September 9, 2016

Mr. Shahram Dehghani
Art of Construction, LLC
10724 Wilshire Blvd., Suite 1506
Los Angeles, CA 90024

Report: Balboa Car Wash Project – Comparable Site Queue Observations

Dear Mr. Dehghani:

Based on the observed peak hours of activity at the two comparable sites studied in the trip generation analysis completed for the project, *TJW ENGINEERING, INC. (TJW)* re-visited the comparable sites on Friday July 8, Saturday July 9, and Wednesday July 12, 2016 to observe vehicle stacking at the sites during peak hours of activity. ***Tables 1 and 2*** summarize the observed queuing at the comparable sites. The period of queuing activity observed on Saturday July 9th and Wednesday July 12th was based on driveway count data collected at each comparable site on Saturday April 30, 2016 and Wednesday May 4, 2016. The peak hours of vehicle ingress recorded during the driveway counts were selected for queue observation hours.

The observed queue from the pay stations back at the two selected sites varied greatly from each other. At the observed Hawaiian Gardens car wash site (Five Star Express) a maximum vehicle queue of 8 vehicles was observed on Saturday, with lesser queues seen on both the observed Friday and Wednesday. At the observed San Diego car wash site (Wash'N Go), a maximum vehicle queue of 19 vehicles was observed during both the Friday and Saturday observation, and a maximum queue of 13 vehicles was noted during the Wednesday observation. This may be due to the different price points at the two sites; Five Star Express offers $5, $7 and $10 car washes, while Wash N Go offers car washes for as low as $3.

Additionally, at the Wash'N Go the majority of the vacuum stations are only accessible if vehicles enter the car wash queue a second time to access them. This inflates the queue length, as the queue is made up of both vehicles waiting to pay and get a car wash, and vehicles that have already finished their car wash and are just trying to get to vacuum stations. Without this effect, vehicle queues at the Wash N Go would be shorter.

Table 1
Queue Observations at Hawaiian Gardens Comparable Site

Five Star Express 12245 E. Carson St, Hawaiian Gardens	
Friday July 8, 2016	
Time Interval	Max Observed Queue from Pay Station Back
4:45-5:00 PM	5
5:00-5:15 PM	2
5:15-5:30 PM	2
5:30-5:45 PM	2
Saturday July 9, 2016	
Time Interval	Max Observed Queue from Pay Station Back (Vehicles)
11:30-11:45 AM	4
11:45-12:00 PM	4
12:00-12:15 PM	8
12:15-12:30 PM	7
12:30-12:45 PM	6
12:45-1:00 PM	2
1:00-1:15 PM	4
1:15-1:30 PM	4
Wednesday July 12, 2016	
Time Interval	Max Observed Queue from Pay Station Back (Vehicles)
4:30-4:45 PM	2
4:45-5:00 PM	1
5:00-5:15 PM	3
5:15-5:30 PM	2
5:30-5:45 PM	3
5:45-6:00 PM	4

Table 2
Queue Observations at San Diego Comparable Site

Wash'N Go 1812 Palm Ave, San Diego	
Friday July 8, 2016	
Time Interval	Max Observed Queue from Pay Station Back
11:00-11:15 AM	11
11:15-11:30 AM	11
11:30-11:45 AM	16
11:45-12:00 PM	12
12:00-12:15 PM	14
12:15-12:30 PM	14
12:30-12:45 PM	8
12:45-1:00 PM	10
1:00-1:15 PM	12
4:00-4:15 PM	16
4:15-4:30 PM	11
4:30-4:45 PM	12
4:45-5:00 PM	9
5:00-5:15 PM	14
5:15-5:30 PM	16
5:30-5:45 PM	19
5:45-6:00 PM	15
6:00-6:15 PM	18
Saturday July 9, 2016	
Time Interval	Max Observed Queue from Pay Station Back (Vehicles)
11:30-11:45 AM	11
11:45-12:00 PM	18
12:00-12:15 PM	15
12:15-12:30 PM	18
12:30-12:45 PM	18
12:45-1:00 PM	14
1:00-1:15 PM	19
1:15-1:30 PM	17
1:30-1:45 PM	16
Wednesday July 12, 2016	
Time Interval	Max Observed Queue from Pay Station Back (Vehicles)
1:00-1:15 PM	12
1:15-1:30 PM	13
1:30-1:45 PM	13
1:45-2:00 PM	12
2:00-2:15 PM	13
2:15-2:30 PM	12
2:30-2:45 PM	11

Copies of the proposed Balboa car wash site plan and aerials of the comparable car wash sites are located in the attached Appendix. The proposed site plan shows over 180-feet of stacking between the two pay stations and the driveway. At 20-feet per car, the site is able to accommodate 9 vehicles.

The site layout of the proposed Balboa car wash is more similar to the Five Star Express site in Hawaiian Gardens than the Wash'N Go site in San Diego. At the San Diego site, customers leaving the car wash need to reenter into the same car wash queue to reach the vacuum stations. This inflates the queue length. The layout of the proposed Balboa car wash will not require vehicles to reenter the car wash queue to access vacuum stations, and the price points for the car wash will be more comparable to the Five Star Express than Wash'N Go.

Please feel free to call us at (949) 878-3509 if you have any questions regarding the collected data.

Sincerely,

Thomas Wheat, PE, TE
Principal
TJW Engineering, Inc.

Jeffrey Weckstein
Transportation Planner
TJW Engineering, Inc.

Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

Attachments

APPENDIX

SITE PLAN KEYED NOTES :

1. CONC. SIDEWALK W/ EXPANSION JOINTS @ 4'-0" O.C. AND TOOL JOINTS @ 12'-0" O.C.
2. SETBACKS LINE
3. CONC. CURB AT PLANTER.
4. CONC. CURB.
5. 4" WIDE HIGHWAY WHITE PAINTED LETTERING "STOP" (2 COATS)
6. 4" WIDE BLUE COLOR PAINTED STRIPS (2 COATS)
7. PAINT 4" WIDE PARKING STRIPING W/ HIGHWAY WHITE PAINT (2 COATS)
8a. RECONSTRUCT THE EXISTING DRIVEWAY WITH CURRENT CITY STD. CONCRETE DRIVEWAY, SEE CIVIL DRAWINGS.
8b. CLOSURE OF NON-UTILIZED DRIVEWAY, AND REPLACE WITH CURRENT CITY STD. CURB, GUTTER AND SIDEWALK, SEE CIVIL DWGS.
9. PERSONS WITH DISABILITIES ENTRANCE SIGN.
10. PAVING SEE CIVIL DWGS.
11. LANDSCAPE AREA - REFER TO LANDSCAPE DRAWINGS
12. 11'-6" x 8'-0" x 4" THK. FLAT AND LEVEL CONC. PAD FOR VACUUM EQUIPMENTS
13. HANDICAP PARKING SIGN
14. INTERNATIONAL SYMBOL ACCESSIBILITY.
15. LIGHT POLE - REFER TO ELECTRICAL & STRUCT. DWGS.
16. NOT USED
17. PAINTED DIRECTIONAL ARROWS HIGHWAY WHITE PAINT (2 COATS)
18. 80 SQ. FT. TRASH ENCLOSURE.
19. TRUNCATED DOMES.
20. EXISTING CMU WALL
21. POSTED SIGN TO READ "STOP"
22. POSTED SIGNS TO READ "RIGHT TURN ONLY" AND "EXIT ONLY" (DOUBLE SIGNS)
23. GATE ARM
24. PAY MACHINE
25. WATER METER
26. COLUMN OF SOLAR CANOPY
27. STEEL BOLLARD.
28. EXISTING SIDEWALK
29. VENDING MACHINE
30. SDG&E TRANSFORMER PAD
31. BUS STOP WITH NEW SHELTER PROVIDED BY MTS.
32. 6' HIGH CMU WALL PER CITY STANDARD PAINTED OFF WHITE.
33. LOCATION OF INFORMATIONAL GROUND MOUNTED SIGNS, TYPICAL FOR TOTAL OF 10 U.N.O.
34. LOCATION OF INFORMATIONAL WALL MOUNTED SIGNS FOR TOTAL OF 2
35. 18" CONCRETE DRAINBOX
36. SETBACK
37. MINIMUM 48" WIDE PEDESTRIAN PATH FROM PUBLIC STREET
38. LINE OF VACUUM CANOPY WITH SOLAR PANELS
39. STREET TREES, REFER TO LANDSCAPE PLAN (TYP.)
40. PATH OF TRAVEL FROM BUS STOP THRU PUBLIC WALK

NOTES:

1) PRIOR TO ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITEE SHALL ENTER INTO A MAINTENANCE AGREEMENT FOR THE ONGOING PERMANENT BMP MAINTENANCE, SATISFACTORY TO THE CITY ENGINEER.

2) PRIOR TO ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITEE SHALL INCORPORATE ANY CONSTRUCTION BEST MANAGEMENT PRACTICES NECESSARY TO COMPLY WITH CHAPTER 14, ARTICLE 2, DIVISION 1, (GRADING REGULATION) OF THE SAN DIEGO MUNICIPAL CODE, INTO THE CONSTRUCTION PLANS OR SPECIFICATIONS.

3) PRIOR TO ISSUANCE OF ANY CONSTRUCTION PERMIT, THE OWNER/PERMITEE SHALL SUBMIT A WATER POLLUTION CONTROL PLAN (WPCP) THE WPCP SHALL BE PREPARED IN ACCORDANCE WITH THE GUIDELINES IN PART 2 CONSTRUCTION BMP STANDARD CHAPTER 4 OF THE CITY'S STORM WATER STANDARD.

4) PRIOR TO ISSUANCE OF ANY CONSTRUCTION PERMIT, THE APPLICANT SHALL SUBMIT A TECHNICAL REPORT THAT WILL SUBJECT TO FINAL REVIEW AND APPROVAL BY CITY ENGINEER BASED ON THE STORM WATER STD. IN EFFECT AT THE TIME OF THE CONSTRUCTION PERMIT ISSUANCE.

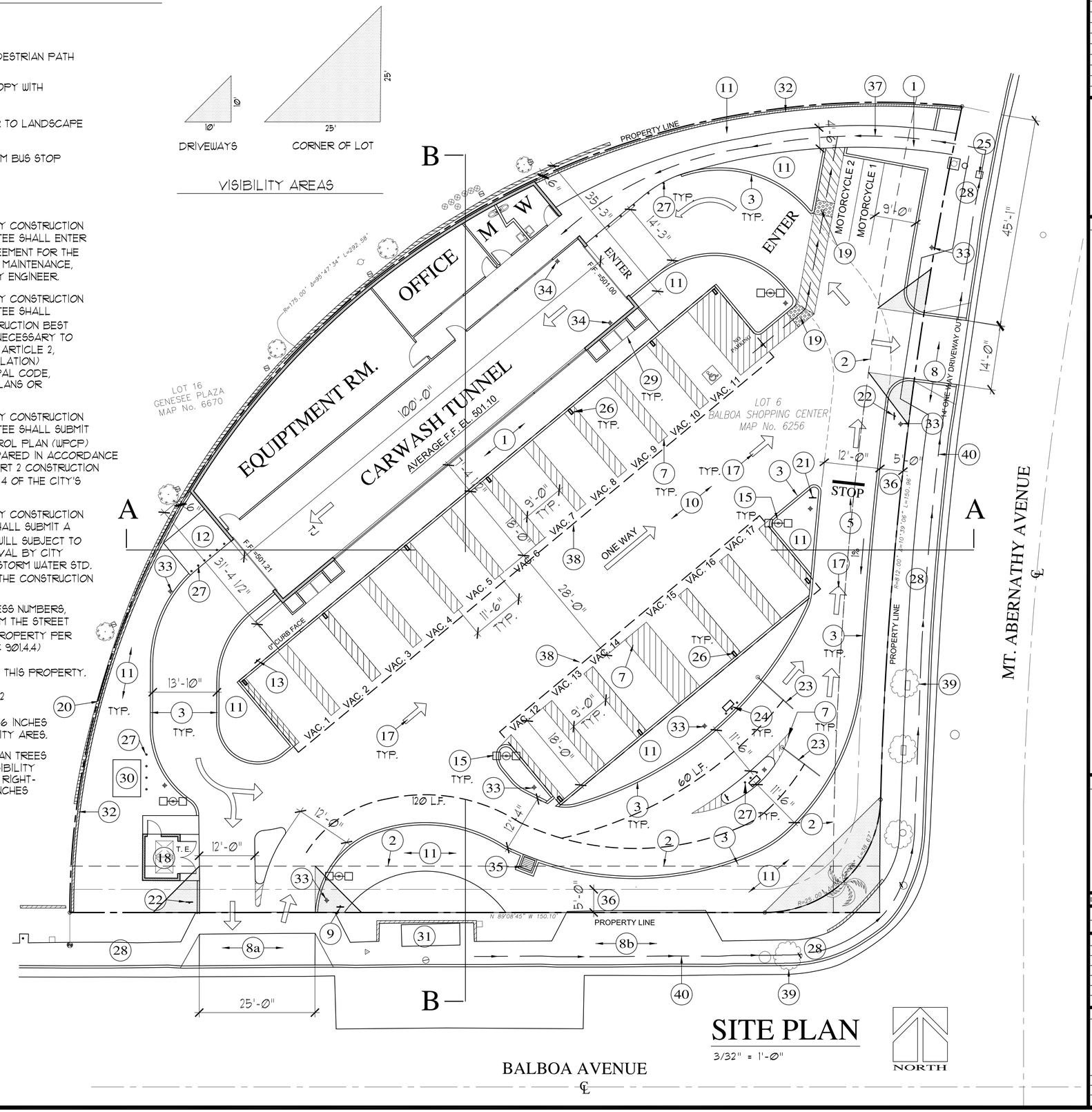
5) PROVIDE BUILDING ADDRESS NUMBERS, VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY PER FHPS POLICY P-00-6 (UFC 901.4.4)

6) THERE IS NO EASEMENT ON THIS PROPERTY.

7) FOR SITE SECTIONS SEE A-2

8) NO OBJECT HIGHER THAN 36 INCHES ARE PROPOSED IN VISIBILITY ARES.

9) NO VEGETATION, OTHER THAN TREES WITHIN PORTION OF THE VISIBILITY AREAS LIES WITHIN PUBLIC RIGHT-OF-WAY WILL EXCEED 24 INCHES IN HEIGHT.



SITE PLAN

3/32" = 1'-0"

REVISIONS : BY :

DESIGNED BY Petrossi AND ASSOCIATES INC.
1300 BRISTOL ST. N. SUITE 270
NEWPORT BEACH, CA 92660
TEL. (949) 833-3240
FAX (949) 833-1145
E-MAIL HP@PETROSSIASSOC.COM

PROJECT

BALBOA EXPRESS CARWASH

6066 BALBOA AVENUE
SAN DIEGO, CA.

DRAWING

SITE PLAN

DRAWING:
CHECKED BY:
DATE: 8-29-2016

ISSUED FOR:
REVIEW
PLAN CHECK
BIDDING
PERMIT
CONSTRUCTION
DRAWN BY :

SHEET NO. 2 OF 7

A-1

CAD FILE
JOB NO. 3417P-0115

COMPARABLE SITE: FIVE STAR EXPRESS
12245 E. CARSON ST.
HAWAIIAN GARDENS

COMPARABLE SITE: WASH'N GO
1812 PALM AVE.
SAN DIEGO

MD ACOUSTICS
Sound Solutions for Planning and Design

AZ Office
4960 S. Gilbert Rd, Suite 1-461
Chandler, AZ 85249
p. (602) 774-1950

CA Office
1197 Los Angeles Ave, Suite C-256
Simi Valley, CA 93065
p. (805) 426-4477

www.mdacoustics.com

October 17, 2016

Mr. Shahram Dehghani
Skylab Real Estate & Development, LLC
10920 Wilshire Boulevard, Ste 15-9252
Los Angeles, CA 90024

Subject: Balboa Express Carwash Noise Review, City of San Diego, CA – Memorandum #1

Dear Mr. Dehghani:

MD Acoustics (MD) completed a noise impact study (dated 10/10/2016) for the proposed Balboa Express Carwash project located at 6066 Balboa Avenue, in the City of San Diego. Per your request, MD has reviewed the project's operational noise impact and compared results to the City's noise ordinance. The project site falls within the Clairemont Mesa East overlay district.

Figure 1: Noise Limits

TABLE OF APPLICABLE LIMITS

Land Use	Time of Day	One-Hour Average Sound Level (decibels)
1. Single Family Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45 40
2. Multi-Family Residential (Up to a maximum density of 1/2000)	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50 45
3. All other Residential	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55 50
4. Commercial	7 a.m. to 7 p.m. 7 p.m. to 10 p.m. 10 p.m. to 7 a.m.	65 60 60
5. Industrial or Agricultural	any time	75

Section 59.5.0401 from the municipal code outlines the sound limits and is provided in the adjacent Table (Figure 1).

The nearest multi-family residence is located approximately 150, from property line to property line, to the northeast. However, the nearest on-site noise source to the nearest outdoor sensitive area is approximately 220 feet and is shown in Appendix A.

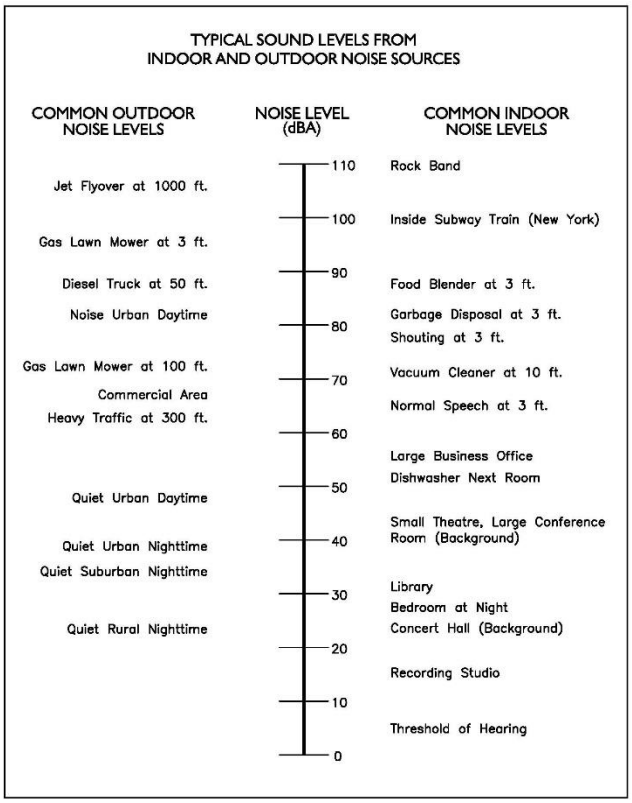
MD utilized SoundPlan (SP) acoustic modeling software to model the on-site stationary noise sources. These sources include the car wash equipment at the tunnel exit and entrance and vacuum stations. The vacuum compressor will be housed within the equipment room, thereby further reducing the sound footprint of the site. SP software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows a user to input specific noise sources, spectral content, sound barriers, buildings, topography and sensitive receptor locations. Appendix A contains the results of the modeling and provides both a noise level map and a noise contour map which illustrates the noise levels at the adjacent land uses. Noise levels are projected to range between 38.6 to 59.9 dBA. During daytime hours (7AM to 10PM), the project's operational noise level does not exceed the City's allowable noise limit (based on land use). The project's projected operable hours are from 6AM to 10PM. Therefore, the project would comply with the City's daytime and evening noise ordinance.

In addition, according to SANDAG, Balboa Avenue (between Genesse Ave and Mt. Abernathy Ave) has an approximate average daily traffic (ADTs) of 32,600. The nearest sensitive receptors are located

approximately 320 feet from the centerline of Balboa Avenue. The projected noise level from traffic along Balboa Avenue would range between 50.5 to 60.2 dBA. When comparing the project noise levels to the traffic noise levels, traffic noise levels are anticipated to be approximately 11.9 to 21.6 dBA higher. Traffic noise output calculations are provided in Appendix B.

As previously mentioned, the nearest sensitive receptors are located approximately 320 feet from the centerline of Balboa Avenue and 220 feet from the carwash tunnel entrance. The anticipated traffic noise level at these unit range between 50.5 to 60.2 dBA (during daytime and evening hours) while the project's noise impact would be 38.6 dBA (approximately 11.9 to 21.6 dBA lower than ambient). Figure 2 provides typical sound levels for comparison purposes. Levels are equivalent to noise ranging between a quiet urban day (50 dBA) to the sound of a dishwasher in the other room (60 dBA) to traffic at 300 feet (60 to 65 dBA).

Figure 2: Typical Sound Levels



The project has shown that it will comply with the City's noise ordinance (outlined above). MD is pleased to provide this memo for the Balboa Express Carwash project. If you have any questions regarding this memorandum, please call our office at (805) 426-4477.

Sincerely,
MD Acoustics

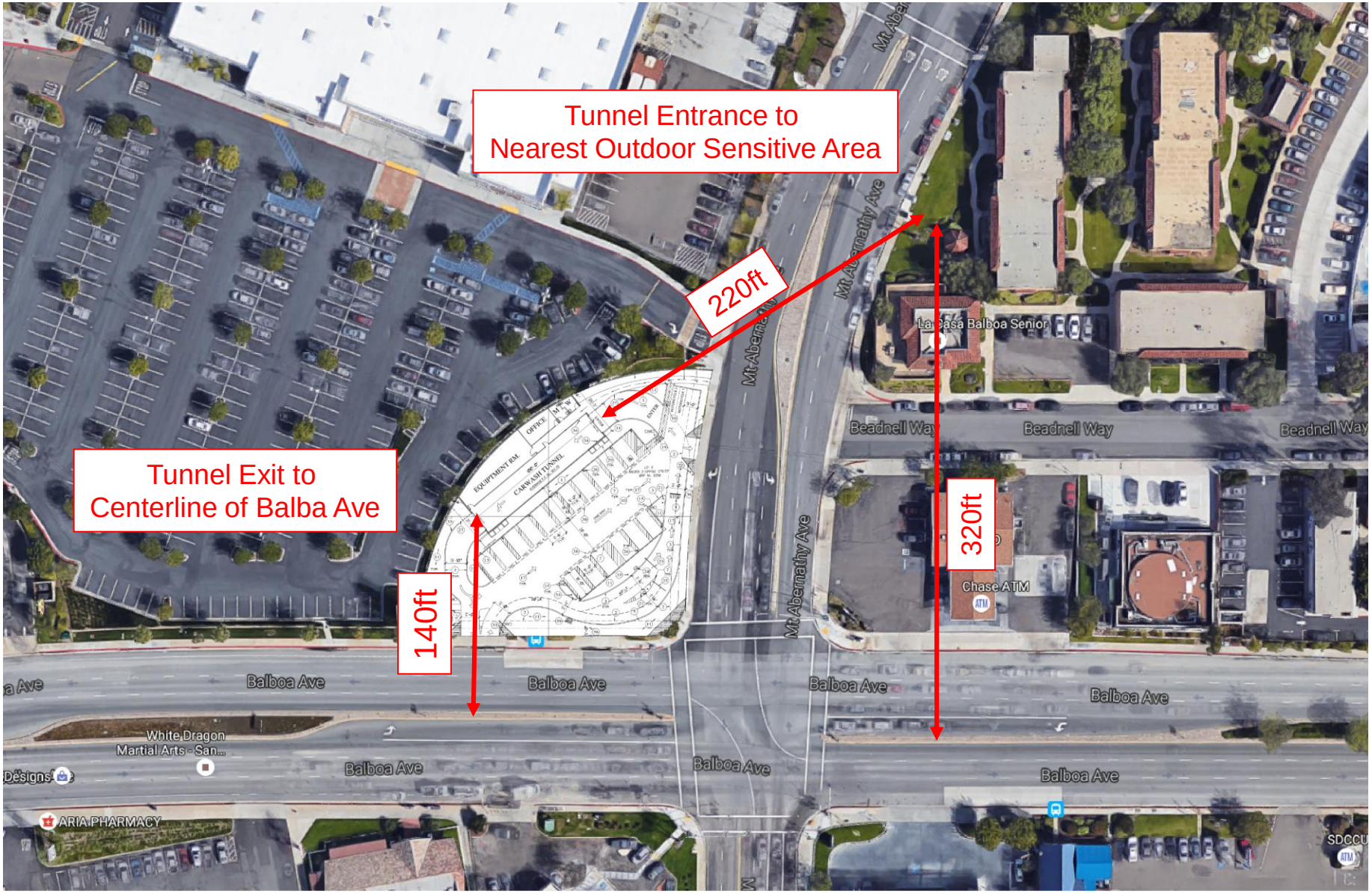
Mike Dickerson, INCE
Principal

Appendix A

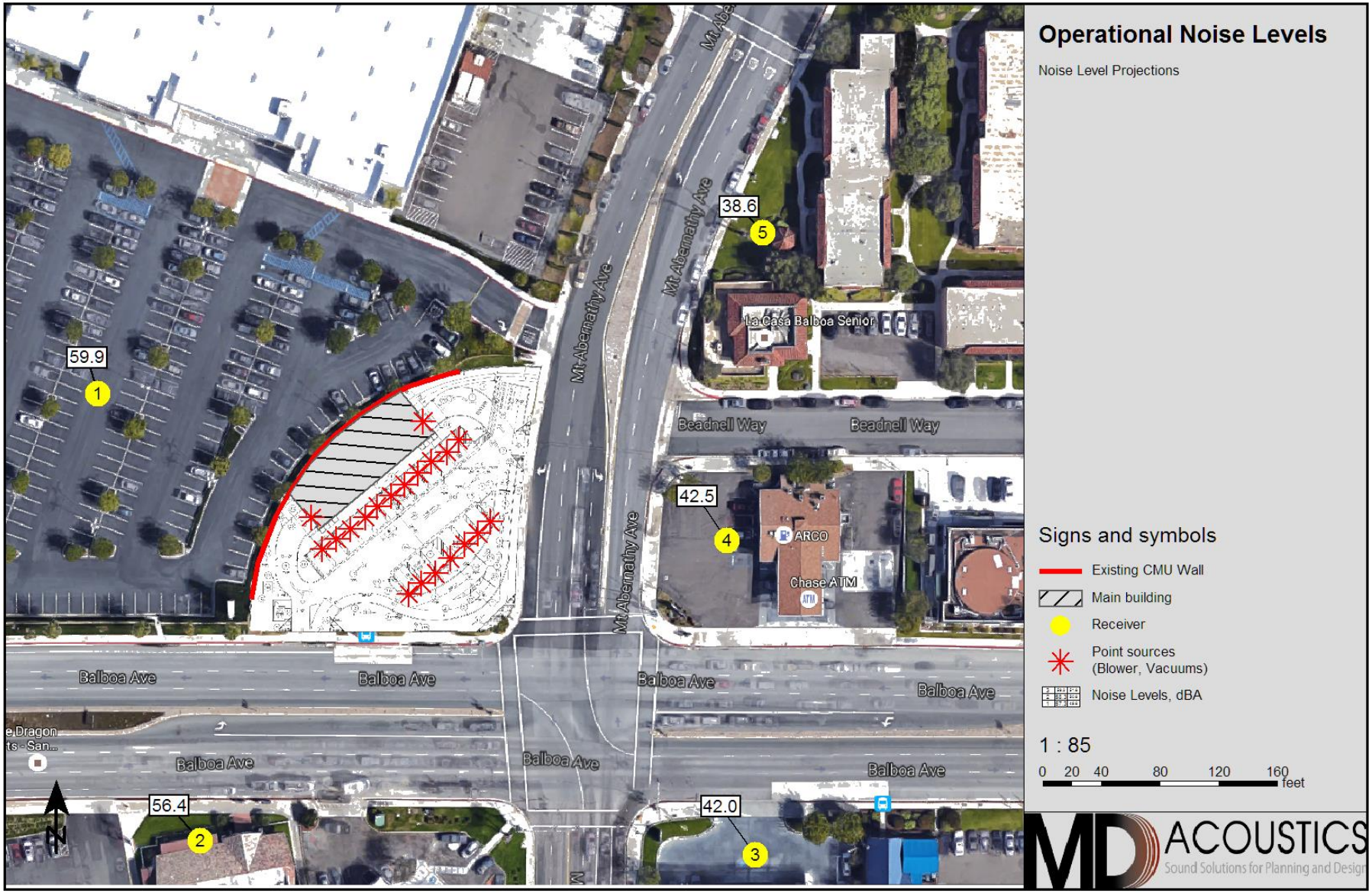
SoundPlan Output Calculations

Appendix A

Site Distances

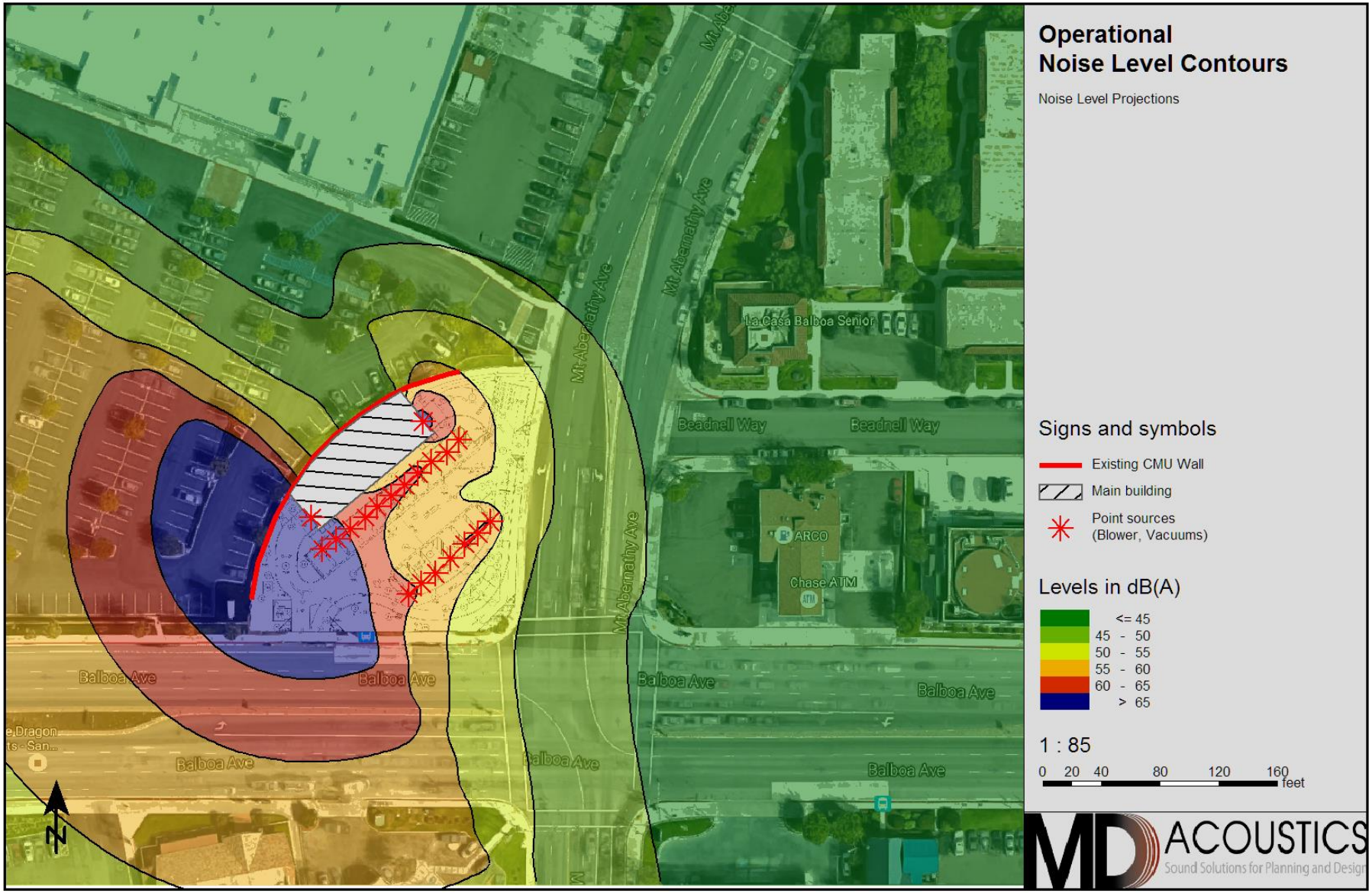


Appendix A
Operation Noise Levels



Appendix A

Operation Noise Level Contours



Noise Emissions of Industry Sources

Source name	Referenc	Level		Frequency spectrum [dB(A)]										Corrections		
				31	63	125	250	500	1	2	4	8	16	Kwall	CI	CT
			dB(A)	Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	kHz	dB(A)	dB(A)	dB(A)
Car Wash Exit	Unit	Leq1	102.4	62.5	77.8	83.6	91.9	99.1	96.7	93.0	88.7	81.0	63.5	3.0	-	-
Car Wash Entrance	Unit	Leq1	82.0	42.0	57.4	63.2	71.5	78.7	76.3	72.6	68.3	60.6	43.1	3.0	-	-
Vac1	Unit	Leq1	70.0											-	-	-
Vac2	Unit	Leq1	70.0											-	-	-
Vac3	Unit	Leq1	70.0											-	-	-
Vac4	Unit	Leq1	70.0											-	-	-
Vac5	Unit	Leq1	70.0											-	-	-
Vac6	Unit	Leq1	70.0											-	-	-
Vac7	Unit	Leq1	70.0											-	-	-
Vac8	Unit	Leq1	70.0											-	-	-
Vac9	Unit	Leq1	70.0											-	-	-
Vac10	Unit	Leq1	70.0											-	-	-
Vac11	Unit	Leq1	70.0											-	-	-
Vac12	Unit	Leq1	70.0											-	-	-
Vac13	Unit	Leq1	70.0											-	-	-
Vac14	Unit	Leq1	70.0											-	-	-
Vac15	Unit	Leq1	70.0											-	-	-
Vac16	Unit	Leq1	70.0											-	-	-
Vac17	Unit	Leq1	70.0											-	-	-
Vac18	Unit	Leq1	70.0											-	-	-

Contribution Levels of the Receivers

Source name		Level Leq1 dB(A)
1	1.Fl	59.9
Car Wash Entrance		18.4
Car Wash Exit		59.9
Vac1		22.2
Vac2		18.3
Vac3		9.4
Vac4		6.6
Vac5		5.4
Vac6		4.8
Vac7		4.4
Vac8		4.0
Vac9		3.7
Vac10		4.0
Vac11		5.0
Vac12		7.1
Vac13		7.4
Vac14		7.9
Vac15		8.8
Vac16		11.0
Vac17		15.4
Vac18		19.6
2	1.Fl	56.4
Car Wash Entrance		16.5
Car Wash Exit		56.4
Vac1		21.8
Vac2		21.3
Vac3		20.9
Vac4		23.2
Vac5		22.8
Vac6		22.4
Vac7		22.0
Vac8		21.7
Vac9		21.3
Vac10		21.0
Vac11		20.6
Vac12		18.7
Vac13		19.1
Vac14		19.5
Vac15		20.0
Vac16		20.6
Vac17		21.1
Vac18		21.6
3	1.Fl	42.0
Car Wash Entrance		24.7
Car Wash Exit		41.5
Vac1		16.8
Vac2		19.6
Vac3		19.6
Vac4		19.7
Vac5		19.7
Vac6		19.8
Vac7		19.8
Vac8		19.8
Vac9		19.8
Vac10		19.8
Vac11		17.1
Vac12		20.4
Vac13		20.4
Vac14		20.4
Vac15		20.4
Vac16		20.3
Vac17		20.3
Vac18		20.2

Contribution Levels of the Receivers

Source name		Level Leq1 dB(A)
4	1.Fl	42.5
Car Wash Entrance		36.5
Car Wash Exit		39.6
Vac1		22.1
Vac2		22.4
Vac3		22.7
Vac4		23.0
Vac5		23.3
Vac6		23.7
Vac7		24.0
Vac8		24.3
Vac9		24.6
Vac10		22.5
Vac11		22.7
Vac12		24.7
Vac13		24.2
Vac14		23.6
Vac15		24.4
Vac16		23.9
Vac17		23.5
Vac18		23.1
5	1.Fl	38.6
Car Wash Entrance		34.7
Car Wash Exit		35.0
Vac1		16.5
Vac2		16.8
Vac3		17.2
Vac4		17.5
Vac5		17.8
Vac6		18.2
Vac7		18.6
Vac8		19.0
Vac9		19.4
Vac10		19.8
Vac11		20.3
Vac12		19.5
Vac13		19.1
Vac14		18.7
Vac15		18.3
Vac16		17.9
Vac17		17.5
Vac18		17.2

Appendix B

Traffic Noise Calculations

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT:	BALBOA CAR WASH	JOB #:	0101-16-01
ROADWAY:	BALBOA AVE	DATE:	17-Oct-16
LOCATION:	LOT 52 - 1ST FLOOR	ENGINEER:	M. Dickerson

NOISE INPUT DATA

ROADWAY CONDITIONS

ADT =	32,600	
SPEED =	45	
PK HR % =	10	
NEAR LANE/FAR LANE DIST	0	
ROAD ELEVATION =	0.0	
GRADE =	0.0	%
PK HR VOL =	3,260	

RECEIVER INPUT DATA

RECEIVER DISTANCE =		320
DIST C/L TO WALL =		320
RECEIVER HEIGHT =		5.0
WALL DISTANCE FROM RECEIVER =		0
PAD ELEVATION =		0.5
ROADWAY VIEW:	LF ANGLE=	-90
	RT ANGLE=	90
	DF ANGLE=	180

SITE CONDITIONS

AUTOMOBILES =	15	
MEDIUM TRUCKS =	15	(10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS =	15	

WALL INFORMATION

HTH WALL=	0.0	
AMBIENT=	0.0	
BARRIER =	0	(0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.775	0.129	0.096	0.9742
MEDIUM TRUCKS	0.848	0.049	0.103	0.0184
HEAVY TRUCKS	0.865	0.027	0.108	0.0074

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	320.02	- -
MEDIUM TRUCKS	4.0	320.00	- -
HEAVY TRUCKS	8.0	320.01	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	59.1	57.2	55.5	49.4	58.0	58.6
MEDIUM TRUCKS	50.2	48.7	42.3	40.8	49.2	49.4
HEAVY TRUCKS	50.7	49.3	40.3	41.5	49.9	50.0
NOISE LEVELS (dBA)	60.2	58.4	55.8	50.5	59.1	59.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	59.1	57.2	55.5	49.4	58.0	58.6
MEDIUM TRUCKS	50.2	48.7	42.3	40.8	49.2	49.4
HEAVY TRUCKS	50.7	49.3	40.3	41.5	49.9	50.0
NOISE LEVELS (dBA)	60.2	58.4	55.8	50.5	59.1	59.6

NOISE CONTOUR (FT)				
NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	65	140	302	652
LDN	60	130	280	602

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: 469903 / BALBOA EXPRESS CARWASH

Property Address: 60666 BALBOA AVE. SAN DIEGO, CA 92111

Applicant Name/Co.: SHAHRAM DEHGHANI / THE ART OF CONSTRUCTION, LLC

Contact Phone: (424) 273-6022 Contact Email: SKYLABDEVELOPMENT.COM

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

Consultant Name: _____ Contact Phone: _____

Company Name: _____ Contact Email: _____

Project Information

1. What is the size of the project (acres)? 0.572 ACRES
2. Identify all applicable proposed land uses:
   - ☐ Residential (indicate # of single-family units): _____
   - ☐ Residential (indicate # of multi-family units): _____
   - ☒ Commercial (total square footage): 3,822 SQ. FT.
   - ☐ Industrial (total square footage): _____
   - ☐ Other (describe): _____
3. Is the project located in a Transit Priority Area? ☒ Yes ☐ No
4. Provide a brief description of the project proposed: NEW EXPRESS FULLY AUTOMATED CARWASH WITH 100 FEET TUNNEL AND 18 STATIONS OF EXTERIOR VACUUM SYSTEM

[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?	☒	☐

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.	☒	☐	☐
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.	☒	☐	☐

[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.	☒	☐	☐
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?	☐	☐	☒

[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.			X
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.	☐	☐	☒
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?	☐	☐	☒

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

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).

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

Step 2: CAP Strategies Consistency

Checklist Item (Check the appropriate box and provide explanation for your answer)	Yes	No	N/A
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? 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.	☒	☐	☐
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	☐	☐	☒

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

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).			X

NOT APPLICABLE

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?

NOT APPLICABLE

Attachment A-6066 Balboa Ave., Balboa Express Carwash
(Project No. 469903)

CAP CONSISTENCY CHECKLIST SUPPORTING DOCUMENTATION

PROJECT DESCRIPTION

The Project proposes construction of 3,822 square feet of fully automated express carwash with 18 vacuum stations which is designed per the guidelines and limits of the CC-1-3 Zone and Clairemont Mesa Community Plan Area.

LAND USE CONSISTENCY

The project is consistent with the land use designations in the City's General Plan (Commercial) and the Clairemont Mesa Community Plan Area, with a similar use to existing 3 corner of Balboa Ave., & Mt. Abernathy Ave., intersection.

CAP STRATEGIES CONSISTENCY

STRATEGY 1. ENERGY & WATER EFFICIENT BUILDINGS

1. **Cool/Green Roofs –** The project will 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.

2. **Plumbing fixtures and fittings-** The project will use low-flow fixtures to meet with California Green Building Standards Code.

STRATEGY 2. CLEAN & RENEWABLE ENERGY

3. **Clean & Renewable Energy –** Designed to have solar panels installed on the roof and over the canopies in the parking area that will generate 86% of anticipated energy demand.

Attachment A-6066 Balboa Ave., Balboa Express Carwash
(Project No. 469903)

STRATEGY 3. BICYCLE, WALING, TRANSIT & LAND USE

4. **Electrical Vehicle Charging –** Not Applicable: Project is under the thresholds listed in attachment A.

5. **Bicycle Parking Spaces –** Not Applicable: According to the Code, the project is exempt from providing short-term bicycle parking spaces per 142.0530(e)(1)(D), as the project is considered a Vehicle and vehicular equipment sales and service uses.

6. **Shower Facilities –** Not Applicable: the project does not include over 10 tenant occupants (employees).

7. **Designated Parking Spaces –** 0 space are required because it falls with 0-9 thresholds for employees.

8. **Transportation Demand Management Program –** Not Applicable: Does not include over 50 tenant occupants.

3550C

JACK MILLER
Director

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700/1 (800) 253-9933
www.sdcdeh.org

ELIZABETH POZZEBON
Assistant Director

March 19, 2014

Mr. Lee Hanley
Exxon Mobil
1464 Madera Road, Suite N #265
Simi Valley, CA 93065

RECEIVED MAR 2 5 2014

Dear Mr. Hanley:

UNAUTHORIZED RELEASE H12820-002
MOBIL STATION 18-F95
6066 BALBOA AVENUE, SAN DIEGO, CA 92111

This letter confirms the completion of a site investigation and corrective action for the underground storage tanks formally located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks is greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tanks site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code, and that no further action related to the petroleum release at the site is required.

Claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact Ewan Moffat, at (858) 505-6856, if you have questions regarding this matter.

Sincerely,

JACK MILLER, Director
Department of Environmental Health
Site Assessment and Mitigation Program

cc: Mr. Jeff Aguilar, Cardino ERI

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

DATE: March 18, 2014

Agency Name: COUNTY OF SAN DIEGO, ENVIRONMENTAL HEALTH, SAM	Address: P.O. BOX 129261
City/State/Zip: SAN DIEGO, CA 92112-9261	Phone: (858) 505-6856 FAX: (858) 694-3670
Responsible Staff Person: EWAN MOFFAT	Title: ENVIRONMENTAL HEALTH SPECIALIST

II. CASE INFORMATION

Site Facility Name: MOBIL 18F95

Site Facility Address: 6066 BALBOA AVE., SAN DIEGO, CA 92111

RB LUSTIS Case No: 9UT2112	Local Case No: H12820-002	LOP Case No: N/A
URF Filing Date: 8/3/2009	SWEEPS No: N/A	

Responsible Parties	Address	Phone Number
LEE HANLEY EXXON MOBIL	901 WEST ARROW HIGHWAY #473 SAN DIMAS, CA 91733	(951) 270-5163

Tank No.	Size in Gal.	Contents	Status	Date
T001	10,000 gallons	GASOLINE	CLOSED BY REMOVAL	8/19/09
T002	10,000 gallons	GASOLINE	CLOSED BY REMOVAL	8/19/09
T003	10,000 gallons	GASOLINE	CLOSED BY REMOVAL	8/19/09
T004	10,000 gallons	GASOLINE	CLOSED BY REMOVAL	8/19/09

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause Release: Elevated Levels of TPH Gasoline in Borings	Substance Released: Gasoline

Site Characterization complete: YES	Date Approved By Oversight Agency: 8/15/2013	
Monitoring Wells Installed? YES	Number: 8	Proper Screened Interval? YES
Highest GW Depth B.G. Surface: 2.01'	Lowest Depth: 6.35'	Flow Direction: NORTH

Most Sensitive Current Use: BENEFICIAL GROUNDWATER USE: NONE DESIGNATED
EXISTING BENEFICIAL SURFACE WATER USE: REC2 AND POTENTIAL: REC1

Are Drinking Water Wells Affected? NO	Aquifer Name: 906.50-TECOLOTE HYDROLOGIC AREA
Is Surface Water Affected? NO	Nearest SW name: TECOLOTE CREEK 1.5 MILES WEST

Off-Site Beneficial Use Impacts (addresses/locations): NA

Report(s) on file? YES	Where is Report(s) Filed? COUNTY OF SAN DIEGO, ENVIRONMENTAL HEALTH

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal)	Date
Soil	28 Drums	Treatment, TPS Technologies, Adelanto, CA	7/31/09
Groundwater	200 Gallons	Treatment, Crosby & Overton, Long Beach CA	7/31/09
Tanks	4 Tanks	Disposal – Miramar Landfill, San Diego, CA	8/19/09
Groundwater	17,100 Gallons	Treatment, Crosby & Overton, Long Beach CA	8/19/09
Tank Rinsate	800 Gallon	Treatment, Demenno Kerdoon, Compton CA	8/19/09
Tank Rinsate	150 Gallons	Treatment, Crosby & Overton, Long Beach CA	8/19/09
Soil	255.28 Tons	Treatment, TPS Technologies, Adelanto, CA	8/24/09
Soil	2.97 Tons	Treatment, Soil Safe , Adelanto, CA	10/27/10
Groundwater	220 Gallons	Treatment, Crosby & Overton, Long Beach CA	10/27/10

Case Closure Summary
Leaking Underground Fuel Storage Tank Program

III. RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) H12820-002

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS -	MAXIMUM	REMAINING
SOIL		
Gasoline	= 2,268 mg/kg	= 2,268 mg/kg
Diesel	= 130 mg/kg	= 130 mg/kg
Benzene	= 4.5 mg/kg	= 4.5 mg/kg
Toluene	= 86.2 mg/kg	= 86.2 mg/kg
Ethyl benzene	= 36.5 mg/kg	= 36.5 mg/kg
Xylene (individual isomers or total)	= 238.5 mg/kg	= 238.5 mg/kg
Methyl-tert-butyl ether (MTBE)	= 3.0 mg/kg	= 3.0 mg/kg
TBA	= 15 mg/kg	= 15 mg/kg
WATER		
LPH	0 feet	0 feet
Gasoline	= 1,040 ug/l	= 1,040 ug/l
Benzene	= 330 ug/l	= 9.49 ug/l
Toluene	= 0.77 ug/l	< 0.5 ug/l
Ethyl benzene	= 1.6 ug/l	= 0.31 ug/l
Xylene (individual isomers or total)	= 7.5 ug/l	= 0.75 ug/l
Methyl-tert-butyl ether (MTBE)	= 170 ug/l	= 72.6 ug/l
TBA	= 24,700 ug/l	= 14,500 ug/l

Comments:

This site is currently a vacant lot.

The former release (H12820-001) involved a gasoline release from USTs that were removed in August 1986. The case was closed August 8, 1994.

This release (H12820-002) was discovered during a Phase II investigation in August 2009. The extent of soil contamination was further delineated with additional soil borings. All four tanks, piping and dispensers were removed in August 19, 2009 and all structures on site were demolished.

From 2009 to 2010, eight groundwater monitoring wells were installed at which time the groundwater plume was delineated. Groundwater samples from monitoring wells related to the Arco Station 1986 (Release #H15189-001), located east of the site (6130 Balboa Ave), and Shell (Release #H13176-002), located southeast of the site (6125 Balboa Ave), were also used to delineate the plume.

A July 13, 2013 Corrective Action Plan (CAP) was submitted. The suggested clean up method, natural attenuation, was approved.

The consultant proposed natural attenuation because:

- No LPH has been detected on the groundwater.
- The plume is shrinking.
- No supply wells are within a ½ mile of this site.
- Groundwater is designated as having no beneficial uses.
- Most utilities are above the groundwater table, per the consultant. However, an 18-inch diameter stormdrain, an 8-inch sewer line and navy fuel line beneath the sidewalk on Balboa Ave and Mount Albernathy Avenue are located at a depth of approximately 10' bgs which is below the groundwater table. However, the limited area of dissolved contaminants detected beneath this site indicates a low risk of environmental exposure, per the consultant.
- Based on degradation analyses, it is estimated that benzene in groundwater will degrade to MCL's of 1ppb within one year using MW-4 groundwater benzene data.
- It is estimated that MtBE in groundwater will degrade to MCL's of 13 ppb within one year using MW-2 groundwater MtBE data.

The health risk is less than one in a million (6.24×10^{-7}) excess cancer risk based on benzene groundwater concentrations in groundwater. There are no buildings on this site.

The consultant states that approximately 37.5 cubic yards of soil remain on site with over 100 mg/kg TPHg. This soil is located in the area on the east side of the property (boring DV6 southeast of former tank T0004) to a depth of approximately 4' bgs.

Other than removal of tanks, piping, dispensers and pumping of groundwater from tank cavity, no other form of active cleanup has occurred on the site. DEH concurs with the consultant's conclusions and recommendations and approves case closure.

Case Closure Summary

Leaking Underground Fuel Storage Tank Program

IV. CLOSURE

H12820-002

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? YES		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan YES		
Does corrective action protect public health for current land use? YES Case oversight completed based upon the following site use: COMMERCIAL		
Site Management Requirements: ANY CONTAMINATED SOIL EXCAVATED AS PART OF SUBSURFACE CONSTRUCTION WORK MUST BE MANAGED IN ACCORDANCE WITH THE LEGAL REQUIREMENTS AT THAT TIME.		
Should corrective action be reviewed if land use changes? YES		
Monitoring Wells Decommissioned: YES	Number Decommissioned: 8*	Number Retained: NA
List Actions Taken: NOTICE OF REIMBURSEMENT / LOCAL		
List Enforcement Actions Rescinded: NONE		

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: TONY V. SAWYER, PG 4345, CHg 40	Title: HYDROGEOLOGIST
Signature: Ty V. Sawy	Date: 3-19-14

VI. RWQCB NOTIFICATION

Date Submitted to RB: N/A – Non Beneficial	RB Response: N/A	
RWQCB Staff Name: N/A	Title: N/A	Date: N/A

VII. ADDITIONAL COMMENTS, DATA, ETC.

* A permit application has been received for the destruction of the existing monitoring wells on-site.
The permit number is DEH-2014-LWMP 000813.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

County of San Diego

ELISE ROTHSCHILD
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 565-5173 Fax: (858) 514-6853
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

July 13, 2016

Mr. Shahram Dehghani
Art of Construction, LLC
10724 Wilshire Blvd., Suite #1506
Los Angeles, CA 90024

Dear Mr. Dehghani:

VOLUNTARY ASSISTANCE PROGRAM - DEH CASE – DEH2016 LSAM 000379
RESPONSE LETTER
BALBOA EXPRESS CAR WASH
6066 BALBOA AVENUE, SAN DIEGO, CA 92111

Staff of the Department of Environmental Health, Site Assessment and Mitigation Program (SAM) have reviewed the June 22, 2016 *Soil Management Plan* (SMP) prepared by Frey Environmental. The report describes the scope of work for the segregation, reuse and disposal of soils to be excavated at this site during a grading project for the construction of a future car wash. Soil on site will be excavated up to 4 feet below grade. The report discusses segregation and sampling protocols if impacted soils are noted. The SMP, including the sampling protocols and parameters, is *approved.* Please note that any off-site reuse of soils will require a conditional waiver from the Regional Water Quality Control Board (RWQCB).

In addition, SAM staff have also reviewed the June 22, 2016 *Community Health and Safety Plan* (CHSP), also submitted by Frey Environmental. The report addresses proposed safeguards for the community due to the excavation, stockpiling and loading of soils generated during the grading project. The report describes the proposed methods for the application of water to control dust, the use of Photo Ionization Detectors (PID) to monitor hydrocarbon vapors and the protocols to be followed if PID readings are noted. The report further discusses methods of noise control, BMP's and emergency planning. It also contains a sample public notification. The CHSP, and format of public notification, is also *approved*.

If you have any questions, please call me at (858) 505-6856.

Sincerely,

Ewan Moffat PG 7207, CHg 972, Project Manager
Site Assessment and Mitigation Program

cc: Mr. Ed Rands, Frey Environmental.

SOIL MANAGEMENT PLAN
BALBOA EXPRESS CAR WASH PROJECT
6066 BALBOA AVENUE
SAN DIEGO, CALIFORNIA
(APN 361-261-18-00)

VOLUNTARY ASSISTANCE PROGRAM (VAP)

Prepared by:

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Project No.: 366-05

June 22, 2016

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A - SITE LOCATION MAP AND GRADING PLAN

1.0 INTRODUCTION

This Soil Management Plan (SMP) describes the setting, subsurface environmental conditions, and presents a soil management plan to be implemented during redevelopment of the property located at 6066 Balboa Avenue in San Diego, California ("Site"). The location of the Site is shown on the site location map included in Appendix A. The Site was recently the location of a fuel service station, and is proposed to be redeveloped as a car wash. The proposed car wash layout is shown on the grading plan included in Appendix A.

1.1 Purpose and Scope

This SMP is designed to assist the Site owner with guidelines to identify potential or known environmental conditions that may be encountered during excavation activities associated with the Site redevelopment project to ensure compliance with applicable laws and regulations.

This SMP will assist in achieving best practice environmental management for the excavation, management and disposal and/or re-use of soil during Site redevelopment. The project will involve an area of disturbed soil of approximately 0.57 acre.

1.2 Potential Chemical Constituents of Concern in Soil

Petroleum hydrocarbon constituents could possibly be encountered during the subject project based on the past site usage, and the results of historical subsurface investigations conducted at the Site (Cardno, 2013). As such, this SMP incorporates information regarding the management and handling of soils suspected of containing petroleum hydrocarbons. Past Site usage and previous subsurface soil and groundwater investigative work conducted at the Site are discussed in Section 2.0.

2.0 ENVIRONMENTAL BACKGROUND

2.1 Former Fuel Service Station

A fuel service station, designated "Mobil Station #18-F95," formerly occupied the Site. An unauthorized release of gasoline to the subsurface occurred at the former fueling facility, which was designated "Unauthorized Release H12820-002" by the County of San Diego Department of Environmental Health (SDDEH).

A complete description of historical soil and groundwater investigations conducted at the Site pertaining to assessment of the unauthorized release are presented in a report by Cardno ERI entitled, *Corrective Action Plan…,* dated July 17, 2013 ("CAP")(Cardno, 2013).

The SDDEH case for the unauthorized release was eventually closed by the SDDEH on March 19, 2014 (SDDEH, 2014). Since the results of subsurface investigative work conducted at the Site indicated that the petroleum hydrocarbons present beneath the Site were relatively limited in occurrence and extent, and at concentrations below State Water Resources Control Board (SWRCB) Low Threat UST Case Closure Policy (LTCP) threshold values, no active soil or groundwater remediation was required at the Site (SDDEH, 2014).

2.2 Groundwater

Based on historical groundwater monitoring and sampling conducted at the Site, groundwater had historically occurred at depths of approximately 2 to 6 feet below ground surface (bgs) prior to the SDDEH case closure in 2014, and contains petroleum hydrocarbons at concentrations considered low risk (Cardno, 2013). Since the SDDEH case closure in 2014, groundwater levels dropped dramatically due to the on-going draught conditions. Groundwater was only encountered at 15 feet in one of four soil borings advanced to depths ranging from 15 to 25 feet bgs during a subsequent geotechnical investigation conducted in 2015 (SPI, 2015). As such, groundwater will not be encountered during the proposed Site re-development since the deepest depths of excavation will only be up to 4 feet bgs at the proposed building slabs for the car wash and office building (see attached figure).

2.3 Soil and Groundwater Remediation

In the CAP prepared by Cardno, natural attenuation was the recommended remedial action to reduce the remaining concentrations of petroleum hydrocarbons beneath the Site (Cardno, 2013). The SDDEH concurred that natural attenuation was an appropriate remedial method to reduce the concentrations of petroleum hydrocarbons in soil and groundwater beneath the Site, and ultimately closed the case on March 19, 2014. Active remediation was never conducted at the Site (SDDEH, 2014).

2.4 Chemical Impacts

Petroleum hydrocarbons are present in soil and groundwater beneath the Site, and those in soil could possibly be encountered in soil excavated during Site redevelopment activities.

3.0 SOIL MANAGEMENT PLAN

It is anticipated that petroleum hydrocarbons may be encountered in soil during grading and excavation work.

Soils generated during grading and excavation work for the Site redevelopment project will be monitored for the presence of petroleum hydrocarbons by FREY in the field using a photoionization detector (PID). Should petroleum hydrocarbon impacted soils be encountered that require removal from the Site, they will be managed and disposed of as described in Sections 5.0 and 6.0, respectively.

4.0 SITE CONTROL MEASURES

This section outlines the site control measures to be implemented to minimize potential exposure to and the accidental spread of soils containing petroleum hydrocarbons if such are encountered during Site redevelopment. It is anticipated that petroleum hydrocarbons may be encountered in soils during excavation and grading. The most likely area where such soils could be encountered at the northeastern corner of the proposed building pad for the car wash tunnel (see attached figure), where the deepest excavation work (approximately 4 feet bgs) will be conducted.

Listed below are the work zones that shall be established when potentially contaminated soils are encountered at the Site. The zone boundaries may be modified as necessary as new information becomes available. Changes to the exclusion zone will be communicated daily, during the Site tailgate safety meeting. Additional details will be provided in a community health and safety plan (HSP) for the subject project.

4.1 Exclusion Zone

The Exclusion Zone is where there will be direct contact with potentially contaminated soil. The level of personal protective equipment (PPE) required shall be based on the specific hazard and existing Site conditions. The boundary of the Exclusion Zone may be defined with delineators, caution tape, barricades, and/or signage. Modification to the size and boundary of the Exclusion Zone will be made in the field at the time, based on the scope of work and the Project Manager's discretion.

4.2 Support Zone

Between the Exclusion Zone and the Support Zone a Decontamination Zone may be established, where workers exposed to soils with concentrations of petroleum hydrocarbons in the Exclusion Zone are to remove contaminated suits or other articles of clothing affected by the exposure and wash themselves clean of residual materials before proceeding to the Support Zone. In the Support Zone, areas are to be set aside for eating and resting; the Support Zone may be used as a storage area for operations equipment, as well, and air monitoring will also be feasible from here.

4.3 Personal Hygiene and General Safety Requirements

Within the Exclusion Zone, personnel supervising or performing work that may be subject to exposures to vapors or contaminated soil shall observe and strictly adhere to the provisions of the Site Specific and Community HSP. Any personnel found disregarding the provisions of the Site Specific and Community HSP will be barred from the Site.

No facial hair which interferes with the effectiveness of a respirator shall be permitted on personnel required or potentially required to wear respirators. PPE must be utilized by on-Site personnel when deemed necessary. Each individual will be responsible for the proper inspection and maintenance of his or her PPE prior to entering the Exclusion Zone. Hard hats and safety glasses with side shields will be worn on-Site at all times. No open flames or smoking will ever be permitted in the Exclusion Zone.

5.0 MANAGEMENT OF SOILS AT THE SITE

5.1 Soil Excavation Parameters

The Site is located as shown on the attached figure in Appendix A. The disturbed soil area for the project is approximately 0.57 acre. Excavated soils and materials will be observed for the potential presence of petroleum hydrocarbons. Such materials will be observed, analyzed and removed as they are encountered.

Handling, storing, transporting and disposing of impacted soils are subject to federal, State and local regulations depending upon whether the impacted soils are considered hazardous or non-hazardous as described in CCR Title 22. The determination as to whether the impacted soil is hazardous is based on the following hazardous waste characteristics: ignitability, corrosivity, reactivity and toxicity. It is highly unlikely that any impacted soils encountered will exhibit any of these four characteristics based on the nature of the contaminants, concentrations of the contaminants, and/or the buffering/neutralizing nature of soil.

Regardless of whether the soil in question is hazardous or non-hazardous, records should be maintained regarding its transportation and disposal. In addition the contractor should implement appropriate health and safety procedures to prevent or minimize potential exposure of impacted soil to workers, the surrounding community and the environment. Workers should conduct their activities in accordance with State rules as outlined in the HSP.

5.2 Soil Screening and Segregation

5.2.1 Soil Screening Methods

Should soils containing petroleum hydrocarbons be encountered during excavation activities, undifferentiated volatile organic compounds (UVOCs) will be screened in the field using a PID. Personnel trained in the operation, calibration and application of the manufacturer's methods for PID use will be allowed to conduct soil screening. The PID must be calibrated daily in accordance with the manufacturer's manual and protocol. Field methods and calibration documentation must be recorded and will be submitted a part of a final summary report discussed in Section 7.0.

5.2.2 Soil Stockpile Segregation

Should soils excavated during the project be found to contain potential petroleum hydrocarbon constituents, excavated soils would then be separated into two or more stockpiles based upon visual, olfactory and PID monitoring. Soils which do not exhibit evidence of visual or olfactory impact or do not exhibit a PID reading in excess of 50 parts per million by volume (ppmv) will be stockpiled in the area designated for soils suitable for reuse. Soil stockpile sizes will be kept to a manageable size, anticipated to be less than 100 cubic yards.

Soils which exhibit PID readings in excess of 50 ppmv will be stockpiled in the area designated for "potentially impacted" soils. Soils which are discolored or malodorous, as determined by field personnel, will also be stockpiled in the "potentially impacted" soil stockpile.

5.2.3 Excavation Confirmatory Field Screening

If excavation soil samples are required, upon completion of excavation activities field personnel shall enter the excavation in areas less than 4 feet in depth to screen the excavation bottom and sidewall soils with a PID if required. Field personnel shall screen sidewall soils by placing the PID approximately 3 inches from the exposed soil surface at approximate 100 foot intervals around the entire excavation. Soils which comprise the excavation bottom will be screened in a similar fashion with field personnel traversing the excavation following an approximate 50 foot grid pattern. Soil screening locations which exhibit greater than 50 ppm on the PID, and/or are discolored or malodorous will be recorded on a hand held GPS unit.

5.3 Soil Stockpile Construction

Soil stockpiles must either be placed on an asphalt or concrete surface or on 20 millimeter thick plastic sheeting placed upon an unpaved surface. The clean and potentially impacted soil piles must be covered with a minimum of 6 millimeter thick plastic sheeting. Seams in the plastic sheeting must overlap a minimum of 24 inches. Sandbags or other appropriate weighting objects must be placed on the overlapping seams to secure the sheeting in place.

The working face of the potentially impacted soil pile will be moistened with water to prevent volatile organic compound (VOC) emissions during work and will be recovered during periods of inactivity which exceed one day. At the end of each work day, all soil piles shall be completely covered and securely anchored to prevent any exposure of soil to the atmosphere.

Erosion controls (fiber roll, rock berms,…) must be installed and maintained around all soil piles. Controls must be inspected by the contractor each working day. Erosion controls in need of repair or replacement must be conducted within 24 hours of discovery.

All soil stockpiles must be located a minimum of 20 feet from a storm water surface drain. Soil stockpiles must have identification markers which correspond to where the soil originated from in the excavation. The boundaries of each soil stockpile will be recorded. Soil stockpiles are anticipated to be no larger than 100 cubic yards in size.

5.4 Dust and Vapor Control

Dust and vapor emissions shall be controlled during the project such that no noticeable dust or odor is observable outside the controlled work area. Dust and vapor control measures may be implemented during construction to minimize dust/odor emissions. Dust suppression may be performed by actively spraying water on construction debris and exposed soil during handling sizing, separating and loading. Additional dust control measures may include: using a perimeter misting system, covering waste within the excavation and on stockpiles, covering non-active stockpiles with plastic sheeting, and temporarily suspending dust-generating activities until the problem has been resolved.

Equipment and vehicles used to load and move soil will be operated at speeds that minimize generation of airborne particles. The distance soil is dropped onto stockpiles and into containers will be minimized. Soil transfer will be conducted on the leeward side of trucks/stockpiles to reduce the potential for wind to generate particulates. Soil stockpiles will be placed and shaped to minimize generation of particles from wind if feasible. Trucks transporting soils and containers holding soil will be covered with tarps. Soil disturbance and loading activities will be halted and the work areas secured if wind speeds exceed 25 miles per hour. Soil stockpiles will be placed on and covered with plastic sheeting. The plastic sheeting covering the stockpiles will be secured with sandbags or equivalent.

5.5 Soil Sampling of Excavation and Soil Stockpiles

5.5.1 Soil Sampling Methodology

Personnel collecting soil samples will put on unused latex gloves prior to the collection of each sample. A 1-foot by 1-foot square area will be etched into the surficial soils to designate the sample collection area. Soil samples will be collected by inserting a trowel directly into the freshly exposed soil surface. The extracted soil will be directly transferred into a laboratory supplied, 4-ounce, screw top, glass jar. The trowel will be used to fill the glass jar to maximum capacity. A sheet of Teflon sheeting will be placed over the open end of the sample jar. The cap will be screwed onto the jar until tight. Each sample will be labeled with a sample specific identification (for example Area 1, Sample 1), time and date, and soil sampler's name.

The use of new gloves, sample jars and Teflon tape for the collection of each sample will minimize the potential for cross-contamination. Equipment that will be reused must be decontaminated with triple rinse and non-phosphate detergent using de-ionized water for the last rinse.

The samples will then be placed in a chest cooled with ice as discussed in greater detail in Section 5.5.5.

5.5.2 Soil Sampling of Soil Stockpiles

Soil samples will not be collected from the soil pile(s) classified as suitable for reuse during the excavation and segregation of soils.

Soils classified as "potentially impacted" will be sampled at the following frequencies:

- Stockpiles containing up to 500 cubic yards: collect a minimum of one soil sample per 25 cubic yards or portion thereof (for example, a 130 cubic yard stockpile will require 6 soil samples). The stockpile will be divided into 25 cubic yard portions and a minimum of one sample will be obtained from each 25 cubic yard portion. Sample locations will be randomly selected within each 25 cubic yard portion of the stockpile.

- Stockpiles over 500 cubic yards require a minimum of 20 soil samples.

All soil samples should be submitted for laboratory analysis as discussed in Section 5.5.5. Soil sample results will be used to profile soils for off-Site disposal.

Soil sample locations will be selected per the County of San Diego Department of Environmental Health Site Assessment and Mitigation (SAM) Manual Section 5.XI.B.5. Each sample location will be recorded using a hand held global positioning system (GPS) unit. Soil sample collection depths within the soil stockpile should not be collected from depths less than 12 inches from the exposed surface of the stockpile.

5.5.3 Soil Sampling of Excavation

Soil samples may be collected from excavation bottom(s) or sidewall(s) at locations identified during the screening process to document concentrations of petroleum hydrocarbons left in place. Soil samples will be collected from excavation sidewalls and bottoms with the use of a hand auger with extension rods, an excavator bucket, or a backhoe as applicable, and transferred to laboratory containers as described in Section 5.5.1. Personnel will not enter excavations greater than 4 feet in depth to collect excavation samples.

5.5.4 Decontamination Procedures

The soil sampling methodology has been designed to minimize, if not eliminate, the prospect for cross contamination. Tools used as part of the soil sampling process that are not disposable/dedicated for each sample location will be cleaned between sample intervals using a triple rinse consisting of: a brush and tap water rinse, followed by a brush and a non phosphate-TSP solution rinse, followed by de-ionized water rinse. The decontamination station will be placed upwind of all sampling areas.

5.5.5 Sample Transport and Laboratory Analyses of Soil Samples

After collection and labeling, each soil sample will be placed in an ice chest packed with ice and cooled to a maximum of 4 degrees Celsius and delivered to the laboratory. At the end of each work day, the cooler will be transported to the laboratory using chain of custody protocol. Soil samples will be analyzed by a State of California certified hazardous waste testing laboratory.

Soil samples may be analyzed for at least one of the following parameters:

- TPH-full carbon chain breakdown by EPA Method No. 8015B(M). The breakdown ranges are C_4 to C_{12} (gasoline); C_{10} to C_{22} (diesel); C_{22} to C_{44} (heavy end oil). The detection limit for each carbon range for soil will be 10 mg/kg. The holding time is 14 days for preserved samples. The holding time is seven days for unpreserved samples.

- VOCs by EPA Method No. 8260B. The detection limits range from 0.001 mg/kg to 0.050 mg/kg. The holding time for preserved soil samples (assuming extraction within 48 hours) is 14 days. The holding time is seven days for unpreserved samples.

- Title 22 metals by EPA Method No. 6010B and 7471A. The detection limits range from 0.500 mg/kg to 0.100 mg/kg. The holding time for soil is 180 days.

6.0 SOIL LOADING AND OFF SITE DISPOSAL

6.1 Soil Loading

The project manager will identify the correct soil pile and direct field personnel to remove the plastic sheeting from the area of the pile which will be the working face. The remainder of the pile will remain covered with sheeting until the working face migrates further into the pile and requires removal of sheeting. Water will be misted onto the working face, onto soils collected within the loader bucket and onto the soil as it is dumped into the end dump or truck and transfer. Once the end dump or truck and transfer is determined to be full, the truck driver will pull a tarp over the exposed soils and secure the tarp to the truck.

Equipment and vehicles used to load and move soil will be operated at speeds that minimize the generation of airborne particles. In addition, the excavated areas and stockpiles will be wetted regularly to minimize the potential for dust. During soil transfer operations, the distance that soil is dropped into containers, stockpiles or trucks will be minimized. Soil transfer will take place on the leeward side of trucks and/or stockpiles to reduce the potential for wind to generate particles. Soil disturbance and/or loading activities will be halted if wind speeds exceed 25 mph and the work area secured until the wind subsides.

Vehicles leaving the Site will be directed to drive over rumble strips prior to exiting the Site to remove soil from tires.

6.2 Soil Disposal

Contaminated soil from the project shall not be re-used or disposed of at any other place outside of the Site property except the disposal facility discussed in this section.

Petroleum hydrocarbon impacted soil will be profiled, transported and disposed of under non-hazardous waste manifest to Soil Safe of California, Inc., a State licensed recycling facility located in Adelanto, California. The contractor will complete and supply each truck with a non-hazardous waste manifest to be presented to the weigh master at Soil Safe. Non-hazardous waste will be hauled by appropriately licensed and permitted transportation firms.

Though not anticipated, should soils classified as California Hazardous Waste or as Resource Conservation and Recovery Act (RCRA) federal hazardous waste be encountered, they will be disposed of at appropriate disposal facilities as either California Hazardous Waste or as RCRA hazardous waste.

7.0 REPORTING

Daily, monthly and final summary reporting will be conducted for the project. The summary report will include, but not be limited to, a narrative of excavation activities, soil screening activities and results, laboratory analyses and results, health and safety implementation, and documentation of final soil disposal.

Supporting documentation will include, but not be limited to:

- Figures showing the Site location, excavation limits, cross sections as needed, soil screening readings and soil sample locations, and laboratory analytical data:
- Tables which summarize laboratory analytical data for all soil samples collected as part of the Site redevelopment, a summary of tons of soil disposed of off-Site.
- Appendices which include PID daily calibration forms, photographs of work conducted in chronological order, laboratory analytical data sheets and chain of custody forms, weight tickets and soil disposal manifests.
- Photo documentation of the excavation/removal of impacted soils.

In addition to providing a final summary report, daily field reports documenting observation of soil screening, field instrument readings and analysis of potentially impacted stockpiles will be prepared during the project. The daily field reports will include, as applicable:

- Soil stockpile records, including Site source of the soil.
- Location of the stockpile(s).
- Location of samples within the soil stockpile(s).
- Laboratory report of soil stockpile sample analyses.
- Disposition of the stockpile and a statement if the soil was re-used on-site or disposed of at Soil Safe.
- Documentation of disposal at Soil Safe with copies of manifests and truck trip tickets.

8.0 LIMITATIONS

The judgments described in this report are professional opinions based solely within the limits of the scope of work authorized, and pertain to conditions judged to be present or applicable at the time the work was performed. Future conditions may differ from those described herein, and this report is not intended for future evaluations of this Site unless an update is conducted by a consultant familiar with environmental assessments.

This report was compiled from information supplied to FREY Environmental, Inc. from outside sources, and other information that is in the public domain. FREY Environmental, Inc. makes no warranty as to the accuracy of statements made by others, which may be contained in this report, nor are any other warranties or guarantees, expressed or implied, included or intended by the report, except that it has been prepared in accordance with the current accepted practices and standards consistent with the level of care and skill exercised under similar circumstances by other professional consultants or firms performing similar services. Future environmental investigations may reveal site conditions not indicated in the data reviewed by FREY Environmental, Inc. Additionally, changes in standards or regulations applicable to the Site may occur. The findings of this report may be partially or wholly invalidated by changes of which FREY Environmental, Inc. is not aware or has not had the opportunity to evaluate.

Environmental assessments provide an additional source on information regarding the environmental conditions of a particular property or facility. The report to the Client is a professional opinion and judgment, dependent upon FREY's knowledge and information obtained during the course of performance of the services.

Should you have any questions regarding this letter, please contact me at (949) 723-1645.

Sincerely,
FREY Environmental, Inc.

REGISTERED PROFESSIONAL ENGINEER
EDWARD D. RANDS
C 58183
EXP 6/30/18
CIVIL
STATE OF CALIFORNIA

Ed Rands
Senior Project Engineer
P.E. #58183

REFERENCES

- Cardno ERI, 2013; *Corrective Action Plan, Former Mobil Station 18F95, 6066 Balboa Avenue, San Diego, California*, dated July 17, 2013.

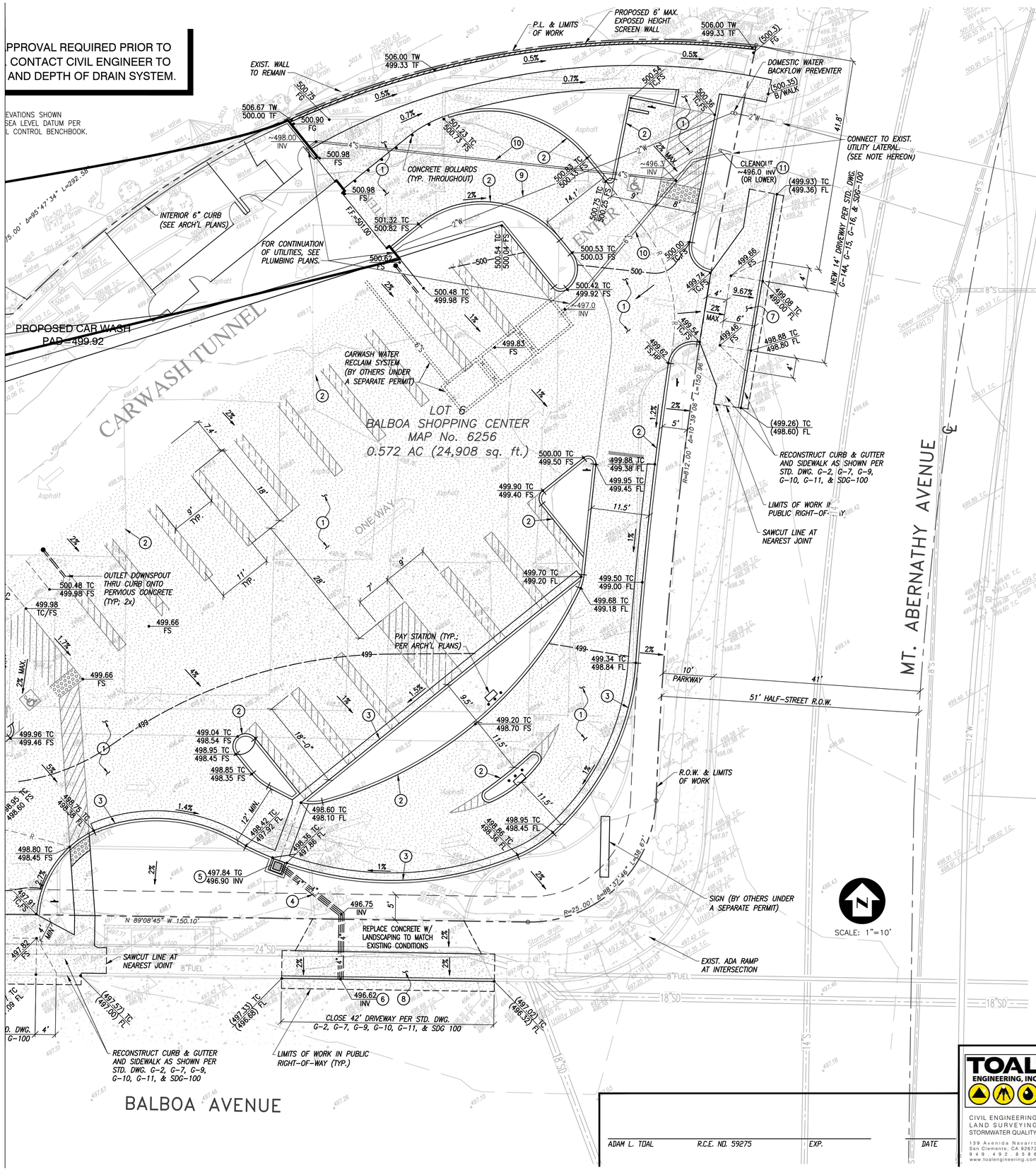
- Cardno ERI, 2014; *Well Destruction Report, Former Mobil Station 18F95, 6066 Balboa Avenue, San Diego, California*, dated April 8, 2014.

- SDDEH (County of San Diego Department of Environmental Health), 2014; Case Closure Letter for Unauthorized Release H12820-002, Mobil Station 18-F95, 6066 Balboa Avenue, San Diego, CA 92111, dated March 19, 2014.

- SPI (Soil Pacific, Inc.), 2015; *Preliminary Soil and Foundation Engineering Evaluation Report, Proposed Commercial Building (Carwash), 6066 Balboa Avenue, San Diego, California*, dated September 24, 2015.

APPENDIX A

SITE LOCATION MAP AND GRADING PLAN



LEGEND

	PERVIOUS CONCRETE (ON-SITE ONLY)
—100—	CONTOUR (EXISTING)
—100—	CONTOUR (PROPOSED)
100.00	SPOT ELEVATION (PROPOSED)
(100.00)	SPOT ELEVATION (MATCH EXISTING)
==4"==	PROPOSED DRAIN LINE
	PROPOSED SCREEN WALL (NON-RETAINING)
● DS	DOWNSPOUT
FF	FINISH FLOOR
FG	FINISH GRADE
FL OR ℄	FLOW LINE
FS	FINISH SURFACE
HP	HIGH POINT
INV	INVERT
P.L. OR ℙ	PROPERTY LINE
PA	PLANTER AREA
R.O.W. OR R/W	RIGHT OF WAY
TC	TOP OF CURB
TG	TOP OF GRATE
TW	TOP OF WALL

DEVELOPMENT STATISTICS

SITE AREA	24,907 S.F.	0.572 AC
DISTURBED AREA	24,907 S.F.	0.572 AC
IMPERVIOUS AREA		
PRE-PROJECT	16,380 S.F.	0.376 AC
NEW OR REPLACEMENT	3,800 S.F.	0.087 AC
POST-PROJECT	3,800 S.F.	0.087 AC

SOIL TYPE

CHESTERTON FINE SANDY LOAM SOILS (CfB; OBJECTID 78) PER SOIL SURVEY GEOGRAPHIC (S SURGO) DATABASE FOR SAN DIEGO COUNTY.

UTILITY NOTE:

UTILITY LINES SHOWN HEREON PER THE CITY OF SAN DIEGO'S SanGIS MAP LAYERS AND IMPROVEMENT PLANS ON FILE IN THE CITY'S RECORDS OFFICE INCLUDING: 10677-4-D, 10677-6-D, 9740-5-D, 12073-4-D, 10208-11-D, AND 4098-D.

UTILITY LATERAL CONNECTION NOTE:

CONTRACTOR SHALL CONFIRM SIZE, DEPTH, MATERIAL, AND CONDITION OF EXISTING WATER SERVICE, WATER METER, AND SEWER LATERAL PRIOR TO COMMENCEMENT OF ONSITE SEWER AND WATER WORK. CONTRACTOR TO REPLACE OR UPGRADE UTILITY LATERALS, IF NECESSARY.

ADDITIONAL NOTES

1. ALL ROOFS SHALL BE GUTTERED AND DOWNSPOUTS SHALL OUTLET ONTO PERVIOUS CONCRETE SURFACE.
2. PAD ELEVATIONS BASED ON 5" CONCRETE SLAB OVER 2" SAND OVER 15 MIL VISQUEEN OVER 2" SAND OVER 4" OF 1/2" (OR LARGER) CLEAN AGGREGATE PER STRUCTURAL PLANS. CONTRACTOR TO VERIFY PAD W/ STRUCTURAL ENGINEER AND SOILS ENGINEER PRIOR TO GRADING.
3. UNLESS SPECIFIED OTHERWISE, WHERE AN INTERIOR OR EXTERIOR UTILITY TRENCH IS PROPOSED PARALLEL TO A BUILDING FOOTING, THE BOTTOM OF THE TRENCH SHOULD NOT BE LOCATED BELOW A 1:1 PLANE PROJECTED DOWNWARD FROM THE OUTSIDE BOTTOM EDGE OF THE ADJACENT FOOTING. WHERE THIS CONDITION EXISTS, THE ADJACENT FOOTING SHOULD BE DEEPENED SUCH THAT THE BOTTOM OF THE UTILITY TRENCH IS LOCATED ABOVE THE 1:1 PROJECTION.
4. FOR FOOTING AND FOUNDATION DESIGN SEE STRUCTURAL PLANS.
5. ALL RECOMMENDATIONS IN THE PROJECT SOILS REPORT PREPARED BY SOIL PACIFIC, INC. (DATED SEPTEMBER 24, 2015; J.N. A-5035-15), AND ALL ADDENDA, ARE CONSIDERED A PART OF THESE PLANS.

CONSTRUCTION NOTES

1. CONSTRUCT PERVIOUS CONCRETE PAVING; COMPLY WITH CITY OF SAN DIEGO STDS.
2. CONSTRUCT 6" CONCRETE CURB PER CITY OF SAN DIEGO STD. SDG-150.
3. CONSTRUCT 6" CURB & GUTTER (TYPE G) PER CITY OF SAN DIEGO STD. SDG-151.
4. INSTALL 4" ø PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM.
5. INSTALL 18" SQ. CONC. DRAINBOX (BROOKS 1818CB OR EQUAL).
6. OUTLET 4" ø PIPE THRU CURB PER CITY OF SAN DIEGO STD. D-27.
7. RECONSTRUCT DRIVEWAY APPROACH AS SHOWN.
8. REMOVE DRIVEWAY APPROACH & REPLACE W/ SIDEWALK AS SHOWN.
9. INSTALL 2" ø PVC SCHEDULE 40 DOMESTIC WATER PIPE.
10. INSTALL PVC SCHEDULE 40 SEWER PIPE. SIZE PER PLAN.
11. INSTALL PRIVATE SEWER CLEANOUT.

GRADING PLANS FOR

PROPOSED CAR WASH FACILITY

6066 BALBOA AVENUE, SAN DIEGO, CA
LOT 6, BALBOA SHOPPING CENTER (MAP 6256)

CITY OF SAN DIEGO, CALIFORNIA
Development Services Department
SHEET 2 OF 3 SHEETS

I.O. NO. _____
PROJECT NO. _____
V.T.M. _____

FOR CITY ENGINEER _____ DATE _____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XXX			
AS-BUILTS				

187-6276 & 6277
NAD83 COORDINATES

239-1715
LAMBERT COORDINATES

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

2-D

TOAL ENGINEERING, INC.
CIVIL ENGINEERING
LAND SURVEYING
STORMWATER QUALITY
139 Avenida Navarro
San Clemente, CA 92672
949.492.8586
www.toalengineering.com

ADAM L. TOAL R.C.E. NO. 59275 EXP. DATE

ORIGINAL SCALE: INCHES 1 2 3 4 5 6

N:\15xx\15601\Drawings\Civil\15601-gp-02.dwg 5/6/2016 3:18:31 PM

15601

City of San Diego
2016 STORM WATER STANDARDS
WATER QUALITY STUDY BMP REPORT

Prepared By: Mark Browe
Toal Engineering, Inc.
139 Avenida Navarro
San Clemente, CA 92672
Tel: (949) 492-8586

Date Prepared: June 22, 2016

STANDARD DEVELOPMENT PROJECT

BALBOA EXPRESS CAR WASH – 6066 BALBOA AVENUE

This report identifies the required permanent best management practices for Standard Development Projects per the City of San Diego's Storm Water Standards.
The City's Storm Water Standards are available online at:
http://www.sandiego.gov/stormwater/pdf/citysdstormwaterstandardsmanualdraft2015.pdf

The 6 Source Control BMP's and 8 Site Design BMP's for Standard Development Projects are listed below, along with a discussion regarding the applicability, feasibility, and/or implementation of each BMP for this project.

Required Permanent Best Management Practices for Standard Development Projects

Source Control (SC) BMP Requirements:

How to comply: Projects shall comply with this requirement by implementing source control BMPs listed in this section that are applicable to their project. Applicability shall be determined through consideration of the development project's features and anticipated pollutant sources.

SC-1: Prevent illicit discharges into the MS4

An illicit discharge is any discharge to the MS4 that is not composed entirely of storm water except discharges pursuant to a National Pollutant Discharge Elimination System permit and discharges resulting from firefighting activities. Projects must effectively eliminate discharges of non-storm water into the MS4. This may involve a suite of housekeeping BMPs which could include effective irrigation, dispersion of non-storm water discharges into landscaping for infiltration, and controlling wash water from vehicle washing.

DISCUSSION:

- The site irrigation system shall be equipped with a smart controller and rain gauge to regulate on-site irrigation water, and avoid overwatering or watering on rainy days.
- The proposed car wash is a self-contained building, with a process for recycling/reuse of wash water. Discharges from the car wash are connected directly to the sanitary sewer system.

SC-2: Identify the storm drain system using stenciling or signage

Storm drain signs and stencils are visible source controls typically placed adjacent to the inlets. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Stenciling shall be provided for all storm water conveyance system inlets and catch basins within the project area. Inlet stenciling may include concrete stamping, concrete painting, placards, or other methods approved by the local municipality. In addition to storm drain stenciling, projects are encouraged to post signs and prohibitive language (with graphical icons) which prohibit illegal dumping at trailheads, parks, building entrances and public access points along channels and creeks within the project area.
Language associated with the stamping (e.g., "No Dumping-Drains to Ocean") must be satisfactory to the City Engineer. Stamping may also be required in Spanish.

DISCUSSION:

- On-site drain inlets shall be stamped "No Dumping – Drains to Ocean", or with similar wording, to the satisfaction of the City Engineer.

SC-3: Protect outdoor material storage areas from rainfall, run-on, runoff, and wind dispersal

Materials with the potential to pollute storm water runoff shall be stored in a manner that prevents contact with rainfall and storm water runoff. Contaminated runoff shall be managed for treatment incorporate the following structural or pollutant control BMPs for outdoor material storage areas, as applicable and feasible:
Materials with the potential to contaminate storm water shall be:

• Placed in an enclosure such as, but not limited to, a cabinet, or similar structure, or under a roof or awning that prevents contact with rainfall runoff or spillage to the storm water conveyance system; or
• Protected by secondary containment structures such as berms, dikes, or curbs.
• The storage areas shall be paved and sufficiently impervious to contain leaks and spills, where necessary.
(continued below)
• The storage area shall be sloped towards a sump or another equivalent measure that is effective to contain spills.
• Runoff from downspouts/roofs shall be directed away from storage areas.
• The storage area shall have a roof or awning that extends beyond the storage area to minimize collection of storm water within the secondary containment area. A manufactured storage shed may be used for small containers.

DISCUSSION:

- At present there are no designated outdoor material storage areas for this project. Any outdoor material storage areas added post-development shall incorporate the control measures listed above to the maximum extent feasible, but at a minimum the areas shall be covered and located outside of the path of roof water and surface drainage.

SC-4: Protect materials stored in outdoor work areas from rainfall, run-on, runoff, and wind dispersal

Outdoor work areas have an elevated potential for pollutant loading and spills. All development projects shall include the following structural or pollutant control BMPs for any outdoor work areas with potential for pollutant generation, as applicable and feasible:

• Create an impermeable surface such as concrete or asphalt, or a prefabricated metal drip pan, depending on the size needed to protect the materials.
• Cover the area with a roof or other acceptable cover.

• Berm the perimeter of the area to prevent water from adjacent areas from flowing on to the surface of the work area.
• Directly connect runoff to sanitary sewer or other specialized containment system(s), as needed and where feasible. This allows the more highly concentrated pollutants from these areas to receive special treatment that removes particular constituents. Approval for this connection must be obtained from the appropriate sanitary sewer agency.
• Locate the work area away from storm drains or catch basins.

DISCUSSION:

- At present there are no designated outdoor work areas associated with this project. Any outdoor work areas added post-development shall incorporate the control measures listed above to the maximum extent practicable, but at a minimum the areas shall have perimeter controls and be located away from catch basins.

SC-5: Protect trash storage areas from rainfall, run-on, runoff, and wind dispersal

Storm water runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. All development projects shall include the following structural or pollutant control BMPs, as applicable:

• Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This can include berming or grading the waste handling area to prevent run-on of storm water.
• Ensure trash container areas are screened or walled to prevent offsite transport of trash.
• Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
• Locate storm drains away from immediate vicinity of the trash storage area and vice versa.
• Post signs on all dumpsters informing users that hazardous material are not to be disposed.

DISCUSSION:

- The proposed trash storage area is enclosed and covered. Trash receptacles shall have attached lids, and the lids shall be kept closed at all times when not in use. The trash area shall be equipped with a sign informing users that hazardous materials shall not be deposited into the trash.

SC-6: Use any additional BMPs determined to be necessary by the Copermittee to minimize pollutant generation at each project site

Appendix E.1 provides guidance on permanent controls and operational BMPs that are applicable at a project site based on potential sources of runoff pollutants at the project site. The project shall implement all applicable and feasible source control BMPs listed in Appendix E.1. In addition to the source control BMPs in Appendix E.1, additional source control requirements apply for the following project types within the City jurisdiction. Guidance for implementing these additional source control requirements are presented in Appendix E.

• **SC-6D: Automotive-related Uses**: include but are not limited to facilities that perform maintenance or repair of vehicles, vehicle washing facilities, and retail gasoline outlets. Refer to Appendix E.23

DISCUSSION:

- The proposed car wash facility is self-contained, with a process in place for recycle and reuse of wash water. Discharged water is connected directly to the sanitary sewer system.
- Site paving be swept quarterly, to minimize build-up of sediment and debris and reduce the potential for sediment laden runoff discharged from the project site.

Site Design (SD) BMP Requirements:

How to comply: Projects shall comply with this requirement by using all of the site design BMPs listed in this section that are applicable and practicable to their project type and site conditions. Applicability of a given site design BMP shall be determined based on project type, soil conditions, presence of natural features (e.g. streams), and presence of site features (e.g. parking areas). Explanation shall be provided by the applicant when a certain site design BMP is considered to be not applicable or not practicable/feasible. Site plans shall show site design BMPs and provide adequate details necessary for effective implementation of site design BMPs. The "Site Design BMP Checklist for All Development Projects" located in Appendix I-5 shall be used to document compliance with site design BMP requirements.

SD-1: Maintain natural drainage pathways and hydrologic features
Maintain or restore natural storage reservoirs and drainage corridors (including topographic depressions, areas of permeable soils, natural swales, and ephemeral and intermittent streams)
Buffer zones for natural water bodies (where buffer zones are technically infeasible, require project applicant to include other buffers such as trees, access restrictions, etc.)

During the site assessment, natural drainages must be identified along with their connection to creeks and/or streams, if any. Natural drainages offer a benefit to storm water management as the soils and habitat already function as a natural filtering/infiltrating swale. When determining the development footprint of the site, altering natural drainages should be avoided. By providing a development envelope set back from natural drainages, the drainage can retain some water quality benefits to the watershed. In some situations, site constraints, regulations, economics, or other factors may not allow avoidance of drainages and sensitive areas. Projects proposing to dredge or fill materials in Waters of the U.S. must obtain Clean Water Act Section 401 Water Quality Certification. Projects proposing to dredge or fill waters of the State must obtain waste discharge requirements. Both the 401 Certification and the Waste Discharge Requirements are administered by the San Diego Water Board. The project applicant shall consult the local jurisdiction for other specific requirements.

Projects can incorporate SD-1 into a project by implementing the following planning and design phase techniques as applicable and practicable:

• Evaluate surface drainage and topography in considering selection of Site Design BMPs that will be most beneficial for a given project site. Where feasible, maintain topographic depressions for infiltration.
• Optimize the site layout and reduce the need for grading. Where possible, conform the site layout along natural landforms, avoid grading and disturbance of vegetation and soils, and replicate the site's natural drainage patterns. Integrating existing drainage patterns into the site plan will help maintain the site's predevelopment hydrologic function.
• Preserve existing drainage paths and depressions, where feasible and applicable, to help
• Structural BMPs cannot be located in buffer zones if a State and/or Federal resource agency (e.g. SDRWQCB, California Department of Fish and Wildlife; U.S. Army Corps of Engineers, etc.) prohibits maintenance or activity in the area.

DISCUSSION:

- The proposed project includes a significant amount of pervious paving, per E.6. SD-6B Permeable Pavement, which will reduce the volume of runoff discharged from the project site through on-site storage and infiltration.
- There are no natural streams or water bodies within, or adjacent to, the project site.

SD-2: Conserve natural areas, soils and vegetation

• Conserve natural areas within the project footprint including existing trees, other vegetation, and soils

To enhance a site's ability to support source control and reduce runoff, the conservation and restoration of natural areas must be considered in the site design process. By conserving or restoring the natural drainage features, natural processes are able to intercept storm water, thereby reducing the amount of runoff. The upper soil layers of a natural area contain organic material, soil biota, vegetation, and a configuration favorable for storing and slowly conveying storm water and establishing or restoring vegetation to stabilize the site after construction. The canopy of existing native trees and shrubs also provide a water conservation benefit by intercepting rain water before it hits the ground. By minimizing disturbances in these areas, natural processes are able to intercept storm water, providing a water quality benefit. By keeping the development concentrated to the least environmentally sensitive areas of the site and set back from natural areas, storm water runoff is reduced, water quality can be improved, environmental impacts can be decreased, and many of the site's most attractive native landscape features can be retained. In some situations, site constraints, regulations, economics, and/or other factors may not allow avoidance of all sensitive areas on a project site. Project applicant shall consult the local municipality for jurisdictional specific requirements for mitigation of removal of sensitive areas.

Projects can incorporate SD-2 by implementing the following planning and design phase techniques as applicable and practicable:

• Identify areas most suitable for development and areas that should be left undisturbed. Additionally, reduced disturbance can be accomplished by increasing building density and increasing height, if possible.
• Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
• Avoid areas with thick, undisturbed vegetation. Soils in these areas have a much higher capacity to store and infiltrate runoff than disturbed soils, and reestablishment of a mature vegetative community can take decades. Vegetative cover can also provide additional volume storage of rainfall by retaining water on the surfaces of leaves, branches, and trunks of trees during and after storm events.
• Preserve trees, especially native trees and shrubs, and identify locations for planting additional native or drought tolerant trees and large shrubs.
• In areas of disturbance, topsoil should be removed before construction and replaced after the project is completed. When handled carefully, such an approach limits the disturbance to native soils and reduces the need for additional (purchased) topsoil during later phases.
• Avoid sensitive areas, such as wetlands, biological open space areas, biological mitigation sites, streams, floodplains, or particular vegetation communities, such as coastal sage scrub and intact forest. Also, avoid areas that are habitat for sensitive plants and animals, particularly those, State or federally listed as endangered, threatened or rare. Development in these areas is often restricted by federal, state and local laws.

DISCUSSION:

- Vegetated areas are located around the perimeter of, and throughout, the proposed car wash development. Where possible, existing trees and vegetation will remain untouched in their natural state. Where protection is infeasible, new plantings will incorporate native, drought-tolerant species to help reduce irrigation requirements.

SD-3: Minimize impervious area

• Construct streets, sidewalks or parking lots aisles to the minimum widths necessary, provided public safety is not compromised

• Minimize the impervious footprint of the project

One of the principal causes of environmental impacts by development is the creation of impervious surfaces. Imperviousness links urban land development to degradation of aquatic ecosystems in two ways:

• First, the combination of paved surfaces and piped runoff efficiently collects urban pollutants and transports them, in suspended or dissolved form, to surface waters. These pollutants may originate as airborne dust, be washed from the atmosphere during rains, or may be generated by automobiles and outdoor work activities.

• Second, increased peak flows and runoff durations typically cause erosion of stream banks and beds, transport of fine sediments, and disruption of aquatic habitat. Measures taken to control stream erosion, such as hardening banks with riprap or concrete, may permanently eliminate habitat. Impervious cover can be minimized through identification of the smallest possible land area that can be practically impacted or disturbed during site development. Reducing impervious surfaces retains the permeability of the project site, allowing natural processes to filter and reduce sources of pollution.

Projects can incorporate SD-3 by implementing the following planning and design phase techniques as applicable and practicable:

• Decrease building footprint through (the design of compact and taller structures when allowed by local zoning and design standards and provided public safety is not compromised.
• Construct walkways, trails, patios, overflow parking lots, alleys and other low-traffic areas with permeable surfaces.
• Construct streets, sidewalks and parking lot aisles to the minimum widths necessary, provided that public safety and alternative transportation (e.g. pedestrians, bikes) are not compromised.
• Consider the implementation of shared parking lots and driveways where possible.
• Landscaped area in the center of a cul-de-sac can reduce impervious area depending on configuration. Design of a landscaped cul-de-sac must be coordinated with fire department personnel to accommodate turning radii and other operational needs.
• Design smaller parking lots with fewer stalls, smaller stalls, more efficient lanes.
• Design indoor or underground parking.
• Minimize the use of impervious surfaces in the landscape design.

DISCUSSION:

- The proposed project includes a significant amount of pervious paving, per E.6. SD-6B Permeable Pavement (see Fact Sheet at the end of this Water Quality Study BMP Report), which will reduce the volume of runoff discharged from the project site through on-site storage and infiltration.
- The pervious paver parking lot is also designed to incorporate the minimum dimensions necessary for access and maneuverability in an effort to increase the area for pervious landscaping.

SD-4: Minimize soil compaction

• Minimize soil compaction in landscaped areas

The upper soil layers contain organic material, soil biota, and a configuration favorable for storing and slowly conveying storm water down gradient. By protecting native soils and vegetation in appropriate areas during the clearing and grading phase of development the site can retain some of its existing beneficial hydrologic function. Soil compaction resulting from the movement of heavy construction equipment can reduce soil infiltration rates. It is important to recognize that areas adjacent to and under building foundations, roads and manufactured slopes must be compacted with min. soil density requirements in compliance with local building and grading ordinances.

Projects can incorporate SD-4 by implementing the following planning and design phase techniques as applicable and practicable:

• Avoid disturbance in planned green space and proposed landscaped areas where feasible. These areas that are planned for retaining their beneficial hydrological function should be protected during the grading/construction phase so that vehicles and construction equipment do not intrude and inadvertently compact the area.
• In areas planned for landscaping where compaction could not be avoided, re-till the soil surface to allow for better infiltration capacity. Soil amendments are recommended and may be necessary to increase permeability and organic content. Soil stability, density requirements, and other geotechnical considerations associated with soil compaction must be reviewed by a qualified landscape architect or licensed geotechnical, civil or other professional engineer.

DISCUSSION:

- Landscape areas located around the perimeter of the proposed parking lot and car wash facility do not require compaction for structural support. These areas shall remain untouched in their natural state, where possible. Otherwise, the surficial soils shall be tilled and re-worked to allow for better infiltration of surface water.

SD-5: Disperse impervious areas
Disconnect impervious surfaces through disturbed pervious areas
Design and construct landscaped or other pervious areas to effectively receive and infiltrate, retain and/or treat runoff from impervious areas prior to discharging to the MS4

Impervious area dispersion (dispersion) refers to the practice of essentially disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as rooftops, walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges, and reduce volumes while achieving incidental treatment. Volume reduction from dispersion is dependent on the infiltration characteristics of the pervious area and the amount of impervious area draining to the pervious area. Treatment is achieved through filtration, shallow sedimentation, sorption, infiltration, evapotranspiration, biochemical processes and plant uptake.
The effects of imperviousness can be mitigated by disconnecting impervious areas from the drainage system and by encouraging detention and retention of runoff near the point where it is generated. Detention and retention of runoff reduces peak flows and volumes and allows pollutants to settle out or adhere to soils before they can be transported downstream. Disconnection practices may be applied in almost any location, but impervious surfaces must discharge into a suitable receiving area for the practices to be effective. Information gathered during the site assessment will help determine appropriate receiving areas.
Project designs should direct runoff from impervious areas to adjacent landscaping areas that have higher potential for infiltration and surface water storage. This will limit the amount of runoff generated, and therefore the size of the mitigation BMPs downstream. The design, including consideration of slopes and soils, must reflect a reasonable expectation that runoff will soak into the soil and produce no runoff of the DCV. On hillside sites, drainage from upper areas may be collected in conventional catch basins and piped to landscaped areas that have higher potential for infiltration. Or use low retaining walls to create terraces that can accommodate BMPs.

Projects can incorporate SD-5 by implementing the following planning and design phase techniques as applicable and practicable:
• Implement design criteria and considerations listed in impervious area dispersion fact sheet (SD-5) presented in Appendix E.
• Drain rooftops into adjacent landscape areas.
• Drain impervious parking lots, sidewalks, walkways, trails, and patios into adjacent landscape areas.
• Reduce or eliminate curb and gutters from roadway sections, thus allowing roadway runoff to drain to adjacent pervious areas.
• Replace curbs and gutters with roadside vegetated swales and direct runoff from the paved street or parking areas to adjacent LID facilities. Such an approach for alternative design can reduce the overall capital cost of the site development while improving the storm water quantity and quality issues and the site's aesthetics.
• Plan site layout and grading to allow for runoff from impervious surfaces to be directed into distributed permeable areas such as turf, landscaped or permeable recreational areas, medians, parking islands, planter boxes, etc.
• Detain and retain runoff throughout the site. On flatter sites, landscaped areas can be interspersed among the buildings and pavement areas. On hillside sites, drainage from upper areas may be collected in conventional catch basins and conveyed to landscaped areas in lower areas of the site.
• Pervious area that receives run on from impervious surfaces shall have a minimum width of 10 feet and a maximum slope of 5%.

DISCUSSION:

- The proposed car wash facility is the only impervious surface within the proposed development. The proposed parking lot and walkways will be constructed using pervious paving (per E.6. SD-6B Permeable Pavement). The roof drains for the facility will outlet onto the pervious paving so the roof water will have the opportunity to infiltrate on-site.

SD-6: Collect runoff

• Use small collection strategies located at, or as close to as possible to the sources (i.e. the point where storm water initially meets the ground) to minimize the transport of runoff and pollutants to the MS4 and receiving waters

• Use permeable material for projects with low traffic areas and appropriate soil conditions

Distributed control of storm water runoff from the site can be accomplished by applying small collection techniques (e.g. green roofs), or integrated management practices, on small sub-catchments or on residential lots. Small collection techniques foster opportunities to maintain the natural hydrology provide a much greater range of control practices. Integration of storm water management into landscape design and natural features of the site, reduce site development and long-term maintenance costs, and provide redundancy if one technique fails. On flatter sites, it typically works best to intersperse landscaped areas and integrate small scale retention practices among the buildings and paving.
Permeable pavements contain small voids that allow water to pass through to a gravel base. They come in a variety of forms; they may be a modular paving system (concrete pavers, grass-pave, or gravel-pave) or poured in place pavement (porous concrete, permeable asphalt). Project applicants should identify locations where permeable pavements could be substituted for impervious concrete or asphalt paving. The O&M of the site must ensure that permeable pavements will not be sealed in the future. In areas where infiltration is not appropriate, permeable paving systems can be fitted with an under drain to allow filtration, storage, and evaporation, prior to drainage into the storm drain system.

Projects can incorporate SD-6 by implementing the following planning and design phase techniques as applicable and practicable:

• Implementing distributed small collection techniques to collect and retain runoff
• Installing permeable pavements (see SD-6B in Appendix E)

DISCUSSION:

- Permeable paving (per E.6. SD-6B Permeable Pavement) is utilized for all on-site walkways, drive aisles, and parking stalls.
- Drainage improvements on-site (inlets and pipes) are intended for collection and conveyance of storm volumes exceeding the storage/infiltration capacity of the pervious paving and landscaping.

SD-7: Landscape with native or drought tolerant species

All development projects are required to select a landscape design and plant palette that minimizes required resources (irrigation, fertilizers and pesticides) and pollutants generated from landscape areas. Native plants require less fertilizers and pesticides because they are already adapted to the rainfall patterns and soils conditions. Plants should be selected to be drought tolerant and not require watering after establishment (2 to 3 years). Watering should only be required during prolonged dry periods after plants are established. Final selection of plant material needs to be made by a landscape architect experienced with LID techniques. Microclimates vary significantly throughout the region and consulting local municipal resources will help to select plant material suitable for a specific geographic location.

Projects can incorporate SD-7 by landscaping with native and drought tolerant species. Recommended plant list is included in Appendix E (Fact Sheet PL).

DISCUSSION:

- Where possible, existing vegetation shall remain protected in place.
- Where new landscaping is proposed, planting shall incorporate native, drought-tolerant plant species in an effort to reduce watering requirements.

SD-8: Harvest and use precipitation

Harvest and use BMPs capture and stores storm water runoff for later use. Harvest and use can be applied at smaller scales (Standard Projects) using rain barrels or at larger scales (PDPs) using cisterns. This harvest and use technique has been successful in reducing runoff discharged to the storm drain system conserving potable water and recharging groundwater.
Rain barrels are above ground storage vessels that capture runoff from roof downspouts during rain events and detain that runoff for later reuse for irrigating landscaped areas. The temporary storage of roof runoff reduces the runoff volume from a property and may reduce the peak runoff velocity for small, frequently occurring storms. In addition, by reducing the amount of storm water runoff that flows overland into a storm water conveyance system (storm drain inlets and drain pipes), less pollutants are transported through the conveyance system into local creeks and the ocean. The reuse of the detained water for irrigation purposes leads to the conservation of potable water and the recharge of groundwater. SD-8 fact sheet in Appendix E provides additional detail for designing Harvest and Use BMPs. Projects can incorporate SD-8 by installing rain barrels or cisterns, as applicable.

DISCUSSION:

- This BMP has not been implemented due to the extensive amount of pervious paving proposed for the site, which provides storage during storm events and groundwater recharge via infiltration.

E.6. SD-6B Permeable Pavement (Site Design BMP)

Photo Credit: San Diego Low Impact Development Design Manual

Description

Permeable pavement is pavement that allows for percolation through void spaces in the pavement surface into subsurface layers. Permeable pavements reduce runoff volumes and rates and can provide pollutant control via infiltration, filtration, sorption, sedimentation, and biodegradation processes. When used as a site design BMP, the subsurface layers are designed to provide storage of storm water runoff so that outflow rates can be controlled via infiltration into subgrade soils. Varying levels of storm water treatment and flow control can be provided depending on the size of the permeable pavement system relative to its drainage area and the underlying infiltration rates. As a site design BMP permeable pavement areas are designed to be self-retaining and are designed primarily for direct rainfall. Self-retaining permeable pavement areas have a ratio of total drainage area (including permeable pavement) to area of permeable pavement of 1.5:1 or less. Permeable pavement surfaces can be constructed from modular paver units or paver blocks, pervious concrete, porous asphalt, and turf pavers. Sites designed with permeable pavements can significantly reduce the impervious area of the project. Reduction in impervious surfaces decreases the DCV and can reduce the footprint of treatment control and flow control BMPs.

Design Adaptations for Project Goals

Site design BMP to reduce impervious area and DCV. Permeable pavement without an underdrain can be used as a site design feature to reduce the impervious area of the site by replacing traditional pavements, including roadways, parking lots, emergency access lanes, sidewalks, trails and driveways.

Typical Permeable Pavement Components (Top to Bottom)
Permeable surface layer
Bedding layer for permeable surface
Aggregate storage layer with optional underdrain(s)
Optional final filter course layer over uncompacted existing subgrade

Conceptual Design and Sizing Approach for Site Design

Determine the areas where permeable pavements can be used in the site design to replace conventional pavements to reduce the DCV. These areas can be credited toward reducing runoff generated through representation in storm water calculations as pervious, not impervious, areas but are not credited for storm water pollutant control.

- Calculate the DCV per Appendix B.2, taking into account reduced runoff from permeable pavement areas.

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October 27, 2016

Site: Balboa Express – Shahram Dehghani
Wash Info: Belanger 100 ft. tunnel
Subject: Water Usage Information

To Whom It May Concern:

The PurWater Recovery System has been engineered and designed specifically with the Professional Car Wash Operator in mind and incorporates the same innovative, cutting edge technology the industry has come to expect from PurClean. Modular in design, the PurWater System platform provides a simplified approach that allows the system to be easily adapted to meet the needs and requirements of the targeted wash facility and eliminates the confusion typically associated with water recovery.

Belanger – 100 ft. tunnel

It is a commonly used number that you will lose 6 gallons to evaporation and carry out. Using 60 gallons total (reclaim, RO, RO reject and freshwater) per vehicle will put you at 73% reclaim which should be a good balance of wash quality and conservation. With your chemical applications and final rinse applications at 22 gallons per vehicle, all your undercarriage, and all cloth applications running on reclaimed water you will be at 16 gallons per vehicle going to sewer.

Water Use Per Car

- evaporation and carry out 6 gallons
- chemical application and final rinse (RO and RO Reject) 22 gallons
- undercarriage and cloth running on reclaim water 38 gallons
- at maximum going to sewer 16 gallons of reclaim water

Summary

- Total of 60 gallons of water used per vehicle
- 22 gallons of freshwater, for RO, RO reject and freshwater for chemistry
- 38 gallons of recycled water for the wash
- 6 gallons of water lost to evaporation and carry out
- 16 gallons going to the sewer – calculates to 73% reclaim

Total Gallons to Sewer Daily (estimated at 100 cars per day count)

- 16 gallons per vehicle going to sewer (estimated 100 cars per day) total to sewer per day 1600 gallons

Best Regards,

Teresa Borchard
Director of Technical Sales and Project Management
New Wave Industries
PurClean/PurWater