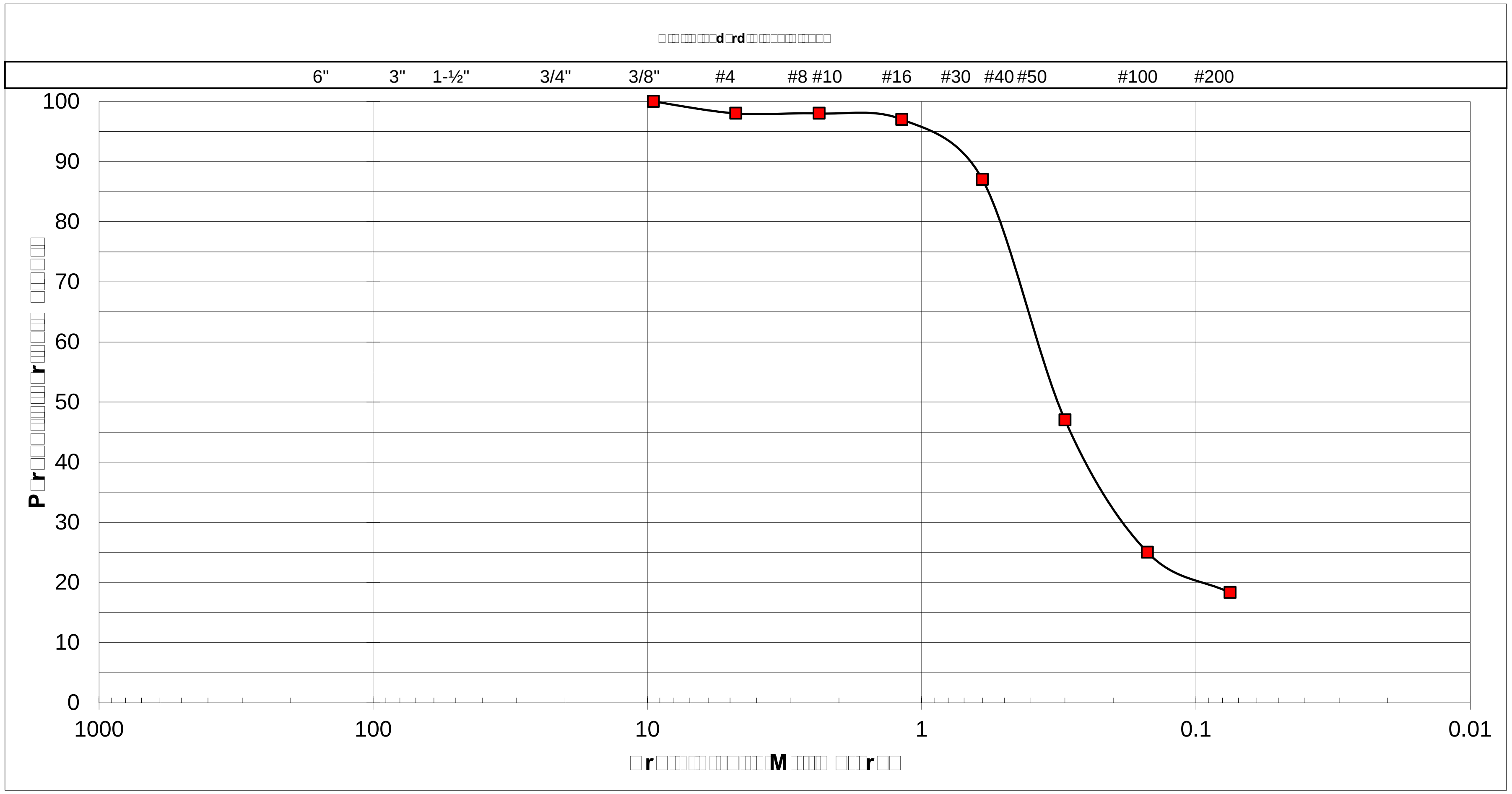


Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

[illegible]
TP1 at 0 to 3 Feet

[illegible]	SM
[illegible]	SILTY SAND with GRAVEL

UCSD Hillel Center for Jewish Life San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	II-1



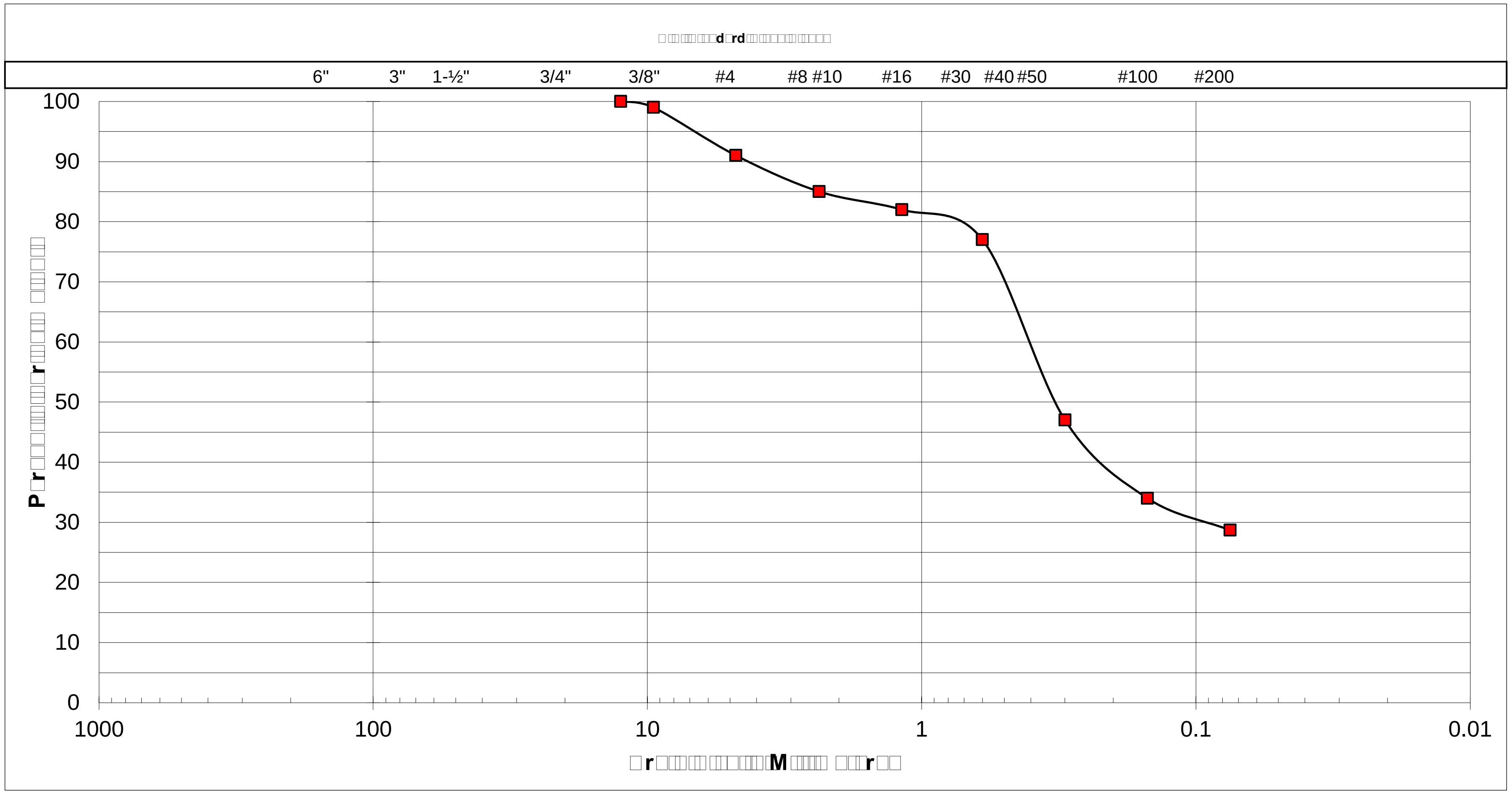
Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

[illegible]
TP2 at 5 to 9 Feet

[illegible]	SM
[illegible]	SILTY SAND

[illegible]

UCSD Hillel Center for Jewish Life San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	II-2

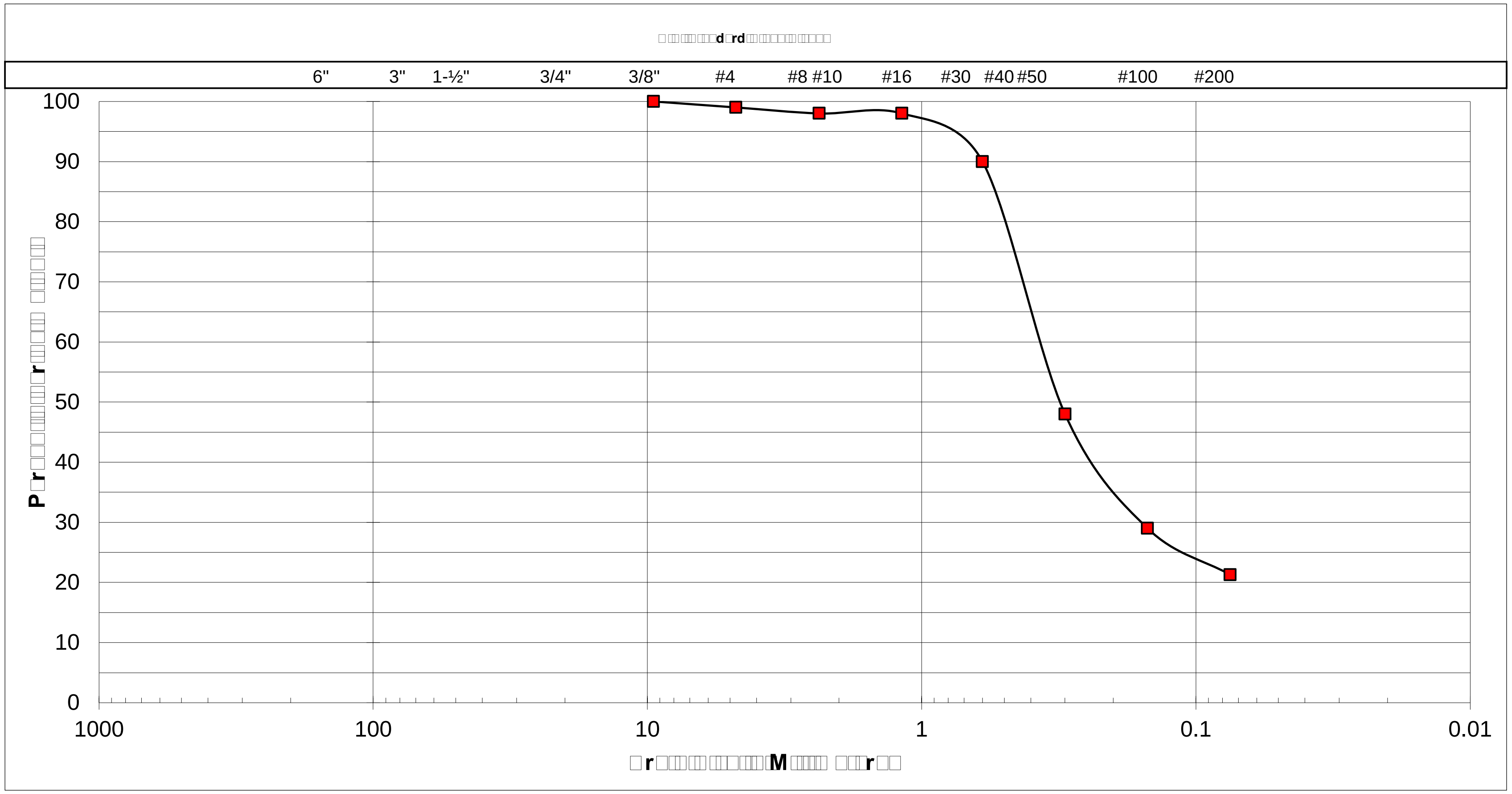


Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

[illegible]
TP3 at 2 to 4 Feet

[illegible]	SM
[illegible]	SILTY SAND

UCSD Hillel Center for Jewish Life San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	II-3



Cobbles	Gravel		Sand			Silt or Clay
	Coarse	Fine	Coarse	Medium	Fine	

	SM
TP4 at 4 to 9 Feet	SILTY SAND

UCSD Hillel Center for Jewish Life San Diego, California			
By:	EM	Date:	March, 2016
Job Number:	160133N-1	Figure:	II-4

□PP□□□I□□III□

I□□I□T□□TI□□□□□T□□T□□T□□□□□□T□□

Report of Double Ring Infiltrometer Testing

Project Name: **UCSD Hillel Center for Jewish Life**
Test Number: **I-1**
Project Number: **160133N-1**
Date Tested: **2/8/2016**
Test Depth (ft): **2**
Tested By: **EM**
Reviewed By: **ER**
Soil Type: **SILTY SAND**

Inner Ring Test Data

Inner Ring Diameter (in): 12

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.5	9:28 AM	9:43 AM	2.3	1.8	27.5	1.0
15	0.3	9:43 AM	9:58 AM	1.8	1.5	18.3	0.6
15	0.3	9:58 AM	10:13 AM	1.5	1.2	18.3	0.6
17	0.3	10:13 AM	10:30 AM	2.1	1.9	15.3	0.5
30	0.4	10:34 AM	11:04 AM	1.9	1.5	21.4	0.4
31	0.5	11:04 AM	11:35 AM	1.5	1.0	30.5	0.5
30	0.4	11:37 AM	12:07 PM	2.0	1.6	24.4	0.4
30	0.4	12:07 PM	12:37 PM	1.6	1.2	24.4	0.4

Outer Ring Test Data

Outer Ring Diameter (in): 24

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	2.6	9:28 AM	9:43 AM	7.8	5.2	155.6	1.8
15	1.4	9:43 AM	9:58 AM	5.2	3.8	85.4	1.0
15	1.8	9:58 AM	10:13 AM	3.8	2.0	109.8	1.3
17	1.2	10:13 AM	10:30 AM	2.0	0.8	73.2	0.8
30	1.9	10:34 AM	11:04 AM	7.5	5.6	115.9	0.7
31	2.7	11:04 AM	11:35 AM	5.6	2.9	164.8	0.9
30	2.3	11:37 AM	12:07 PM	7.5	5.2	140.4	0.8
30	2.1	12:07 PM	12:37 PM	5.2	3.1	128.1	0.8

Remarks:

Infiltration Rate: 0.4 in/hr

Figure No.: **III-1**

Method: **ASTM D3385**

Report of Double Ring Infiltrometer Testing

Project Name: **UCSD Hillel Center for Jewish Life** Test Number: **I-2**
Project Number: **160133N** Date Tested: **2/8/2016** Test Depth (ft): **2**
Tested By: **EM** Reviewed By: **ER** Soil Type: **SILTY SAND**

Inner Ring Test Data

Inner Ring Diameter (in): 11 1/2

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.2	9:29 AM	9:44 AM	15.2	15.0	12.2	0.5
15	0.0	9:44 AM	9:59 AM	15.0	15.0	0.0	0.0
14	0.1	9:59 AM	10:13 AM	15.0	14.9	6.1	0.3
18	0.0	10:13 AM	10:31 AM	14.9	14.9	0.0	0.0
30	0.1	10:35 AM	11:05 AM	14.9	14.8	6.1	0.1
30	0.0	11:05 AM	11:35 AM	14.8	14.8	0.0	0.0
30	0.0	11:37 AM	12:07 PM	14.8	14.8	0.0	0.0
30	0.0	12:07 PM	12:37 PM	14.8	14.8	0.0	0.0

Outer Ring Test Data

Outer Ring Diameter (in): 22 5/8

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.0	9:29 AM	9:44 AM	44.6	44.6	0.0	0.0
15	0.0	9:44 AM	9:59 AM	44.6	44.6	0.0	0.0
14	0.0	9:59 AM	10:13 AM	44.6	44.6	0.0	0.0
18	0.0	10:13 AM	10:31 AM	44.6	44.6	0.0	0.0
30	0.0	10:35 AM	11:05 AM	44.6	44.6	0.0	0.0
30	0.0	11:05 AM	11:35 AM	44.6	44.6	0.0	0.0
30	0.0	11:37 AM	12:07 PM	44.6	44.6	0.0	0.0
30	0.0	12:07 PM	12:37 PM	44.6	44.6	0.0	0.0

Remarks: Infiltration Rate: <0.1 in/hr

Figure No.: **III-2**

Method: **ASTM D3385**

Report of Double Ring Infiltrometer Testing

Project Name: **UCSD Hillel Center for Jewish Life**
Test Number: **I-3**
Project Number: **160133N-1**
Date Tested: **2/8/2016**
Test Depth (ft): **2**
Tested By: **EM**
Reviewed By: **ER**
Soil Type: **SILTY SAND**

Inner Ring Test Data

Inner Ring Diameter (in): 12

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.7	1:22 PM	1:37 PM	2.1	1.4	42.7	1.5
15	0.4	1:37 PM	1:52 PM	1.4	1.0	24.4	0.9
18	0.5	1:52 PM	2:10 PM	1.0	0.5	30.5	0.9
16	0.6	2:12 PM	2:28 PM	2.3	1.7	36.6	1.2
31	0.9	2:28 PM	2:59 PM	1.7	0.8	54.9	0.9
30	0.9	3:02 PM	3:32 PM	2.1	1.2	54.9	1.0
30	0.8	3:32 PM	4:02 PM	1.2	0.4	48.8	0.9
30	0.9	4:04 PM	4:34 PM	2.0	1.2	51.9	0.9

Outer Ring Test Data

Outer Ring Diameter (in): 24

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	2.4	1:22 PM	1:37 PM	7.4	5.0	146.5	1.7
15	1.8	1:37 PM	1:52 PM	5.0	3.2	109.8	1.3
18	2.4	1:52 PM	2:10 PM	3.2	0.8	146.5	1.4
16	2.1	2:12 PM	2:28 PM	7.8	5.7	128.1	1.4
31	3.8	2:28 PM	2:59 PM	5.7	1.9	231.9	1.3
30	3.5	3:02 PM	3:32 PM	7.5	4.0	213.6	1.3
30	3.2	3:32 PM	4:02 PM	4.0	0.8	195.3	1.2
30	3.5	4:04 PM	4:34 PM	7.2	3.7	213.6	1.3

Remarks:

Infiltration Rate: 0.9 in/hr

Figure No.: **III-3**

Method: **ASTM D3385**

Report of Double Ring Infiltrometer Testing

Project Name: **UCSD Hillel Center for Jewish Life**
Test Number: **I-4**
Project Number: **160133N**
Date Tested: **2/8/2016**
Test Depth (ft): **2**
Tested By: **EM**
Reviewed By: **ER**
Soil Type: **SILTY SAND**

Inner Ring Test Data

Inner Ring Diameter (in): 11 1/2

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.0	1:23 PM	1:38 PM	14.8	14.8	0.0	0.0
14	0.0	1:38 PM	1:52 PM	14.8	14.8	0.0	0.0
18	0.0	1:52 PM	2:10 PM	14.8	14.8	0.0	0.0
16	0.0	2:12 PM	2:28 PM	14.8	14.8	0.0	0.0
31	0.0	2:28 PM	2:59 PM	14.8	14.8	0.0	0.0
30	0.0	3:02 PM	3:32 PM	14.8	14.8	0.0	0.0
30	0.0	3:32 PM	4:02 PM	14.8	14.8	0.0	0.0
30	0.0	4:04 PM	4:34 PM	14.8	14.8	0.0	0.0

Outer Ring Test Data

Outer Ring Diameter (in): 22 5/8

Interval (min)	Reading Difference (L)	Test Time		Reading (L)		Volume (in^3)	Rate (in/hr)
		Initial	Final	Initial	Final		
15	0.0	1:23 PM	1:38 PM	44.6	44.6	0.0	0.0
14	0.0	1:38 PM	1:52 PM	44.6	44.6	0.0	0.0
18	0.0	1:52 PM	2:10 PM	44.6	44.6	0.0	0.0
16	0.0	2:12 PM	2:28 PM	44.6	44.6	0.0	0.0
31	0.0	2:28 PM	2:59 PM	44.6	44.6	0.0	0.0
30	0.0	3:02 PM	3:32 PM	44.6	44.6	0.0	0.0
30	0.0	3:32 PM	4:02 PM	44.6	44.6	0.0	0.0
30	0.0	4:04 PM	4:34 PM	44.6	44.6	0.0	0.0

Remarks:

Infiltration Rate: <0.1 in/hr

Figure No.: **III-4**

Method: **ASTM D3385**

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<table>
<tr><th colspan="2">Categorization of Infiltration Feasibility Condition</th><th colspan="2">Form I-8</th></tr>
<tr><td colspan="4">Part 1 - Full Infiltration Feasibility Screening Criteria
Would infiltration of the full design volume be feasible from a physical perspective without any undesirable consequences that cannot be reasonably mitigated?</td></tr>
<tr><td>Criteria</td><td>Screening Question</td><td>Yes</td><td>No</td></tr>
<tr><td>1</td><td>Is the estimated reliable infiltration rate below proposed facility locations greater than 0.5 inches per hour? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.</td><td>☐</td><td>☑</td></tr>
<tr><td colspan="4">Provide basis:

The tested infiltration rates range from less than 0.1 to 0.9 inch per hour. Three of the four infiltration tests resulted in rates below 0.5 inch per hour. The tested material is believed to be generally representative of the material that will be encountered below the proposed BMP locations. The tested infiltration rates do not support allowing infiltration greater than 0.5 inch per hour.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</td></tr>
<tr><td>2</td><td>Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.</td><td>☐</td><td>☑</td></tr>
<tr><td colspan="4">Provide basis:

The tested infiltration rate at the site does not support allowing infiltration greater than 0.5 inch per hour. Allowing infiltration greater than 0.5 inch per hour will increase the risk of geotechnical hazards. Given the relatively impermeable nature of the very old paralic deposits beneath the site, allowing infiltration greater than 0.5 inch/hour will result in uncontrolled lateral migration of groundwater through permeable bedding material of utilities within the public right-of-way. SCST does not recommend allowing infiltration greater than 0.5 inch/ hour at the site.

Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.</td></tr>
</table>

Form I-8 Page 2 of 4			
Criteria	Screening Question	Yes	No
3	Can infiltration greater than 0.5 inches per hour be allowed without increasing risk of groundwater contamination (shallow water table, storm water pollutants or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☑
Provide basis: The tested infiltration rate at the site does not support allowing infiltration greater than 0.5 inch per hour. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
4	Can infiltration greater than 0.5 inches per hour be allowed without causing potential water balance issues such as change of seasonality of ephemeral streams or increased discharge of contaminated groundwater to surface waters? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.		
Provide basis: The project design engineer is responsible for completing criterion 4. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability.			
Part 1 Result*	If all answers to rows 1 - 4 are "Yes" a full infiltration design is potentially feasible. The feasibility screening category is Full Infiltration If any answer from row 1-4 is "No", infiltration may be possible to some extent but would not generally be feasible or desirable to achieve a "full infiltration" design. Proceed to Part 2		

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

Form I-8 Page 3 of 4			
Part 2 – Partial Infiltration vs. No Infiltration Feasibility Screening Criteria Would infiltration of water in any appreciable amount be physically feasible without any negative consequences that cannot be reasonably mitigated?			
Criteria	Screening Question	Yes	No
5	Do soil and geologic conditions allow for infiltration in any appreciable rate or volume? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2 and Appendix D.	☑	☐
Provide basis: The tested infiltration rates range from 0.0 to 0.9 inch per hour. The tested material is believed to be generally representative of the material that will be encountered below the proposed BMP locations. The tested infiltration rates support allowing partial infiltration based on the City of San Diego's definition of any appreciable quantity (greater than 0.01 inch per hour). Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
6	Can Infiltration in any appreciable quantity be allowed without increasing risk of geotechnical hazards (slope stability, groundwater mounding, utilities, or other factors) that cannot be mitigated to an acceptable level? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.2.	☑	☐
Provide basis: To mitigate the increased risk associated with infiltration at the bottom of the proposed BMP basins to an acceptable level and reduce the potential for groundwater migration and adverse impacts to adjacent structures and improvements, cutoff walls or vertical cutoff membranes consisting of 30 mil HDPE or PVC should be installed along the sides of the BMPs, and a subdrain should be placed at the bottom of the basins and connected to a storm drain. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			

Form I-8 Page 4 of 4			
Criteria	Screening Question	Yes	No
7	Can Infiltration in any appreciable quantity be allowed without posing significant risk for groundwater related concerns (shallow water table, storm water pollutants or other factors)? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☑	☐
Provide basis: Without pre-treatment, infiltration of stormwater pollutants could migrate laterally and adversely affect down-gradient sites. SCST would recommend pre-treatment of stormwater runoff. In SCST's opinion, allowing infiltration of pre-treated stormwater runoff in any appreciable quantity does not pose a significant risk to the regional groundwater table. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
8	Can infiltration be allowed without violating downstream water rights? The response to this Screening Question shall be based on a comprehensive evaluation of the factors presented in Appendix C.3.	☐	☐
Provide basis: The project design engineer is responsible for completing criterion 8. Summarize findings of studies; provide reference to studies, calculations, maps, data sources, etc. Provide narrative discussion of study/data source applicability and why it was not feasible to mitigate low infiltration rates.			
Part 2 Result*	If all answers from row 1-4 are yes then partial infiltration design is potentially feasible. The feasibility screening category is Partial Infiltration. If any answer from row 5-8 is no, then infiltration of any volume is considered to be infeasible within the drainage area. The feasibility screening category is No Infiltration.		

*To be completed using gathered site information and best professional judgment considering the definition of MEP in the MS4 Permit. Additional testing and/or studies may be required by the City Engineer to substantiate findings

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REVISED GEOLOGIC RECONNAISSANCE HILLEL PROJECT INTERSECTION OF LA JOLLA VILLAGE DRIVE AND LA JOLLA SCENIC WAY LA JOLLA, CALIFORNIA

PREPARED FOR

HILLEL OF LA JOLLA
MS. JENNIFER AYALA
C/O M. W. STEELE GROUP INC.
325 FIFTEENTH STREET
SAN DIEGO, CALIFORNIA 92101

PREPARED BY:

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6280 RIVERDALE STREET
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ATTACHMENTS

FIGURES

SOUTHERN CALIFORNIA SOIL & TESTING, INC.

SC
ST

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January 20, 2011

SCS&T No. 0811008
Report No. 2

Hillel of La Jolla
Ms. Jennifer Ayala
c/o M. W. Steele Group Inc.
325 Fifteenth Street
San Diego, California 92101

Subject: REVISED GEOLOGIC RECONNAISSANCE
HILLEL PROJECT
INTERSECTION OF LA JOLLA VILLAGE DRIVE
AND LA JOLLA SCENIC WAY
LA JOLLA, CALIFORNIA

References:
1. *"Geologic Reconnaissance, Hillel Project"*; prepared by Southern California Soil and Testing, Inc.; dated January 7, 2003 (SCS&T No. 0211240-1).
2. "*Updated Geologic Reconnaissance, Hillel Project, Intersection of La Jolla Village Drive and La Jolla Scenic Way, La Jolla, California",* prepared by Southern California Soil and Testing, Inc.; dated January 14, 2008 (SCS&T No. 0811008-1)

Dear Ms. Ayala:

In accordance with your request, we have performed an updated geologic reconnaissance to assess the geologic conditions at the site, including potential geologic hazards. The scope of the investigation consisted of a site visit by a member of our engineering geology staff, a review of available pertinent literature, and the preparation of this report that includes our findings and conclusions.

1. FINDINGS

1.1 SITE DESCRIPTION

The subject site consists of an irregular shaped property located at the southwest corner of the intersection of La Jolla Village Drive and La Jolla Scenic Way in the La Jolla community of San Diego, California. A site plan and site location map are presented on Figures 1 and 2, respectively. The site covers approximately 1.2 acres and is bounded on the east by La Jolla Scenic Way, on the west by Torrey Pines Road, on the north by La Jolla Village Drive, and on the south by La Jolla Scenic Drive North, Cliffridge Avenue and residential property. Topographically, the site is comprised of a relatively flat ground surface that slopes very gently to the south and is bounded by steep cut slopes on the north and east. The cut slopes range up to approximately 10 feet in height and the site is at elevations ranging from approximately 400 feet to 407 feet above mean sea level. It appears that drainage is accomplished via sheet flow in a general southerly direction. Vegetation is comprised of a few trees and shrubs, lawn grass, sparse native grass, and various ground coverings. A one-story single-family residential building with detached garage exists on the southwest portion of the site. Main utility lines are located along the existing streets and sidewalks adjacent to the site.

1.2 GENERAL GEOLOGY AND SUBSURFACE CONDITIONS

1.2.1 Geologic Setting and Soil Description

The subject site is located in the coastal plains portion of the Peninsular Ranges Province of California and is underlain by sediments of theTertiary-age Scripps Formation and Quaternary-age Lindavista Formation. A portion of a local geology map is presented on Figure 3. Brief descriptions of the underlying materials anticipated on site are presented below.

No significant fill materials were noted during our site reconnaissance; however minor amounts of fill associated with the public improvements may exist along the site perimeter and some fill may be associated with the existing structures. In addition, a thin veneer of topsoil/subsoil is present on most of the site.

Very old paralic deposits, commonly identified as the Lindavista Formation, are anticipated to extend to depths of approximately 30 feet below the existing ground surface. These deposits are comprised of massive to coarsely bedded, reddish-brown, silty sand with some gravel and cobble interbedded with sandy cobble conglomerate. The Lindavista Formation is often moderately to highly cemented and excavations with backhoes and other light trenching equipment will likely be slow and difficult to perform. The Lindavista Formation unconformably overlies the Scripps Formation.

The Scripps Formation, in the vicinity of the site, is comprised of tan to pale yellowish-tan, well-consolidated, fine silty sandstone. The structure of the Scripps Formation has been mapped as dipping a few degrees in a north to northwest direction.

1.2.2 Tectonic Setting

No faults have been mapped on the subject site. However, it should be noted that much of Southern California, including the San Diego area, is characterized by a series of Quaternary-age fault zones that typically consist of several individual en echelon faults that generally strike in a northerly to northwesterly direction. Some of the individual faults (within the zones) are classified as active, while others are classified as potentially active. Active faults are those that have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years) while potentially active faults have demonstrated movement during the Pleistocene Epoch

(11,000 to 1.6 million years before the present) but no movement during Holocene time. Faults that have no demonstrable movement during the last 1.6 million years are generally considered inactive.

A review of the available geologic literature indicates that the potentially active Scripps Fault is located approximately 200 meters southeast of the site. The active Rose Canyon Fault is located approximately 2.1 kilometers southwest of the site. Other active fault zones in the region that could possibly affect the subject site include the Coronado Bank, San Diego Trough and San Clemente fault zones to the west, the Elsinore and San Jacinto fault zones to the northeast, and the Agua Blanca and San Miguel fault zones to the south. A portion of a regional fault map is presented on Figure 4.

1.3 GEOLOGIC HAZARDS

1.3.1 General

The site is located in an area that is subject to some potential geologic hazards. Specific geologic hazards are discussed below.

1.3.2 Geologic Hazard Categories

As part of our investigation, we have reviewed the City of San Diego Seismic Safety Study. This study is the result of a comprehensive investigation of the city, which rates areas according to geological risk potential (nominal, low, moderate and high), and identifies any potential geotechnical hazards and/or describes geomorphic conditions. The site is located in Geologic Hazards Category 52. This category is assigned to level mesas underlain by terrace deposits and bedrock and has a nominal relative risk potential. A portion of the Seismic Safety Study Map is presented on Figure 5.

1.3.3 Seismic

Based upon the 2007 California Building Code, the following seismic design parameters are considered appropriate for the subject site:

Site Coordinates: Latitude = 32.869°
Longitude = -117.241°
Site Class: D
Spectral Response Acceleration at Short Periods S_s = 1.627
Spectral Response Acceleration at 1-Second Period S_1 = 0.634
Site Coefficient F_a = 1.0
Site Coefficient F_v = 1.5
$S_{MS}=F_aS_s = 1.627$
$S_{M1}=F_vS_1 = 0.950$
$S_{DS}=2/3^* S_{MS} = 1.085$
$S_{D1}=2/3^* S_{M1} = 0.634$

Probable groundshaking levels at the site could range from slight to strong depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the structures.

1.3.4 Surface Rupture and Soil Cracking

No active faults are known to be present at the subject site proper; therefore, the site is not considered susceptible to surface rupture. The likelihood of soil cracking caused by shaking from distant sources is considered to be minimal.

1.3.5 Landsliding

The site is located in AREA 2 as per the Landslide Hazard Identification Map No. 33. AREA 2 is classified as Marginally Susceptible to slope instability. AREA 2 includes gentle to moderate slopes, where slope angles are generally less than 15 degrees. This area includes low-lying bottoms of broad valleys and basins and large elevated surfaces of Pleistocene terrace deposits. Landslides and other slope failures are rare within this area although slope hazards are possible on some steeper slopes within the area or along its borders. It is our opinion that the potential for gross, deep-seated, slope failure to affect the project site is negligible. A portion of the Landslide Hazard Map is presented on Figure 6.

1.3.6 Liquefaction

The materials at the site are not considered subject to liquefaction due to soil density as well as lack of shallow groundwater.

1.3.7 Tsunamis

Tsunamis are great sea waves produced by a submarine earthquake or volcanic eruption. Due to the elevation of the site and distance to the shore, it is our opinion that the potential for a tsunami to affect the site is nonexistent.

1.3.8 Seiches

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. No such large bodies of standing water are located in an area that could affect the subject site.

1.3.9 Flooding

The site is located outside the boundaries of 100-year and the 500-year flood zones.

1.3.10 Groundwater

No groundwater seepage or ponding was noted within the immediate site vicinity. It should be noted that perched/ponded water may develop upon the well-cemented Lindavista Formation. It should be noted that groundwater seepage and ponding could occur after development of a site, even where none were present before development. These are often the result of alteration of the permeability characteristics of the soil, alteration in drainage patterns, and/or increased precipitation or irrigation water.

2. CONCLUSIONS

1. No geologic hazards of sufficient magnitude to preclude the proposed use of the site are known to exist.

2. The formational sediments are likely to be relatively impermeable. An appropriate drainage system should be incorporated into the development of the site.

3. The native formational materials at the site are generally competent and suitable for the support of low to mid-rise structures, if at least the minimum requirements of the local governing agency and a qualified engineer and geologist are followed. A site-specific geotechnical investigation with subsurface explorations, laboratory testing and specific recommendations will likely be required for the proposed development.

Should you have any questions regarding this document or if we may be of further service, please contact our office at your convenience.

Respectfully Submitted,
SOUTHERN CALIFORNIA SOIL & TESTING, INC.

PROFESSIONAL GEOLOGIST
DOUGLAS A. SKINNER
NO. 2472
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Douglas A. Skinner, CEG 2472
Senior Engineering Geologist

DAS:aw

(1) Addressee
(4) MW Steele Group, Inc.

3. REFERENCES

1. Anderson, J.G.; R.K. and Agnew, D.C., 1989, Past and Possible Future Earthquakes of Significance to the San Diego Region, Earthquake Spectra, Volume 5, No. 2, 1989.
2. City of San Seismic Safety Study, 1995, Geologic Hazards and Faults, Map Sheet 29 and 30.
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9. Lindvall, S.C., Rockwell, T.K., 1995, Holocene Activity of the Rose Canyon Fault Zone in San Diego, California: Journal of Geophysical Research, Vol. 100, No. B12, December 10.
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13. Tan, S.S., 1995, Landslide Hazards in the Southern part of San Diego Metropolitan Area, San Diego County, California, California Division of Mines and Geology Open-File Report 95-03.
14. Treiman, Jerome A., 1993, The Rose Canyon Fault Zone, Southern California, CDMG Open-File Report 93-02.
15. California Building Code, 2006, and Maps of Known and Active Fault Near-Source Zones in California and Adjacent Portions of Nevada.
16. Wesnousky, S.G., 1986, "Earthquakes, Quaternary Faults, and Seismic Hazards in California," in Journal of Geophysical Research, Volume 91, No. B12, pp 12,587 to 12,631, November 1986.

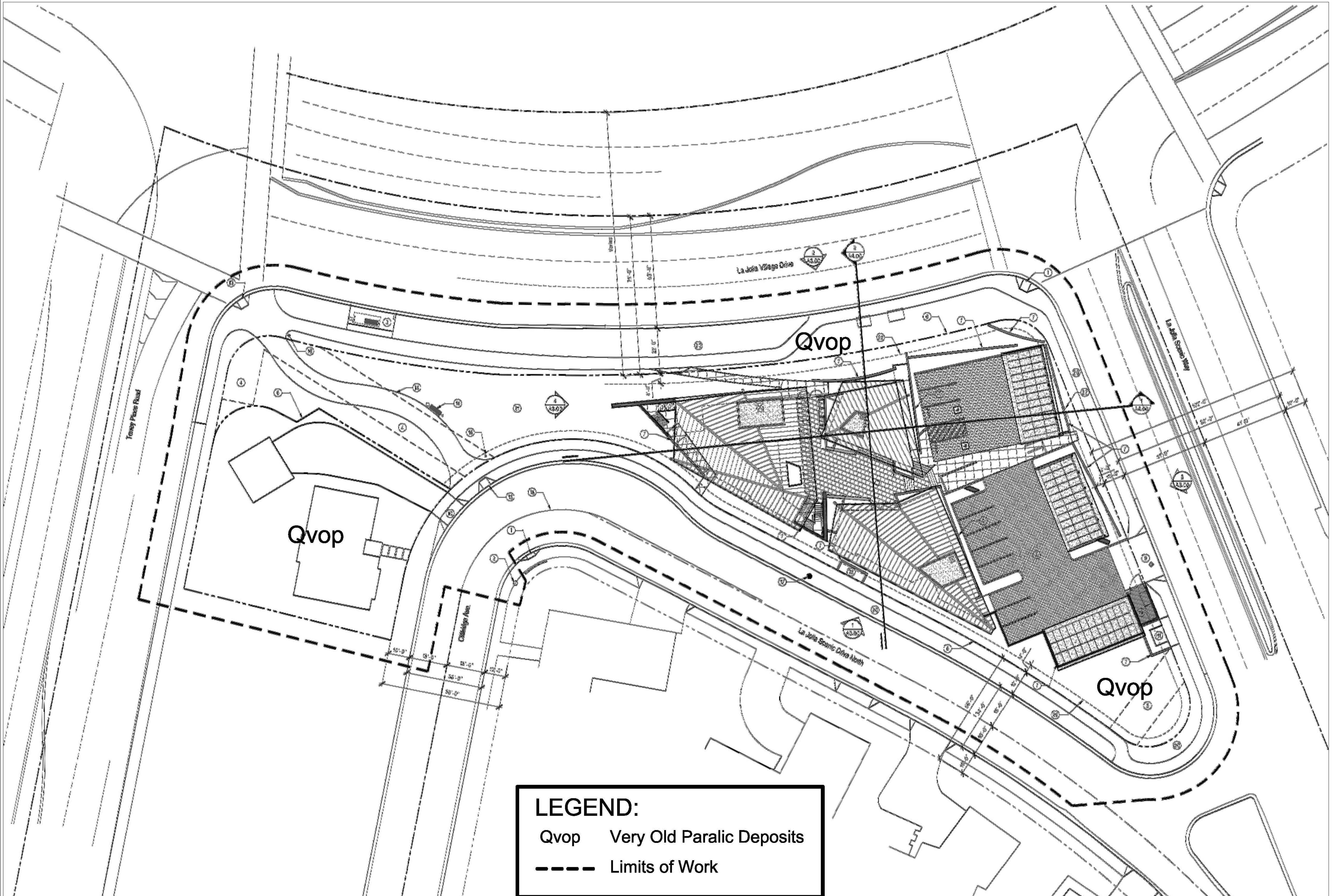
4. AERIAL PHOTOGRAPHS

1. San Diego County, 1928, Photographs 52DX 1 and 2, and 52DXA-1.
2. San Diego County, 1966, Photographs 1-48, 1-49, 1-65 and 1-66.

3. San Diego County, 1970, Flight 5, Photographs 11, 12, and 13.
4. San Diego County, 1973, Flight 30, Photographs 20 and 21.
5. San Diego County, 1974, Flight 5, Photographs 4 and 5.
6. San Diego County, 1976, Photographs 0084 and 0085.
7. San Diego County, 1978, Flight 18B, Photographs 43 and 44.
8. San Diego County, 1983, Photographs 618 and 619.
9. San Diego County, 1989, Photographs 1-201 and 1-203

5. TOPOGRAPHIC MAPS

1. County of San Diego, 1977 and 1979, Map Sheet 254-1695; Scale: 1 inch = 200 feet.
2. U.S. Geological Survey, 1953 and 1967, 7.5 Minute Topographic Map, La Jolla Quadrangle.

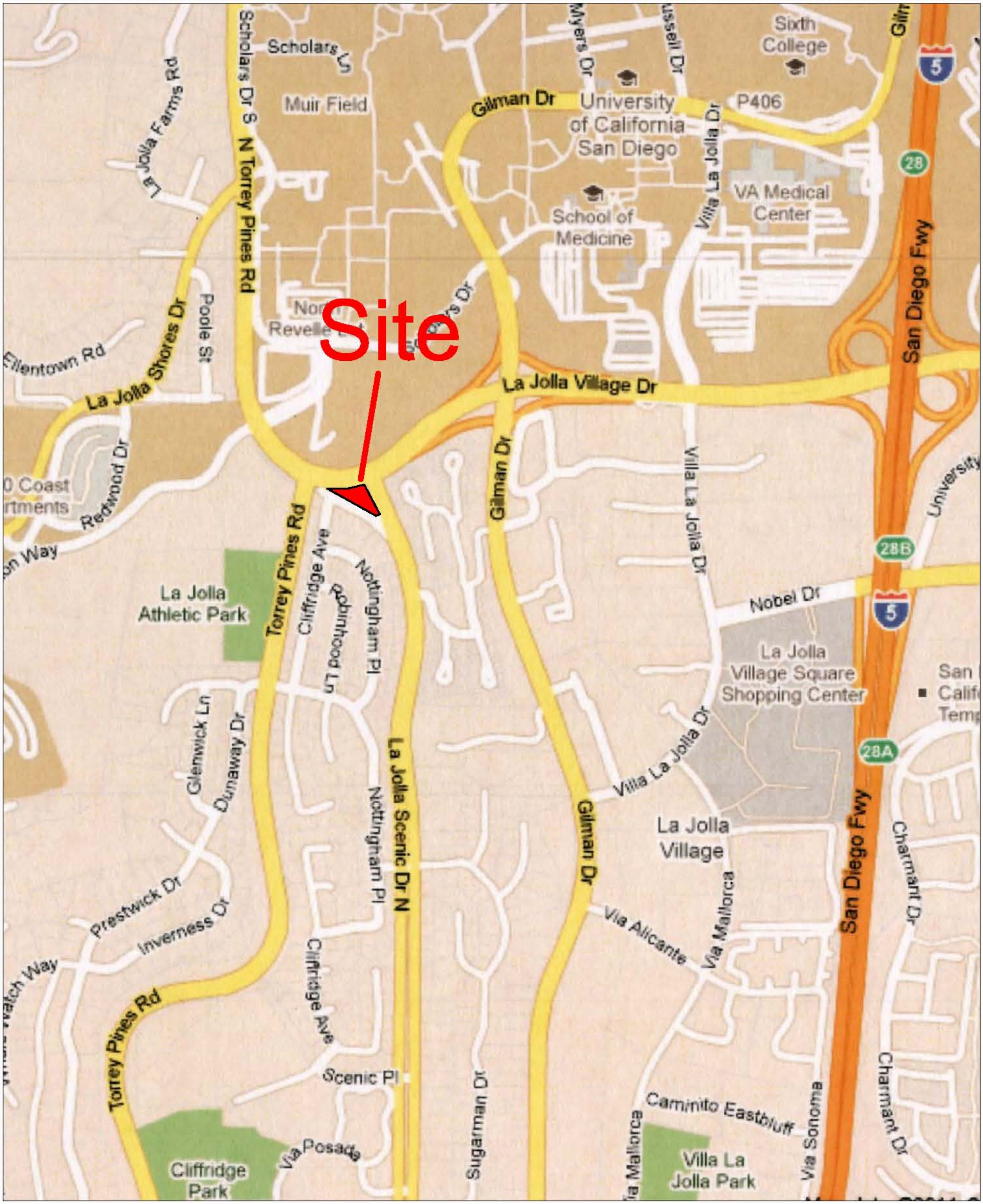


SITE PLAN
HILLEL OF SAN DIEGO
San Diego, California

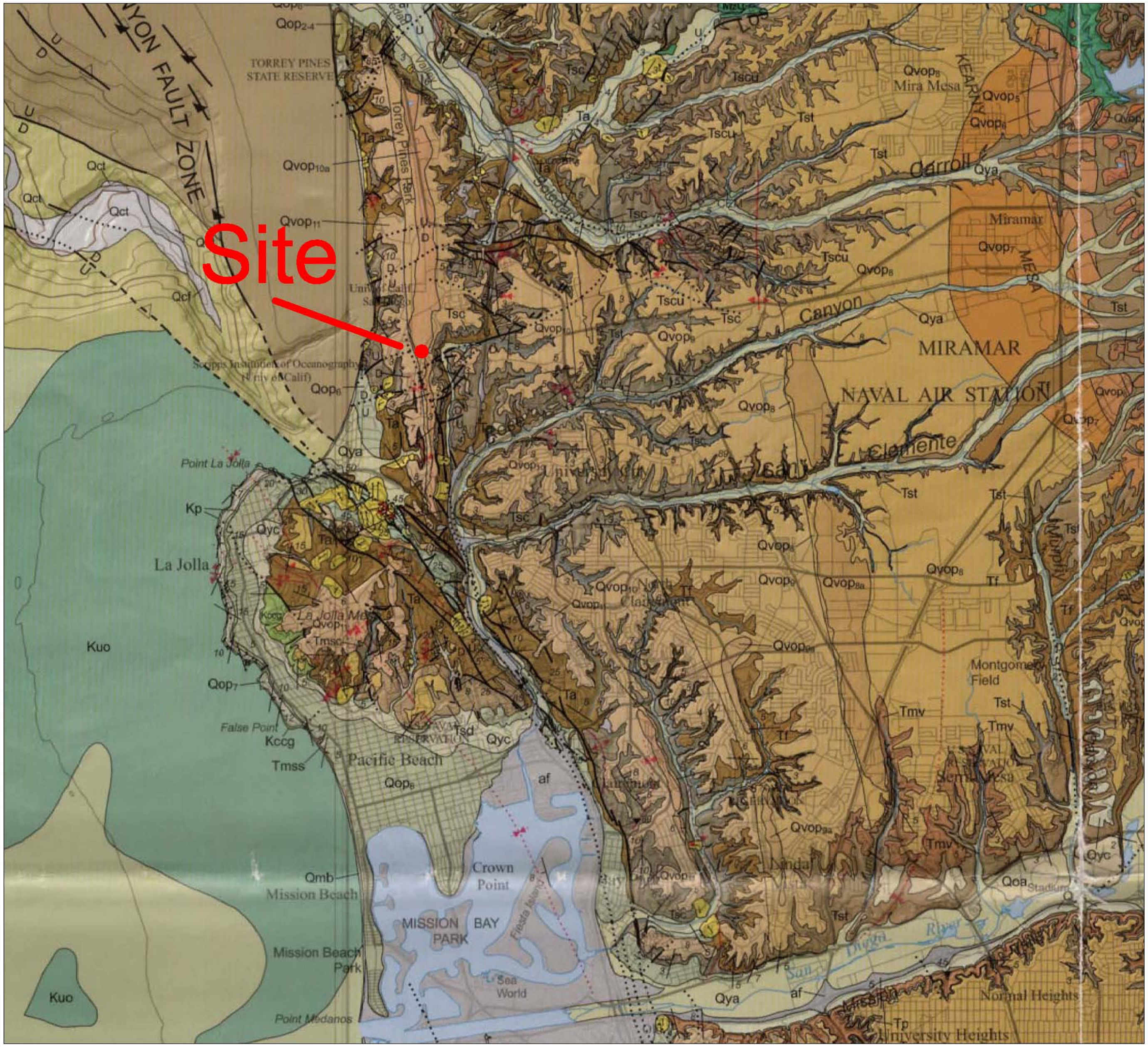
Date:	1/19/2011
By:	DAS
Job No.:	0811008-2
Scale:	NOT TO SCALE

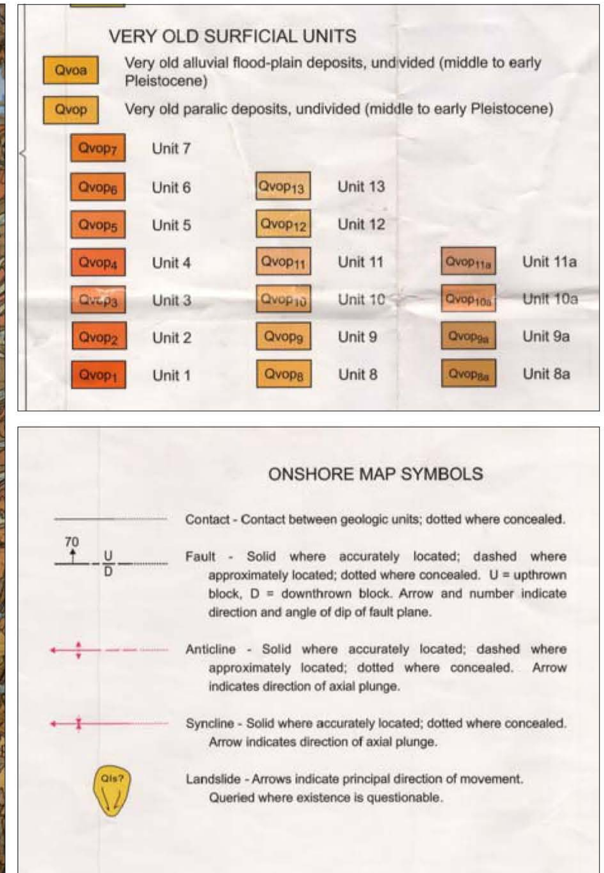
SOUTHERN CALIFORNIA SOIL & TESTING, INC.

Figure: 1



SOUTHERN CALIFORNIA SOIL & TESTING, INC.	**SITE LOCATION MAP** **HILLEL OF SAN DIEGO** **San Diego, California**	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale	Figure: 2

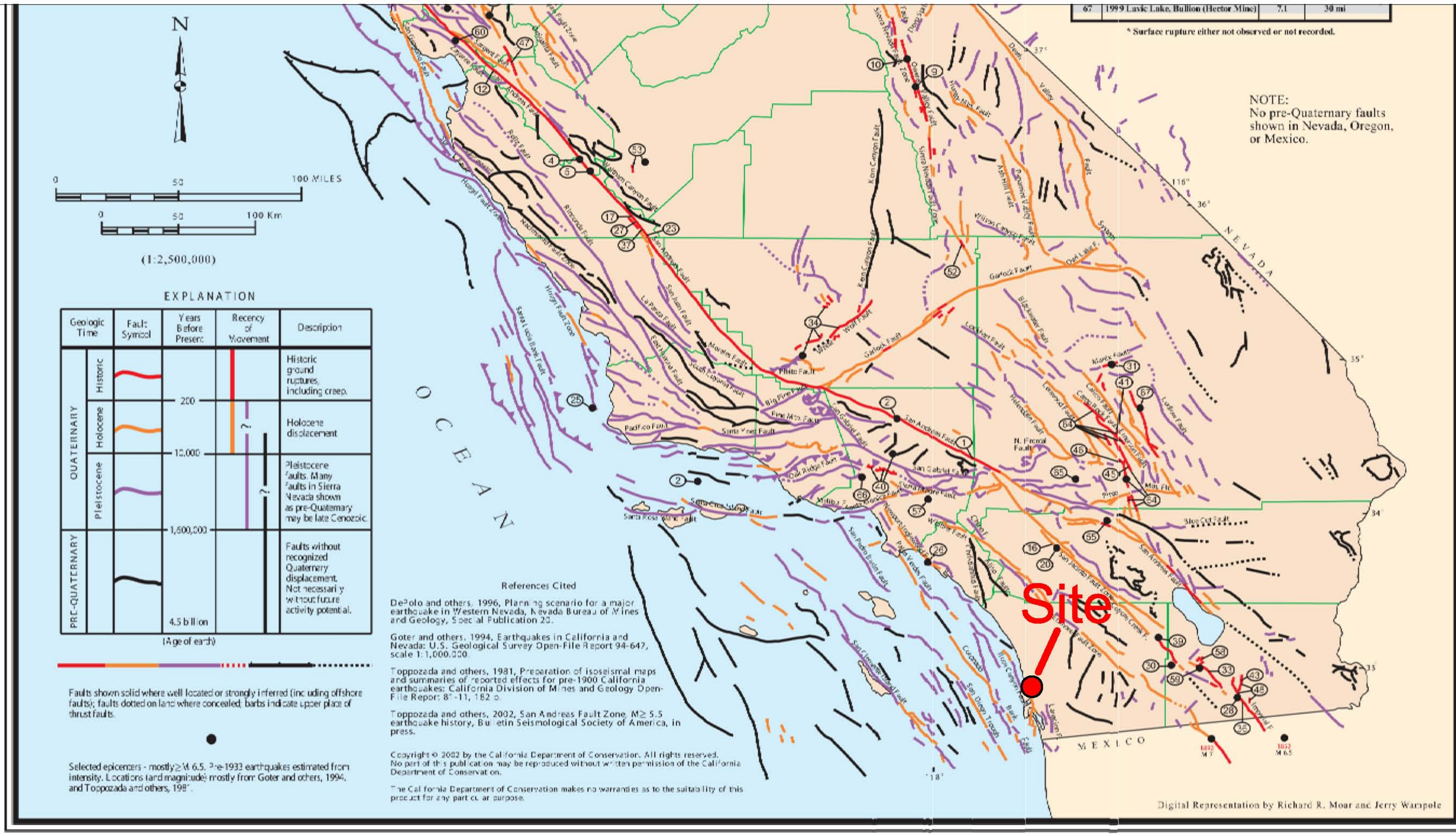




Adapted from:

Geologic Map of the San Diego 30' X 60' Quadrangle, California, by M.P. Kennedy and S.S. Tan, 2008

Figure: 3	SOUTHERN CALIFORNIA SOIL & TESTING, INC.	LOCAL GEOLOGY MAP HILLEL OF SAN DIEGO San Diego. California	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale

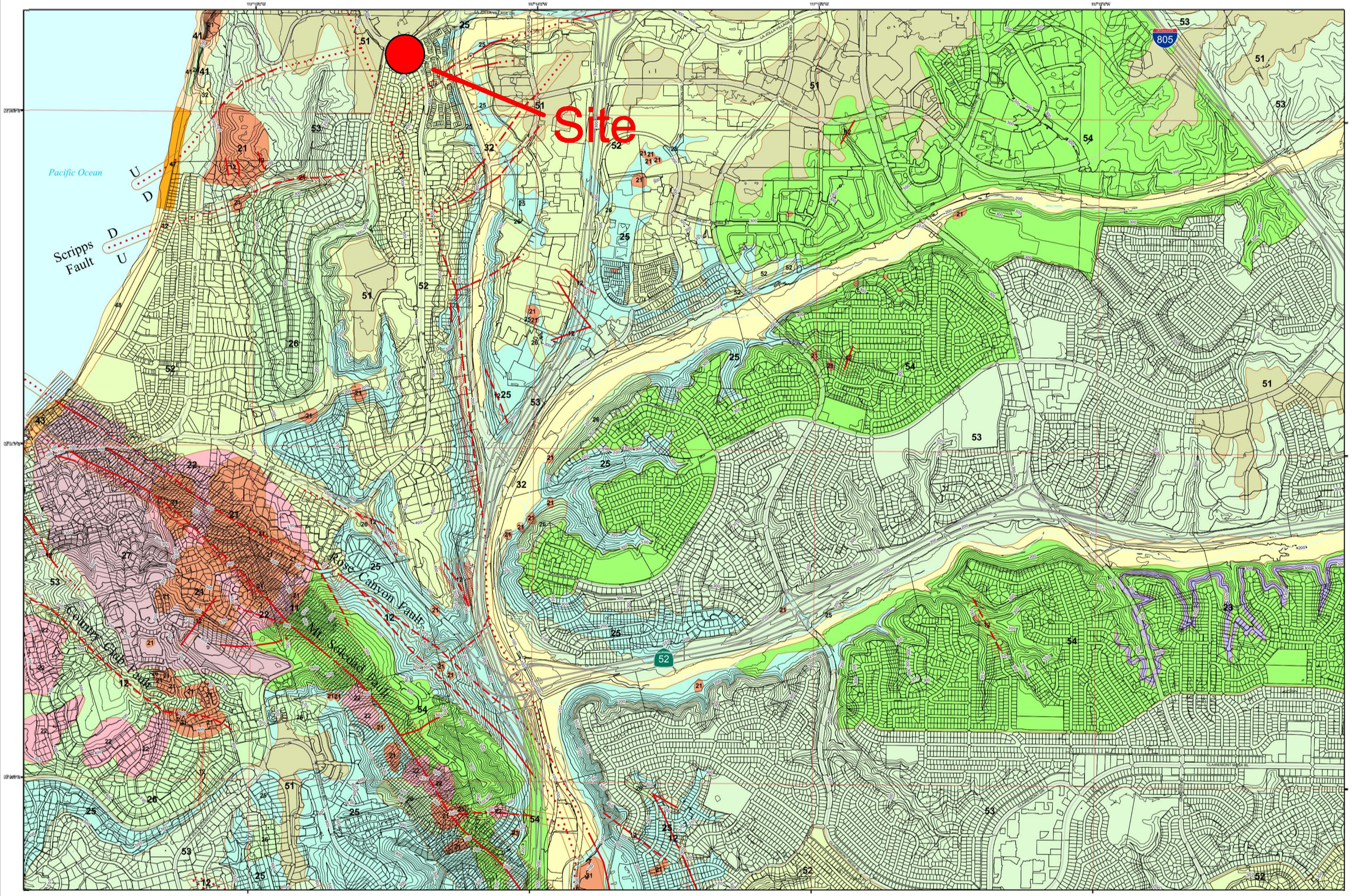


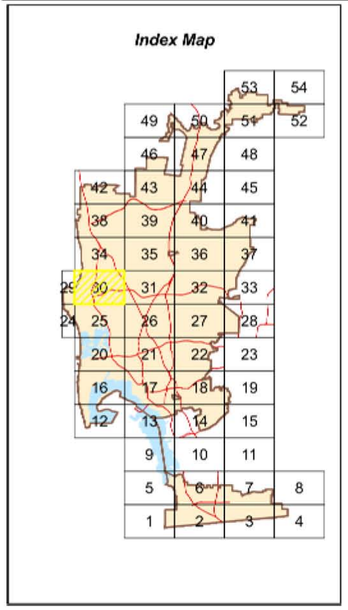
SIMPLIFIED FAULT ACTIVITY MAP OF CALIFORNIA

Compiled by Charles W. Jennings and George J. Saucedo

1999 (Revised 2002, Tousson Toppozada and David Branum)

Figure: 4	SOUTHERN CALIFORNIA SOIL & TESTING, INC.	REGIONAL FAULT MAP HILLEL OF SAN DIEGO San Diego, California	Date: 1/19/2011 By: DAS Job No.: 0811008-2 Scale: Not To Scale





City of San Diego

SEISMIC SAFETY STUDY

Geologic Hazards and Faults

Development Services Department

GRID TILE: 30

GRID SCALE: 800

DATE: 4/3/2008

Date:	1/19/2011
By:	DAS
Job No.:	0811008-2
Scale:	NOT TO SCALE

SEISMIC SAFETY STUDY
HILLEL OF SAN DIEGO
San Diego, California

SOUTHERN CALIFORNIA
SOIL & TESTING, INC.

Figure:
5

Figure: 6

SOUTHERN CALIFORNIA SOIL & TESTING, INC.

LANDSLIDE HAZARD MAP
HILLEL OF SAN DIEGO
San Diego, California

Date:	1/19/2011
By:	EL/WQA
Job No.:	0811008-2
Scale:	Not To Scale

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UPDATED GEOLOGIC RECONNAISSANCE
HILLEL PROJECT
INTERSECTION OF LA JOLLA VILLAGE DRIVE AND LA JOLLA SCENIC WAY
LA JOLLA, CALIFORNIA

PREPARED FOR

HILLEL AT LA JOLLA
JENNIFER AYALA
C/O M. W. STEELE GROUP INC.
325 FIFTEENTH STREET
SAN DIEGO, CALIFORNIA 92101

PREPARED BY:

SOUTHERN CALIFORNIA SOIL & TESTING, INC.
6280 RIVERDALE STREET
SAN DIEGO, CALIFORNIA 92120

Providing Professional Engineering Services Since 1959

ATTACHMENTS

PLATES

Plate	1	Site Plan
Plate	2	Site Location Map
Plate	3	Local Geology Map
Plate	4	Regional Fault Map
Plate	5	Seismic Safety Study Map
Plate	6	Landslide Hazard Map

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January 14, 2008

SCS&T No. 0811008
Report No. 1

Hillel of San Diego
C/O MW Steele Group, Inc.
Ms. Jennifer Ayala
325 Fifteenth Street
San Diego, California 92101

Subject: UPDATED GEOLOGIC RECONNAISSANCE
HILLEL PROJECT
INTERSECTION OF
LA JOLLA VILLAGE DRIVE
AND LA JOLLA SCENIC WAY
LA JOLLA, CALIFORNIA

References: *"Geologic Reconnaissance, Hillel Project"*, prepared by Southern California Soil and Testing, Inc.; dated January 7, 2003 (SCS&T No. 0211240-1).

Dear Ms. Ayala:

In accordance with your request, we have performed an updated geologic reconnaissance to assess the geologic conditions at the site, including potential geologic hazards. The scope of the investigation consisted of a site visit by a member of our engineering geology staff, a review of available pertinent literature, and the preparation of this report that includes our findings and conclusions.

1. FINDINGS

1.1 SITE DESCRIPTION

The subject site consists of an irregular shaped property located at the southwest corner of the intersection of La Jolla Village Drive and La Jolla Scenic Way in the La Jolla community of San Diego, California. A site plan and site location map are presented on Plates 1 and 2, respectively. The site covers approximately 1.2 acres and is bounded on the east by La Jolla Scenic Way, on the west by Torrey Pines Road, on the north by La Jolla Village Drive, and on the south by La Jolla Scenic Drive North, Cliffridge Avenue and residential property. Topographically, the site is comprised of a relatively flat ground surface that slopes very gently to the south and is bounded by steep cut slopes on the north and east. The cut slopes range up to approximately 10 feet in height and the site is at elevations ranging from of approximately 400 feet to 407 feet above mean sea level. It appears that drainage is accomplished via sheet flow in a general southerly direction. Vegetation is comprised of a few trees and shrubs, lawn grass, sparse native grass, and various ground coverings. A one-story single-family residential building with detached garage exists on the southwest portion of the site. Main utility lines are located along the existing streets and sidewalks adjacent to the site.

1.2 GENERAL GEOLOGY AND SUBSURFACE CONDITIONS

1.2.1 Geologic Setting and Soil Description

The subject site is located in the coastal plains portion of the Peninsular Ranges Province of California and is underlain by sediments of theTertiary-age Scripps Formation and Quaternary-age Lindavista Formation. A portion of a local geology map is presented on Plate 3. Brief descriptions of the underlying materials anticipated on site are presented below.

No significant fill materials were noted during our site reconnaissance; however minor amounts of fill associated with the public improvements may exist along the site perimeter and some fill may be associated with the existing structures. In addition, a thin veneer of topsoil/subsoil is present on most of the site.

The Lindavista Formation is anticipated to extend to depths of approximately 30 feet below the existing ground surface. The Lindavista Formation is comprised of massive to coarsely bedded, reddish-brown, silty sand with some gravel and cobble interbedded with sandy cobble conglomerate. The Lindavista Formation is often moderately to highly cemented and excavations with backhoes and other light trenching equipment will likely be slow and difficult to perform. The Lindavista Formation unconformably overlies the Scripps Formation.

The Scripps Formation, in the vicinity of the site, is comprised of tan to pale yellowish-tan, well-consolidated, fine silty sandstone. The structure of the Scripps Formation has been mapped as dipping a few degrees in a north to northwest direction.

1.2.2 Tectonic Setting

No faults have been mapped on the subject site. However, it should be noted that much of Southern California, including the San Diego area, is characterized by a series of Quaternary-age fault zones that typically consist of several individual en echelon faults that generally strike in a northerly to northwesterly direction. Some of the individual faults (within the zones) are classified as active, while others are classified as potentially active. Active faults are those that have shown conclusive evidence of faulting during the Holocene Epoch (the most recent 11,000 years) while potentially active faults have demonstrated movement during the Pleistocene Epoch

(11,000 to 1.6 million years before the present) but no movement during Holocene time. Faults that have no demonstrable movement during the last 1.6 million years are generally considered inactive.

A review of the available geologic literature indicates that the potentially active Scripps Fault is located approximately 200 meters southeast of the site. The active Rose Canyon Fault is located approximately 2.1 kilometers southwest of the site. Other active fault zones in the region that could possibly affect the subject site include the Coronado Bank, San Diego Trough and San Clemente fault zones to the west, the Elsinore and San Jacinto fault zones to the northeast, and the Agua Blanca and San Miguel fault zones to the south. A portion of a regional fault map is presented on Plate 4.

1.3 GEOLOGIC HAZARDS

1.3.1 General

The site is located in an area that is subject to some potential geologic hazards. Specific geologic hazards are discussed below.

1.3.2 Geologic Hazard Categories

As part of our investigation, we have reviewed the City of San Diego Seismic Safety Study. This study is the result of a comprehensive investigation of the city, which rates areas according to geological risk potential (nominal, low, moderate and high), and identifies any potential geotechnical hazards and/or describes geomorphic conditions. The site is located in Geologic Hazards Category 51. This category is assigned to level mesas underlain by terrace deposits and bedrock and has a nominal relative risk potential. A portion of the Seismic Safety Study Map is presented on Plate 5.

1.3.3 Seismic

Based upon the 2007 California Building Code, the following seismic design parameters are considered appropriate for the subject site:

Site Coordinates: Latitude = 32.869°
Longitude = -117.241°
Site Class: D
Spectral Response Acceleration at Short Periods $S_s = 1.627$
Spectral Response Acceleration at 1-Second Period $S_1 = 0.634$
Site Coefficient $F_a = 1.0$
Site Coefficient $F_v = 1.5$
$S_{MS}=F_aS_s = 1.627$
$S_{M1}=F_vS_1 = 0.950$
$S_{DS}=2/3^* S_{MS} = 1.085$
$S_{D1}=2/3^* S_{M1} = 0.634$

Probable groundshaking levels at the site could range from slight to strong depending on such factors as the magnitude of the seismic event and the distance to the epicenter. It is likely that the site will experience the effects of at least one moderate to large earthquake during the life of the structures.

1.3.4 Surface Rupture and Soil Cracking

No active faults are known to be present at the subject site proper; therefore, the site is not considered susceptible to surface rupture. The likelihood of soil cracking caused by shaking from distant sources is considered to be minimal.

1.3.5 Landsliding

The site is located in AREA 2 as per the Landslide Hazard Identification Map No. 33. AREA 2 is classified as Marginally Susceptible to slope instability. AREA 2 includes gentle to moderate slopes, where slope angles are generally less than 15 degrees. This area includes low-lying bottoms of broad valleys and basins and large elevated surfaces of Pleistocene terrace deposits. Landslides and other slope failures are rare within this area although slope hazards are possible on some steeper slopes within the area or along its borders. It is our opinion that the potential for gross, deep-seated, slope failure to affect the project site is negligible. A portion of the Landslide Hazard Map is presented on Plate 6.

1.3.6 Liquefaction

The materials at the site are not considered subject to liquefaction due to soil density as well as lack of shallow groundwater.

1.3.7 Tsunamis

Tsunamis are great sea waves produced by a submarine earthquake or volcanic eruption. Due to the elevation of the site and distance to the shore, it is our opinion that the potential for a tsunami to affect the site is nonexistent.

1.3.8 Seiches

Seiches are periodic oscillations in large bodies of water such as lakes, harbors, bays, or reservoirs. No such large bodies of standing water are located in an area that could affect the subject site.

1.3.9 Flooding

The site is located outside the boundaries of 100-year and the 500-year flood zones.

1.3.10 Groundwater

No groundwater seepage or ponding was noted within the immediate site vicinity. It should be noted that perched/ponded water may develop upon the well-cemented Lindavista Formation. It should be noted that groundwater seepage and ponding could occur after development of a site, even where none were present before development. These are often the result of alteration of the permeability characteristics of the soil, alteration in drainage patterns, and/or increased precipitation or irrigation water.

2. CONCLUSIONS

1. No geologic hazards of sufficient magnitude to preclude the proposed use of the site are known to exist.
2. The formational sediments are likely to be relatively impermeable. An appropriate drainage system should be incorporated into the development of the site.
3. The native formational materials at the site are generally competent and suitable for the support of low to mid-rise structures, if at least the minimum requirements of the local governing agency and a qualified engineer and geologist are followed. A site-specific geotechnical investigation with subsurface explorations, laboratory testing and specific recommendations will likely be required for the proposed development.

Should you have any questions regarding this document or if we may be of further service, please contact our office at your convenience.

Very truly yours,
SOUTHERN CALIFORNIA SOIL & TESTING, INC.

PROFESSIONAL
JOHN R. HIGH
REGISTERED ENGINEER
No. 1237
CERTIFIED ENGINEERING GEOLOGIST
Exp: 11-30-08
STATE OF CALIFORNIA

John R. High CEG 1237
Senior Engineering Geologist

JRH:sd

(1) Addressee
(5) MW Steele Group, Inc.

3. REFERENCES

Anderson, J.G.; R.K. and Agnew, D.C., 1989, Past and Possible Future Earthquakes of Significance to the San Diego Region, Earthquake Spectra, Volume 5, No. 2, 1989.

City of San Seismic Safety Study, 1995, Geologic Hazards and Faults, Map Sheet 29 and 30.

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California Building Code, 2006, and Maps of Known and Active Fault Near-Source Zones in California and Adjacent Portions of Nevada.

Wesnousky, S.G., 1986, "Earthquakes, Quaternary Faults, and Seismic Hazards in California," in Journal of Geophysical Research, Volume 91, No. B12, pp 12,587 to 12,631, November 1986.

4. AERIAL PHOTOGRAPHS

San Diego County, 1928, Photographs 52DX 1 and 2, and 52DXA-1.

San Diego County, 1966, Photographs 1-48, 1-49, 1-65 and 1-66.

San Diego County, 1970, Flight 5, Photographs 11, 12, and 13.

San Diego County, 1973, Flight 30, Photographs 20 and 21.

San Diego County, 1974, Flight 5, Photographs 4 and 5.

San Diego County, 1976, Photographs 0084 and 0085.

San Diego County, 1978, Flight 18B, Photographs 43 and 44.

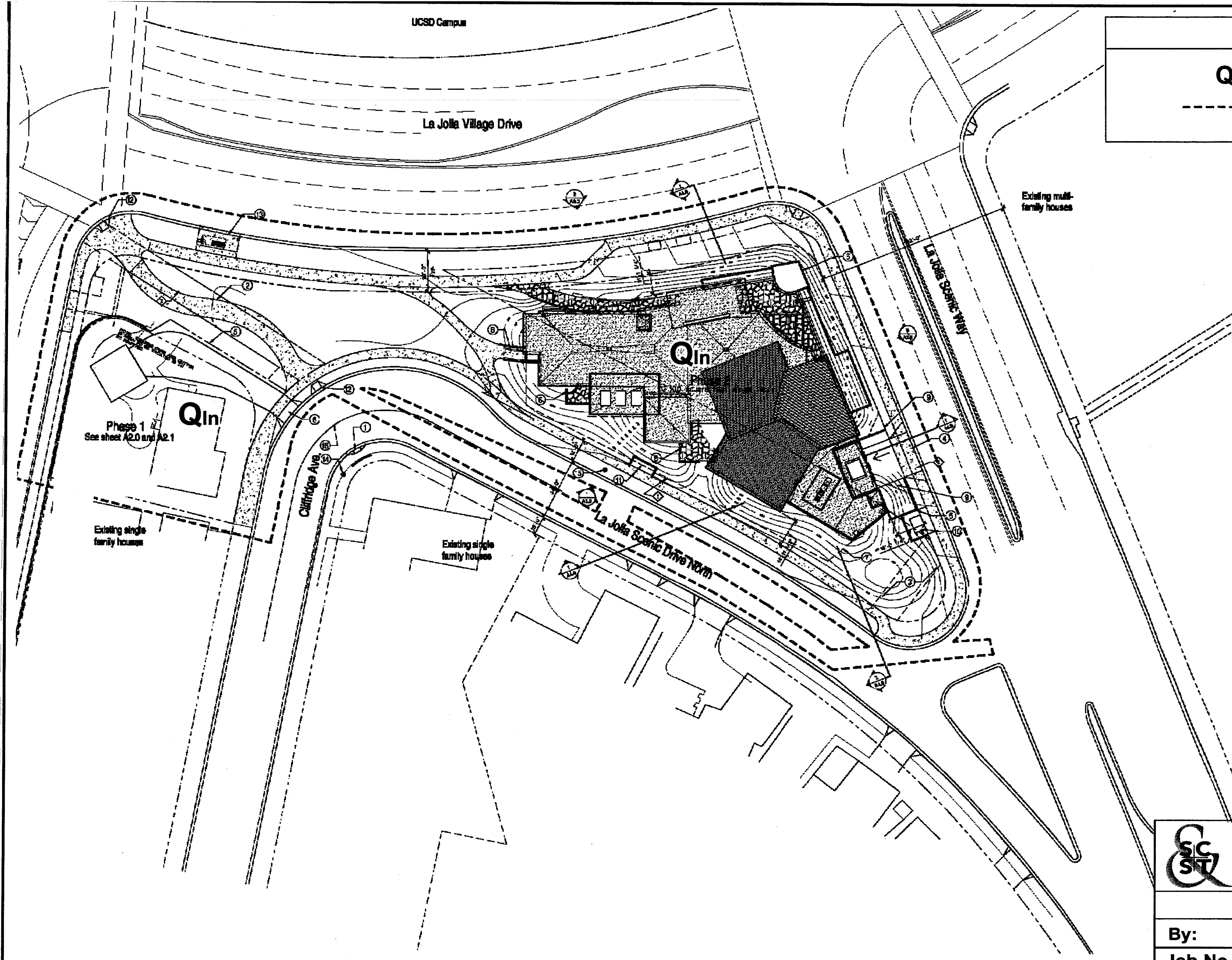
San Diego County, 1983, Photographs 618 and 619.

San Diego County, 1989, Photographs 1-201 and 1-203

5. TOPOGRAPHIC MAPS

County of San Diego, 1977 and 1979, Map Sheet 254-1695; Scale: 1 inch = 200 feet.

U.S. Geological Survey, 1953 and 1967, 7.5 Minute Topographic Map, La Jolla Quadrangle.

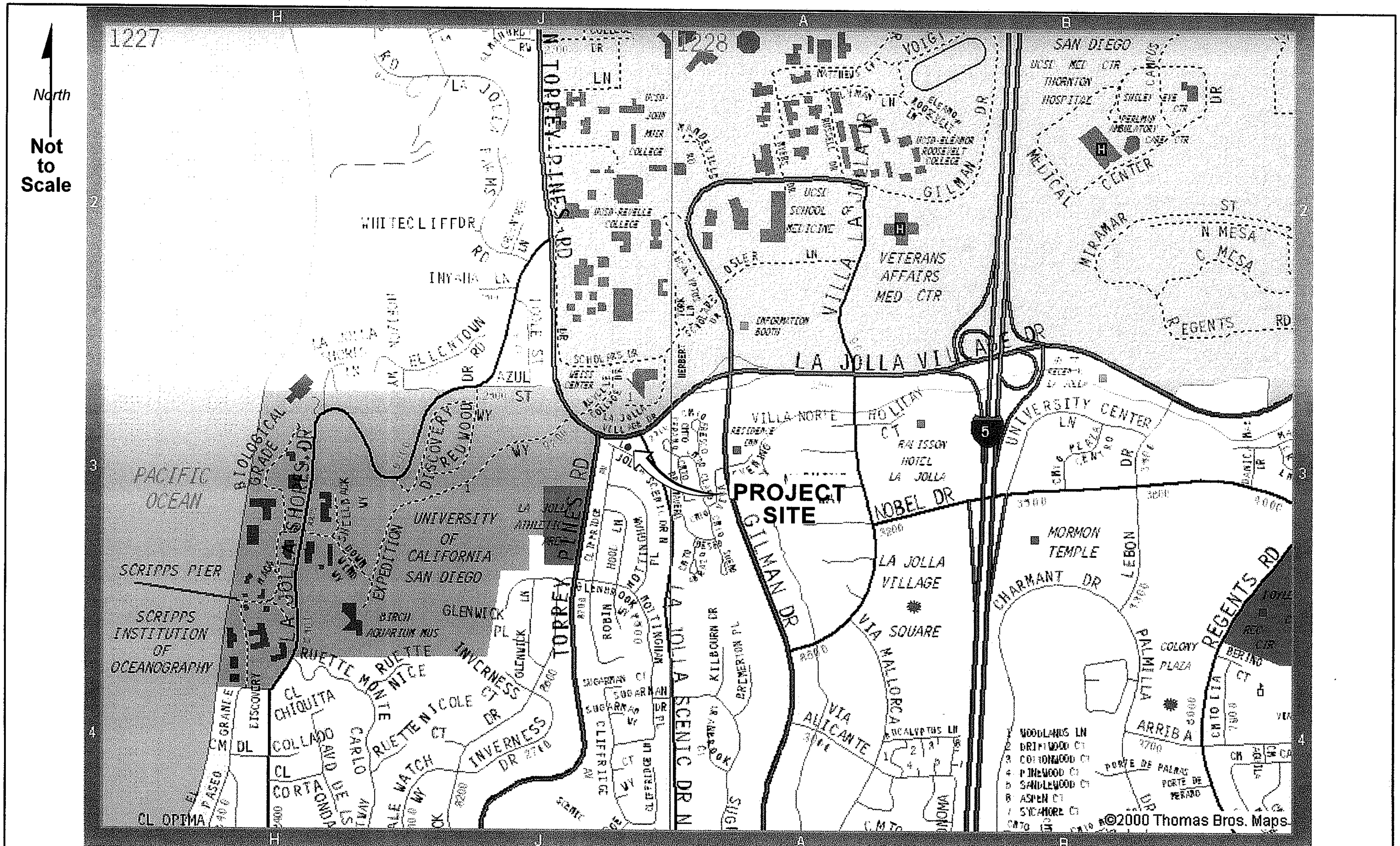


SCS&T LEGEND

Qln	Linda Vista Formation
- - - - - -	Limit of Work Line

SOUTHERN CALIFORNIA SOIL & TESTING, INC.

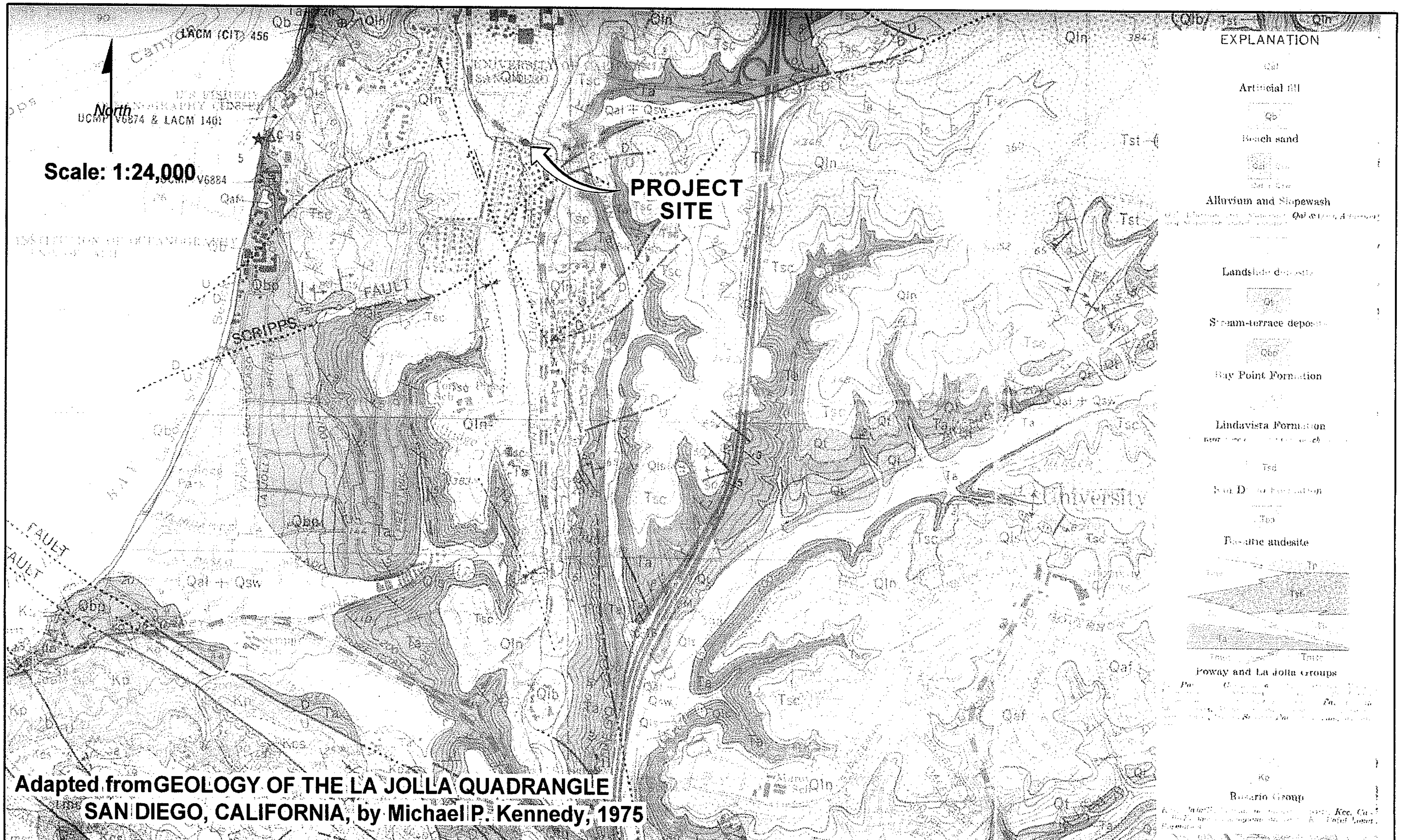
Hillel Project			
By:	DBA/EL	Date:	1/15/08
Job No.:	0811008-1	Plate:	1



SOUTHERN CALIFORNIA SOIL & TESTING, INC.

SITE LOCATION MAP
Hillel Project
San Diego, California

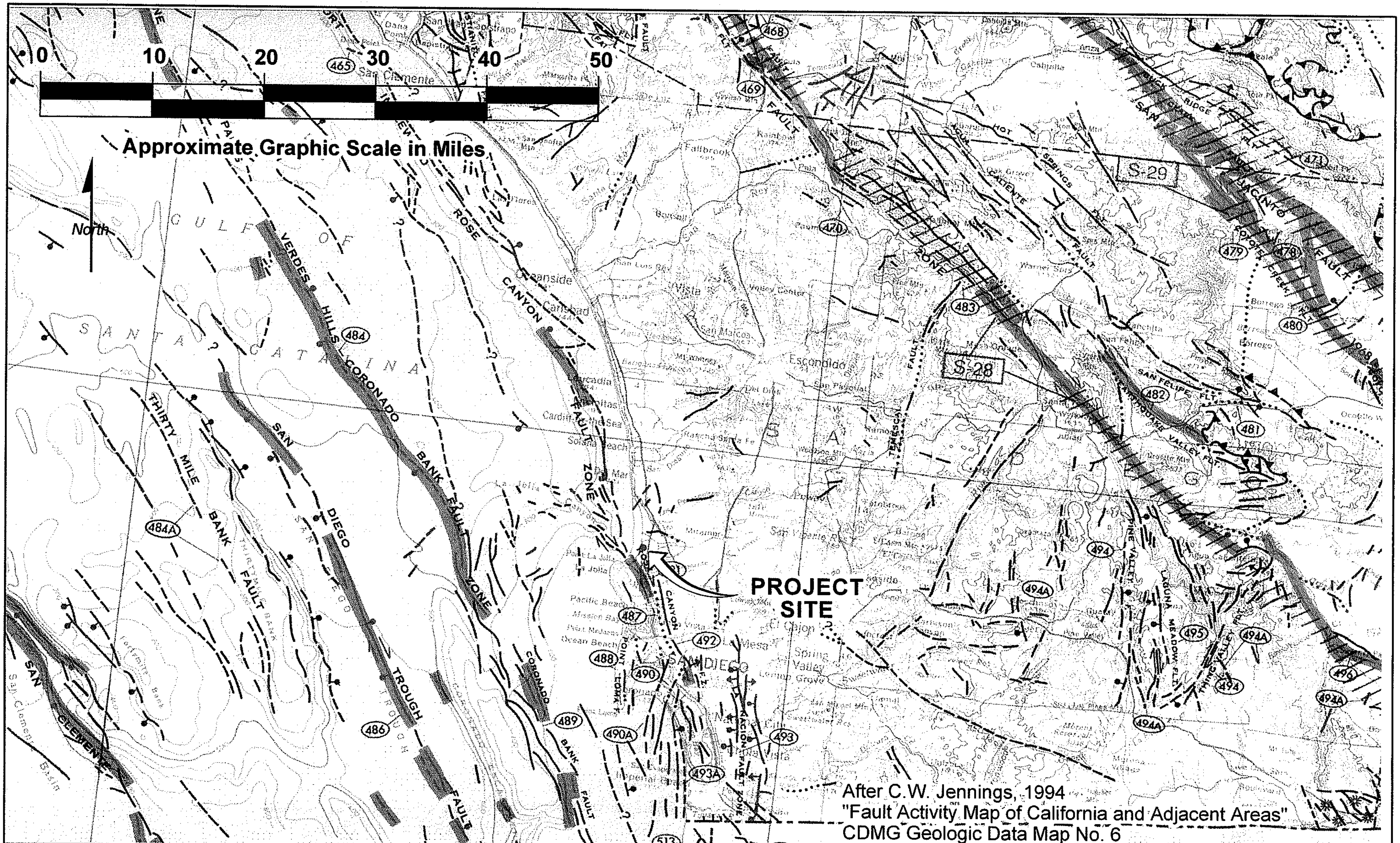
Job Number: 0811008-1
Plate 2



SOUTHERN CALIFORNIA
SOIL & TESTING, INC.

LOCAL GEOLOGY MAP
Hillel Project
San Diego, California

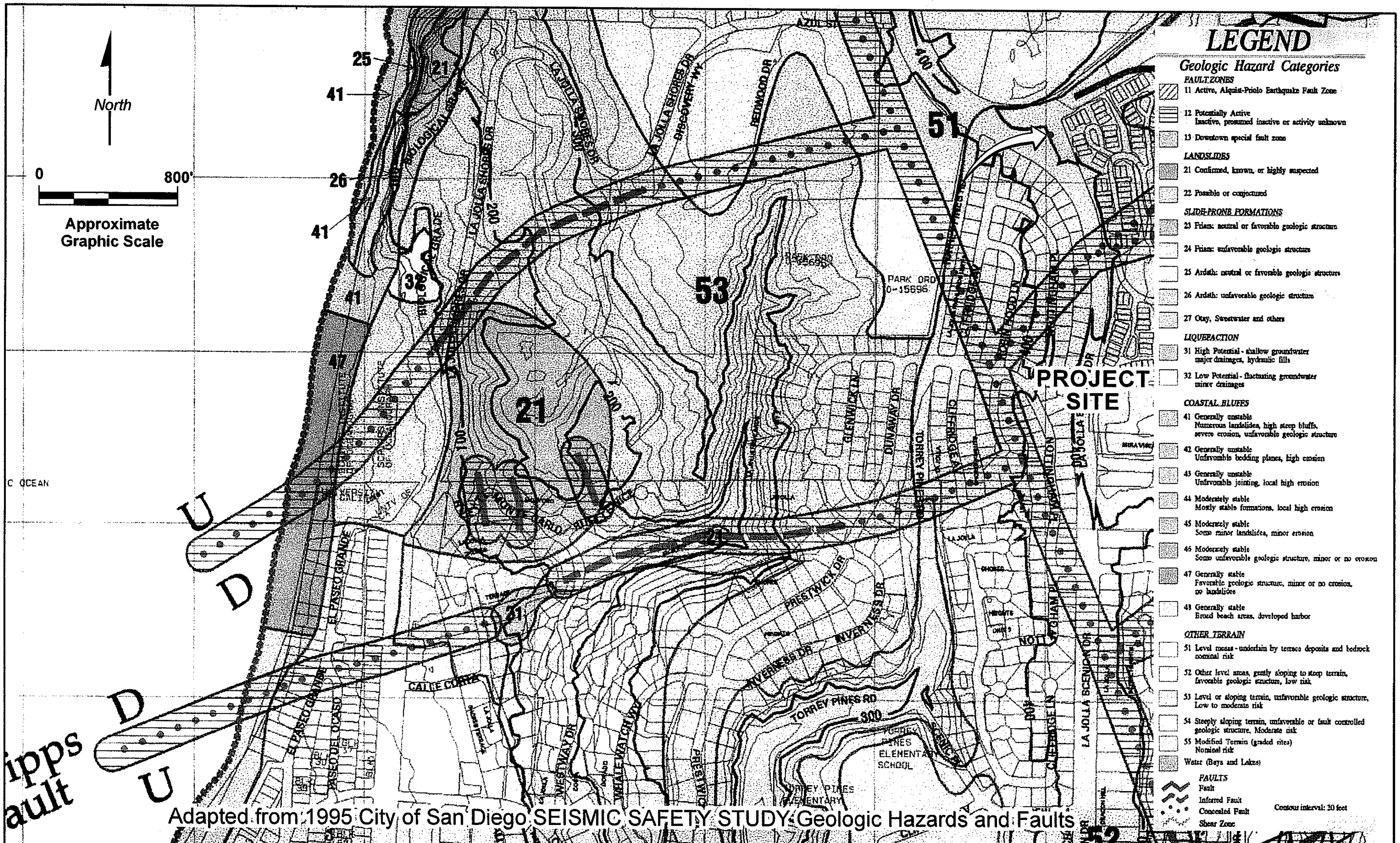
Job Number: 0811008-1
Plate 3



SOUTHERN CALIFORNIA SOIL & TESTING, INC.

REGIONAL FAULT MAP
Hillel Project
San Diego, California

Job Number:	**0811008-1**
Plate	**4**



SOUTHERN CALIFORNIA SOIL & TESTING, INC.

SEISMIC SAFETY STUDY
GEOLOGIC HAZARDS and FAULTS
Hillel Project
San Diego, California

Job Number: 0811008-1
Plate 5

SOUTHERN CALIFORNIA SOIL & TESTING, INC.

LANDSLIDE HAZARDS MAP
Hillel Project
San Diego, California

Job Number: 0811008-1
Plate 6

DRAINAGE STUDY

FOR

UCSD HILLEL CENTER

San Diego, California
Project # 212995
Grading Drawing # ________-D
I.O. #

Engineer:

ATLAS Civil Design
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
P: 888-364-1973
F: 760-231-1378
PN: 15-107

Prepared by: ______________________ Date: 11/18/16
Arnold J. Whitaker RCE# 59320 Exp. 06-30-17

REGISTERED PROFESSIONAL ENGINEER
ARNOLD J. WHITAKER
C 59320
Exp. 6/17
CIVIL
STATE OF CALIFORNIA

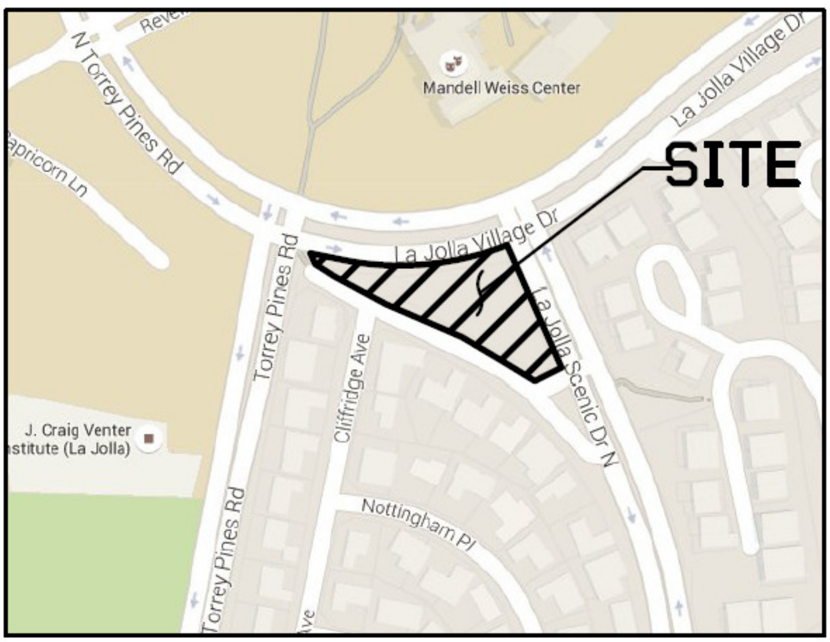
Date	Comments
03-10-16	Original, planning
11-18-16	Approved, Planning

TABLE OF CONTENTS

1.0 PROJECT DESCRIPTION

The UCSD Hillel Center for Jewish Life (hereafter referred to as the Hillel Center) project site is a 1.43 Acre triangle piece of land sectioned off northeasterly by La Jolla Village Drive, La Jolla Scenic Way to the east and La Jolla Scenic Drive North to the south. The site will be composed of a building, a cul-de-sac which will be vacated, a park and walking paths, and landscaping. The property is identified as lot 26 of the much larger Pueblo lot 1299 of the Pueblo Lands of San Diego, Map No. 36. The Hillel Center will accommodate religious, educational, social and cultural activities for Jewish students at UCSD. The facility is planned to include meeting rooms, offices for clergy for students and staff; lounges and recreational areas, a kosher kitchen, a computer room and a library. The Center will be over 7,000 square feet of building space and included twenty-six surface parking spaces.

This project will also involve the vacation of public right of way and the removal of the westerly cul-de-sac- on La Jolla Scenic Drive North. Meandering walks and large landscape belts are proposed for these areas improving the curb appeal for the surrounding community. The project neighbor on Lot 67, whose current access is off of La Jolla Scenic Drive North, shall be provided with a new driveway access on Cliffridge Avenue.



VICINITY MAP

N.T.S

2.0 PURPOSE

The purpose of this study is to determine the peak runoff rates and velocities for the pre-development and post-development conditions. Comparisons will be made at the same discharge points for each drainage basin affecting the site and adjacent properties.

3.0 METHODOLOGY

The Rational Method as outlined in the City of San Diego Drainage Manual, dated April 1984, was used to determine the runoff flow rate. The 100-year frequency storm event was analyzed to determine peak runoff rates discharging the site for both the existing and post-development condition.

Runoff coefficients,"C", were determined from Table 2 – Runoff Coefficients (Rational Method) located in Appendix A. Soil type 'D' was used for the analysis. Modified "C" values were calculated using the actual imperviousness of the site. This calculation is included in Appendices B and C.

4.0 HYDROLOGY

4.1 Pre-Development Conditions

A Pre-Development Hydrology Map delineating basin areas, flow paths, and concentration points has been prepared and is attached to this report as Exhibit "A". Pre-development hydrology calculations can be found in Appendix B.

The existing 1.43 Acre site consists of a single undeveloped, landscape triangular area. The existing site is composed of 3 basins. The existing grades permit positive runoff from all areas of the site. The largest basin, Basin 100, surface runoff enters the public drainage system at an existing 10' Type "A" curb inlet west of the intersection of La Jolla Scenic Way and La Jolla Village Drive. Basin 300 surface runoff flows back into the end of the cul-de-sac where it enters into a ditch that discharges to the Torrey Pines Road gutter.

4.2 Post-Development Conditions

A Post-Development Hydrology Map delineating basin areas, flow paths and concentration points has been prepared for the tributary basins and is located in the back of this report as Exhibit 'B'. Post-developed hydrology calculations can be found in Appendix C.

The 1.43 Acre site is broken into 3 basins (100, 200 and 300). Basin 100 is composed of the building site, parking area (pervious paving) and the associated landscaping Planters areas. The building site comprises the western portion of the site and the runoff off is collected by means of an underground storm drain system and discharged to the east before entering a bioretention basin. The eastern portion of the site is comprised of the parking area to the east. The parking area, covering the eastern portion of this basin, also drain to the bioretention basins. The flow from basin 100 enters the bioretention basin then discharges to an underground detention pipe before discharging to the existing 18" storm drain pipe. Basin 200 consist of the flow from the public right of way along La Jolla Village Drive and La Jolla Scenic Way. Basin

300 is primarily landscaping, driveway area and a public Bike path that surfaces flows to a bioretention basin before discharging into a storm drain system.

5.0 CONCLUSION

The development of the project site will minimally increase the pre-development flow rate of storm water runoff by 0.58 cfs (basin 100) in the 100-year storm event; however, the increased flow rate will be mitigated by onsite underground detention facilities. Detention volume calculations can be found in Appendix E. Table 1 below provides a summary of the pre- and post-development areas and flows at key locations without detention. Table 2 provides a summary of the same pre- and post-development areas and 100-year peak flows with detention applied.

Table 1 – Pre and Post-Development Areas and Flows (without Detention)

	Area (ac)		**Q_{100} (cfs)**		
Basin / Node	**Pre-Dev**	**Post-Dev**	**Pre-Dev**	**Post-Dev**	**+/-**
100	0.78	0.95	1.48	2.06	+0.58
200	0.42	0.68	0.80	0.68	-0.12
300	0.23	0.17	0.46	0.40	-0.06
Total	1.43	1.43	2.74	3.14	0.22

Table 2 – Pre and Post-Development Areas and Flows (with Detention)

	Area (ac)		**Q_{100} (cfs)**		
Basin / Node	**Pre-Dev**	**Post-Dev**	**Pre-Dev**	**Post-Dev**	**+/-**
100	0.78	0.95	1.48	1.36	-0.12
200	0.42	0.68	0.80	0.68	-0.12
300	0.23	0.17	0.46	0.40	-0.06
Total	1.43	1.43	2.74	3.14	-0.30

Since the increased flow rate will be mitigated by an onsite underground detention facility, there will be no negative impacts to any adjacent properties.

REFERENCES

City of San Diego Drainage Design Manual (April 1984).

City of San Diego Municipal Code*. Land development Manual – Storm Water Standards* (March 24, 2008).

APPENDIX A

Reference Charts

WEIGHTED RUNOFF COEFFICIENT CALCULATIONS

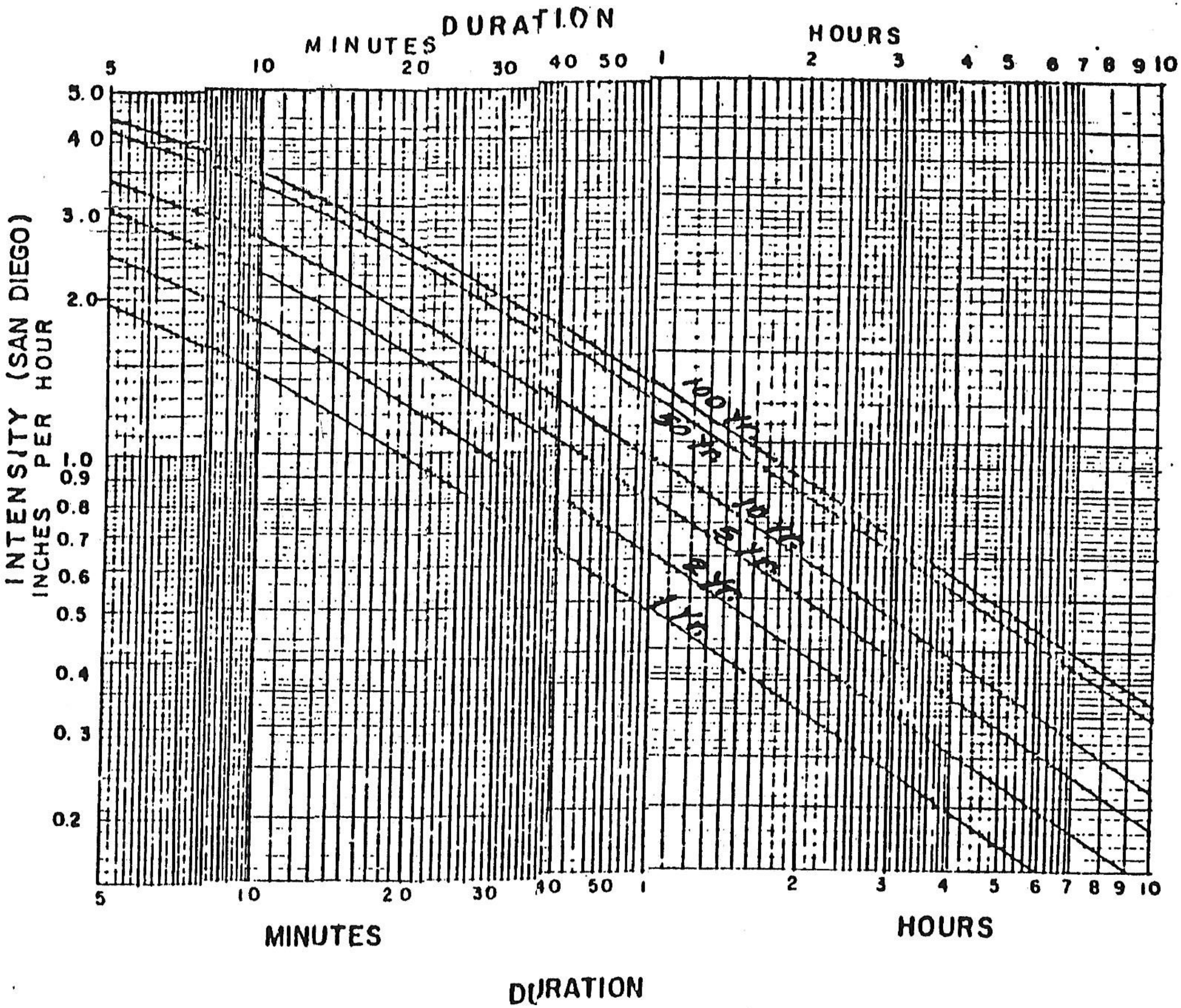
HILLEL-POST DEVELOPED

Landscaping & Pervious Pavement		Buildings & Impervious Pavement			
A_1 (acres)	C_1	A_2 (acres)	C_2	Total Area A_T (acres)	Weighed C C_W
0.69	0.45	0.74	0.95	1.43	0.71

WEIGHTED RUNOFF COEFFICIENT CALCULATIONS

HILLEL-PRE DEVELOPED

Landscaping & Pervious Pavement		Buildings & Impervious Pavement			
A_1 (acres)	C_1	A_2 (acres)	C_2	Total Area A_T (acres)	Weighed C C_W
0.90	0.45	0.53	0.95	1.43	0.64



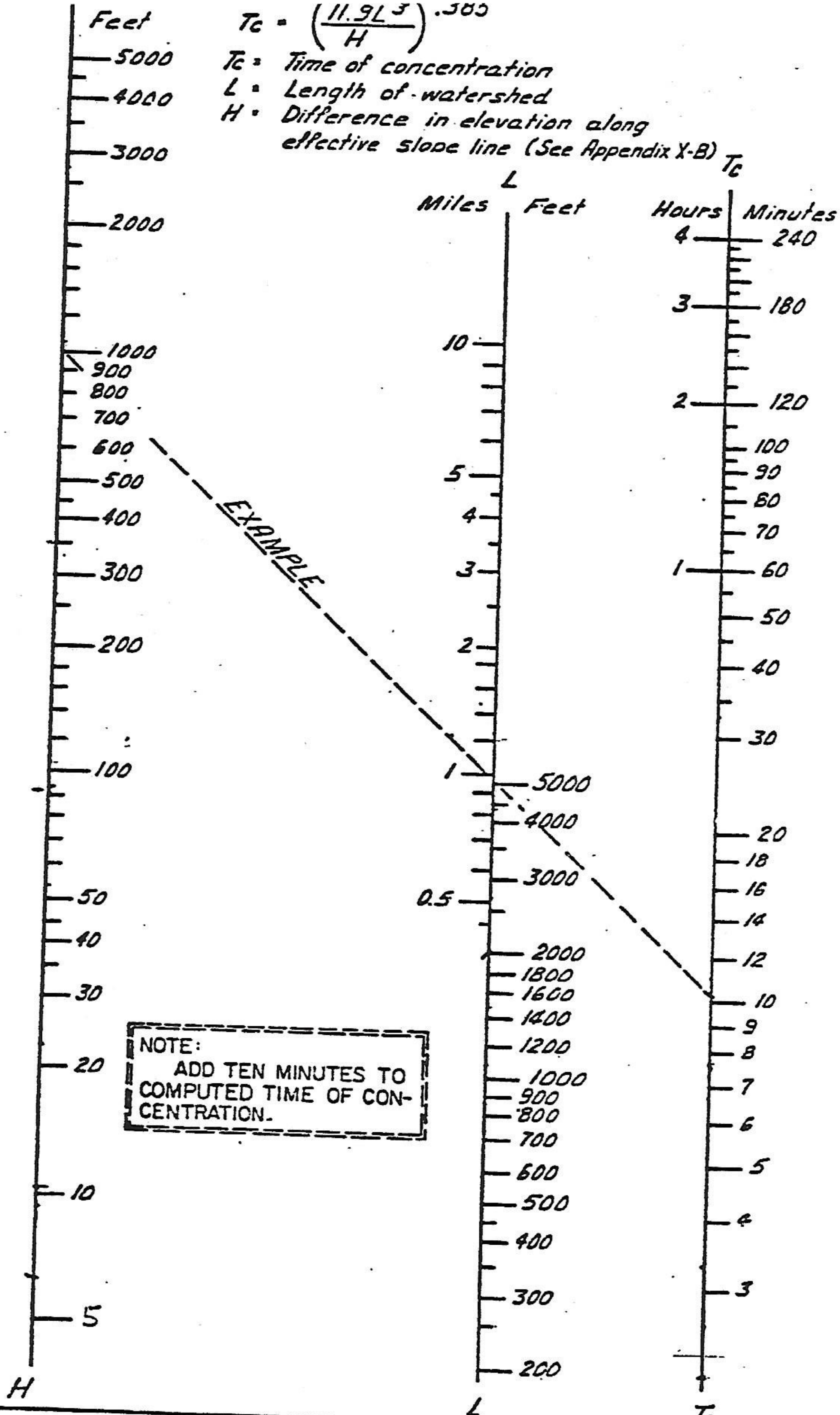
ELEV.	FACTOR
0–1500	1.00
1500–3000	1.25
3000–4000	1.42
4000–5000	1.60
5000–6000	1.70
DESERT	1.25

To obtain correct intensity, multiply intensity on chart by factor for design elevation.

RAINFALL INTENSITY - DURATION - FREQUENC

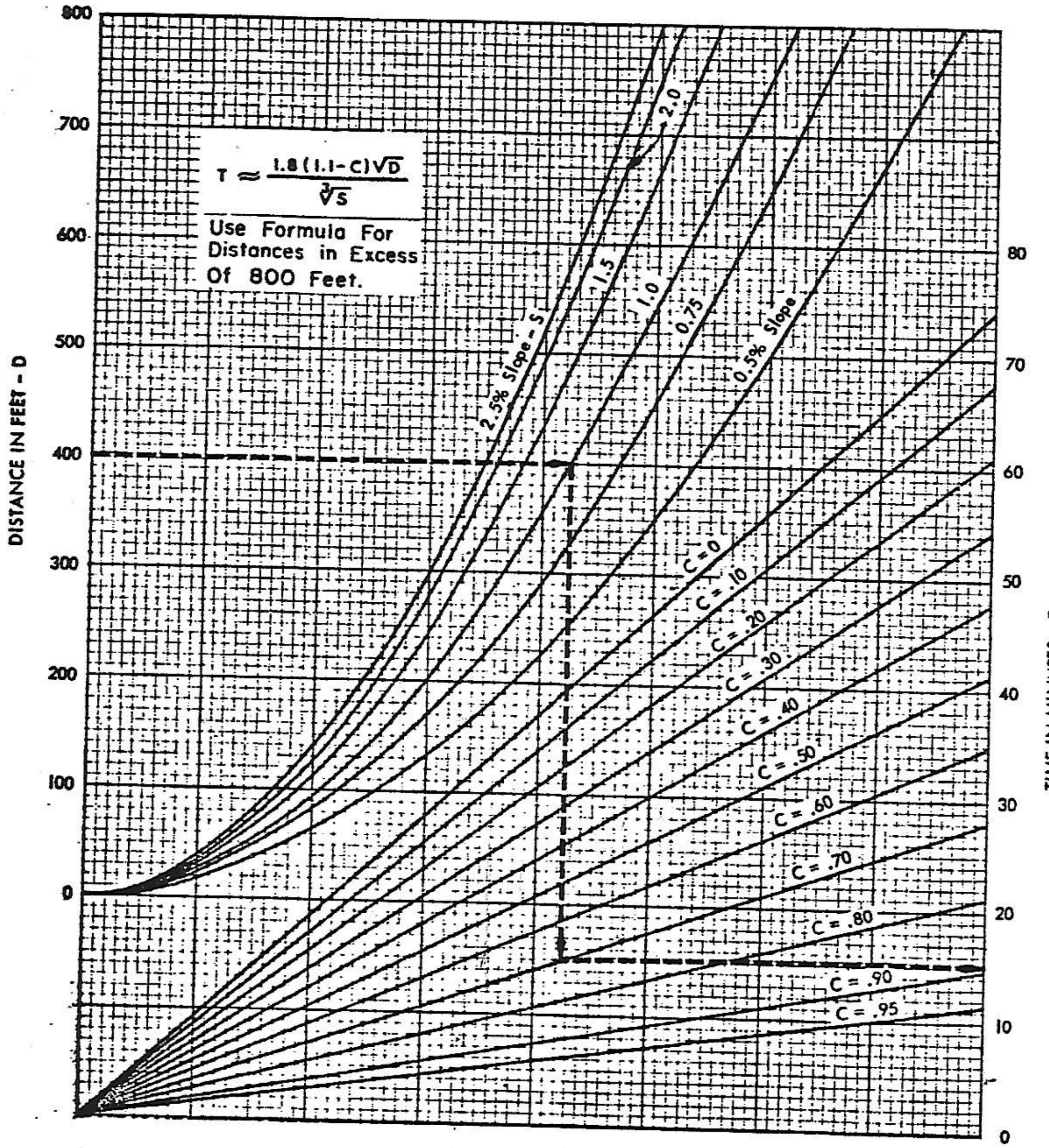
CURVES for COUNTY OF SAN DIEGO

APPENDIX



SAN DIEGO COUNTY DEPARTMENT OF SPECIAL DISTRICT SERVICES **DESIGN MANUAL**	NOMOGRAPH FOR DETERMINATION OF TIME OF CONCENTRATION (Tc) FOR NATURAL WATERSHEDS	
APPROVED ______	DATE ______	APPENDIX

URBAN AREAS OVERLAND TIME OF FLOW CURVES



Surface Flow Time Curves

EXAMPLE:

GIVEN: LENGTH OF FLOW = 400 FT.
SLOPE = 1.0 %
COEFFICIENT OF RUNOFF C = .70

READ: OVERLAND FLOWTIME = 15 MINUTES

TABLE 2

RUNOFF COEFFICIENTS (RATIONAL METHOD)

DEVELOPED AREAS (URBAN)

Land Use	Coefficient, C Soil Type (1)
	D
Residential:	
Single Family	.55
Multi-Units	.70
Mobile Homes	.65
Rural (lots greater than 1/2 acre)	.45
Commercial (2) 80% Impervious	.85
Industrial (2) 90% Impervious	.95

NOTES:

(1) Type D soil to be used for all areas.

(2) Where actual conditions deviate significantly from the tabulated imperviousness values of 80% or 90%, the values given for coefficient C, may be revised by multiplying 80% or 90% by the ratio of actual imperviousness to the tabulated imperviousness. However, in no case shall the final coefficient be less than 0.50. For example: Consider commercial property on D soil.

Actual imperviousness = 50%

Tabulated imperviousness = 80%

$$\text{Revised C} = \frac{50}{80} \times 0.85 = 0.53$$

APPENDIX B

Pre-Development Hydrology Calculations

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 100

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 101.000 to Point/Station 100.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 326.000(Ft.)

Highest elevation = 402.970(Ft.)

Lowest elevation = 400.220(Ft.)

Elevation difference = 2.750(Ft.)

TC=[(11.9*0.0617^3)/(2.75)]^.385= 4.23 + 10 min. = 14.23 min.

Rainfall intensity (I) = 2.964(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 1.480(CFS)

Total initial stream area = 0.780(Ac.)

End of computations, total study area = 0.780 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 200

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 202.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 266.000(Ft.)

Highest elevation = 400.800(Ft.)

Lowest elevation = 392.200(Ft.)

Elevation difference = 8.600(Ft.)

TC=[(11.9*0.0504^3)/(8.60)]^.385= 2.16 + 10 min. = 12.16 min.

Rainfall intensity (I) = 3.143(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.604(CFS)

Total initial stream area = 0.300(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.300(Ac.)

Runoff from this stream = 0.604(CFS)

Time of concentration = 12.16 min.

Rainfall intensity = 3.143(In/Hr)

++

Process from Point/Station 201.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 475.000(Ft.)

Highest elevation = 400.890(Ft.)

Lowest elevation = 392.200(Ft.)

Elevation difference = 8.690(Ft.)

TC=[(11.9*0.0900^3)/(8.69)]^.385= 4.19 + 10 min. = 14.19 min.

Rainfall intensity (I) = 2.967(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.228(CFS)

Total initial stream area = 0.120(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.120(Ac.)

Runoff from this stream = 0.228(CFS)

Time of concentration = 14.19 min.

Rainfall intensity = 2.967(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.604	12.16	3.143
2	0.228	14.19	2.967

Qmax(1) =

1.000 * 1.000 * 0.604) +

1.000 * 0.856 * 0.228) + = 0.799

Qmax(2) =

0.944 * 1.000 * 0.604) +

1.000 * 1.000 * 0.228) + = 0.798

Total of 2 streams to confluence:

Flow rates before confluence point:

0.604 0.228

Maximum flow rates at confluence using above data:

0.799 0.798

Area of streams before confluence:

0.300 0.120

Results of confluence:

Total flow rate = 0.799(CFS)

Time of concentration = 12.156 min.

Effective stream area after confluence = 0.420(Ac.)

End of computations, total study area = 0.420 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

PRE-DEVELOPMENT BASIN 300

100 YEAR STORM

PREPARED BY: PHS DAE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 301.000 to Point/Station 300.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.640 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 202.000(Ft.)

Highest elevation = 402.970(Ft.)

Lowest elevation = 400.890(Ft.)

Elevation difference = 2.080(Ft.)

TC=[(11.9*0.0383^3)/(2.08)]^.385= 2.71 + 10 min. = 12.71 min.

Rainfall intensity (I) = 3.092(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.640

Subarea runoff = 0.455(CFS)

Total initial stream area = 0.230(Ac.)

End of computations, total study area = 0.230 (Ac.)

APPENDIX C

Post-Development Hydrology Calculations

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study   Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 (NODE 102-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 102.000 to Point/Station 101.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 293.000(Ft.)

Highest elevation = 404.500(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 6.600(Ft.)

TC=[(11.9*0.0555^3)/(6.60)]^.385= 2.67 + 10 min. = 12.67 min.

Rainfall intensity (I) = 3.096(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.308(CFS)

Total initial stream area = 0.140(Ac.)

End of computations, total study area = 0.140 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 (NODE 107-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 107.000 to Point/Station 106.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 144.000(Ft.)

Highest elevation = 401.500(Ft.)

Lowest elevation = 400.000(Ft.)

Elevation difference = 1.500(Ft.)

TC=[(11.9*0.0273^3)/(1.50)]^.385= 2.08 + 10 min. = 12.08 min.

Rainfall intensity (I) = 3.151(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.112(CFS)

Total initial stream area = 0.050(Ac.)

++

Process from Point/Station   106.000 to Point/Station   104.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation =   399.500(Ft.)

Downstream point/station elevation =   389.560(Ft.)

Pipe length =   188.13(Ft.)   Manning's N = 0.013

No. of pipes = 1 Required pipe flow =   0.112(CFS)

Nearest computed pipe diameter =   3.00(In.)

Calculated individual pipe flow =   0.112(CFS)

Normal flow depth in pipe =   1.59(In.)

Flow top width inside pipe =   2.99(In.)

Critical Depth =   2.42(In.)

Pipe flow velocity =   4.24(Ft/s)

Travel time through pipe =   0.74 min.

Time of concentration (TC) =   12.82 min.

++

Process from Point/Station   104.000 to Point/Station   104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area =   0.050(Ac.)

Runoff from this stream =   0.112(CFS)

Time of concentration =   12.82 min.

Rainfall intensity =   3.082(In/Hr)

++

Process from Point/Station   105.000 to Point/Station   104.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 114.000(Ft.)

Highest elevation = 404.500(Ft.)

Lowest elevation = 403.500(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0216^3)/(1.00)]^.385= 1.85 + 10 min. = 11.85 min.

Rainfall intensity (I) = 3.172(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.360(CFS)

Total initial stream area = 0.160(Ac.)

++

Process from Point/Station 104.000 to Point/Station 104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.160(Ac.)

Runoff from this stream = 0.360(CFS)

Time of concentration = 11.85 min.

Rainfall intensity = 3.172(In/Hr)

++

Process from Point/Station 103.000 to Point/Station 104.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 54.000(Ft.)

Highest elevation = 400.000(Ft.)

Lowest elevation = 399.000(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0102^3)/(1.00)]^.385= 0.78 + 10 min. = 10.78 min.

Rainfall intensity (I) = 3.283(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.583(CFS)

Total initial stream area = 0.250(Ac.)

++

Process from Point/Station 104.000 to Point/Station 104.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 3

Stream flow area = 0.250(Ac.)

Runoff from this stream = 0.583(CFS)

Time of concentration = 10.78 min.

Rainfall intensity = 3.283(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.112	12.82	3.082
2	0.360	11.85	3.172
3	0.583	10.78	3.283

Qmax(1) =

1.000 * 1.000 * 0.112) +

0.972 * 1.000 * 0.360) +

0.939 * 1.000 * 0.583) + = 1.009

Qmax(2) =

1.000 * 0.925 * 0.112) +

1.000 * 1.000 * 0.360) +

0.966 * 1.000 * 0.583) + = 1.027

Qmax(3) =

1.000 * 0.841 * 0.112) +

1.000 * 0.910 * 0.360) +

1.000 * 1.000 * 0.583) + = 1.005

Total of 3 streams to confluence:

Flow rates before confluence point:

0.112 0.360 0.583

Maximum flow rates at confluence using above data:

1.009 1.027 1.005

Area of streams before confluence:

0.050 0.160 0.250

Results of confluence:

Total flow rate = 1.027(CFS)

Time of concentration = 11.855 min.

Effective stream area after confluence = 0.460(Ac.)

++

Process from Point/Station 104.000 to Point/Station 101.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 398.560(Ft.)

Downstream point/station elevation = 398.040(Ft.)

Pipe length = 105.00(Ft.) Manning's N = 0.013

No. of pipes = 1 Required pipe flow = 1.027(CFS)

Nearest computed pipe diameter = 9.00(In.)

Calculated individual pipe flow = 1.027(CFS)

Normal flow depth in pipe = 6.56(In.)

Flow top width inside pipe = 8.00(In.)

Critical Depth = 5.58(In.)

Pipe flow velocity = 2.97(Ft/s)

Travel time through pipe = 0.59 min.

Time of concentration (TC) = 12.44 min.

End of computations, total study area = 0.460 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100(NODE 108-100)

100 YEAR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 108.000 to Point/Station 100.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 338.000(Ft.)

Highest elevation = 422.970(Ft.)

Lowest elevation = 400.180(Ft.)

Elevation difference = 22.790(Ft.)

TC=[(11.9*0.0640^3)/(22.79)]^.385= 1.95 + 10 min. = 11.95 min.

Rainfall intensity (I) = 3.163(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.674(CFS)

Total initial stream area = 0.300(Ac.)

End of computations, total study area = 0.300 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 100 9NODE 109-101)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 1.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 109.000 to Point/Station 101.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 120.000(Ft.)

Highest elevation = 398.900(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 1.000(Ft.)

TC=[(11.9*0.0227^3)/(1.00)]^.385= 1.97 + 10 min. = 11.97 min.

Rainfall intensity (I) = 1.256(In/Hr) for a 1.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.045(CFS)

Total initial stream area = 0.050(Ac.)

End of computations, total study area = 0.050 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 200 9NODE 201-200)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 201.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 265.000(Ft.)

Highest elevation = 400.770(Ft.)

Lowest elevation = 392.080(Ft.)

Elevation difference = 8.690(Ft.)

TC=[(11.9*0.0502^3)/(8.69)]^.385= 2.14 + 10 min. = 12.14 min.

Rainfall intensity (I) = 3.145(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.268(CFS)

Total initial stream area = 0.120(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 1

Stream flow area = 0.120(Ac.)

Runoff from this stream = 0.268(CFS)

Time of concentration = 12.14 min.

Rainfall intensity = 3.145(In/Hr)

++

Process from Point/Station 202.000 to Point/Station 200.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 342.000(Ft.)

Highest elevation = 400.890(Ft.)

Lowest elevation = 392.080(Ft.)

Elevation difference = 8.810(Ft.)

TC=[(11.9*0.0648^3)/(8.81)]^.385= 2.85 + 10 min. = 12.85 min.

Rainfall intensity (I) = 3.079(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.415(CFS)

Total initial stream area = 0.190(Ac.)

++

Process from Point/Station 200.000 to Point/Station 200.000

**** CONFLUENCE OF MINOR STREAMS ****

Along Main Stream number: 1 in normal stream number 2

Stream flow area = 0.190(Ac.)

Runoff from this stream = 0.415(CFS)

Time of concentration = 12.85 min.

Rainfall intensity = 3.079(In/Hr)

Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	0.268	12.14	3.145
2	0.415	12.85	3.079

Qmax(1) =

1.000 * 1.000 * 0.268) +

1.000 * 0.944 * 0.415) + = 0.660

Qmax(2) =

0.979 * 1.000 * 0.268) +

1.000 * 1.000 * 0.415) + = 0.678

Total of 2 streams to confluence:

Flow rates before confluence point:

0.268 0.415

Maximum flow rates at confluence using above data:

0.660 0.678

Area of streams before confluence:

0.120 0.190

Results of confluence:

Total flow rate = 0.678(CFS)

Time of concentration = 12.855 min.

Effective stream area after confluence = 0.310(Ac.)

End of computations, total study area = 0.310 (Ac.)

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2005 Version 6.5

Rational method hydrology program based on

San Diego County Flood Control Division 1985 hydrology manual

Rational Hydrology Study Date: 03/11/16

UCSD HILLEL

POST-DEVELOPMENT BASIN 300 (NODE 302-300)

100 YR STORM

PREPARED BY: PHS DATE: 03-10-16

********* Hydrology Study Control Information **********

Program License Serial Number 6340

Rational hydrology study storm event year is 100.0

English (in-lb) input data Units used

English (in) rainfall data used

Standard intensity of Appendix I-B used for year and

Elevation 0 - 1500 feet

Factor (to multiply * intensity) = 1.000

Only used if inside City of San Diego

San Diego hydrology manual 'C' values used

Runoff coefficients by rational method

++

Process from Point/Station 302.000 to Point/Station 301.000

**** INITIAL AREA EVALUATION ****

User specified 'C' value of 0.710 given for subarea

Time of concentration computed by the

natural watersheds nomograph (App X-A)

TC = [11.9*length(Mi)^3)/(elevation change(Ft.))]^.385 *60(min/hr) + 10 min.

Initial subarea flow distance = 70.000(Ft.)

Highest elevation = 401.500(Ft.)

Lowest elevation = 397.900(Ft.)

Elevation difference = 3.600(Ft.)

TC=[(11.9*0.0133^3)/(3.60)]^.385= 0.64 + 10 min. = 10.64 min.

Rainfall intensity (I) = 3.299(In/Hr) for a 100.0 year storm

Effective runoff coefficient used for area (Q=KCIA) is C = 0.710

Subarea runoff = 0.398(CFS)

Total initial stream area = 0.170(Ac.)

++

Process from Point/Station 301.000 to Point/Station 300.000

**** PIPEFLOW TRAVEL TIME (Program estimated size) ****

Upstream point/station elevation = 394.000(Ft.)

Downstream point/station elevation = 392.000(Ft.)

Pipe length = 60.00(Ft.) Manning's N = 0.013

No. of pipes = 1 Required pipe flow = 0.398(CFS)

Nearest computed pipe diameter = 6.00(In.)

Calculated individual pipe flow = 0.398(CFS)

Normal flow depth in pipe = 2.59(In.)

Flow top width inside pipe = 5.94(In.)

Critical Depth = 3.85(In.)

Pipe flow velocity = 4.89(Ft/s)

Travel time through pipe = 0.20 min.

Time of concentration (TC) = 10.85 min.

End of computations, total study area = 0.170 (Ac.)

APPENDIX D

Hydraulic Calculations

APPENDIX E

Detention Calculations

100-Year Rational Method Hydrograph Calculations for UCSD Hillel

		Q100=	1.39	cfs				
		Tc=	10	min	C=	0.71		
#= 42		$P_{100,6}$=	2	in	A=	0.65	acres	

#	D (MIN)	I (IN/HR) *(7.44*P6*D^-.645)*	VOL (IN) *(I*D/60)*	∆VOL (IN) *(V1-V0)*	I (INCR) (IN/HR) *(∆V/∆T)*	Q (CFS) *(Q=ciA)*	VOL (CF)	ORDINATE SUM= *(Re-ordered)*
0	0	0.00	0.00	0.56	3.37	1.39	834	0.00
1	10	3.37	0.56	0.16	0.94	0.43	260	0.06
2	20	2.15	0.72	0.11	0.67	0.31	185	0.06
3	30	1.66	0.83	0.09	0.54	0.25	148	0.06
4	40	1.38	0.92	0.08	0.45	0.21	126	0.06
5	50	1.19	0.99	0.07	0.40	0.18	110	0.06
6	60	1.06	1.06	0.06	0.36	0.17	99	0.06
7	70	0.96	1.12	0.05	0.33	0.15	90	0.07
8	80	0.88	1.18	0.05	0.30	0.14	83	0.07
9	90	0.82	1.23	0.05	0.28	0.13	78	0.07
10	100	0.76	1.27	0.04	0.26	0.12	73	0.07
11	110	0.72	1.32	0.04	0.25	0.11	69	0.08
12	120	0.68	1.36	0.04	0.23	0.11	65	0.08
13	130	0.64	1.40	0.04	0.22	0.10	62	0.09
14	140	0.61	1.43	0.04	0.21	0.10	59	0.09
15	150	0.59	1.47	0.03	0.20	0.09	57	0.10
16	160	0.56	1.50	0.03	0.20	0.09	54	0.10
17	170	0.54	1.54	0.03	0.19	0.09	52	0.11
18	180	0.52	1.57	0.03	0.18	0.08	50	0.12
19	190	0.50	1.60	0.03	0.18	0.08	49	0.14
20	200	0.49	1.63	0.03	0.17	0.08	47	0.15
21	210	0.47	1.66	0.03	0.17	0.08	46	0.18
22	220	0.46	1.68	0.03	0.16	0.07	44	0.21
23	230	0.45	1.71	0.03	0.16	0.07	43	0.31
24	240	0.43	1.74	0.03	0.15	0.07	42	0.43
25	250	0.42	1.76	0.02	0.15	0.07	41	1.39
26	260	0.41	1.79	0.02	0.14	0.07	40	0.25
27	270	0.40	1.81	0.02	0.14	0.07	39	0.17
28	280	0.39	1.83	0.02	0.14	0.06	38	0.13
29	290	0.38	1.86	0.02	0.13	0.06	37	0.11
30	300	0.38	1.88	0.02	0.13	0.06	37	0.09
31	310	0.37	1.90	0.02	0.13	0.06	36	0.08
32	320	0.36	1.92	0.02	0.13	0.06	35	0.08
33	330	0.35	1.94	0.02	0.12	0.06	34	0.07
34	340	0.35	1.96	0.02	0.12	0.06	34	0.07
35	350	0.34	1.98	0.02	0.12	0.06	33	0.06
36	360	0.33	2.00	0.00	0.00	0.00	0	0.06
						SUM=	**3231**	**cubic feet**
							0.07	**acre-feet**

Check: $V = C*A*P_6$

V= 0.08 acre-feet

OK

UCSD HILLEL

Stage-Discharge Table

RISER DETAILS: 5" Orifice Oulet

100-YR PEAK DISCHARGE, Q100 = 1.36 cfs

ORIFICE EQUATION: $Q = CA(2gH)^{1/2}$

where: C = Orifice Coefficient
= 0.60
A = Cross Sectional Area of Orifice (ft^2)
g = Gravitational Constant (32.2 ft/s^2)
H = Water Height over Centroid of Orifice (ft)

Water Height (in)	Water Height (ft)	Radius (ft)	Orifice Coeff.	Orifice Area (ft^2)	Orifice Flow (cfs)
1.0	0.08	0.2	0.6	0.1	0.1894
2.0	0.17	0.2	0.6	0.1	0.2679
3.0	0.25	0.2	0.6	0.1	0.3281
4.0	0.33	0.2	0.6	0.1	0.3789
5.0	0.42	0.2	0.6	0.1	0.4236
6.0	0.50	0.2	0.6	0.1	0.4640
7.0	0.58	0.2	0.6	0.1	0.5012
8.0	0.67	0.2	0.6	0.1	0.5358
9.0	0.75	0.2	0.6	0.1	0.5683
10.0	0.83	0.2	0.6	0.1	0.5990
11.0	0.92	0.2	0.6	0.1	0.6283
12.0	1.00	0.2	0.6	0.1	0.6562
13.0	1.08	0.2	0.6	0.1	0.6830
14.0	1.17	0.2	0.6	0.1	0.7088
15.0	1.25	0.2	0.6	0.1	0.7337
16.0	1.33	0.2	0.6	0.1	0.7577
17.0	1.42	0.2	0.6	0.1	0.7810
18.0	1.50	0.2	0.6	0.1	0.8037
19.0	1.58	0.2	0.6	0.1	0.8257
20.0	1.67	0.2	0.6	0.1	0.8472
21.0	1.75	0.2	0.6	0.1	0.8681
22.0	1.83	0.2	0.6	0.1	0.8885
23.0	1.92	0.2	0.6	0.1	0.9085
24.0	2.00	0.2	0.6	0.1	0.9280
25.0	2.08	0.2	0.6	0.1	0.9472
26.0	2.17	0.2	0.6	0.1	0.9659
27.0	2.25	0.2	0.6	0.1	0.9843
28.0	2.33	0.2	0.6	0.1	1.0024
29.0	2.42	0.2	0.6	0.1	1.0201
30.0	2.50	0.2	0.6	0.1	1.0376

UCSD HILLEL

31.0	2.58	0.2	0.6	0.1	1.0547
32.0	2.67	0.2	0.6	0.1	1.0716
33.0	2.75	0.2	0.6	0.1	1.0882
34.0	2.83	0.2	0.6	0.1	1.1046
35.0	2.92	0.2	0.6	0.1	1.1207
36.0	3.00	0.2	0.6	0.1	1.1366

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PIPE ELEVATION-STORAGE CALCULATOR
FLAT DETENTION PIPE

INPUT

PIPE DIA =	48	inches
LENGTH =	150	feet

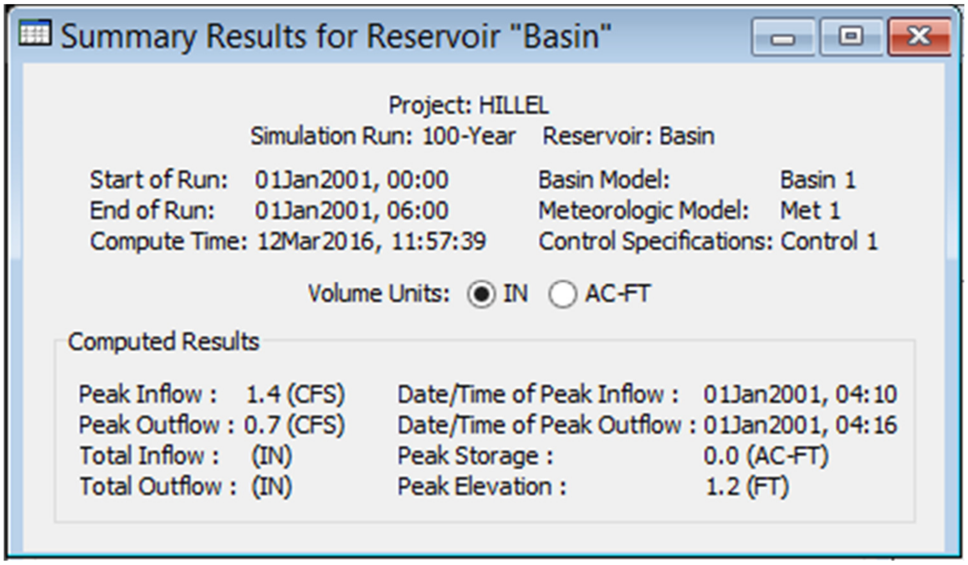
CALCULATE

RADIUS =	24	inches
TOTAL AREA =	12.57	sq. feet

				AREA 1				
ELEVATION (in)	AREA (sq ft)	AREA (acres)	STORAGE (acre-ft)	h	θ (deg)	θ (rad)	K (sq in)	K (sq ft)
1	0.06	0.00000146	0.000220	1	33	0.58	9	0.06
2	0.18	0.00000411	0.000617	2	47	0.82	26	0.18
3	0.33	0.00000751	0.001126	3	58	1.01	47	0.33
4	0.50	0.00001148	0.001722	4	67	1.17	72	0.50
5	0.69	0.00001594	0.002391	5	75	1.31	100	0.69
6	0.91	0.00002081	0.003122	6	83	1.45	131	0.91
7	1.13	0.00002605	0.003907	7	90	1.57	163	1.13
8	1.38	0.00003160	0.004741	8	96	1.68	198	1.38
9	1.63	0.00003744	0.005617	9	103	1.79	235	1.63
10	1.90	0.00004354	0.006531	10	109	1.90	273	1.90
11	2.17	0.00004987	0.007480	11	114	2.00	313	2.17
12	2.46	0.00005640	0.008460	12	120	2.09	354	2.46
13	2.75	0.00006311	0.009467	13	125	2.19	396	2.75
14	3.05	0.00007000	0.010499	14	131	2.28	439	3.05
15	3.36	0.00007702	0.011553	15	136	2.37	483	3.36
16	3.67	0.00008418	0.012627	16	141	2.46	528	3.67
17	3.98	0.00009145	0.013717	17	146	2.55	574	3.98
18	4.30	0.00009881	0.014822	18	151	2.64	620	4.30
19	4.63	0.00010626	0.015939	19	156	2.72	667	4.63
20	4.96	0.00011378	0.017066	20	161	2.81	714	4.96
21	5.29	0.00012135	0.018202	21	166	2.89	761	5.29
22	5.62	0.00012896	0.019343	22	170	2.97	809	5.62
23	5.95	0.00013659	0.020489	23	175	3.06	857	5.95
24	6.28	0.00014424	0.021636	24	180	3.14	905	6.28
25	6.62	0.00015189	0.022784	23	175	3.06	857	5.95
26	6.95	0.00015953	0.023929	22	170	2.97	809	5.62
27	7.28	0.00016714	0.025071	21	166	2.89	761	5.29
28	7.61	0.00017471	0.026206	20	161	2.81	714	4.96

29	7.94	0.00018223	0.027334	19	156	2.72	667	4.63
30	8.26	0.00018967	0.028451	18	151	2.64	620	4.30
31	8.58	0.00019704	0.029556	17	146	2.55	574	3.98
32	8.90	0.00020431	0.030646	16	141	2.46	528	3.67
33	9.21	0.00021146	0.031719	15	136	2.37	483	3.36
34	9.52	0.00021849	0.032773	14	131	2.28	439	3.05
35	9.82	0.00022537	0.033806	13	125	2.19	396	2.75
36	10.11	0.00023209	0.034813	12	120	2.09	354	2.46
37	10.39	0.00023862	0.035793	11	114	2.00	313	2.17
38	10.67	0.00024494	0.036741	10	109	1.90	273	1.90
39	10.94	0.00025104	0.037656	9	103	1.79	235	1.63
40	11.19	0.00025688	0.038532	8	96	1.68	198	1.38
41	11.43	0.00026244	0.039365	7	90	1.57	163	1.13
42	11.66	0.00026767	0.040151	6	83	1.45	131	0.91
43	11.87	0.00027254	0.040882	5	75	1.31	100	0.69
44	12.07	0.00027700	0.041550	4	67	1.17	72	0.50
45	12.24	0.00028098	0.042147	3	58	1.01	47	0.33
46	12.39	0.00028437	0.042656	2	47	0.82	26	0.18
47	12.50	0.00028702	0.043053	1	33	0.58	9	0.06
48	12.57	0.00028848	0.043273	0	0	0.00	0	0.00

UCSD HILLEL
100-YEAR HEC-HMS OUTPUT


Summary Results for Reservoir "Basin"

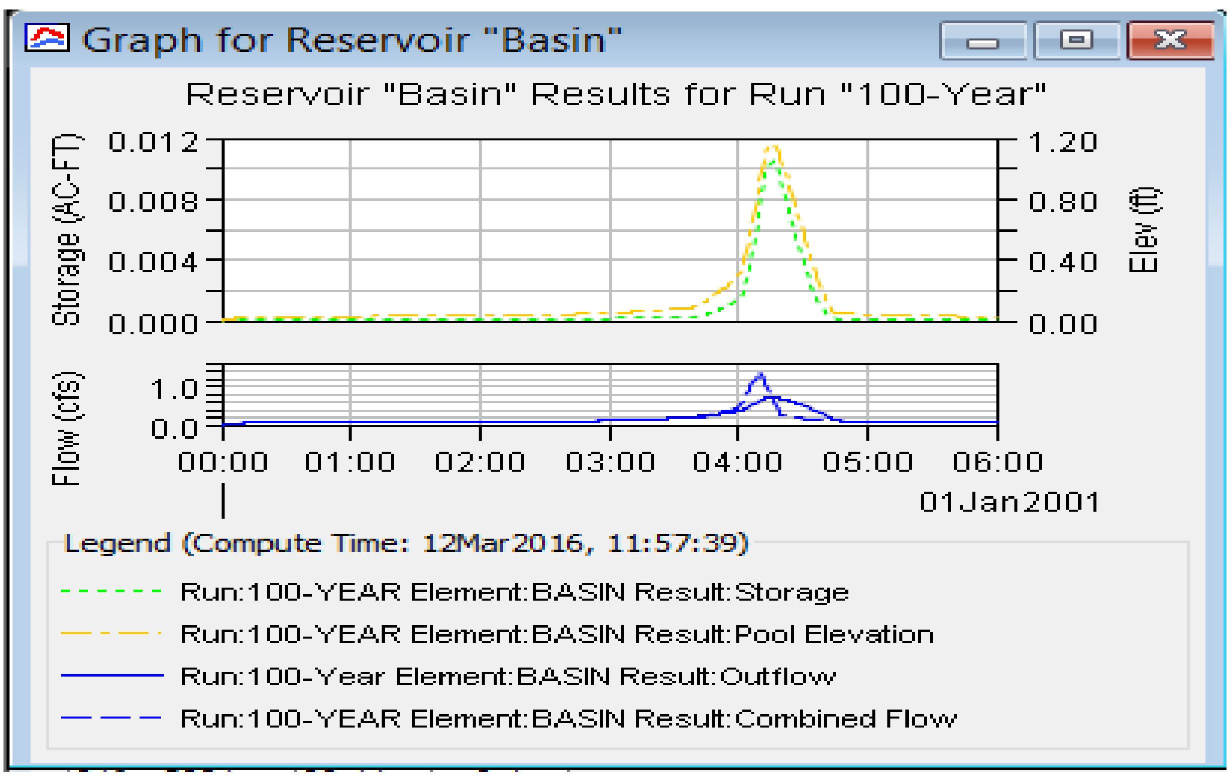
Project: HILLEL
Simulation Run: 100-Year   Reservoir: Basin

Start of Run:	01Jan2001, 00:00	Basin Model:	Basin 1
End of Run:	01Jan2001, 06:00	Meteorologic Model:	Met 1
Compute Time:	12Mar2016, 11:57:39	Control Specifications:	Control 1

Volume Units: IN AC-FT

Computed Results

Peak Inflow :	1.4 (CFS)	Date/Time of Peak Inflow :	01Jan2001, 04:10
Peak Outflow :	0.7 (CFS)	Date/Time of Peak Outflow :	01Jan2001, 04:16
Total Inflow :	(IN)	Peak Storage :	0.0 (AC-FT)
Total Outflow :	(IN)	Peak Elevation :	1.2 (FT)



Project: HILLEL
Simulation Run: 100-Year Reservoir: Basin

Start of Run: 01Jan2001, 00:00 Basin Model: Basin 1
End of Run: 01Jan2001, 06:00 Meteorologic Model: Met 1
Compute Time: 12Mar2016, 11:57:39 Control Specifications: Cor

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:00	0.0	0.0	0.0	0.0
01Jan2001	00:01	0.0	0.0	0.0	0.0
01Jan2001	00:02	0.0	0.0	0.0	0.0
01Jan2001	00:03	0.0	0.0	0.0	0.0
01Jan2001	00:04	0.0	0.0	0.0	0.0
01Jan2001	00:05	0.0	0.0	0.0	0.0
01Jan2001	00:06	0.0	0.0	0.0	0.0
01Jan2001	00:07	0.0	0.0	0.0	0.0
01Jan2001	00:08	0.0	0.0	0.0	0.0
01Jan2001	00:09	0.1	0.0	0.0	0.0
01Jan2001	00:10	0.1	0.0	0.0	0.1
01Jan2001	00:11	0.1	0.0	0.0	0.1
01Jan2001	00:12	0.1	0.0	0.0	0.1
01Jan2001	00:13	0.1	0.0	0.0	0.1
01Jan2001	00:14	0.1	0.0	0.0	0.1
01Jan2001	00:15	0.1	0.0	0.0	0.1
01Jan2001	00:16	0.1	0.0	0.0	0.1
01Jan2001	00:17	0.1	0.0	0.0	0.1
01Jan2001	00:18	0.1	0.0	0.0	0.1
01Jan2001	00:19	0.1	0.0	0.0	0.1
01Jan2001	00:20	0.1	0.0	0.0	0.1
01Jan2001	00:21	0.1	0.0	0.0	0.1
01Jan2001	00:22	0.1	0.0	0.0	0.1
01Jan2001	00:23	0.1	0.0	0.0	0.1
01Jan2001	00:24	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:25	0.1	0.0	0.0	0.1
01Jan2001	00:26	0.1	0.0	0.0	0.1
01Jan2001	00:27	0.1	0.0	0.0	0.1
01Jan2001	00:28	0.1	0.0	0.0	0.1
01Jan2001	00:29	0.1	0.0	0.0	0.1
01Jan2001	00:30	0.1	0.0	0.0	0.1
01Jan2001	00:31	0.1	0.0	0.0	0.1
01Jan2001	00:32	0.1	0.0	0.0	0.1
01Jan2001	00:33	0.1	0.0	0.0	0.1
01Jan2001	00:34	0.1	0.0	0.0	0.1
01Jan2001	00:35	0.1	0.0	0.0	0.1
01Jan2001	00:36	0.1	0.0	0.0	0.1
01Jan2001	00:37	0.1	0.0	0.0	0.1
01Jan2001	00:38	0.1	0.0	0.0	0.1
01Jan2001	00:39	0.1	0.0	0.0	0.1
01Jan2001	00:40	0.1	0.0	0.0	0.1
01Jan2001	00:41	0.1	0.0	0.0	0.1
01Jan2001	00:42	0.1	0.0	0.0	0.1
01Jan2001	00:43	0.1	0.0	0.0	0.1
01Jan2001	00:44	0.1	0.0	0.0	0.1
01Jan2001	00:45	0.1	0.0	0.0	0.1
01Jan2001	00:46	0.1	0.0	0.0	0.1
01Jan2001	00:47	0.1	0.0	0.0	0.1
01Jan2001	00:48	0.1	0.0	0.0	0.1
01Jan2001	00:49	0.1	0.0	0.0	0.1
01Jan2001	00:50	0.1	0.0	0.0	0.1
01Jan2001	00:51	0.1	0.0	0.0	0.1
01Jan2001	00:52	0.1	0.0	0.0	0.1
01Jan2001	00:53	0.1	0.0	0.0	0.1
01Jan2001	00:54	0.1	0.0	0.0	0.1
01Jan2001	00:55	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	00:56	0.1	0.0	0.0	0.1
01Jan2001	00:57	0.1	0.0	0.0	0.1
01Jan2001	00:58	0.1	0.0	0.0	0.1
01Jan2001	00:59	0.1	0.0	0.0	0.1
01Jan2001	01:00	0.1	0.0	0.0	0.1
01Jan2001	01:01	0.1	0.0	0.0	0.1
01Jan2001	01:02	0.1	0.0	0.0	0.1
01Jan2001	01:03	0.1	0.0	0.0	0.1
01Jan2001	01:04	0.1	0.0	0.0	0.1
01Jan2001	01:05	0.1	0.0	0.0	0.1
01Jan2001	01:06	0.1	0.0	0.0	0.1
01Jan2001	01:07	0.1	0.0	0.0	0.1
01Jan2001	01:08	0.1	0.0	0.0	0.1
01Jan2001	01:09	0.1	0.0	0.0	0.1
01Jan2001	01:10	0.1	0.0	0.0	0.1
01Jan2001	01:11	0.1	0.0	0.0	0.1
01Jan2001	01:12	0.1	0.0	0.0	0.1
01Jan2001	01:13	0.1	0.0	0.0	0.1
01Jan2001	01:14	0.1	0.0	0.0	0.1
01Jan2001	01:15	0.1	0.0	0.0	0.1
01Jan2001	01:16	0.1	0.0	0.0	0.1
01Jan2001	01:17	0.1	0.0	0.0	0.1
01Jan2001	01:18	0.1	0.0	0.0	0.1
01Jan2001	01:19	0.1	0.0	0.0	0.1
01Jan2001	01:20	0.1	0.0	0.0	0.1
01Jan2001	01:21	0.1	0.0	0.0	0.1
01Jan2001	01:22	0.1	0.0	0.0	0.1
01Jan2001	01:23	0.1	0.0	0.0	0.1
01Jan2001	01:24	0.1	0.0	0.0	0.1
01Jan2001	01:25	0.1	0.0	0.0	0.1
01Jan2001	01:26	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	01:27	0.1	0.0	0.0	0.1
01Jan2001	01:28	0.1	0.0	0.0	0.1
01Jan2001	01:29	0.1	0.0	0.0	0.1
01Jan2001	01:30	0.1	0.0	0.0	0.1
01Jan2001	01:31	0.1	0.0	0.0	0.1
01Jan2001	01:32	0.1	0.0	0.0	0.1
01Jan2001	01:33	0.1	0.0	0.0	0.1
01Jan2001	01:34	0.1	0.0	0.0	0.1
01Jan2001	01:35	0.1	0.0	0.0	0.1
01Jan2001	01:36	0.1	0.0	0.0	0.1
01Jan2001	01:37	0.1	0.0	0.0	0.1
01Jan2001	01:38	0.1	0.0	0.0	0.1
01Jan2001	01:39	0.1	0.0	0.0	0.1
01Jan2001	01:40	0.1	0.0	0.0	0.1
01Jan2001	01:41	0.1	0.0	0.0	0.1
01Jan2001	01:42	0.1	0.0	0.0	0.1
01Jan2001	01:43	0.1	0.0	0.0	0.1
01Jan2001	01:44	0.1	0.0	0.0	0.1
01Jan2001	01:45	0.1	0.0	0.0	0.1
01Jan2001	01:46	0.1	0.0	0.0	0.1
01Jan2001	01:47	0.1	0.0	0.0	0.1
01Jan2001	01:48	0.1	0.0	0.0	0.1
01Jan2001	01:49	0.1	0.0	0.0	0.1
01Jan2001	01:50	0.1	0.0	0.0	0.1
01Jan2001	01:51	0.1	0.0	0.0	0.1
01Jan2001	01:52	0.1	0.0	0.0	0.1
01Jan2001	01:53	0.1	0.0	0.0	0.1
01Jan2001	01:54	0.1	0.0	0.0	0.1
01Jan2001	01:55	0.1	0.0	0.0	0.1
01Jan2001	01:56	0.1	0.0	0.0	0.1
01Jan2001	01:57	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	01:58	0.1	0.0	0.0	0.1
01Jan2001	01:59	0.1	0.0	0.0	0.1
01Jan2001	02:00	0.1	0.0	0.0	0.1
01Jan2001	02:01	0.1	0.0	0.0	0.1
01Jan2001	02:02	0.1	0.0	0.0	0.1
01Jan2001	02:03	0.1	0.0	0.0	0.1
01Jan2001	02:04	0.1	0.0	0.0	0.1
01Jan2001	02:05	0.1	0.0	0.0	0.1
01Jan2001	02:06	0.1	0.0	0.0	0.1
01Jan2001	02:07	0.1	0.0	0.0	0.1
01Jan2001	02:08	0.1	0.0	0.0	0.1
01Jan2001	02:09	0.1	0.0	0.0	0.1
01Jan2001	02:10	0.1	0.0	0.0	0.1
01Jan2001	02:11	0.1	0.0	0.0	0.1
01Jan2001	02:12	0.1	0.0	0.0	0.1
01Jan2001	02:13	0.1	0.0	0.0	0.1
01Jan2001	02:14	0.1	0.0	0.0	0.1
01Jan2001	02:15	0.1	0.0	0.0	0.1
01Jan2001	02:16	0.1	0.0	0.0	0.1
01Jan2001	02:17	0.1	0.0	0.0	0.1
01Jan2001	02:18	0.1	0.0	0.0	0.1
01Jan2001	02:19	0.1	0.0	0.0	0.1
01Jan2001	02:20	0.1	0.0	0.0	0.1
01Jan2001	02:21	0.1	0.0	0.0	0.1
01Jan2001	02:22	0.1	0.0	0.0	0.1
01Jan2001	02:23	0.1	0.0	0.0	0.1
01Jan2001	02:24	0.1	0.0	0.0	0.1
01Jan2001	02:25	0.1	0.0	0.0	0.1
01Jan2001	02:26	0.1	0.0	0.0	0.1
01Jan2001	02:27	0.1	0.0	0.0	0.1
01Jan2001	02:28	0.1	0.0	0.0	0.1

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	02:29	0.1	0.0	0.0	0.1
01Jan2001	02:30	0.1	0.0	0.0	0.1
01Jan2001	02:31	0.1	0.0	0.0	0.1
01Jan2001	02:32	0.1	0.0	0.0	0.1
01Jan2001	02:33	0.1	0.0	0.0	0.1
01Jan2001	02:34	0.1	0.0	0.0	0.1
01Jan2001	02:35	0.1	0.0	0.0	0.1
01Jan2001	02:36	0.1	0.0	0.0	0.1
01Jan2001	02:37	0.1	0.0	0.0	0.1
01Jan2001	02:38	0.1	0.0	0.0	0.1
01Jan2001	02:39	0.1	0.0	0.0	0.1
01Jan2001	02:40	0.1	0.0	0.0	0.1
01Jan2001	02:41	0.1	0.0	0.0	0.1
01Jan2001	02:42	0.1	0.0	0.0	0.1
01Jan2001	02:43	0.1	0.0	0.0	0.1
01Jan2001	02:44	0.1	0.0	0.0	0.1
01Jan2001	02:45	0.1	0.0	0.0	0.1
01Jan2001	02:46	0.1	0.0	0.0	0.1
01Jan2001	02:47	0.1	0.0	0.0	0.1
01Jan2001	02:48	0.1	0.0	0.0	0.1
01Jan2001	02:49	0.1	0.0	0.0	0.1
01Jan2001	02:50	0.1	0.0	0.0	0.1
01Jan2001	02:51	0.1	0.0	0.0	0.1
01Jan2001	02:52	0.1	0.0	0.0	0.1
01Jan2001	02:53	0.1	0.0	0.0	0.1
01Jan2001	02:54	0.1	0.0	0.0	0.1
01Jan2001	02:55	0.1	0.0	0.0	0.1
01Jan2001	02:56	0.1	0.0	0.0	0.1
01Jan2001	02:57	0.1	0.0	0.0	0.1
01Jan2001	02:58	0.1	0.0	0.0	0.1
01Jan2001	02:59	0.1	0.0	0.0	0.1

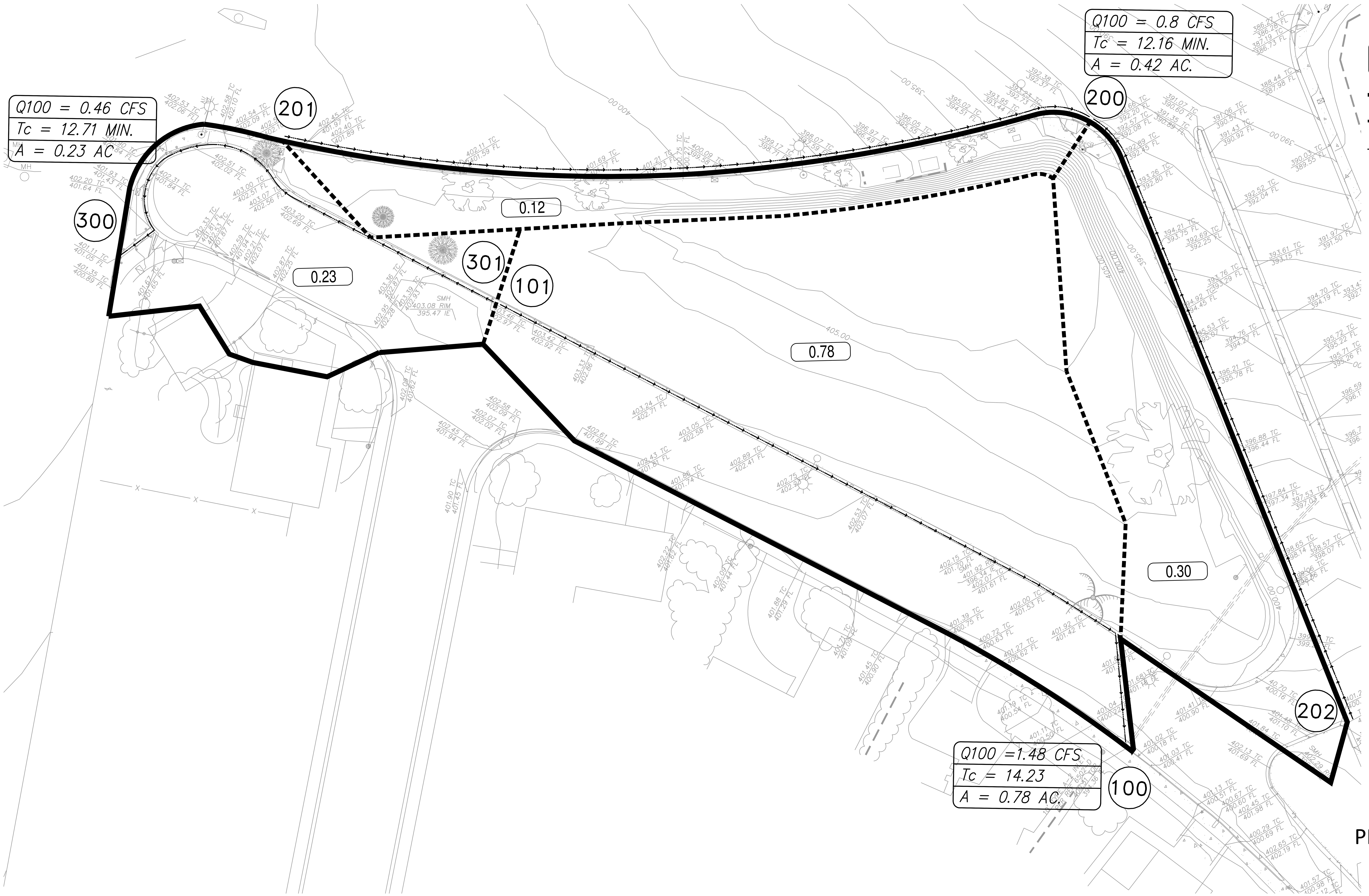
Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	03:00	0.1	0.0	0.1	0.1
01Jan2001	03:01	0.1	0.0	0.1	0.1
01Jan2001	03:02	0.1	0.0	0.1	0.1
01Jan2001	03:03	0.1	0.0	0.1	0.1
01Jan2001	03:04	0.1	0.0	0.1	0.1
01Jan2001	03:05	0.1	0.0	0.1	0.1
01Jan2001	03:06	0.1	0.0	0.1	0.1
01Jan2001	03:07	0.1	0.0	0.1	0.1
01Jan2001	03:08	0.1	0.0	0.1	0.1
01Jan2001	03:09	0.1	0.0	0.1	0.1
01Jan2001	03:10	0.1	0.0	0.1	0.1
01Jan2001	03:11	0.1	0.0	0.1	0.1
01Jan2001	03:12	0.1	0.0	0.1	0.1
01Jan2001	03:13	0.1	0.0	0.1	0.1
01Jan2001	03:14	0.1	0.0	0.1	0.1
01Jan2001	03:15	0.1	0.0	0.1	0.1
01Jan2001	03:16	0.1	0.0	0.1	0.1
01Jan2001	03:17	0.1	0.0	0.1	0.1
01Jan2001	03:18	0.1	0.0	0.1	0.1
01Jan2001	03:19	0.1	0.0	0.1	0.1
01Jan2001	03:20	0.2	0.0	0.1	0.1
01Jan2001	03:21	0.2	0.0	0.1	0.2
01Jan2001	03:22	0.2	0.0	0.1	0.2
01Jan2001	03:23	0.2	0.0	0.1	0.2
01Jan2001	03:24	0.2	0.0	0.1	0.2
01Jan2001	03:25	0.2	0.0	0.1	0.2
01Jan2001	03:26	0.2	0.0	0.1	0.2
01Jan2001	03:27	0.2	0.0	0.1	0.2
01Jan2001	03:28	0.2	0.0	0.1	0.2
01Jan2001	03:29	0.2	0.0	0.1	0.2
01Jan2001	03:30	0.2	0.0	0.1	0.2

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	03:31	0.2	0.0	0.1	0.2
01Jan2001	03:32	0.2	0.0	0.1	0.2
01Jan2001	03:33	0.2	0.0	0.1	0.2
01Jan2001	03:34	0.2	0.0	0.1	0.2
01Jan2001	03:35	0.2	0.0	0.1	0.2
01Jan2001	03:36	0.2	0.0	0.1	0.2
01Jan2001	03:37	0.2	0.0	0.1	0.2
01Jan2001	03:38	0.2	0.0	0.1	0.2
01Jan2001	03:39	0.2	0.0	0.1	0.2
01Jan2001	03:40	0.2	0.0	0.1	0.2
01Jan2001	03:41	0.2	0.0	0.1	0.2
01Jan2001	03:42	0.2	0.0	0.1	0.2
01Jan2001	03:43	0.2	0.0	0.1	0.2
01Jan2001	03:44	0.2	0.0	0.1	0.2
01Jan2001	03:45	0.3	0.0	0.1	0.2
01Jan2001	03:46	0.3	0.0	0.1	0.2
01Jan2001	03:47	0.3	0.0	0.1	0.2
01Jan2001	03:48	0.3	0.0	0.2	0.3
01Jan2001	03:49	0.3	0.0	0.2	0.3
01Jan2001	03:50	0.3	0.0	0.2	0.3
01Jan2001	03:51	0.3	0.0	0.2	0.3
01Jan2001	03:52	0.3	0.0	0.2	0.3
01Jan2001	03:53	0.3	0.0	0.2	0.3
01Jan2001	03:54	0.4	0.0	0.2	0.3
01Jan2001	03:55	0.4	0.0	0.2	0.3
01Jan2001	03:56	0.4	0.0	0.2	0.3
01Jan2001	03:57	0.4	0.0	0.3	0.3
01Jan2001	03:58	0.4	0.0	0.3	0.3
01Jan2001	03:59	0.4	0.0	0.3	0.3
01Jan2001	04:00	0.4	0.0	0.3	0.4
01Jan2001	04:01	0.5	0.0	0.3	0.4

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	04:02	0.6	0.0	0.4	0.4
01Jan2001	04:03	0.7	0.0	0.4	0.4
01Jan2001	04:04	0.8	0.0	0.5	0.4
01Jan2001	04:05	0.9	0.0	0.5	0.5
01Jan2001	04:06	1.0	0.0	0.6	0.5
01Jan2001	04:07	1.1	0.0	0.7	0.5
01Jan2001	04:08	1.2	0.0	0.7	0.6
01Jan2001	04:09	1.3	0.0	0.8	0.6
01Jan2001	04:10	1.4	0.0	0.9	0.6
01Jan2001	04:11	1.3	0.0	1.0	0.7
01Jan2001	04:12	1.2	0.0	1.1	0.7
01Jan2001	04:13	1.0	0.0	1.1	0.7
01Jan2001	04:14	0.9	0.0	1.1	0.7
01Jan2001	04:15	0.8	0.0	1.2	0.7
01Jan2001	04:16	0.7	0.0	1.2	0.7
01Jan2001	04:17	0.6	0.0	1.2	0.7
01Jan2001	04:18	0.5	0.0	1.1	0.7
01Jan2001	04:19	0.4	0.0	1.1	0.7
01Jan2001	04:20	0.2	0.0	1.1	0.7
01Jan2001	04:21	0.2	0.0	1.0	0.7
01Jan2001	04:22	0.2	0.0	1.0	0.6
01Jan2001	04:23	0.2	0.0	0.9	0.6
01Jan2001	04:24	0.2	0.0	0.9	0.6
01Jan2001	04:25	0.2	0.0	0.8	0.6
01Jan2001	04:26	0.2	0.0	0.8	0.6
01Jan2001	04:27	0.2	0.0	0.7	0.6
01Jan2001	04:28	0.2	0.0	0.7	0.5
01Jan2001	04:29	0.2	0.0	0.6	0.5
01Jan2001	04:30	0.2	0.0	0.6	0.5
01Jan2001	04:31	0.2	0.0	0.5	0.5
01Jan2001	04:32	0.2	0.0	0.5	0.5

Date	Time	Inflow (CFS)	Storage (AC-FT)	Elevation (FT)	Outflow (CFS)
01Jan2001	04:33	0.2	0.0	0.5	0.4
01Jan2001	04:34	0.2	0.0	0.4	0.4
01Jan2001	04:35	0.2	0.0	0.4	0.4
01Jan2001	04:36	0.1	0.0	0.3	0.4
01Jan2001	04:37	0.1	0.0	0.3	0.3
01Jan2001	04:38	0.1	0.0	0.2	0.3
01Jan2001	04:39	0.1	0.0	0.2	0.3
01Jan2001	04:40	0.1	0.0	0.2	0.3
01Jan2001	04:41	0.1	0.0	0.1	0.2
01Jan2001	04:42	0.1	0.0	0.1	0.2
01Jan2001	04:43	0.1	0.0	0.1	0.2
01Jan2001	04:44	0.1	0.0	0.1	0.1
01Jan2001	04:45	0.1	0.0	0.1	0.1
01Jan2001	04:46	0.1	0.0	0.1	0.1
01Jan2001	04:47	0.1	0.0	0.0	0.1
01Jan2001	04:48	0.1	0.0	0.0	0.1
01Jan2001	04:49	0.1	0.0	0.0	0.1
01Jan2001	04:50	0.1	0.0	0.0	0.1
01Jan2001	04:51	0.1	0.0	0.0	0.1
01Jan2001	04:52	0.1	0.0	0.0	0.1
01Jan2001	04:53	0.1	0.0	0.0	0.1
01Jan2001	04:54	0.1	0.0	0.0	0.1
01Jan2001	04:55	0.1	0.0	0.0	0.1
01Jan2001	04:56	0.1	0.0	0.0	0.1
01Jan2001	04:57	0.1	0.0	0.0	0.1
01Jan2001	04:58	0.1	0.0	0.0	0.1
01Jan2001	04:59	0.1	0.0	0.0	0.1
01Jan2001	05:00	0.1	0.0	0.0	0.1
01Jan2001	05:01	0.1	0.0	0.0	0.1
01Jan2001	05:02	0.1	0.0	0.0	0.1
01Jan2001	05:03	0.1	0.0	0.0	0.1

HILLEL
DRAINAGE MAP
PRE DEVELOPMENT CONDITION



LEGEND

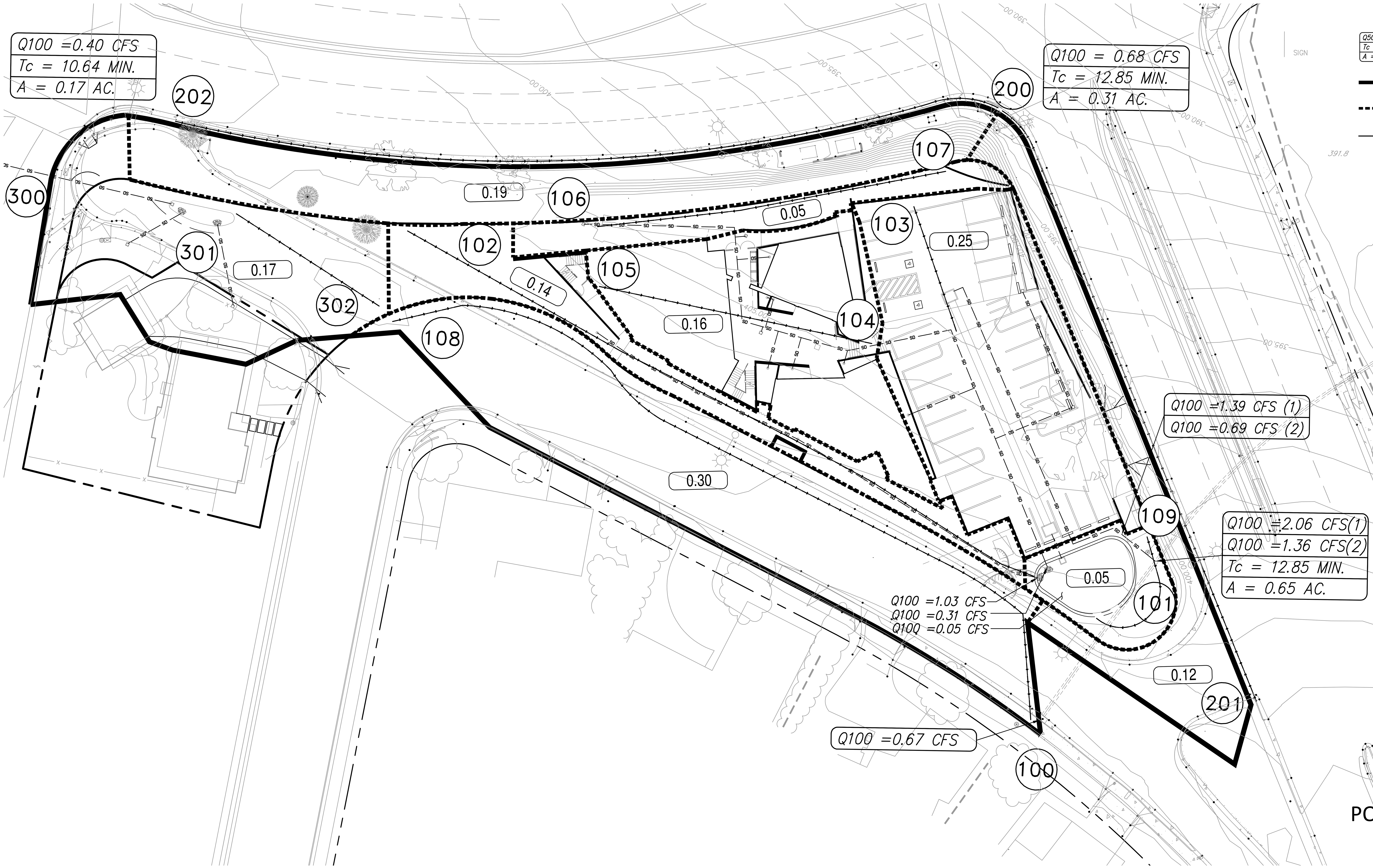
100	NODE
Q50 = X.XX CFS Tc = X.XX MIN. A = X.XX AC.	50-YEAR FREQUENCY DISCHARGE TIME OF CONCENTRATION AREA
(solid heavy line)	MAJOR BASIN BOUNDARY
(dashed heavy line)	SUBBASIN BOUNDARY
(arrow line)	FLOW PATH
0.20	BASIN AREA

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1" = 20'

EXHIBIT 'A'
PRE-DEVELOPMENT
DRAINAGE MAP

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973

HILLEL
DRAINAGE MAP
POST DEVELOPMENT CONDITION



LEGEND

100	NODE
Q50 = X.XX CFS / Tc = X.XX MIN. / A = X.XX AC.	50-YEAR FREQUENCY DISCHARGE / TIME OF CONCENTRATION / AREA
	MAJOR BASIN BOUNDARY
	SUBBASIN BOUNDARY
	FLOW PATH
0.20	BASIN AREA
(1)	TOTAL FLOW BEFORE DETENTION
(2)	TOTAL FLOW AFTER DETENTION

GRAPHIC SCALE
20 0 20 40
(IN FEET)
1" = 20'

EXHIBIT 'B'
POST-DEVELOPMENT DRAINAGE MAP

ATLAS Civil Design
www.ATLASCivilDesign.com
2191 El Camino Real, Suite 208K
Oceanside, CA 92054
Tel: 888-364-1973