AGENDA

ALISO VIEJO CITY COUNCIL
WEDNESDAY, FEBRUARY 5, 2025
7:00 PM REGULAR MEETING

CITY HALL
COUNCIL CHAMBERS
12 JOURNEY
ALISO VIEJO, CA

Mayor Tiffany Ackley
Mayor Pro Tem Max Duncan
Councilmember Richard Hurt
Councilmember Mike Munzing
Councilmember Tim Zandbergen

WELCOME to the City of Aliso Viejo City Council meeting. Those persons wishing to address the City Council are requested to complete and submit to the City Clerk a “Request to Address City Council” form available at the entrance to the City Council Chambers. Speakers will be called at the appropriate time as their interested matter is heard. COMMENTS WILL BE LIMITED TO THREE MINUTES PER SPEAKER. Council proceedings are recorded.

It is the City's intention to comply with the Americans with Disabilities Act (ADA) . If you need special assistance to participate in the meeting, the City will make reasonable arrangements to ensure accessibility and/or accommodations. [28 CFR 35.102-35.104 ADA Title II] Please contact the City Clerk's Office at (949) 425-2505 at least 48 hours prior to the meeting.

Regular meetings of the City Council are held on the first and third Wednesday of the month at the City Hall Council Chambers, 12 Journey, Aliso Viejo. Copies of the agenda are available in the lobby at City Hall on the Thursday preceding a regularly scheduled City Council meeting. All communications received by the City regarding an agenda item have been included in the agenda materials. Supplemental documents relating to specific agenda items, including communications received after agenda delivery, are presented at the dais and in the Public Copy agenda binder at the time of the meeting. Supplemental documents are also available for review in the City Clerk's office, 12 Journey, Aliso Viejo. For more information, please contact City Hall at (949) 425-2505.

This meeting will be broadcast live on Cox Communications Channel 851, AT&T U-Verse Channel 99 and the City's website. By attending the City Council Meeting, you are giving your permission to be televised. The Council Meetings are rebroadcast on Wednesday at 7:00 p.m. on Cox Communications Channel 851, AT&T U-Verse Channel 99, and can be viewed on the internet at www.avcity.org.

MITZI ORTIZ	SCOTT C. SMITH	JANET MARTINEZ
CITY MANAGER	CITY ATTORNEY	CITY CLERK

PLEASE SILENCE ALL CELL PHONES AND OTHER ELECTRONIC EQUIPMENT WHILE CITY COUNCIL IS IN SESSION

CALL TO ORDER: Regular Meeting

ROLL CALL

PLEDGE OF ALLEGIANCE:

REPORT FROM CLOSED SESSION:

1. SPECIAL PRESENTATIONS:

1.1 PRESENTATION BY THE ORANGE COUNTY MOSQUITO AND VECTOR CONTROL DISTRICT

2. ADDITIONS, DELETIONS, REORDERING TO THE AGENDA:

3. COMMUNITY INPUT:

Members of the public wishing to address the City Council are requested to complete and submit to the City Clerk a "Request to Address City Council" form available at the entrance to the City Council Chambers. In compliance with the Brown Act, no discussion or action may be taken on comments received at this time, except the City Council may briefly respond to statements made or questions posed. Comments are limited to three (3) minutes per speaker.

4. CONSENT CALENDAR:

All matters listed on the Consent Calendar will be acted upon by one vote unless members of the City Council, or staff request a matter to be discussed and/or removed from the Consent Calendar for separate action. Items removed from the Consent Calendar will be discussed and voted upon immediately following City Council action on the remainder of the Consent Calendar.

4.1 WAIVE THE READING OF ALL ORDINANCES AND RESOLUTIONS

Recommended Action: Approve the reading by title only of all ordinances and resolutions wherein the titles appear on the public agenda; said titles shall be determined to have been read by title, and further reading is waived.

4.2 APPROVAL OF MINUTES

Recommended Action: Approve the Minutes as submitted for the January 15, 2025, Regular Meeting.

Draft Minutes - January 15, 2025 Regular Meeting

4.3 ACCOUNTS PAYABLE

Recommended Action: Ratify accounts payable checks and electronic funds transfers issued between December 20, 2024, and January 16, 2025, in the amount of $1,681,919.55.

Staff Report

Attachment - Accounts Payable Report

4.4 TREASURER'S STATEMENT – DECEMBER 2024

Recommended Action: Receive and file the December 2024 Treasurer's Statement.

Staff Report

Attachment - December 2024 Treasurer's Statement

4.5 PROFESSIONAL SERVICES AGREEMENT WITH STC TRAFFIC, INC. TO PROVIDE TRAFFIC STUDY PEER REVIEW SERVICES

Recommended Action: Approve and authorize the City Manager to execute a Professional Services Agreement with STC Traffic, Inc. for traffic study peer review consulting services.

Staff Report

Attachment 1 - Agreement

4.6 STATUS UPDATE ON DEVELOPMENT AGREEMENT NEGOTIATIONS

Recommended Action: Receive and file.

Staff Report

5. PUBLIC HEARINGS:

5.1 CONDITIONAL USE PERMIT TO CONSTRUCT A 748 SQUARE FOOT ACCESSORY DWELLING UNIT WITH A 668 SQUARE FOOT ATTACHED GARAGE THAT EXCEEDS THE HEIGHT LIMIT OF 25' (27' PROPOSED) AT 25 ALISAL COURT (USE-2024-00012).

Recommended Action: Adopt a Resolution approving a Conditional Use Permit to construct a 748 square foot accessory dwelling unit with a 668 square foot attached garage that exceeds the height limit of 25 feet (27 feet proposed) at 25 Alisal Court (USE-2024-00012).

Staff Report

Attachment 1 - Resolution

Attachment 2 - Proposed Plans

Attachment 3 - Applicant's Letter

Attachment 3.1 - Letter from AVCA.pdf

Attachment 4 - Presentation

6. DISCUSSION:

6.1 PAVEMENT MANAGEMENT AND CONDITION ANALYSIS

Recommended Action: Receive Staff presentation.

Staff Report

Attachment 1 - Presentation

Attachment 2 - Phase I Pavement Report.pdf

Attachment 3 - Phase II Pavement Report.pdf

6.2 BIKE LANE DISCUSSION

Recommended Action: Receive presentation and provide direction to Staff.

Staff Report

Attachment 1 - Bike Lane Map

Attachment 2 - Presentation

6.3 AGREEMENT WITH GFIVE ENTERPRISES INC. DBA ADVANCED POOL SPECIALISTS FOR THE AQUATIC CENTER POOL DECK SURFACE REHABILITATION PROJECT

Recommended Action:

1. Approve Contract Documents, Specifications, and Plans for Aquatic Center Pool Deck Rehabilitation Project;
2. Award an agreement in the amount of $238,312.00 to GFive Enterprises Inc. dba Advanced Pool Specialists for Aquatic Center Pool Deck Surface Rehabilitation Project;
3. Authorize the City Manager to execute an agreement with GFive Enterprises Inc. dba Advanced Pool Specialists;
4. Authorize City staff to make total compensation to GFive Enterprises Inc. dba Advanced Pool Specialists up to $238,312.00 plus $23,831.20 (10% of the agreement amount) to allow for contingencies, totaling 262,143.20; and
5. Declare this project categorically exempt from the California Environmental Quality Act (CEQA) process Per Title 14 of the California Code of Regulations, Chapter 3, Article 19, Section 15301 (Class 1: Existing Facilities).

Staff Report
Attachment 1 - Agreement

7. CITY MANAGER' S REPORT:

8. ANNOUNCEMENTS / COUNCIL COMMENTS / COMMITTEE UPDATES:

9. ADJOURNMENT:

The next regularly scheduled City Council meeting is February 19, 2025.

CITY OF ALISO VIEJO
CITY COUNCIL MINUTES
REGULAR MEETING
JANUARY 15, 2025, 7:00 PM
Council Chambers, City Hall, 12 Journey
Aliso Viejo, California

CALL TO ORDER: Mayor Ackley called the Regular Meeting of the City Council of the City of Aliso Viejo to order at 7:00 p.m.

ROLL CALL

PRESENT: MAYOR TIFFANY ACKLEY
MAYOR PRO TEM MAX DUNCAN
COUNCILMEMBER RICHARD W. HURT
COUNCILMEMBER MIKE MUNZING
COUNCILMEMBER TIM A. ZANDBERGEN

ABSENT: NONE

STAFF PRESENT: MITZI ORTIZ, CITY MANAGER
HONGDAO NGUYEN, ASSISTANT CITY ATTORNEY
JANET MARTINEZ, CITY CLERK
ANN EIFERT, FINANCIAL SERVICES DIRECTOR
SHAUN PELLETIER, PUBLIC WORKS DIRECTOR
SO KIM, COMMUNITY DEVELOPMENT DIRECTOR
ROSE RIVERA, SENIOR PLANNER
LIZZY MENDOZA, RECREATION & COMMUNITY SERVICES MANAGER
ISAAC AZIZ, INFORMATION TECHNOLOGY MANAGER
CAPT. RYAN BUHR, CHIEF OF POLICE SERVICES

PLEDGE OF ALLEGIANCE: City Clerk Janet Martinez led the pledge of allegiance.

1. SPECIAL PRESENTATIONS:

1.1 RECOGNITION OF ALISO VIEJO LITTLE LEAGUE - 10 & 12 YEAR OLD ALL STARS DISTRICT 55 & SECTION 10 CHAMPIONS

Mayor Ackley presented the certificates of recognition to 10-Year-Old All-Stars Team Manager Jeff Perkins, who commented on the team's accomplishments.

Mayor Ackley presented the certificates of recognition to 12-Year-Old All-Stars Team Manager Ryan Johnson, who commented on the team's accomplishments.

1.2 RECOGNITION OF 2024 MAYOR MIKE MUNZING

Mayor Ackley presented the recognition to Councilmember Munzing. Janelle Atienza, Field Representative for Assemblymember Dinae Dixon presented a certificate of recognition. Councilmember Munzing expressed his appreciation to City staff, Council colleagues, and residents.

1.3 INTRODUCTION OF CITY CLERK JANET MARTINEZ

Mayor Ackley introduced City Clerk Janet Martinez. City Manager Mitzi Ortiz provided additional comments. City Clerk Janet Martinez expressed her appreciation for the welcome.

1.4 INTRODUCTION OF CHIEF OF POLICE SERVICES CAPTAIN RYAN BUHR

Mayor Ackley introduced Chief of Police Services Captain Ryan Buhr. City Manager Mitzi Ortiz provided additional comments. Chief of Police Services Captain Ryan Buhr expressed his appreciation for the welcome.

2. ADDITIONS, DELETIONS, REORDERING TO THE AGENDA:

None.

3. COMMUNITY INPUT:

1. Finn Sullivan commented on a donation drive benefitting Los Angeles fire victims.

4. CONSENT CALENDAR:

Unless otherwise indicated below, the following pertains to all items on the Consent Calendar.

Motion: Councilmember Hurt moved and Councilmember Munzing seconded to approve the recommended actions. Motion carried 5-0.

4.1 WAIVE THE READING OF ALL ORDINANCES AND RESOLUTIONS

Recommended Action: Approve the reading by title only of all ordinances and resolutions wherein the titles appear on the public agenda; said titles shall be determined to have been read by title, and further reading is waived.

4.2 APPROVAL OF MINUTES

Recommended Action: Approve the Minutes as submitted for the December 4, 2024 Regular Meeting.

DRAFT

4.3 ACCOUNTS PAYABLE

Recommended Action: Ratify accounts payable checks and electronic funds transfers issued between November 22, 2024, and December 19, 2024, in the amount of $1,998,474.57.

4.4 TREASURER'S STATEMENT – NOVEMBER 2024

Recommended Action: Receive and file the November 2024 Treasurer's Statement.

4.5 MEMORANDUM OF AGREEMENT BY AND BETWEEN CITY OF ALISO VIEJO, CITY OF LAGUNA HILLS, CITY OF LAKE FOREST, CITY OF MISSION VIEJO, AND CITY OF LAGUNA NIGUEL FOR SHARING OF EMERGENCY MANAGEMENT RESOURCES

Recommended Action: Authorize the City Manager to execute the Memorandum of Agreement by and between the City of Aliso Viejo, City of Laguna Hills, City of Lake Forest, City of Mission Viejo, and City of Laguna Niguel for sharing of emergency management resources.

4.6 AGREEMENT WITH TROY AND BANKS, INC. FOR COST REDUCTION CONSULTING SERVICES

Recommended Action:

1. Approve an agreement with Troy and Banks, Inc. for cost reduction consulting services; and
2. Authorize the City Manager to execute a professional services agreement with Troy and Banks, Inc. in the amount not-to-exceed $49,999 through June 30, 2026.

4.7 AUTHORIZE THE RENEWAL OF ARCTIC WOLF MANAGED DETECTION AND RESPONSE CYBERSECURITY SOLUTION

Recommended Action:

1. Approve and authorize the City Manager to issue a purchase order to RedNight Consulting Inc., authorized reseller of Artic Wolf, Inc., in the amount of $34,996.45 for Fiscal Year 2024-25 for the renewal of cloud-based cybersecurity event log aggregation, threat detection and response, and Security Operations Center services; and
2. Authorize the City Manager to administratively approve up to two additional renewals of the purchase order on the same terms with an annual increase not-to-exceed 3% per year for Fiscal Years 2025-26 through 2026-27.

4.8 FIRST AMENDMENT TO PROFESSIONAL SERVICES AGREEMENT WITH TYLER TECHNOLOGIES, INC. FOR THE CITY'S PERMITTING SOFTWARE

Recommended Action: Approve and authorize the City Manager to execute a First Amendment to the Professional Services Agreement with Tyler Technologies, Inc. for the City's permitting software to increase the total compensation by $73,352.

4.9 SPECIAL EVENT SPONSORSHIP PROGRAM

City Manager Mitzi Ortiz responded to questions regarding advertising.

Recommended Action: Approve and authorize the proposed Special Event Sponsorship Policy and Procedures.

Motion: Councilmember Hurt moved and Councilmember Munzing seconded to approve the recommended actions. Motion carried 5-0.

5. PUBLIC HEARINGS

5.1 CONCEPT PLAN REVIEW FOR A RESIDENTIAL COMMUNITY AT 26800-26970 ALISO VIEJO PARKWAY

City Manager Mitzi Ortiz introduced Community Development Director So Kim, who provided an overview. Staff and the applicant responded to questions regarding proposed garage sizes, parking, traffic impacts, unit layouts, sales model of duplex units, EV charging stations, gas or electric utilities, estimated construction timeline, and estimated price range of units. Mayor Ackley opened the public hearing and the following provided comment:

1. Alp Kalaycioglu expressed concerns about the project
2. Matt Young with Glaukos expressed concerns about the project.
3. Jeff Merritt expressed support for the project.
4. Art Camoia expressed concerns about the project.
5. Kevin A. expressed opposition to the project.

There were no other comments. Mayor Ackley closed the public hearing.

5.2 CONCEPT PLAN REVIEW FOR A TOWNHOME COMMUNITY AT 400-700 FREEDOM LANE

City Manager Mitzi Ortiz introduced Senior Planner Rose Rivera, who provided an overview. Staff and the applicant responded to questions regarding garage sizes, unit layouts, parking, gas or electric utilities, affordable units, estimated price ranges, traffic impacts, density bonus, amenities, noise mitigation, and ventilation requirements. Mayor Ackley opened the public hearing and there were no requests to speak. Mayor Ackley closed the public hearing.

6. DISCUSSION:

None.

7. CITY MANAGER' S REPORT:

City Manager Mitzi Ortiz commented on disaster preparedness resources available on the City's website; announced winter registration for recreation classes; and announced the Aliso Viejo Rental Showcase to be held on January 26, 2025, from 11:00 a.m. to 1:00 p.m. at Aliso Viejo Ranch.

8. ANNOUNCEMENTS / COUNCIL COMMENTS / COMMITTEE UPDATES:

Councilmember Munzing:
- Expressed enthusiasm for the new year ahead
- Offered wishes for a safe recovery to OCSD Deputy Clara Dossland
- Wished a happy birthday to Mayor Pro Tem Duncan and Councilmember Zandbergen

Councilmember Zandbergen:
- Attended All is Bright Celebration and Tree Lighting Ceremony
- Attended Boys & Girls Club holiday events

Councilmember Hurt:
- Attended SJHTCA Board meeting
- Shared information about phishing scam affecting FasTrak customers
- Commended Aliso Viejo businesses on raising funds for fire victims

Mayor Pro Tem Duncan:
- Commented on recent wildfires
- Expressed gratitude for the opportunity to serve as Mayor Pro Tem
- Congratulated Mayor Ackley on being appointed as Mayor
- Welcomed Councilmember Zandbergen to the City Council
- Complimented OCSD Deputy Aaron Barragan for work with local e-bike riders
- Obtained consensus to consider amendment to City's e-bike ordinance

Mayor Ackley:
- Wished a happy birthday to Councilmember Hurt
- Expressed enthusiasm for the new year ahead
- Asked Councilmember Hurt to adjourn the meeting

9. ADJOURNMENT: Councilmember Hurt adjourned the meeting in memory of resident Joe Brooks at 9:26 p.m. to the regularly scheduled City Council meeting of February 5, 2025.

Respectfully submitted:

_____
JANET MARTINEZ
CITY CLERK

Approved by:

_____
TIFFANY ACKLEY
MAYOR

DRAFT

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: Ann Eifert, Director of Financial Services

SUBJECT: ACCOUNTS PAYABLE

Recommended Action:

Ratify accounts payable checks and electronic funds transfers issued between December 20, 2024, and January 16, 2025, in the amount of $1,681,919.55.

Fiscal Impact:

Expenditures in the amount of $1,681,919.55.

Background:

The City issues accounts payable checks on a bi-weekly basis and presents it to City Council for ratification at its next regularly scheduled City Council meeting.

Discussion:

The attached registers containing checks and electronic funds transfers issued between December 20, 2024, and January 16, 2025, for $1,681,919.55, are being presented for ratification. All payments have been made in compliance with the City's purchasing policy and procedures. Payments have been reviewed and approved by the appropriate departmental staff. The issued accounts payable checks and electronic funds transfers have been reviewed and deemed in accordance with the fiscal year budget by the Director of Financial Services.

Attachment:

1. Accounts Payable Report

Accounts Payable

Vendor Name	Description (Item)	Amount
101 - GENERAL FUND		
BEST BEST & KRIEGER	DEC'24 BBK CELLULAR	1,332.50
BEST BEST & KRIEGER	DEC'24 BBK CEQA & ENVIRONMENTAL (SPECIALIZED)	32.50
BEST BEST & KRIEGER	DEC'24 BBK MAJOR GENERAL PLAN UPDATE	867.00
BEST BEST & KRIEGER	DEC'24 BBK APPLICANT INITIATED REIMB (AIR)	1,760.10
CHOICE BUILDER	FEB'25 VISION - DD	24.19
CHOICE BUILDER	FEB'25 DENTAL - DD	145.88
CHOICE BUILDER	FEB'25 DENTAL - RC	(145.88)
CHOICE BUILDER	FEB'25 VISION - RC	(24.19)
CHOICE BUILDER	FEB'25 DENTAL INSURANCE	1,830.38
CHOICE BUILDER	FEB'25 DENTAL - RH	96.90
CHOICE BUILDER	FEB'25 VISION - RH	15.03
CHOICE BUILDER	FEB'25 VISION INSURANCE	283.36
DE NOVO PLANNING GROUP	CEQA PROFESSIONAL SERVICES	2,135.00
CHARLES ABBOTT ASSOC INC	NOV'24 CAA - ST. MARY'S GRADING - S.WILSON	47.50
CHARLES ABBOTT ASSOC INC	NOV'24 CAA - KAISER GRADING - S.WILSON	47.50
STC TRAFFIC, INC	NOV'24 TRAFFIC CONSULTANT SERVICES	2,780.00
STC TRAFFIC, INC	NOV'24 TRAFFIC CONSULTANT SERVICES	4,425.00
SUNRUN INSTALLATION SERVICES	SAPP-2024-00017_11 DUNLIN LN_SUNRUN CANCELLED	153.50
SUNRUN INSTALLATION SERVICES	SAPP-2024-00017_11 DUNLIN LN_SUNRUN CANCELLED	43.03
SUNRUN INSTALLATION SERVICES	SAPP-2024-00025_28 TANGLEWOOD_SUNRUN CANCELLED	153.50
SUNRUN INSTALLATION SERVICES	SAPP-2024-00025_28 TANGLEWOOD_SUNRUN CANCELLED	43.03
CALPERS HEALTH	JAN'25 CALPERS HEALTH PREMIUM	28,430.42
SUSAN WILSON	SW COMPUTER LOAN AGREEMENT	961.05
RJM DESIGN GROUP INC	NOV'24 LANDSCAPE PLAN REVIEW - 95 ARGONAUT	877.50
RJM DESIGN GROUP INC	NOV'24 LANDSCAPE PLAN REVIEW - 400-700 FREEDOM LN	780.00
DE NOVO PLANNING GROUP	CEQA PROFESSIONAL SERVICES	4,694.00
GLAUKOS CORPORATION	ENG2243_GLAUKOS	(2,337.39)
GLAUKOS CORPORATION	ENG2244_GLAUKOS	1,535.66
GLAUKOS CORPORATION	ENG2242_GLAUKOS	17,302.30
HOYT ROOFS	CD-2024-00107_2 AMBER_HOYT ROOFS	500.00
		68,789.37
CITY COUNCIL		
RICHARD HURT III	RH 10/16-10/18/24 CALCITIES CONF-T&E REIMBURSEMENT	179.29
SIMONSON PHOTOGRAPHY, INC	01/06 - MM - COUNCIL PORTRAIT	382.51
US BANK PURCHASING CARD PROGRAM	DL 11/26 LOCC - MAYORS & COUNCILMEMBERS ACAD TIM Z	675.00
AT&T	11/17/24-12/16/24 CITY COUNCIL PHONE LINES	237.43
US BANK PURCHASING CARD PROGRAM	DL 10/22 LAKE FOREST FLORAL - VETERANS DAY WREATH	420.56
	CITY COUNCIL TOTAL:	**1,894.79**
CITY MANAGER		
US BANK PURCHASING CARD PROGRAM	DL 12/02 CITYBREA-OCCMA LUNCHEON-MO DL SP AE IA LM	390.00
US BANK PURCHASING CARD PROGRAM	DL 11/27 ICSC - MEMBERSHIP MO	125.00
CALPERS HEALTH	JAN'25 PG - HEALTH PREMIUM	158.00
AT&T	11/17/24-12/16/24 CITY MANAGER PHONE	45.47
AT&T	11/17/24-12/16/24 HR PHONE	50.51
	CITY MANAGER TOTAL:	**768.98**
HUMAN RESOURCES		
SMARTHIRE, A DIVISION OF KROUT & SCHNEIDER, INC	11/20 CITY CLERK BACKGROUND CHECK	92.00
US BANK PURCHASING CARD PROGRAM	DL 11/05 PAVILIONS-WVPP TRAINING-SNACKS/DRINKS*	197.75
US BANK PURCHASING CARD PROGRAM	DL 11/04 STARBUCKS - INTERVIEW PANEL	28.20
HEALTH AND HUMAN RESOURCE CENTER INC	FEB'25 EAP PROGRAM	102.90
US BANK PURCHASING CARD PROGRAM	PC 10/30 TOWN&COUNTRY-PERS ED FORUM-HOTEL	609.00
US BANK PURCHASING CARD PROGRAM	PC 10/29 TOWN&COUNTRY-PERS ED FORUM-MEAL	22.32
US BANK PURCHASING CARD PROGRAM	PC 11/20 URBANE CAFE-TRAINING LUNCH	366.79
US BANK PURCHASING CARD PROGRAM	PC 10/28 TOWN&COUNTRY-PERS ED FORUM-MEAL	45.87
US BANK PURCHASING CARD PROGRAM	PC 11/20 OPAH-REC SPEC PANEL LUNCH	142.53

	Vendor Name	Description (Item)	Amount
	US BANK PURCHASING CARD PROGRAM	PC 11/13 STARBUCKS-CLERK INTERVIEW	12.20
	US BANK PURCHASING CARD PROGRAM	PC 11/14 STARBUCKS-CLERK INTERVIEW	5.25
	US BANK PURCHASING CARD PROGRAM	PC 11/14 STARBUCKS-CLERK INTERVIEW	12.00
	US BANK PURCHASING CARD PROGRAM	PC 11/05 WEBBS-CLERK PANEL LUNCH	130.68
	US BANK PURCHASING CARD PROGRAM	PC 11/26 TARGET - GC FOR OCHRC LUNCHEON RAFFLE	25.00
		HUMAN RESOURCES TOTAL:	**1,792.49**
CITY CLERK			
	CALIFORNIA NEWSPAPERS PARTNERSHIP	REF0011706537 - 12/12 NIB AQUATIC CTR POOL REHAB	468.59
	STAPLES ADVANTAGE	FY24-25 CITY CLERK-OFFICE SUPPLIES	271.91
	MITZI ORTIZ	MO 12/11-12/13/24 LOCC NEW LAW CONF REIMB	1,173.91
		CITY CLERK TOTAL:	**1,914.41**
CITY ATTORNEY			
	BEST BEST & KRIEGER	DEC'24 BBK GENERAL RETAINER LEGAL SERVICES	24,150.00
	BEST BEST & KRIEGER	DEC'24 BBK LABOR/BENEFITS	97.50
	BEST BEST & KRIEGER	DEC'24 NPDES NEW PERMIT (NON-RETAINER)	737.70
		CITY ATTORNEY TOTAL:	**24,985.20**
FINANCE			
	CHOICE BUILDER	FEB'25 ADMIN FEE	30.00
	PARS (PHASE II SYSTEMS AND CALIFORNIA CORPORATION)	NOV'24 PARS REP FEES	300.00
	US BANK PURCHASING CARD PROGRAM	AE 11/27 GFOA ANNUAL MEMBERSHIP - M. MARTINEZ	150.00
	CALPERS HEALTH	JAN'25 CALPERS ADMIN FEE	74.38
	DAVIS FARR LLP	2024 AVPC TAX FILINGS FY 23-24	437.50
	STAPLES ADVANTAGE	DEC'24 FIN OFFICE SUPPLIES	20.03
		FINANCE TOTAL:	**1,011.91**
INFORMATION TECHNOLOGY			
	NEXUS IS INC	JAN'25 NETWORK SUPPORT & SECURITY	416.67
	JOSE RUEL FABELLA DIRA	DEC'24 ENERGOV & GIS	1,500.00
	US BANK PURCHASING CARD PROGRAM	IA 11/28 EOC YOUTUBE SUBSCR	72.99
	US BANK PURCHASING CARD PROGRAM	IA 12/07 GODADDY - DOMAIN RENEWAL	55.16
	US BANK PURCHASING CARD PROGRAM	IA 12/16 WAITWHILE SUBSCRIPTION	196.00
	US BANK PURCHASING CARD PROGRAM	IA 12/19 STAPLES - POWER BANK AND MICE	183.14
	US BANK PURCHASING CARD PROGRAM	IA 12/11 AT&T - COUNCIL MEMBER PHONE CASE	75.43
	US BANK PURCHASING CARD PROGRAM	IA 12/05 STAPLES - KEYBOARDS	75.41
	US BANK PURCHASING CARD PROGRAM	IA 11/27 BLUEBEAM SUB - PLNG PROJ MARKUPS	2,340.00
	US BANK PURCHASING CARD PROGRAM	IA 12/19 GODADDY-ALISOVIEJOFAMILYRESOURCCENTER.COM	45.34
	US BANK PURCHASING CARD PROGRAM	IA 12/21 GODADDY - ALISOVIEJOAQUATICCENTER	22.17
	US BANK PURCHASING CARD PROGRAM	IA 11/30 DIGITAL RIVER STELLAR - DATA RECOVERY	299.00
	TANGENT COMPUTERS INC	12/23/24-01/22/25 CH O365 LICENSING AND SUPPORT	2,976.70
	LUNAVI, INC	JAN'25 OFFSITE BACKUP STORAGE	604.25
	AT&T	11/22/24-12/21/24 CH-ALARM/POTS LINE	3,789.29
	COX COMMUNICATIONS, INC	JAN'25 ACCT#0202 CH CABLE TV	206.73
	COX COMMUNICATIONS, INC	JAN'25 ACCT#8802 CH INTERNET - FIBER (600MB)	1,500.00
	COX COMMUNICATIONS, INC	JAN'25 ACCT#9302 LAB INTERNET	85.39
	GOTO TECHNOLOGIES USA, INC	DEC'24-DEC'25 GOTOMEETING BUSINESS	780.00
	AT&T	11/17/24-12/16/24 FLEET COMPLETE GPS	202.32
	AT&T	11/17/24-12/16/24 EOC MIFI	160.96
	AT&T	11/17/24-12/16/24 CITY HALL MIFI	123.72
	AT&T	11/17/24-12/16/24 EOC PHONES LINES	110.03
	GOTO COMMUNICATIONS	JAN'25 CH GOTO VOIP SERVICE & SUPPORT	1,999.94
	TIM ZANDBERGEN	LAPTOP REIMBURSEMENT - TZ	1,650.00
		INFORMATION TECHNOLOGY TOTAL:	**19,470.64**
NON-DEPARTMENTAL			
	CERTIFIED RECORDS MANAGEMENT	JAN'25 - RECORDS OFF SITE STORAGE	449.73
	RICOH USA	JAN'24 C5300S COPY ROOM LEASE (2624) - PRINCIPAL	617.99
	RICOH USA	JAN'24 C5300S COPY ROOM LEASE (2624) - INTEREST	76.21
	GREAT SCOTT TREE SERVICE, INC	DEC'24 VISTA PARK TREE TRIMMING	3,374.00
	AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-AWARDS FOR HOLIDAY LUNCHEON	16.15
	AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-HOLIDAY CANDY FOR HOLIDAY LUNCHEON	37.61
	AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-TABLE COVERS FOR HOLIDAY LUNCHEON	25.19
	J&M TROPHIES INC	PLATES & BADGES-MARTINEZ & COUNCIL	101.35
	CONSOLIDATED ELECTRICAL DISTRIBUTORS, INC	JAN'25 VP LIGHTING PARTS	483.42
	RICOH USA	DEC'24 RICOH 2504EX FRONT COUNTER PRINTS (4456)	71.87
	RICOH USA	JAN'25 RICOH RSI CLOUD SUBSCRIPTION (SW1860708)	24.31

Vendor Name	Description (Item)	Amount
CINTAS CORPORATION NO. 2	JAN'25 CH & STE 200 FIRST AID MAINT. & SUPPLIES	290.81
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE VISTA PARK	1,064.97
US BANK PURCHASING CARD PROGRAM	AE 12/02 HARBOR STATION HOA DUES-DEC'24 89 PLAYA	191.01
KYRSTI NICOLE ASHMALL	DEC'24-2.37 HRS-PUBLIC INFORMATION	213.30
US BANK PURCHASING CARD PROGRAM	DL 12/05 BRUEGGER'S BAGELS - J MARTINEZ WELCOME	65.71
US BANK PURCHASING CARD PROGRAM	EM 12/12 TRADER JOE'S - HOLIDAY LUNCHEON SUPPLIES	50.00
US BANK PURCHASING CARD PROGRAM	EM 12/19 BAGELS & BREW-HOLIDAY LUNCHEON - REFUND	(1,979.04)
US BANK PURCHASING CARD PROGRAM	EM 12/12 TRADER JOE'S - HOLIDAY LUNCHEON SUPPLIES	72.06
US BANK PURCHASING CARD PROGRAM	EM 12/11 SMART AND FINAL-HOLIDAY LUNCHEON SUPPLIES	87.57
US BANK PURCHASING CARD PROGRAM	EM 12/17 COSTCO - HOLIDAY LUNCHEON SUPPLIES	117.82
US BANK PURCHASING CARD PROGRAM	EM 12/12 TARGET-HOLIDAY LUNCHEON SUPPLIES & PRIZES	140.00
US BANK PURCHASING CARD PROGRAM	EM 12/03 COSTCO - STAFF HOLIDAY LUNCHEON SUPPLIES	125.91
US BANK PURCHASING CARD PROGRAM	EM 12/19 BAGELS & BREW-HOLIDAY LUNCHEON UPD PRICE	1,830.97
US BANK PURCHASING CARD PROGRAM	EM 12/18 BAGELS & BREW-HOLIDAY LUNCHEON CATERING	1,979.04
VIGICABI INC	JAN'25 REMOVAL OF BANNERS - HOLIDAY	1,449.00
US BANK PURCHASING CARD PROGRAM	JB 12/10 COSTCO - HOLIDAY LUNCHEON	38.76
SESAC RIGHTS MANAGEMENT INC	2025 MUSIC LICENSE FEE	1,982.00
THE GAS COMPANY	12/04/24-01/04/25 MTR#13016735 89 PLAYA CIR GAS	1.76
SO CAL EDISON	DEC'24 ACCT#2427 89 PLAYA CIR ELECTRICITY	48.77
US BANK PURCHASING CARD PROGRAM	DL 10/29 AMAZON-HALLOWEEN LUNCHEON GIFTCARDS	40.00
US BANK PURCHASING CARD PROGRAM	DL 10/26 AMAZON-HALLOWEEN LUNCHEON SUPPLIES	51.53
US BANK PURCHASING CARD PROGRAM	DL 10/29 SMART&FINAL-HALLOWEEN ACTIVITY SUPPLIES	60.46
US BANK PURCHASING CARD PROGRAM	DL 10/30 SMART&FINAL-HALLOWEEN LUNCHEON SUPPLIES	81.79
US BANK PURCHASING CARD PROGRAM	DL 10/30 TARGET-HALLOWEEN LUNCHEON GIFTCARDS	25.00
US BANK PURCHASING CARD PROGRAM	DL 10/31 BAGELS&BREW-HALLOWEEN LUNCHEON CATERING	931.97
US BANK PURCHASING CARD PROGRAM	DL 10/30 TARGET-HALLOWEEN ACTIVITY SUPPLIES	53.60
US BANK PURCHASING CARD PROGRAM	JNL 12/21 HOBBY LOBBY - HOLIDAY PARTY BRAG BOARD	1.72
US BANK PURCHASING CARD PROGRAM	MO 12/14 CANVA SUBSCRIPTION	119.99
MOULTON NIGUEL WATER DIST	ACCT#64101 VISTA WATER SVC	679.99
US BANK PURCHASING CARD PROGRAM	PC 10/26 AMAZON-LUNCHEON ACTIVITY-BALLOON TAPE	24.77
US BANK PURCHASING CARD PROGRAM	PC 11/18 RALPHS-CC DINNER DRINKS	54.87
US BANK PURCHASING CARD PROGRAM	PC 10/26 AMAZON-LUNCHEON ACTIVITY-BALLOONS	62.38
US BANK PURCHASING CARD PROGRAM	PC 11/14 PLUMERIA CAFE-LUNCHEON ACTIVITY WINNERS	125.51
	NON-DEPARTMENTAL TOTAL:	**15,361.83**
C. S. ADMINISTRATION		
CABCO YELLOW INC	DEC'24 SMP R&CS CONTRIBUTION	636.00
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-2 NEW NET LIGHTS FOR TREE LIGHTING	62.48
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-NEW UPLIGHTS FOR TREE LIGHTING	198.20
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-GREEN ZIP TIES FOR TREE LIGHTING	9.64
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-CHRISTMAS SQUISHY TOY GIVEAWAYS CWC	13.95
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-BLACK CABLE TIES FOR TREE LIGHTING	18.31
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-CHRISTMAS FIDGET TOY GIVEAWAYS CWC	20.46
AMAZON CAPITAL SERVICES INC	DEC'24 AMAZON-CHRISTMAS TABLE COVERS CWC	28.00
ADVANTAGE MAILING, LLC	WINTER 2025 BROCHURE 32 PAGE SELF COVER	12,792.55
ERIC WINTER	TREE LIGHTING 2024 PHOTOGRAPHY	600.00
US BANK PURCHASING CARD PROGRAM	EM 12/06 STADIUM BREW - TREE LIGHTING STAFF MEAL	383.40
US BANK PURCHASING CARD PROGRAM	JB 12/17 TARGET - HOLIDAY SUPPLIES	29.31
US BANK PURCHASING CARD PROGRAM	JB 11/26 COSTCO - PLASTIC GAME CUPS CWC	26.92
US BANK PURCHASING CARD PROGRAM	JB 12/04 DOLLAR TREE - PLASTIC GAME CUPS CWC	5.39
US BANK PURCHASING CARD PROGRAM	JB 12/19 TARGET - HOLIDAY SUPPLIES- RETURN	(10.77)
US BANK PURCHASING CARD PROGRAM	JB 12/02 WALMART - BATTERIES	35.46
US BANK PURCHASING CARD PROGRAM	JB 11/26 COSTCO-CLEANING/BREAKROOM SUPPLIES	164.67
CALPERS HEALTH	JAN'25 HW - HEALTH PREMIUM	158.00
CALPERS HEALTH	JAN'25 DP - HEALTH PREMIUM	158.00
CABCO YELLOW INC	NOV'24 SMP FUND R&CS CONTRIB TRANSPORTATION	708.00
JONES FOREST PRODUCTS LLC	2024 AV HOLIDAY TREE - REMOVAL SERVICE	3,000.00
US BANK PURCHASING CARD PROGRAM	JNL 12/11 SMART AND FINAL - CWTC EVENT SUPPLIES	10.96
US BANK PURCHASING CARD PROGRAM	JNL 12/16 SMART AND FINAL - CWTC SUPPLIES RETURNED	(9.99)
US BANK PURCHASING CARD PROGRAM	JNL 12/17 RALPHS - CWTC EVENT SUPPLIES	2.29
US BANK PURCHASING CARD PROGRAM	JNL 12/12 SMART AND FINAL - CWTC EVENT SUPPLIES	29.97
	C. S. ADMINISTRATION TOTAL:	**19,071.20**
IGLESIA PARK		
PV MAINTENANCE INC	NOV'24 PVM IGLESIA PARK MAINTENANCE	971.14
PV MAINTENANCE INC	DEC'24 PVM IGLESIA PARK MAINTENANCE	858.00

Vendor Name	Description (Item)	Amount
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE IGLESIA PARK	7,085.61
SO CAL EDISON	DEC'24 ACCT#7997 IGLESIA PARK ELECTRICITY	337.77
EL TORO WATER DISTRICT	8/08/24-12/09/24 MTR#4114 IGLESIA PARK WATER	3,213.25
EL TORO WATER DISTRICT	8/08/24-12/09/24 MTR#3499 IGLESIA PARK WATER	3,539.95
	IGLESIA PARK TOTAL:	**16,005.72**
IGLESIA BUILDING		
SONITROL ORANGE COUNTY LLC	JAN'25 IGLESIA ACCESS CONTROL	109.39
SO CAL EDISON	DEC'24 ACCT#7997 IGLESIA BLDG ELECTRICITY	1,114.43
EL TORO WATER DISTRICT	8/08/24-12/09/24 MTR#5016 IGLESIA PARK BLDG WATER	1,056.29
	IGLESIA BUILDING TOTAL:	**2,280.11**
IGLESIA PARK COMMUNITY CENTER		
BOYS & GIRLS CLUB OF CAPISTRANO VALLEY	NOV'24 ELEMENTARY & TEEN KEYSTONE PROGRAM	15,000.00
BOYS & GIRLS CLUB OF CAPISTRANO VALLEY	OCT'24 ELEMENTARY & TEEN KEYSTONE PROGRAM	15,000.00
	IGLESIA PARK COMMUNITY CENTER TOTAL:	**30,000.00**
PLANNING		
CALPERS HEALTH	JAN'25 MF - HEALTH PREMIUM	158.00
ATLAS PLANNING SOLUTIONS	DEC'24 SAFETY ELEMENT UPDATE	1,400.00
REBECCA J CAHA	DEC'24 AFFORD. HOUSING CONSULTANT SERVICES	1,425.00
	PLANNING TOTAL:	**2,983.00**
BUILDING		
CHARLES ABBOTT ASSOC INC	DEC'24 CAA CONTRACT SERVICES - BUILDING SERVICES	95,638.69
CHARLES ABBOTT ASSOC INC	NOV'24 CAA CONTRACT SERVICES - BUILDING SERVICES	36,177.62
	BUILDING TOTAL:	**131,816.31**
CODE ENFORCEMENT		
PV MAINTENANCE INC	JAN'24 SIDEWALK VENDING TASKFORCE	1,582.00
CHARLES ABBOTT ASSOC INC	DEC'24 CAA CONTRACT SERVICES - CODE ENFORCEMENT	5,270.00
CHARLES ABBOTT ASSOC INC	NOV'24 CAA CONTRACT SERVICES - CODE ENFORCEMENT	8,500.00
US BANK PURCHASING CARD PROGRAM	SK 12/03 EXTRA SPACE STORAGE-CONFISCATED TACO STAN	631.20
	CODE ENFORCEMENT TOTAL:	**15,983.20**
ENGINEERING (GENERAL)		
PV MAINTENANCE INC	JAN'25 PVM WAREHOUSE LEASE	1,035.00
RICHARD FISHER ASSOCIATES	DEC'24 LANDSCAPE INSPECTION SERVICES	3,996.23
CHARLES ABBOTT ASSOC INC	NOV'24 CAA - NPDES	9,586.25
CHARLES ABBOTT ASSOC INC	NOV'24 CAA - SOLID WASTE	3,122.50
MURPHY SWITCH OF CA	JAN'25 MURCAL IOT SMARTCOMMAND MONITORING SERVICE	450.00
AT&T	11/17/24-12/16/24 PUBLIC WORKS TABLETS	120.72
MOULTON NIGUEL WATER DIST	10/17/24 H20 FOR HOAS EVENT - AV CITY CONTRIBUTION	423.03
COUNTY OF ORANGE	FY24-25 NPDES COST SHARE AGMT #D02-048	109,894.87
US BANK PURCHASING CARD PROGRAM	SP 12/03 ASCE MEMBERSHIP RENEWAL 2025	321.00
	ENGINEERING (GENERAL) TOTAL:	**128,949.60**
STREET MAINTENANCE		
PV MAINTENANCE INC	DEC'24 PVM STREET MAINTENANCE MOE TAX	20,884.08
	STREET MAINTENANCE TOTAL:	**20,884.08**
LAW ENFORCEMENT-CONTRACT		
COUNTY OF ORANGE	JAN'25 LAW ENFORCEMENT/BODY CAMERAS/IN CAR VIDEO	892,517.60
	LAW ENFORCEMENT-CONTRACT TOTAL:	**892,517.60**
LAW ENFORCEMENT-OTHER		
STAPLES ADVANTAGE	NOV'24 POLICE SERVICES OFFICE SUPPLIES	963.43
STAPLES ADVANTAGE	DEC'24 POLICE SERVICES OFFICE SUPPLIES	46.79
ALL CITY MANAGEMENT SERVICES	12/08-12/21/24 413.11 HRS-CROSSING GUARD SERVICES	13,847.45
US BANK PURCHASING CARD PROGRAM	AV 11/28 CSG NEMA - NAT'L EMERGENCY MGT ASSOC	187.50
US BANK PURCHASING CARD PROGRAM	AV 11/27 IACP -INTERNATIONAL ASSOC CHIEF OF POLICE	220.00
US BANK PURCHASING CARD PROGRAM	AV 12/05 WEBB'S GRAINWORKS-MEETING AV CITY STAFF	94.78
US BANK PURCHASING CARD PROGRAM	RD 11/22 CHEVRON - CAR WASH FOR UNIT 2716	29.99
US BANK PURCHASING CARD PROGRAM	RD 12/13 THE TOLL ROADS	575.00
US BANK PURCHASING CARD PROGRAM	RD 12/19 RENAISSANCE CLUBSPORT - STAFF MEETING	464.19
US BANK PURCHASING CARD PROGRAM	RD 11/30 TARGET - CANDY CANES TREE LIGHTING EVENT	24.10
US BANK PURCHASING CARD PROGRAM	RD 12/06 JM TROPHIES - BRASS NAME PLATE FOR PLAQUE	21.50
US BANK PURCHASING CARD PROGRAM	RD 11/29 RALPHS - WATER TREE LIGHTING EVENT	52.01
US BANK PURCHASING CARD PROGRAM	RD12/10 SOUTH COASTTROPHY- STAFFBEVERAGE CONTAINEF	1,031.17
US BANK PURCHASING CARD PROGRAM	RD 12/05 SGT PEPPERERONIS-FOOD TREE LIGHTING EVENT	142.23
AT&T	11/17/24-12/16/24 PALS PHONE LINE	45.47

Vendor Name	Description (Item)	Amount
ALL CITY MANAGEMENT SERVICES	11/24-12/07/24 229.38 HRS-CROSSING GUARD SERVICES	7,688.82
	LAW ENFORCEMENT-OTHER TOTAL:	**25,434.43**
EOC		
US BANK PURCHASING CARD PROGRAM	DL 12/14 EXTRA SPACE - OFFSITE UNIT #A1554	290.00
ATLAS PLANNING SOLUTIONS	DEC'24 EOP UPDATE	1,605.00
CLAUDINE JAENICHEN	ALL HAZARDS READY GUIDE SPANISH	3,275.00
US BANK PURCHASING CARD PROGRAM	DL 11/14 LIFE STORAGE - OFFSITE UNIT #A1554	290.00
US BANK PURCHASING CARD PROGRAM	SL 12/18 TERRA MIA PIZZERIA - MEETING SUPPLIES	150.31
US BANK PURCHASING CARD PROGRAM	SL 12/17 HOBBY LOBBY - FOOD EXPLORER MTG TRAINING	18.53
US BANK PURCHASING CARD PROGRAM	SL 12/05 SELF PARKING - PARKING FOR MEETING	10.00
	EOC TOTAL:	**5,638.84**
	GENERAL FUND TOTAL:	**1,427,553.71**

102 - GEN. FD-CITY HALL

NON-DEPARTMENTAL

SONITROL ORANGE COUNTY LLC	JAN'25 CH INTRUSION DETECTION	383.54
SONITROL ORANGE COUNTY LLC	JAN'25 CH ACCESS CONTROL	609.40
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE CH	701.73
THURSTON ELEVATOR CONCEPTS INC	JAN'25 CH ELEVATOR MAINTENANCE	137.00
AYANTRA INC	JAN-DEC'25 GENERATOR MONITORING SUBSCRIPTION CH	240.00
PACIFIC PARK II ASSOCIATION	JAN'25 CH ASO ASSOCIATION DUES	502.00
THE GAS COMPANY	12/03/24-01/03/25 MTR#16122180 CH GAS SVC	935.95
SO CAL EDISON	DEC'24 ACCT#7189 CH ELECTRICITY	4,699.25
MOULTON NIGUEL WATER DIST	ACCT#65408/65407/65406 CH WATER SVC	611.61
	NON-DEPARTMENTAL TOTAL:	**8,820.48**
	GEN. FD-CITY HALL TOTAL:	**8,820.48**

103 - GF-AV RECREATION SERVICES

RECREATION SERVICES

PV MAINTENANCE INC	DEC'24 PVM AVR MAINTENANCE	681.00
GARDAWORLD	JAN'25 AVR - CASH COURIER SERVICE	546.74
PRESTIGIOUS CLEANERS LLC	12/27 AVR LINEN DRY CLEANING	13.99
PRESTIGIOUS CLEANERS LLC	12/27 AVR LINEN DRY CLEANING	381.02
SONITROL ORANGE COUNTY LLC	JAN'25 AVCENTER AND AQC ACCESS CONTROL	125.20
SONITROL ORANGE COUNTY LLC	JAN'25 AVR ACCESS CONTROL	535.57
RICOH USA	OCT-DEC'24 C2500 AVR PRINTS (8774)	340.20
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE AVR	2,341.86
AARON FLORA	DEC'24 RENEWABLE FARMS	9,244.43
TANGENT COMPUTERS INC	12/23/24-01/22/25 AVR O365 LICENSING AND SUPPORT	525.30
US BANK PURCHASING CARD PROGRAM	JB 11/25 HOBBY LOBBY-REPLACEMENT RENTAL ARCH	70.55
AT&T	11/22/24-12/21/24 AVR-ALARM/POTS LINE	1,263.10
CSG FORTE PAYMENTS, INC	DEC'24 CREDIT CARD SERVICE FEES - POS	340.59
CSG FORTE PAYMENTS, INC	DEC'24 CREDIT CARD SERVICE FEES - WEB	330.85
JENNIFER BALES	FALL2024-FAL129 IMPROV - 4 PARTICIPANTS	264.00
TUMBLE-N-KIDS, INC	FALL2024-FAL040/135/028/032 GYMNASTICS-21 PARTICIP	1,301.40
ANGIE DOROTHY ABAD	FALL2024-FAL107/181/184 HULA - 11 PARTICIPANTS	441.00
EPC PLAYTIME	FALL2024-FAL062 SPORTS - 3 PARTICIPANTS	250.20
SWAY BALLROOM INC	FALL2024-FAL605 DANCE - 2 PARTICIPANTS	96.00
RONALD GORMAN	FALL2024-FAL132 GUITAR/UKULELE - 3 PARTICIPANTS	153.00
MUSIC MOVES ACADEMY INC	FALL2024-FAL011 MUSIC -10 PARTICIPANTS	240.00
DS SERVICES OF AMERICA, INC	12/18 AVR BOTTLED WATER SERVICE	54.75
AT&T	11/17/24-12/16/24 REC TABLET	40.24
AT&T	11/17/24-12/16/24 REC PHONE LINES	181.88
LYONS SECURITY SERVICE IN	DEC'24 GCF SECURITY SERVICES	291.38
LYONS SECURITY SERVICE IN	DEC'24 AVR EVENT SECURITY SERVICES	1,165.50
STAPLES ADVANTAGE	DEC'24 RCS OFFICE SUPPLIES	8.39
FACILITRON, INC.	9/08/24-12/01/24 HOOPERS	76.33
SO CAL EDISON	DEC'24 ACCT#4551 FARM ELECTRICITY	321.87
SO CAL EDISON	DEC'24 ACCT#6247 AVR ELECTRICITY	3,255.20
FACILITRON, INC.	9/08/24-12/08/24 ANHS TENNIS	191.34
GOTO COMMUNICATIONS	JAN'25 AVR GOTO VOIP SERVICE & SUPPORT	666.64
US BANK PURCHASING CARD PROGRAM	KB 12/18 MCFADDDEN DALE-AVR DOLLY WHEELS REPAI	287.12
MOULTON NIGUEL WATER DIST	ACCT#105234/104936/104935/104986 RANCH WATER SVC	1,239.94

Vendor Name	Description (Item)	Amount
MOULTON NIGUEL WATER DIST	ACCT#104515/104519 FARM WATER SVC	280.02
FACILITRON, INC.	11/09/24-12/14/24 SKYHAWKS	67.38
	RECREATION SERVICES TOTAL:	**27,613.98**
	GF-AV RECREATION SERVICES TOTAL:	**27,613.98**

203 - GAS TAX

TRAFFIC ENGINEERING

HARTZOG & CRABILL INC	DEC'24 TRAFFIC SIGNAL MONITORING	2,750.00
RK ENGINEERING GROUP INC	DEC'24 TRAFFIC CALMING GUIDELINES	4,500.00
	TRAFFIC ENGINEERING TOTAL:	**7,250.00**

STREET MAINTENANCE

PV MAINTENANCE INC	DEC'24 PVM STREET MAINTENANCE GAS TAX	25,524.99
SCA OF CA LLC	NOV'24 STREET SWEEPING SERVICES	8,972.06
SCA OF CA LLC	DEC'24 STREET SWEEPING SERVICES	8,972.06
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE MEDIANS	1,641.51
SO CAL EDISON	DEC'24 ACCT#2125 GS1 MEDIANS	20.87
UNDERGROUND SERVICE ALERT OF SOUTHERN CA	NOV'24 DATABASE MAINT + 37 TICKETS	78.45
UNDERGROUND SERVICE ALERT OF SOUTHERN CA	DEC'24 DATABASE MAINT + 33 TICKETS	71.05
BEAR ELECTRICAL SOLUTIONS INC	NOV'24 TRAFFIC SIGNAL MAINTENANCE ROUTINE	3,225.90
BEAR ELECTRICAL SOLUTIONS INC	NOV'24 TRAFFIC SIGNAL MAINTENANCE RESPONSE	15,097.10
EL TORO WATER DISTRICT	8/08/24-12/09/24 MTR#5675CALLE CORTEZ MEDIAN WATER	539.08
SO CAL EDISON	DEC'24 ACCT#6377 LS2 ST LIGHTS ELECTRICITY	1,292.07
SO CAL EDISON	DEC'24 ACCT#7241 LS1 ST LIGHTS ELECTRICITY	17,730.67
SO CAL EDISON	DEC'24 ACCT#8254 TC1 ST LIGHTS ELECTRICITY	4,075.68
MOULTON NIGUEL WATER DIST	ACCT#64613/64615/65346 MEDIANS WATER SVC	801.23
	STREET MAINTENANCE TOTAL:	**88,042.72**
	GAS TAX TOTAL:	**95,292.72**

204 - MEASURE M

GEN-MEASURE M

CABCO YELLOW INC	DEC'24 M2 FUND TRANSPORTATION SVC	2,544.00
CABCO YELLOW INC	NOV'24 M2 FUND TRANSPORTATION SVC	2,832.00
	GEN-MEASURE M TOTAL:	**5,376.00**
	MEASURE M TOTAL:	**5,376.00**

215 - PUBLIC SAFETY GRANTS

LAW ENFORCEMENT-OTHER

US BANK PURCHASING CARD PROGRAM	AV 11/27 SP N-EAR.COM - TACTICAL EARPIECES	298.00
COUNTY OF ORANGE	DEC'24 AUTOMATED FINGERPRINT IDENTIFICATION SYSTEM	1,518.00
COUNTY OF ORANGE	JAN'25 E CITATION/MDC EQUIPMENT	6,120.27
	LAW ENFORCEMENT-OTHER TOTAL:	**7,936.27**
	PUBLIC SAFETY GRANTS TOTAL:	**7,936.27**

225 - INTEGRATED WASTE MGMT FD

GEN-TECHNOLOGY GRANTS

CHARLES ABBOTT ASSOC INC	NOV'24 CAA - CONTRACT SERVICES - SB1383	285.00
	GEN-TECHNOLOGY GRANTS TOTAL:	**285.00**
	INTEGRATED WASTE MGMT FD TOTAL:	**285.00**

241 - TECHNOLOGY FUND

GEN-TECHNOLOGY GRANTS

GRANICUS INC	JAN-MAR'25 GRANICUS-WEBSTREAMING	4,380.49
ERIC WINTER	DEC'24-CITY COUNCIL MTG 12/4	665.38
	GEN-TECHNOLOGY GRANTS TOTAL:	**5,045.87**
	TECHNOLOGY FUND TOTAL:	**5,045.87**

251 - FEDERAL GRANTS

GEN-FEDERAL GRANT

MIKE LINARES INC	JUL'24 CDBG-CV PROFESSIONAL SERVICES	330.00
MIKE LINARES INC	JUL'24 CDBG PROFESSIONAL SERVICES	1,320.00
MIKE LINARES INC	AUG'24 CDBG PROFESSIONAL SERVICES	1,155.00

Vendor Name	Description (Item)	Amount
MIKE LINARES INC	AUG'24 CDBG-CV PROFESSIONAL SERVICES	220.00
MIKE LINARES INC	SEP'24 CDBG PROFESSIONAL SERVICES	880.00
MIKE LINARES INC	SEP'24 CDBG-CV PROFESSIONAL SERVICES	55.00
MIKE LINARES INC	OCT'24 CDBG CONSULTANT SERVICES	1,430.00
	GEN-FEDERAL GRANT TOTAL:	**5,390.00**
	FEDERAL GRANTS TOTAL:	**5,390.00**

261 - CITY FAC.-AQUATIC CENTER

GEN-AQUATIC CENTER

GARDAWORLD	JAN'25 AQC - CASH COURIER SERVICE	490.94
GREAT SCOTT TREE SERVICE, INC	DEC'24 AQC TREE TRIMMING	2,175.60
NIEVES LANDSCAPE INC	DEC'24 LANDSCAPE MAINTENANCE AQC	944.42
COX COMMUNICATIONS, INC	JAN'25 ACCT#6701 AQC INTERNET	510.81
AQUATIC TECHNOLOGIES, INC	DEC'24 POOL MAINTENANCE	2,693.00
THE GAS COMPANY	12/04/24-01/04/25 MTR#15672349 AQC GAS SVC	4,258.02
US BANK PURCHASING CARD PROGRAM	KB 12/02 SCP DISTRIBUTORS - AQC POOL LIGHT REPAIR	192.51
US BANK PURCHASING CARD PROGRAM	KB 12/12 THE HOMEDEPOT - AQC WATERLINE REPAIR	59.24
US BANK PURCHASING CARD PROGRAM	KB 11/26 THE HOME DEPOT-AQC POOL DECK LIGHTING	86.52
MOULTON NIGUEL WATER DIST	ACCT#64095/64096 AQC WATER SVC	593.95
	GEN-AQUATIC CENTER TOTAL:	**12,005.01**
	CITY FAC.-AQUATIC CENTER TOTAL:	**12,005.01**

311 - STREET IMPROVEMENTS

STREETS & HIGHWAYS

ENGINEERING RESOURCES OF SOUTHERN CALIFORNIA	DEC'24 ALISO CREEK REHAB DESIGN	8,430.00
JTB SUPPLY COMPANY, INC	ALISO CREEK AND ENTERPRISE VIDEO DETECTION UNIT	24,705.38
ENGINEERING RESOURCES OF SOUTHERN CALIFORNIA	NOV'24 ALISO VIEJO PARKWAY REHAB DESIGN	2,848.75
	STREETS & HIGHWAYS TOTAL:	**35,984.13**
	STREET IMPROVEMENTS TOTAL:	**35,984.13**

331 - CAPITAL IMPROVEMENTS

CAPITAL IMPROVEMENTS

CREATIVE AIR MECHANICAL SERVICES, LLC	CITY HALL - ROOFTOP UNIT HVAC REPLACEMENT PROJECT	48,252.00
	CAPITAL IMPROVEMENTS TOTAL:	**48,252.00**
	CAPITAL IMPROVEMENTS TOTAL:	**48,252.00**

731 - CFD 2005-01

TRUST FUND

KOPPEL & GRUBER PUBLIC FIN.	OCT-DEC'24 CFD ANNUAL ADMIN SERVICES	2,364.38
	TRUST FUND TOTAL:	**2,364.38**
	CFD 2005-01 TOTAL:	**2,364.38**

GRAND TOTAL: 1,681,919.55

Fund Summary

Fund	Expense Amount	Payment Amount
101 - GENERAL FUND	1,427,553.71	1,427,553.71
102 - GEN. FD-CITY HALL	8,820.48	8,820.48
103 - GF-AV RECREATION SERVICES	27,613.98	27,613.98
203 - GAS TAX	95,292.72	95,292.72
204 - MEASURE M	5,376.00	5,376.00
215 - PUBLIC SAFETY GRANTS	7,936.27	7,936.27
225 - INTEGRATED WASTE MGMT FD	285.00	285.00
241 - TECHNOLOGY FUND	5,045.87	5,045.87
251 - FEDERAL GRANTS	5,390.00	5,390.00
261 - CITY FAC.-AQUATIC CENTER	12,005.01	12,005.01
311 - STREET IMPROVEMENTS	35,984.13	35,984.13
331 - CAPITAL IMPROVEMENTS	48,252.00	48,252.00

Fund Summary

Fund		Expense Amount	Payment Amount
731 - CFD 2005-01		2,364.38	2,364.38
	Grand Total:	**1,681,919.55**	**1,681,919.55**

Report Summary

Fund Summary

Fund	Payment Amount
101 - GENERAL FUND	1,427,553.71
102 - GEN. FD-CITY HALL	8,820.48
103 - GF-AV RECREATION SERVICES	27,613.98
203 - GAS TAX	95,292.72
204 - MEASURE M	5,376.00
215 - PUBLIC SAFETY GRANTS	7,936.27
225 - INTEGRATED WASTE MGMT FD	285.00
241 - TECHNOLOGY FUND	5,045.87
251 - FEDERAL GRANTS	5,390.00
261 - CITY FAC.-AQUATIC CENTER	12,005.01
311 - STREET IMPROVEMENTS	35,984.13
331 - CAPITAL IMPROVEMENTS	48,252.00
731 - CFD 2005-01	2,364.38
Grand Total:	**1,681,919.55**

Account Summary

Account Number	Account Name	Payment Amount
101-1203-000	ACCOUNTS RECEIVABLE	961.05
101-2505-000	DENTAL INSURANCE PA…	1,927.28
101-2506-000	MEDICAL INSURANCE P…	28,430.42
101-2508-000	VISION INSURANCE PAY…	298.39
101-2602-000	PLANNING DEPOSIT	19,683.60
101-2603-000	ENGINEERING DEPOSIT	16,595.57
101-2606-000	C & D DEPOSIT	500.00
101-32010	BUILDING PERMITS	307.00
101-32020	ELECTRICAL PERMITS	86.06
101-4-1101-4501-000	ADVERTISING & PROMO…	420.56
101-4-1101-4511-000	COMMUNICATION	237.43
101-4-1101-4520-000	MTGS/CONF./TRNG & D…	854.29
101-4-1101-4601-000	SUPPLIES	382.51
101-4-1501-4206-000	MEDICAL INSURANCE	158.00
101-4-1501-4511-000	COMMUNICATION	95.98
101-4-1501-4520-000	MTGS/CONF./TRNG & D…	390.00
101-4-1501-4521-000	MEMBERSHIP & DUES	125.00
101-4-1503-4309-000	OTHER CONTRACTUAL S…	194.90
101-4-1503-4520-000	MTGS/CONF./TRNG & D…	1,241.73
101-4-1503-4601-000	SUPPLIES	25.00
101-4-1503-4612-000	OPERATING SUPPLIES	330.86
101-4-1601-4303-000	LEGAL NOTICES	468.59
101-4-1601-4520-000	MTGS/CONF./TRNG & D…	1,173.91
101-4-1601-4601-000	SUPPLIES	271.91
101-4-2101-4304-000	LEGAL SERVICES	24,150.00
101-4-2101-4532-000	SPECIAL PROJECTS	97.50
101-4-2101-4701-000	NPDES	737.70
101-4-2501-4301-000	PROFESSIONAL SERVICES	437.50
101-4-2501-4309-000	OTHER CONTRACTUAL S…	404.38
101-4-2501-4521-000	MEMBERSHIP & DUES	150.00
101-4-2501-4601-000	SUPPLIES	20.03
101-4-3101-4301-000	PROFESSIONAL SERVICES	1,916.67
101-4-3101-4305-000	TECHNOLOGY SERVICES	8,251.37
101-4-3101-4481-000	COMPUTER EXPENSE	9,302.60
101-4-3501-4301-000	PROFESSIONAL SERVICES	213.30
101-4-3501-4422-000	EQUIP RENTAL LEASE - P…	617.99
101-4-3501-4431-000	BUILDING & GROUND M…	5,843.92
101-4-3501-4471-000	RENT	449.73
101-4-3501-4513-000	PRINTING	96.18
101-4-3501-4521-000	MEMBERSHIP & DUES	1,982.00

Account Summary

Account Number	Account Name	Payment Amount
101-4-3501-4542-000	INTEREST EXPENSE - LEA…	76.21
101-4-3501-4553-000	COMMUNITY BRANDING	1,568.99
101-4-3501-4601-000	SUPPLIES	392.16
101-4-3501-4612-000	OPERATING SUPPLIES	4,121.35
101-4-4101-4206-000	MEDICAL INSURANCE	316.00
101-4-4101-4501-000	ADVERTISING & PROMO…	12,792.55
101-4-4101-4524-000	RECREATION-SENIOR TR…	1,344.00
101-4-4101-4527-000	REC-CITY SPECIAL EVENTS	4,418.52
101-4-4101-4601-000	SUPPLIES	200.13
101-4-4102-4411-000	UTILITIES	7,090.97
101-4-4102-4431-000	BUILDING & GROUND M…	8,914.75
101-4-4103-4411-000	UTILITIES	2,170.72
101-4-4103-4431-000	BUILDING & GROUND M…	109.39
101-4-4104-4529-000	REC-YOUTH PROGRAMS	30,000.00
101-4-4401-4206-000	MEDICAL INSURANCE	158.00
101-4-4401-4309-000	OTHER CONTRACTUAL S…	1,425.00
101-4-4401-4731-000	GENERAL PLAN	1,400.00
101-4-4402-4751-000	C.S-BUILDING	131,816.31
101-4-4403-4761-000	C.S-CODE ENFORCEMENT	15,983.20
101-4-4501-4471-000	RENT	1,035.00
101-4-4501-4521-000	MEMBERSHIP & DUES	321.00
101-4-4501-4562-000	PERMITS	109,894.87
101-4-4501-4612-000	OPERATING SUPPLIES	120.72
101-4-4501-4701-000	NPDES	10,459.28
101-4-4501-4702-000	AB939-SOLID WASTE	3,122.50
101-4-4501-4741-000	C.S-CITY ENGINEERING	3,996.23
101-4-4503-4771-000	C.S-STREET MAINTENAN…	20,884.08
101-4-5101-4308-000	LAW ENFORCEMENT	892,517.60
101-4-5102-4511-000	COMMUNICATION	45.47
101-4-5102-4516-000	FUEL	604.99
101-4-5102-4520-000	MTGS/CONF./TRNG & D…	966.47
101-4-5102-4612-000	OPERATING SUPPLIES	2,281.23
101-4-5102-4721-000	C.S-CROSSING GUARDS	21,536.27
101-4-5401-4301-000	PROFESSIONAL SERVICES	1,605.00
101-4-5401-4471-000	RENT	580.00
101-4-5401-4520-000	MTGS/CONF/TRNG & D…	178.84
101-4-5401-4612-000	OPERATING SUPPLIES	3,275.00
102-4-3501-4411-000	UTILITIES	6,246.81
102-4-3501-4431-000	BUILDING & GROUND M…	2,573.67
103-4-4105-4305-000	TECHNOLOGY SERVICES	3,456.01
103-4-4105-4309-000	OTHER CONTRACTUAL S…	3,080.65
103-4-4105-4411-000	UTILITIES	4,495.14
103-4-4105-4431-000	BUILDING & GROUND M…	4,475.48
103-4-4105-4451-000	FARM OPERATING EXPE…	10,137.70
103-4-4105-4511-000	COMMUNICATION	222.12
103-4-4105-4561-000	TAXES/FEES/PERMITS	1,218.18
103-4-4105-4601-000	SUPPLIES	63.14
103-4-4105-4612-000	OPERATING SUPPLIES	395.01
103-4-4105-4620-000	MINOR EQUIPMENT	70.55
203-4-4502-4301-000	PROFESSIONAL SERVICES	7,250.00
203-4-4503-4411-000	UTILITIES	24,459.60
203-4-4503-4771-000	C.S-STREET MAINTENAN…	45,639.00
203-4-4503-4772-000	C.S-STREET SWEEPING	17,944.12
204-4-6104-4309-000	OTHER CONTRACTUAL S…	5,376.00
215-4-5102-4803-000	PUBLIC SAFETY EQUIPM…	7,936.27
225-4-6141-4309-000	OTHER CONTRACTUAL S…	285.00
241-4-6141-4309-000	OTHER CONTRACTUAL S…	665.38
241-4-6141-4481-000	IT/COMPUTER EQUIPM…	4,380.49

Account Summary

Account Number	Account Name	Payment Amount
251-4-6151-4309-000	OTHER CONTRACTUAL S…	5,390.00
261-4-6161-7401-000	EQUIPMENT MAINTENA…	2,693.00
261-4-6161-7411-000	UTILITIES	5,362.78
261-4-6161-7421-000	BUILDING & GROUND M…	3,458.29
261-4-6161-7445-000	FEES & PERMITS	490.94
311-4-8301-5501-000	DESIGN	11,278.75
311-4-8301-5701-000	CONSTRUCTION	24,705.38
331-4-8701-5910-000	IMPROVEMENTS	48,252.00
731-4-7501-4542-000	INTEREST & FISCAL CHGS	2,364.38
	Grand Total:	**1,681,919.55**

Project Account Summary

Project Account Key	Payment Amount
None	1,549,428.30
0635910	48,252.00
1002FALL	3,080.65
10034301	1,605.00
1345701	24,705.38
1385501	11,278.75
9014612	54.87
9024612	4,000.77
9294520	179.29
9314520	675.00
9934527	1,490.37
CDBGCV4309	605.00
ENG 2242	17,302.30
ENG 2243	-2,337.39
ENG 2244	1,535.66
ENG 2254	47.50
ENG 2256	47.50
SB13834309	285.00
SDP-2022-0004	13,913.60
SDP-2024-00001	3,657.50
SDP-2024-00002	780.00
USE-2024-00003	1,332.50
Grand Total:	**1,681,919.55**

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: Ann Eifert, Director of Financial Services/City Treasurer

SUBJECT: TREASURER'S STATEMENT – DECEMBER 2024

Recommended Action:

Receive and file the December 2024 Treasurer's Statement.

Fiscal Impact:

No Fiscal Impact.

Background:

Per City policy, the Finance Department presents the monthly Treasurer's Statement for the City Council's review. This statement shows the cash balance for all City funds, a breakdown of bank account balances, investment account balances and the effective yield earned from investments.

Discussion:

The City's portfolio consists of investments in Certificates of Deposits, US Treasuries, US Federal Agencies, Corporate Bonds, and Local Agency Investment Fund (LAIF). All funds invested with LAIF are available for withdrawal within 24 hours.

The Treasurer's Statement provides information regarding the City's investment portfolio and activity during the reporting month. The City's investment portfolio is in compliance with all government codes as well as the City's investment policy. Interest is credited to the City's bank account monthly and allocated among the City's funds. The current portfolio provides sufficient cash flow liquidity to meet the upcoming operating expenses and spending requirements for the next 6 months.

Attachment:

1. December 2024 Treasurer's Statement

CITY OF ALISO VIEJO
TREASURER'S MONTHLY CASH STATEMENT

December 31, 2024

	BEGINNING BALANCE	RECEIPTS	DISBURSEMENTS	ENDING BALANCE
CASH BALANCE (ALL FUNDS)	$ 8,106,106.62	$ 4,648,464.99	$ 2,936,377.58	$ 9,818,194.03
CITY TRUST FUNDS:				
AV RANCH FOUNDATION	$ 100.00			100.00
CFD 2005-01	$ 172,281.32	556,854.41	736,760.77	(7,625.04)
COMMUNITY TRUST	$ 5,562.68			5,562.68
CASH BALANCE TOTALS	**$ 8,284,050.62**	**$ 5,205,319.40**	**$ 3,673,138.35**	**$ 9,816,231.67**

SUMMARY OF CASH:

DEMAND DEPOSITS:	GENERAL ACCOUNT	$ 405,759.45	
INVESTMENTS:	LOCAL AGENCY INVESTMENT FD	$ 7,642,981.28	
	MONEY MARKET/SWEEP ACCOUNT	$ 1,767,490.94	
	TOTAL CASH		**$ 9,816,231.67**

Years to Maturity for December 2024	1.62
Weighted Average Yield for December 2024	4.000%

All investments are placed in accordance with the City of Aliso Viejo's Investment Policy.

The above summary provides sufficient cash flow liquidity to meet the next six month's estimated expenditures.

Other monies held include Cash with Fiscal Agent, Investments, Payroll and AV Center.			**$ 39,075,323.88**
Cash With Fiscal Agent	COPS/CFD 2005-01	2,290,193.17	
Cash With Investment Advisor	City Investments	34,684,688.24	
AV Center		1,543,985.26	
PR Account		554,492.60	
Petty Cash		1,964.61	
	GRAND TOTAL OF CITY FUNDS		**$ 48,891,555.55**

CITY OF ALISO VIEJO
DECEMBER 31, 2024

Portfolio Summary

4.00
Weighted Average Yield to Maturity

1.62
Weighted Average Maturity (Years)

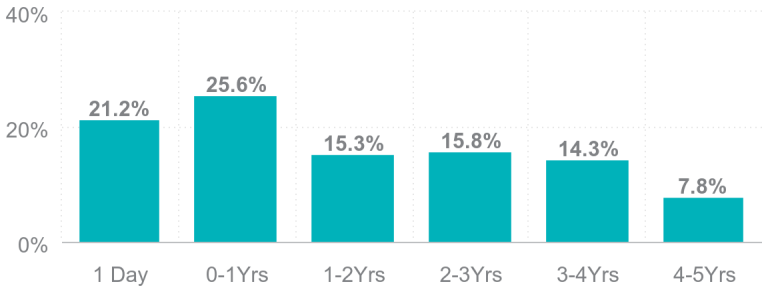
1.83
Portfolio Effective Duration (Years)

1.62
Weighted Average Life (Years)

AA
Average Credit Rating

MEEDER PUBLIC FUNDS

Maturity Distribution



Sector Allocation

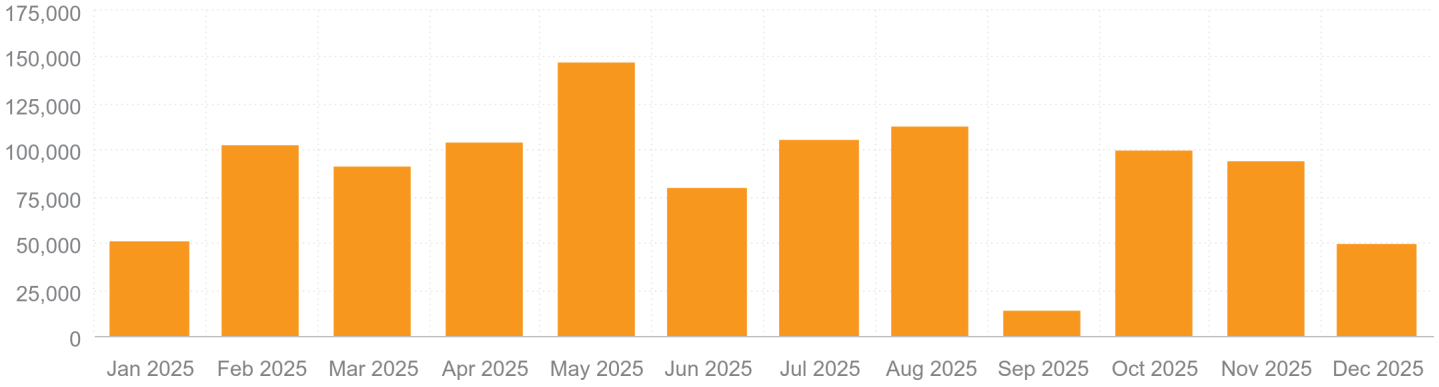


U.S. Treasuries	52.00%
LGIP	17.24%
U.S. Agencies	10.22%
Corporate Bonds	9.57%
Negotiable CD's	6.99%
Money Market Funds	3.99%

Reconciliation

	CURRENT MONTH
Beginning	**36,359,820.87**
Contributions/Withdrawals	0.00
Management Fees	0.00
Custodian Fees	(229.68)
Realized Gains Losses	1,657.05
Purchased Interest	0.00
Interest Received	90,930.94
ENDING	**36,452,179.18**

Projected Monthly Income Schedule



MEEDER PUBLIC FUNDS

Position Statement

CUSIP	DESCRIPTION	TRADE DATE SETTLE DATE	PAR VALUE	PRINCIPAL COST PURCHASED INTEREST	TOTAL COST	YIELD TO MATURITY	MATURITY DATE	DAYS TO MATURITY	MARKET PRICE MARKET VALUE	UNREALIZED GAIN/LOSS BOOK VALUE	% OF MV	MOODY'S S&P RATING
CITY OF ALISO VIEJO												
LGIP												
CALAIF	California LAIF	12/31/2024 12/31/2024	7,642,981.28	7,642,981.28 0.00	7,642,981.28	4.43		1	1.00 7,642,981.28	0.00 7,642,981.28	17.24	
LGIP TOTAL			**7,642,981.28**	**7,642,981.28** **0.00**	**7,642,981.28**	**4.43**		**1**	**1.00** **7,642,981.28**	**0.00** **7,642,981.28**	**17.24**	**NA**
MONEY MARKET FUNDS												
31846V567	FIRST AMER:GVT OBLG;Z	12/31/2024 12/31/2024	1,767,490.94	1,767,490.94 0.00	1,767,490.94	4.35		1	1.00 1,767,490.94	0.00 1,767,490.94	3.99	Aaa AAA
MONEY MARKET FUNDS TOTAL			**1,767,490.94**	**1,767,490.94** **0.00**	**1,767,490.94**	**4.35**		**1**	**1.00** **1,767,490.94**	**0.00** **1,767,490.94**	**3.99**	**AAA**
U.S. TREASURIES												
912797KJ5	US TREASURY BILL 03/20/25	05/08/2024 05/08/2024	2,000,000.00	1,913,519.58 0.00	1,913,519.58	5.16	03/20/2025	79	99.11 1,982,130.54	68,610.96 1,913,519.58	4.47	P-1 A-1+
912797LB1	US TREASURY BILL 05/15/25	06/11/2024 06/13/2024	1,000,000.00	953,923.20 0.00	953,923.20	5.19	05/15/2025	135	98.47 984,692.65	32,818.78 951,873.87	2.22	P-1 A-1+
912797LB1	US TREASURY BILL 05/15/25	05/31/2024 05/31/2024	1,000,000.00	951,873.87 0.00	951,873.87	5.24	05/15/2025	135	98.47 984,692.65	30,769.45 953,923.20	2.22	P-1 A-1+
91282CHL8	US TREASURY 4.625 06/30/25	11/10/2023 11/10/2023	1,000,000.00	993,398.44 0.00	993,398.44	5.05	06/30/2025	181	100.23 1,002,343.75	8,945.31 993,398.44	2.26	Aaa AA+
91282CEY3	US TREASURY 3.000 07/15/25	05/30/2023 05/30/2023	1,000,000.00	973,437.50 0.00	973,437.50	4.32	07/15/2025	196	99.34 993,437.50	20,000.00 973,437.50	2.24	Aaa AA+
91282CFE6	US TREASURY 3.125 08/15/25	01/13/2023 01/13/2023	1,000,000.00	980,078.13 0.00	980,078.13	3.94	08/15/2025	227	99.32 993,164.06	13,085.93 980,078.13	2.24	Aaa AA+
91282CFP1	US TREASURY 4.250 10/15/25	05/30/2023 05/30/2023	1,000,000.00	1,000,625.00 0.00	1,000,625.00	4.22	10/15/2025	288	100.02 1,000,234.38	(390.62) 1,000,625.00	2.26	Aaa AA+
912828M56	US TREASURY 2.250 11/15/25	05/30/2023 05/30/2023	1,000,000.00	955,117.19 0.00	955,117.19	4.19	11/15/2025	319	98.29 982,851.56	27,734.37 955,117.19	2.22	Aaa AA+
91282CGL9	US TREASURY 4.000 02/15/26	05/30/2023 05/30/2023	1,000,000.00	997,578.13 0.00	997,578.13	4.09	02/15/2026	411	99.74 997,382.81	(195.32) 997,578.13	2.25	Aaa AA+
91282CGV7	US TREASURY 3.750 04/15/26	01/22/2024 01/22/2024	1,200,000.00	1,187,437.50 0.00	1,187,437.50	4.24	04/15/2026	470	99.36 1,192,359.37	4,921.87 1,187,437.50	2.69	Aaa AA+
91282CCF6	US TREASURY 0.750 05/31/26	06/13/2022 06/13/2022	1,000,000.00	915,976.56 0.00	915,976.56	3.01	05/31/2026	516	95.24 952,421.88	36,445.32 915,976.56	2.15	Aaa AA+
91282CCJ8	US TREASURY 0.875 06/30/26	06/29/2022 06/29/2022	1,000,000.00	913,125.00 0.00	913,125.00	3.20	06/30/2026	546	95.16 951,601.56	38,476.56 913,125.00	2.15	Aaa AA+
91282CCP4	US TREASURY 0.625 07/31/26	01/13/2023 01/13/2023	1,100,000.00	987,292.97 0.00	987,292.97	3.73	07/31/2026	577	94.51 1,039,628.91	52,335.94 987,292.97	2.34	Aaa AA+
91282CJT9	US TREASURY 4.000 01/15/27	01/22/2024 01/22/2024	1,000,000.00	996,718.75 0.00	996,718.75	4.12	01/15/2027	745	99.52 995,156.25	(1,562.50) 996,718.75	2.24	Aaa AA+
912828X88	US TREASURY 2.375 05/15/27	06/29/2022 06/29/2022	1,000,000.00	962,851.56 0.00	962,851.56	3.20	05/15/2027	865	95.77 957,734.38	(5,117.18) 962,851.56	2.16	Aaa AA+

MEEDER PUBLIC FUNDS

Position Statement

CUSIP	DESCRIPTION	TRADE DATE SETTLE DATE	PAR VALUE	PRINCIPAL COST PURCHASED INTEREST	TOTAL COST	YIELD TO MATURITY	MATURITY DATE	DAYS TO MATURITY	MARKET PRICE MARKET VALUE	UNREALIZED GAIN/LOSS BOOK VALUE	% OF MV	MOODY'S S&P RATING
9128282R0	US TREASURY 2.250 08/15/27	01/13/2023 01/13/2023	1,050,000.00	990,322.27 0.00	990,322.27	3.60	08/15/2027	957	95.05 997,992.19	7,669.92 990,322.27	2.25	Aaa AA+
9128284N7	US TREASURY 2.875 05/15/28	09/18/2024 09/19/2024	1,000,000.00	979,882.81 0.00	979,882.81	3.47	05/15/2028	1,231	95.54 955,390.63	(24,492.18) 979,882.81	2.15	Aaa AA+
91282CCR0	US TREASURY 1.000 07/31/28	09/18/2024 09/19/2024	1,000,000.00	910,507.81 1,358.70	911,866.51	3.50	07/31/2028	1,308	89.04 890,390.63	(20,117.18) 910,507.81	2.01	Aaa AA+
91282CCV1	US TREASURY 1.125 08/31/28	12/21/2023 12/21/2023	1,000,000.00	878,750.00 0.00	878,750.00	3.98	08/31/2028	1,339	89.20 892,031.25	13,281.25 878,750.00	2.01	Aaa AA+
91282CDF5	US TREASURY 1.375 10/31/28	12/21/2023 12/21/2023	1,500,000.00	1,328,906.25 0.00	1,328,906.25	3.98	10/31/2028	1,400	89.57 1,343,554.70	14,648.45 1,328,906.25	3.03	Aaa AA+
91282CJR3	US TREASURY 3.750 12/31/28	01/22/2024 01/22/2024	1,000,000.00	987,695.31 0.00	987,695.31	4.03	12/31/2028	1,461	97.78 977,812.50	(9,882.81) 987,695.31	2.21	Aaa AA+
91282CLR0	US TREASURY 4.125 10/31/29	11/25/2024 11/26/2024	1,000,000.00	996,445.31 2,962.71	999,408.02	4.21	10/31/2029	1,765	98.88 988,750.00	(7,695.31) 996,445.31	2.23	Aaa AA+
U.S. TREASURIES TOTAL			**23,850,000.00**	**22,755,463.14 4,321.41**	**22,759,784.55**	**4.13**		**665**	**96.80 23,055,754.14**	**300,291.00 22,755,463.14**	**52.00**	**AA+**
U.S. AGENCIES												
3137EAEX3	FREDDIE MAC 0.375 09/23/25 MTN	10/20/2020 10/20/2020	500,000.00	497,505.00 0.00	497,505.00	0.48	09/23/2025	266	97.22 486,110.00	(11,395.00) 497,505.00	1.10	Aaa AA+
3130AK5J1	FHLBANKS 0.700 09/18/26 '24	02/16/2023 02/16/2023	1,000,000.00	872,060.00 0.00	872,060.00	4.61	09/18/2026	626	93.76 937,550.00	65,490.00 872,060.00	2.11	Aaa AA+
3130ASD63	FHLBANKS 3.250 06/28/27 '24	06/28/2022 06/28/2022	1,000,000.00	1,000,000.00 0.00	1,000,000.00	3.25	06/28/2027	909	97.08 970,840.00	(29,160.00) 1,000,000.00	2.19	Aaa AA+
3133EPAU9	FED FARM CR BNKS 3.875 07/14/27	02/16/2023 02/16/2023	1,000,000.00	990,390.00 0.00	990,390.00	4.12	07/14/2027	925	98.91 989,140.00	(1,250.00) 990,390.00	2.23	Aaa AA+
3136G4X99	FANNIE MAE 0.740 08/25/27 '24	04/06/2023 04/06/2023	1,000,000.00	876,610.00 0.00	876,610.00	3.82	08/25/2027	967	90.41 904,070.00	27,460.00 876,610.00	2.04	Aaa AA+
3130B2GZ2	FHLBANKS 4.200 08/13/29 '26	08/21/2024 08/23/2024	250,000.00	250,000.00 0.00	250,000.00	4.20	08/13/2029	1,686	97.68 244,195.00	(5,805.00) 250,000.00	0.55	Aaa AA+
U.S. AGENCIES TOTAL			**4,750,000.00**	**4,486,565.00 0.00**	**4,486,565.00**	**3.59**		**838**	**95.51 4,531,905.00**	**45,340.00 4,486,565.00**	**10.22**	**AA+**
NEGOTIABLE CD'S												
61690UUJ7	MSBNA 1.800 02/27/25	02/28/2020 02/28/2020	245,000.00	244,416.90 0.00	244,416.90	1.85	02/27/2025	58	99.58 243,980.80	(436.10) 244,416.90	0.55	NA NA
14042RPG0	CAPITL ONE NA 1.600 04/08/25	04/09/2020 04/09/2020	245,000.00	244,412.00 0.00	244,412.00	1.65	04/08/2025	98	99.23 243,111.05	(1,300.95) 244,412.00	0.55	NA NA
866264DP6	SUMMIT STATE BNK 0.850 05/15/25	05/18/2020 05/18/2020	245,000.00	244,402.20 0.00	244,402.20	0.90	05/15/2025	135	98.45 241,192.70	(3,209.50) 244,402.20	0.54	NA NA
33847E3J4	FLAGSTAR BNK 0.900 05/15/25	05/15/2020 05/15/2020	245,000.00	245,000.00 0.00	245,000.00	0.90	05/15/2025	135	98.56 241,462.20	(3,537.80) 245,000.00	0.54	NA NA
89235MJS1	TOYOTA FINL SVGS 0.800 06/30/25	06/30/2020 06/30/2020	245,000.00	245,000.00 0.00	245,000.00	0.80	06/30/2025	181	97.75 239,489.95	(5,510.05) 245,000.00	0.54	NA NA
59013KLQ7	MERRICK BANK 0.550 12/30/25	12/30/2020 12/30/2020	245,000.00	245,000.00 0.00	245,000.00	0.55	12/30/2025	364	95.53 234,055.85	(10,944.15) 245,000.00	0.53	NA NA

MEEDER PUBLIC FUNDS

Position Statement

CUSIP	DESCRIPTION	TRADE DATE SETTLE DATE	PAR VALUE	PRINCIPAL COST PURCHASED INTEREST	TOTAL COST	YIELD TO MATURITY	MATURITY DATE	DAYS TO MATURITY	MARKET PRICE MARKET VALUE	UNREALIZED GAIN/LOSS BOOK VALUE	% OF MV	MOODY'S S&P RATING
02007GXG3	ALLY BANK 3.450 08/04/26	08/04/2022 08/04/2022	245,000.00	245,000.00 0.00	245,000.00	3.45	08/04/2026	581	97.77 239,541.40	(5,458.60) 245,000.00	0.54	NA NA
38149MYB3	GOLDMAN BANK USA 1.000 08/11/26	08/11/2021 08/11/2021	245,000.00	245,000.00 0.00	245,000.00	1.00	08/11/2026	588	94.03 230,371.05	(14,628.95) 245,000.00	0.52	NA NA
90348JR93	UBS USA 0.950 08/11/26	08/11/2021 08/11/2021	245,000.00	245,000.00 0.00	245,000.00	0.95	08/11/2026	588	94.29 231,020.30	(13,979.70) 245,000.00	0.52	NA NA
254673N44	DISCOVER BANK 3.500 07/29/27	08/03/2022 08/03/2022	245,000.00	245,000.00 0.00	245,000.00	3.50	07/29/2027	940	96.77 237,095.60	(7,904.40) 245,000.00	0.53	NA NA
87164XN93	SYNCHRONY BANK 3.500 08/05/27	08/05/2022 08/05/2022	245,000.00	245,000.00 0.00	245,000.00	3.50	08/05/2027	947	96.76 237,050.75	(7,949.25) 245,000.00	0.53	NA NA
02589ADQ2	AM EX BK 3.450 08/10/27	08/12/2022 08/12/2022	245,000.00	243,775.00 0.00	243,775.00	3.56	08/10/2027	952	95.44 233,828.00	(9,947.00) 243,775.00	0.53	NA NA
58404DVV0	MEDALLION BANK 3.800 08/30/29	08/21/2024 08/30/2024	245,000.00	245,000.00 0.00	245,000.00	3.80	08/30/2029	1,703	100.00 245,000.00	0.00 245,000.00	0.55	NA NA
NEGOTIABLE CD'S TOTAL			**3,185,000.00**	**3,182,006.10 0.00**	**3,182,006.10**	**2.04**		**558**	**97.28 3,097,199.65**	**(84,806.45) 3,182,006.10**	**6.99**	**NA**
CORPORATE BONDS												
64952WDL4	NYL GLOBAL FUND 2.000 01/22/25	01/22/2020 01/22/2020	500,000.00	498,205.00 0.00	498,205.00	2.08	01/22/2025	22	99.86 499,280.00	1,075.00 498,205.00	1.13	Aaa AA+
14913UAR1	CTRPLLR FIN SERV 4.400 10/15/27 MTN	11/25/2024 11/26/2024	500,000.00	498,865.00 2,505.56	501,370.56	4.48	10/15/2027	1,018	99.59 497,960.00	(905.00) 498,865.00	1.12	A2 A
24422EWR6	JOHN DEERE CAP 4.750 01/20/28 MTN	11/25/2024 11/26/2024	500,000.00	504,235.00 8,312.50	512,547.50	4.46	01/20/2028	1,115	100.50 502,510.00	(1,725.00) 504,235.00	1.13	A1 A
931142FB4	WALMART 3.900 04/15/28 '28	11/25/2024 11/26/2024	325,000.00	320,619.00 1,443.54	322,062.54	4.33	04/15/2028	1,201	98.23 319,260.50	(1,358.50) 320,619.00	0.72	Aa2 AA
58933YBD6	MERCK & CO 1.900 12/10/28 '28	11/25/2024 11/26/2024	500,000.00	452,905.00 0.00	452,905.00	4.47	12/10/2028	1,440	90.21 451,030.00	(1,875.00) 452,905.00	1.02	A1 A+
17275RBR2	CISCO SYSTEMS 4.850 02/26/29 '29	11/01/2024 11/04/2024	500,000.00	506,060.00 4,580.56	510,640.56	4.53	02/26/2029	1,518	100.60 503,010.00	(3,050.00) 506,060.00	1.13	A1 AA-
023135CG9	AMAZON.COM 3.450 04/13/29 '29	11/01/2024 11/04/2024	500,000.00	481,580.00 1,006.25	482,586.25	4.37	04/13/2029	1,564	95.91 479,535.00	(2,045.00) 481,580.00	1.08	A1 AA
30303M8S4	META PLATFORMS 4.300 08/15/29 '29	11/01/2024 11/04/2024	500,000.00	496,070.00 5,076.39	501,146.39	4.48	08/15/2029	1,688	98.69 493,445.00	(2,625.00) 496,070.00	1.11	Aa3 AA-
857449AE2	STATE STR BK TR 4.782 11/23/29	11/25/2024 11/26/2024	500,000.00	502,115.00 66.42	502,181.42	4.69	11/23/2029	1,788	99.62 498,075.00	(4,040.00) 502,115.00	1.12	Aa2 AA-
CORPORATE BONDS TOTAL			**4,325,000.00**	**4,260,654.00 22,991.22**	**4,283,645.22**	**4.20**		**1,260**	**98.23 4,244,105.50**	**(16,548.50) 4,260,654.00**	**9.57**	**A+**
CITY OF ALISO VIEJO TOTAL			**45,520,472.22**	**44,095,160.46 27,312.63**	**44,122,473.09**	**4.00**		**591**	**44,339,436.51**	**244,276.05 44,095,160.46**	**100.00**	**AA**
GRAND TOTAL			**45,520,472.22**	**44,095,160.46 27,312.63**	**44,122,473.09**	**4.00**		**591**	**44,339,436.51**	**244,276.05 44,095,160.46**	**100.00**	**AA**

MEEDER PUBLIC FUNDS

Transaction Statement

CITY OF ALISO VIEJO

	TRADE DATE	SETTLE DATE	CUSIP	DESCRIPTION	PAR VALUE	BOOK VALUE	TOTAL	NET REALIZED GAIN/LOSS
MATURITY								
	12/03/2024	12/03/2024	3133ELCP7	FEDERAL FARM CREDIT BANKS FUNDING CORP 1.625 12/03/2024	(235,000.00)	233,926.05	235,000.00	1,073.95
	12/12/2024	12/12/2024	61760A4F3	Morgan Stanley Private Bank, National Association 1.95 12/12/2024	(245,000.00)	244,416.90	245,000.00	583.10
MATURITY TOTAL					**(480,000.00)**	**478,342.95**	**480,000.00**	**1,657.05**

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: So Kim, Community Development Director

SUBJECT: PROFESSIONAL SERVICES AGREEMENT WITH STC TRAFFIC, INC. TO PROVIDE TRAFFIC STUDY PEER REVIEW SERVICES

Recommended Action:

Approve and authorize the City Manager to execute a Professional Services Agreement with STC Traffic, Inc. for traffic study peer review consulting services.

Fiscal Impact:

There will be no fiscal impact as project applicants will be required to submit deposits up front to cover the cost of STC Traffic, Inc. services.

Background:

In September 2022, the City Manager authorized a professional services agreement with STC Traffic, Inc. (STC) to peer review traffic analyses submitted by applicants for development projects, with a budget of $50,000, an initial term ending in December 2022, and with options to renew the agreement for two additional one-year terms through 2024.

In December 2022, the City Manager approved the first amendment, extending the agreement term by one year to December 31, 2023. In August 2023, the City Council approved a second amendment, increasing the total compensation from $50,000 to $100,000. In December 2023, the City Manager approved a third amendment, extending the agreement for an additional year, now ending on December 30, 2024.

In November 2024, the City Council approved an amendment to extend the agreement beyond the original renewal term to June 2027 to allow STC to complete review of projects already in progress. Staff informed the City Council at that time that Staff will conduct a Request for Proposal per the Purchasing Policy for traffic study peer review consulting services for new development projects.

Discussion:

Recently, several new development projects have been submitted to the City. With the increase in new development applications with anticipated peer review needs, Staff released a notice inviting informal bids for traffic study peer review consulting services in December 2024. The notice was emailed to various consulting firms recommended by other Orange County cities. Staff received six proposals in response to the City's request for proposals. All six proposals were from reputable firms with comparable qualifications and experience with similar costs, ranging up to $375 in hourly rates.

STC Inc. ("STC") has been providing quality traffic study peer review consulting services for the past few years. They are familiar with the City and its community concerns and have established team familiarity with City Staff. STC proposes the same key personnel and rates that range up to $290 per hour. Working with the same firm would result in efficiency, as there will be no learning curve in terms of communication styles, response rates, and expectations. Staff has been satisfied with STC's performance on past projects and expect consistent service levels. Therefore, Staff recommends that the City Council consider awarding STC a new agreement for traffic study peer review services through June 30, 2027, with the option to extend for an additional two years by the City Manager. The compensation will be set in an amount not to exceed $150,000, which will be fully funded upfront by development applicants.

Attachment:

1. Agreement

CITY OF ALISO VIEJO
PROFESSIONAL SERVICES AGREEMENT
FOR
TRAFFIC STUDY PEER REVIEW SERVICES

1. PARTIES AND DATE.

This Agreement is made and entered into this _____ day of _____, 2025, by and between the City of Aliso Viejo, a municipal corporation organized under the laws of the State of California with its principal place of business at 12 Journey, Suite 100, Aliso Viejo, California 92656 ("City") and **STC TRAFFIC, INC.**, a **CORPORATION**, with its principal place of business at **5973 AVENIDA ENCINAS, SUITE 218, CARLSBAD, CA 92008** ("Consultant"). City and Consultant are sometimes individually referred to herein as "Party" and collectively as "Parties."

2. RECITALS.

2.1 Consultant.

Consultant desires to perform and assume responsibility for the provision of professional **TRAFFIC STUDY PEER REVIEW SERVICES** required by the City on the terms and conditions set forth in this Agreement. Consultant represents that it is experienced in providing professional **TRAFFIC STUDY PEER REVIEW SERVICES** to public clients, is licensed in the State of California, and is familiar with the plans of City.

2.2 Project.

City desires to engage Consultant to render such services for **DEVELOPMENT** projects ("Project") as set forth in this Agreement.

3. TERMS.

3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Consultant promises and agrees to furnish to the City all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the professional **TRAFFIC STUDY PEER REVIEW SERVICES** consultant services necessary for the Project ("Services"). The Services are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term. The term of this Agreement shall be from **FEBRUARY 6, 2025** to **JUNE 30, 2027**, unless earlier terminated as provided herein. The City Manager shall have the unilateral option, at its sole discretion, to renew this Agreement annually for no more than two additional one-year terms.***] Consultant shall complete the Services within the term of this Agreement, and shall meet any other established schedules and deadlines.

3.1.3 Consultant acknowledges and agrees that Consultant's compensation, as set forth in Paragraph 3.3.1 herein, shall be the sole responsibility of, and be paid for fully by, **DEVELOPMENT PROJECT APPLICANTS**. Consultant shall not commence Services pursuant to this Agreement until such time as it has been advised, in writing, by City that **DEVELOPMENT PROJECT APPLICANTS** has deposited with City funds sufficient to fully pay Consultant's compensation.

3.2 Responsibilities of Consultant.

3.2.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Consultant or under its supervision. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. City retains Consultant on an independent contractor basis and not as an employee. Consultant shall complete, execute, and submit to City a Request for Taxpayer Identification Number and Certification (IRS FormW-9) prior to commencement of any Services under this Agreement. Neither City, nor any of its officials, officers, directors, employees or agents shall have control over the conduct of Consultant or any of Consultant's officers, employees, or agents, except as set forth in this Agreement. Consultant retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Consultant shall also not be employees of City and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services.

3.2.2.1 Consultant shall perform the Services expeditiously, within the term of this Agreement. Consultant represents that it has the professional and technical personnel required to perform the Services in conformance with such conditions. In order to facilitate Consultant's conformance with the Schedule, City shall respond to Consultant's submittals in a timely manner. Upon request of City, Consultant shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.2.2 Neither City nor Consultant shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing Party. For purposes of this Agreement, such circumstances include a Force Majeure Event. A Force Majeure Event shall mean an event that materially affects a Party's performance and is one or more of the following: (1) Acts of God or other natural disasters; (2) terrorism or other acts of a public enemy; (3) orders of governmental authorities (including, without limitation, unreasonable and unforeseeable delay in the issuance of permits or approvals by governmental authorities that are required for the Services); (4) strikes and other organized labor action occurring at the site and the effects thereof on the Services, only to the extent such strikes and other organized labor action are beyond the control of Consultant and its subcontractors, and

to the extent the effects thereof cannot be avoided by use of replacement workers; and (5) pandemics, epidemics or quarantine restrictions. For purposes of this section, "orders of governmental authorities," includes ordinances, emergency proclamations and orders, rules to protect the public health, welfare and safety, and other actions of a public agency applicable to the Services and Agreement.

3.2.2.3 Should a Force Majeure Event occur, the non-performing Party shall, within a reasonable time of being prevented from performing, give written notice to the other Party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement. Force Majeure Events and/or delays, regardless of the Party responsible for the delay, shall not entitle Consultant to any additional compensation. Notwithstanding the foregoing in this section, the City may still terminate this Agreement in accordance with the termination provisions of this Agreement.

3.2.3 Conformance to Applicable Requirements. All work prepared by Consultant shall be subject to the approval of City.

3.2.4 Substitution of Key Personnel. Consultant has represented to City that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of City. In the event that City and Consultant cannot agree as to the substitution of key personnel, City shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to the City, or who are determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by the Consultant at the request of the City. The key personnel for performance of this Agreement are as follows: **PHILIP WRAGG**.

3.2.5 City's Representative. The City hereby designates the City Manager, or his or her designee, to act as its representative for the performance of this Agreement ("City's Representative"). City's Representative shall have the power to act on behalf of the City for all purposes under this Contract. The City Manager hereby designates **COMMUNITY DEVELOPMENT DIRECTOR**, or his or her designee, as the City's contact for the implementation of the Services hereunder. Consultant shall not accept direction or orders from any person other than the City's Representative or his or her designee.

3.2.6 Consultant's Representative. Consultant hereby designates **PHILIP WRAGG**, or his or her designee, to act as its representative for the performance of this Agreement ("Consultant's Representative"). Consultant's Representative shall have full authority to represent and act on behalf of the Consultant for all purposes under this Agreement. The Consultant's Representative shall supervise and direct the Services, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.7 Coordination of Services. Consultant agrees to work closely with City staff in the performance of Services and shall be available to City's staff, consultants and other staff at all reasonable times.

3.2.8 Standard of Care; Performance of Employees. Consultant shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Consultant represents and maintains that it is skilled in the professional calling necessary to perform the Services. Consultant warrants that all employees and subconsultants shall have sufficient skill and experience to perform the Services assigned to them. Finally, Consultant represents that it, its employees and subconsultants have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Consultant shall perform, at its own cost and expense and without reimbursement from the City, any services necessary to correct errors or omissions which are caused by the Consultant's failure to comply with the standard of care provided for herein. Any employee of the Consultant or its sub-consultants who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the City, shall be promptly removed from the Project by the Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.9 Laws and Regulations. Consultant shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all violations of such laws and regulations in connection with Services. If the Consultant performs any work knowing it to be contrary to such laws, rules and regulations, Consultant shall be solely responsible for all costs arising therefrom. Consultant shall defend, indemnify and hold City, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.2.10 Insurance.

3.2.10.1 Time for Compliance. Consultant shall not commence Work under this Agreement until it has provided evidence satisfactory to the City that it has secured all insurance required under this section. In addition, Consultant shall not allow any subconsultant to commence work on any subcontract until it has provided evidence satisfactory to the City that the subconsultant has secured all insurance required under this section.

3.2.10.2 Types of Insurance Required. As a condition precedent to the effectiveness of this Agreement for work to be performed hereunder and without limiting the indemnity provisions of the Agreement, the Consultant in partial performance of its obligations under such Agreement, shall procure and maintain in full force and effect during the term of the Agreement, the following policies of insurance. If the existing policies do not meet the Insurance Requirements set forth herein, Consultant agrees to amend, supplement or endorse the policies to do so.

(a) Commercial General Liability: Commercial General Liability Insurance which affords coverage at least as broad as Insurance

Services Office "occurrence" form CG 0001, with minimum limits of at least $1,000,000 per occurrence, and if written with an aggregate, the aggregate shall be double the per occurrence limit. Defense costs shall be paid in addition to the limits.

The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) contain any other exclusion contrary to the Agreement.

(b) Automobile Liability Insurance: Automobile Liability Insurance with coverage at least as broad as Insurance Services Office Form CA 0001 covering "Any Auto" (Symbol 1) with minimum limits of $1,000,000 each accident.

(c) Professional Liability: Professional Liability insurance with minimum limits of $1,000,000. Covered professional services shall specifically include all work to be performed under the Agreement and delete any exclusions that may potentially affect the work to be performed (for example, any exclusions relating to lead, asbestos, pollution, testing, underground storage tanks, laboratory analysis, soil work, etc.).

If coverage is written on a claims-made basis, the retroactive date shall precede the effective date of the initial Agreement and continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least three (3) years from termination or expiration of this Agreement.

(d) Workers' Compensation: Workers' Compensation Insurance, as required by the State of California and Employer's Liability Insurance with a limit of not less than $1,000,000 per accident for bodily injury and disease.

3.2.10.3 Endorsements. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the City for approval.

(a) The policy or policies of insurance required by Section 3.2.10.2 (a) Commercial General Liability and (c) Contractor's Pollution Liability shall be endorsed to provide the following:

(1) Additional Insured: The City of Aliso Viejo, its officials, officers, employees, agents, and volunteers shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Agreement.

Additional Insured Endorsements shall not (1) be restricted to "ongoing operations"; (2) exclude "contractual liability"; (3) restrict coverage to "sole" liability of Consultant; or (4) contain any other exclusions contrary to the Agreement.

(2) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

(b) The policy or policies of insurance required by Section 3.2.10.2 (b) Automobile Liability and (d) Professional Liability shall be endorsed to provide the following:

(1) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

(c) The policy or policies of insurance required by Section 3.2.10.2 (e) Workers' Compensation shall be endorsed to provide the following:

(1) Waiver of Subrogation: A waiver of subrogation stating that the insurer waives all rights of subrogation against the indemnified parties.

(2) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

3.2.10.4 Primary and Non-Contributing Insurance. All insurance coverages shall be primary and any other insurance, deductible, or self-insurance maintained by the indemnified parties shall not contribute with this primary insurance. Policies shall contain or be endorsed to contain such provisions.

3.2.10.5 Waiver of Subrogation. Required insurance coverages shall not prohibit Consultant from waiving the right of subrogation prior to a loss. Consultant shall waive all subrogation rights against the indemnified parties. Policies shall contain or be endorsed to contain such provisions.

3.2.10.6 Deductible. Any deductible or self-insured retention must be approved in writing by the City and shall protect the indemnified parties in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention.

3.2.10.7 Evidence of Insurance. The Consultant, concurrently with the execution of the Agreement, and as a condition precedent to the effectiveness thereof, shall deliver either certified copies of the required policies, or original certificates and endorsements on forms approved by the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15 days) prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the City. If such coverage is cancelled or reduced, Consultant shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the City evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies.

3.2.10.8 Failure to Maintain Coverage. Consultant agrees to suspend and cease all operations hereunder during such period of time as the required insurance coverage is not in effect and evidence of insurance has not been furnished to the City. The City shall have the right to withhold any payment due Consultant until Consultant has fully complied with the insurance provisions of this Agreement.

In the event that the Consultant's operations are suspended for failure to maintain required insurance coverage, the Consultant shall not be entitled to an extension of time for completion of the Services because of production lost during suspension.

3.2.10.9 Acceptability of Insurers. Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and authorized to do business in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

3.2.10.10 Insurance for Subconsultants. All Subconsultants shall be included as additional insureds under the Consultant's policies, or the Consultant shall be responsible for causing Subconsultants to purchase the appropriate insurance in compliance with the terms of these Insurance Requirements, including adding the City as an Additional Insured to the Subconsultant's policies.

3.2.11 Safety. Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions where applicable shall include, but shall not be limited to: (A) adequate life protection and life saving equipment and procedures; (B) instructions in accident prevention for all employees and subconsultants, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.3 Fees and Payments.

3.3.1 Compensation. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "B" attached hereto and incorporated herein by reference. The total compensation shall not exceed **ONE HUNDRED FIFTY THOUSAND** DOLLARS (**$150,000**) ("Total Compensation") without written approval of City's **CITY MANAGER.** Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.

3.3.2 Payment of Compensation.

Consultant shall submit to City a monthly itemized statement which indicates work completed and hours of Services rendered by Consultant. The statement shall describe the amount of Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. City shall, within 45 days of receiving such statement, review the statement and pay all non-disputed and approved charges thereon; provided, however, that if funds deposited with City by **DEVELOPMENT APPLICANTS**, as set forth in Paragraph 3.1.3 herein, are insufficient to pay such monthly statement, payment to Consultant shall not be made until such time as funds have been deposited with City by **DEVELOPMENT APPLICANTS** to pay Consultant's monthly statement.

3.3.3 Reimbursement for Expenses. Consultant shall not be reimbursed for any expenses unless authorized in writing by City.

3.3.4 Extra Work. At any time during the term of this Agreement, City may request that Consultant perform Extra Work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, Extra Work without written authorization from the City.

3.3.5.1 Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. City shall provide Consultant with a copy of the prevailing rates of per diem wages in effect at the commencement of this Agreement. Consultant shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Consultant's principal place of business and at the project site. It is the intent of the parties to effectuate the requirements of sections 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code within this Agreement, and Consultant shall therefore comply with such Labor Code sections to the fullest extent required by law. Consultant shall defend, indemnify and hold the City, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

3.3.5.2 If the Services are being performed as part of an applicable "public works" or "maintenance" project, in addition to the foregoing, then pursuant to Labor Code sections 1725.5 and 1771.1, the Consultant and all subconsultants must be registered with the Department of Industrial Relations ("DIR"). Consultant shall maintain registration for the duration of the project and require the same of any subconsultants. This project may also be subject to compliance monitoring and enforcement by the DIR. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

3.4 Accounting Records.

3.4.1 Maintenance and Inspection. Consultant shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

3.5 General Provisions.

3.5.1 Termination of Agreement.

3.5.1.1 Grounds for Termination. City may, by written notice to Consultant, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Consultant of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Consultant shall be compensated only for those services which have been adequately rendered to City, and Consultant shall be entitled to no further compensation. Consultant may not terminate this Agreement except for cause. The rights and remedies of the City provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law, equity or under this Agreement.

3.5.1.2 Effect of Termination. If this Agreement is terminated as provided herein, City may require Consultant to provide all finished or unfinished Documents and Data and other information of any kind prepared by Consultant in connection with the performance of Services under this Agreement. Consultant shall be required to provide such document and other information within fifteen (15) days of the request.

3.5.1.3 Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, City may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Consultant:

STC TRAFFIC, INC.
5973 AVENIDA ENCINAS, SUITE 218
CARLSBAD, CA 92008
ATTN: PHILIP WRAGG

City:

City of Aliso Viejo
12 Journey, Suite 100
Aliso Viejo, CA 92656
Attn: **SO KIM, COMMUNITY DEVELOPMENT DIRECTOR**

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Ownership of Materials and Confidentiality.

3.5.3.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for City to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Consultant under this Agreement ("Documents & Data"). Consultant shall require all subconsultants to agree in writing that City is granted a non-exclusive and perpetual license for any Documents & Data the subconsultant prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Consultant or provided to Consultant by the City. City shall not be limited in any way in its use of the Documents and Data at any time, provided that any such use not within the purposes intended by this Agreement shall be at City's sole risk.

3.5.3.2 Confidentiality. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other Documents and Data either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant. Such materials shall not, without the prior written consent of City, be used by Consultant for any purposes other than the performance of the Services. Nor shall such materials be disclosed to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Consultant which is otherwise known to Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of City.

3.5.3.3 Confidential Information. The City shall refrain from releasing Consultant's proprietary information ("Proprietary Information") unless the City's legal counsel determines that the release of the Proprietary Information is required by the California Public Records Act or other applicable state or federal law, or order of a court of competent jurisdiction, in which case the City shall notify Consultant of its intention to release Proprietary Information. Consultant shall have five (5) working days after receipt of the Release Notice to give City written notice of Consultant's objection to the City's release of Proprietary Information. Consultant shall indemnify, defend and hold harmless the City, and its officers, directors, employees, and agents from and against all liability, loss, cost or expense (including attorney's fees) arising out of a legal action brought to compel the release of Proprietary Information. City shall not release the Proprietary Information after receipt of the Objection Notice unless either: (1) Consultant fails to fully indemnify, defend (with City's choice of legal counsel), and hold City harmless from any legal action brought to compel such release; and/or (2) a final and non-appealable order by a court of competent jurisdiction requires that City release such information.

3.5.4 Fraud Policy. Consultant shall provide a copy of the City's Fraud Prevention Policy to each of its employees assigned to perform Services under this Agreement. Consultant shall submit to the City a statement signed by an authorized representative for Consultant certifying receipt of the City's Fraud Prevention Policy. A finding by the City that any of Consultant's employees have committed fraud against the City or have violated the City's Fraud Prevention Policy shall be grounds for appropriate discipline, up to and including such employee's removal from performance of this Agreement at City's request and/or termination of this Agreement. Consultant shall reimburse the City for any costs and expenses associated with fraud against the City.

3.5.5 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.6 Attorney's Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorney's fees and all other costs of such action.

3.5.7 Indemnification.

3.5.7.1 To the fullest extent permitted by law, Consultant shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of Consultant, its officials, officers, employees, subcontractors, consultants or agents in connection with the performance of the Consultant's Services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorneys fees and other related costs and expenses except such loss or damage caused by the sole negligence or willful misconduct of the City. Consultant's obligation to indemnify shall survive expiration or termination of this Agreement and shall not be restricted to

insurance proceeds, if any, received by the Consultant or the City, its officials, officers, employees, agents or volunteers.

3.5.7.2 If Consultant's obligation to defend, indemnify, and/or hold harmless arises out of Consultant's performance as a "design professional" (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Consultant's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant, and, upon Consultant obtaining a final adjudication by a court of competent jurisdiction, Consultant's liability for such claim, including the cost to defend, shall not exceed the Consultant's proportionate percentage of fault.

3.5.8 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both parties.

3.5.9 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Orange County.

3.5.10 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.6 City's Right to Employ Other Consultants. City reserves right to employ other consultants in connection with this Project.

3.7 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.8 Assignment or Transfer. Consultant shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the City. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.9 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Consultant include all personnel, employees, agents, and subconsultants of Consultant, except as otherwise specified in this Agreement. All references to City include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.10 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.11 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.12 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.13 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.14 Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.15 Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer and it shall not discriminate against any subconsultant, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Consultant shall also comply with all relevant provisions of City's Minority Business Enterprise program, Affirmative Action Plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.16 Labor Certification. By its signature hereunder, Consultant certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.17 Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.18 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.19 Declaration of Political Contributions. Consultant shall, throughout the term of this Agreement, submit to City an annual statement in writing declaring any political contributions

of money, in-kind services, or loan made to any member of the City Council within the previous twelve-month period by the Consultant and all of Consultant's employees, including any employee(s) that Consultant intends to assign to perform the Services described in this Agreement.

3.20 Subcontracting.

3.20.1 Prior Approval Required. Consultant shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of City. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

[Signatures on following page.]

SIGNATURE PAGE TO PROFESSIONAL SERVICES AGREEMENT BETWEEN THE CITY OF ALISO VIEJO AND STC TRAFFIC, INC.

IN WITNESS WHEREOF, the parties have executed this Professional Services Agreement on this ____ day of _____, 2025.

CITY OF ALISO VIEJO

Approved:

By: _____
Mitzi Ortiz
City Manager

ATTEST:

By: _____
Janet Martinez
City Clerk

APPROVED AS TO FORM:

_____
Best Best & Krieger LLP
City Attorney

APPROVED AS TO COMPLIANCE WITH BUDGET

By: _____
Ann Eifert
Director of Financial Services

STC TRAFFIC, INC.

[If Corporation, TWO SIGNATURES, President OR Vice President AND Secretary OR Treasurer REQUIRED]

By: Jason Stack

Its: President

Printed Name: Jason Stack

By: Sandra Sass

Its: CFO

Printed Name: Sandra Sass

CITY OF ALISO VIEJO

DECLARATION OF POLITICAL CONTRIBUTIONS

Using the space provided below, please list any political contributions of money, in-kind services, or loans made to any member of the City Council within the last twelve (12) months by Consultant and all of Consultant's employees, including any employee(s) that applicant intends to assign to perform the work or services described in this Agreement:

none

To the best of my knowledge, I declare under penalty of perjury that the foregoing is true and was executed at:

Carlbad/ San Diego/ CA	01/22/2025
City/County/State	Date
STC Traffic, Inc.	Jason Stack, President
Name of Business	Print Name

Signature

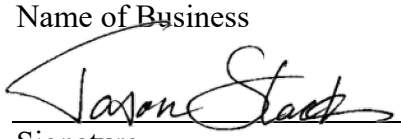
NOTE: THIS DECLARATION IS INCLUDED AS PART OF THE AGREEMENT AND MUST BE SIGNED AND ATTACHED HERETO.

CITY OF ALISO VIEJO

ACKNOWLEDGMENT OF RECEIPT OF FRAUD POLICY

I hereby acknowledge that I have received a copy of the City's "Fraud Prevention Policy" dated October 1, 2008. I understand that I am to promptly read its contents and distribute copies to employees assigned to perform Services for the City of Aliso Viejo.

To the extent that provisions of this policy conflict with previously issued policies or practices, whether or not such policies and practices were contained in written policies, this policy shall prevail.

STC Traffic, Inc.	Jason Stack, President
Name of Business	Print Name
	
Signature	
01/22/2025	
Date	

City of Aliso Viejo

COUNCIL POLICY

SUBJECT	RES. NO.	POLICY NO.	EFF. DATE	PAGE
FRAUD PREVENTION POLICY	**2005-056**	**400-15**	**10/01/2008**	**1 of 8**

PURPOSE

To establish Policy and procedures for the prevention and detection of fraud and other related dishonest activities against the City and, when appropriate, to pursue legal remedies available under the law.

This Policy has been established to ensure that elected officials, officers, employees, and members of advisory boards, commissions and committees of the City of Aliso Viejo are aware of the following:

1. Acts that are considered to be fraudulent;
2. Procedures for reporting suspected fraudulent acts;
3. Steps to be taken when fraud or other related dishonest activities are suspected; and
4. Consequences to expect when a dishonest act is reported.

Further, this Policy delineates management's responsibility for instituting and maintaining a system of internal control to prevent and detect fraud, misappropriations and other irregularities, and to be alert for any indications of such misconduct.

POLICY

1. GENERAL

The City of Aliso Viejo is committed to protecting its assets against the risk of loss or misuse. Accordingly, it is the policy of the City to identify and promptly investigate any possibility of fraudulent or related dishonest activities against the City and, when appropriate, to pursue legal remedies available under law.

2. DEFINITIONS

a. Fraud – Fraud and other similar irregularities including, but not limited to:

i. claim for reimbursement of expenses that are not job-related or authorized by current policy;

ii. forgery or unauthorized alteration of documents (checks, time sheets, independent contractor agreements, purchase orders, budgets, etc.);

iii. misappropriation of City assets (funds, securities, supplies, furniture, equipment, etc.);

iv. improprieties in the handling or reporting of money or financial transactions;

v. authorizing or receiving payment for goods not received or services not performed;

vi. computer-related activity involving unauthorized alteration, destruction, forgery, or manipulation of data or misappropriation of City-owned software;

vii. misrepresentation of information on documents;

viii. any violation of Federal, State, or Local laws related to dishonest activities or fraud;

ix. seeking or accepting anything of material value from those doing business with the City, including vendors, consultants, contractors, lessees, applicants, and grantees. Materiality is determined by the City's Conflict of Interest Code, which incorporates the Fair Political Practices Commission's regulations;

x. obtaining profit or personal gain as a result of "insider" knowledge of City activities;

xi. disclosing confidential and proprietary information to outside parties; or

xii. Intentional, false representation or concealment of material fact for the purpose of personal gain.

b. Employee – Any individual or group of individuals who receive compensation, either full or part-time, from the City of Aliso Viejo for employment or providing services. The term also includes any volunteer who provides services to the City through an official arrangement with the City or a City organization, as well as consultants, vendors, contractors, outside agencies and/or any other parties with a business relationship with the City of Aliso Viejo.

c. Official - Elected officials, officers, and members of advisory or appointed boards, commissions and committees.

d. Management – Any administrator, manager, director, supervisor, or other individual who manages or supervises funds or other resources, including human resources.

e. Internal Auditor – Any person or persons assigned by the City Manager to investigate any fraud or similar activity.

f. External Auditor – Independent audit professionals who perform annual audits of the City's financial statements.

3. INVESTIGATION

a. It is the City's intent to fully investigate any suspected acts of fraud. An objective and impartial investigation will be conducted regardless of the position, title, length of service or relationship with the City of any party who might be or become involved in or becomes the subject of such investigation.

b. Each department of the City is responsible for instituting and maintaining a system of internal control to provide reasonable assurance for the prevention and detection of fraud. Management should be familiar with the types of improprieties that might occur within their area of responsibility and be alert for any indications of such conduct.

c. The Internal Auditor, in conjunction with the City Attorney, has the primary responsibility for the investigation of fraud.

d. Throughout the investigation, the Internal Auditor will inform the City Manager of pertinent investigative findings.

e. Employees will be granted "whistle-blower protection," as described below when acting in accordance with this Policy. When informed of suspected fraud, neither the City nor any person acting on behalf of the City shall:

   i. dismiss or threaten to dismiss the Employee reporting the suspected fraud;

   ii. discipline, suspend, or threaten to discipline or suspend the Employee reporting the suspected fraud;

   iii. impose any penalty upon the Employee reporting the suspected fraud, or;

   iv. intimidate or coerce the Employee reporting the suspected fraud.

Violations of these "whistle-blower protections" may result in discipline up to and including dismissal.

f. Upon conclusion of the investigation, the results will be reported to the City Manager.

g. The City Manager, following review of investigation results, will take appropriate disciplinary action regarding Employee misconduct. Disciplinary action can include termination of employment or a contract, and referral of the case to the District Attorney's Office for possible prosecution.

h. The City will pursue every reasonable effort, including court ordered restitution, to obtain recovery of City losses from the offender, or other appropriate sources.

PROCEDURE

1. RESPONSIBILITIES OF OFFICIALS

a. If an Official has reason to suspect that a fraud has occurred, he or she shall immediately contact the City Manager.

b. An Official shall not attempt to investigate the suspected fraud or discuss the matter with anyone other than the City Manager.

c. The alleged fraud or audit investigation shall not be discussed with the media by any person other than through the City Manager in consultation with the City Attorney and the Internal Auditor.

2. MANAGEMENT RESPONSIBILITIES

a. Management is responsible for detecting, preventing and reporting fraud in their areas of responsibility.

b. Each manager should be familiar with the types of fraud that might occur in his or her area and be alert for any indication that fraud is or was in existence in his or her area.

c. When fraud is detected or suspected, Management should determine whether an error or mistake has occurred or if there may be dishonest or fraudulent activity.

d. If Management determines a suspected activity may involve fraud, they should contact their immediate supervisor. In the event the activity involves the immediate supervisor, the activity should be reported to the Department Director.

e. Upon being notified of suspected fraud, Department Directors shall inform the City Manager.

f. Management should not attempt to conduct individual investigations, interviews, or interrogations. However, Management is responsible for taking appropriate corrective actions to ensure adequate controls exist to prevent reoccurrences of fraud.

g. Management shall cooperate fully with the Internal Auditor, other involved departments, and law enforcement agencies in the detection, reporting, and investigation of fraud, including the prosecution of offenders.

h. Management will have full and unrestricted access to all necessary records and personnel. All City furniture and contents, including desks and computers, are open to inspection at any time. There is no assumption of privacy.

i. In dealing with suspected fraud, great care must be taken. Management should not:

   i. make accusations;

   ii. alert individuals suspected of committing fraud that an investigation is underway;

   iii. treat individuals suspected of committing fraud unfairly, or;

   iv. make statements that could lead to claims of false accusations or other offenses.

j. In handling suspected fraud activities, Management has the responsibility to:

   i. make no contact (unless requested) with the individual suspected of committing fraud to determine facts or demand restitution. Under no circumstances should there be any reference to “what you did”, “the crime”, “the fraud”, “the misappropriation”, etc.;

   ii. avoid discussing the case, facts, suspicions, or allegations with anyone outside the City, unless specifically directed to do so by the City Attorney;

iii. avoid discussing the case with anyone inside the City other than the City Manager, Internal Auditor, or City Attorney or law enforcement personnel;

iv. direct all inquiries from the individual suspected of committing fraud, or his or her representative, to the City Manager or City Attorney. All inquiries by an attorney representing the individual suspected of committing fraud should be directed to the City Attorney. All inquiries from the media should be directed to the City Manager, and;

v. take appropriate corrective and disciplinary action, up to and including dismissal, if authorized by and in conformance with the City's personnel policies.

3. EMPLOYEE RESPONSIBILITIES

a. Employees should report detected or suspected fraud to the Employee's supervisor.

b. In the event the suspected fraud involves the Employee's immediate supervisor, the Employee shall make the report directly to the next higher level of Management and/or the City Manager.

c. The reporting Employee shall refrain from further investigation of the incident, confrontation with the alleged violator, or further discussion of the incident with anyone, unless requested by the City Manager, Internal Auditor, City Attorney, or law enforcement personnel.

4. INTERNAL AUDITOR RESPONSIBILITIES

a. Upon assignment by the City Manager, the Internal Auditor will promptly investigate the fraud.

b. In all circumstances where there appears to be reasonable grounds for suspecting that a fraud has taken place, the Internal Auditor, in consultation with the City Attorney, will contact appropriate law enforcement personnel.

c. The Internal Auditor shall be available and receptive to receiving relevant, confidential information to the extent allowed by law.

d. If evidence is uncovered showing possible fraud, the Internal Auditor will proceed as follows:

i. discuss the findings with Management and the City Manager to determine if disciplinary actions should be taken;

ii. report to the External Auditor such activities in order to assess the effect of the fraud activity on the City's financial statements;

iii. coordinate with Management regarding notification to insurers and filing of insurance claims;

iv. take immediate action, in consultation with the City Attorney, to prevent the theft, alteration, or destruction of evidentiary records. Such action shall include, but is not limited to:

(A) removing the records and placing them in a secure location, or limiting access to the location where the records currently exist, and;

(B) preventing the individual suspected of committing the fraud from having access to the records.

e. In consultation with the City Attorney and appropriate law enforcement personnel, the Internal Auditor may disclose particulars of the investigation with potential witnesses if such disclosure would further the investigation.

f. If the Internal Auditor is contacted by the media regarding an alleged fraud or investigation, the Internal Auditor will direct all inquiries to the City Manager.

g. At the conclusion of the investigation, the Internal Auditor will document the results in a confidential memorandum report to the City Manager and the City Attorney. If the report concludes that the allegations are supported by evidence, the report will be forwarded to appropriate law enforcement personnel.

h. Unless exceptional circumstances exist, a person under investigation for fraud is to be given notice in writing of essential particulars of the allegations following the conclusion of the investigation. Where notice is given, the person against whom allegations are being made may submit a written explanation to the Internal Auditor no later than seven (7) calendar days after notice is received.

i. The Internal Auditor shall make recommendations to the appropriate department for

assistance in the prevention of future similar occurrences.

j. Upon completion of the investigation, including all legal and personnel actions, all records, documents, and other evidentiary material, obtained from the department under investigation will be returned by the Internal Auditor to that department.

DISCIPLINARY ACTIONS

Any Employee found to be responsible for fraud or who knowingly makes false allegations in violation of this Policy shall be subject to appropriate disciplinary action, up to and including termination of employment and/or termination of the contract. The severity of the disciplinary action will be based upon the circumstances of the violation and in accordance with the City's personnel policies. The City will assess any remedial measures necessary to address and correct the circumstance and prevent reoccurrence in the future. Remedial measures may include, but are not limited to, disciplinary action, reorganization of personnel, training and education, counseling and/or other employee assistance.

EXCEPTIONS

There will be no exceptions to this Policy unless provided and approved by the City Manager and the City Attorney.

EXHIBIT "A"

SCOPE OF SERVICES

Project Approach

A key element of permitting land development projects involves reviewing traffic studies for potential impacts to Vehicle Miles Traveled (VMT) to ensure compliance with CEQA and non-CEQA requirements related to Level of Service (LOS) for the operation of the local roadway network. STC is well-versed in understanding VMT analysis and the requirements established by SB 743 through the State of California Governor's Office of Planning and Research. We have updated TIA guidelines for numerous local agencies to include VMT as the new metric for assessing project-specific transportation impacts for CEQA compliance. STC is familiar with the City's Transportation Impact Guidelines for CEQA and General Plan Consistency (May 2020), including requirements for Local Transportation Assessments (Non-CEQA) involving roadway and intersection operations.

We understand the roles and context for each of these reviews. This includes navigating the important difference between VMT analysis (for CEQA requirements) and traffic operations analysis (for roadway system safety, performance, maintenance, and capacity needs). Our staff will work with the City and the applicant to develop solutions where impacts are identified.

Part of the process is being readily available for meetings with City staff and the applicant to clarify comments and/or resolve design issues. We steer these conversations into a collaborative process. Our goal is to help expedite these reviews to keep the permit process moving forward while ensuring adherence to engineering standards. We understand the level of pressure that City staff are put under to manage and facilitate land development reviews. Many of these projects provide significant economic value to the City and ongoing tax revenues.

Our staff have a unique understanding having worked at the highest levels of local government, including STC's QA/QC Manager, David DiPierro, who served as the City Traffic Engineer for the City of Oceanside. We've applied this intimate knowledge to our approach to managing on-call contracts and have trained our staff on the importance of responsive communications.

Scope of Work

STC will provide peer review services as- needed for various traffic and transportation submittals, including Level of Service studies, Vehicle Miles Traveled studies, Parking studies and other documentation as requested by the City. Studies will be compared with the requirements of the City of Aliso Viejo Transportation Impact Guidelines for CEQA and General Plan Consistency (May 2020) as well as with County and State guidelines where it is deemed appropriate.

Project Manager, **Philip Wragg, AICP,** will be directly responsible for handling day-to-day activities for the contract. STC will take part in coordination meetings with City staff and applicant's consultants as well as attend, and present at Planning Commission and City Council meetings upon request.

Review letters will include a request to provide response to comments, which will be reviewed with subsequent submittals if provided. Typically, three reviews are required before documentation is approved.

EXHIBIT "B"

COMPENSATION

In the event that this Agreement is renewed pursuant to Section 3.1.2, the rates set forth above may be adjusted each year at the time of renewal in accordance with the annual average Consumer Price Index of the prior calendar year, All Urban Consumers, Los Angeles-Long Beach-Anaheim up to a maximum percentage of five percent (5%).

Cost Proposal

STC's detailed fee schedule is provided in the table below. It includes hourly rates for all classifications.

STC Traffic is a local business and there are no direct costs for mileage.

Outsourced reimbursable expenses such as printing and reproduction, deliveries and overnight shipping, computerized plotting, materials, etc., will be charged to the client at the consultant's cost without mark-up.

Hourly Rates	
Executive/Management Classifications	
Principal-In-Charge	$290
Senior Principal Manager	$270
Principal Manager	$260
Senior Project Manager	$240
Project Manager III	$220
Project Manager II	$210
Project Manager I	$200
Professional Engineering Classifications	
Principal Engineer	$230
Senior Project Engineer	$210
Project Engineer III	$190
Project Engineer II	$160
Project Engineer I	$140
Professional Planning Classifications	
Principal Planner	$200
Senior Project Planner	$180
Project Planner III	$170
Project Planner II	$140
Project Planner I	$120

Hourly Rates	
Technical/Specialized Classifications	
Senior Systems Engineer/Technical Specialist	$220
Systems Engineer / Technical Specialist III	$200
Systems Engineer / Technical Specialist II	$170
Systems Engineer / Technical Specialist I	$150
Construction Manager	$240
Senior Construction Engineer/Inspector	$220
Construction Engineer/Inspector III	$190
Construction Engineer/Inspector II	$160
Construction Engineer/Inspector I	$140
Senior Drafter	$160
Drafter III	$150
Drafter II	$130
Drafter I	$110
Other Classifications	
Intern	$100
Expert Witness	$400

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: So Kim, Community Development Department

SUBJECT: STATUS UPDATE ON DEVELOPMENT AGREEMENT NEGOTIATIONS

Recommended Action:

Receive and file.

Discussion:

Recently, several new development projects have been submitted to the City, necessitating development agreements (DAs) due to amendments to the general plan and zoning designations. A DA is a contract between the City and the developer, outlining conditions, terms, restrictions, and regulations for the development project. It ensures that the property owner can implement and operate the project without changes to the imposed conditions after approval. The DA may include fees, such as park in-lieu fees, to mitigate impacts on parks, schools, traffic, etc.

To negotiate the DA terms, the City Council directed Staff to collaborate with a third-party consultant, Kosmont & Associates (Kosmont), to work with the Applicant and report on progress. Below is a list of pending projects and the status of DA negotiations:

- Avalon Bay at The Commons: A draft DA has been prepared. However, Staff anticipates renegotiating the terms as the Applicant is redesigning the project to address the City Council's previous concerns.

- 26800-26970 Aliso Viejo Parkway: A formal application has yet to be submitted. Once submitted, DA negotiations will begin.

- 95 Argonaut: A kickoff meeting has been completed. The Applicant is preparing information for Kosmont to conduct a fiscal impact analysis.

- 400-600 Freedom Lane: A kickoff meeting has been completed. The Applicant is preparing information for Kosmont to conduct a fiscal impact analysis.

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: So Kim, Community Development Director
Michael Delgadillo, Assistant Planner

SUBJECT: CONDITIONAL USE PERMIT TO CONSTRUCT A 748 SQUARE FOOT ACCESSORY DWELLING UNIT WITH A 668 SQUARE FOOT ATTACHED GARAGE THAT EXCEEDS THE HEIGHT LIMIT OF 25' (27' PROPOSED) AT 25 ALISAL COURT (USE-2024-00012).

Recommended Action:

Adopt a Resolution approving a Conditional Use Permit to construct a 748 square foot accessory dwelling unit with a 668 square foot attached garage that exceeds the height limit of 25 feet (27 feet proposed) at 25 Alisal Court (USE-2024-00012).

Fiscal Impact:

None.

Background:

On November 4, 2024, Bob Bunyan ("Applicant") submitted an application, requesting to construct a 748 square foot accessory dwelling unit ("ADU") with a 668 square foot attached garage at 25 Alisal Court. The proposed ADU is proposed along the south side yard area of the property. A deck is proposed to the north facade of the ADU that would connect the upper floor of the ADU to the existing residence. The ADU is designed to match the architectural style, color, and materials of the existing residence.



Image 1. Project site facing west.

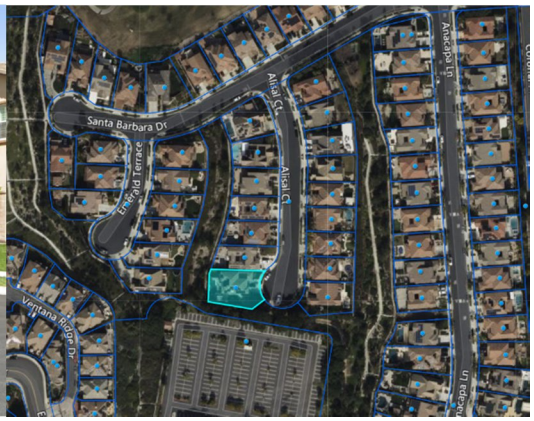


Image 2. Aerial Image of Vicinity

Discussion:

California Government Code Section 66317 states that permit applications for ADUs shall be considered and approved ministerially without discretionary review or a hearing. However, any proposed ADU which does not conform to the objective standards of the City's ADU ordinance may be allowed with a Conditional Use Permit ("CUP"). The proposed ADU exceeds the height limit imposed by AVMC 15.14.080(H)(2)(d), which states that an ADU that is attached to the primary dwelling may not exceed 25 feet in height or the height limitation imposed by the underlying zone that applies to the primary dwelling, whichever is lower. Since the height limit for the primary dwelling unit is 35 feet per the Glenwood Specific Plan, the maximum allowed height for the proposed ADU is 25 feet. Additionally, the applicant is requesting a deviation from a window requirement, which is detailed further in Finding No. 4 below.

Pursuant to Aliso Viejo Municipal Code ("AVMC") Section 15.14.080 (Accessory Dwelling Units), any proposed ADU that does not conform to all objective standards requires an approval of a CUP, subject to the following findings of approval established in AVMC Section 15.74.040.

1. Consistency with General Plan. The land use is consistent with the general plan and any applicable specific plan.

In 2004, the Glenwood Specific Plan was adopted, consistent with the General Plan, for the development of the larger Aliso Viejo Resort and Golf Club. The Glenwood Specific Plan permits, among other developments, single-family dwellings with ADUs. Additionally, AVMC 15.14.080 deems ADU developments consistent with the allowable density for the lot. As no changes are proposed to the existing residential land use, this finding can be made.

2. Consistency with Zoning Code. The land use and associated development conform to the permitted use provisions and development standards of this zoning code and are consistent with this code and any applicable specific plan.

As previously mentioned, the Glenwood Specific Plan permits the development of ADUs. The ADU with the attached garage is compliant with the minimum required setbacks, interior dimensions (20’ by 20’), and lot coverage as set forth in the Glenwood Specific Plan and AVMC 15.14.080, except for the overall building height. The proposed 27’ tall ADU exceeds the Code required 25’ height limit (AVMC 15.14.080(H)(2)(d)). The Applicant is requesting a 2’ increase in the overall building height to accommodate a garage ceiling height of 11.55’. The property owners are professional stunt car drivers, and they are requesting a higher garage ceiling to install vehicle lifts for additional storage and security. While the proposed building height is taller than 25’, it will remain shorter than the existing primary residence, which conforms with the Glennwood Specific Plan allowed maximum height of 35’. As the property is located at the end of the street, with the ADU positioned against a non-residential property and away from other neighboring residential properties, most of the building will be screened by the existing residence, except for the front facade. Also, the proposed ADU matches the architectural style, color, and material of the primary residence. The proposed ADU complies with the Glenwood Specific Plan in that the entry is oriented towards the street, front setback is consistent with the primary residence, balcony defuses direct effect of sunlight to the lower floor, and includes roofline variations and facade articulations, and covered outdoor spaces to reduce the apparent mass. For these reasons, the proposed ADU is consistent with the zoning code and the Glenwood Specific Plan and therefore, this finding can be made.

3. Compliance with CEQA. Processing and approval of the permit application are in compliance with the requirements of the California Environmental Quality Act.

The proposed use is categorically exempt from the California Environmental Quality Act (CEQA) Guidelines (New Construction of Small Structures, Section 15303) as the proposal consists of the construction of small accessory structures, and therefore, this finding can be made.

4. Surrounding Uses. Approval of the application will not create conditions materially detrimental to the public health, safety and general welfare or injurious to or incompatible with other properties or land uses in the vicinity.

As discussed in Finding No. 2 above, the proposed ADU will be compatible with the surrounding uses as it will be positioned against a non-residential property and away from other neighboring residential properties; matches the primary residence in orientation, materials, architectural style, and color; and includes design elements to visually break the mass and scale of the building. Thus, the 2’ increase to the overall height will not create conditions materially detrimental to adjacent properties. In addition to the 2’ building height increase, the Applicant is requesting to deviate from the following window regulation set forth in AVMC 15.14.080(I)(7)(E): all windows located less than 30’ from a property line that is not a public right-of-way must utilize obscure glass. The intent of this regulation is to

minimize privacy impact on other properties. The Applicant is requesting to use non-obscure glass for all windows, except for bathroom windows. The windows located at the front facade face a public street and this regulation does not apply. The windows located along the south side facade faces a row of trees in front of a parking lot of the Church of Jesus Christ of Latter-day Saints. The windows located along the north side façade faces the existing primary residence. The windows to the rear facade face a slope. Due to the location of the ADU, none of the proposed windows will cause privacy impacts to adjacent properties. Therefore, the proposed 2' increase in overall building height and the use of non-obscure windows will not cause materially detrimental impacts to surrounding properties and this finding can be made.

Public Notice:

On January 16, 2025, a public notice was published in the Laguna Niguel News and mailed to all property owners within 300' of the subject site. No public comments were received in response.

Attachments:

1. Resolution

2. Proposed Plans

3. Applicant's Letter
   3.1. Letter from AVCA

4. Presentation

RESOLUTION NO. 2025- ____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF ALISO VIEJO, CALIFORNIA, APPROVING A CONDITIONAL USE PERMIT TO CONSTRUCT A 748 SQUARE FOOT ACCESSORY DWELLING UNIT WITH A 668 SQUARE FOOT ATTACHED GARAGE THAT EXCEEDS THE HEIGHT LIMIT OF 25 FEET (27 FEET PROPOSED) AT 25 ALISAL COURT AND FINDING THE PROJECT CATEGORICALLY EXEMPT FROM CEQA (USE-2024-00012)

WHEREAS, on December 4, 2024, the Applicant, Bob Bunyan, representing Samuel Hubinette, submitted an application for a request to construct an accessory dwelling unit with an attached garage that exceeds the height limit of 25 feet (27 feet proposed) at 25 Alisal Court ("Project"); and

WHEREAS, on January 16, 2025, a public notice of the public hearing was published in the Laguna Niguel News and mailed to all property owners within 300 feet of the subject site; and

WHEREAS, on February 5, 2025, the City Council held a duly noticed public hearing as prescribed by law and considered public testimony and evidence and recommendations presented by staff in the agenda report and oral presentation; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution have occurred.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF ALISO VIEJO, DOES HEREBY RESOLVE, DECLARE, DETERMINE AND ORDER AS FOLLOWS:

Section 1: **Determination of Recitals.** The City Council hereby finds and determines that all the recitals set forth above are true and correct. The above recitals are hereby incorporated as substantive findings of this Resolution.

Section 2: **Approval of Project and Findings for Conditional Use Permit.** In accordance with AVMC 15.74.040(D), the City Council hereby makes the following findings of fact and approves a Conditional Use Permit (USE-2024-00012) for the request to construct an accessory dwelling unit that exceeds the height limit of 25 feet (27 feet proposed), subject to the conditions set forth in Exhibit "A" and project plans set forth in Exhibit "B", which are both attached hereto and incorporated herein by reference.

1. Consistency with General Plan. The land use is consistent with the general plan and any applicable specific plan. In 2004, the Glenwood Specific Plan was adopted, consistent with the General Plan, for the development of the larger Aliso Viejo Resort and Golf Club. The Glenwood Specific Plan permits, among other developments, single-family dwellings with ADUs. Additionally, AVMC 15.14.080 deems ADU developments consistent with the allowable density for the lot.

Attachment 1

2. Consistency with Zoning Code. The land use and associated development conform to the permitted use provisions and development standards of this zoning code and are consistent with this code and any applicable specific plan. The Glenwood Specific Plan permits the development of ADUs. The ADU with the attached garage is compliant with the minimum required setbacks, interior dimensions (20' by 20'), and lot coverage as set forth in the Glenwood Specific Plan and AVMC 15.14.080, except for the overall building height. The proposed 27' tall ADU exceeds the Code required 25' height limit (AVMC 15.14.080(H)(2)(d)). The Applicant is requesting a 2' increase in the overall building height to accommodate a garage ceiling height of 11.55'. The property owners are professional stunt car drivers, and they are requesting a higher garage ceiling to install vehicle lifts for additional storage and security. While the proposed building height is taller than 25', it will remain shorter than the existing primary residence, which conforms with the Glenwood Specific Plan allowed maximum height of 35'. As the property is located at the end of the street, with the ADU positioned against a non-residential property and away from other neighboring residential properties, most of the building will be screened by the existing residence, except for the front facade. Also, the proposed ADU matches the architectural style, color, and material of the primary residence. The proposed ADU complies with the Glenwood Specific Plan in that the entry is oriented towards the street, front setback is consistent with the primary residence, balcony defuses direct effect of sunlight to the lower floor, and includes roofline variations and facade articulations, and covered outdoor spaces to reduce the apparent mass.

3. Compliance with CEQA. Processing and approval of the permit application are in compliance with the requirements of the California Environmental Quality Act. The proposed use is categorically exempt from the California Environmental Quality Act (CEQA) Guidelines (New Construction of Small Structures, Section 15303) as the proposal consists of the construction of small accessory structures.

4. Surrounding Uses. Approval of the application will not create conditions materially detrimental to the public health, safety and general welfare or injurious to or incompatible with other properties or land uses in the vicinity. The proposed ADU will be compatible with the surrounding uses as it will be positioned against a non-residential property and away from other neighboring residential properties; matches the primary residence in orientation, materials, architectural style, and color; and includes design elements to visually break the mass and scale of the building. Thus, the 2' increase to the overall height will not create conditions materially detrimental to adjacent properties. In addition to the 2' building height increase, the Applicant is requesting to deviate from the following window regulation set forth in AVMC 15.14.080(I)(7)(E): all windows located less than 30' from a property line that is not a public right-of-way must utilize obscure glass. The intent of this regulation is to minimize privacy impact on other properties. The Applicant is requesting to use non-

obscure glass for all windows, except for bathroom windows. The windows located at the front facade face a public street and this regulation does not apply. The windows located along the south side facade face a row of trees in front of a parking lot of the Church of Jesus Christ of Latter-day Saints. The windows located along the north side façade face the existing primary residence. The windows to the rear façade face a slope. Due to the location of the ADU, none of the proposed windows will cause privacy impacts to adjacent properties.

Section 3: **Filing of Notice of Exemption.** The City Council hereby authorizes and directs staff to prepare, execute and file with the Orange County Clerk a Notice of Exemption for the proposed project.

Section 4: **Location of Documents.** The administrative record for the Project is maintained at City Hall located at 12 Journey, Suite 100, Aliso Viejo, CA 92656. The custodian of records is the City Clerk.

PASSED, APPROVED AND ADOPTED this 5th day of February 2025.

_____
Tiffany Ackley
Mayor

APPROVED AS TO FORM:

_____
Scott C. Smith, City Attorney

ATTEST:

_____
Janet Martinez, City Clerk

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss.
CITY OF ALISO VIEJO)

I, JANET MARTINEZ, City Clerk of the City of Aliso Viejo, California, DO HEREBY CERTIFY that foregoing Resolution No. 2025-___ was duly passed and adopted by the City Council of the City of Aliso Viejo at their regular meeting held on the 5th day of February, 2025, by the following roll call vote, to wit:

AYES:

NOES:

ABSENT:

_____
JANET MARTINEZ
CITY CLERK

(SEAL)

EXHIBIT "A"
Conditions of Approval
25 Alisal Court (USE-2024-00012)

1. Project Description. This approval permits the construction of a 27' tall, 748 square foot accessory dwelling unit ("ADU") with a 668 square foot attached garage. The ADU shall provide permanent provisions for living, sleeping, eating, cooking, and sanitation.

2. Parking. One off-street parking space is required for the ADU.

3. Setback. The following minimum setbacks shall apply: 10' front and 4' side- and rear- setbacks.

4. Lot Coverage. Total lot coverage of the lot shall not exceed 75 percent.

5. Fire Sprinklers. Fire sprinklers approved by Orange County Fire Authority (OCFA), are required in an ADU if sprinklers are required in the primary residence when constructed.

6. Rental Term. The ADU shall not be rented for a term that is shorter than 30 consecutive days.

7. No Separate Conveyance. An ADU or JADU may be rented, but, except as otherwise provided in Government Code Section 66341, no ADU or JADU may be sold or otherwise conveyed separately from the lot and the primary dwelling (in the case of a single-family lot) or from the lot and all of the dwellings (in the case of a multifamily lot).

8. Development Per Approved Plans. This approval constitutes a precise plan for the location and design of uses, structures, features, and materials submitted with this application. Development shall occur substantially as shown on the plans approved by this Project and set forth in Exhibit B, subject to any modifications imposed by the conditions of approval herein, as confirmed by the Director of Community Development. Any land use, construction, or improvement not specifically approved by this conditional use permit and site development permit is not permitted and must be addressed in a separate and subsequent application and review. Relocation, alteration or addition to any use, structure, feature or material not specifically approved shall require an amendment to the approved plans unless the Director of Community Development determines such modifications are minor and consistent with the spirit and intent of the original approving action, and that the action would have been the same for the modifications as for the approved plans. The Director of Community Development may approve such minor modifications in accordance with AVMC Section 15.74.110.

9. Payments of Fees. The Applicant and Applicant's successors in interest shall be responsible for payment of all applicable fees along with reimbursement for all City expenses in ensuring compliance with these conditions.

10. Compliance with Conditions. The Applicant shall be fully responsible for knowing and complying with all conditions of approval, including making conditions known to City staff for future governmental permits or actions on the project site. Failure to abide by and faithfully comply with any and all conditions attached to granting these permits may constitute grounds for revocation of the permit(s) in accordance with AVMC Section 15.74.120. This Resolution and Conditions of Approval shall be incorporated into building plans to all applicable reviewing agencies or authorities.

11. Compliance with City Codes. The approved project shall comply with all applicable provisions of the municipal code, including but not limited to provisions of building codes, Glenwood Specific Plan, and any conditions imposed as part of the approval process.

12. Fire Safety and Prevention. The Applicant is responsible for compliance with all applicable fire prevention standards and permits.

13. Materials and Colors. The materials and colors of the exterior walls and roof must match those of the primary dwelling.

14. Roof Slope. The roof slope must match that of the dominant roof slope of the primary dwelling. The dominant roof slope is the slope shared by the largest portion of the roof.

15. Exterior Lighting. The exterior lighting must be designed or shielded to direct lights downward or as otherwise required by the building or fire code.

16. Exterior Entrance. The ADU must have an independent exterior entrance, apart from that of the primary dwelling.

17. Placement of Mechanical Equipment. Mechanical equipment may not be placed within four feet of an adjacent property.

18. Indemnification. The Applicant shall indemnify, protect, defend, and hold the city, and/or any of its officials (appointed or elected), officers, employees, agents, departments, agencies, and instrumentalities thereof, harmless from any and all claims, demands, lawsuits, writs of mandamus, and other actions and proceedings (whether legal, equitable, declaratory, administrative or adjudicatory in nature), and alternative dispute resolution procedures (including, but not limited to arbitrations, mediations, and other such procedures), judgments, orders, and decisions (collectively 'Actions'), brought against the city, and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof, that

challenge, attack, or seek to modify, set aside, void, or annul, any action of, or any permit or approval issued by the city and/or any of its officials, officers, employees, agents, departments, agencies, and instrumentalities thereof (including actions approved by the voters of the city) for or concerning the project, whether such Actions are brought under the Ralph M. Brown Act, California Environmental Quality Act, Planning and Zoning Law, Subdivision Map Act, Community Redevelopment Law, Code of Civil Procedure Sections 1085 or 1094.5, or any other federal, state, or local constitution, statute, law, ordinance, charter, rule, regulation, or any decision of a court of competent jurisdiction. It is expressly agreed the city shall have the right to approve, which approval will not be unreasonably withheld, legal counsel providing the city's defense, and that Applicant shall reimburse city for any costs and expenses directly and necessarily incurred by the city in the course of the defense. The city shall promptly notify the Applicant of any action brought, and city shall cooperate with the Applicant in defense of the action.

19. Actions by City Council. Decisions by the city council are final and shall become effective immediately except as otherwise provided in the approving action and except for actions by ordinance.

20. Expiration. This approval shall expire and be of no further force or effect if:
    a. Expiration of Period of Validity. The permit is not established within two years of the permit's effective date, or such other time period designated by the permit approval, by state law, or by this code; or
    b. Abandonment. After establishment, the use or activity for which the permit was approved is discontinued or abandoned for a period of one year.

21. Time Extensions. Upon application before expiration of the period of validity, the original decision-making authority may grant or conditionally grant an extension to the period of validity for up to one year per extension if it finds that such an extension is justified by the circumstances of the original findings for the project can still be made with, if necessary, the imposition of conditions not originally imposed on the project. The filing of an application for extension shall stay expiration of the permit until action is taken on the time extension by the decision-making authority. No more than two one-year extensions may be granted or conditionally granted.

22. Revocation. This approval may be revoked by the original decision-making authority pursuant to the provisions of AVMC 15.74.120.

HUBINETTE RESIDENCE - 25 Alisal Court

PROJECT DIRECTORY

OWNER:
SAM HUBINETTE
25 Alisal Court
Aliso Viejo, CA 92656
(714) 924-5100 Phone

ARCHITECT:
AVALON ARCHITECTURAL, INC.
Jeff Anderson, Project Architect
18006 Sky Park Circle, Suite 100
Irvine, CA 92614
(949) 640-0606 Phone

STRUCTURAL ENGINEER:
ESI/FME, INC.
Scott Ross
1800 E 16th Street Suite B
Santa Ana, CA 92701
(657) 335-4107 Phone

ENERGY ANALYSIS:
ADVANCED TITLE-24
Efrain Olivas
2000 E. Chapman Avenue, Suite 202
Fullerton, CA 92831
714-525-9824 Phone

CODE INFORMATION

OCCUPANCY GROUPS:
R-3 (SINGLE FAMILY RESIDENCE)
U (PRIVATE GARAGE - ACCESSORY USE)

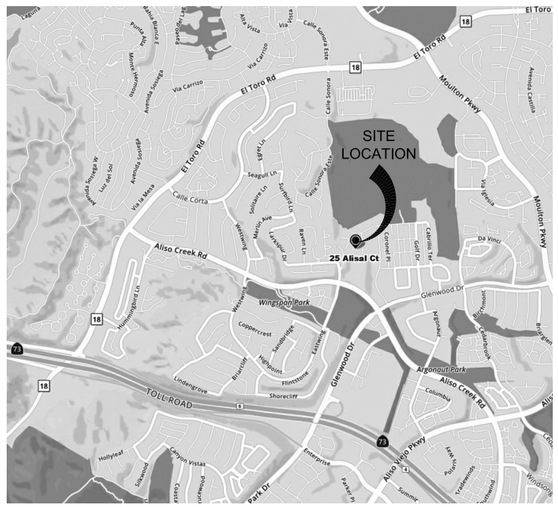
CONSTRUCTION TYPE: V-B

APPLICABLE CODES

ALL CONSTRUCTION SHALL COMPLY WITH THE 2022 CRC, CMC, CPC, 2022 TITLE 24 ENERGY REGULATIONS AND 2022 CGBC

FIRE SPRINKLERS (DEFERRED SUBMITTAL)

FIRE SPRINKLERS WILL BE PROVIDED FOR ADU, INCLUDING GARAGE AND STORAGE AREAS (UNDER SEPARATE PERMIT)



VICINITY MAP

SCALE: NTS

PROJECT SHEET INDEX

A0.0 TITLE SHEET, PROJECT TABULATIONS, SHEET INDEX, SITE PLAN & VICINITY MAP

ARCHITECTURAL
A0.1 GENERAL CONDITIONS
A0.2 GENERAL NOTES & NPDES FORM
A0.3 OUTLINE SPECIFICATIONS & HOA APPROVAL LETTER
A1.0 SLAB PLAN
A1.1 FIRST FLOOR PLAN
A1.2 SECOND FLOOR PLAN
A1.3 ROOF PLAN
A2.0 ELEVATIONS
A2.1 ELEVATIONS & DETAILS
A2.2 SECTIONS
A3.0 DETAILS & DOOR / WINDOW SCHEDULE

STRUCTURAL
SGN STRUCTURAL GENERAL NOTES
S1 FOUNDATION PLAN
S2 FIRST LEVEL FRAMING PLAN
S3 SECOND LEVEL AND ROOF FRAMING PLAN
FD1 FOUNDATION DETAILS
SD1 STRUCTURAL DETAILS
SD2 STRUCTURAL DETAILS
HFX1 HARDY FRAME DETAILS
HFX2 HARDY FRAME DETAILS

TITLE 24 ENERGY
T24.1 TITLE 24
T24.2 TITLE 24

PROJECT TABULATIONS

Lot size: 9,300 sf
Floor Area Ratio: 0.95 maximum allowed; 0.36 existing; 0.58 proposed
Lot Coverage: 56% maximum allowed; 26% existing; 31% proposed
Building Height: 35' maximum above pad; 26' proposed (Existing building height to remain)
Parking Required: 2 Covered Spaces plus 0.2 Guest Space (on street)
Parking Provided: 5 Covered Spaces plus 1 Guest Space (on street)

Existing Enclosed Living Area:

Ground floor level:	1,679 sf
Upper floor level:	1,578 sf
Total enclosed area:	3,257 sf
Garage and Storage area:	645 sf
Sauna:	60 sf

Proposed ADU Addition Enclosed Living Area:

Ground floor level:	0 sf
Upper floor level:	748 sf
Total enclosed area:	748 sf
Garage and Storage area:	668 sf
Covered area:	350 sf

Total Proposed Enclosed Living Area:

Ground floor level:	1,679 sf
Upper floor level:	2,326 sf
Total enclosed area:	4,005 sf
Garage and Storage area:	1,313 sf
Sauna:	60 sf

CONSTRUCTION NOTES:
Provide portable toilet and hand wash station per OSHA regulations or construction workers will be able to use the restroom inside the building.

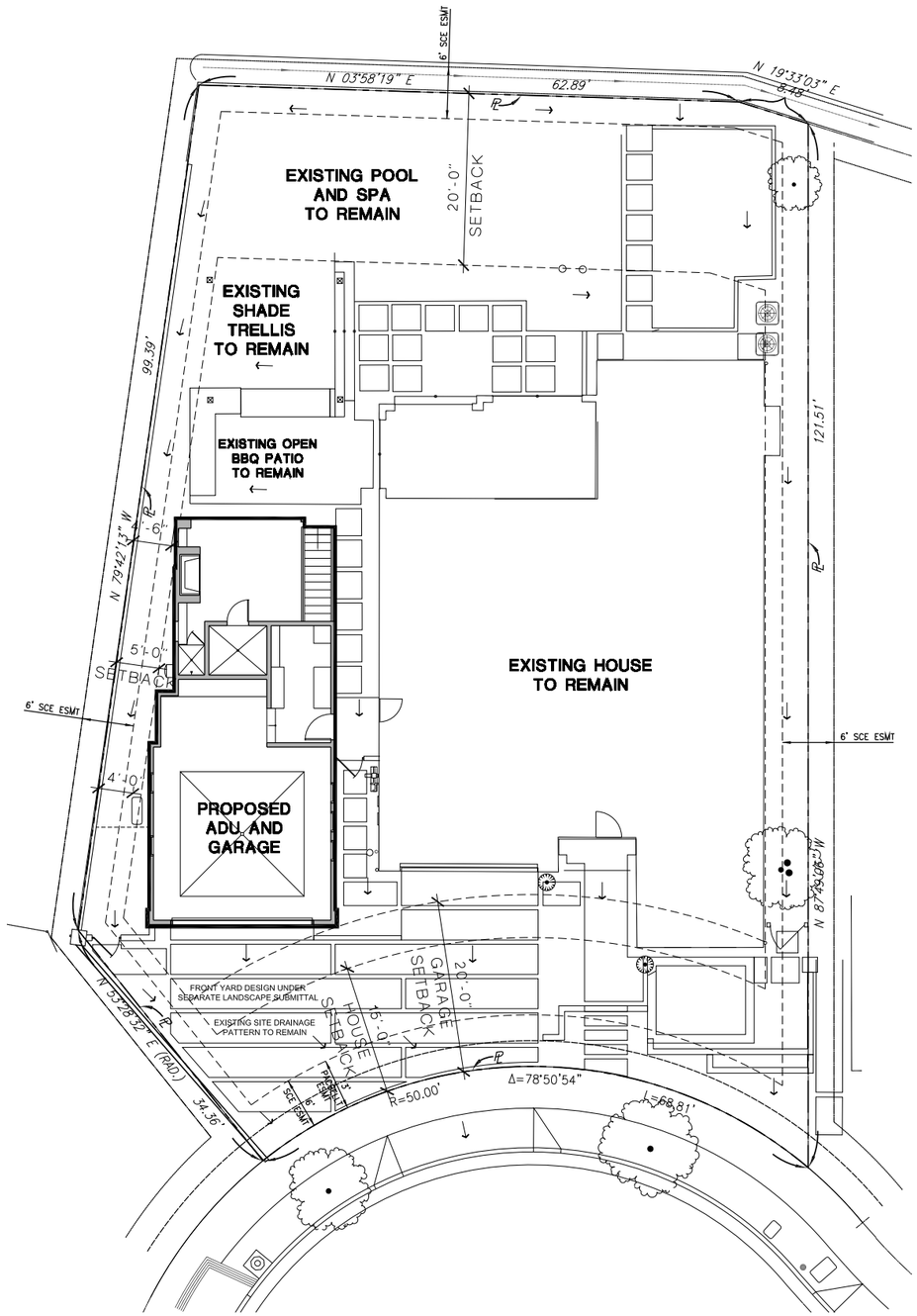
65% of the construction and demolition debris shall be recycled, unless self-hauled by the contractor of the project, the use of any waste hauler other than the City's franchised hauler, CR&R Environmental Service, to haul construction debris is prohibited.

The discharge of pollutants to any storm drainage system is prohibited. No solid waste, petroleum byproducts, soil particulates, construction waste materials or wastewater generated from construction site or by construction activities shall be placed, conveyed or discharged into the street, gutter or storm drain system.

Street address for the residential addition will be the same as the existing home. No additional address number will be mounted on the addition.

The ADU will have new, separate utility connections per AVMC 15.14.080(J)(2)(C). Provide gas line with a minimum capacity of 200,000 BTU for new tankless water heater.

New address for ADU is "25 Alisal Court, Unit B." See east elevation on sheet A2.0.



SITE PLAN

SCALE : 1/8" = 1'-0"

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REVISIONS

LICENSED ARCHITECT JEFFREY G. ANDERSON C-29294 RENEWAL 4/30/25 STATE OF CALIFORNIA

HUBINETTE RESIDENCE
ADU ADDITION
25 ALISAL COURT
ALISO VIEJO, CA 92656

AVALON ARCHITECTURAL, INC.
18006 SKY PARK CIRCLE, SUITE 100
IRVINE, CALIFORNIA 92614
PHONE: 949-640-0606 WEBSITE: www.avalonarchitectural.com

DRAWN	
CHECKED	
DATE	12-16-24
SCALE	1/8" : 1'-0"
JOB NO:	

SHEET
A0.0

GENERAL CONDITIONS:

Revision Date: 05-28-20

See also General Notes and Outline Specifications.

1.0 GENERAL CONDITIONS FOR CONSTRUCTION:

1.1 The Owner's consultants shall provide the following services:

1.1.1 Geotechnical Engineering evaluation, soils testing, soils report and site inspections as required.

1.1.2 Structural Engineering drawings, details and calculations including foundation, and site inspections as required.

1.1.3 Civil Engineering drawings including site boundary and certified topographic survey, site drainage and runoff control plan, hydrology study, precise grading plan, erosion control plan, and horizontal control plan.

1.1.4 Landscape and site improvement specifications including planting and hardscape plan, safety gates, parking area and streetscape, irrigation plan and permits.

1.1.5 Specialty Electrical Engineering drawings and calculations including 'Smart home system' design including alarms, security monitors, sound and entertainment system, communications, computer network, lighting programs.

1.1.6 Site construction inspections by engineering consultants, as required.

1.1.7 Kitchen design consultant, including cabinet layout, details, lighting and appliance specifications, and coordination with all other consultants affected by the work.

1.1.8 The Owner is to supply interior designer services and window coverings consultant as required and any other consultant services needed for proper completion of the Work.

1.2 The General Contractor shall provide detailed design-build or shop drawings for submittal to the applicable governmental agencies for construction permit to include the following systems:

1.2.1 Plumbing and venting drawings and layout, including roof, deck and site drainage / filtered manifold systems, in coordination with the Civil Engineer and Soils Engineer and required permits.

1.2.2 Structural fabrication shop drawings, in coordination with the Structural Engineer.

1.2.3 Fire sprinkler engineering shop drawings, calculations and layout, providing separate permits from governmental agencies as required.

1.2.4 HVAC Engineering drawings and specifications ventilation system, air conditioning system including shop drawings and calculations for required permits.

1.2.5 Electrical panels and circuiting drawings, layout and calculations, including coordination with "Smart-home" central system sensors, alarms and all owner-requested features, and required permits.

1.2.6 Swimming pool, spa and water feature drawings, including fencing, pumps, filters heating and solar heating systems (if applicable), providing construction documents and separate permits from governmental agencies as required.

1.2.7 Site construction inspections by engineering consultants, as required.

1.2.8 All products and materials and any substitutions used in this project shall provide California ICBO certification test numbers for local Building Department inspection and review.

1.3 The Architect shall endeavor to prepare a Builder's Set of Construction Documents that will be sufficient to obtain the approval of governmental authorities. These documents are intended for use only by knowledgeable, licensed contractors familiar with applicable building codes and other governmental requirements, and able and willing to provide workmanship and materials of high quality. All materials and products required to complete the Project will not necessarily be described. The Construction Documents, Specifications and General Notes delineate and describe only locations, dimensions, types of materials and general methods of assembling or fastening. They are not intended to specify particular products or other methods of application, except where specifically noted or required by governmental authorities. The Architect assumes no responsibility for the selection, fabrication or installation of any specific material or product.

1.4 The Architect shall review architectural plan check corrections from agencies and make modifications to Construction Documents as needed for final plan review approval. Owner and Owner's consultants shall be responsible for satisfying the requirements of governmental authorities for their respective work.

1.5 The Architect shall coordinate with Owner's licensed structural, mechanical, electrical engineering and other consultants on behalf of the Owner for the purpose of utilizing the services and expertise necessary to produce the Project's Construction Documents; but the Owner acknowledges that the Architect is not licensed or otherwise authorized to perform such engineering services, and that Architect's utilization of these consultants does not imply technical knowledge regarding their fields of expertise. The Owner shall have the right to disapprove of the Architect's selection of said consultants, provided that such disapproval is not unreasonable or arbitrary. In no event, however, will the Architect have any fiduciary or legal liability for any professional errors or omissions committed by these consultants; and the Architect's responsibility concerning the consultants shall be limited to providing appropriate coordination with their services. Architect and General Contractor shall mutually agree on design/build consultants.

1.6 The Architect's responsibility to provide Basic Services commences with the award of this contract and terminates after government plan check approval.

1.7 The Architect shall at all times have access to the Work at any phase of preparation or progress.

1.8 The Architect will be available for consultation to answer reasonable inquiries regarding clarification of the architectural construction documents.

1.9 Visits to the site at the Owner's request with the Owner or Owner's representative during construction will be to ascertain if the Work is proceeding in accordance with the visual architectural design concept of the project. However the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

1.10 The architect shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, since these are solely the Contractor's responsibility under the contract for Construction. The architect shall not be responsible for the Contractors schedules or failure to carry out the work in accordance with the Contract Documents. The Architect shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, or their agents or employees, or of any other persons performing portions of the Work.

1.11 If the Owner, Owner's representative or contractor authorizes deviations, recorded, or unrecorded, from the documents prepared by the Architect without the written agreement of the Architect, the Owner shall indemnify and hold harmless the Architect, Architects consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorney's fees arising out of or resulting in whole or in part from such deviations, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

1.12 If due to an error in the Architect's documents, a required item or component of the Project is omitted from the Architect's construction documents, the Architect shall not be responsible for paying the cost required to add such item or component to the extent that such item or component would have been required and included in the original construction documents. In no event will the Architect be responsible for any cost or expense that provides betterment or upgrades or enhances the value of the Project.

2.0 EXCLUDED SERVICES:

2.1 The Architect will not provide any soils engineering or other geotechnical services whatsoever, nor otherwise have any liability or responsibility for the Project's soils, subterranean water and/or subsurface conditions.

2.2 The Architect will not provide any hazardous waste or toxic substances engineering or otherwise provide any services concerning compliance with any federal or state environmental or pollution laws, nor test or investigate any product for environmental or pollution hazards.

2.3 In the event the Architect or any other party encounters any hazardous or toxic materials, or should it become known to the Architect that such materials may be present on or about the job site or any adjacent areas that may affect the performance of the Architect's services, the Architect may, at its option and without liability for consequential or any other damages, suspend performance of its services under this Agreement until the Client retains appropriate consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants the job site is in full compliance with all applicable laws and regulations. Owner agrees to indemnify the Architect and consultants from and against all costs including attorney's fees in any way connected with any hazardous or toxic materials on or affecting the Project site.

2.4 The Architect will not provide any legal, accounting or insurance counseling services whatsoever, nor otherwise have any responsibility for these aspects of the Project.

2.5 The Architect will not be responsible for the accuracy of data and/or other design work provided to Architect by Owner, or other design professionals, or other reasonably reliable sources. Architect will grant an opinion if other design work is observed to be not compatible with industry standards.

2.6 The Architect will not guarantee construction cost or other estimates.

2.7 The Architect will not enforce or otherwise be responsible for warranties provided by the Project's contractors or material and equipment suppliers.

2.8 The Architect will not be responsible for shoring for demolition or construction.

2.9 The Architect will not be responsible for the impact of contractor substitutions or resulting modifications required due to manufacturer's specifications.

3.0 THE OWNER'S RESPONSIBILITIES:

3.1 The Owner shall indemnify and defend the Architect and its principals, employees and subconsultants to the fullest extent allowed by law from and against any and all liability, losses, claims and costs of any kind whatsoever caused or contributed to by the failure by or on behalf of the Owner to provide complete and accurate information, tests, inspections, safety programs, reports or surveys required, even in the event of an indemnity's actual or alleged active negligence or design defects; provided, however, that this indemnification shall not apply to any indemnity's sole negligence or willful misconduct.

3.2 The Owner shall furnish the services of any consultants not called for in these documents, but nevertheless reasonably required for the success of the Project.

3.3 The Owner shall not request from the Architect or the consultants any certification which would require or indicate that the Architect or the consultants have information which in truth they do not have, or have provided or will provide services beyond the scope of work.

3.4 The Owner agrees that the Architect is not responsible for damages arising directly or indirectly from any delays for causes beyond the Architect's control.

4.0 THE USE OF ARCHITECT'S DRAWINGS AND SPECIFICATIONS:

4.1 The Drawings, Specifications and other documents prepared by the Architect for this Project are instruments of the Architect's service for use solely with respect to this Project and, unless otherwise provided, the Architect shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including the copyright. The Owner shall be permitted to retain copies, including reproducible copies, of the Architect's Drawings, Specifications and other documents for information and reference in connection with Owner's use and occupancy of the Project upon completion of construction documents and associated full payment.

4.2 The Owner shall not use or authorize any other person to use the Drawings, Specifications, electronic data and other instruments of service on other projects, for additions to the Project or for completion of this Project by others, except by agreement in writing and with appropriate compensation to the Architect. Use or reuse without the Architect's professional involvement will be at the Owner's sole risk. The Owner shall indemnify and hold harmless the Architect, the Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of unauthorized reuse or modification of Drawings, Specifications, electronic data or other instruments of service.

4.3 Submission or distribution of documents to meet official regulatory requirements for similar purposes in connection with the Project is not to be construed as publication in derogation of the Architect's reserved rights.

5.0 CLAIMS AND DISPUTES:

5.1 If at any time either party should feel that the other has materially breached their responsibility under these documents, then it shall notify that party in writing setting forth clearly what must be done to cure that breach; and thereafter the party so notified shall have 14 calendar days to take the prescribed action.

5.2 The parties shall endeavor to settle disputes by mediation in accordance with the Construction Industry Mediation Rules of JAMS currently in effect. A demand for mediation shall be filed in writing with the other party. A demand for mediation shall be made within a reasonable time after the claim, dispute or other matter in question has arisen. In no event shall the demand for mediation be made after the date when the institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statue of repose or limitations. Before litigation is commenced mediation is mandatory and must be conducted. Mediation may be conducted by JAMS or another mutually acceptable mediator with construction industry experience. The Owner and Architect further agree to include a similar mediation provision in all agreements with contractors and consultants retained for the Project.

5.3 The Owner shall make no claim for professional negligence, either directly or by way of a cross complaint against the Architect unless the Owner has first provided the Architect with a written certification executed by an independent consultant currently practicing in the same discipline as the Architect and licensed in the State of California. This certification shall: a) contain the name and license number of the certifier; b) specify the acts or omissions that the certifier contends are not in conformance with the standard of care for a consultant performing professional services under similar circumstances; and c) state in detail the basis for the certifier's opinion that such acts or omissions do not conform to the standard of care. This certificate shall be provided to the Architect not less than thirty (30) calendar days prior to the presentation of any claim or the institution of any mediation or judicial proceeding. This Certificate of Merit clause will take precedence over any existing state law in force at the time of the claim or demand for mediation.

5.4 In the event of any litigation arising from or related to these documents or the services provided, the prevailing party shall be entitled to recover from the non-prevailing party all reasonable costs incurred, including staff time, court costs, attorneys' fees and all other related expenses in such litigation. In the event of a non-adjudicative settlement of litigation between the parties or a resolution of dispute by mediation, the term "prevailing party" shall be determined by that same process.

5.5 It is intended by the parties to these documents that the Architect's services in connection with the Project shall not subject the Architect's individual employees, officers or directors to any personal legal exposure for the risks associated with the Project. Therefore, and notwithstanding anything to the contrary contained herein, the Owner agrees that as the Owner's sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against the Architect, a California Corporation, and not against any of the Architect's individual employees, officers or directors.

5.6 Nothing contained in these documents shall create a contractual relationship with or a cause of action in favor of a third party against either the Owner or Architect. The Architect's services under these documents are being performed solely for the Owner's benefit, and no other party or entity shall have any claim against the Architect because of this Agreement or the performance or nonperformance of services hereunder.

5.7 The Architect shall endeavor that all of the services provided by or on its behalf pursuant these documents will be performed with reasonable care, skill and diligence in accordance with generally and currently accepted design professional principles and practices. This warranty is in lieu of all other warranties, either express or implied. Further, it is understood that when used in conjunction with the providing of services pursuant to these documents, such terms as "certify," "warrant," "confirm," "assure," or the like do not constitute a guarantee, but rather a representation based on the Architect's professional opinion or judgment.

5.8 The Architect's responsibility concerning those consultants retained by the Owner or by the Architect on behalf of the Owner shall be limited to providing appropriate coordination with their services; and in no event will the Architect have any legal liability for any professional errors or omissions committed by or on behalf of these consultants.

5.9 The Architect will be legally liable for only the design professional services provided pursuant to these documents, and only pursuant to the terms and conditions of these documents. In particular, and without limitation, the Architect shall not be responsible for delays beyond its reasonable control, for inaccurate information provided to it by the Owner or other reasonably reliable sources, for site conditions of which it was not informed, for the specification of products or equipment for purposes consistent with the manufacturer's published literature, for the Owner's finish materials and equipment decisions, for implementing the Owner's lawful design decisions, for the actions or inaction or subjective interpretations of governmental agencies, or for any failures of the Project's contractors and material suppliers.

5.10 In light of the limited nature of the Architect's involvement with the Project's overall planning and execution, the Architect's limited ability to affect the risks inherent in the Project, and the disparity between the Architect's fee and the potential liability for those risks taken on the Owner's behalf, and in consideration for the Architect's undertaking of the obligations related to these documents, the Owner shall indemnify the Architect, consultants, and their respective principals and employees, to the fullest extent allowed by law concerning any and all claims, liability and/or losses related to the Project even in situations involving actual or alleged "active negligence" or "design defects"; provided, however, that this indemnification shall not apply to any indemnities sole negligence or willful misconduct found by a Court of competent jurisdiction. Furthermore, the Owner agrees to limit the liability concerning the Project of the Architect to the fullest extent allowed by law to an amount equal to one-hundred percent (100%) of the fee for the services performed directly by the Architect pursuant to this contract and limited to the extent of Architect's Professional Liability Insurance coverage available. Owner has the option to negotiate an increase in fees to provide a higher limit of liability.

5.11 The Owner acknowledges that the Project is of such magnitude and complexity that changes to the construction documents will inevitably be required as a result of Owner revisions and omissions, ambiguities or inconsistencies in the Construction Documents, and that the Architect is relying upon the Owner to contract with a responsible contractor for sufficient pre-construction plan review and value engineering to minimize the impact of these changes. Therefore the Owner agrees to make no claim against the Architect or the consultants, with respect to any delay, consequential damage or payments to or claims by the Project's contractors as a result of or related to such changes.

6.0 SPECIAL GENERAL CONDITIONS:

6.1 In order to eliminate problems in construction and in use of, or interpretation of architect and design team's prepared documents by the Owner and/or Owner's representatives, the following Special General Conditions shall take precedence over any other provisions pertaining to the use of these construction documents. It is recognized that the design and construction of any structure requires that the architect and design team rely upon products manufactured and/or fabricated by others. Since the architect and design team specifies or implies the use of materials and products serving the purpose that manufacturers claim they will serve, and since the architect and design team does not fabricate, manufacture or install such materials:

It is the Contractor's responsibility to insure that all fabricated or manufactured products and equipment are installed as per manufacturer's specifications and with the supervision and inspection of the manufacturer's representative(s) or as required by the manufacturer. Manufacturer's requirements and specifications for installation are to take precedence over all others, drawn, written or implied.

6.2 The Contractor shall take full and final responsibility for constructing a final product of appropriate quality and serviceability consistent with the information and requirements contained in the Construction Documents or reasonably inferable therefore, and/or contained in the requirements of any governmental entity with jurisdiction over the project; and in this regard the Contractor shall take full responsibility for all construction means, methods, techniques, sequences or procedures including without limitation demolition, excavation and erection procedures; for safety precautions and programs in connection with the project; and `for the timeliness or quality of all of the work performed pursuant to these documents. In this regard, the Contractor shall indemnify to the fullest extent allowed by law the Owner and the Project's design team, and their respective officers, directors, principals, consultants and employees, of and from any and all claims, liability and/or losses which are caused or contributed to by the failure of the Contractor to honor these obligations, including even liability claims and/or losses involving any indemnities actual or alleged active negligence or design defects, and excluding only any indemnity's sole negligence or willful misconduct.

6.3 Contractor acknowledges that it carefully reviewed the Construction Documents before commencing construction and Contractor assumes the risk, including without limitation the risk of damage or loss due to delay and/or construction cost increases, of any and all errors and omissions in the Construction Documents which were or should have been discernible from a careful review of those documents by a knowledgeable Contractor, but which nevertheless the Contractor failed for any reason to bring to the Owner's and Architect's attention before commencing construction; and the Contractor agrees to make no claim for or concerning such errors and omissions against any party including without limitation the Owner and the Project's design team.

6.4 The Contractor acknowledges that presently undetected errors and omission in the Construction Documents could result in increased construction costs and in disruption to and delay in the construction process. As the work progresses, the Contractor shall carefully review the Construction Documents so as to identify all errors and omissions in sufficient time to avoid or mitigate such cost increases, disruption and delay; and Contractor fully assumes the risk of such cost increases, disruption and delay, and shall make no claim for or concerning such cost increases, disruption and delay against any party including without limitation the Owner and the Project's design team.

6.5 The Contractor shall be responsible for all Owner approved materials and equipment substitutions or changes.

6.6 The Contractor shall purchase and maintain during the course of the Project's construction builder's risk "all risk" insurance in an amount equal to the value of the work, which will name the Owner, the Architect and the Architect's subconsultants as additional insureds as their interests may appear.

6.7 The Contractor shall furnish all laboratory tests, inspections and reports that are required by the Contract Documents, governmental or quasi-governmental agencies or by law.

6.8 The Contractor shall provide an **Operation and maintenance manual.** Prior to final inspection, a manual, compact disc, web-based reference, or other acceptable media which includes all of the following shall be placed in the building:

a. Directions to owner or occupant that manual shall remain with the building throughout the life cycle of the structure.

b. Operation and maintenance instructions for the following:

1. Equipment and appliances, including water-saving devices and systems, HVAC system, water-heating systems and other major appliances and equipment.
2. Roof and yard drainage, including gutters and downspouts.
3. Space conditioning systems, including condensers and air filters.
4. Landscape irrigation systems.
5. Water reuse systems.

c. Information from local utility, water, and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.

d. Public transportation and/or carpool options available in the area.

e. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.

f. Information about water-conserving landscape and irrigation design and controllers which conserve water.

g. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.

h. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.

i. Information about state solar energy and incentive programs available.

j. A copy of all special inspection verifications required by the enforcing agency or code.

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GENERAL NOTES

Revision Date: 07-18-24

See also General Conditions and Outline Specifications.

GENERAL NOTES TO ARCHITECTURAL DRAWINGS:

1. The General Contractor designated on the Title Sheet has been involved in the creation of these documents, and in the coordination of consultants. The General Contractor is knowledgeable of this information. The intent of these drawings and notes is to serve as a builder's set of documents for the construction of the Architect's portion of the building only. The General Contractor shall refer to drawings and notes prepared by consulting Engineers for structural, mechanical, lighting, plumbing, electrical, fire protection, civil, geology, utilities and landscape. All drawings and notes provided by those consultants shall take precedence over architectural drawings.
2. All work shall conform to all applicable building codes, ordinances and regulations as adopted by local authorities having jurisdiction.
3. Dimensions on drawings are shown to centerline of columns and to face of concrete or face of studs at walls and partitions unless noted otherwise.
4. Do not scale drawings.
5. Structural, mechanical, electrical, plumbing, fire protection, civil and landscape drawings are supplemental to the architectural drawings. The Contractor shall review all plans and drawings and in the event of conflicting statements, insufficient information or errors the Contractor shall immediately notify the architect and obtain clarification before any work is bid and begun. Work installed where conflicting conditions exist shall be corrected at the contractor's expense.
6. Dimensions, details, notes and/or symbols that apply to one unit, apply to all units in like situations unless noted otherwise.
7. Details noted as "typical" shall apply in all like conditions unless specifically shown or noted otherwise. Where no specific detail is shown, the framing or construction shall be identical or similar to that indicated for like cases of construction in this project.
8. Whenever an article, device or piece of equipment is shown, indicated, or referred to on the drawings or in these notes in the singular number, such references apply to as many such articles as are required to complete the installation.
9. The General Contractor and all subcontractors shall verify all dimensions and conditions on the job site prior to beginning construction and shall report any discrepancies or unidentified conditions to the architect for resolution before any work is begun.
10. The Contractor shall be responsible for means, methods, techniques and procedures employed in the performance of work in, on, or about the job site; the contractor shall coordinate and verify all work performed by subcontractors.
11. All contractors and subcontractors performing work on or related to this project shall conduct their operations so that all employees are provided a safe place to work and the public is protected and shall comply with the "Occupational Safety and Health Act" of the U.S. Department of Labor and with any and all other applicable state and/or local safety regulations. The contractor agrees to assume sole and complete responsibility of job site safety conditions during the course of construction of this project; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify and hold harmless the owner and architect form any and all liability, real or alleged, in connection with performance of work on this project.
12. The structure is designed as a stable unit after all components are in place. The Contractor shall provide all shoring and bracing necessary to ensure the stability of any and all parts of the building during construction.
13. Unless specifically shown or noted on the drawings, no structural member shall be cut, notched, bored, or otherwise modified without the written permission of the structural engineer.
14. Whether or not detailed on drawings, the Contractor shall provide and install all stiffeners, bracing, back-up plates, and supporting brackets required for the installation of all casework and of all wall-mounted or suspended mechanical, electrical, or miscellaneous equipment, including plywood backing boards for telephone and electrical equipment rooms.
15. The Contractor shall be responsible for obtaining approval and permits for all design/build systems. The Contractor shall also be responsible for the systems meeting all applicable code requirements.
16. Any modifications to the building resulting from design/build requirements shall be reported to the Owner and Architect and appropriate Engineers along with any required costs and/or savings prior to construction. Any modifications not reported will be the Contractor's sole responsibility for coordination, code conformance, liability and cost.
17. Neither the Architect's review nor approval of shop drawings shall relieve the general contractor from responsibility for any deviation from drawings or specifications unless the General Contractor has received approval from the appropriate engineers, nor shall it relieve him of responsibility for errors of any sort in the shop drawings.
18. The Architect will review and take appropriate action on shop drawings, product data, samples and other submittals expressly required by the architectural construction documents. This review shall be only for general conformance with the project's aesthetic design concept and general compliance with the construction documents; and it shall not include review of quantities, dimensions, weights or gauges, fabrication processes, construction methods, coordination of the work of other trades, compatibility with related components or assemblies, or construction safety precautions, all of which are the sole responsibility of the Contractor. Architect shall not be expected or required to detect changes from prior submittals or deviations from the construction documents that are not clearly flagged as such.
19. Installation of glass shall conform to Federal Specification 16-CFR-1202 and all local codes and ordinances. Glass subject to human impact shall comply with U.S. Consumer Product Safety Standards. Certificate shall accompany product stating date and place of manufacture.
20. Refer to the Civil Engineer's drawings for locations of existing utility lines. Locations of all utilities shown are approximate and the contractor shall exercise extreme caution in excavation and trenching to avoid intercepting existing piping or conduits.
21. The Contractor shall submit a soils report and a compaction report to the building department for approval prior to foundation inspections.
22. The Contractor is responsible to verity location of all site utilities and to coordinate and avoid conflict in the locations of new underground and site utilities. The Contractor shall include all necessary fees, meters, and connections in his bid.
23. The Contractor shall immediately notify the owner and the architect should unidentified field conditions be discovered.
24. On a set of transparencies furnished by the architect and at the contractor's expense, the contractor shall keep an up-to-date record of "as built" conditions of the work. Upon completion of the work, that set shall be returned to the architect completely and neatly posted showing all additions, deletions, corrections, and revisions of the actual construction of the project. Record drawings shall be signed by subcontractors representing all major trades for the project as well as the general contractor.
25. The Contractor shall be responsible for obtaining, mounting and displaying the architect's job sign. Contractor shall also return the job sign to the architect at the completion of project in good condition.
26. All underground utilities or structures reported by the owner or others, and those shown on the records examined are indicated with their approximate location and extent. The Owner, by accepting these plans or proceeding with improvements pursuant thereto, agrees to assume liability and to hold the Architect harmless for any damages resulting from the existence of underground utilities or structures not reported by the Architect, not indicated on the records examined, located at variance with those reported, or shown on records examined. The Contractor is required to take due precautionary measures to protect the utilities found at the site. It shall be the Contractor's responsibility to notify the owner(s) of the utilities or structures concerned before starting work.

EXTERIOR WALLS AND INTERIOR PARTITIONS:

1. All studs at non-bearing interior partitions shall be wood 2 x 4 at minimum 24" on center spacing, unless noted otherwise. Structural drawings and notes shall take precedence.

MECHANICAL, PLUMBING & ELECTRICAL: See also Shop Drawings.

1. Provide and locate per approval of the appropriate engineer, access doors or panels in ceiling and wall construction as required by installation of mechanical, fire sprinkler, plumbing and electrical work in addition to those shown on the drawings.

FIRE PROTECTION: See also Outline Specifications, Division 15C:

1. Provide fire protection for buildings under construction per requirements of local governing agencies.
2. Provide and install materials for fire protection of the structural assemblies of this building type, as required by the building code.

CALGREEN:

Plumbing fixtures shall comply with the following table:

FIXTURE FLOW RATES	
FIXTURE TYPE	**MAXIMUM FLOW RATE**
Showerheads	1.8 gpm @ 80 psi
Lavatory Faucets	1.2 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi
Water Closets	1.28 gallons/flush
Wall Mounted Urinals	0.125 gallons/flush

CONSTRUCTION SAFETY NOTES:

1. The Contractor shall be responsible for job site safety. The following requirements are not intended to be a complete list, but are additional safety requirements for the contractor. Observation visits to the site by the architect shall not include inspections.
2. The contract drawings and specifications represent the finished structure and do not indicate the method of construction. The design, adequacy and safety of erection bracing, shoring, temporary supports, etc., is the sole responsibility of the contractor and has not been considered by the architect. The Contractor is responsible for the stability of the structure prior to the application of all walls and roof and floor sheathing. He shall provide the necessary bracing to provide stability prior to the application of the afore-mentioned materials.
3. An erection plan is required for most construction phases. Contractor shall determine all construction phases which require erection plans according to all applicable safety regulations. A certified copy of such erection plans shall remain on the construction site at all times.
4. Temporary loading during construction shall not overload design values. Contractor is responsible for notifying all trades of such design values.
5. The contractor shall provide attached visible plates indicating the design loads in all spaces as required by applicable safety regulations. The occupant of the building shall be responsible for keeping the actual load below the allowable limits.
6. The lack of high guardrails at building parapets, floor openings and roof openings does not meet current labor code of an occupied space. The architect recommends the use of guardrails at the above stated locations. If guardrails are not used, the owner shall accept full responsibility. In addition, the contractor shall provide clearly legible signs at these locations stating "Caution: No guardrail".
7. All temporary floor and roof openings lacking these guardrails shall be adequately covered and designed to resist construction traffic loads.
8. Contractor shall verify that all skylights are designed to withstand the loads specified in the uniform building codes.
9. It shall be the responsibility of the contractor to locate all existing utilities whether shown hereon or not, and to protect them from damage. The contractor shall bear all expense of repair or replacement in conjunction with the execution of this work.
10. Materials used in this design may be hazardous to one's health. The contractor and owner shall accept all responsibility and shall post such warning during project occupancy.
11. The contractor during construction and the owner during occupancy shall assume all responsibility for proper roof maintenance to insure proper roof drainage.

WATERPROOFING:

The General Contractor shall be responsible for providing a continuous weatherproof perimeter enclosure for all enclosed or conditioned buildings, conforming to standard construction practices, manufacturer's specifications and the building code.

1. The Contractor shall follow all recommendations of the Soils Report.
2. The Contractor shall provide all drainage features of the Civil Engineering plans and details.
3. The Contractor shall follow all Structural Notes and Specifications.

MANUFACTURED PRODUCTS:

The scope of the following requirement shall include all waterproofing systems and any other product and equipment utilized in this Project:

It is the contractor's responsibility to ensure that all fabricated or manufactured products and equipment are installed per manufacturer's specifications and with the supervision and inspection of the manufacturer's representative(s). Manufacturer's requirements and specifications for installation are to take precedence over all others drawn, written or implied.

The General contractor shall be responsible for all flashing conditions to ensure the owner a weatherproof enclosure, including all special applications, irrespective of the standard architectural detail conditions shown.

SPECIAL INSPECTIONS:

1. Structural observation will be performed when required by the building official.
2. If required, the owner shall employ the engineer responsible for the structural design or person designated by them to perform visual structural observation of the structural system at significant construction stages and at the completion of the structural system. Observed deficiencies will be reported to the owner, contractor, special inspector and building official in writing. (CBC-1704)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) NOTES

Notes must be shown as worded, on the title sheet of the plan

1. In the case of emergency, call **Chris Manos** at Work Phone # **909-975-4852** or Home Phone #_____ _____.

2. Sediment from areas disturbed by construction shall be retained on site using structural controls to the maximum extent practicable.

3. Stockpiles of soil shall be properly contained to minimize sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tacking, or wind.

4. Appropriate BMP's for construction-related materials, wastes, spills shall be implemented to minimize transport from the site to streets, drainage facilities, or adjoining properties by wind or runoff.

5. Runoff from equipment and vehicle washing shall be contained at construction sites unless treated to reduce or remove sediment and other pollutants.

6. All construction contractor and subcontractor personnel are to be made aware or the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.

7. At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.

8. Construction sites shall be maintained in such a condition that an anticipated storm does not carry wastes or pollutants off the site. Discharges of material other than stormwater only when necessary for performance and completion of construction practices and where they do not: cause or contribute to a violation of any water quality standard; cause or threaten to cause pollution, contamination, or nuisance; or contain a hazardous substance in a quantity reportable under Federal Regulations 40 CFR Parts 117 and 302.

9. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, glues, limes, pesticides, herbicides, wood preservatives and solvents; asbestos fibers, paint flakes or stucco fragments; fuels, oils, lubricants, and hydraulic, radiator or battery fluids; fertilizers, vehicle/equipment wash water and concrete wash water; concrete, detergent or floatable wastes; wastes from any engine/equipment steam cleaning or chemical degreasing and superchlorinated potable water line flushing.

During construction, permittee shall dispose of such materials in a specified and controlled temporary area on -site, physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, state and federal requirements.

10. Dewatering of contaminated groundwater, or discharging contaminated soils via surface erosion is prohibited. Dewatering of non-contaminated groundwater requires a National Pollutant Discharge Elimination System Permit from the respective State Regional Water Quality Control Board.

11. Graded areas on the permitted area perimeter must drain away from the face of slopes at the conclusion of each working day. Drainage is to be directed toward desilting facilities.

12. The permittee and contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a hazardous condition.

13. The permittee and contractor shall inspect the erosion control work and insure that the work is in accordance with the approved plans.

14. The permittee shall notify all general contractors, subcontractors, material suppliers, lessees, and property owners: that dumping of chemicals into the storm drain system or the watershed is prohibited.

15. Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available on site and stockpiled at convenient locations to facilitate rapid construction of temporary devices when rain is imminent.

16. All removable erosion protective devices shall be in place at the end of each working day when the 5-Day Rain Probability Forecast exceeds 40%.

17. Sediments from areas disturbed by construction shall be retained on site using an effective combination of erosion and sediment controls to the maximum extent practicable, and stockpiles of soil shall be properly containted to minimize sediment transport from the site to streets, drainage facilities of adjacent properties via runoff, vehicle tracking, or wind.

18. Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented and retained on site to minimize transport from the site to streets, drainage facilities, or adjoining property by wind or runoff.

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REVISIONS

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OUTLINE SPECIFICATIONS

Revision Date: 07-15-24

See also General Conditions and General Notes.

DIVISION 1 GENERAL REQUIREMENTS

1. The drawings and specifications are intended to comply with all applicable codes, laws, ordinances, rules and regulations of the place of the building including, but not limited to 2022 CRC with City of Aliso Viejo amendments.
2. These plans are intended for use by only knowledgeable licensed contractors familiar with all applicable building codes and other governmental requirements, and able and willing to provide workmanship and materials of high quality. They shall be interpreted so as to incorporate all applicable building codes and other governmental requirements. All ambiguities and doubts shall be resolved, unless the architect specifies otherwise in writing, in favor of the construction or material of the highest quality.
3. The architect will be available for consultation to answer reasonable inquiries regarding clarification of the architectural construction documents.
4. The architect shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, since these are solely the contractor's responsibility under the contract for construction. The architect shall not be responsible for the contractor's schedules or failure to carry out the work in accordance with the contract documents. The architect shall not have control over or charge of acts or omissions of the contractor, subcontractors, or their agents or employees, or of any other persons performing portions of the work.
5. The general contractor shall take full and final responsibility for constructing a final product of high quality and good serviceability consistent with the information and requirements contained in these plans or reasonably inferable there from, and/or contained in the requirements of any governmental entity with jurisdiction over the project; and in this regard the general contractor shall take full responsibility for all construction means, methods, techniques, sequences or procedures including, without limitation, demolition, excavation and erection procedures; for safety precautions and programs in connection with the work; and for the timeliness and quality of all the work.
6. Any contractor which agrees to construct the project pursuant to these plans fully assumes the risk of all errors and omissions which should have been detected by a careful review by a knowledgeable licensed contractor, that which for any reason were not resolved during the bidding or negotiation process. Further, the general contractor shall carefully review these plans as the work progresses in order to identify any significant errors and omissions and to ascertain all necessary information before proceeding with the affected work, and assumes the risk of any and all loss, including delay, which may be caused or contributed to by the failure to ascertain correct or necessary information in a timely manner.
7. The general contractor shall verify all conditions and dimensions in the field; and all questions as to dimensions and field conditions shall be resolved before the affected work proceeds. No dimensions shall be obtained by scaling these plans.
8. The general building permit and plan check fees shall be secured and paid for by the owner. All of the permits shall be taken out and paid for by either the general contractor or by such subcontractor as the general contractor may direct.
9. The general contractor shall be responsible for providing and maintaining temporary water supply, light/power, toilet facilities and job site office with telephone and fax machine.
10. The general contractor shall furnish all laboratory tests, inspections and reports that are required by these plans or by law.
11. No final substitutions shall be submitted to the architect unless each substitution has first been approved in writing by the owner.
12. Any substitutions may affect the performance of other materials. Substitutions may affect procedures required for correct installation of that substitution as well as for related components, etc. The general contractor is responsible for analysis of each substitution, determination of ramifications of that substitution and correct implementation. Architect's review or approval of a substitution does not include analysis of effect on related installation, materials, components or other modifications required.
13. All trades shall at all times keep the premises free from accumulation of waste materials or rubbish caused by their work, and at the completion of the work shall remove all rubbish from and about the job site and all their tools, scaffolding and surplus materials, and shall leave the job room clean, including removing all labels, stickers, paint smears, etc. from lighting fixtures, plumbing fixtures, glass surfaces, finish hardware, cabinets, countertops, etc.
14. The general contractor shall provide the Owner with certificates of insurance evidencing worker's compensation coverage as required by law, general liability coverage, including contractual and completed operations coverage, in the amount of at least $1,000,000. Combined single limits (unless some different amount is expressly required or allowed by the owner) and builder's risk "all risk" insurance in an amount equal to the value of the work, which will name the Owner and the Architect as additional insureds as their interest may appear.
15. The Owner may order extra work or make changes by altering, adding to or deducting from the work, and the contract sum shall be adjusted accordingly.

DIVISION 2 SITE WORK (SEE NOTES ON STRUCTURAL DRAWINGS)

1. Earthwork:
   A. Perform all excavation, grading, trenching, compacting and backfilling as shown on the structural drawings.
   B. Export cut soils to an approved dump site.
   C. Bottom of excavation cuts shall be level, free from loose material and brought to required levels of undisturbed or compacted soil.
   D. Backfill: Allow the installation of waterproofing system prior to any backfill against retaining walls or slabs. Soil used for backfill shall be free from debris and per soils report and waterproofing system manufacturer's recommendations. Pipe trenches shall be filled with construction sand, pulled and taped after required inspections.
   E. Upon completion of filling and backfilling, all areas to receive concrete slabs shall be wetted and loose material compacted by rolling and tamping.

DIVISION 3 CONCRETE (SEE NOTES ON STRUCTURAL DRAWINGS)

1. Work included: Furnish all materials, labor and equipment necessary to complete the installation of concrete and reinforcing steel work as indicated.
2. Specifications: Refer to final soils report for all recommendations and see structural drawings for concrete specifications, notes, details, etc.

DIVISION 4 MASONRY (SEE NOTES ON STRUCTURAL DRAWINGS)

General Contractor to ensure that sulfate exposure standards are not exceeded per CBC and governmental agencies.

1. Work included: Furnish and install all masonry work complete including masonry reinforcing.
2. Workmanship: Work shall be plumb, level and true to line. Where horizontal masonry is exposed to weather, masonry shall have slope to drain per industry standards, manufacturer's specifications and other applicable codes. Reinforcing shall be accurately placed and properly held in position per structural engineer's, code and manufacturer's specifications.
3. Masonry fireplaces: "Isokern" 46 Vent Free fireplace (ICC ESR-4873) or approved equal surround with refractory firebrick finish surface in fire chamber and noncombustible hearth slab and hearth extension, per architectural and structural details. Non-combustible hearth material as selected by Owner. Install adjustable metal damper on all interior fireplaces. Conform to CBC Section 2111 requirements. Install non-combustible fireplace surround and optional mantle as selected by Owner.
4. Adhered veneer stone: As supplied by "Materials Marketing" or approved equal adhered veneer stone, pattern, color mix and texture as selected by Owner. Install per manufacturer's recommendations. Grout shall match one shade lighter than average field stone color. Seal grout with clear matte finish silicone waterproofing solution.

DIVISION 5 METALS (SEE NOTES ON STRUCTURAL DRAWINGS)

1. Steel rebar:
   A. Steel strength and sizes shall follow the structural notes and specifications.

DIVISION 6 CARPENTRY (SEE NOTES ON STRUCTURAL DRAWINGS)

1. Rough carpentry: Per structural notes and specifications. Install fireblocking and firestops as required per CBC Section 717.2. Use preservative-treated wood sill plates on foundation walls that are less than 8" above finished grade.
2. Finish carpentry:
   A. All required permits must be obtained from the fire prevention bureau before the building is occupied.

DIVISION 7 MOISTURE PROTECTION

1. Clay tile roofing - to match existing. Install over "Malarkey Roofing Products" (ICC ESR-1561) fiberglass SBS UDL modified base or approved equal waterproof membrane underlayment and per the tile roofing manufacturer's installation recommendations.
2. Built-Up Roofing - Class A rating: Structural engineering drawings, notes, details and manufacturer's specifications shall take precedence to details shown in architectural plans. Use "Johns Manville" APP modified bitumen heat fused system or approved equal. Two plies Type G2, "PermaPly 28", "GlasBase" or "DibiGlass Base", mechanically fastened or hot mopped with "APPex 4.5M FR CR" (ASTM D 6222, Type I, Grade G; UL Classified - TGFU.R10167 Roofing Systems, meets Title 24 requirements for reflectivity and emissivity, FM approved). Roofing materials must conform to California Title 24 thermal standards for "Cool Roofs". Cool Roofs shall have a minimum initial thermal emittance of 0.75 and minimum initial solar reflectance of 0.70. See Roof Plans for additional information. Use appropriate crickets and cant strips to create drainage slopes as recommended by roofing manufacturer.
3. Roof drains: "Thunderbird" or approved equal copper roof drains and overflow drains.
4. Accessories: Provide accessories as shown on plans and as normally required.
5. Attic space vents: "C&J Metal Products Inc." or approved equal hot dipped galvanized steel roof vents at built-up roof areas.
6. Sheet metal flashing (including roof flashing): Shall be min. 20 oz. copper or as noted. Furnish all materials, labor and equipment necessary to complete the installation of all flashing. Contractor to coordinate his work with related contractors as necessary for the completion of his work.
7. Sealant: "DAP" butyl-rubber sealant with back-up gaskets as approved by manufacturer.
8. Weather barrier:
   A. Exterior walls: "DuPont" 'Tyvek,' or approved equal, weather-resistive vapor permeable barrier beneath all exterior wall finishes per CBC Section 1403.2. Provide additional bituthene waterproof membrane under exterior plaster at all tops of walls, parapets, chimneys, pot shelves, etc. Provide copper flashing and bituthene waterproof membrane at exterior wall / floor and wall / roof conditions.
   B. Exterior openings: Flash around all openings with 12" wide "Moistop," or approved equal, door and window frame flashing per CBC Section 1402.2.

DIVISION 9 FINISHES

1. Exterior plaster:
   A. Exterior plaster on wood studs: 3 coat cement plaster system (minimum 7/8" thick) with integral color, with smooth steel troweled finish coat. Finished surface shall be consistent, even and without "dishing". Apply over galvanized backing wire, building papers and galvanized metal lath or "K-lath" 'Stucco Rite'.
   B. Provide galvanized metal grounds, screeds, expansion joints, vents, trim and miscellaneous items incidental to the completion of the work.
   C. Weep screed shall be placed a minimum of 4-inches above the earth or 2-inches above paved areas.
   D. All work shall comply with Chapter 25 of the CBC and local codes.

2. Painting:
   A. Provide all materials, labor and equipment to complete all painting work.
   B. No painting shall commence until surfaces are in proper condition to receive it.
   C. All colors shall be selected and approved by the Owner and interior design consultant.
   D. Use only first grade quality lines of paint. The following schedule is written with "Vista Paint Co." catalog numbers and identifications.
   E. Exterior surfaces:
3. Metal: 1 coat 'Metal primer'
   2 coats 'Kynar' semi-gloss
4. Exterior concrete and horizontal exterior plaster surfaces: 2 coats appropriate clear sealant or more as needed for adequate water-resistant coverage.
   F. Interior surfaces:
5. Flame spread classifications:
   Walls and ceilings- Not greater than 200
6. Smoke developed index: Not greater than 450

DIVISION 10 SPECIALTIES

1. Manufactured Fireplaces: Montigo Del Ray DRL6013 Direct Vent fireplace; Roof exhaust. Confirm all fireplace features with owner and architect before ordering. CSA/ANSI Z21.88-2019 / CSA 2.33-2019 Certified

DIVISION 16 ELECTRICAL

1. See notes on Electrical drawings.

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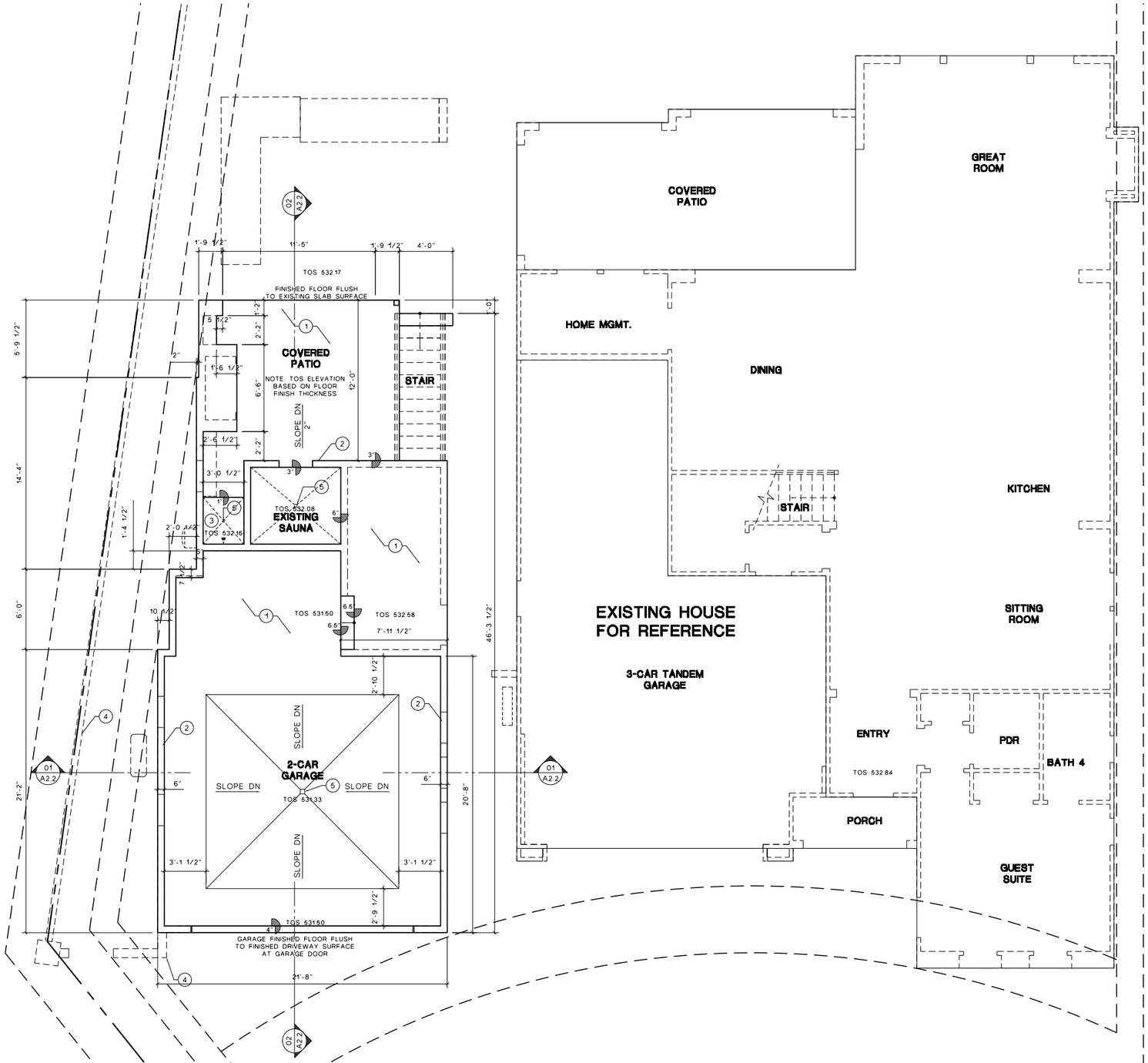
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GENERAL NOTES

- GENERAL CONTRACTOR TO DETERMINE EXACT DIMENSIONS/ELEVATIONS FOR ALL STRUCTURAL SLAB DEPRESSIONS AND STEPS BASED ON OWNER SELECTED FLOOR FINISHES. SEE FLOOR PLAN FOR FINISH FLOOR STEP HEIGHT DIMENSIONS.
- ALL DIMENSIONS ARE FROM FINISH FLOOR SURFACE, NOT TOP OF SLAB. GENERAL CONTRACTOR TO VERIFY SLAB LEVELS AND CONSIDER FLOORING THICKNESS AND FLOAT BED TO ESTABLISH CONCRETE SLAB.
- SEE CIVIL AND STRUCTURAL DRAWINGS FOR MORE INFORMATION.
- FF : FINISH FLOOR
- TOS : TOP OF SLAB

SLAB PLAN KEYNOTES

1. SLAB ON GRADE
2. STEM WALL
3. SLAB DEPRESSION/SLOPE FOR SHOWER
4. EXISTING SITE WALL
5. FLOOR DRAIN



IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL FABRICATED OR MANUFACTURED PRODUCTS AND EQUIPMENT ARE INSTALLED PER MANUFACTURER'S SPECIFICATIONS, AND WITH THE SUPERVISION AND INSPECTION OF THE MANUFACTURER'S REPRESENTATIVE(S).

MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS FOR INSTALLATION ARE TO TAKE PRECEDENCE OVER ALL OTHERS DRAWN, WRITTEN OR IMPLIED.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FLASHING CONDITIONS TO ENSURE THE OWNER A WEATHERPROOF ENCLOSURE, INCLUDING ALL SPECIAL APPLICATIONS, IRRESPECTIVE OF THE STANDARD ARCHITECTURAL DETAIL CONDITIONS SHOWN.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL PARTS OF INSTALLATION INCLUDING A CODE-APPROVED STRUCTURAL ANCHORING SYSTEM FOR DECORATIVE CONCRETE OR STONE IF APPLICABLE.

IN THE EVENT THAT WALLS OR COLUMNS ARE REMOVED OR RELOCATED, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROPERLY RELOCATE THOSE WALLS FOR REPLACEMENT, INCLUDING PROPER STRUCTURAL ENGINEERING.

5 0 2 4 6 10

GRAPHIC SCALE: 1/4"=1'-0"

SLAB PLAN

SCALE: 1/4" = 1'-0"

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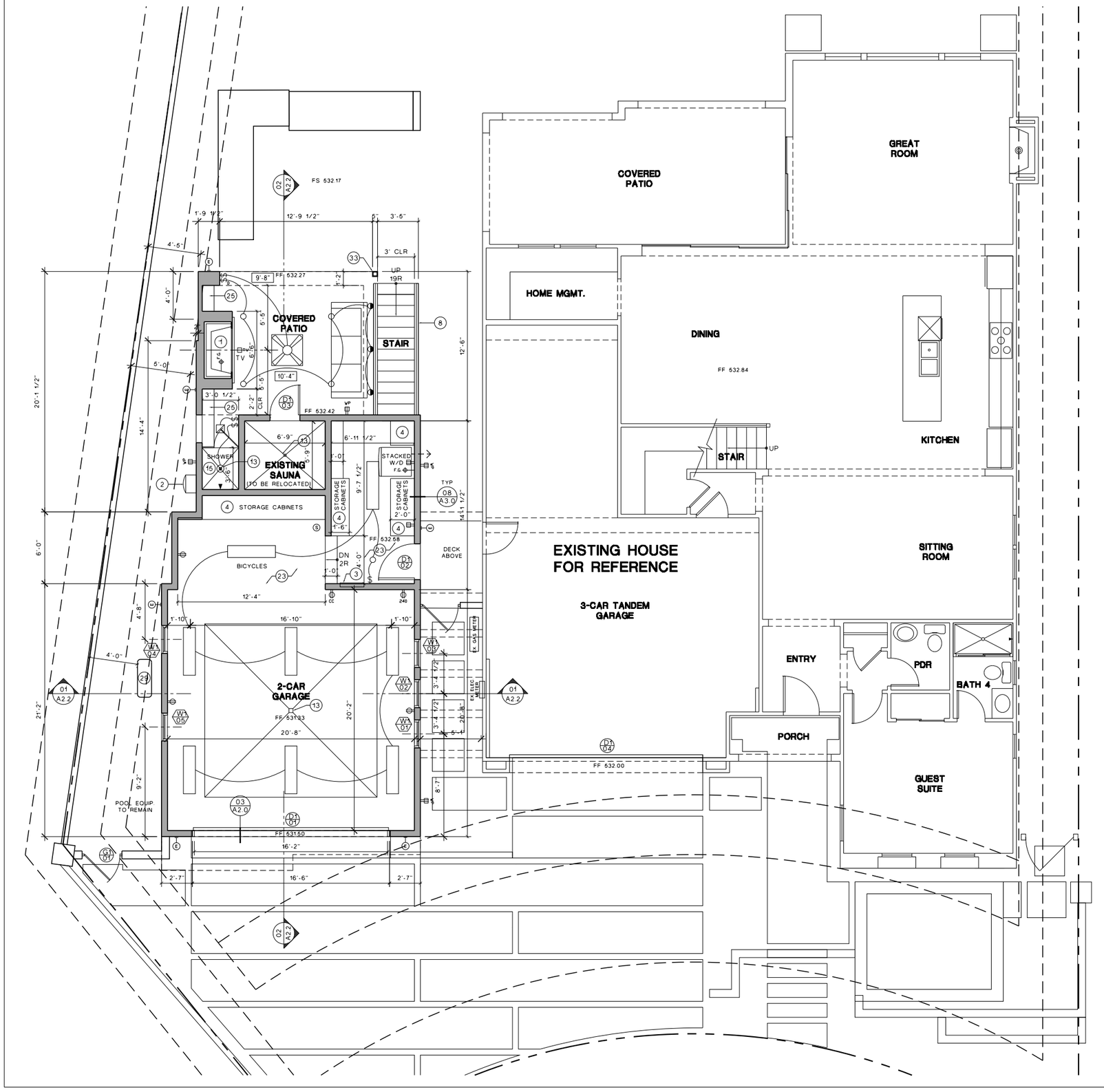
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GENERAL ELEC. NOTES

- ALL DIMENSIONS ARE FROM FINISH FLOOR SURFACE. GENERAL CONTRACTOR TO VERIFY STRUCTURAL FRAMING/SLAB LEVELS AND CONSIDER FLOORING THICKNESS AND FLOAT BED TO ACHIEVE NOTED HEIGHTS. DIFFUSER AND EXHAUST GRILLE LOCATIONS.
- PROVIDE G.F.C.I. PROTECTION FOR RECEPTACLES IN THE GARAGE, KITCHEN COUNTERS AND THOSE SERVING LAUNDRY, UTILITY AND WET BAR SINKS WHERE THE RECEPTACLE IS WITHIN 6' OF THE OUTSIDE EDGE OF THE SINK (NEC 210.8).
- ALL RECEPTACLES SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT PER CEC ARTICLE 210-12(b).
- SMOKE ALARMS ARE NOT TO BE LOCATED IN KITCHEN, GARAGE, OR WITHIN 3 FEET FROM DOOR TO KITCHEN OR BATHROOM OR SUPPLY AIR REGISTERS.
- GARAGES, LAUNDRY ROOMS & UTILITY ROOMS SHALL HAVE HIGH EFFICACY LIGHTING AND BE CONTROLLED BY A VACANCY SENSOR.
- ALL EXTERIOR LIGHTING FIXTURES SHALL BE HIGH EFFICACY UNLESS THOSE LIGHTING FIXTURES ARE CONTROLLED BY MOTION SENSOR AND EITHER A PHOTOCELL OR AN ASTRONOMICAL TIME CLOCK.
- ALUMINUM CONDUCTORS ARE PERMITTED ONLY IF SIZE 1/0 OR LARGER, AND ONLY TO FEED MAIN OR SUBPANELS. ALL OTHER CURRENT CARRYING CONDUCTORS SHALL BE COPPER.
- PROVIDE AT LEAST TWO 20-AMP SMALL APPLIANCE BRANCH CIRCUITS TO SERVE ALL WALL, FLOOR AND COUNTERTOP RECEPTACLES IN KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM OR SIMILAR AREA. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- PROVIDE AT LEAST ONE 20-AMP BRANCH CIRCUIT TO SERVE LAUNDRY APPLIANCES. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- PROVIDE AT LEAST ONE 20-AMP BRANCH CIRCUIT TO SERVE BATHROOM RECEPTACLES. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- LUMINARIES (LIGHT FIXTURES) IN TUB OR SHOWER ENCLOSURES SHALL BE LABELED 'SUITABLE FOR DAMP LOCATION.'
- TAMPER RESISTANT RECEPTACLE TO BE USED IN ALL 125-VOLT, 15 & 20 AMP RECEPTACLES LOCATED IN AREAS REQUIRED BY CEC 210.52.

UTILITY SYMBOLS

- DUPLEX OUTLET
- QUAD OUTLET
- 240 240V DUPLEX OUTLET
- CC CAR CHARGE OUTLET
- GFCI OUTLET
- WP GFCI OUTLET - WEATHERPROOF
- TELEPHONE OUTLET
- TV TV OUTLET
- HB HOSEBIBB
- F.G. FUEL GAS
- (S) SMOKE ALARM (UL 217 RATING), IN AREAS OF NEW CONSTRUCTION ALARMS TO BE HARD WIRED AND INTERCONNECTED WITH BATTERY BACKUP. ALARM SHALL SOUND IN ALL SLEEPING AREAS
- (C) CARBON MONOXIDE ALARM (UL2034 RATING); IN AREAS OF NEW CONSTRUCTION ALARMS TO BE HARD WIRED AND INTERCONNECTED WITH BATTERY BACKUP
- LOCAL EXHAUST FAN TO EXTERIOR PROVIDING MINIMUM 50 CFM INTERMITTENT VENTILATION OR 20 CFM CONTINUOUS VENTILATION. MECHANICAL EXHAUST FANS FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING (CALGREEN 4.506.1):
  a. ENERGY STAR COMPLIANT AND DUCTED TO TERMINATE OUTSIDE BLDG
  b. CONTROLLED BY READILY ACCESSIBLE HUMIDISTAT
- PENDANT/CEILING MOUNTED FIXTURE
- (E) EXTERIOR PENDANT LIGHT FIXTURE W/ MOTION SENSOR & EMCS (ENERGY MGMT)
- (E) EXTERIOR WALL MOUNTED LIGHT FIXTURE W/ MOTION SENSOR & EMCS (ENERGY MGMT)
- INTERIOR WALL MOUNT LIGHT
- HIGH-EFFICACY SURFACE MOUNTED CEILING LIGHT
- HIGH-EFFICACY RECESSED LIGHT
- (V) VAPOR PROOF HIGH EFFICACY RECESSED LIGHT
- (E) HIGH-EFFICACY RECESSED EXTERIOR LIGHT
- RECESSED WALLWASHER LIGHT
- WALL STEP LIGHT
- LED STRIP LIGHT
- LINEAR SURFACE MOUNT HIGH-EFFICACY LIGHT FIXTURE
- CEILING FAN WITH LIGHT
- $S SWITCH
- $D SWITCH WITH DIMMER
- $3 3-WAY SWITCH
- $3D 3-WAY SWITCH WITH DIMMER
- $OCC3 3-WAY SWITCH WITH 'MANUAL ON, AUTOMATIC OFF' OCCUPANCY SENSOR
- $OCC SWITCH WITH 'MANUAL ON, AUTOMATIC OFF' OCCUPANCY SENSOR
- 9'-0" CEILING HEIGHT

- DOORS WHICH PROVIDE DIRECT ACCESS TO THE SWIMMING POOL SHALL BE PROVIDED WITH A BARRIER ALARM.
- ALL NEW SMOKE AND CARBON MONOXIDE DETECTORS SHALL HAVE 10-YEAR LIFE BATTERIES IN A SEALED UNIT.

GENERAL NOTES

- ALL DIMENSIONS TO FACE OF STUD, U.N.O.
- ALL DIMENSIONS ARE FROM FINISH FLOOR SURFACE, NOT TOP OF SLAB. GENERAL CONTRACTOR TO VERIFY SLAB LEVELS AND CONSIDER FLOORING THICKNESS AND FLOAT BED TO ESTABLISH CONCRETE SLAB.
- SMOKE DETECTORS ARE NOT TO BE LOCATED IN KITCHEN, GARAGE, OR WITHIN 3 FEET FROM DOOR TO KITCHEN OR BATHROOM OR SUPPLY AIR REGISTERS.
- INSTALL ALL APPLIANCES & FIXTURES PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO VERIFY CLEARANCES, POWER REQUIREMENT & INSTALLATION PROCEDURES FOR ALL FIXTURES AND EQUIPMENT PRIOR TO PURCHASE.
- KEEP THREE FEET CLEAR FROM FACE OF ELECTRICAL PANEL TO ANY WALL SURFACE OR OBSTRUCTION.
- SEE STRUCTURAL DRAWINGS FOR STRUCTURAL INFORMATION.
- SEE CALGREEN NOTES ON A0.2 FOR PLUMBING FIXTURE FLOW RATES.
- STAIRS SHALL HAVE AN ILLUMINATION LEVEL ON TREAD RUNS OF NOT LESS THAN ONE FOOTCANDLE

KEYNOTES

1. FIREPLACE - ISOKERN 46 VENT FREE; ESR-4873
2. TANKLESS GAS WATER HEATER (EFF. 0.94)
3. NEW 200 AMP SUBPANEL
4. CABINET SYSTEM WITH ADJUSTABLE SHELVES
5. CUSTOM CABINET WITH STONE COUNTER
6. CUSTOM CABINET WITH BOOKSHELVES - DESIGN TBD
7. SHELF AND POLE
8. PAINTED WROUGHT IRON GUARDRAIL/HANDRAIL ON TOP OF STEEL STRINGER
9. EXISTING WINDOW TO BE REMOVED FOR NEW DOOR
10. EXISTING CABINET TO BE REMOVED
11. EXISTING SINK TO BE RELOCATED
12. DECK DRAIN
13. FLOOR DRAIN
14. BATHTUB - PROVIDE ANTI-SCALD CONTROL VALVE
15. SHOWER - TILE PAN AND WALLS TO CEILING; PROVIDE SHATTERPROOF GLASS ENCLOSURE PER PLAN; PROVIDE ANTI-SCALD CONTROL VALVE WITH SHOWER HEAD; COORDINATE LOCATION OF HEAD AND CONTROL/MIXING KNOBS WITH OWNER AND ARCHITECT
16. WATER CLOSET - PROVIDE 30"x24" SPACE IN FRONT
17. BATHROOM SINK
18. KITCHENETTE SINK WITH GARBAGE DISPOSAL
19. REFRIGERATOR - CABINET DEPTH (24")
20. COOKTOP - TWO BURNER ELECTRIC
21. MICROWAVE HOOD
22. RECESSED MEDICINE CABINET
23. 5/8" TYPE-X DRYWALL ON GARAGE CEILING & UNDERSIDE OF STAIR
24. TRELLIS WOOD BEAMS: 8"x14", WITH FLASHING CAP PAINTED TO MATCH BEAM
25. +18"H LOW PLASTERED WALL WITH STONE CAP
26. WROUGHT IRON GUARDRAIL - 42" TALL FROM WALKING SURFACE
27. DECK OVERFLOW PIPE THROUGH CURB
28. CEILING ACCESS PANEL FOR AIR HANDLER
29. AIR CONDENSER (18 SEER)
30. DECORATIVE BOX BEAMS - MAIN RIDGE AND HIP BEAMS (8"W x 8"H); SECONDARY BEAMS (6"W x 6"H)
31. AIR HANDLER IN CEILING SPACE (HSPF/HS 8.5)
32. FIREPLACE - MONTIGO DEL RAY DRL6013 DIRECT VENT FIREPLACE; (CSA/ANSI Z21.88/CSA 2.33-2019 CERTIFICATION); ROOF EXHAUST; SEE OUTLINE SPECIFICATIONS (REVIEW WITH OWNER PRIOR TO PURCHASE)
33. PAINTED STEEL COLUMN - SEE STRUCT. DWGS.

LEGEND

- EXISTING WALL TO REMAIN
- NEW 2x6 WOOD FRAMED WALL
- NEW 2x4 WOOD FRAMED WALL

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GRAPHIC SCALE: 1/4"=1'-0"

FIRST FLOOR & UTILITY PLAN

SCALE: 1/4" = 1'-0"

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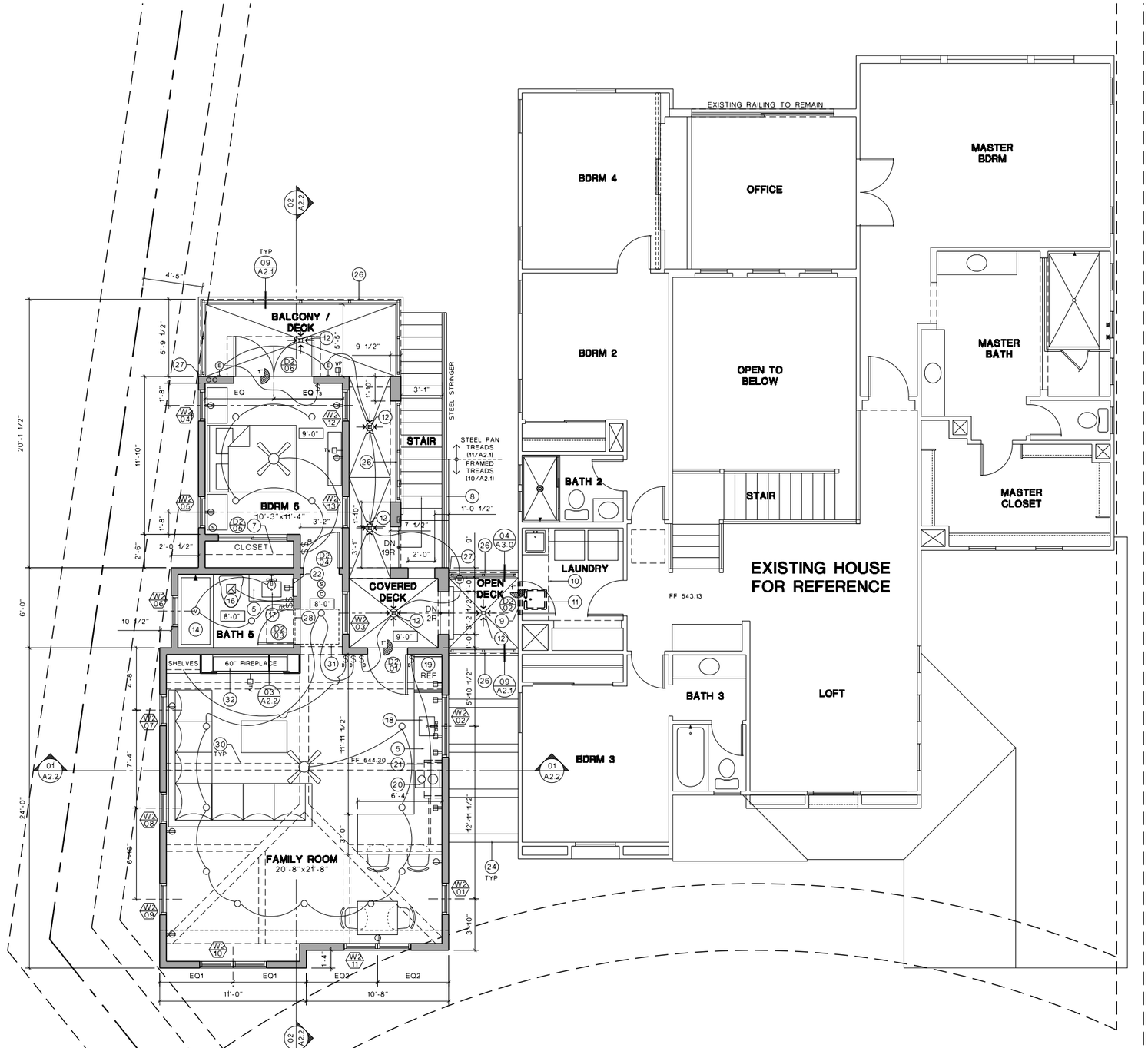
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GENERAL ELEC. NOTES

- ALL DIMENSIONS ARE FROM FINISH FLOOR SURFACE. GENERAL CONTRACTOR TO VERIFY STRUCTURAL FRAMING/SLAB LEVELS AND CONSIDER FLOORING THICKNESS AND FLOAT BED TO ACHIEVE NOTED HEIGHTS. DIFFUSER AND EXHAUST GRILLE LOCATIONS.
- PROVIDE G.F.C.I. PROTECTION FOR RECEPTACLES IN THE GARAGE, KITCHEN COUNTERS AND THOSE SERVING LAUNDRY, UTILITY AND WET BAR SINKS WHERE THE RECEPTACLE IS WITHIN 6' OF THE OUTSIDE EDGE OF THE SINK (NEC 210-8).
- ALL RECEPTACLES SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT PER CEC ARTICLE 210-12(b).
- SMOKE ALARMS ARE NOT TO BE LOCATED IN KITCHEN, GARAGE, OR WITHIN 3 FEET FROM DOOR TO KITCHEN OR BATHROOM OR SUPPLY AIR REGISTERS.
- GARAGES, LAUNDRY ROOMS & UTILITY ROOMS SHALL HAVE HIGH EFFICACY LIGHTING AND BE CONTROLLED BY A VACANCY SENSOR.
- ALL EXTERIOR LIGHTING FIXTURES SHALL BE HIGH EFFICACY UNLESS THOSE LIGHTING FIXTURES ARE CONTROLLED BY MOTION SENSOR AND EITHER A PHOTOCELL OR AN ASTRONOMICAL TIME CLOCK.
- ALUMINUM CONDUCTORS ARE PERMITTED ONLY IF SIZE 1/0 OR LARGER, AND ONLY TO FEED MAIN OR SUBPANELS. ALL OTHER CURRENT CARRYING CONDUCTORS SHALL BE COPPER.
- PROVIDE AT LEAST TWO 20-AMP SMALL APPLIANCE BRANCH CIRCUITS TO SERVE ALL WALL, FLOOR AND COUNTERTOP RECEPTACLES IN KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM OR SIMILAR AREA. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- PROVIDE AT LEAST ONE 20-AMP BRANCH CIRCUIT TO SERVE LAUNDRY APPLIANCES. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- PROVIDE AT LEAST ONE 20-AMP BRANCH CIRCUIT TO SERVE BATHROOM RECEPTACLES. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- LUMINARIES (LIGHT FIXTURES) IN TUB OR SHOWER ENCLOSURES SHALL BE LABELED 'SUITABLE FOR DAMP LOCATION'.
- TAMPER RESISTANT RECEPTACLE TO BE USED IN ALL 125-VOLT, 15 & 20 AMP RECEPTACLES LOCATED IN AREAS REQUIRED BY CEC 210.52.

UTILITY SYMBOLS

- DUPLEX OUTLET
- QUAD OUTLET
- 240 240V DUPLEX OUTLET
- CC CAR CHARGE OUTLET
- GFCI OUTLET
- WP GFCI OUTLET - WEATHERPROOF
- TELEPHONE OUTLET
- TV TV OUTLET
- HB HOSEBIBB
- FG FUEL GAS
- (S) SMOKE ALARM (UL 217 RATING); IN AREAS OF NEW CONSTRUCTION ALARMS TO BE HARD WIRED AND INTERCONNECTED WITH BATTERY BACKUP. ALARM SHALL SOUND IN ALL SLEEPING AREAS
- (C) CARBON MONOXIDE ALARM (UL2034 RATING); IN AREAS OF NEW CONSTRUCTION ALARMS TO BE HARD WIRED AND INTERCONNECTED WITH BATTERY BACKUP
- LOCAL EXHAUST FAN TO EXTERIOR PROVIDING MINIMUM 50 CFM INTERMITTENT VENTILATION OR 20 CFM CONTINUOUS VENTILATION. MECHANICAL EXHAUST FANS FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING (CALGREEN 4.506.1):
  a. ENERGY STAR COMPLIANT AND DUCTED TO TERMINATE OUTSIDE BLDG
  b. CONTROLLED BY READILY ACCESSIBLE HUMIDISTAT
- PENDANT/CEILING MOUNTED FIXTURE
- E EXTERIOR PENDANT LIGHT FIXTURE W/ MOTION SENSOR & EMCS (ENERGY MGMT)
- E EXTERIOR WALL MOUNTED LIGHT FIXTURE W/ MOTION SENSOR & EMCS (ENERGY MGMT)
- INTERIOR WALL MOUNT LIGHT
- HIGH-EFFICACY SURFACE MOUNTED CEILING LIGHT
- HIGH-EFFICACY RECESSED LIGHT
- V VAPOR PROOF HIGH EFFICACY RECESSED LIGHT
- E HIGH-EFFICACY RECESSED EXTERIOR LIGHT
- RECESSED WALLWASHER LIGHT
- WALL STEP LIGHT
- LED STRIP LIGHT
- LINEAR SURFACE MOUNT HIGH-EFFICACY LIGHT FIXTURE
- CEILING FAN WITH LIGHT
- $ SWITCH
- $D SWITCH WITH DIMMER
- $3 3-WAY SWITCH
- $D3 3-WAY SWITCH WITH DIMMER
- $OS3 3-WAY SWITCH WITH 'MANUAL ON, AUTOMATIC OFF' OCCUPANCY SENSOR
- $OS SWITCH WITH 'MANUAL ON, AUTOMATIC OFF' OCCUPANCY SENSOR
- 9'-0" CEILING HEIGHT

- DOORS WHICH PROVIDE DIRECT ACCESS TO THE SWIMMING POOL SHALL BE PROVIDED WITH A BARRIER ALARM.
- ALL NEW SMOKE AND CARBON MONOXIDE DETECTORS SHALL HAVE 10-YEAR LIFE BATTERIES IN A SEALED UNIT.

GENERAL NOTES

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- ALL DIMENSIONS ARE FROM FINISH FLOOR SURFACE, NOT TOP OF SLAB. GENERAL CONTRACTOR TO VERIFY SLAB LEVELS AND CONSIDER FLOORING THICKNESS AND FLOAT BED TO ESTABLISH CONCRETE SLAB.
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- INSTALL ALL APPLIANCES & FIXTURES PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO VERIFY CLEARANCES, POWER REQUIREMENT & INSTALLATION PROCEDURES FOR ALL FIXTURES AND EQUIPMENT PRIOR TO PURCHASE.
- KEEP THREE FEET CLEAR FROM FACE OF ELECTRICAL PANEL TO ANY WALL SURFACE OR OBSTRUCTION.
- SEE STRUCTURAL DRAWINGS FOR STRUCTURAL INFORMATION.
- SEE CALGREEN NOTES ON A0.2 FOR PLUMBING FIXTURE FLOW RATES.
- STAIRS SHALL HAVE AN ILLUMINATION LEVEL ON TREAD RUNS OF NOT LESS THAN ONE FOOTCANDLE.

KEYNOTES

1. FIREPLACE - ISOKERN 46 VENT FREE; ESR-4873
2. TANKLESS GAS WATER HEATER (EFF. 0.94)
3. NEW 200 AMP SUBPANEL
4. CABINET SYSTEM WITH ADJUSTABLE SHELVES
5. CUSTOM CABINET WITH STONE COUNTER
6. CUSTOM CABINET WITH BOOKSHELVES - DESIGN TBD
7. SHELF AND POLE
8. PAINTED WROUGHT IRON GUARDRAIL/HANDRAIL ON TOP OF STEEL STRINGER
9. EXISTING WINDOW TO BE REMOVED FOR NEW DOOR
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GRAPHIC SCALE: 1/4"=1'-0"

SECOND FLOOR & UTILITY PLAN

SCALE: 1/4" = 1'-0"

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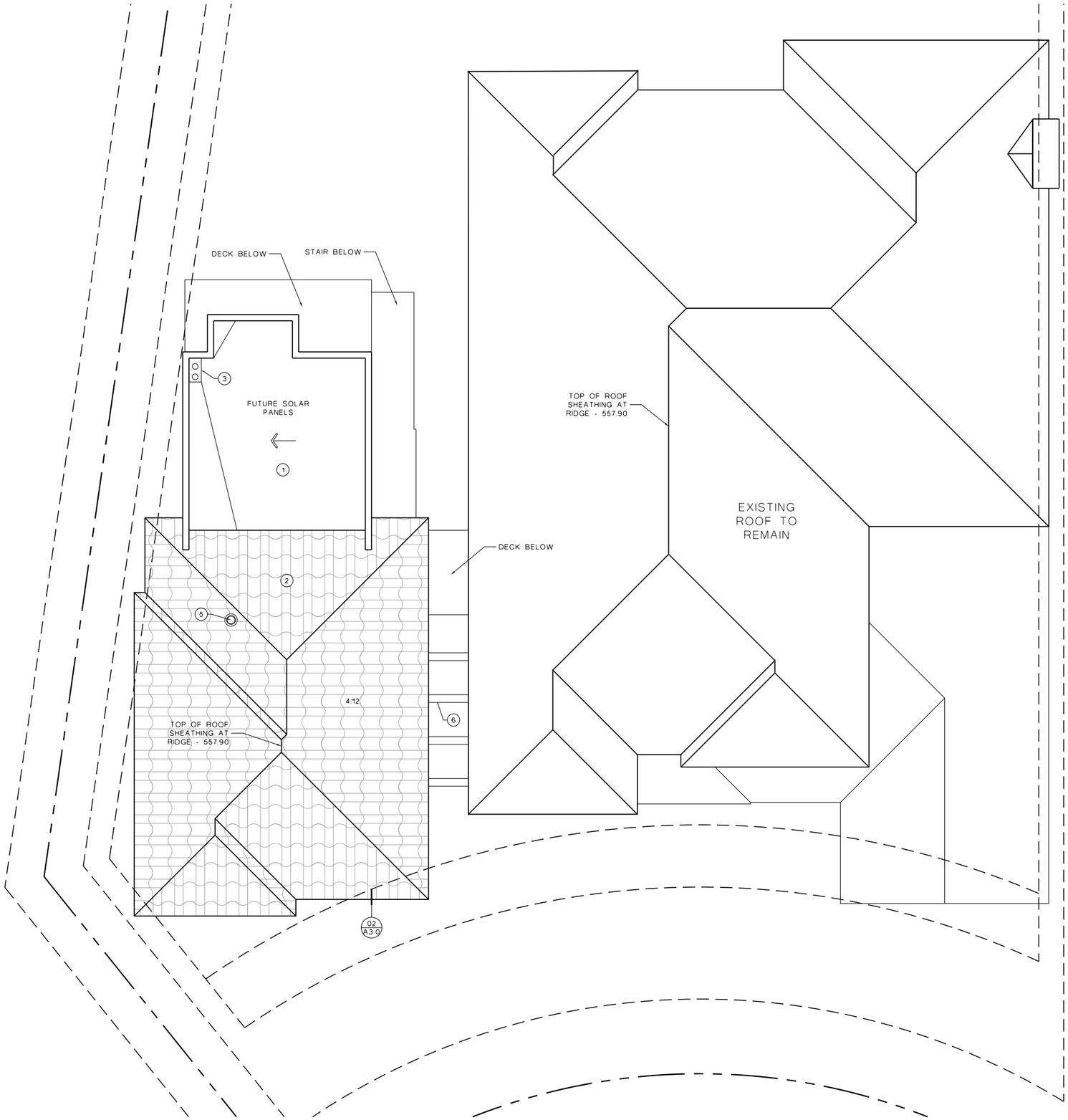
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GENERAL ROOF NOTES:

- SEE OUTLINE SPECIFICATIONS SHEET A0.3 FOR ROOFING SPECIFICATIONS.
- ROOF & WALL INSULATION: SEE DIVISION 7.9 ON THE OUTLINE SPECIFICATIONS (SHEET A0.03) FOR MORE INFORMATION.
- CONTRACTOR TO VERIFY THAT ALL AREAS OF ROOF, INCLUDING CRICKETS, HAVE POSITIVE DRAINAGE OF AT LEAST 1/4" PER FOOT (2%).
- ALL HEIGHTS ARE RELATIVE TO THE GROUND FLOOR LEVEL FINISH FLOOR.
- CONTRACTOR TO VERIFY SIZE AND LOCATION OF ALL ROOF DRAINS AS WELL AS PROVIDE PROPER SLOPE AND ROOF ELEVATIONS TO ENSURE DRAINAGE.
- CONTRACTOR TO VERIFY WITH SUBCONTRACTORS THE SIZE, LOCATION AND FLASHING REQUIREMENTS OF ALL ROOF PENETRATIONS.
- ALL ROOFING FASTENERS TO MEET CODE AND LOCAL REGULATIONS FOR PROPER FACTORY AND WIND UPLIFT REQUIREMENTS.
- MANUFACTURER'S SPECIFICATION AND INSTALLATION INSTRUCTION TO BE PROVIDED TO FIELD INSPECTOR FOR APPROVAL.
- CHIMNEY TERMINATION CAP SHALL BE 2'-0" HIGHER THAN ANY PART OF STRUCTURE WITHIN 10'-0".
- OBTAIN FIRE SPRINKLER PERMIT PRIOR TO CALLING FOR ROOF SHEATHING INSPECTION. DEFFERED SUBMITTAL TO BE CERTIFIED BY PROJECT ARCHITECT PRIOR TO SUBMITTAL.
- SEE STRUCTURAL DRAWINGS FOR STRUCTURAL INFORMATION.
- ALL MECHANICAL AND PLUMBING UNITS MUST BE POSITIONED IN SUCH A MANNER THAT THE REQUIRED DISTANCE FROM THE VENT OUTLET TO THE TOP OF THE FLUE CAP IS WITHIN THE ATTIC, ALLOWING THE EXTERIOR HEIGHT OF THE FLUE CAP ABOVE THE FINISHED ROOFING TO BE MINIMUM ALLOWED BY THE CODE.
- ALL VENTS MUST BE CONSOLIDATED AND LOCATED IN AREAS THAT MINIMIZE THEIR VISIBILITY. VENTS MUST BE AS LOW IN HEIGHT AS ALLOWED BY THE CODE AND SATISFY THE REQUIREMENTS OF THE DESIGN GUIDELINES.
- OVERFLOW DRAINS TO BE SEPARATELY PIPED DOWN EXTERIOR WALLS WITH TERMINATION AT 6" ABOVE FINISHED SURFACE.
- SOLAR PANELS: ALL CONDUITS FOR THE SOLAR PANELS WILL BE CONCEALED IN WALLS OR ATTICS; ALL INVERTERS, ETC. SHOULD BE LOCATED INSIDE OF THE GARAGE OR MECHANICAL ROOMS OR BELOW THE HEIGHT OF THE EXTERIOR YARD WALLS SO THEY ARE NOT VISIBLE TO THE PUBLIC OR NEIGHBOR VIEW.

ROOF PLAN KEYNOTES

1. CLASS-A SINGLE PLY ROOFING - MINIMUM 1/4" PER FOOT SLOPE (INCLUDING CRICKETS)
2. ROOF TILE TO MATCH EXISTING HOUSE - SLOPE 4:12
3. ROOF DRAIN WITH OVERFLOW
4. SOLAR PANEL - UNDER SEPARATE PERMIT
5. FIREPLACE VENT - 2' ABOVE ROOF
6. TRELLIS BEAM BELOW; FLASHING CAP OVER EACH BEAM, PAINTED TO MATCH BEAM

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ROOF PLAN

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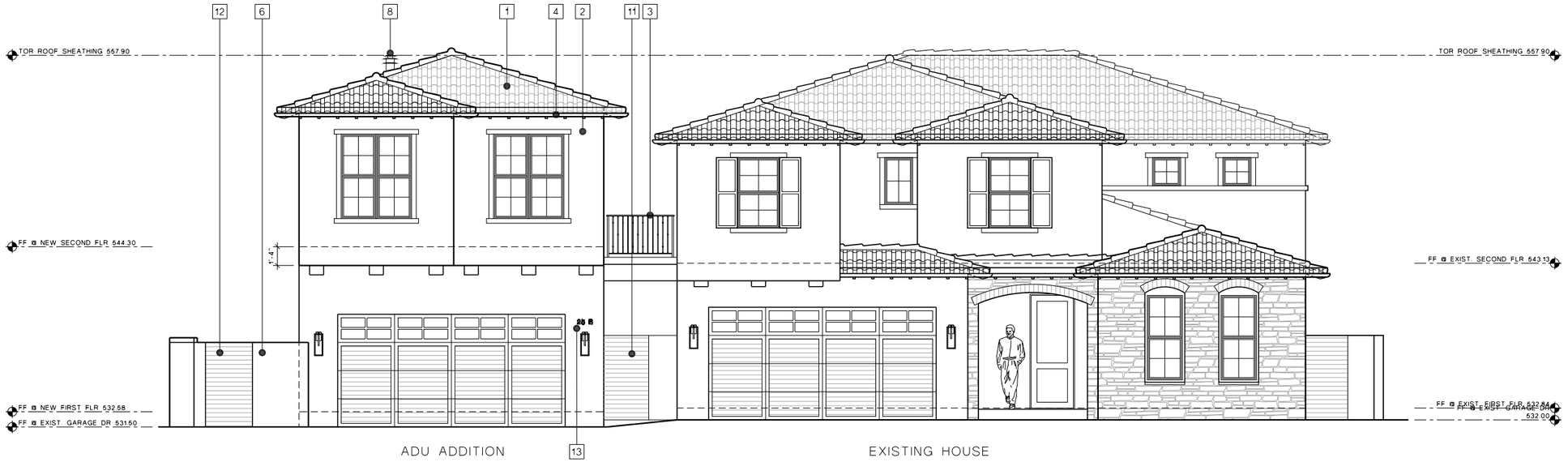
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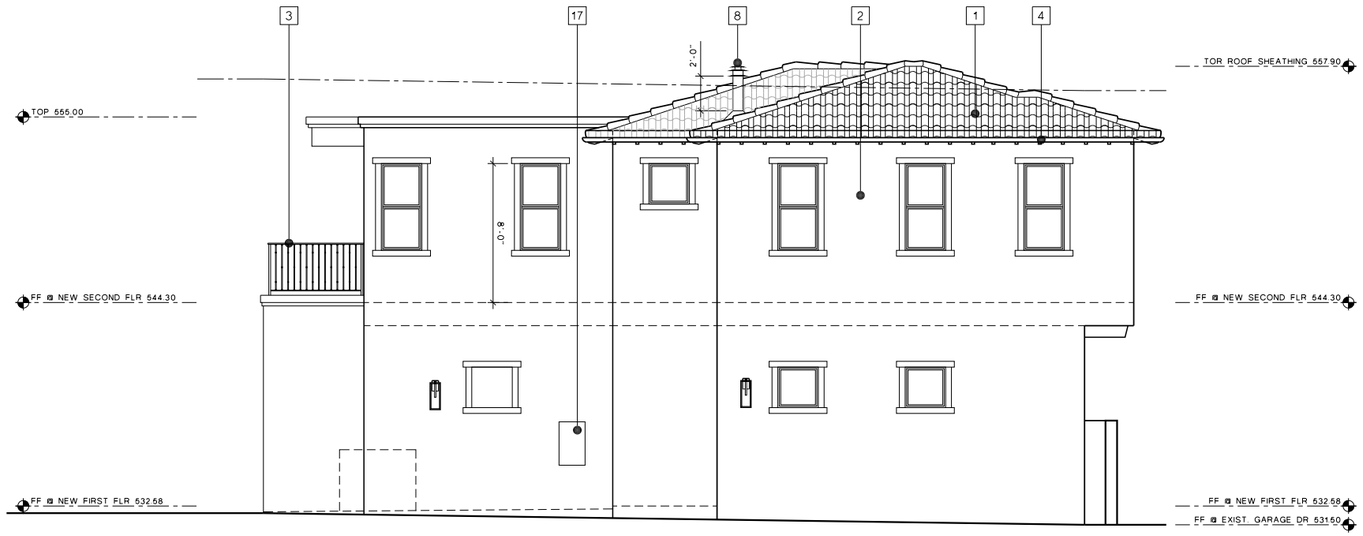
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ELEVATION - EAST 01

SCALE : 1/4" = 1'-0"



ELEVATION - SOUTH 02

SCALE : 1/4" = 1'-0"

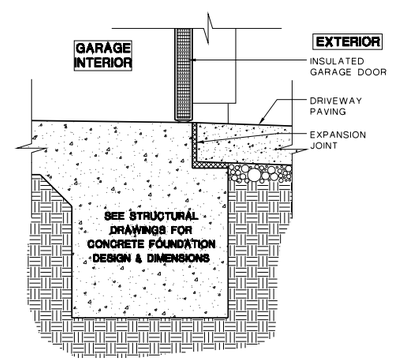
GENERAL NOTES

- ALL DIMENSIONS ARE FROM TOP OF SLAB.
- INSTALL ALL MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
- PROVIDE TWO LAYERS OF GRADE D PAPER OVER ALL WOOD BASE SHEATHING.

KEYNOTES

1. TILE ROOFING TO MATCH EXISTING HOUSE
2. STUCCO TO MATCH EXISTING HOUSE
3. WROUGHT IRON GUARDRAIL- SEE DETAIL 09/A2.1
4. METAL GUTTER AND RAFTER TAILS TO MATCH EXISTING HOUSE
5. COOKTOP WALL EXHAUST
6. SITE WALL
7. DRYER VENT
8. FIREPLACE ROOFTOP EXHAUST
9. ONE-HOUR RATED 3 COAT STUCCO SOFFIT UNDER DECKS
10. CUSTOM CABINETS - SEE FLOOR PLAN
11. EXISTING GATE
12. NEW GATE TO MATCH EXISTING
13. 4-INCH TALL ADDRESS NUMBER
14. MICROWAVE HOOD
15. HORIZONTAL FAU
16. RADIANT BARRIER AT UNDERSIDE OF ROOF SHEATHING (TYP.)

    The radiant barrier must have an emittance of 0.05 or less. The product must be tested according to ASTM C1371 or ASTM E408 and must be certified by the California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation and listed in its ConsumerGuide and Directory of Certified Insulation Material.
17. TANKLESS WATER HEATER
18. NOT USED
19. PAINTED STEEL STRINGER - SEE DETAIL 11/A2.1 & STRUCTURAL DWGS
20. WROUGHT IRON GUARDRAIL/HANDRAIL - SEE DETAILS 10&11/A2.1
21. BRAKE METAL CLADDING - SEE DETAIL 04/A3.0



03 GARAGE DOOR SILL
1 1/2" = 1'-0"

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ELEVATIONS & DETAILS

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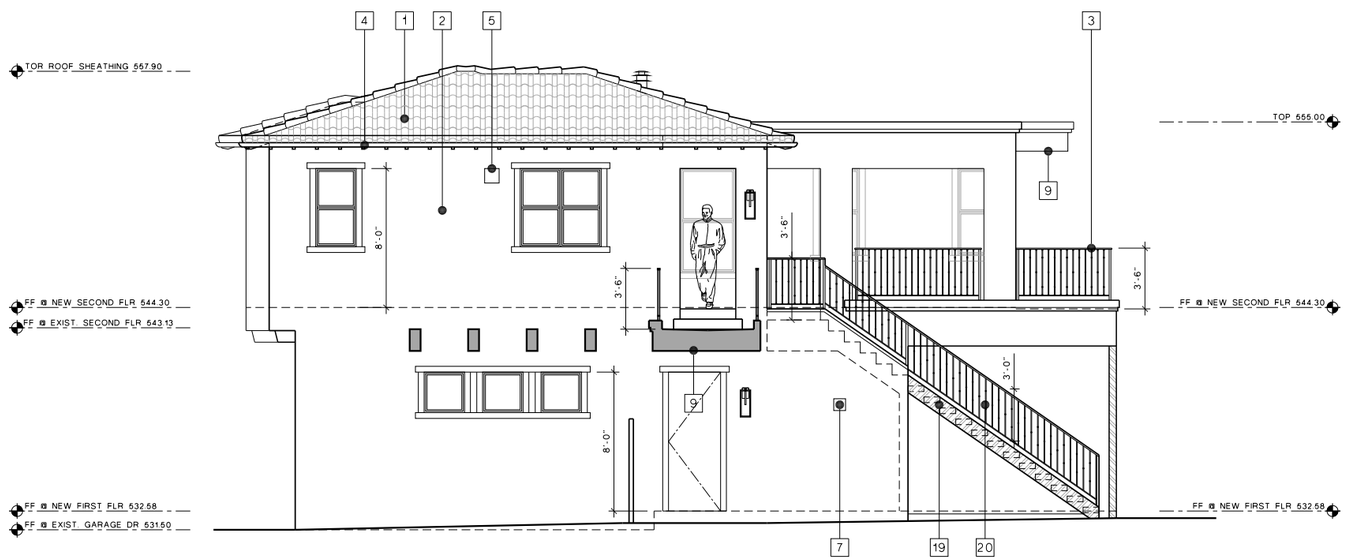
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ELEVATION - WEST

01

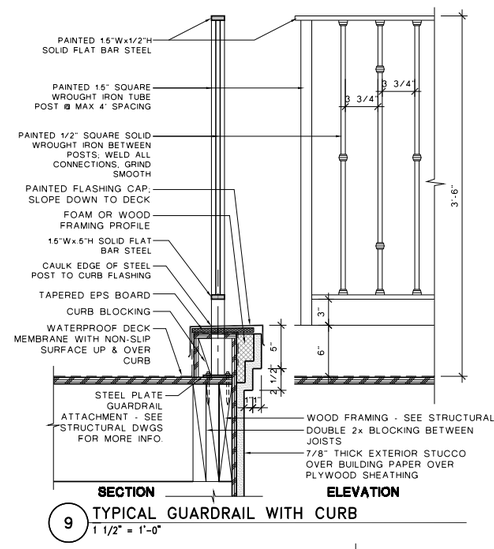
SCALE : 1/4" = 1'-0"



ELEVATION - NORTH

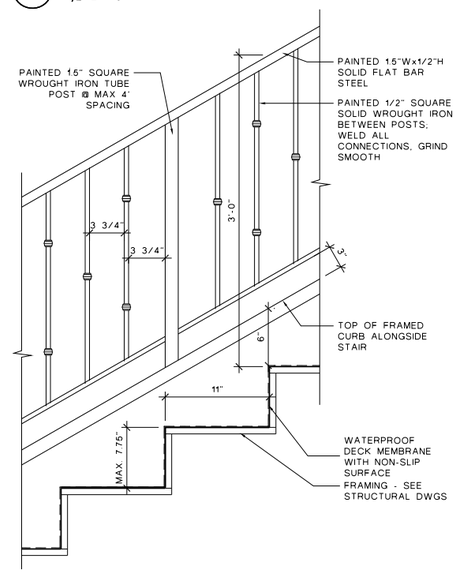
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SCALE : 1/4" = 1'-0"



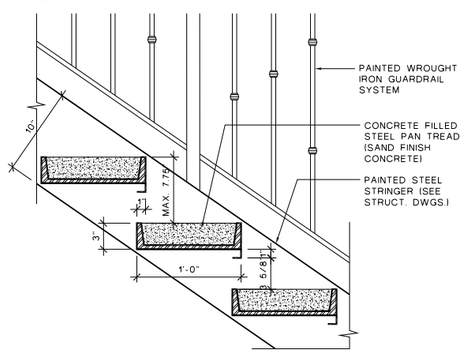
9 TYPICAL GUARDRAIL WITH CURB

1 1/2" = 1'-0"



10 STAIR GUARDRAIL / HANDRAIL

1 1/2" = 1'-0"



11 STEEL STAIR SECTION

1 1/2" = 1'-0"

GENERAL NOTES

- ALL DIMENSIONS ARE FROM TOP OF SLAB.
- INSTALL ALL MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
- PROVIDE TWO LAYERS OF GRADE D PAPER OVER ALL WOOD BASE SHEATHING.

KEYNOTES

1. TILE ROOFING TO MATCH EXISTING HOUSE
2. STUCCO TO MATCH EXISTING HOUSE
3. WROUGHT IRON GUARDRAIL- SEE DETAIL 09/A2.1
4. METAL GUTTER AND RAFTER TAILS TO MATCH EXISTING HOUSE
5. COOKTOP WALL EXHAUST
6. SITE WALL
7. DRYER VENT
8. FIREPLACE ROOFTOP EXHAUST
9. ONE-HOUR RATED 3 COAT STUCCO SOFFIT UNDER DECKS
10. CUSTOM CABINETS - SEE FLOOR PLAN
11. EXISTING GATE
12. NEW GATE TO MATCH EXISTING
13. NOT USED
14. MICROWAVE HOOD
15. HORIZONTAL FAU
16. RADIANT BARRIER AT UNDERSIDE OF ROOF SHEATHING (TYP.)

    The radiant barrier must have an emittance of 0.05 or less. The product must be tested according to ASTM C1371 or ASTM E408 and must be certified by the California Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation and listed in its ConsumerGuide and Directory of Certified Insulation Material.
17. TANKLESS WATER HEATER
18. NOT USED
19. PAINTED STEEL STRINGER - SEE DETAIL 11/A2.1 & STRUCTURAL DWGS
20. WROUGHT IRON GUARDRAIL/HANDRAIL - SEE DETAILS 10&11/A2.1
21. BRAKE METAL CLADDING - SEE DETAIL 04/A3.0

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5 0 2 4 6 10

GRAPHIC SCALE: 1/4"=1'-0"

ELEVATIONS & DETAILS

SCALE: 1/4" = 1'-0"

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HUBINETTE RESIDENCE
ADU ADDITION
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ALISO VIEJO, CA 92656

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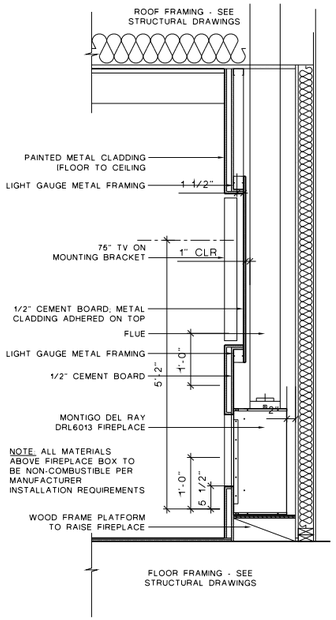
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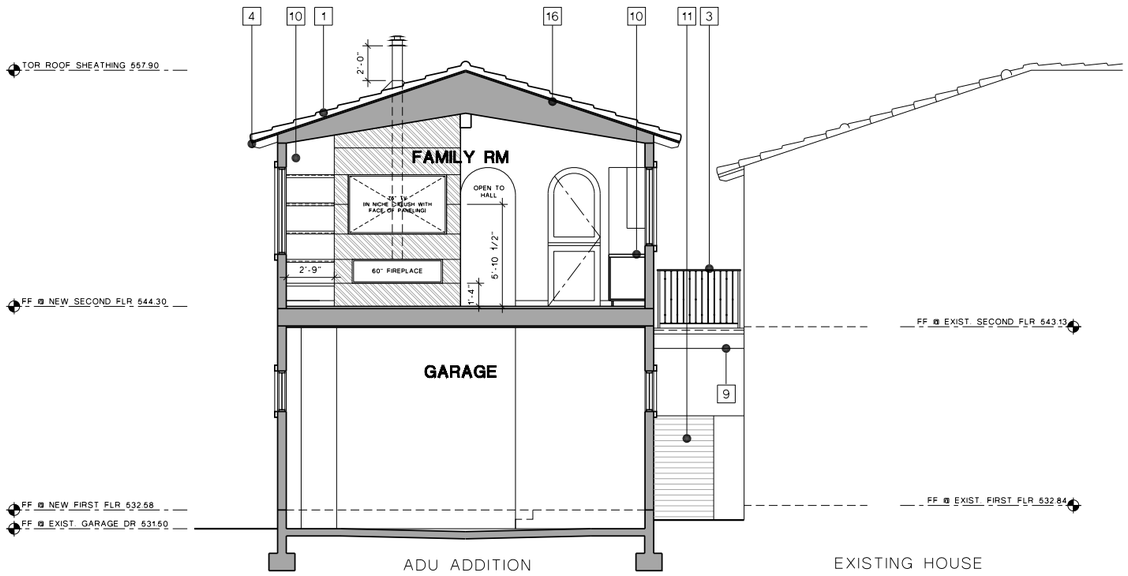
SCALE 1/4" = 1'-0"

JOB NO:

SHEET **A2.1**



03 FIREPLACE / TV WALL SECTION
3/4" = 1'-0"



SECTION A 01

SCALE : 1/4" = 1'-0"

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KEYNOTES

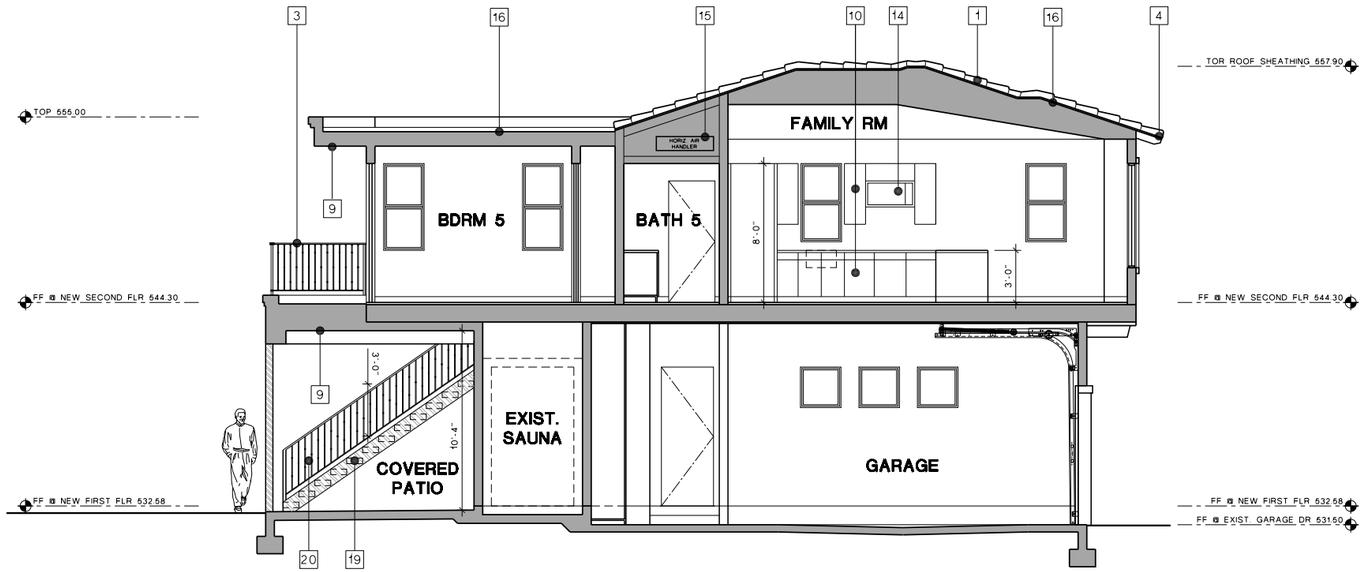
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11. EXISTING GATE
12. NEW GATE TO MATCH EXISTING
13. 4-INCH TALL ADDRESS NUMBER
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21. BRAKE METAL CLADDING - SEE DETAIL 04/A3.0

LIGHT SPECIFICATION:
PIXIE LARGE LED BLACK OUTDOOR WALL SCONCE (LUMENS.COM) 7"W X 22.5"H
SHIELDED LIGHT SOURCE; LIGHT DIRECTED DOWN



04 EXTERIOR WALL SCONCE
3/4" = 1'-0"



SECTION B 02

SCALE : 1/4" = 1'-0"

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5 0 2 4 6 10

GRAPHIC SCALE: 1/4"=1'-0"

SECTIONS

SCALE: 1/4" = 1'-0"

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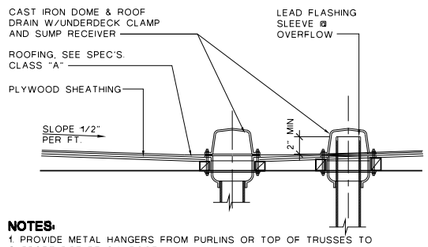
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CHECKED
DATE 12-16-24
SCALE 1/4" = 1'-0"
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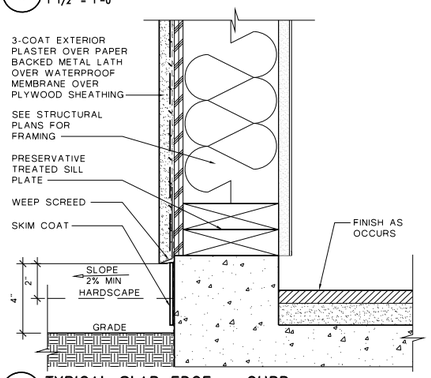
SHEET A2.2



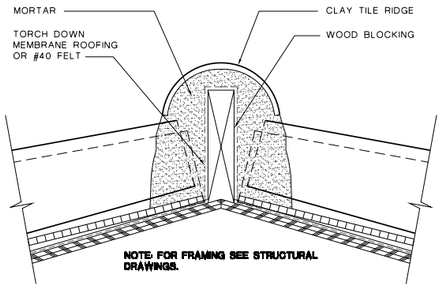
NOTES:

1. PROVIDE METAL HANGERS FROM PURLINS OR TOP OF TRUSSES TO SUPPORT PIPE BELOW ROOF.
2. ALL DRAINS AND OVERFLOWS TO BE MIN. 3" DIA. PIPE.
3. OVERFLOW DRAIN TO BE C.I. PIPING INLET TO BE 2" ABOVE LOW POINT ROOF LINE PER CODE. OVERFLOW DRAIN TO BE SAME SIZE AS ROOF DRAIN.

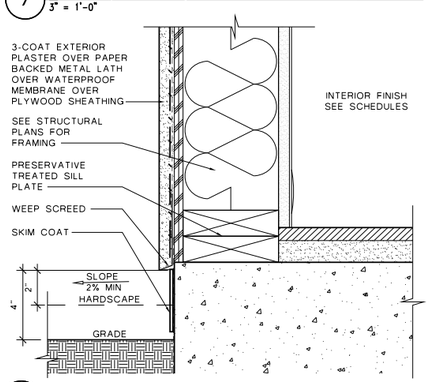
5 ROOF DRAIN & OVERFLOW DRAIN
1 1/2" = 1'-0"



6 TYPICAL SLAB EDGE – CURB
3" = 1'-0"

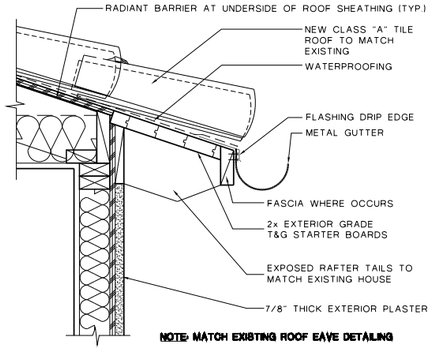


7 RIDGE (HIP SIM.)
3" = 1'-0"

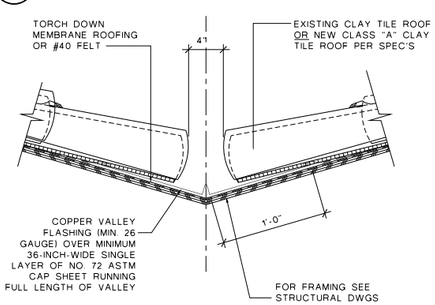


8 TYPICAL SLAB EDGE
3" = 1'-0"

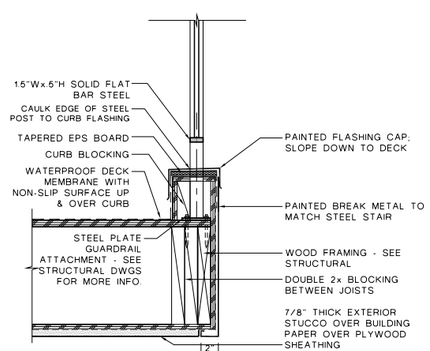
1 WINDOW FLASHING
1 1/2" = 1'-0"



2 STANDARD ROOF EAVE
1 1/2" = 1'-0"



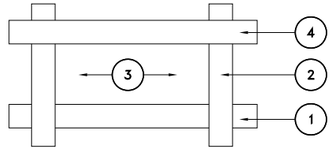
3 VALLEY FLASHING
1 1/2" = 1'-0"



4 TYPICAL WOOD FRAMED STAIR SECTION
1 1/2" = 1'-0"

INSTALLER NOTES:

1. INSTALL 6" MOISTOP PAPER ALONG SILL, OVERLAPPING AT JAMBS.
2. INSTALL MOISTOP ALONG EACH SIDE OF JAMB AND OVER MOISTOP AT SILL AND EXTEND 6 TO 8 INCHES BEYOND EDGE OPENING.
3. CAULK INSIDE EDGE OF WINDOW FRAME NAIL-ON FIN AND INSTALL INTO OPENING PLUMB AND SQUARE. NAIL FRAME TO STUDS WITH CAULKING AGAINST PAPER.
4. INSTALL MOISTOP ALONG HEAD AND OVER NAIL-ON FIN OF WINDOW AND OVER MOISTOP AT JAMBS. EXTEND 2 INCHES BEYOND MOISTOP AT JAMBS.
5. NAIL FRAME 4 INCHES FROM EACH END AND AT 16" O.C.
6. DO NOT NAIL THROUGH FLASHING.



DOOR SCHEDULE

IDEN	SIZE WIDTH	SIZE HEIGHT	TYPE	LOCATION	U-FACTOR	SHGC	DESCRIPTION	REMARKS
FIRST FLOOR								
D1-01	16'-2"	8'-0"	A	EXTERIOR	NA	NA	GARAGE DOOR	ZIEGLER DOORS, INC.; FARMHOUSE DESIGN GDWF2; ARMORITE COMPOSITE WOOD; PAINT COLOR TBD; GLASS AT TOP PANELS
D1-02	3'-0"	8'-0"	B	EXTERIOR	NA	NA	SOLID CORE DOOR	
D1-03	2'-6"	8'-0"	C	EXTERIOR	NA	NA	EXISTING SAUNA DOOR	RE-USE EXISTING SAUNA DOOR - VERIFY SIZE IN FIELD
D1-04	16'-2"	8'-0"	A	EXTERIOR	NA	NA	GARAGE DOOR - EXISTING HOUSE	REPLACE EXISTING GARAGE DOOR TO MATCH NEW GARAGE DOOR
SECOND FLOOR								
D2-01	3'-0"	8'-0"	H	EXTERIOR	0.30	0.23	ARCH-TOP DUTCH DOOR	COLOR TBD BY OWNER
D2-02	2'-6"	8'-0"	D	EXTERIOR	0.30	0.23	FRENCH DOOR	EXISTING HOUSE - VERIFY SIZE WITH EXISTING OPENING
D2-03	2'-8"	7'-0"	E	INTERIOR	NA	NA	SOLID CORE DOOR	MATCH EXISTING INTERIOR DOORS IN HOUSE
D2-04	2'-8"	7'-0"	E	INTERIOR	NA	NA	SOLID CORE DOOR	MATCH EXISTING INTERIOR DOORS IN HOUSE
D2-05	5'-2"	8'-0"	F	INTERIOR	NA	NA	BI-PASS SOLID CORE WOOD DOOR PAIR	MATCH EXISTING INTERIOR DOORS IN HOUSE
D2-06	6'-0"	8'-0"	G	EXTERIOR	0.30	0.23	FRENCH DOOR PAIR	DARK BRONZE/BLACK FRAME/JAMB COLOR TBD BY OWNER

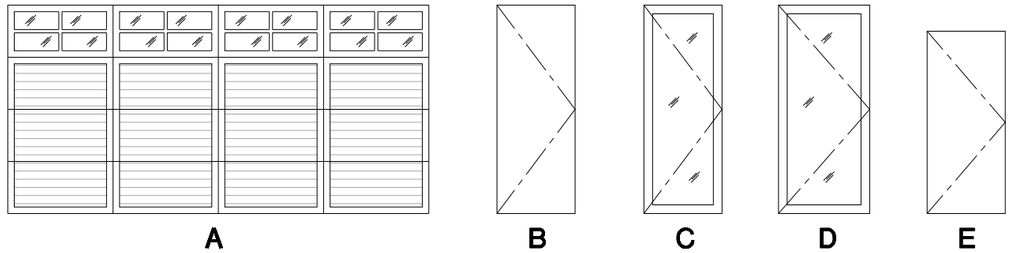
WINDOW SCHEDULE

IDEN	SIZE WIDTH	SIZE HEIGHT	TYPE	U-FACTOR	SHGC	DESCRIPTION	REMARKS
FIRST FLOOR							
W1-01	2'-4"	2'-4"	A	NA	NA	CASEMENT WINDOW	
W1-02	2'-4"	2'-4"	A	NA	NA	CASEMENT WINDOW	
W1-03	2'-4"	2'-4"	A	NA	NA	CASEMENT WINDOW	
W1-04	2'-4"	2'-4"	A	NA	NA	CASEMENT WINDOW	
W1-05	2'-4"	2'-4"	A	NA	NA	CASEMENT WINDOW	
SECOND FLOOR							
W2-01	2'-4"	4'-6"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-02	4'-8"	4'-6"	D	0.3	0.23	DOUBLE HUNG WINDOW	
W2-03	3'-2"	6'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-04	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-05	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-06	2'-4"	2'-4"	B	0.3	0.23	CASEMENT WINDOW	
W2-07	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-08	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-09	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-10	5'-0"	6'-0"	C	0.3	0.23	DOUBLE HUNG WINDOW PAIR	MULLION DIVISIONS TO MATCH EXISTING STREET FACING WINDOWS
W2-11	5'-0"	6'-0"	C	0.3	0.23	DOUBLE HUNG WINDOW PAIR	MULLION DIVISIONS TO MATCH EXISTING STREET FACING WINDOWS
W2-12	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	
W2-13	2'-4"	5'-0"	B	0.3	0.23	DOUBLE HUNG WINDOW	

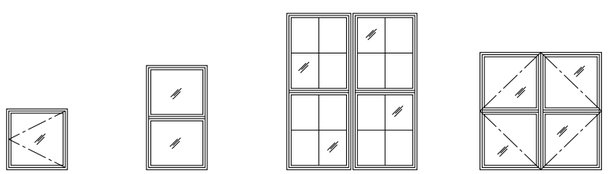
GATE SCHEDULE

IDEN	SIZE WIDTH	SIZE LENGTH	TYPE	U-VALUE	SHGC	DESCRIPTION	REMARKS
G1-01	3'-0"	6'-0"	A	NA	NA	SOLID GATE	MATCH EXISTING STYLE; VERIFY HEIGHT IN FIELD

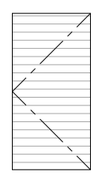
DOOR TYPES
SCALE : 3/8" = 1'-0"



WINDOW TYPES
SCALE : 3/8" = 1'-0"



GATE TYPES
SCALE : 3/8" = 1'-0"



DOOR/WINDOW SCHEDULE GENERAL NOTES

- FOR ALL GLAZING REQUIREMENTS, INCLUDING DUAL GLAZING LOCATIONS, CONTRACTOR SHALL COMPLY WITH TITLE 24 REQUIREMENTS. TITLE 24 REQUIREMENTS TAKE PRECEDENCE OVER ALL INFORMATION SHOWN HERE.
- ALL DOOR, WINDOW AND SKYLIGHT OPENING SIZES INDICATED ARE NOMINAL SIZES. CONTRACTOR SHALL VERIFY ACTUAL SIZES IN FIELD PRIOR TO FABRICATION. ALL EXISTING OPENINGS TO BE FIELD VERIFIED.
- PROVIDE SAFETY GLAZING IN ACCORDANCE WITH SECTION R308.4 AT THE FOLLOWING LOCATIONS:
  a) GLAZING IN DOORS
  b) DOOR SIDELITES - GLAZING ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60-INCHES ABOVE THE WALKING SURFACE.
- TEMPERED SAFETLY GLAZING TO BE ETCH MARKED.
- CONTRACTOR TO VERIFY GLAZING TINT WITH OWNER PRIOR TO PURCHASE. CONTRACTOR TO PROVIDE GLASS SAMPLE(S) FOR OWNER REVIEW AND APPROVAL.
- ALL EXTERIOR GLAZING (DOORS & WINDOWS) TO BE MINIMUM LOW E, INSULATED, DUAL PANE, UNLESS NOTED OTHERWISE.
- ALL DOOR HARDWARE TO BE SELECTED BY THE OWNER.
- SEE EXTERIOR ELEVATIONS & FLOOR PLAN FOR MORE INFORMATION REGARDING DIRECTION FOR SLIDING DOORS & WINDOWS.
- FENESTRATIONS MUST HAVE TEMPORARY AND PERMANENT LABELS.
- DOORS WHICH PROVIDE DIRECT ACCESS TO THE SWIMMING POOL SHALL BE PROVIDED WITH A BARRIER ALARM.

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DETAILS & DOOR & WIN. SCHED.

SCALE: 3/8" = 1'-0"

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CHECKED	
DATE	12-16-24
SCALE	3/8" = 1'-0"
JOB NO:	
SHEET	A3.0

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ROBERT BUNYAN & ASSOCIATES
REAL ESTATE CONSULTANTS
ENTITLEMENTS PERMITTING DEVELOPMENT

December 19, 2024

Michael Delgadillo
Planning Department
City of Aliso Viejo
12 Journey
Aliso Viejo, CA 92656

Re: 25 Alisal Ct. Accessory Dwelling Unit

Dear Michael:

Robert Bunyan & Associates has been retained by the homeowner at 25 Alisal Ct. to assist in processing plans and documents for a 748 square foot accessory dwelling unit in the Glenwood development. This application is requesting approval for a conditional use permit to allow the ADU height to exceed 25 feet, and to permit to allow use of see-through window glass. Applicant is also requesting approval of a site development permit to address a 12 foot height maximum for accessory structures, as specified in the Glennwood Specific Plan.

Project Description:
The subject property is a 9,300 s.f. lot located at 25 Alisal Ct. in the Glenwood at Aliso Viejo development. Zoning on the property is R-1. The existing residence is a 3,257 s.f. single family house with two levels and a 3-car tandem garage. The two-story ADU would be located on the southerly side of the existing single family dwelling unit and is connected to the main residence with a pedestrian bridge. The ADU is 748 square feet in size and two levels with a proposed two-car garage. The homeowner intends to use the ADU for lodging for his family members, who make periodic visits from Sweden.

The architecture, materials, finishes and colors of the ADU are similar to the main residence. These include clay tile roofing, exterior stucco finishes, windows and garage doors. Landscape and hardscape design, finishes and materials will also be consistent with the existing residence. The existing driveway will be widened to provide vehicle access to the ADU garage. Plans for the ADU have been submitted to and approved by the Glenwood Maintenance Corporation and by the Aliso Viejo Community Association.

Conditional Use Permit:
As currently proposed, the ADU exceeds the maximum height limit of 25 feet by 16 inches (AVMC 15.14.080(H)(2)(D). As this is a non-conforming height, we understand that a conditional use permit must be obtained. We note that while the ADU exceeds the City code standard, it is equal in height to the adjacent main residence. The homeowner desires to maintain the proposed height since this height is required to accommodate a vehicle lift within the ADU garage. The homeowner and his wife are professional stunt drivers and utilize the lift for additional vehicle storage.

24008 SKYLINE • MISSION VIEJO, CA 92692
TEL. : (949) 697-7933 • e-mail : rbunyan4@cox.net

Per AVMC 15.14.080(I)(7)(E), all windows located less than 30 feet from a property line that is not a public right-of-way must utilize obscure glass, such as frosted, patterned, bubble effect, ribbed, or other similar design. The code does not specify the reason for requiring obscure glass. The Applicant has proposed using traditional see-through window glass, except for bathroom windows. Such glass is consistent with and matches windows in the main residence. It is noted that the ADU faces slopes on the rear property line and the south property line, which are heavily landscaped and preserve privacy. Windows on the front of the ADU are on the second level and face the street. Windows on the north side of the ADU face the main house. Added privacy for the ADU windows will be provided by appropriate window coverings, such as shutters, blinds or drapes.

Site Development Permit:
Per the Glenwood Specific Plan, accessory structures are limited in height to 12 feet unless approved under a Site Development Permit. The Glenwood Specific Plan was adopted by the City in 2004, well before the state enacted legislation providing for accessory dwelling units. Since the Glenwood Specific Plan has not been amended to accommodate ADU's, and the proposed ADU is higher than 12 feet, a Site Development Permit is being requested.

Project Justification:
Per City of Aliso Viejo Zoning Code, the purpose of a conditional use permit is to provide for individual approval or denial of land uses requiring such permits. Uses requiring CUP's may have moderate to significant potential for adverse impacts on surrounding properties, residents, or businesses. The request for a CUP for this ADU is for approval of the unit to be 18 inches higher than the maximum allowed under the City's Municipal Code, and for the use of see-through window glass, rather than obscure glass. The following are required findings for the approval of a CUP and are applicable to this ADU application:

1. Consistency with General Plan: The ADU land use is consistent with the General Plan
2. Consistency with Zoning Code: ADU use exceeds the maximum height limitation by 18 inches. This additional height provides a street appearance, not only consistent with the existing residence, but with other homes within the neighborhood. The Applicant and wife are professional stunt drivers and occasionally own or park expensive exotic vehicles at their house. The additional height of the ADU assists the Applicant in providing a vehicle lift in the ADU garage. This capability allows such expensive vehicles to be stored off the street and provides enhanced security.
3. Compliance with District Regulations: ADU land use complies with all conditions required of the use in this district
4. Compliance with CEQA: Processing and approval of the permit application are in compliance with the requirements of the California Environmental Quality Act. The ADU is consistent with the existing development and does not introduce any new conditions that would represent a significant impact on the environment.
5. Surrounding Uses: Approval of the application will not create conditions materially detrimental to the public health, safety and general welfare or injurious to or incompatible with other properties or land uses in the vicinity. Increasing the height of the ADU, incorporating see-

through glass and allowing the structure to be higher than 12 feet do not create conditions materially detrimental to public health, safety or general welfare.

Included in this submittal are the following:

- City Application Form PS -200A dated 12/18/2024
- City Environmental Impact Assessment Form PS-205 dated 12/18/2024
- City Zoning Compliance Form PS-240 dated 12/18/2024
- City Deposit Account/Financial Disclosure Form FS-100 dated
- OCFA Plan Submittal Criteria Form SFR dated
- Architectural plans from Avalon Architectural (electronic submittal)
- Public Notification package prepared by Susan W Case Inc dated 12/12/2024
- Glenwood Maintenance Corporation HOA Design Approval Letter
- Aliso Viejo Community Association Design Review Approval letter
- Planning Department Comments for DRP-2024-00004 dated 12/5/2024 and Robert Bunyan & Associates response to comments dated 12/18/2024

A Design Review Permit plan review fee in the amount of $514.71 was previously submitted. (check #1231 dated 11/4/2024). We understand that a supplemental fee will be required for adding the CUP and SDP permits.

Thank you for your assistance and please let me know if you have any questions or require additional information.

Regards,

Bob Bunyan

Attachments

Cc: Samuel Hubinette

CITY OF ALISO VIEJO
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING SERVICES DIVISION
12 JOURNEY, SUITE 100
ALISO VIEJO, CA 92656
Phone: (949) 425-2525

Application Request and Signature Page

FORM PS-200A

Project Case No. *(For City Use Only)*	**Deposit Amount*:**

***Deposit accounts are subject to a technology, postage and micro film/scanning fee, which will be automatically deducted from the deposit account.**

1. Application Type: *(check appropriate box for type of approval needed)*

- ☑ Conditional Use Permit
- ☐ Master Sign Permit
- ☑ Site Development Permit
- ☐ Other_____
- ☐ Other_____
- ☐ Other_____

2. Project Address / Location: 25 ALISAL CT. ALISO VIEJO

Assessor's Parcel Number: 623-642-61

Existing Use: SINGLE FAMILY RESIDENTIAL **Proposed Use:** ACCESSORY DWELLING UNIT

Brief Project Description: CONSTRUCT TWO-STORY ADU ADJACENT TO EXISTING SINGLE FAMILY RESIDENTIAL HOME. ADU IS 748 S.F. WITH ATTACHED WALKWAY TO MAIN HOUSE.

3. Property Owner:

Name: SAMUEL HUBINETTE Company/Corporation:
Address: 25 ALISAL CT.
City: ALISO VIEJO State: CA Zip: 92656 Email: samuel@shstunts.com
Telephone: (949) 350-0233 Telephone:

4. Authorized Agent: *(if different from property owner)*

Name: BOB BUNYAN ROBERT BUNYAN & ASSOC. Company/Corporation:
Address: 24008 SKYLINE
City: MISSION VIEJO State: CA Zip: 92692 Email: rbunyan4@gmail.com
Telephone: (949) 697-7933 Telephone:

- ☐ I am the sole owner and hereby authorize the filing of this application.
- ☐ The property owner is a corporate entity. I am the duly authorized representative of said corporation.
- ☐ I own the project site in conjunction with one or more persons. (Acknowledgement and authorization for all such persons is required for the filing of this application.)

5. Applicant/Agent: *(if different from property owner)*

- ☑ I am not the property owner; however, I am authorized to file this application on behalf of the property owner. (An agent may sign for the property owner if written authorization signed by the property owner is filed with the application.)

Name: BOB BUNYAN Company/Corporation: ROBERT BUNYAN & ASSOC. Telephone: (949) 697-7933 Telephone:
Address: 24008 SKYLINE City: MISSION VIEJO State: CA Zip: 92692 Email: rbunyan4@gmail.com

6. CERTIFICATION:

As the **Property Owner** or **Applicant/Agent** filing this request, I hereby certify that I acknowledge, understand, and concur with the following statements:

(a) There are no assurances at any time, implicitly or otherwise, regarding either final staff recommendations to the decision making body or final decisions regarding this application.

(b) I am responsible for knowing and complying with government policies and regulations applicable to the proposed development and/or permit. The City is not liable for any damages or loss resulting from the actual or alleged failure to inform the applicant of any applicable laws or regulations. City approval of a permit application, including all related plans and documents, is not a grant of approval to violate any applicable policy or regulation, nor does it constitute a waiver by the City to pursue any remedy which may be available to enforce and/or correct violations of the applicable policies and regulations.

(c) Major changes to the proposed project may require a new application and payment of new or additional deposits.

(d) I have read and agree to documentation pertaining to submission of deposits and financial responsibility (Form FS-100) related to processing of this application.

(e) The information I have presented in this form and the accompanying materials is true and correct to the best of my knowledge. I also understand that additional data and information may be required prior to final action on this application.

Print Name: Bob Bunyan Title: PRINCIPAL

Signature: [signature] Date: 12/19/2024

PS-200B
Revised 7/1/18

CITY OF ALISO VIEJO
DEPARTMENT OF FINANCIAL SERVICES
COMMUNITY DEVELOPMENT DEPARTMENT
DEPARTMENT OF ENGINEERING / PUBLIC WORKS
12 JOURNEY, SUITE 100
ALISO VIEJO, CA 92656
Phone: (949) 425-2500 Fax: (949) 425-3899

Deposit Account / Financial Disclosure

FORM FS-100

FOR INTERNAL USE ONLY

Project Address / Location: 25 ALISAL CT. ALISO VIEJO

Project Case No.

Approval Type: (check all applicable types of applications)

Planning

- ☑ Conditional Use Permit
- ☐ Master Sign Permit
- ☐ Minor Site Development Permit
- ☑ Site Development Permit
- ☐ Other_____
- ☐ Other_____

Engineering

☐ Grading ☐ Landscaping ☐ Encroachment ☐ Other_____

Notes:

INITIAL DEPOSIT AMOUNT:_____

Deposit Account Information

In accordance with City Purchasing Policy 300-5, fees and/or a deposit may be required and are intended to provide funding for processing of an application. Applications requiring a deposit will be billed on a time and material basis. Charges for staff time, including but not limited to Planning, Engineering, Public Works, Building, Legal, Law Enforcement, Financial Services and Community Services, legal fees are billed based on project requirement and legal review. Administrative costs and incidental costs will be applied and/or accrued to the deposit account. Costs include but are not limited to publishing of public notice(s), postage for mailing, printing, etc. The applicant shall pay all costs applied to the project prior to final action on the related project or as soon thereafter as such costs may be finally determined. Final action may be permit issuance, issuance of a Certificate of Occupancy, or approval of the specific entitlement.

Though it is not possible to exactly determine the time staff will spend on a given project upon application submittal, an estimate will be provided to the applicant. Staff time is billed in quarter hour increments. In the event the project requires major changes or additional applications to be submitted, the applicant may be required to submit additional funds or open a new deposit account. All deposit accounts are required to maintain a minimum balance of 25% of the original deposit amount. When a balance reaches 25% of the original deposit amount, the applicant will be notified with the amount required to replenish the deposit account with a due date for the receipt of funds. If payment is not received by the due date specified in the notice, all development processing activities will cease until payment is remitted. In addition, no new development cases will be accepted from this billing party for the address/location that is the subject of the original application. Any remaining deposit amount will be refunded to the applicant at the conclusion of the process. ***Note: remaining deposit amount will be made payable to the party that submitted the original deposit with the application submittal. Deposit accounts are subject to a technology fee and a microfilm/scanning fee, which will be automatically deducted from the deposit account.***

Initial SH

PLANNING

Additional Deposit Information for Planning Applications

An initial deposit is required for project processing for all discretionary project applications. When the account reaches the minimum balance, the applicant shall replenish the account by the estimated amount necessary for the City to complete its review of the application or at a minimum of 50% of the initial deposit amount if such amount is sufficient to complete the application review. The payment of such costs may be included as a condition of approval for any such application. In the event development caseload demand exceeds current staffing levels, City consultants may be assigned to process certain cases. All case processing activities performed by consultants are supervised and supported by City staff, services, and supplies and will be paid with funds in the deposit account.

Environmental Review and Documentation

Depending on the level of review required by the California Environmental Quality Act (CEQA) for the project, a separate deposit shall be submitted for the research, review, and preparation of environmental documents related to the proposed project. These deposit accounts are subject to the same terms as stated above for deposit accounts for development processing. Staff may elect to hire an environmental consultant for the environmental review and documentation of the project. In this case, the deposit amount shall be the amount stated in the consultant's proposal for CEQA review.

Initial SH

ENGINEERING / PUBLIC WORKS

Engineering grading and landscaping deposits will be based on the Deposit and Fee Schedule. Deposits for encroachment permits will be based on the anticipated length of the project as determined by the City Engineer or Public Works Inspector. Permittees are charged the actual costs of inspections for encroachments on the City right-of-way. Water quality permits are required for all encroachments in which soil is disturbed. Best Management Practices (BMPs) must be implemented and maintained for the duration of the project.

Initial_____

Financially Responsible Party

Applicant/Agent:	Address:	Email:
SAMUEL HUBINETTE	25 ALISAL CT	samuel@shstunts.com

City:	State:	Zip Code:	Telephone:	Telephone:
ALISO VIEJO	CA	92656	(949) 350-0233	

Financially Responsible Party Declaration

I understand City expenses may exceed the estimated advance deposit and, when requested by the City of Aliso Viejo, will provide additional funds to maintain a positive balance. Furthermore, I understand the sale or other disposition of the property does not relieve me (individual or Company/Corporation) of the obligation to pay and maintain a positive balance in the deposit account, unless the City of Aliso Viejo approves a Change of Responsible Party and transfer of funds. Should the funds in the account fall below the required minimum balance, all City work may stop until the requested advance deposit is received. I HAVE READ, UNDERSTAND, AND AGREE TO THE INFORMATION AND TERMS LISTED ABOVE IN REGARDS TO DEPOSIT ACCOUNTS AND FINANCIAL RESPONSIBILITY.

Print Name: SAMUEL HUBINETTE Title: HOMEOWNER

Signature*: [signature] Date: 12-19-2024

***The name of the individual and the person who signs this deposit must be the same. If a corporation is listed, a corporate officer must sign the declaration (i.e., President, Chairman, Secretary, Treasurer).**

CITY OF ALISO VIEJO
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING SERVICES DIVISION
12 JOURNEY, SUITE 100
ALISO VIEJO, CA 92656
Phone: (949) 425-2525

Environmental Impact Assessment

FORM PS-205

Application Number(s): _____ **Date Filed:** 12/19/2024

Project Description:

CONSTRUCTION OF A TWO-LEVEL 748 S.F. ACCESSORY DWELLING UNIT ON A SINGLE FAMILY RESIDENTIAL LOT.

ENVIRONMENTAL IMPACT ASSESSMENT:

A brief explanation is required for all questions that constitute a "Yes" answer on page two (2). All answers must take into account the entire action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

YES	NO	
☐	☑	1. Change in existing features of any bays, tidelands, beaches, lakes, hills or substantial alteration of ground contours.
☐	☑	2. Change in scenic views or vistas from existing residential areas or public lands or roads.
☐	☑	3. Change in pattern, scale or character of general area of project.
☐	☑	4. Significant amounts of solid waste or litter.
☐	☑	5. Change in dust, ash, smoke, fumes or odors in vicinity.
☐	☑	6. Change in ocean, bay, lake, stream or ground water quality or quantity, or alteration of existing drainage patterns.
☐	☑	7. Substantial change in existing noise or vibration levels in the vicinity.
☐	☑	8. Site on filled land or on slope of 10 percent or more.
☐	☑	9. Use or disposal of potentially hazardous materials, such as toxic substances, flammables or explosives.
☐	☑	10. Substantial change in demand for municipal services (police, fire, water, sewage, etc.).
☐	☑	11. Substantial increase in fossil fuel consumption (electricity, oil, natural gas, etc.).
☐	☑	12. Relationship to a larger project or series of projects.
☐	☑	13. Has a prior environmental impact report been prepared for a program, plan, policy or ordinance consistent with this project?
☐	☐	14. If you answered yes to question 13, will this project cause significant effects on the environment that were not examined in the prior EIR?

Explanations: (attach separate sheets if necessary)

15. Describe the project site, as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site and use of the structures. Attach photographs of the site.

EXISTING RESIDENTIAL NEIGHBORHOOD. SITE IS A SINGLE FAMILY DETACHED LOT.

16. Describe the surrounding properties, including information on plants and animals and any cultural, historical or scenic aspects. Indicate the type of land use (residential, commercial, etc.), intensity of land use (one-family, apartment houses, shops, department stores, etc.), and scale of development (height, frontage, setback, rear yard, etc.). Attach photographs of the vicinity.

SURROUNDING PROPERTIES EAST, WEST, NORTH ARE SINGLE FAMILY DETACHED. PROPERTY TO SOUTH IS CHURCH OF LATTER DAY SAINTS

17. List and describe other related permits and public approvals required for this project, including those required by city, regional, state and federal agencies.

ORANGE COUNTY FIRE AUTHORITY (FIRE SPRINKLERS); MNWD (WILL-SERVE LETTER). BOTH REQUIRED WITH BUILDING PERMIT

CITY/CEQA PROCESS: (please initial below)

RTB The Director of Planning Services (Director) will determine whether the activity is a "project".

RTB If the activity is a "project", the Director will determine if the project is exempt from further CEQA analysis:

- If the project is exempt, an $84.00 CEQA fee is added to the application amount and a $84 check payable to the "Orange County Clerk Recorder" will be required to be submitted to staff with two (2) days of a City determination.

RTB If the activity is a "project" and it is not deemed exempt:

- The Director will request bids from three (3) environmental consultants to prepare an Initial Study and subsequent environmental documentation; and will select consultant with applicant's input.
- The Applicant shall provide a check payable to the "City of Aliso Viejo" for the amount identified in the consultant's proposal.
- The City shall execute a contract with the selected consultant for the amount identified in the proposal and on deposit with the City.
- Following completion of the document, specified consultation/noticing period, and a determination by the City, the Applicant shall provide staff with a check payable to the "Orange County Clerk Recorder" for the applicable Fish and Game and administrative fees within two (2) business days of the City determination.

CERTIFICATION:

I hereby certify that statements furnished above, and in the attached exhibits, present the data and information required for this initial evaluation to the best of my ability, and that facts, statements and information presented are true and correct to the best of my knowledge and belief.

Signature: _____ Date: 12/19/2024

Print Name: ROBERT T. BUNYAN

CITY OF ALISO VIEJO
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING SERVICES DIVISION
12 JOURNEY, SUITE 100
Aliso Viejo, CA 92656
Phone: (949) 425-2525

Zoning Compliance Application for Plan Review

FORM PS-240

Property Owner:

Name: SAMUEL HUBINETTE | Company/Corporation:

Address: 25 ALISAL CT.

City: ALISO VIEJO | State: CA | Zip: 92656

Email: | Telephone: | Telephone:

CERTIFICATION: (*if the Applicant is not the Property Owner*)
As the **Property Owner,** I hereby certify that I acknowledge, understand, and concur the filing of this application by the **Applicant** identified below. (An Authorization Letter or Contract Agreement may be attached in lieu of a Property Owner signature).

Print Name: SAMUEL HUBINETTE | Title: OWNER

Signature: [signature] | Date:

Authorized Applicant:

Name: BOB BUNYAN | Company/Corporation: ROBERT BUNYAN & ASSOCIATES

Address: 24008 SKYLINE

City: MISSION VIEJO | State: CA | Zip: 92692

Email: rbunyan4@gmail.com | Telephone: (949) 697-7933 | Telephone:

CERTIFICATION:

As the **Property Owner or Authorized Applicant** filing this request, I hereby certify that I acknowledge, understand, and concur with the following statements:

(a) I am responsible for knowing and complying with government policies and regulations applicable to the proposed development and/or permit. The City is not liable for any damages or loss resulting from the actual or alleged failure to inform the applicant of any applicable laws or regulations. City approval of a permit application, including all related plans and documents, is not a grant of approval to violate any applicable policy or regulation, nor does it constitute a waiver by the City to pursue any remedy which may be available to enforce and/or correct violations of the applicable policies and regulations.

(b) The information I have presented in this form and the accompanying materials is true and correct to the best of my knowledge. I also understand that additional data and information may be required prior to final action on this application.

(c) I acknowledge that the Planning Department will review submittals to the Building Department to ensure Zoning Compliance; and if changes are made in the Building Permit submittal that affect development standard in the Aliso Viejo Municipal Code, it may affect the status of an approved Form PS-240.

Print Name: SAMUEL HUBINETTE | Title: OWNER

Signature: [signature] | Date: 12/19/2024

Staff Use Only

Review Time (in 15 minute increments): _____ Planning Fee Collected : _____ Building Permit No.: _____

Approved By:

Print Name:	Signature:	Date:

Notes:

ORANGE COUNTY FIRE AUTHORITY

Plan Submittal Criteria Form

Required for Single Family or Duplex Residences
(Use Commercial form for lots with 3+ dwelling units or new residential tracts)

SFR

Complete the Project Information and Questionnaire below, then sign and date the Applicant Certification.

Project Information

☐ New Single Family Residence/Duplex ☐ Addition/Remodel ☑ ADU ☐ Other

Address:	Unit #:	City or Unincorporated County Area:	ZIP:
25 Alisal Ct.	1-B	Aliso Viejo	92656

Scope of Work: Construct 748 s.f. ADU on single-family residential lot adjacent to existing house

Existing Area:	Area to be Added:	Total Resulting Area:	Stories:	Area Added in Past 2 Years (excluding this project):
0	748sf	748sf	2	0

	Yes	No	Questionnaire	OCFA Plan Type if "Yes"
1.	☐	☑	**New** – Is this a new single family residence or duplex?	*(PR160) Residential Site with Water Availability (PR400-402) Fire Sprinkler
2.	☑	☐	**ADU** – Is this a new Accessory Dwelling Unit (ADU) on the same property as a house that already has fire sprinklers or a house that will have fire sprinklers added as part of this project?	(PR400-402) Fire Sprinkler
3.	☐	☑	**Addition** – Is this (A) an addition to a currently sprinklered building, or (B) an addition requiring a fire sprinkler retrofit based on a threshold set by local ordinance?	(PR400-402) Fire Sprinkler
4.	☐	☑	**Distance** – Is the most remote portion of the addition, ADU or other detached structure greater than 140-feet from the fire access roadway?	*(PR160) Residential Site
5.	☐	☑	**Total Area** – Will the addition result in a total area of greater than 3,600 square feet (sf) for non-sprinklered buildings, or greater than 6,200 sf for sprinklered buildings, including the area of all enclosed spaces, such as garages, stairs, and detached structures separated by less than 10-feet?	*(PR160) Residential Site with Water Availability
6.	☐	☑	**Remodel** – Is this a remodel of a sprinklered building with a scope of work that includes adding or removing any interior walls? Note: If "Yes", then project must be evaluated by a C-16 licensed contractor to determine if a fire sprinkler modification is needed.	(PR400-402) Fire Sprinkler
7.	☐	☑	**Detached Structure** – Is this a new detached utility or accessory structure (not an ADU), such as a garage, workshop, game room, pool house, barn, etc., requiring fire sprinklers based on a threshold set by local ordinance?	*(PR160) Residential Site (PR400-402) Fire Sprinkler
8.	☐	☑	**Gate** – Is a gate being installed across a driveway or road that is designated as a fire department access roadway, or a driveway or road that serves more than a single home/duplex?	(PR180) Gate
9.	☐	☑	**Methane** – Is project located in or less than 100' from a "Division of Oil, Gas, and Geothermal Resources" (DOGGR) field boundary or well (active or abandoned), less than 300-feet from an oil/gas seep, or less than 1000-feet from a landfill? (Note: For projects in Yorba Linda, this requirement only applies to new homes, enclosed accessory structures, addition to existing structure greater than 1000 sf, and ADU's).	*(PR160) Residential Site *(PR172-174) Methane Test/Mitigation Plans
10.	☐	☑	**Vegetation** – Is the property/structure (A) on the perimeter of a community containing, or adjacent to slopes or hills, or (B) adjacent to an open space or wildland area containing non-irrigated vegetation, or (C) in a State Responsibility Area or Local Responsibility Area "Fire Hazard Severity Zone", as defined by the State, or (D) near an area that could be affected by a wildfire in the open space.	*(PR125) Fuel Modification (PR182) Accessory Structure

*OCFA approval required before issuance of a grading/building permit. All other plans types may be deferred submittals.

Applicant Certification

I certify, under penalty of perjury, under the laws of the State of California, that the information above is true:

Print Name: SAMUEL HUBINETTE Signature: Samuel H Date: 12-19-2024

Phone Number: 9493500233 Email: Samuelg5@students.com

Attention Building Department Staff – After you've verified all questions were answered accurately as "No", then you may accept this signed form as a written release that an OCFA review is not required. If any questions were answered as "Yes", then the plan type on the right side may be required.

_____ If all answers are "No" and the Building Department still requires the applicant to have their plans reviewed by OCFA, or if any answers are "Yes" and the Building Department prefers for OCFA to determine if a review is required, please initial this line and provide an explanation on the Plan Referral Form (on the reverse), to be submitted along with the appropriate plans to OCFA for a determination.

For questions and submittal information, please visit ocfa.org, or call OCFA at (714) 573-6108

Glenwood Maintenance Corporation
c/o Seabreeze Management Company
26840 Aliso Viejo Parkway, Suite 100
Aliso Viejo, CA 92656

ARCHITECTURAL APPROVAL

October 02 2024

Samuel Bengt Hubinette
25 Alisal Ct
Aliso Viejo, CA 92656

Re: Glenwood Maintenance Corporation
Architectural Approval - 25 Alisal Ct

Dear Samuel Bengt Hubinette:

Your architectural plans for **Landscaping** were reviewed by the Board of Directors at their most recent meeting. After review of the plans submitted, the Board determined to approve your architectural application as submitted.

Please be advised that if your plans have been approved, they are subject to acquiring any required City/County permits (if applicable), and work must be completed within the timeframe as stipulated in your governing documents.

When completed with your project, please return your Notice of Completion form along with photos of the completed work to Brian Reyes at Brian.Reyes@seabreezemgmt.com.

If you have any questions, please contact the Architectural Review Committee via your Community Manager, Julie McKenna at julie.mckenna@seabreezemgmt.com or you may mail your appeal letter to the address listed above.

Sincerely,

Architectural Review Committee
Glenwood Maintenance Corporation

Glenwood Maintenance Corporation
c/o Seabreeze Management Company
26840 Aliso Viejo Parkway, Suite 100
Aliso Viejo, CA 92656

ARCHITECTURAL APPROVAL

October 02 2024

Samuel Bengt Hubinette
25 Alisal Ct
Aliso Viejo, CA 92656

Re: Glenwood Maintenance Corporation
Architectural Approval - 25 Alisal Ct

Dear Samuel Bengt Hubinette:

Your architectural plans for **ADU (Accessory Dwelling Unit)** were reviewed by the Board of Directors at their most recent meeting. After review of the plans submitted, the Board determined to approve your architectural application as submitted.

Please be advised that if your plans have been approved, they are subject to acquiring any required City/County permits (if applicable), and work must be completed within the timeframe as stipulated in your governing documents.

When completed with your project, please return your Notice of Completion form along with photos of the completed work to Brian Reyes at Brian.Reyes@seabreezemgmt.com.

If you have any questions, please contact the Architectural Review Committee via your Community Manager, Julie McKenna at julie.mckenna@seabreezemgmt.com or you may mail your appeal letter to the address listed above.

Sincerely,

Architectural Review Committee
Glenwood Maintenance Corporation

ALISO VIEJO
COMMUNITY ASSOCIATION

October 23, 2024

Samual Hubinette
25 Alisal Ct
Aliso Viejo CA 92656

RE: Architectural Plan Review – ADU- & Multiple Items

Dear Property Owner:

Please be advised that the Aliso Viejo Community Association (AVCA) Master Architectural Committee (MAC) met on Tuesday, October 22, 2024 where they reviewed your plans for ADU & Multiple items and has granted approval per the notes on the application.

Please remember that you are responsible for:

- Submitting any additional changes to the plans for approval to the appropriate committees
- Obtaining any required permits from the City of Aliso Viejo
- Submitting a "Notice of Completion" when the work is complete (attached & available online at www.avca.net)

AVCA's MAC reviews proposed designs for aesthetics only and does not assume any liability for proposed Improvements. Owners are solely responsible for all aspects of their Improvements, including but not limited to engineering, physical location, design, required permits and approvals, and compliance with all applicable Federal, State, County and City building codes, fire codes, and ordinances.

AVCA's MAC approval does not include the approval for any improvement(s) that are not solely located on the applicant's/property owners personal property.

AVCA's MAC *cannot grant approval* for any alteration or improvement to be located on AVCA's privately owned property. Such approval must be submitted in writing to the AVCA Board of Directors and would require a legally recorded Easement to be in place, if approved by the AVCA Board of Directors.

AVCA will retain one copy of your plans for future reference and an additional set of plans are enclosed for your records.

Enjoy completing your improvements and give me a call at (949) 243-7750 or email at ymunoz@avca.net if you have any questions.

For the Master Architectural Committee,

Yessenia Munoz, CMCA®
Assistant General Manager
Aliso Viejo Community Association

ALISO VIEJO

Accessory Dwelling Unit

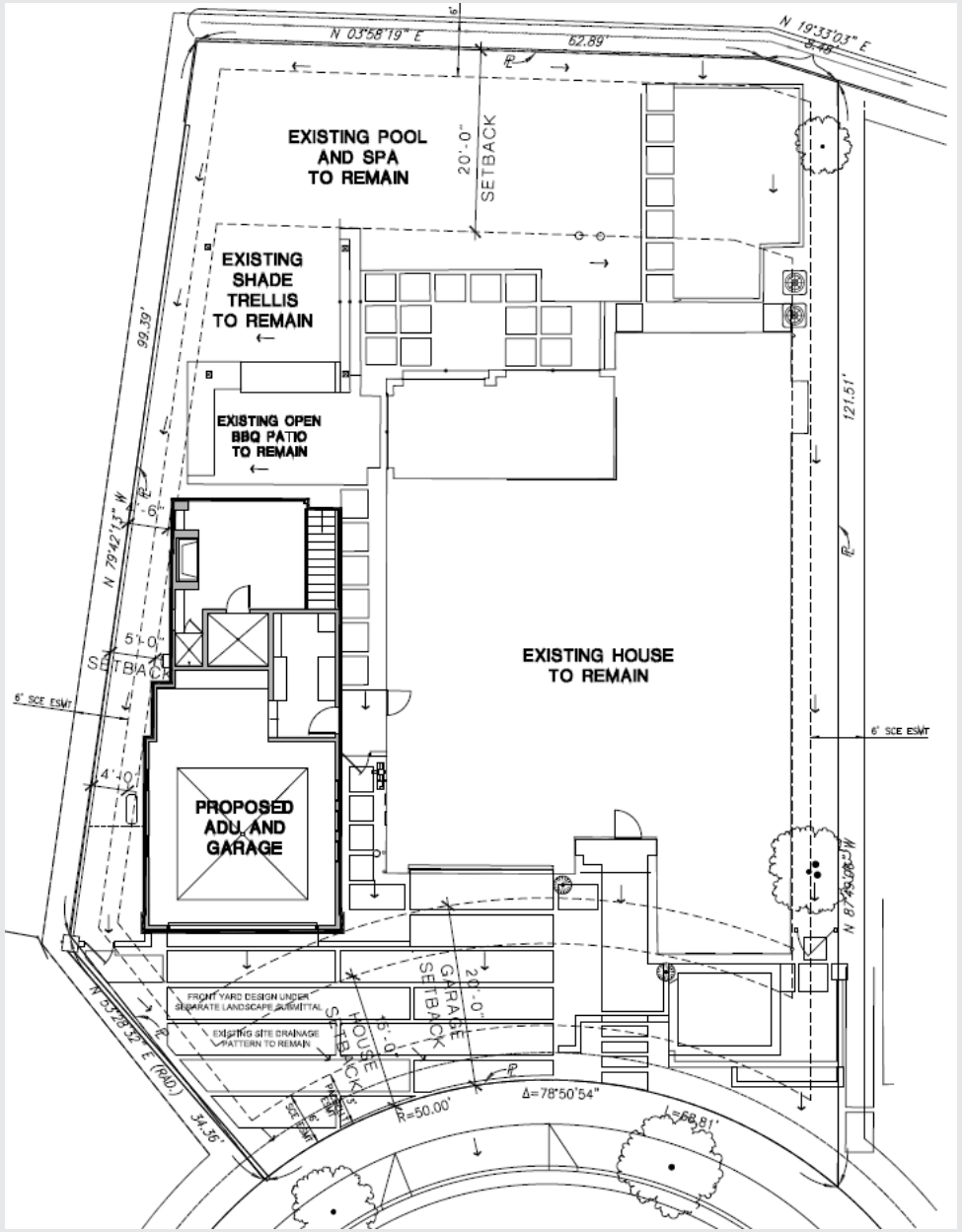
25 Alisal Court

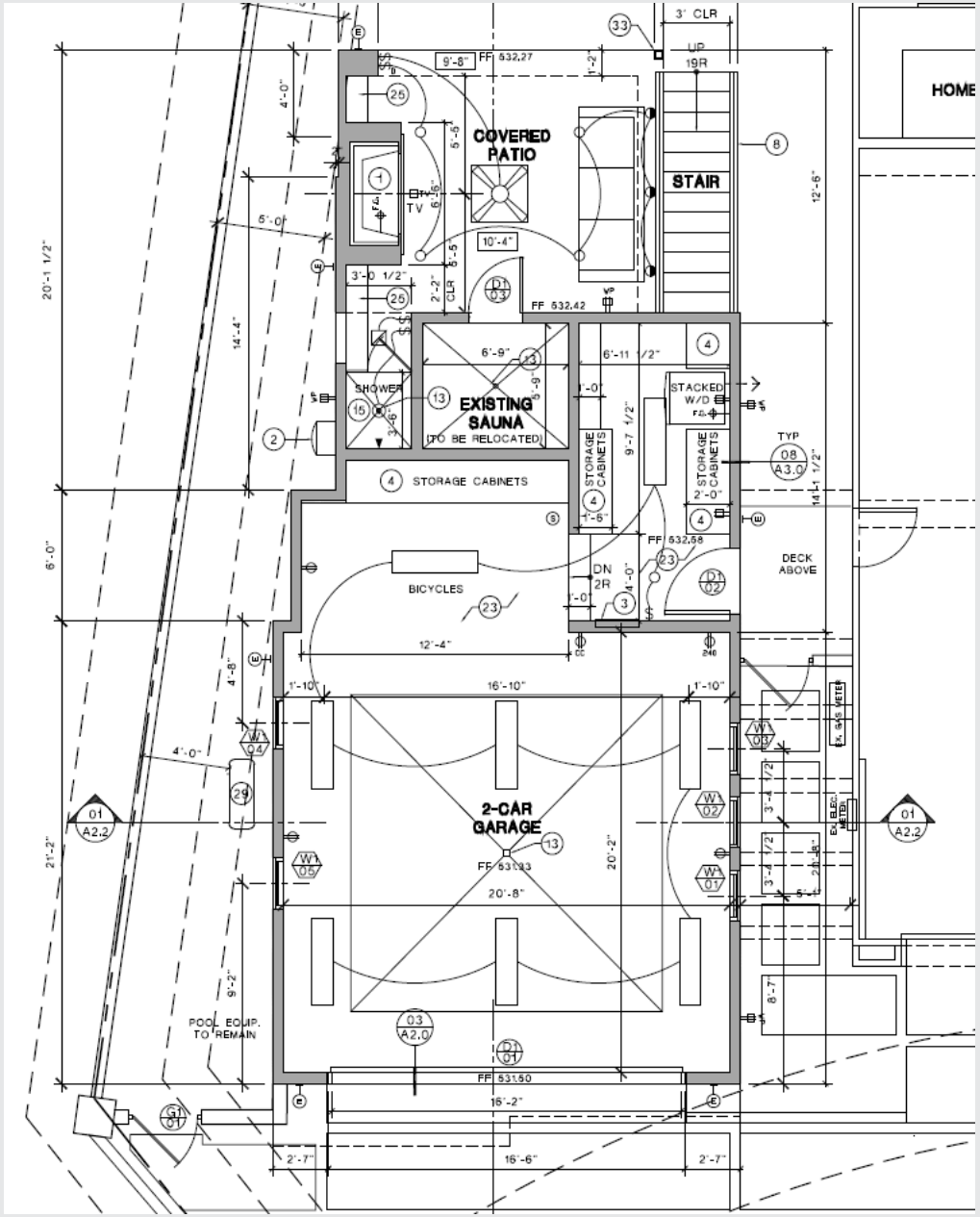
USE-2024-00012

City Council
February 5, 2025

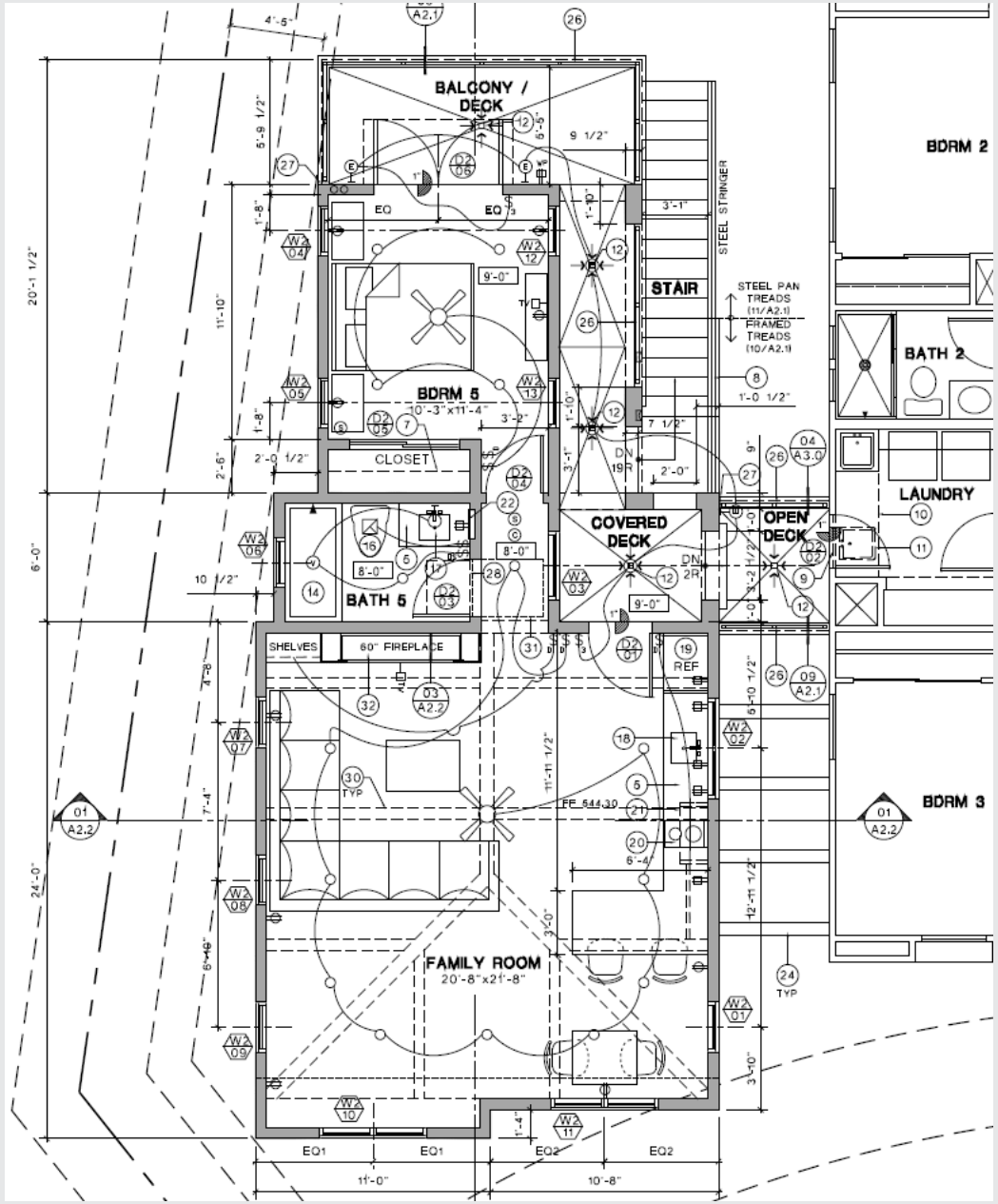
Proposal and Site Plan

- A proposed two-story structure:
  - A 668 SF garage, storage area, sauna, and covered patio on the first floor
  - A 748 SF ADU with an attached balcony, and deck connecting to the existing residence





First Floor

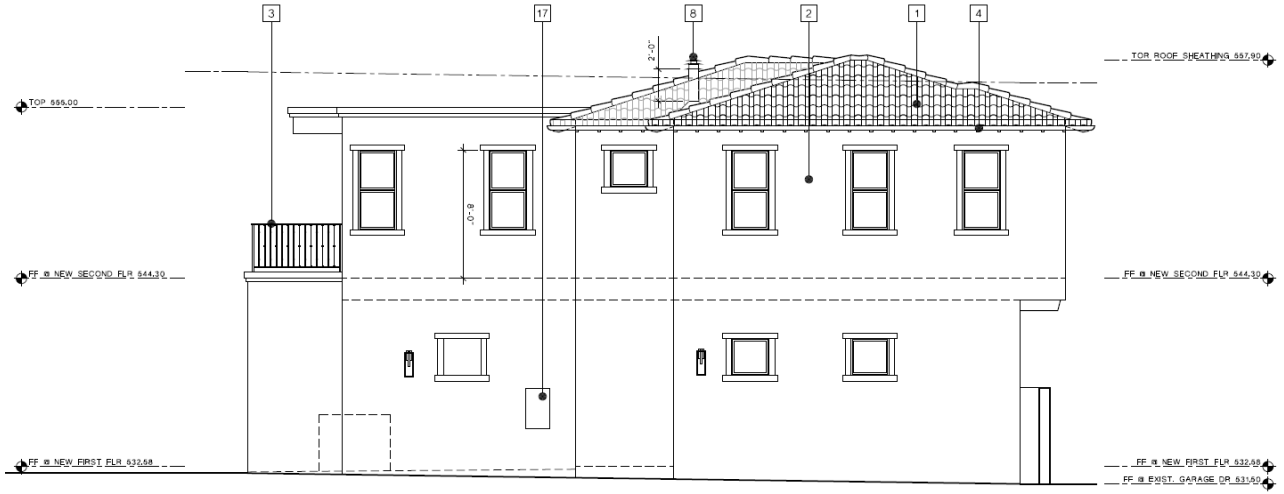


Second Floor



ELEVATION - EAST 01

SCALE : 1/4" = 1'-0"



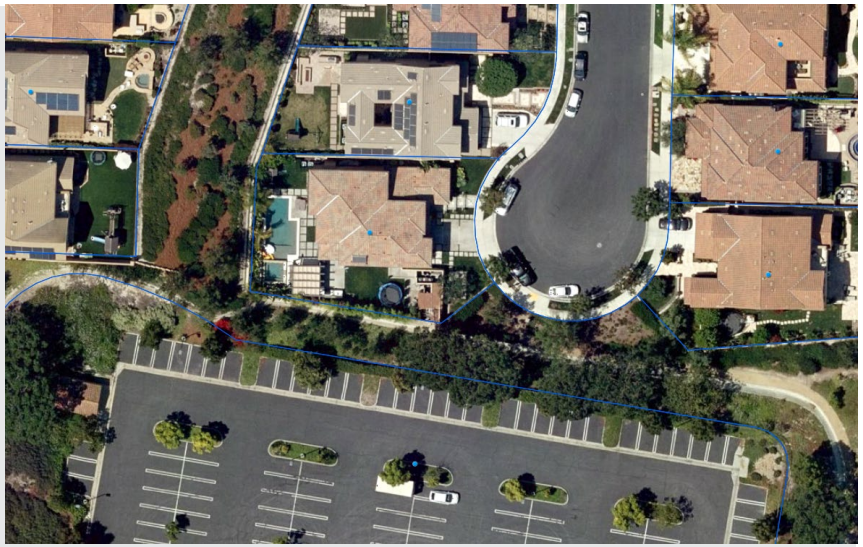
ELEVATION - SOUTH 02

SCALE : 1/4" = 1'-0"



ELEVATION - NORTH 02

SCALE : 1/4" = 1'-0"





ELEVATION - WEST 01

SCALE : 1/4" = 1'-0"

ALISO VIEJO

Staff Recommendation to City Council:

Adopt a Resolution approving Conditional Use Permit to construct a 748 square foot accessory dwelling unit with a 688 square foot attached garage that exceeds the height limit of 25' (27' proposed) at 25 Alisal Court (USE-2024-00012).

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: Shaun Pelletier, Director of Public Works/City Engineer

SUBJECT: PAVEMENT MANAGEMENT AND CONDITION ANALYSIS

Recommended Action:

Receive Staff presentation.

Fiscal Impact:

There is no fiscal impact for this report.

Background:

Since the City's incorporation in 2001, staff has evaluated public streets and annually prepared a 7-year capital improvement project (CIP) list and a biannual pavement management program (PMP) including a pavement condition index (PCI) evaluation to meet OCTA Measure M eligibility requirements. These are utilized to prioritize maintenance and capital projects with the funding available to extend pavement life. Since Aliso Viejo is the youngest incorporated Orange County city, the streets are also relatively young. Most of the residential areas were developed prior to incorporation, between 1984 and 2001. The main arterial streets date back to the late 70s.

Asphalt pavements are typically designed to last 20-30 years, and with proper maintenance can last much longer. Preventive maintenance generally includes 2 categories: Slurry Seal and Asphalt Overlay. Slurry seal is a low cost ($0.50/SF) maintenance tool that extends pavement life by reducing the oxidation caused by the sun. Oxidation causes asphalt to become brittle and therefore deteriorate. Slurry seal can be viewed as a sunscreen for pavements. This surface treatment is considered effective for 5-10 years, and the city has had a regular slurry seal program in place since 2002, reoccurring on a 5-7 year cycle.

Since slurry seal is not a structural improvement, at times the wearing course of a pavement needs to be replaced. This is achieved with a midrange cost ($5.50/SF) asphalt overlay that is typically 2-3 inches thick. Depending on the existing condition, the street

will be fully or partially milled before applying this overlay. This method is generally considered to provide 10-20 years of additional life.

When the pavement condition becomes too deteriorated for either method to be successful, a mid to high cost ($10/SF) full street reconstruction is required. Enterprise recently utilized this method for a small segment, but no other city streets have required this to date. This cost can grow 2-3 times larger if the concrete curb and gutter and drainage systems also need to be replaced.

The funding sources available for street maintenance and capital projects include Gas Tax, OCTA Measure M, and most recently SB1 Gas Tax. Grant funds for pavement maintenance are not readily available, but staff has been successful in obtaining them when the opportunity exists. Annual revenue amounts do vary, but the FY 2024-25 budget anticipated the following.

Gas Tax	$1,407,500
SB1 Gas Tax	$1,330,000
Measure M	$1,000,000

Most of the Gas Tax funds are expended on normal operations and maintenance such as minor street and sidewalk repairs, storm drain cleaning, street sweeping, traffic signal operation and repair, median landscaping, and streetlight electric utility costs. The remaining revenues from the 3 sources are applied towards capital improvement projects or held in reserves for emergency purposes. For reference, actual recent CIP expenditures are shown below.

FY 20-21	$2,327,098
FY 21-22	$1,500,043
FY 22-23	$2,897,938
FY 23-24	$1,169,244
FY 24-25 Budget	$2,972,710

Discussion:

Council previously requested a pavement analysis that went beyond the typical PCI evaluation completed biannually for OCTA Measure M requirements. This request was based on a concern some street segments may not have been built to acceptable standards prior to incorporation. More specifically, we have found that some streets were constructed with asphalt directly on subgrade (compacted earth) rather than an aggregate base layer. Both methods can be acceptable, depending on the thickness of the asphalt layer.

Staff contracted with geotechnical consultant GMU to complete a citywide evaluation of the pavement structure conditions. Testing included pavement cores to determine asphalt thickness and if aggregate base existed, as well as deflection testing. The result was a two-phase report indicating conditions and rehabilitation recommendations based upon

both the PCI report and the structural findings. The report and PCI will each be used to prioritize projects and determine the rehabilitation methods in upcoming years.

The summary of the structural report does conclude that overall, the city's pavement system is in good condition and should remain in good condition with the ongoing pavement management strategies already in place. The main obstacle will always be funding, particularly with costs continuing to rise faster than revenues. Per the latest PMP, we are projected to need about $2.34 million per year to maintain or slightly increase the PCI which is currently 82. At current estimated funding levels of about $1.91 million per year the PCI is projected to drop to 80 after 7 years. It is important to maintain the PCI at 75 or above both to ensure that the pavement system remains in good condition, but also because certain Measure M competitively funded projects have a 10% reduced matching amount with an average of at least 75. The City has always set 80 as the goal to be met and will continue to strive to meet it.

Public streets are considered the largest asset the city owns and therefore will continue to be a priority to maintain at the highest level possible. The tools and programs we have in place have been successful, and they will be evaluated along with revenue sources as time moves on and the city streets age to ensure continued success.

Attachment:

1. Presentation
2. Phase 1 Pavement Report
3. Phase 2 Pavement Report

ALISO VIEJO

Pavement Condition and Practices Overview

February 5th, 2025

Presentation Outline

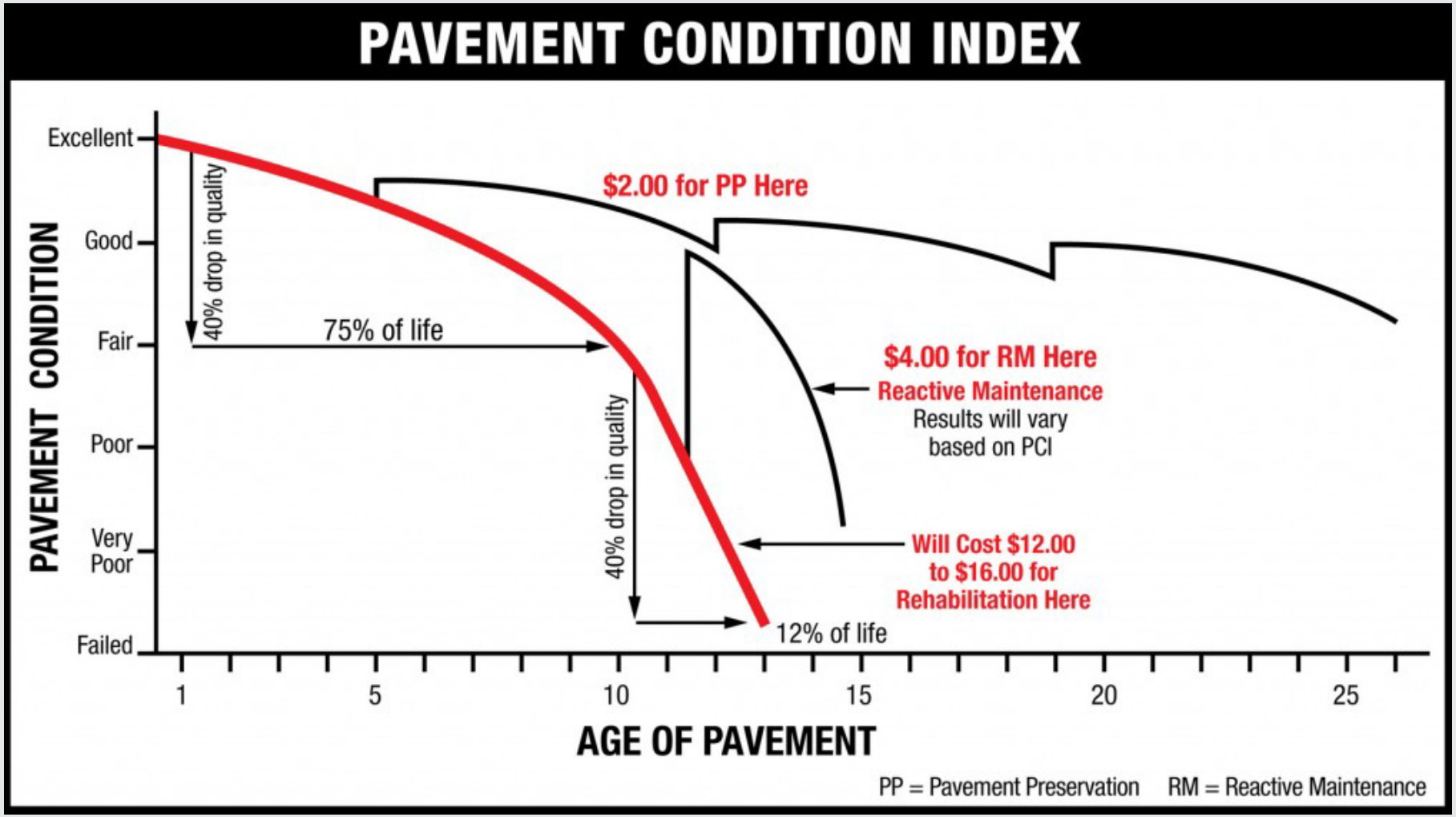
Is the pavement condition at risk?

What is being done to monitor, design, and improve the roadway network?

Findings and Recommendations



Service Life of Pavement



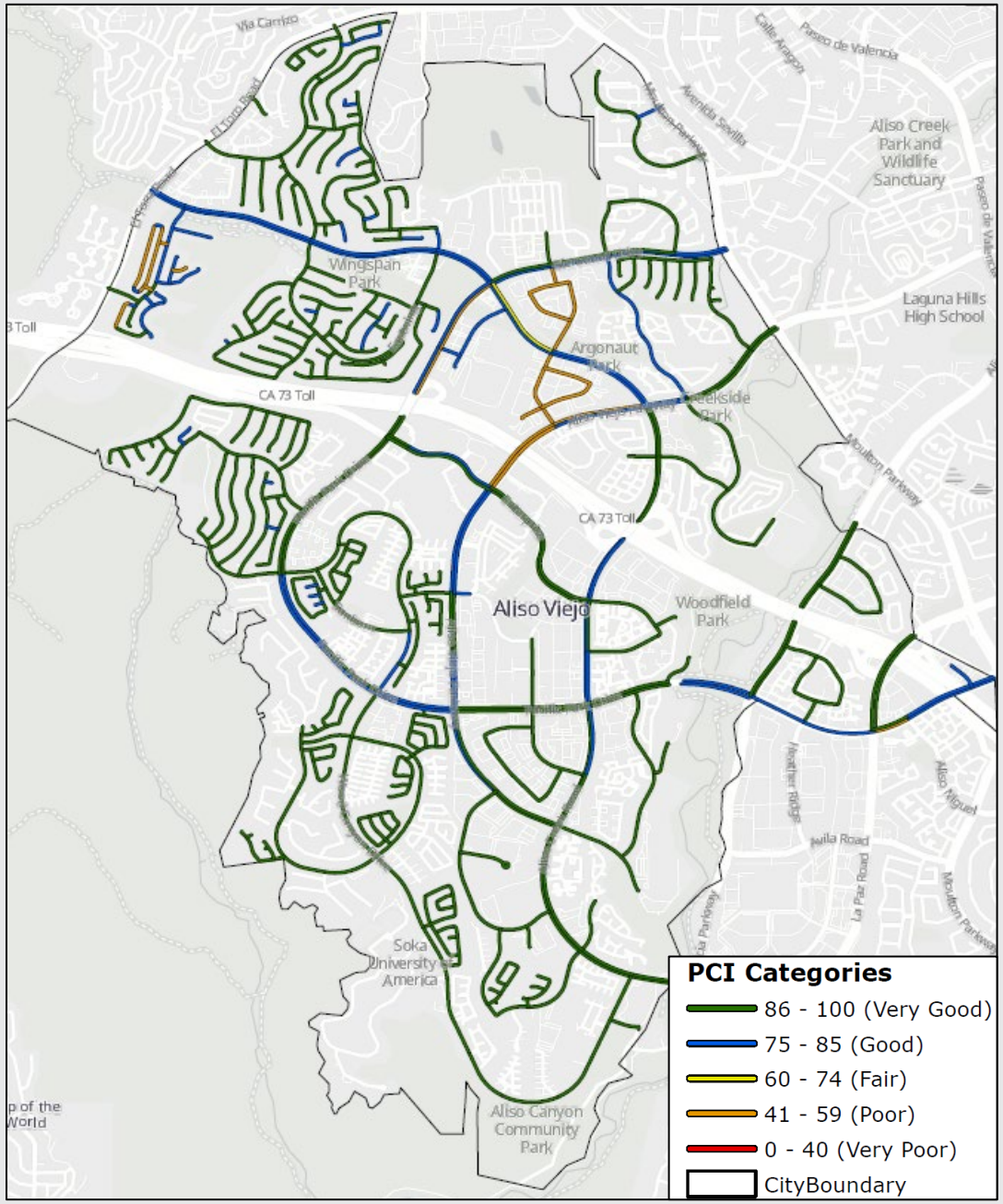
City's Proactive Approach

- Pavement Management Plan
  - ✓Network Level Pavement Evaluation
  - ✓ Bird's eye view
  - ✓Good tool for planning, budgeting, scheduling
- Pavement Evaluation and Improvement
  - ✓Project Level Pavement Evaluation
  - ✓Detailed Focus on Areas Due for Improvement
    - ✓ Coring
    - ✓ Deflection Testing
  - ✓Optimized Improvement Recommendations
- Construction Inspection and Testing



City of Aliso Viejo Network

- **Approximately 72.2 Centerline Miles**
- **More than 15 Million SF**
- **Average PCI of 82**
  - ✓MPAH has a PCI of 79
  - ✓Local streets has a PCI of 85
- **Neighboring Cities**
  - ✓Laguna Niguel: 78 (2024)
  - ✓Newport Beach: 81 (2024)
  - ✓San Clemente: 88 (2023)
  - ✓Irvine: 86 (2022)

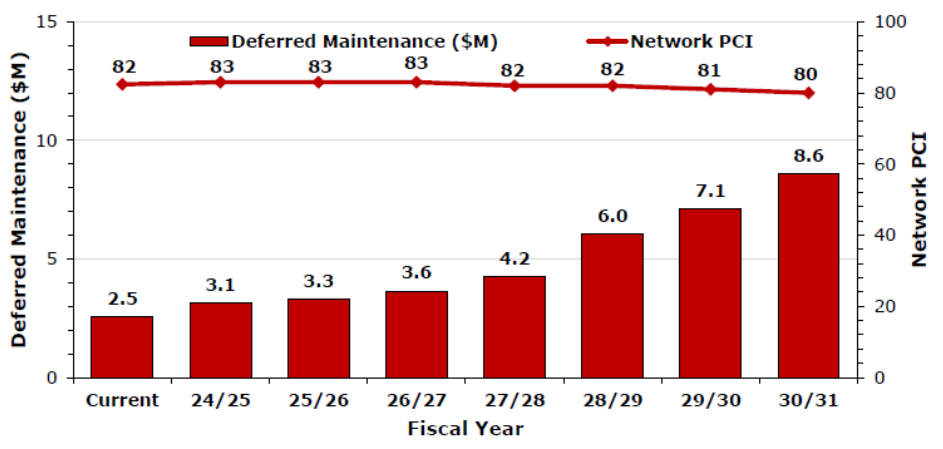


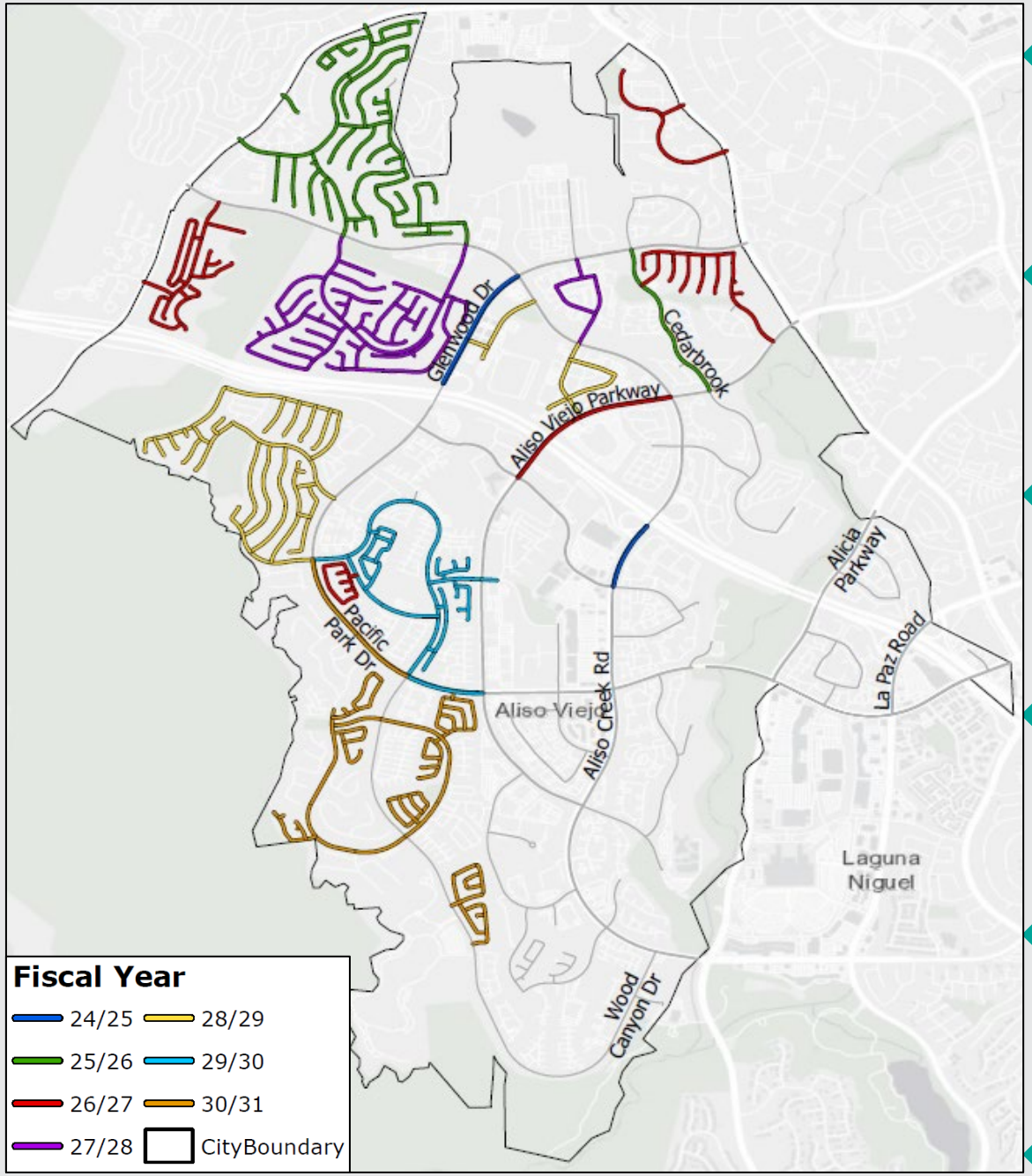
2024 Pavement Conditions Map

ALISO VIEJO

Maintenance and Rehabilitation Plan

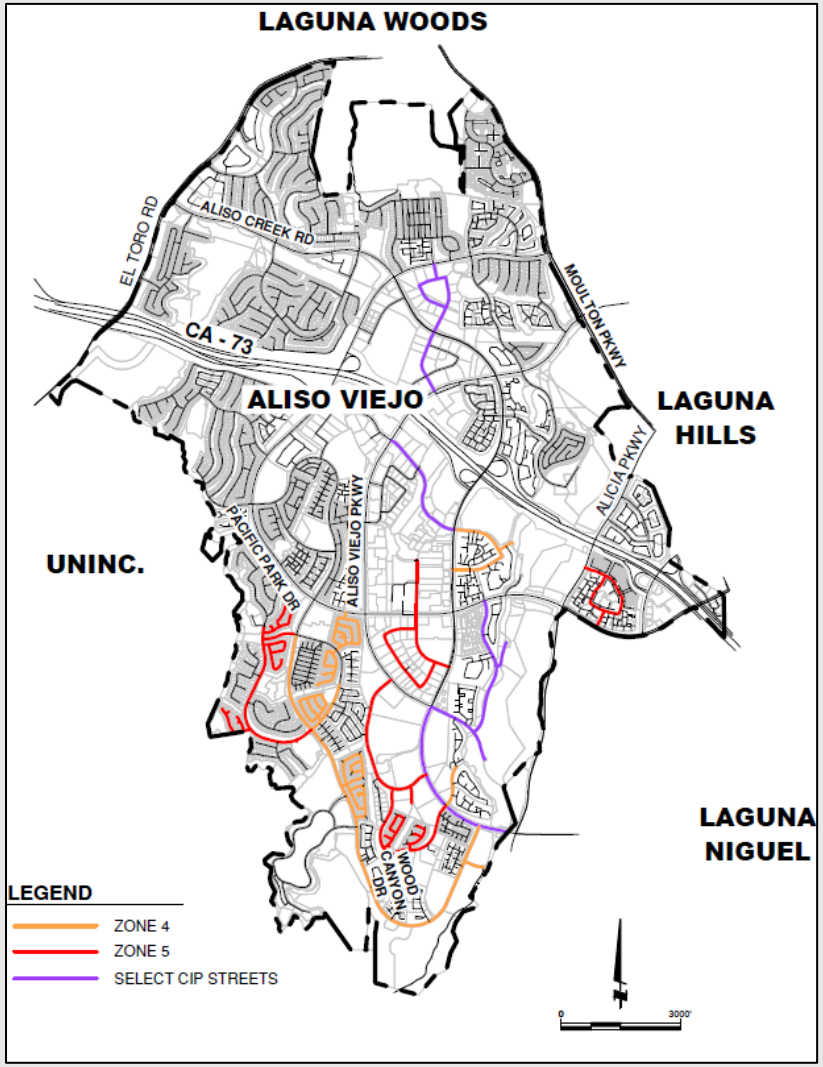
Scenario	Description	Cumulative 7-year Budget ($M)	FY 30/31	
			Network PCI	Deferred Maintenance ($M)
1	City's Budget	$13.4	80	$8.6
2	Maintain PCI at 82	$14.2	82	$6.5
3	Increase PCI to 83	$16.4	83	$1.4



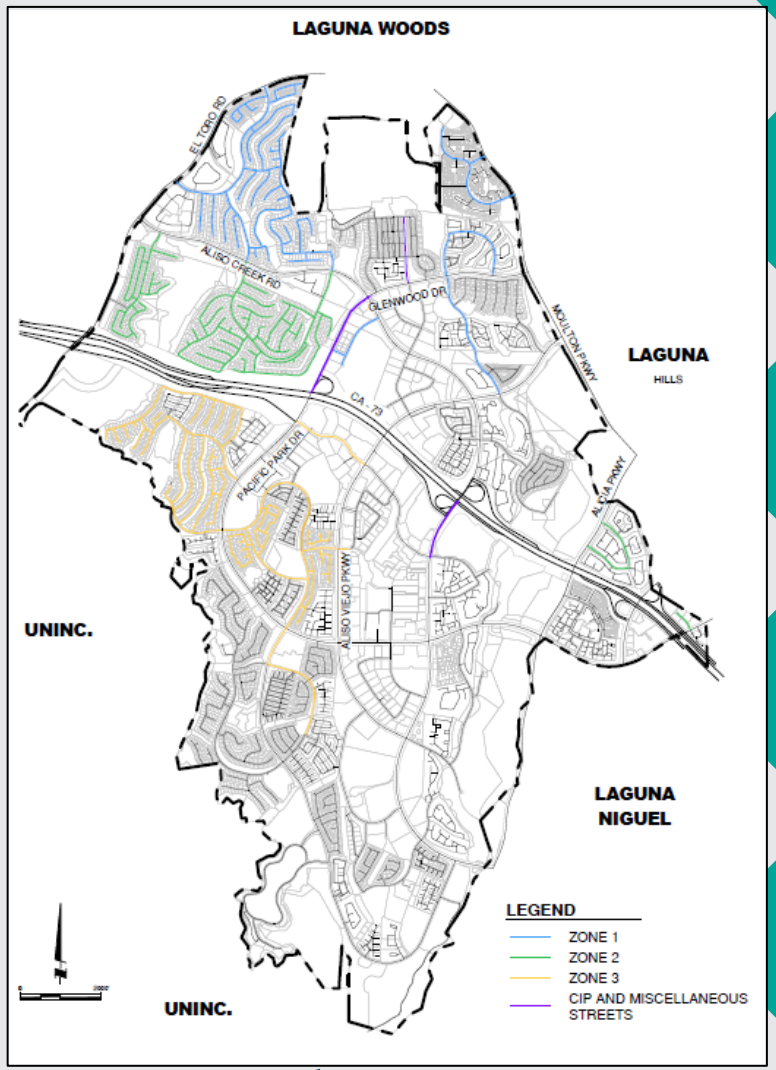


ALISO VIEJO

Pavement Evaluation and Improvement

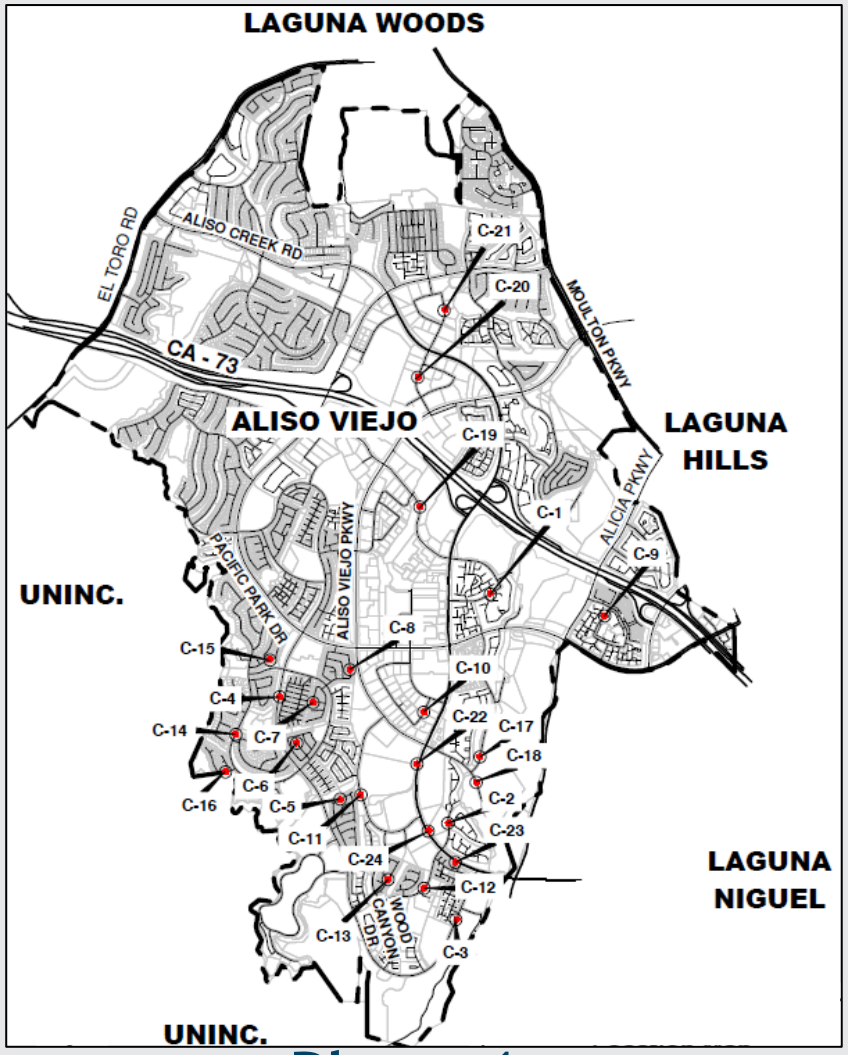


Phase 1

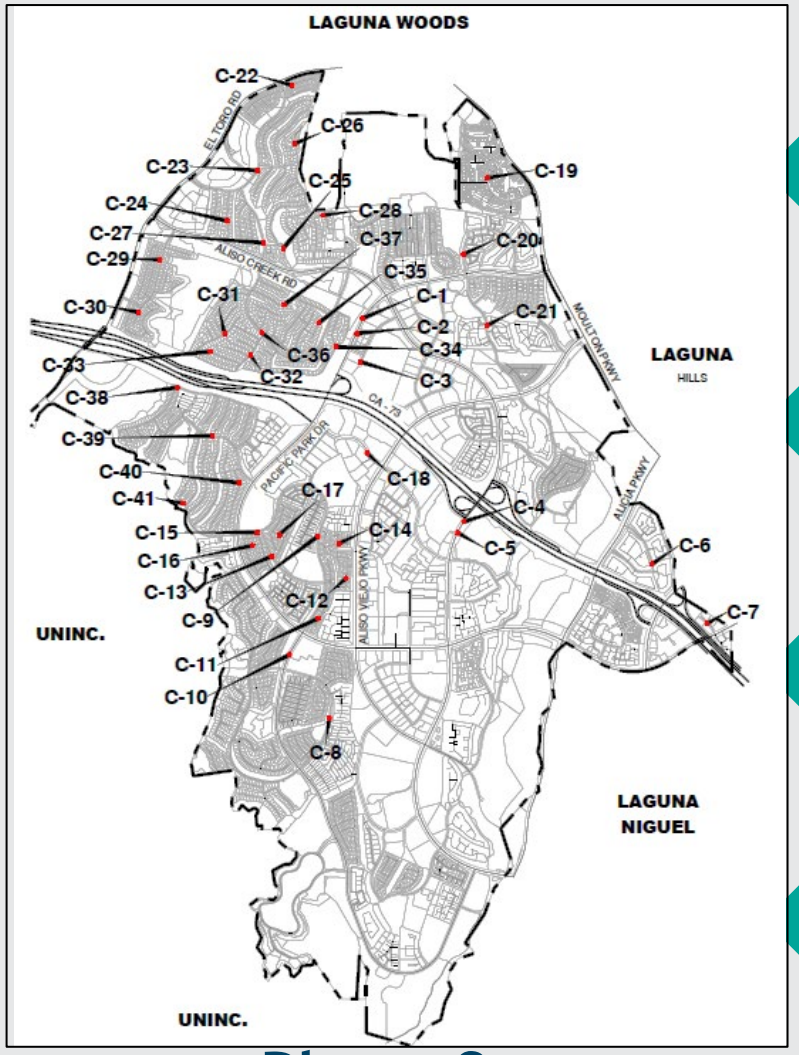


Phase 2

Pavement Cores



Phase 1

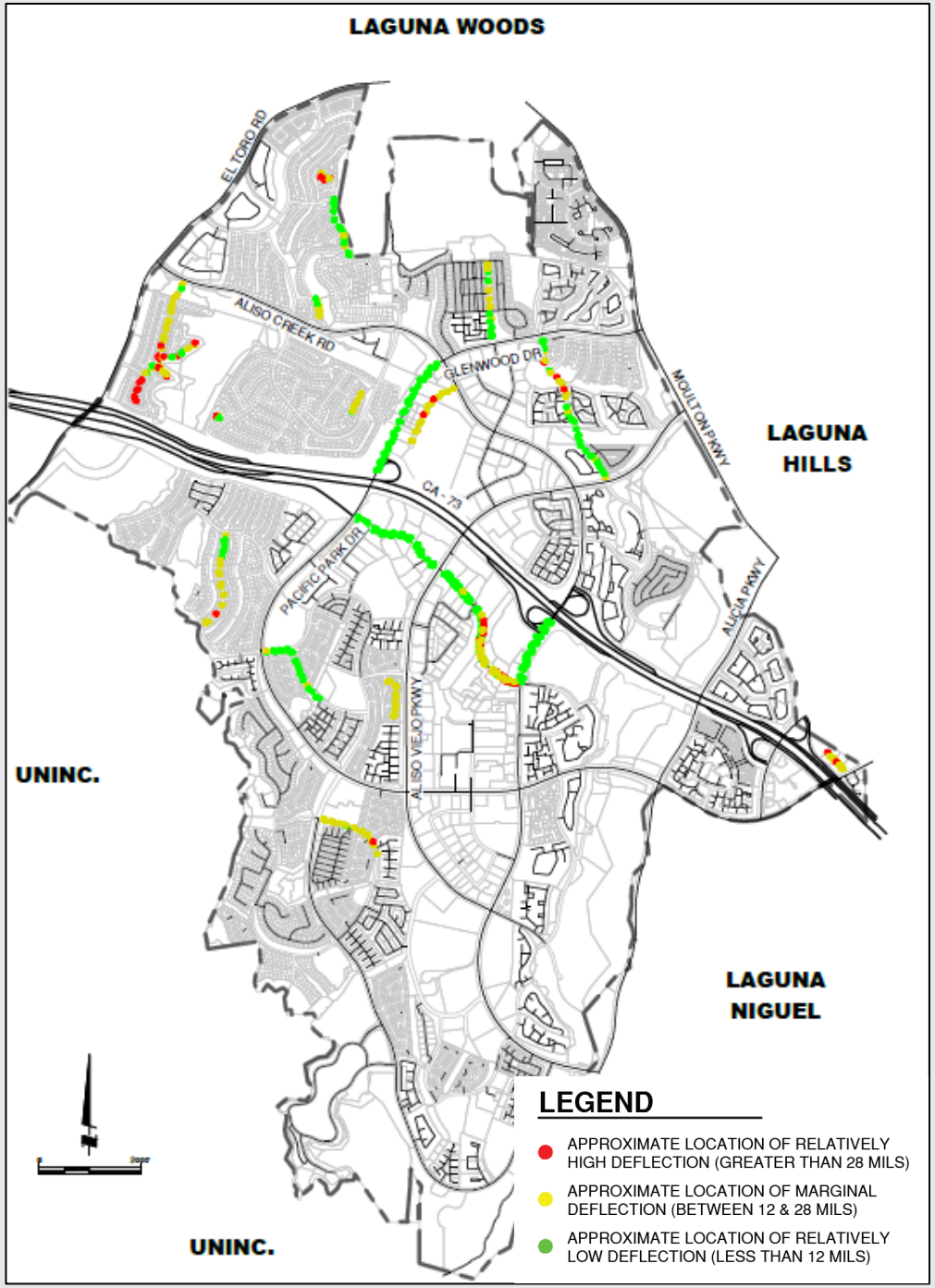


Phase 2

Pavement Deflection Testing Data Map

- 7% of the entire network needed additional investigation
  - ✓24% of those streets were structurally inadequate

Zone	Section	Design 20-Year Traffic Index (TI)	"AC Thickness" for Analysis	Tolerable Deflections at Surface (TDS), mils	80th percentile of measured surface deflection (D_{80})	Findings
Select CIP & Miscellaneous Streets	**Aliso Creek Road** *From Enterprise to SR 73*	11.0	0.5	11.0	5.7	Structurally adequate
	Glenwood Dr *from SH 73 to Aliso Creek Road*	11.0	0.5	11.0	7.8	Structurally adequate
	Golf Dr *from Glenwood Dr to Santa Barbara Dr*	6.0	0.5	25.0	14.1	Structurally adequate
Zone 1	**Brookline** *from Aliso Creek Road to CDS*	7.0	0.5	20.0	29.3	Structurally inadequate
	Cedarbrook *from Glenwood Dr to Aliso Viejo Pkwy*	7.0	0.45	21.0	19.3	Structurally adequate
	Mallard Dr *from Moorhen Ln to CDS*	5.0	0.45	35.0	17.7	Structurally adequate



ALISO VIEJO

Findings

- Aggregate Base Influence:
  - -As long as the AC layer is sufficiently thick, the lack of an aggregate base layer does not have a significant negative pavement performance impact
  - -Lack of aggregate base limits future strategies
- Aging Influence:
  - Nearly all the streets exhibit various degrees of aging-related distress
- Load-related Distresses:
  - Several streets exhibit various degrees of load-related distress
- Complete replacement is not needed for nearly all streets
  - Continuous monitoring of the pavement is recommended

Improvement Strategies

- Maintenance
  - Slurry Seal with localized repairs (i.e., patches) and crack filling
    - ✓ City is exploring new technologies for crack filling
    - ✓ Tiered crack approach
- Rehabilitation
  - Mill and Overlay with localized repairs and crack filling
    - ✓ Target localized repairs for areas that need more extensive isolated treatments
    - ✓ Interlayer system
    - ✓ Fiber-reinforced AC
    - ✓ Asphalt Rubber Hot Mix (ARHM)
- Reconstruction
  - Full-Depth Reclamation (FDR) with Cement Stabilized Pulverized Base (CSPB)

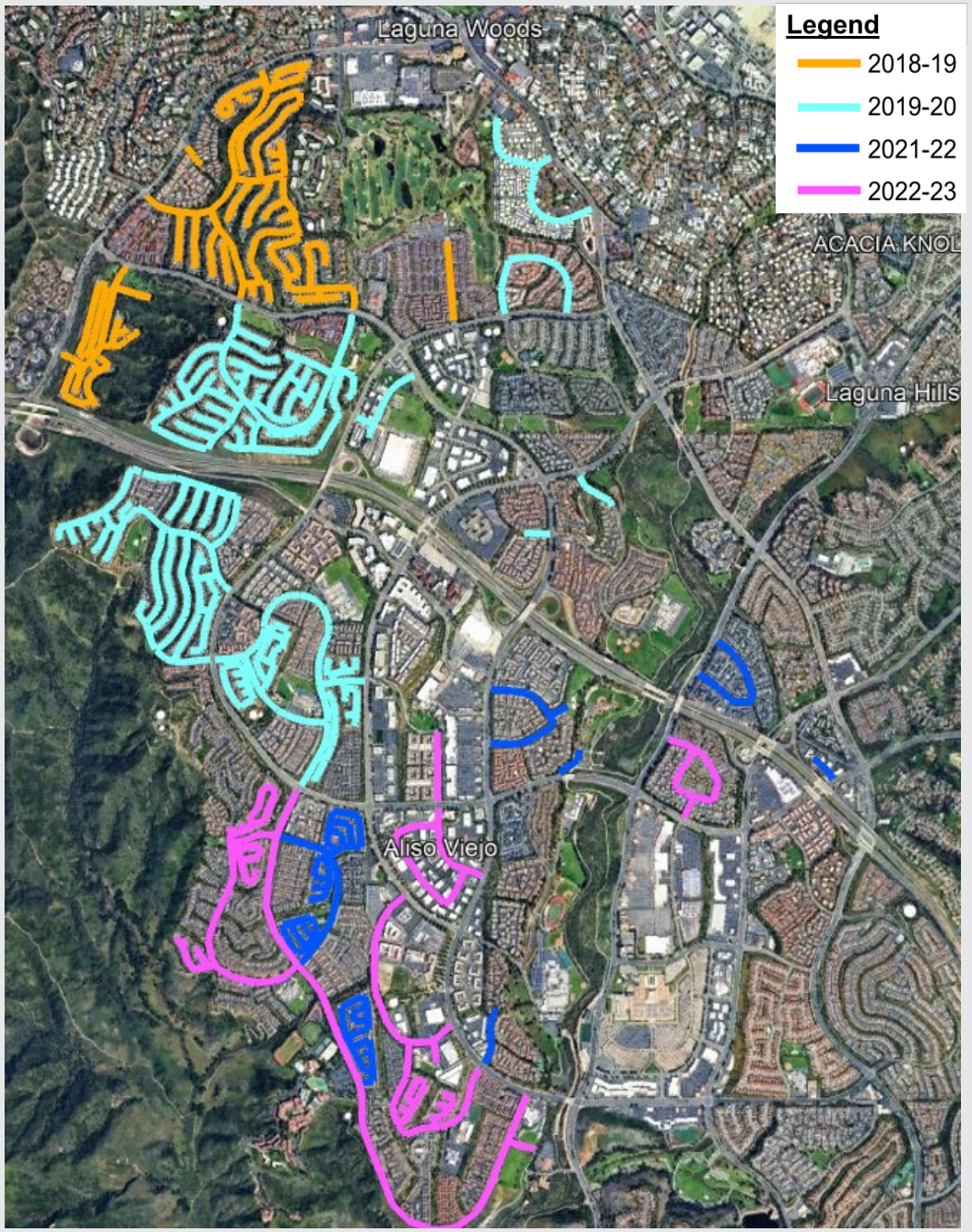
Past and Future Phases

Past Projects:

- Slurry Seal Projects
  - ✓ 2018-19
  - ✓ 2019-20
  - ✓ 2021-22
  - ✓ 2022-23
- Rehab Project
  - ✓ **Aliso Viejo Parkway** from Cedarbrook to Moulton Parkway
  - ✓ **Glenwood Terrace Neighborhood**
  - ✓ **Alicia Parkway** from Pacific Park Drive to Laguna Court
  - ✓ **Pacific Park Drive** from Aliso Viejo Parkway to Aliso Creek Road
  - ✓ **Windsong, Cedarbrook, and Park Avenue**
  - ✓ **Deerhurst, Foxborough, and Wolverine Way**
  - ✓ **Aliso Creek Road** from Wolverine to Alicia Parkway
  - ✓ **Enterprise Street** from Aliso Viejo Parkway to Aliso Creek Road

Future Projects:

- Slurry Seal Projects
  - ✓ "Orange" Streets…….
- Rehab Project
  - ✓ **Aliso Creek Road** from Enterprise to SR 73
  - ✓ **Glenwood Drive** from SR 73 to Aliso Creek Road
  - ✓ **Aliso Viejo Parkway** from Enterprise to Aliso Creek Road



Recap


Is the pavement condition at risk?
1
What is being done to monitor, design, and improve the roadway network?
2
Findings and Recommendations
3

Summary

- Continue proactively maintaining the roadway network
- Continue executing innovative, practical, and cost-effective treatments
- Optimize the remaining life
  - Remove-and-replace is not needed to install AB
- **Increase pavement funding level by total of $3M over 7 years ($450K annually).**

Questions?

GMU
PAVEMENT
ENGINEERING









“Zone 4”, “Zone 5”, and Select CIP Streets

City of Aliso Viejo, California

Pavement Evaluation and Repair Recommendations Report

DRAFT

March 15, 2021

GMU Project No. 20-100-00
GMU
23241 Arroyo Vista
Rancho Santa Margarita, CA 92688

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Attachments:

Plate 1 – Project Limits Map
Plate 1.1 – Project Limits Table
Plate 2 – AC Core Hole Location Map
Plate 3 – Pavement Coring Summary Table

Appendix A – Select Photographs
Appendix B – Laboratory Data Summary
Appendix C – Pavement Repair Recommendations

1. INTRODUCTION

1.1 PURPOSE AND OBJECTIVES

This report presents a summary of our pavement evaluation of various streets maintained by the City of Aliso Viejo. Specifically, the streets considered in this study include "Zone 4 (orange)", "Zone 5 (red)", and certain collector or arterial streets planned for improvement between fiscal years 2021 to 2024. The primary objectives of this evaluation include:

- Determining if aggregate base (AB) exist beneath the asphalt concrete (AC) pavement.
- Providing our opinion and conclusion with regard to lack of AB and if this is detrimental to pavement performance.
- Determining if the condition of the subject streets is suitable for the pavement maintenance and/or repair types scheduled.
- Providing conceptual pavement repair recommendations to improve the condition of the subject streets.

Information such as the pavements' current surface condition, coring data, and laboratory testing results was evaluated and analyzed to develop our conclusions and recommendations.

1.2 SCOPE

The following scope of work was performed, as outlined in our scope and fee proposal dated September 22, 2020:

1. Pavement surface condition assessments were performed to evaluate the general condition of the subject streets.
2. Coring locations were selected in areas of interest and delineated. Dig Alert was notified to identify potential conflicts with known underground utilities prior to drilling.
3. Asphalt concrete (AC) corings were performed at various locations throughout the street segments to measure and identify the various pavement layers, including AC thicknesses, aggregate base thicknesses (where present), and subgrade soil types.
4. Samples collected from the pavement corings were returned to our laboratory and tested for various engineering properties, including R-value, soil classification, and moisture content testing.
5. Pavement engineering analysis was performed to develop pavement repair recommendations.
6. This report was prepared to summarize our work, findings, conclusions, and repair recommendations for the improvement of the subject streets.

2. LOCATION AND PROJECT INFORMATION

This project involved performing a limited evaluation of a significant number of the City's streets. The following table summarizes the quantity of streets evaluated for this study.

Table 1: Summary of Streets Evaluated

Description	Approximate Quantities	Comments
Select CIP Streets (purple)	15 street segments 3.6 centerline miles	Primarily arterial or collector streets.
Zone 4 Streets (orange)	48 street segments 7.2 centerline miles	Primarily collector or residential streets.
Zone 5 Streets (red)	39 street segments 6.4 centerline miles	Primarily collector or residential streets.
Total	**97 street segments 16 centerline miles**	

The general locations of the roadway segments considered in this study are illustrated on **Plate 1 – Project Limits Map** and summarized within **Plate 1.1 – Project Limits Table.**

3. FIELD EXPLORATION

3.1 PAVEMENT SURFACE CONDITION ASSESSMENT

Pavement surface condition assessments were performed in November 2020. The type, severity, and extent of the various observed distresses were documented in general accordance with ASTM D6433. Select photographs of the pavement surface condition is presented in **Appendix A – Select Photographs**.

3.1.1 Select CIP Streets

In summary, for the CIP streets evaluated as part of this study, predominate distresses observed include:

- Alligator cracking: low- to high-severity
- Longitudinal cracking: low- to medium-severity
- Transverse cracking: low- to medium-severity
- Potholes: low- to medium-severity
- Weathering: low- to medium-severity

Overall, the condition of the various CIP streets ranged from "Poor" to "Fair", depending on location.

3.1.2 Zone 4 (Orange) Streets

In summary, predominate distresses observed include:

- Longitudinal cracking: low- to medium-severity
- Transverse cracking: low- to medium-severity
- Weathering: low- to medium-severity

Overall, the condition of the zone 4 streets ranged from "Good" to "Very Good".

3.1.3 Zone 5 (Red) Streets

In summary, predominate distresses observed include:

- Alligator cracking: low-severity
- Longitudinal cracking: low- to medium-severity
- Transverse cracking: low- to medium-severity
- Weathering: low- to medium-severity

Overall, the condition of the zone 5 streets ranged from "Good" to "Very Good".

3.2 PAVEMENT CORINGS

A total of 24 pavement coring locations were explored on November 11, 12, and 13, 2020 within the subject streets. Eight (8) coring locations were performed within each group of streets ("select CIP", Zone 4, and Zone 5). The locations were selected based on the information gathered from the visual pavement surface condition assessments, as well as to gather subsurface data from distributed and representative locations throughout the project limits.

The corings were performed using a 6-inch-diameter electric core drill. The thickness of the asphalt concrete (AC), and underlying aggregate base (AB) layers, where encountered, was recorded. The depth to subgrade and visual classification of the subgrade samples were also logged during the pavement corings. Bulk samples of the subgrade were collected and delivered to GMU's laboratory for further evaluation. Drive samples were collected at the top of the subgrade at select locations. The corings were backfilled with aggregate base and capped with asphalt concrete cold patch.

The results of the pavement corings are provided within **Plate 2 – AC Core Hole Location Map** and **Plate 3 – Pavement Coring Summary Table**.

3.2.1 Select CIP Streets

Along the various CIP street segments, the existing roadway is surfaced with 4.5- to 11.0-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 7.5 inches.

Beneath the AC layer, the subgrade soil varies and included clayey SAND (SC), silty SAND (SM), and clayey SILT (ML).

An aggregate base (AB) layer was not encountered beneath the AC layer at any of the 8 coring locations explored within this group of streets.

3.2.2 Zone 4 Streets

Along the various zone 4 streets, the existing roadway is surfaced with 3.0- to 9.5-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 6.5 inches.

Out of the 8 coring locations performed within Zone 4, one coring location (C-5 located on Sherwood Drive), revealed an aggregate base (AB) layer below the AC layer. The AB layer at this location is 6-inch thick. All other coring locations in Zone 4 revealed an AC layer constructed directly on top of subgrade.

The subgrade soil varies and included clayey SAND (SC) and clayey SILT (ML) materials.

3.2.3 Zone 5 Streets

Along the various zone 5 streets, the existing roadway is surfaced with 4.25- to 9.0-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 7.0 inches.

Beneath the AC layer, the subgrade soil varies between clayey SAND (SC), silty SAND (SM), clayey SILT (ML), and sandy CLAY (CL).

An aggregate base (AB) layer was not encountered beneath the AC layer at any of the 8 coring locations explored within this group of streets.

4. LABORATORY TESTING

Laboratory tests were performed on select samples obtained retrieved from the corings to evaluate various engineering properties of the subgrade soils. The laboratory tests performed include:

- R-value
- Sieve No. 200 wash for soil classification
- Atterberg Limits for soil classification
- Maximum density and optimum moisture content
- In-place moisture/density

The results of the laboratory testing are summarized and presented in **Appendix B – Laboratory Data Summary**.

5. PAVEMENT ENGINEERING ANALYSIS

Engineering analyses was performed in accordance with the Caltrans Highway Design Manual. Topic 633 of the Caltrans Design Manual was followed to develop pavement thickness design recommendations. This design method considers the relationship between the subgrade R-value, gravel factor of the various pavement layers, and the traffic index (TI).

Traffic indices (TI's) were assumed for use in our analysis. A traffic engineer should confirm the suitability of these assumptions.

The results of GMU's laboratory R-value tests were used in the analysis. Design R-values were selected based on actual R-value results. If coring was not performed on a specific street, R-value results from nearby coring locations with similar subgrade soil types were used as the design R-value.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

Pavement performance and deterioration is influenced by many factors. Some of these factors include the type and thickness of the pavement structural section, climate (temperature and moisture), material properties, construction variability, traffic volumes, subgrade strength, age, maintenance/rehabilitation work history, and more.

- **Aggregate Base Influence:** One of the objectives of this evaluation is to identify presence of aggregate base, as well as whether its absence would have a significant influence on pavement performance.

  First, it is important to recognize the primary function of pavement, which is to transmit forces induced by traffic loads from the pavement surface into the underlying subgrade soil. The pavement structure should not exceed a certain level of permanent deformation over its design life period. To achieve this, various types of pavement structural materials are constructed on top of the subgrade surface to protect it from developing excess permanent deformation. The types and thicknesses of the pavement structural material layers are selected based on a number of factors, such as traffic loading conditions, subgrade soil strength, and economy.

  The pavement structural layers making up the overall pavement structure must be of sufficient types and thicknesses to protect the subgrade soil from excessive permanent deformation over its design life period. Different combinations of pavement layer types and thicknesses can be utilized to achieve this objective. The combination of layer types and thickness must ultimately be of sufficient thickness to achieve structural adequacy.

The two most common pavement section types are full-depth AC (AC on subgrade) pavement or composite AC/AB (AC over AB over subgrade) pavement. Streets can be constructed without an aggregate base layer, in this case referred to as full-depth AC, per recognized pavement structural design manuals, including Orange County Highway Design Manual, Caltrans Highway Design Manual, and other established pavement design standards. In summary, the lack of an aggregate base layer is not detrimental for pavement performance, but its absence requires a thicker AC layer to compensate for it.

In summary, in general, the lack of an aggregate base layer is not detrimental to pavement performance, provided that the AC layer is adequately thick. Streets absent of an aggregate base layer can still be cost-effectively maintained and rehabilitated, allowing for the roadway life to be extended and the life cycle cost of the street minimized.

For the streets evaluated for this particular study, all but one of the pavement corings performed revealed a pavement structural section consisting of AC constructed directly on top of subgrade (no aggregate base). The only coring location, performed on Sherwood Drive, revealed a pavement structural section consisting of 3-inch thick AC over 6-inch thick AB over subgrade soil. Through pavement structural thickness analysis, this 3-inch thick AC section provides approximately the same load-carrying capacity as a pavement structural section consisting of 5.5-inch AC over subgrade. The average of all full-depth AC core samples drilled from residential streets was 6.0 inches.

- **Aging Influence:** Streets will age and deteriorate during its design life period as it experiences aging and traffic loading. Nearly all streets evaluated for this study have developed varying degrees of expected aging-related distresses, including raveling/weathering and longitudinal, transverse, and block cracking. As the pavement ages, it oxidizes and becomes increasingly brittle, leading to development of these types of distress. As these cracks worsen over time, moisture is allowed through the cracks. Excess moisture that saturates the underlying subgrade material will weaken its support, leading to development of more severe and eventually load-related distresses (i.e., permanent deformation, alligator cracking, depressions, potholes etc.).

  Expansive subgrade soil, which is known to exist throughout the region and was identified in some of the coring locations (including lean and fat clays from coring locations C-6, C-10, and C-13), will also contribute to development of longitudinal, transverse, and block cracking pavement distress types. Expansive subgrade soil expands as its moisture content increases and contracts as it dries. This cycling of wetting/drying and expansion/contraction contributes to development and worsening of these distress types.

- **Localized Areas of Structural Failure:** Localized areas of structural failure (i.e., isolated areas containing medium- or high-severity alligator cracking and/or depressions) were encountered at various locations throughout. Widespread areas of structural failure were

not encountered, indicating that in general, the pavement structural section offers adequate structural capacity.

In summary, the absence of aggregate base for the subject streets is not detrimental to pavement performance. Significant additional funding will be required (at least 3 to 6 times current funding levels) in order to reconstruct the roadways with an aggregate base layer. The subject streets can still be cost-effectively maintained and rehabilitated to extend their service life.

6.2 RECOMMENDATIONS

Recommendations are summarized in **Appendix C – Pavement Repair Recommendations** for each group of streets in tabular format. Note that this project involved evaluating a substantial number of streets. To minimize repetitiveness and to consider the unique condition of each group of streets, important information is provided within the footnotes of the table.

The final pavement repair recommendation for each street is provided in the right most column within the **Appendix C – Pavement Repair Recommendations** tables. "Maint." describes performing localized AC repairs, crack repairs, and application of a slurry seal. "Rehab." refers to performing localized AC repairs, crack repairs, cold milling (either edge or uniform cold milling, depending on whether structural capacity improvements are needed), installing an AC leveling course (depending on whether the AC cores separated at the lift interphase during drilling), installing an interlayer system (to reduce reflective cracking growth potential when full-depth cracks were identified within the AC cores), and constructing an AC or ARHM overlay.

6.3 UNSTABLE MATERIALS

Based on the soil types encountered and the moisture contents measured from select samples collected, it is our opinion that there is some potential for unstable materials to be exposed during construction.

If unstable materials are exposed, the following recommendations can be implemented. Unstable or soft subgrade conditions can be identified during construction by surface yielding under rubber-tired equipment loading and/or the inability to achieve proper compaction. The condition of the subgrade should be evaluated by GMU during the scarification and re-compaction efforts.

Drying back of localized wet soil conditions can be performed to address unstable soils if time allows. If drying back soil is not a practical option, we recommend increasing the AC base lift thicknesses by an additional 4 to 8 inches to "bridge" over the unstable conditions. The recommended thicknesses of remediation could be greater, or less, depending on the conditions encountered. Any areas that require remediation should be observed by the project geotechnical engineer to confirm the effectiveness of the recommendations provided herein.

The intent of these recommended remediation methods is to achieve a non-yielding subgrade when subjected to relatively heavy, rubber-tired construction equipment loading such as a loaded water

truck or loader with full bucket. The remediated areas should be proof-rolled with this type of equipment after remediation to confirm that the subgrade is unyielding. Pavement constructed on top of an unstable section will likely not achieve the required compaction and/or will experience reduced pavement life.

6.4 SPECIFICATIONS

We recommend following the City of Aliso Viejo Specifications and the Standard Specifications for Public Works Construction (Greenbook) when implementing these repair recommendations. Requirements specified within the Greenbook should be followed, including but not limited to:

- Pavement surface preparation and tack coat application prior to installation overlay;
- Subgrade, aggregate base, and asphalt concrete relative compaction requirements;
- AC mixture requirements, including binder content, gradation, and Hveem Stability requirements;
- AC paving operations, including temperatures, lift thicknesses, rolling patterns, and more.

7. EXPECTATIONS

7.1 REFLECTIVE CRACKING

Reflective cracking is the propagation of the pre-existing underlying cracks through the new overlay. The rate at which remaining underlying cracks reflect through the surface is dependent on a number of factors that are challenging to predict. Some of these factors include the width of underlying cracks that remain after milling, variability in traffic loading, climate conditions (temperature swings resulting in expansion/contraction), and strength of the underlying section(s) supporting the overlay.

The rule-of-thumb for reflective cracking is that cracks will propagate approximately 1-inch per year. In other words, there is potential for underlying cracks to grow to the surface within approximately 2 years for a 2-inch overlay when using conventional AC.

7.2 DESIGN LIFE

Excluding the potential for reflective cracking to propagate sooner and assuming that construction is performed in accordance with our recommendations and specifications, we estimate that implementing the recommended pavement repair will meet the requested 20-year design life. Please note, the pavement will develop distresses with time and should not be expected to remain completely crack free for the full duration of the 20-year design-life period. Proper pavement maintenance, including localized AC repairs when needed, crack repairs, and proper maintenance, should be performed to achieve a full 20-year design life. Areas that are structurally deficient and do not receive localized repairs may not achieve the full 20-year design life.

8. LIMITATIONS

These recommendations are only intended to support the pavement repair map for the subject site. All parties reviewing or utilizing this report should recognize that the findings, conclusions, and recommendations presented represent the results of our professional engineering efforts and judgments. Due to the inexact nature of the state of the art of these professions and the possible occurrence of undetected variables in subsurface conditions, we cannot guarantee that the conditions actually encountered during construction will be the same as those observed and sampled during our study or that there are no unknown subsurface conditions which could have an adverse effect on the use of the roadway. We have exercised a degree of care comparable to the standard of practice presently maintained by other professionals in the fields of geotechnical engineering and pavement engineering, and believe that our findings present a reasonably representative description of conditions and their probable influence on the grading and use of the streets. Surface cracks may develop sooner or later depending on a number of factors that are hard to predict or not provided to us, such as actual traffic volumes or the extent and severity of subsurface cracks that remain upon milling.

Because our conclusions and recommendations are based on a limited amount of geotechnical exploration and analysis, all parties should recognize the need for possible revisions to our conclusions and recommendations during construction of the project. The recommendations provided in this report are based on the assumption that an adequate program of observations and testing will be conducted by our firm during the construction phases in order to evaluate compliance with our recommendations and to provide revised recommendations if necessary depending on conditions encountered.

GMU's recommendations for this project are, to a high degree, dependent upon appropriate quality control of subgrade preparation, mix design compliance, and pavement construction processes. Accordingly, the recommendations are made contingent upon the opportunity for GMU to observe the proposed construction. If parties other than GMU are engaged to provide such services, such parties must be notified that they will be required to assume complete responsibility as the engineer of record of the project by concurring with the recommendations in this letter and/or by providing alternative recommendations.

GMU performed its evaluation using the degree of care and skill ordinarily exercised under similar circumstances by reputable civil and/or geotechnical engineering professionals with experience in this area in similar soil conditions. No other warranty, either expressed or implied, is made as to the conclusions and recommendations contained in this report. This report has been prepared for the exclusive use of the City of Aliso Viejo in accordance with generally accepted pavement engineering practices.

9. CLOSURE

We appreciate this opportunity to provide our pavement evaluation services on you project. If there are any questions concerning our findings or recommendations, please do not hesitate to contact us and we will be happy to discuss them with you.

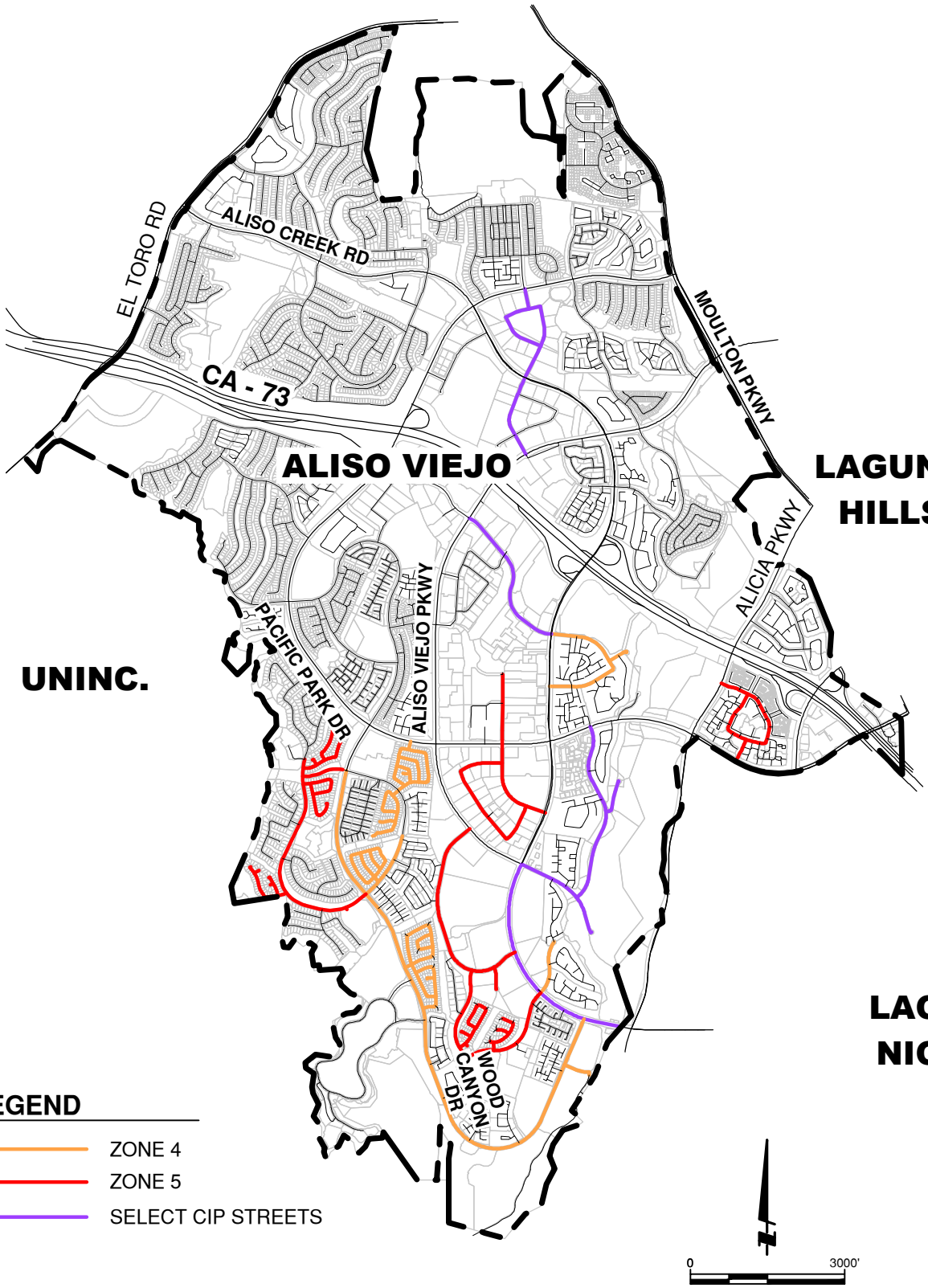
Respectfully submitted,

GMU GEOTECHNICAL, INC.

Ali Zalghout, M.Sc.
Pavement Staff Engineer



Roger W. Schlierkamp, M.Sc., PE 81529
Director of Pavement Engineering



Project Limits Map

GMU	Date: March 15, 2021	Plate 1
	Project No.: 20-100-00	

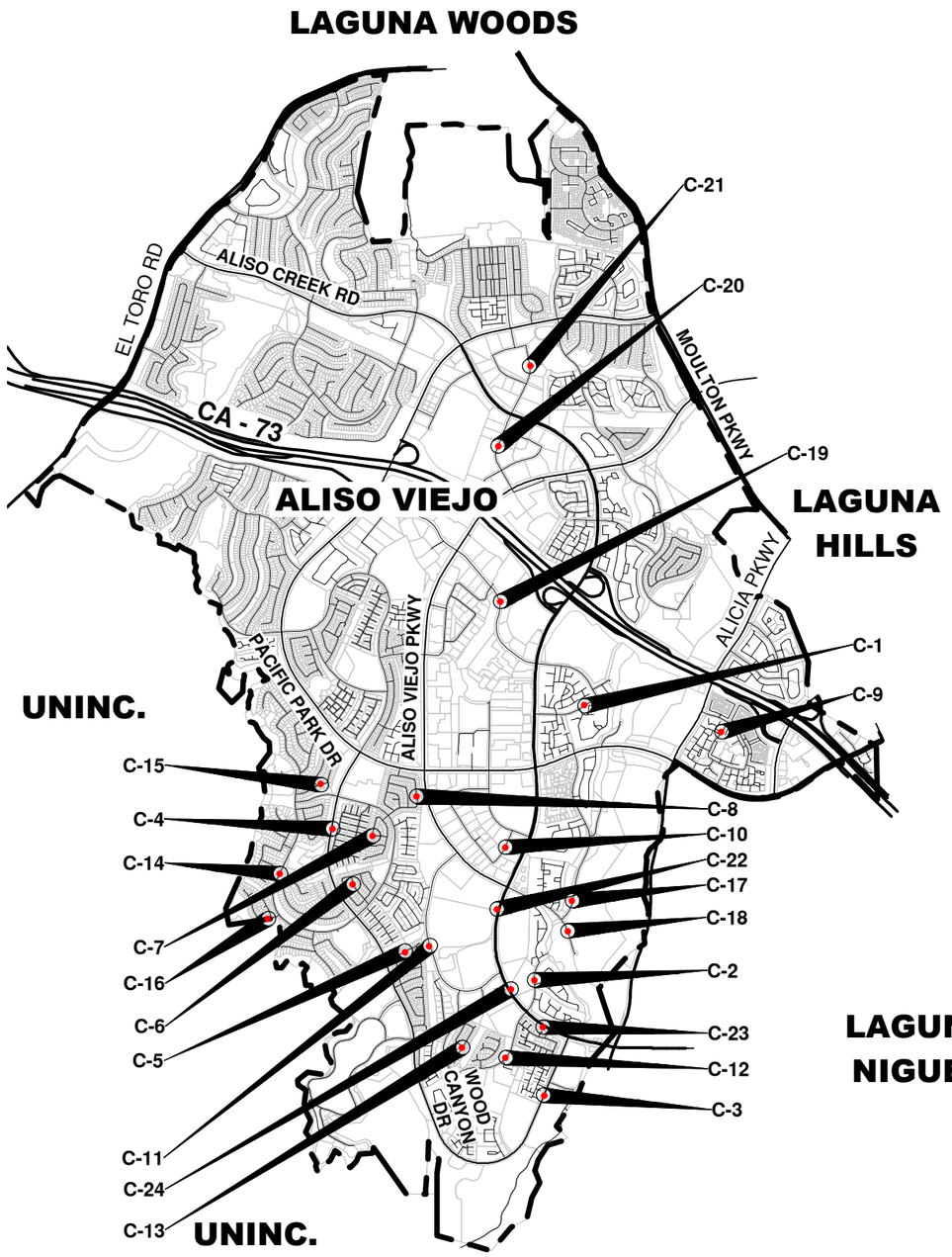
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Plate 1.1 - Project Limits Table DRAFT

Project No. 20-100-00

Street Name	Functional Classification	Zone	From	To	Length (ft)
CIP & Misc Streets (FY 20-21 through 22-23)					
Deerhurst	LOCAL	4 (Orange)	Wolverine	Foxborough	1,808
Deerhurst	LOCAL	4 (Orange)	Foxborough	Pacific Park Dr	1,747
Foxborough	LOCAL	4 (Orange)	Deerhurst	Dead End	705
Wolverine Way	LOCAL	4 (Orange)	Aliso Creek	Sandcastle	954
Wolverine Way	LOCAL	4 (Orange)	Sandcastle	CDS	1,064
Aliso Creek Rd	MPAH	NA	Aliso Viejo Pkwy / Wolverine Wy	Liberty	1,767
Aliso Creek Rd	MPAH	NA	Liberty	Pursuit	942
Aliso Creek Rd	MPAH	NA	Pursuit	Wood Canyon Dr	985
Aliso Creek Rd	MPAH	NA	Wood Canyon Dr	City Limits (Bridge)	750
Enterprise	LOCAL	3 (Yellow)	Aliso Viejo Pkwy	Summit	1,000
Enterprise	LOCAL	3 (Yellow)	Summit	Aliso Creek Rd	2,035
Argonaut	LOCAL	1 (Blue)	Aliso Creek Rd	Argonaut	1,483
Argonaut	LOCAL	1 (Blue)	Argonaut	Argonaut	1,633
Argonaut	LOCAL	1 (Blue)	Argonaut	Glenwood Drive	396
Columbia	LOCAL	1 (Blue)	Aliso Creek Road	Aliso Viejo Pkwy	1,618
Zone 4 Street List					
Autumnglen	LOCAL	4 (orange)	Aliso Creek Rd	Summerfield	1,320
Summerfield	LOCAL	4 (orange)	Autumnglen	Aliso Creek	1,543
Springdale	LOCAL	4 (orange)	Summerfield	Dead End	408
Deerhurst	LOCAL	4 (orange)	Wolverine	Foxborough	1,808
Deerhurst	LOCAL	4 (orange)	Foxborough	Pacific Park Dr	1,747
Foxborough	LOCAL	4 (orange)	Deerhurst	Dead End	705
Wolverine Way	LOCAL	4 (orange)	Aliso Creek	Sandcastle	954
Wolverine Way	LOCAL	4 (orange)	Sandcastle	CDS	1,064
Glenhurst	LOCAL	4 (orange)	Aliso Creek	Gate	1,040
Knollwood	LOCAL	4 (orange)	Wood Canyon Dr	City Line	528
Wood Canyon Dr	MPAH	4 (orange)	Aliso Creek	Las Flores	1,104
Wood Canyon Dr	MPAH	4 (orange)	Las Flores	Valencia	1,664
Wood Canyon Dr	MPAH	4 (orange)	Valencia	Tivoli	1,009
Wood Canyon Dr	MPAH	4 (orange)	Tivoli	Cottage Ln	989
Wood Canyon Dr	MPAH	4 (orange)	Cottage Ln	SOKA South Entrance	1,577
Wood Canyon Dr	MPAH	4 (orange)	SOKA South Entrance	Calypso St	1,102
Wood Canyon Dr	MPAH	4 (orange)	Calypso St	Oak View Dr	1,642
Wood Canyon Dr	MPAH	4 (orange)	Oak View Dr	Huntington Ln (Access Rd)	1,410
Wood Canyon Dr	MPAH	4 (orange)	Huntington Ln (Access Rd)	Westridge Dr	1,167
Laurelwood	LOCAL	4 (orange)	Wood Canyon	Cameo Dr	251
Cameo Dr	LOCAL	4 (orange)	Laurelwood St	Charlemont Dr	752
Chancey Ct	LOCAL	4 (orange)	Cameo Dr	Dead End	158
Charlemont Dr	LOCAL	4 (orange)	Cameo Dr	Deerborn Dr	333
Deerborn Dr	LOCAL	4 (orange)	Cameo Dr	Calypso St	854
Deerborn Dr	LOCAL	4 (orange)	Calypso St	Sherwood Dr	528
Calypso St	LOCAL	4 (orange)	Wood Canyon Dr	Sunbury Dr	580
Sunbury Dr	LOCAL	4 (orange)	Sherwood Dr	Calypso St	618
Sherwood Dr	LOCAL	4 (orange)	Deerborn Dr	Sunbury Dr	528
Somerset Dr	LOCAL	4 (orange)	Sunbury Dr	Brookstone Pl	264
Brookstone Pl	LOCAL	4 (orange)	Somerset Dr	Seton Dr	180
Seton Dr	LOCAL	4 (orange)	Brookstone Pl	Sunbury Dr	310
Cliffwood	LOCAL	4 (orange)	Cranwell	Chesterwood	628
Stockbridge	LOCAL	4 (orange)	Chesterwood	Cranwell	653
Barrington	LOCAL	4 (orange)	Cranwell	Chesterwood	264
Chesterwood	LOCAL	4 (orange)	Cliffwood	Barrington	528
Cranwell	LOCAL	4 (orange)	Barrington	Cliffwood	528
Berkshire	LOCAL	4 (orange)	Cranwell	Chesterwood	264
Oakgrove Dr	LOCAL	4 (orange)	Wood Canyon Dr	Halfway South	1,340
Mallorn Dr	LOCAL	4 (orange)	Rowan Dr	Dead End	1,186
Birch Dr	LOCAL	4 (orange)	Rowan Dr	Mallorn Dr	270
Rowan Dr	LOCAL	4 (orange)	Mallorn	Birch	389

Walnut Dr	LOCAL	4 (orange)	Mallorn Dr	End	264
Beech Dr	LOCAL	4 (orange)	Poplar Dr	Pacific Grove Dr	792
Chestnut Dr	LOCAL	4 (orange)	Beech Dr	Pacific Grove Dr	528
Sequoia Dr	LOCAL	4 (orange)	Pacific Grove Dr	Beech Dr	728
Maple Dr	LOCAL	4 (orange)	Poplar Dr	Pacific Grove Dr	567
Pacific Grove Dr	LOCAL	4 (orange)	Oakgrove Dr	Maple Dr	528
Poplar Dr	LOCAL	4 (orange)	Maple Dr	Beech Dr	528
Zone 5 Street List					
Heather Ridge	LOCAL	5 (red)	Pacific Park Dr	Woodside	471
Woodside	LOCAL	5 (red)	Morning Ridge	Creekside	807
Creekside	LOCAL	5 (red)	Woodside	Morningridge	792
Morning Ridge	LOCAL	5 (red)	Alicia Pkwy	Creekside	561
Morning Ridge	LOCAL	5 (red)	Creekside	Woodside	1,126
City Lights Dr	LOCAL	5 (red)	Pacific Park	Prvt Prop	1,390
Journey	LOCAL	5 (red)	Aliso Creek	Pacific Park Dr	1,829
Journey	LOCAL	5 (red)	Journey (N)	Journey (S)	3,207
Liberty	LOCAL	5 (red)	Aliso Viejo Pkwy	1033' s/o Aliso Viejo Pkwy	1,033
Liberty	LOCAL	5 (red)	1033' s/o Aliso Viejo Pkwy	Pursuit	2,179
Liberty	LOCAL	5 (red)	Pursuit	Aliso Creek Rd	955
Orion	LOCAL	5 (red)	Liberty	End	447
Pursuit	LOCAL	5 (red)	Liberty	Rue Du Chateau	890
Pursuit	LOCAL	5 (red)	Rue Du Chateau	Lyon Ridge	1,538
Pursuit	LOCAL	5 (red)	Lyon Ridge	Aliso Creek Rd	1,580
Duray Ct	LOCAL	5 (red)	Monstad St	End	264
Monstad St	LOCAL	5 (red)	Pursuit	Grindlay Pl	984
Monstad St	LOCAL	5 (red)	Monstad St	End	68
Kewen Wy	LOCAL	5 (red)	Grindlay Pl	Monstad St	538
Grindlay Pl	LOCAL	5 (red)	Monstad St	Kewen Wy	190
Lyon Ridge	LOCAL	5 (red)	Lyon Ridge	Dead End	796
Lyon Ridge	LOCAL	5 (red)	Pursuit	Lyon Ridge	157
Lyon Ridge	LOCAL	5 (red)	Lyon Ridge	Dead End	88
Mesa Cr	LOCAL	5 (red)	Lyon Ridge	End	260
Oakview Dr	LOCAL	5 (red)	Wood Canyon Dr	Crimson Canyon	943
Oakview Dr	LOCAL	5 (red)	Crimson Canyon	Endless Vista	1,486
Oakview Dr	LOCAL	5 (red)	Endless Vista	Gate	2,018
Southern Hills Dr	LOCAL	5 (red)	Bel Flora Ct	Dead End	976
Bel Flora Ct	LOCAL	5 (red)	Oakview Dr	Country Walk Dr	542
Country Walk Dr	LOCAL	5 (red)	Southern Hills Dr	Bel Flora Ct	542
Westridge Dr	LOCAL	5 (red)	Oakview Dr	Wood Canyon Dr	874
Midnight Ct	LOCAL	5 (red)	Dawn Ln	Dead End	158
Dawn Ln	LOCAL	5 (red)	Oakview Dr	Dusk Wy	1,255
Dusk Wy	LOCAL	5 (red)	Dawn Ln	Evening Light	264
Evening Light Ln	LOCAL	5 (red)	Dusk Wy	Dawn Ln	866
Style Dr	LOCAL	5 (red)	Gatewood Dr	Dead End	410
Style Dr	LOCAL	5 (red)	Style Dr	End	63
Gatewood Dr	LOCAL	5 (red)	Oakview Dr	Dead End	1,136
Shining Star Wy	LOCAL	5 (red)	Gatewood Dr	End	102



AC CORE HOLE #	AC THICKNESS (INCHES)	AB THICKNESS (INCHES)	SUBGRADE	MC	ZONE	SHEET
C-1	6		ML	45.1%	4	2.1
C-2	5.5		SC		4	2.2
C-3	9.5		SC		4	2.3
C-4	8.75		ML	27.9%	4	2.4
C-5	3	6	ML	16.1%	4	2.5
C-6	5.5		CH		4	2.6
C-7	7.5		ML	31%	4	2.7
C-8	7				4	2.8
C-9	4.75				5	2.9
C-10	8		CL/ML		5	2.10
C-11	8		SM		5	2.5
C-12	8.75		ML		5	2.11
C-13	4.25		CL	21.6%	5	2.12
C-14	8.25		ML	24.4%	5	2.13
C-15	6				5	2.14
C-16	6.5		SC	16.7%	5	2.15
C-17	4.5		SC		4	2.16
C-18	9		SM	19.7%	SELECT CIP STREET	2.16
C-19	7		ML	22.6%	SELECT CIP STREET	2.17
C-20	4.5		ML	56.0%	SELECT CIP STREET	2.18
C-21	6.5		SC	37.1%	SELECT CIP STREET	2.19
C-22	8.75		SM		SELECT CIP STREET	2.20
C-23	11				SELECT CIP STREET	2.21
C-24	9.5		SC	15.1%	SELECT CIP STREET	2.22

LEGEND

- AC CORE LOCATION

0 3000'

AC Core Hole Location Map

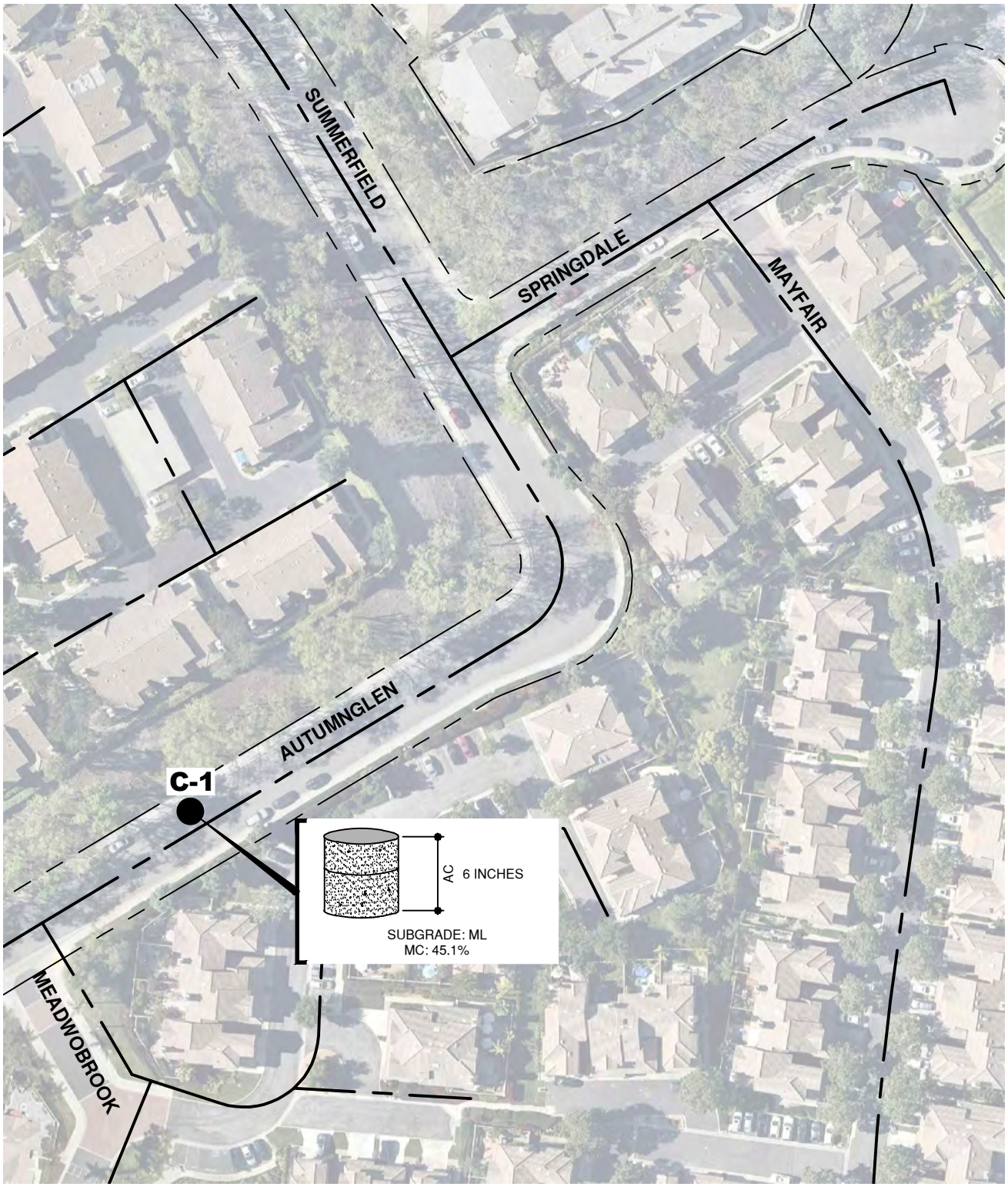
GMU

Date: March 15, 2021

Project No.: 20-100-00

Plate 2

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LEGEND

C-1 ● AC CORE HOLE LOCATION

0 100'

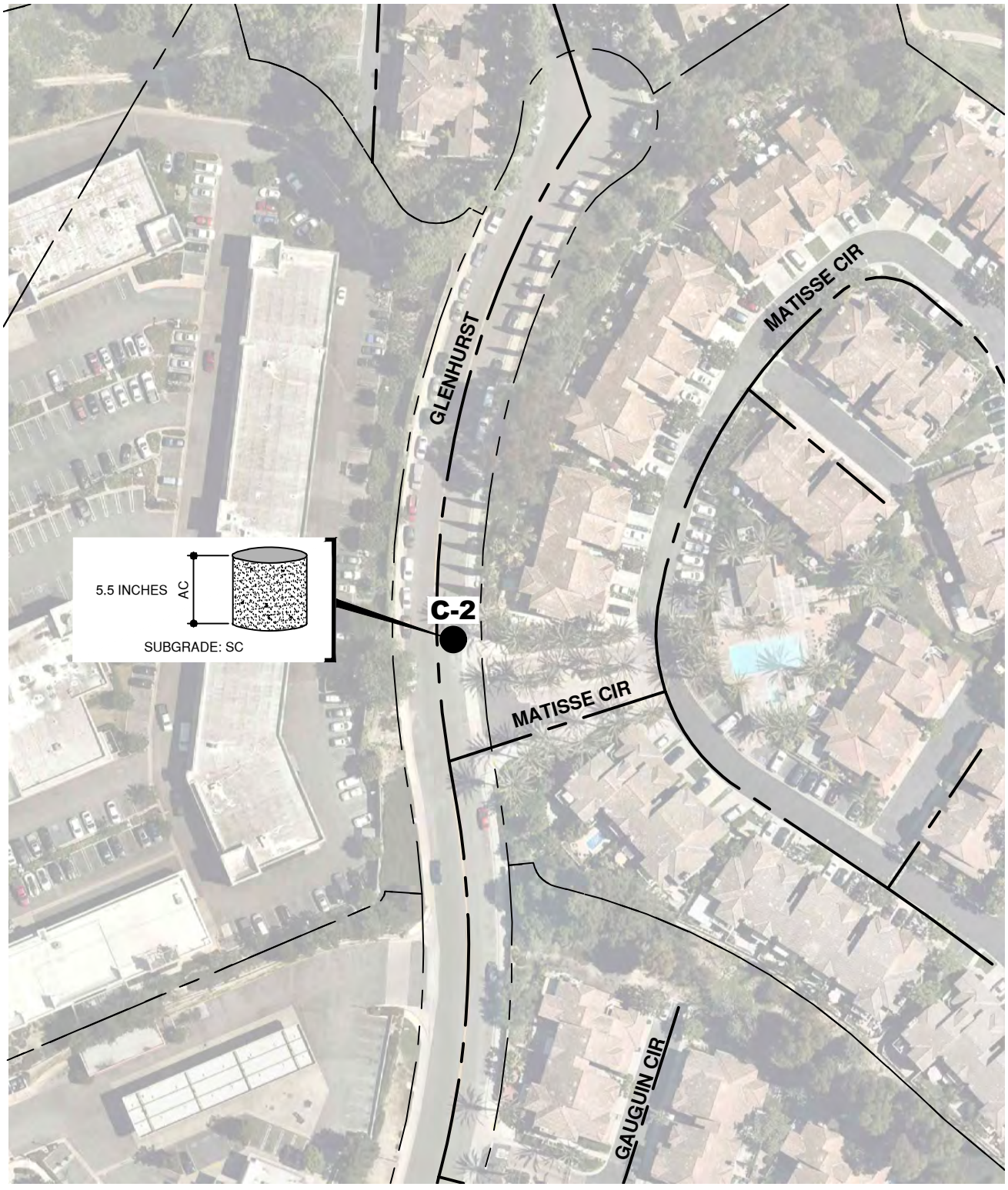
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.1

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LEGEND

C-2 ● AC CORE HOLE LOCATION

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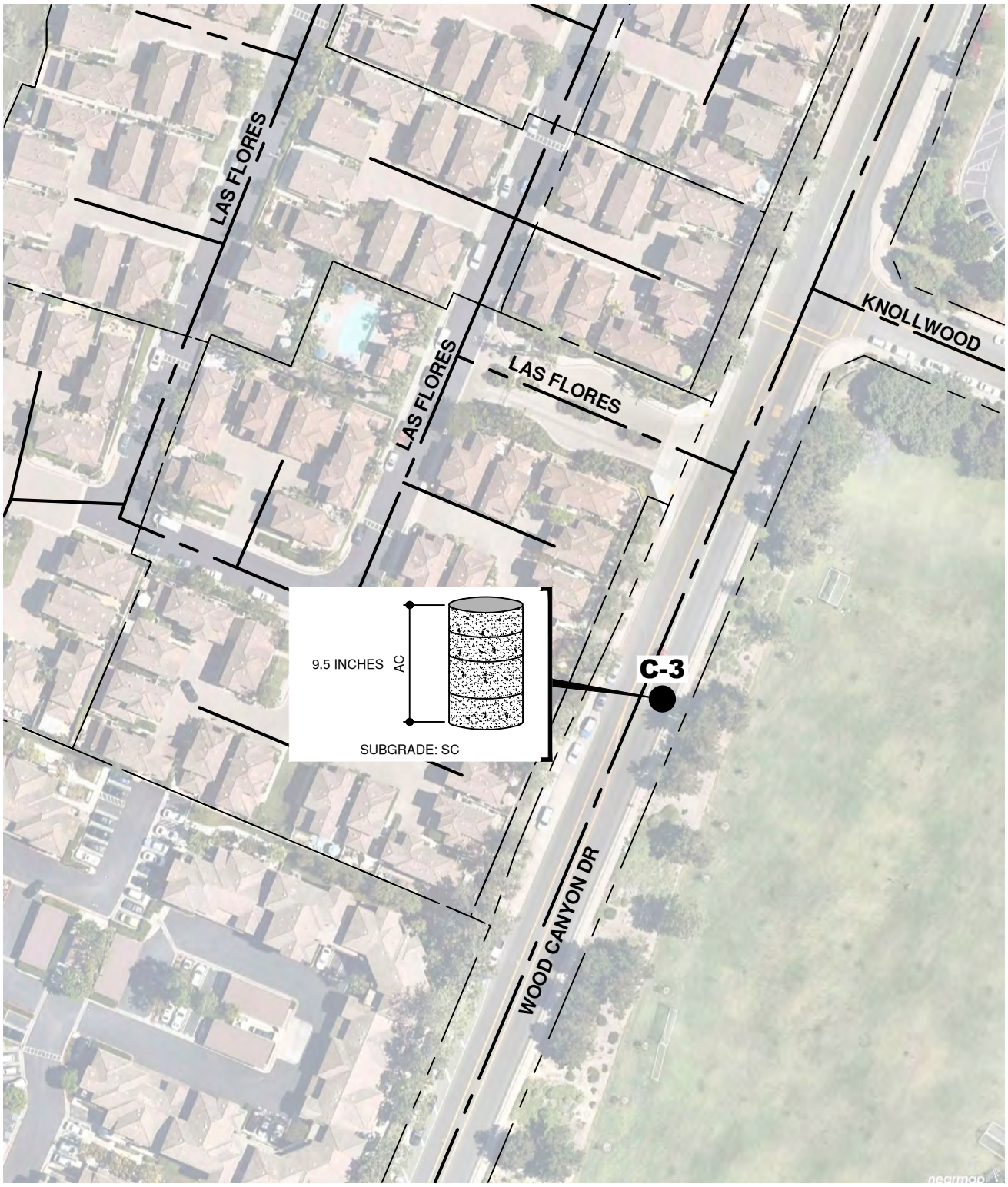
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.2

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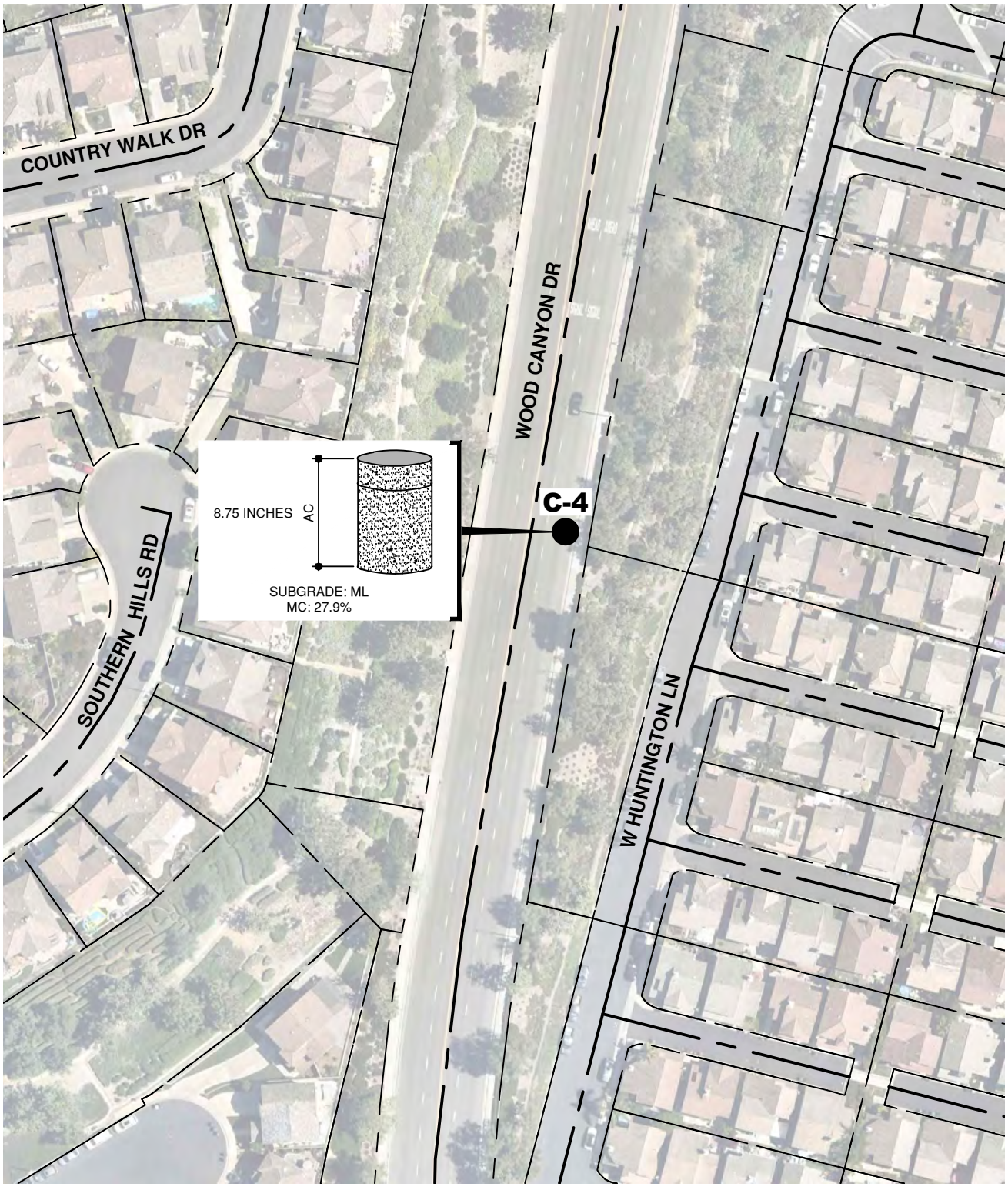
C-3 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.3
	Project No.: 20-100-00	

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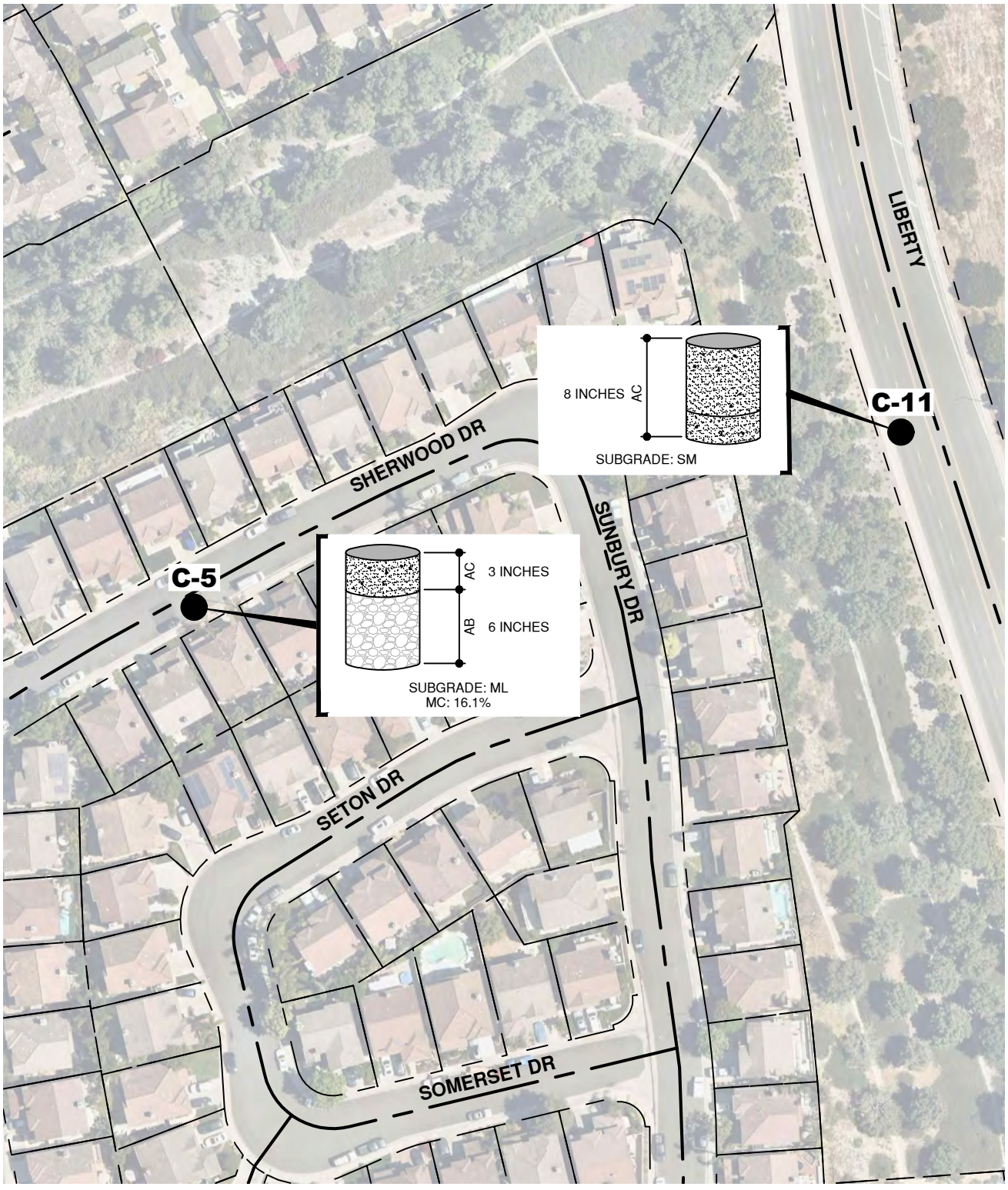
C-4 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.4
	Project No.: 20-100-00	

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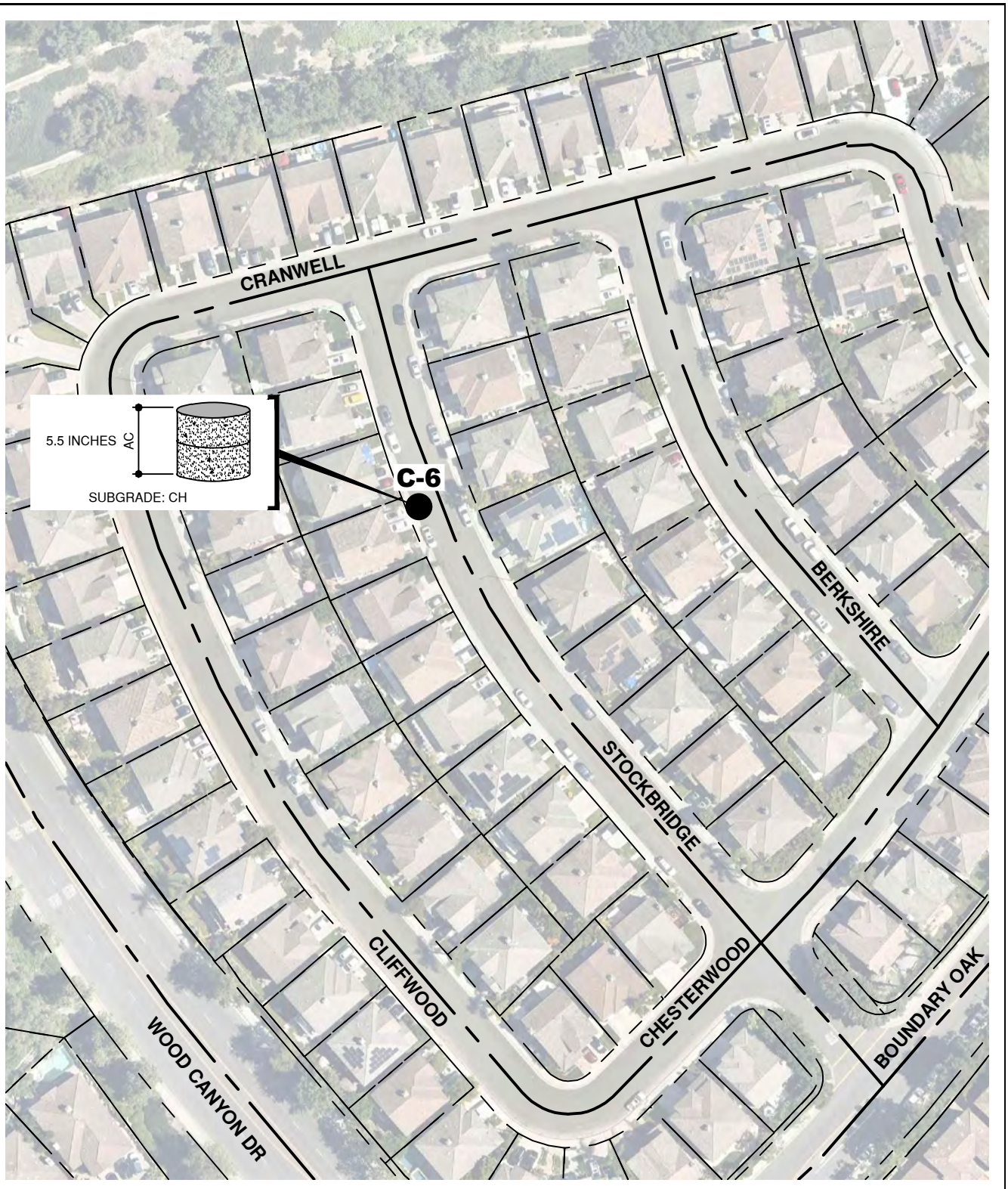
C-11 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.5
	Project No.: 20-100-00	

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LEGEND

C-6 ● AC CORE HOLE LOCATION

0 100'

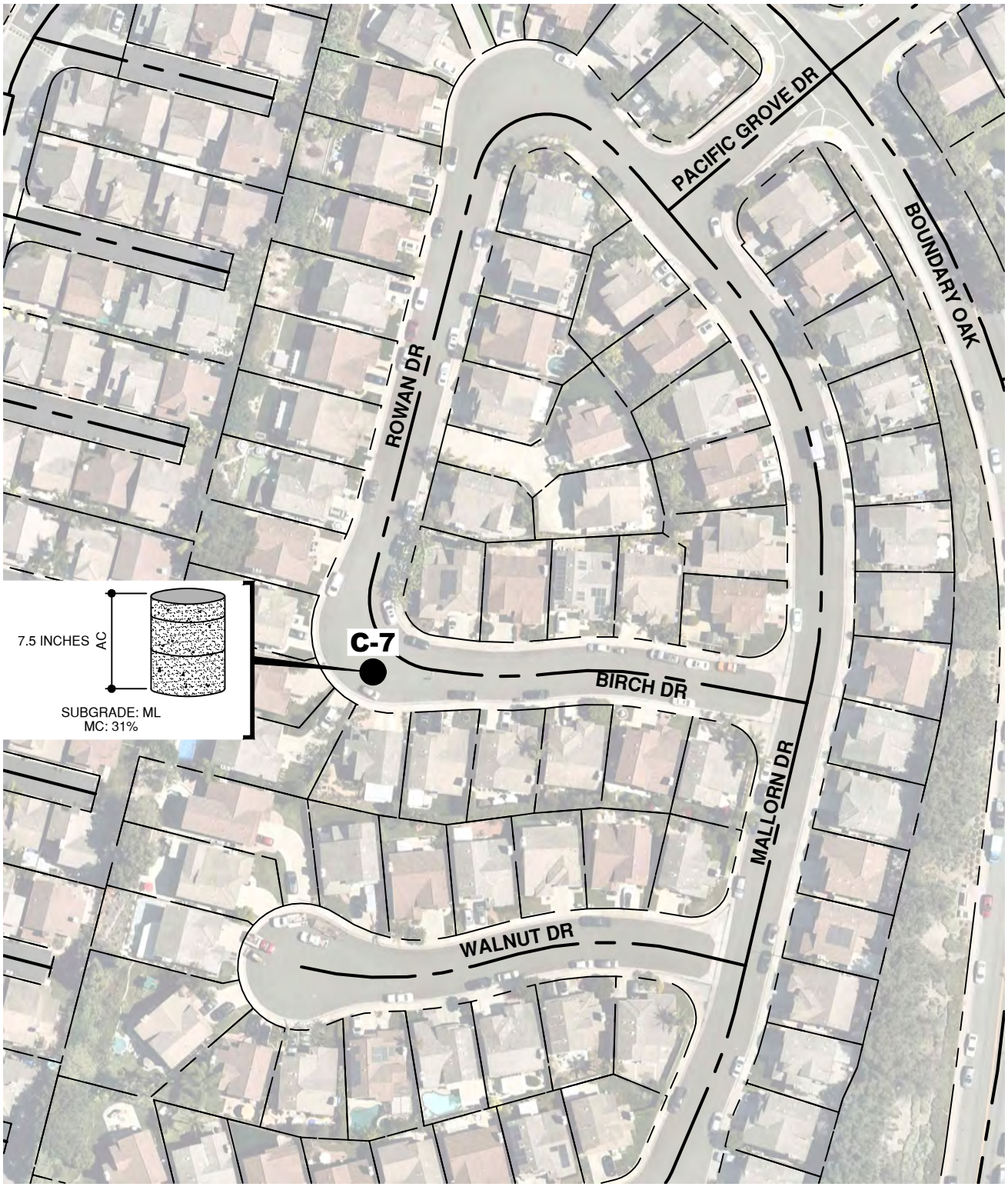
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.6

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LEGEND

C-7 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.7
	Project No.: 20-100-00	

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LEGEND

C-8 AC CORE HOLE LOCATION

0 100'

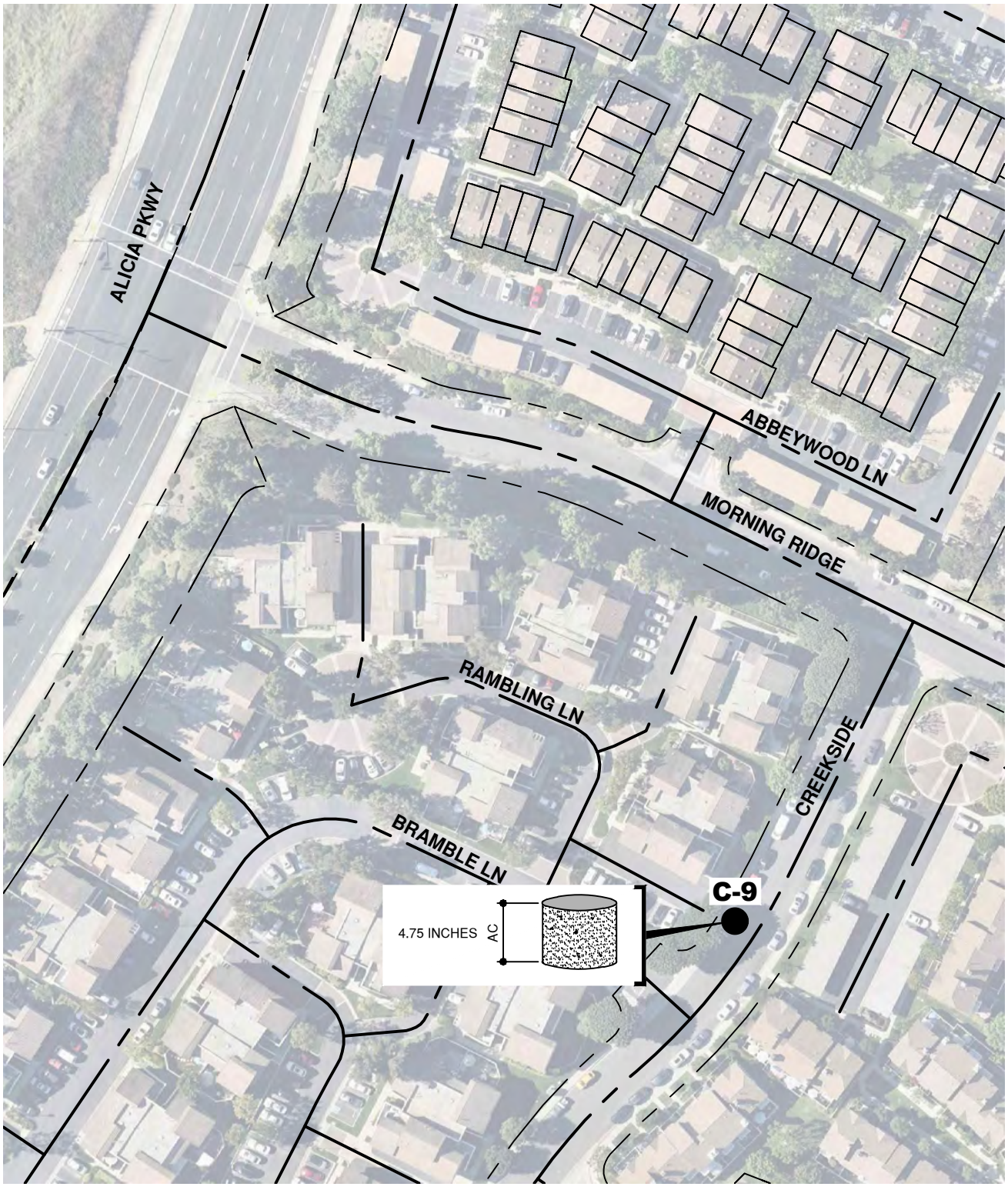
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.8

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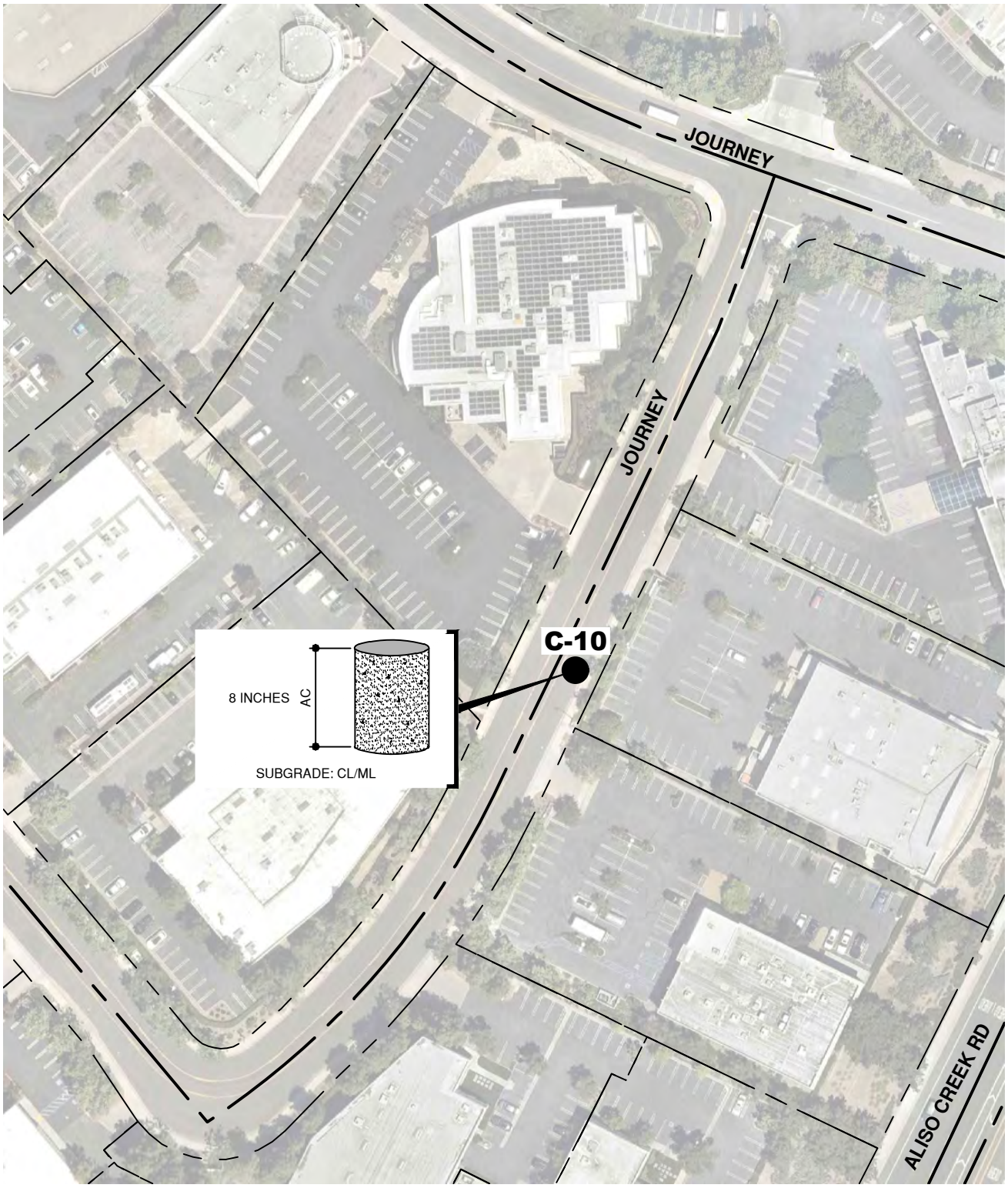
C-9 ● AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.9
	Project No.: 20-100-00	

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LEGEND

C-10 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

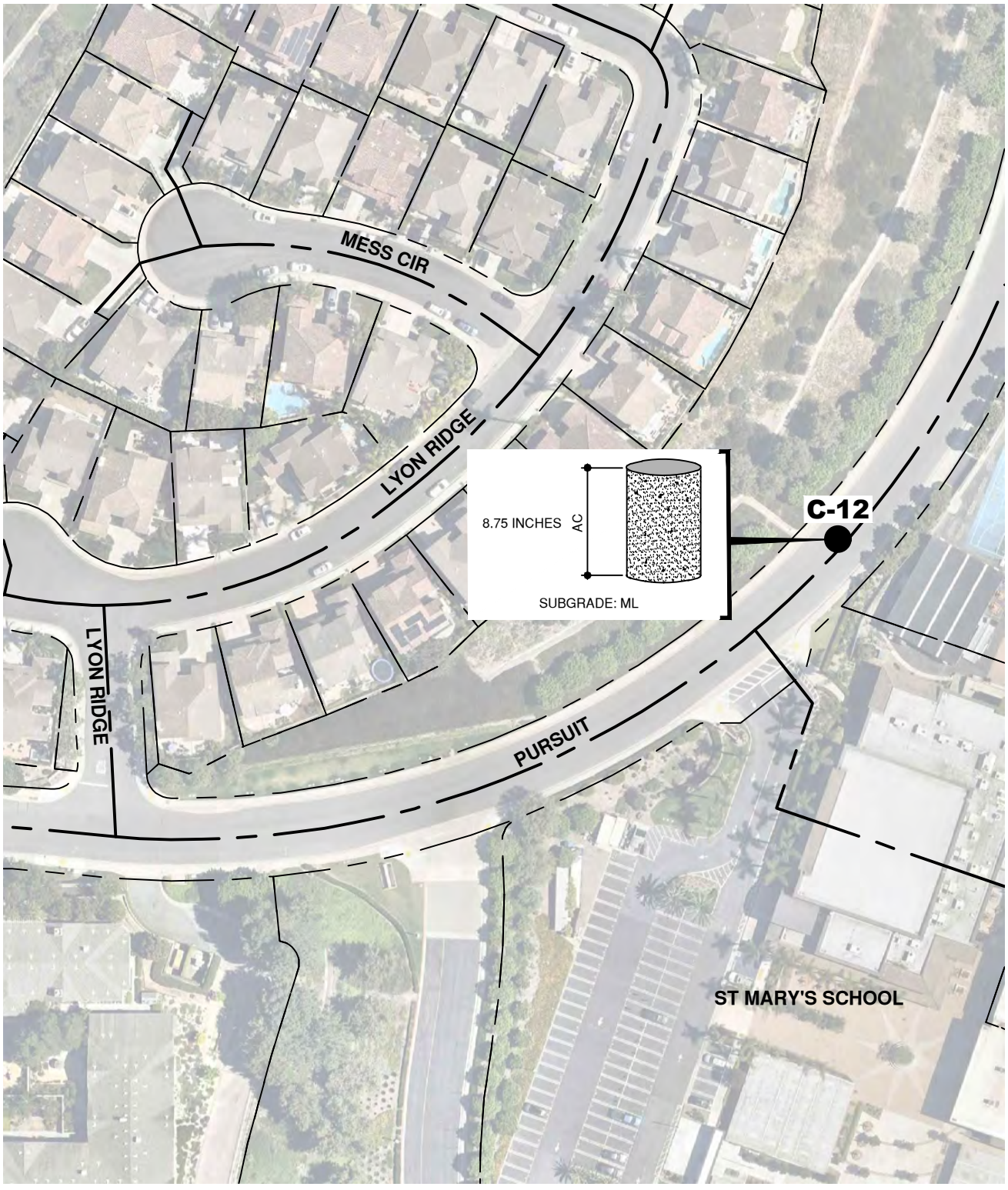
GMU

Date: March 15, 2021

Project No.: 20-100-00

Plate 2.10

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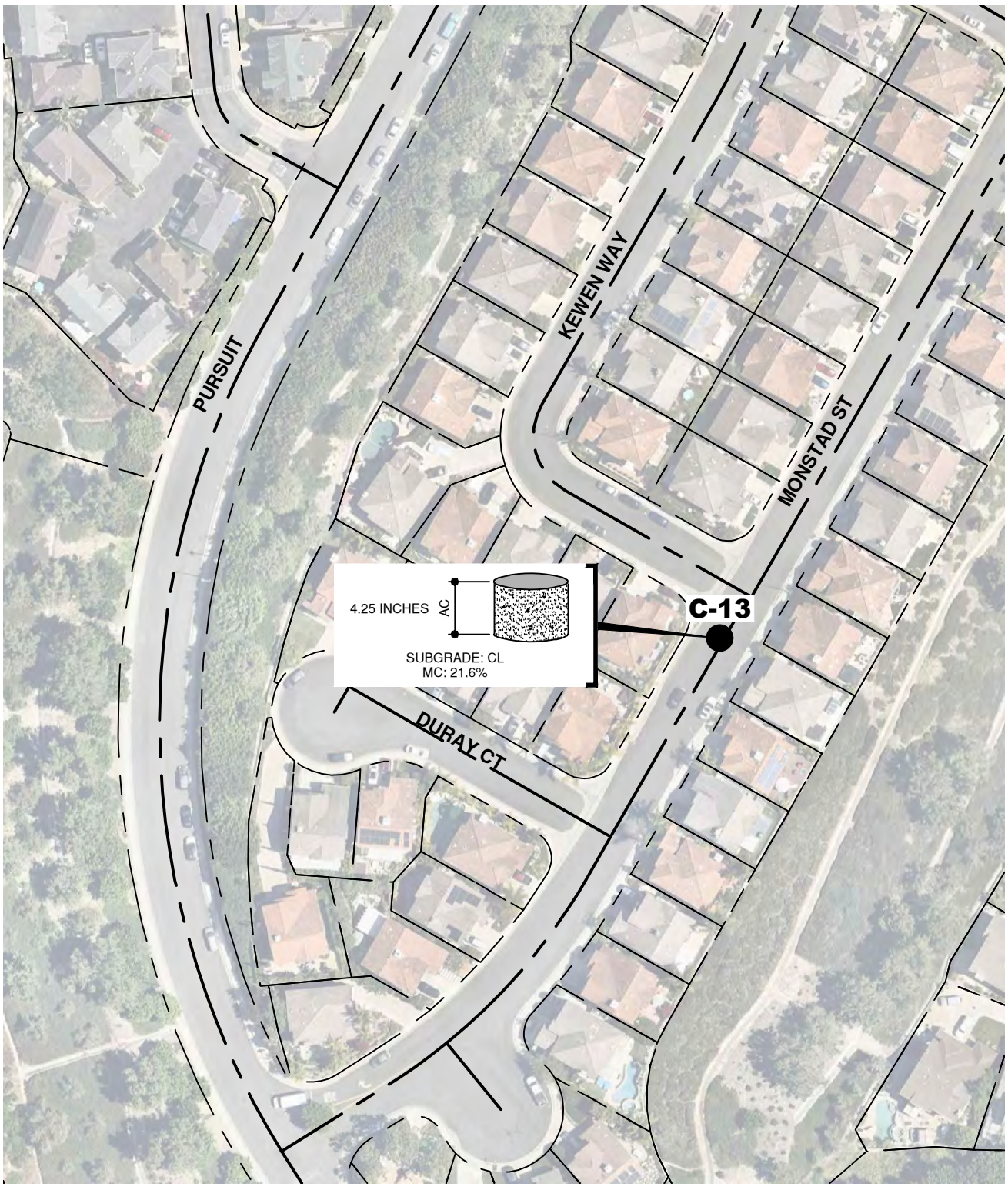
LEGEND

C-12 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.11
	Project No.: 20-100-00	



LEGEND

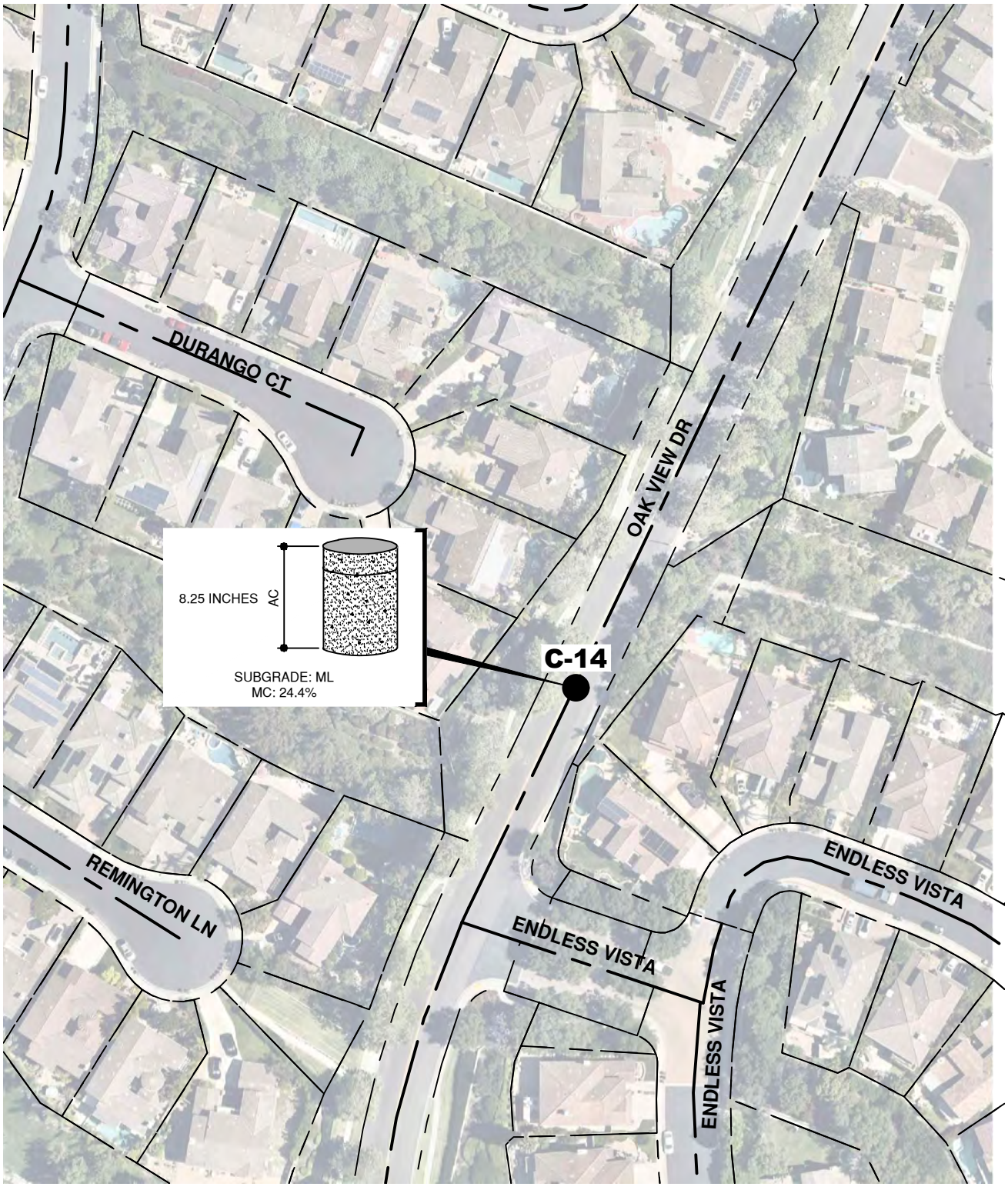
C-13 ● AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.12
	Project No.: 20-100-00	

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.12_ac core hole map.dwg PLOTTED: 12/23/2020 5:44 PM BY: Jmeza



LEGEND

C-14 ● AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.13

DRAWING: q:\2020\20-100-00\dwg\20100000_plate 2.13_ac core hole map.dwg PLOTTED: 12/23/2020 5:50 PM BY: Jmeza



LEGEND

C-15 AC CORE HOLE LOCATION

0 100'

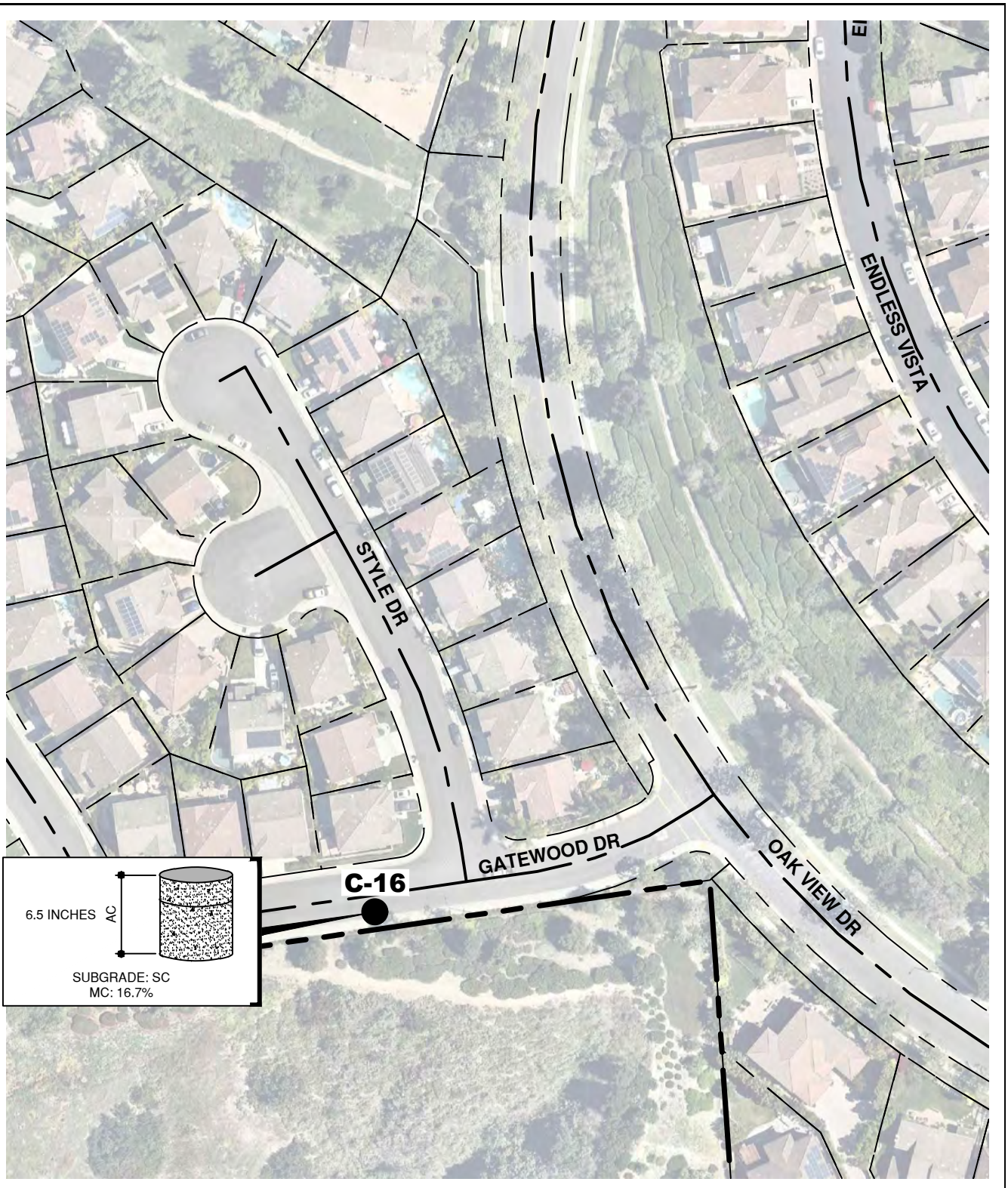
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.14

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.14_ac core hole map.dwg PLOTTED: 12/23/2020 6:00 PM BY: Jmeza



LEGEND

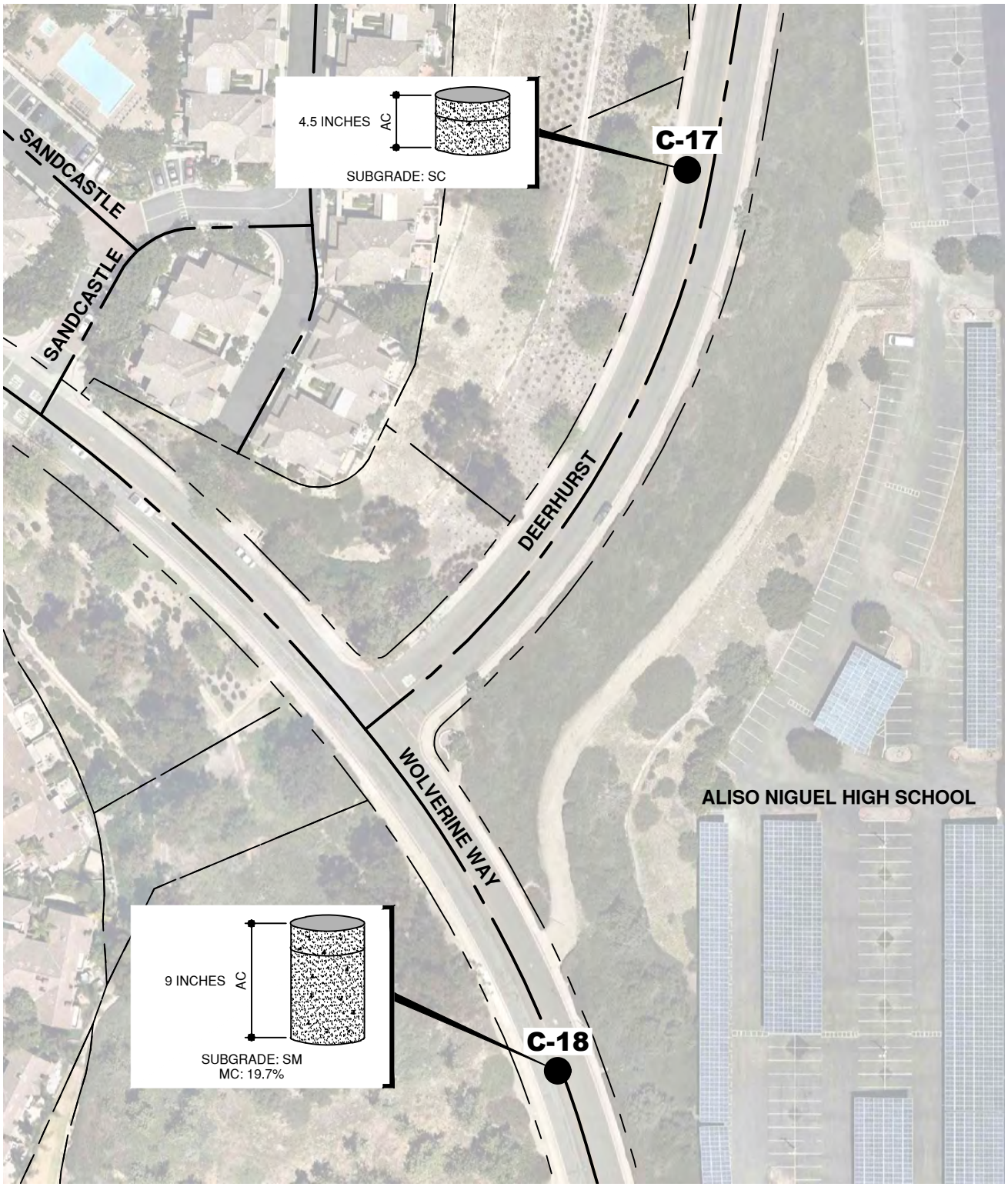
C-16 ● AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.15
	Project No.: 20-100-00	

DRAWING: q:\2020\20-100-00\dwg\20100000_plate 2.15_ac core hole map.dwg PLOTTED: 12/23/2020 6:05 PM BY: Jmeza



LEGEND

C-18 AC CORE HOLE LOCATION

0 100'

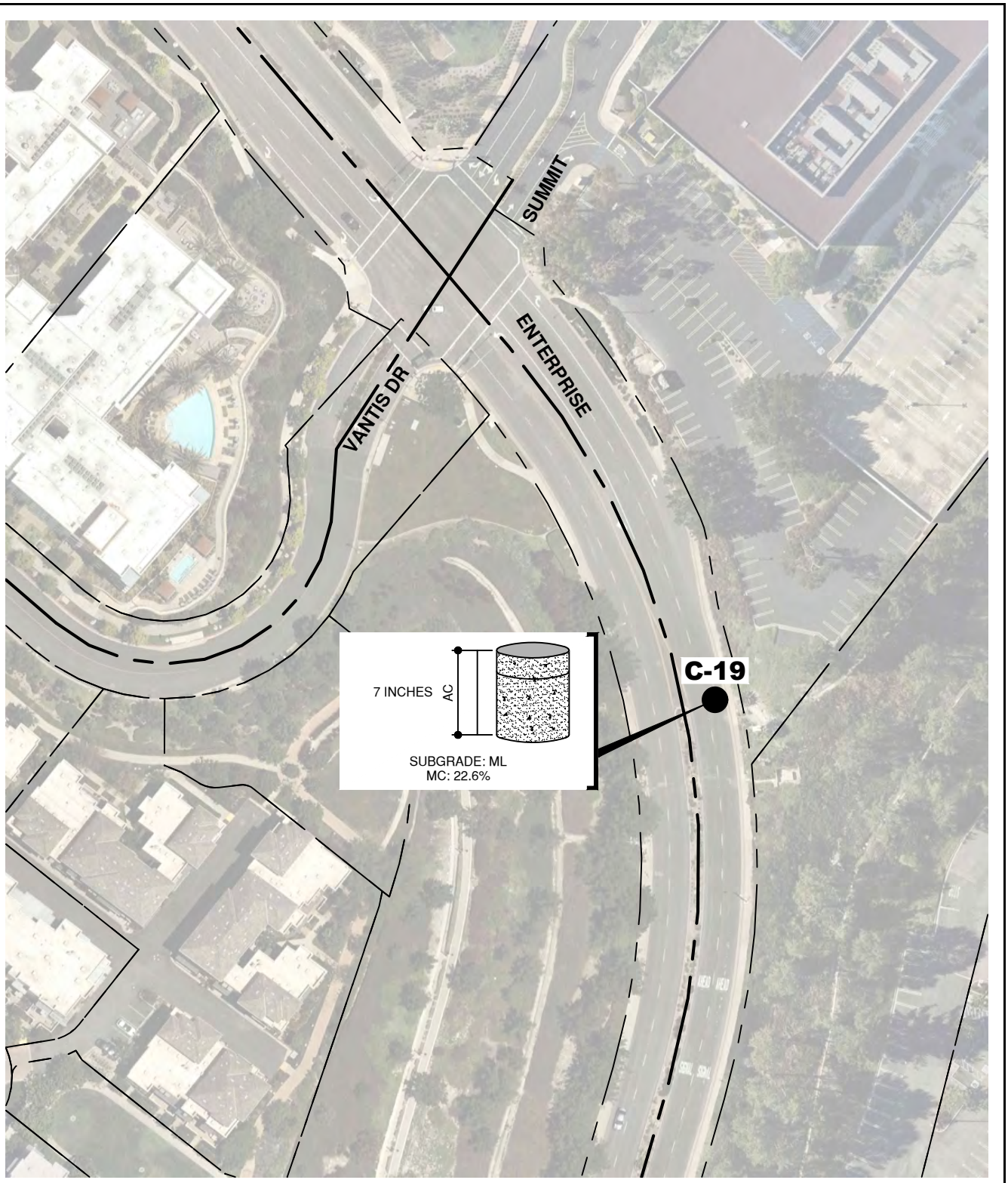
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.16

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.16_ac core hole map.dwg PLOTTED: 12/23/2020 6:15 PM BY: Jmeza



LEGEND

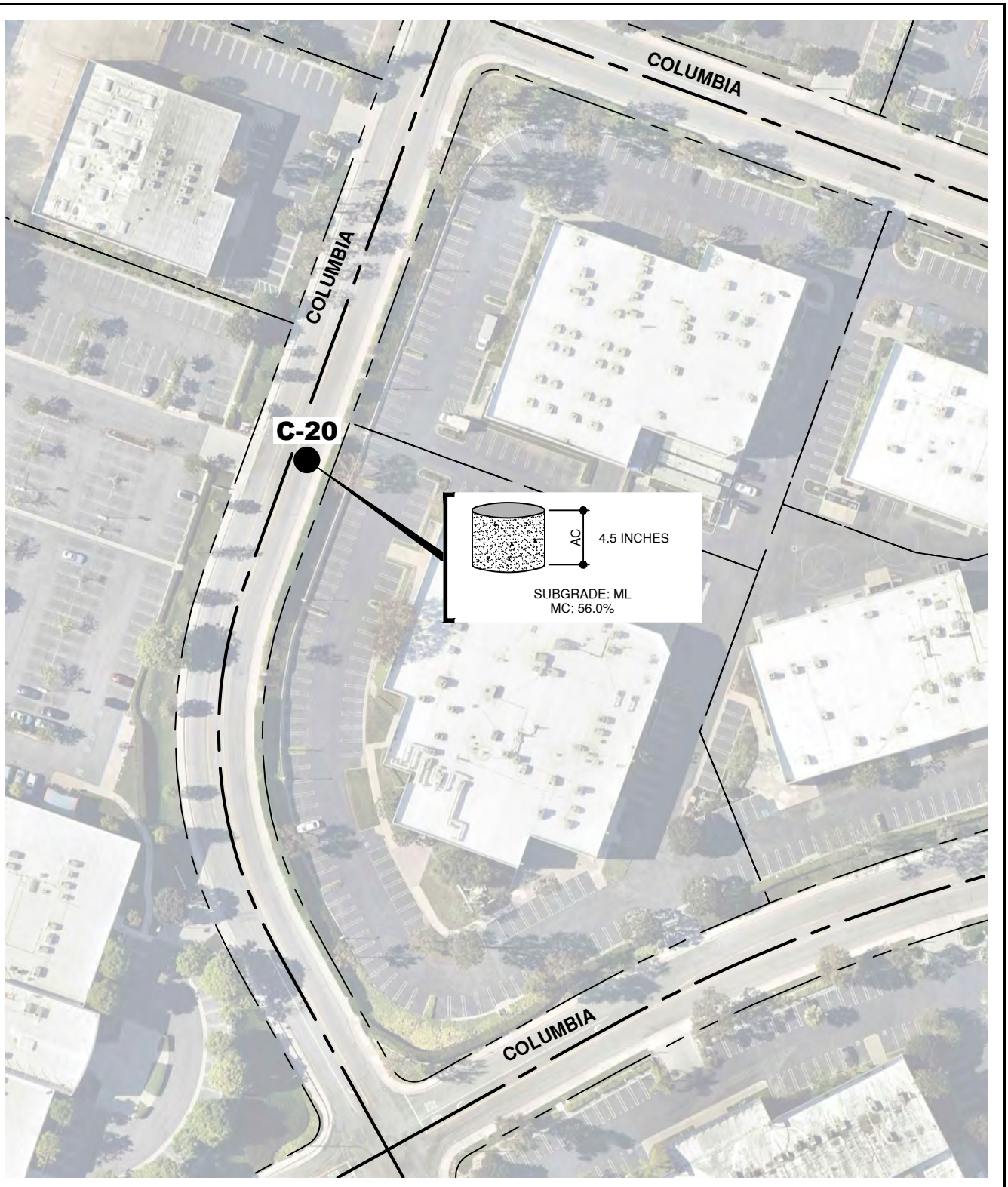
C-19 ● AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.17
	Project No.: 20-100-00	

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.17_ac core hole map.dwg PLOTTED: 12/27/2020 5:43 AM BY: Jmeza



LEGEND

C-20 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

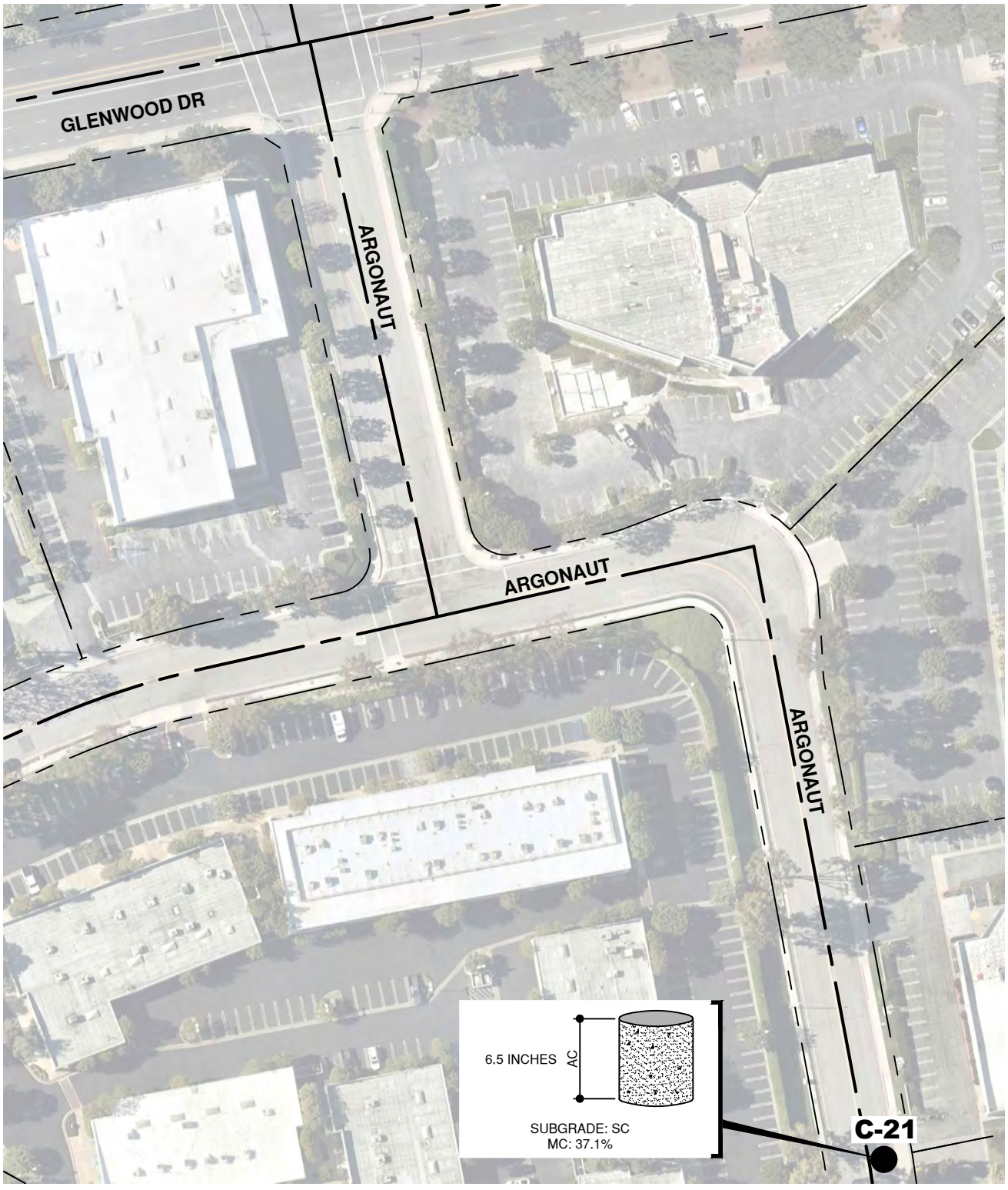
GMU

Date: March 15, 2021

Project No.: 20-100-00

Plate 2.18

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LEGEND

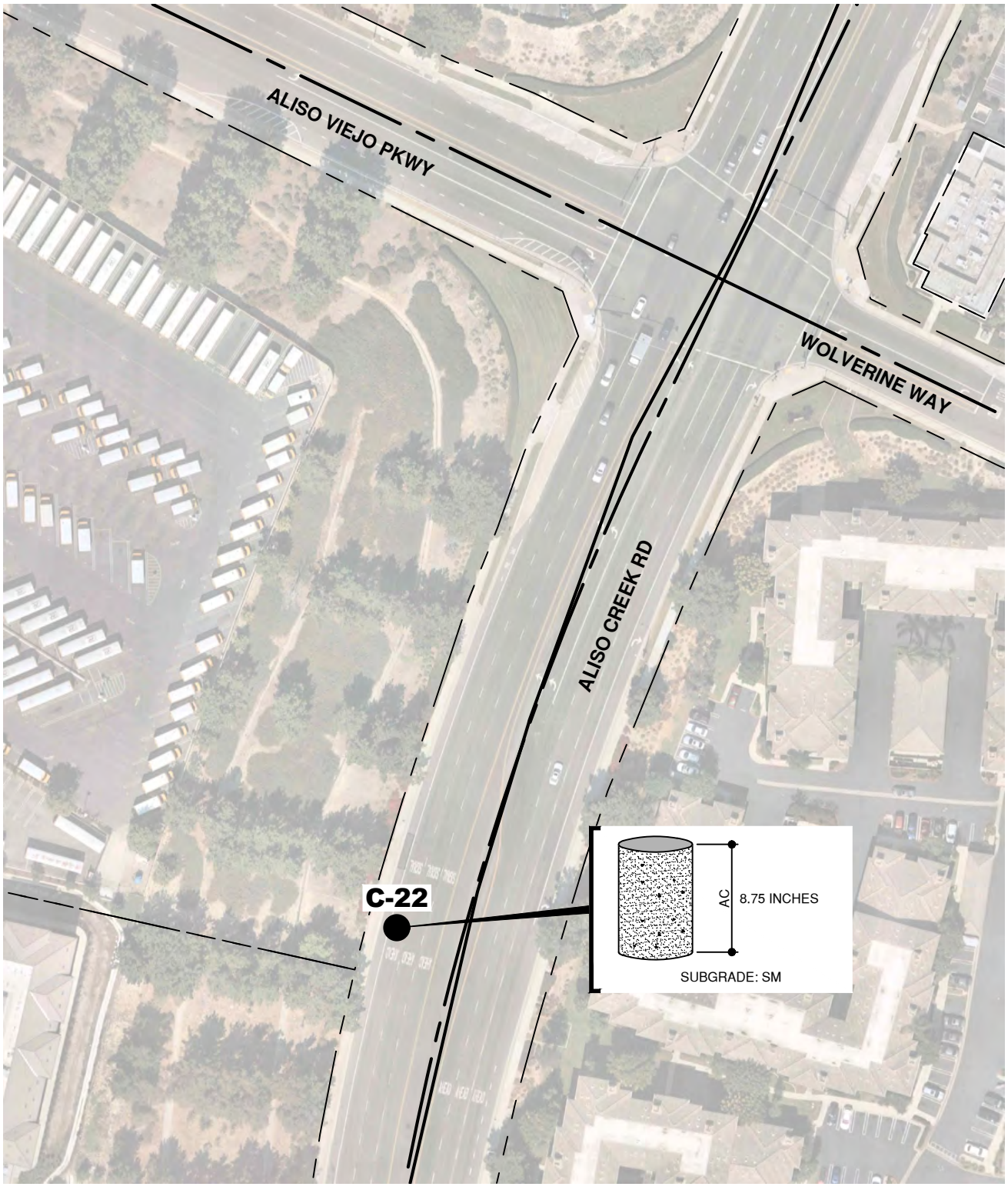
C-21 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.19
	Project No.: 20-100-00	

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.19_ac core hole map.dwg PLOTTED: 12/27/2020 6:03 AM BY: Jmeza



LEGEND

C-22 AC CORE HOLE LOCATION

0 100'

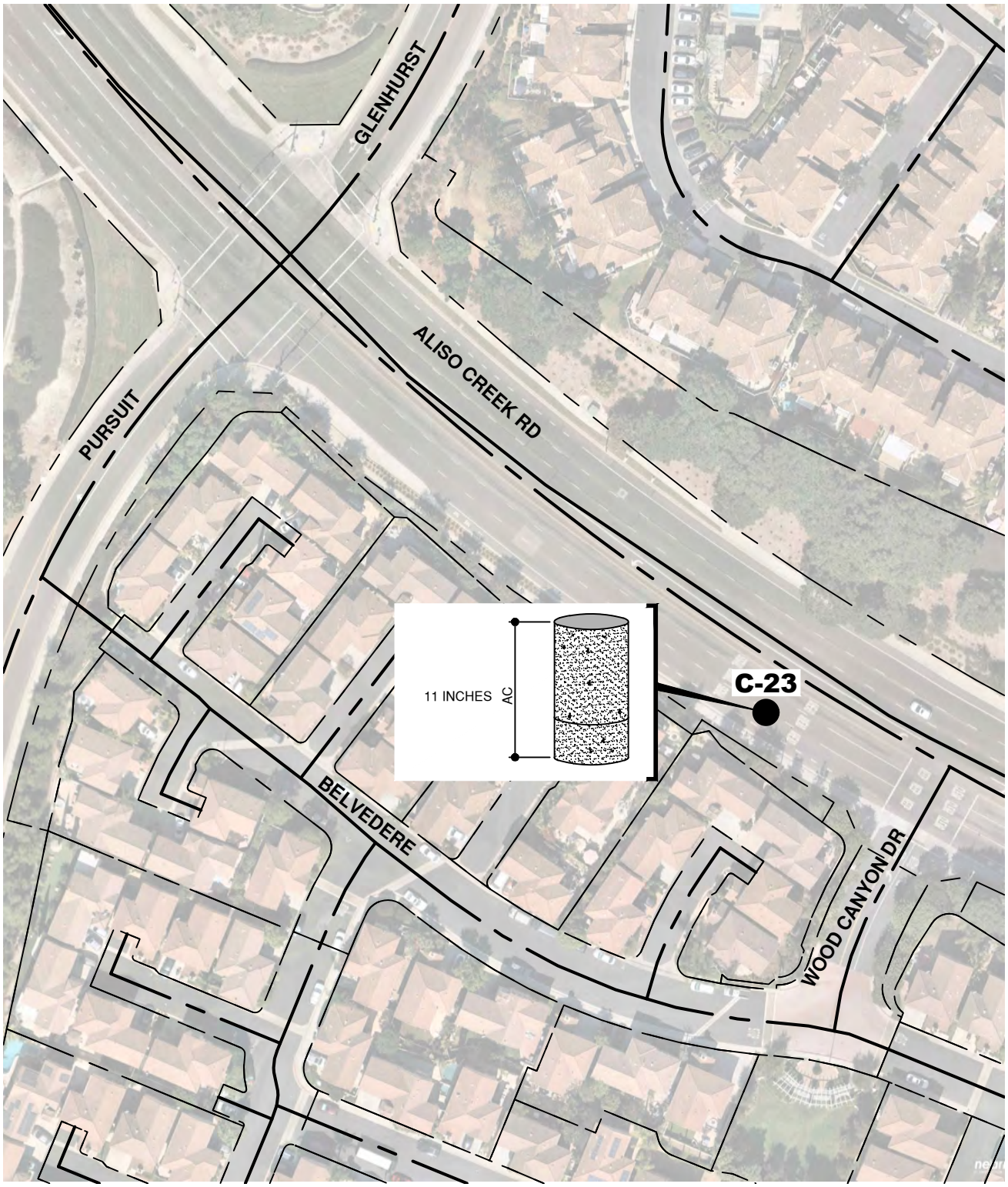
AC Core Hole Map

GMU

Date:	March 15, 2021
Project No.:	20-100-00

Plate 2.20

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LEGEND

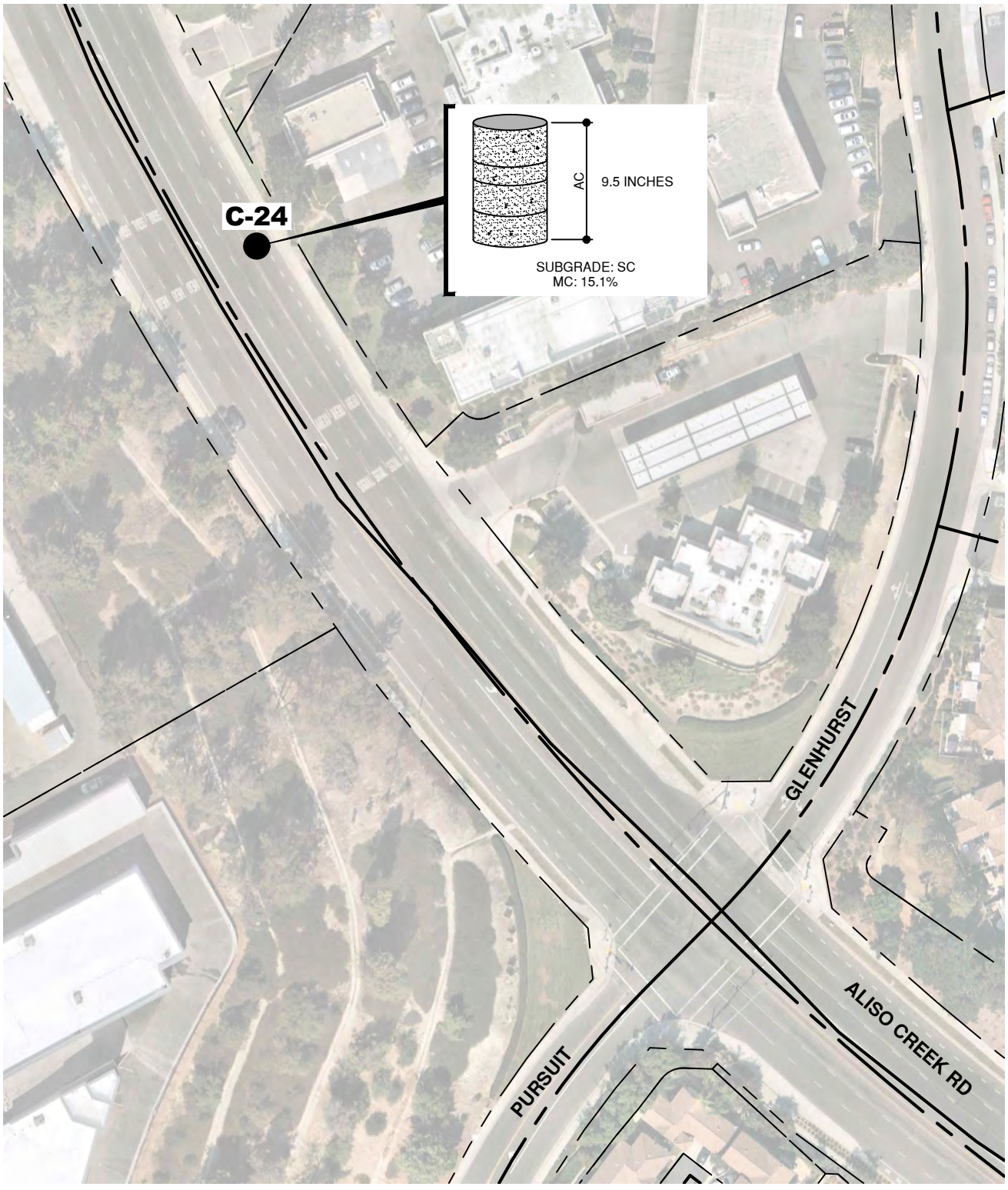
C-23 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU	Date: March 15, 2021	Plate 2.21
	Project No.: 20-100-00	

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.21_ac core hole map.dwg PLOTTED: 1/7/2021 1:21 PM BY: Jmeza



LEGEND

C-24 AC CORE HOLE LOCATION

0 100'

AC Core Hole Map

GMU

Date: March 15, 2021

Project No.: 20-100-00

Plate 2.22

DRAWING: q:\2020\20-100-00\dwg\2010000_plate 2.22_ac core hole map.dwg PLOTTED: 1/4/2021 11:06 AM BY: Jmeza

Plate 3 - Pavement Coring Summary Table

City of Aliso Viejo - "Zone 4", "Zone 5", and Select CIP Streets Pavement Evaluation

GMU PAVEMENT ENGINEERING

Project No. 20-100-00
Corings performed on November 11, 12, and 13 of 2020

Core ID	C-1	C-2	C-3	C-4	C-5	C-6
Location Description	**Autumnglen,** Westbound Direction	**Glenhurst,** Northbound direction	**Wood Canyon Drive,** Northbound direction	**Wood Canyon Drive,** Northbound direction	**Sherwood Drive,** Eastbound Direction	**Stockbridge,** Southbound direction
Pavement Section(s)	6" thick Crack extends through entire AC core sample 2 intact lifts: 2.5" & 3.5"	5.5" thick Crack extends through entire AC core sample	9.5" thick Hairline-width crack extends 2.75 inches through AC core sample 4 intact lifts: 2", 2", 3", & 2.5"	8.75" thick 1/8-inch width crack extends through entire AC core sample 2 intact lifts: 2" cap, and 6.75"	3" thick 1/4-inch width crack extends through entire AC core sample	5.5" thick Crack extends through entire AC core sample 2 separated lifts: 2.5" and 3"
Aggregate Base (AB) Description	N/A	N/A	N/A	N/A	6" thick damp, and loose based on difficulty of excavation	N/A
Subgrade Description	6" to 28" depth: Diatamaceous Earth/SANDY SILT (ML): Light Yellow, damp to moist, fine grained sand, soft	5.5" to 39" depth: CLAYEY SAND (SC): Light yellow, moist, fine to medium grained sand, soft	9.5" to 32" depth: CLAYEY SAND (SC): Brown, dry to damp, medium grained sands, soft	8.75" to 39" depth: SILTY CLAY (ML): Light yellow, damp to moist, fine grained, firm	9" to 44" depth: SILTY CLAY (ML): Olive, dampt to moist, medium grained sands, firm	5.5" to 44" depth: FAT CLAY (CH): Olive, damp to moist, fine grained, firm
Maximum Depth	Refusal at 28"	Refusal at 39"	Refusal at 32"	Refusal at 39"	Refusal at 44"	Refusal at 44"

Core ID	C-7	C-8	C-9	C-10	C-11	C-12
Location Description	**Rowan Drive,** Southbound direction	**Maple Drive,** Southbound direction	**Creekside,** Southbound direction	**Journey,** Northbound direction	**Liberty,** Southbound direction	**Pursuit,** Westbound Direction
Asphalt Concrete (AC) Section	7.5" thick 1/2-inch width crack extends through entire AC core sample 3 lifts: 1.5", 2.75", & 3.25",	7" thick No cracking	4.75" thick 1/2-inch width crack extends through entire AC core sample	8" thick No Cracking	8" thick 1/4-inch width crack extends through entire AC core sample 2 separated lifts: 6.5" and 1.5"	8.75" thick Crack extends through entire AC core sample
Aggregate Base Description	N/A	N/A	N/A	N/A	N/A	N/A
Subgrade Description	7.5" to 45" depth: SILTY CLAY (ML): Olive, very moist, medium grained sands, firm	7" to 36" depth: SANDY CLAY (CL): Olive, damp to moist, medium grained sands, very soft	4.75" to 48" depth: SANDY CLAY (CL): Dark Brown, damp to moist, medium grained sands, soft	8" to 48" depth: SILTY CLAY (ML): Brown, moist, medium grained sand, soft	8" to 48" depth: SILTY SAND (SM): Olive, damp to moist, medium grained sand, loose	8.75" to 48" depth: SILTY CLAY (ML): Light yellow, damp, medium grained sand, soft
Maximum Depth	Refusal at 45"	Refusal at 36"	48"	48"	48"	48"

Plate 3 - Pavement Coring Summary Table

City of Aliso Viejo - "Zone 4", "Zone 5", and Select CIP Streets Pavement Evaluation

Project No. 20-100-00
Corings performed on November 11, 12, and 13 of 2020

Core ID	C-13	C-14	C-15	C-16	C-17	C-18
Location Description	**Monstad Street,** middle of the street	**Oak View Drive,** Southbound direction	**Dawn Lane,** Westbound direction	**Gatewood Drive,** Eastbound direction	**Deerhurst,** Southbound direction	**Wolverine Way,** Southboound direction
Pavement Section(s)	4.25" thick Crack extends through entire AC core sample	8.25" thick 1/8-inch width crack extends 1.75" through AC core sample 2 separated lifts: 1.75" and 6.5"	6" thick 1/4-inch width crack extends through entire AC core sample 2 separated lifts: 2.25" and 3.75"	6.5" thick Crack extends 5" through AC core sample 2 separated lifts: 2" and 4.5"	4.5" thick Crack extends through entire AC core sample 2 separated lifts: 1.5" and 3"	9" thick Crack extends 3.5" through AC Core sample 2 intact lifts: 2" and 7"
Aggregate Base (AB) Description	N/A	N/A	N/A	N/A	N/A	N/A
Subgrade Description	4.25" to 48" depth: SANDY CLAY(CL): Olive, damp to moist, fine grained sand, firm	8.25" to 48" depth: SILTY CLAY (ML): Light yellow, damp to moist, fine graind silty/medium grained sand, loose	6" to 43" depth: SILTY SAND (SM): Olive, damp to moist, medium grained sands, loose	6.5" to 48" depth: CLAYEY SAND (SC): Olive, moist, fine grained sands, medium dense	4.5" to 48" depth: CLAYEY SAND (SC): Olive, damp to moist, fine grained sands, loose	9" to 48" depth: SILTY SAND(SM): Olive, dry to damp, medium grained sands, loose
Maximum Depth	48"	48"	Refusal at 43"	48"	48"	48"

Core ID	C-19	C-20	C-21	C-22	C-23	C-24
Location Description	**Enterprise,** Northbound direction	**Columbia,** Northbound direction	**Argonaut,** Northbound direction	**Aliso Creek Road,** Southbound direction	**Aliso Creek Road,** Southbound direction	**Aliso Creek Road,** Northbound direction
Asphalt Concrete (AC) Section	7" thick Crack extends 1.75" through AC core sample 2 separated lifts: 1.75" and 5.25"	4.5" thick Crack extends through AC core sample	6.5" thick Crack extends 5.5" through AC core sample	8.75" thick 1/4-inch width crack extends 3" through AC core sample	11" thick 1/2-inch width crack extends 5" through AC core sample 2 separated lifts: 7.75" and 3.25"	9.5" thick 1/4-inch width crack extends 3" through AC core sample 4 intact layers: 3", 1.5", 2.5", and 2.5"
Aggregate Base Description	N/A	N/A	N/A	N/A	N/A	N/A
Subgrade Description	7" to 34.5" depth: SILTY CLAY (ML): Light yellow, damp, fine grains, soft	4.5" to 48" depth: CLAYEY SILT(ML): Light yellow, damp to moist,fine grains, soft	6.5" to 24" depth: CLAYEY SAND (SC): Brown, dry to damp, medium grained sands, loose 24" to 48" depth: SANDY CLAY (CL): Brown, damp, medium grained sands, medium dense	8.75" to 48" depth: SILTY SAND (SM): Light yellow, damp to moist, medium grained sands, loose	11" to 34" depth: CLAYEY SAND(SC): Olive, dry to damp, fine grained sands, medium dense 34"to 38" depth: SILTY SAND(SM): Olive, damp to moist, loose	9.5" to 48" depth: CLAYEY SAND (SC): Light brown, damp to moist, medium grained sands, medium dense
Maximum Depth	Refusal at 34.5"	48"	48"	48"	48"	48"

Appendix A
Select Photographs



Photo 1: Core location C-1 on Autumnglen Street, part of zone 4 streets. Core located within area containing medium-severity transverse cracking and low-severity weathering.



Photo 2: Core sample C-1 measuring 6-inch thick asphalt concrete (AC), and revealing a crack that extends through the entire AC layer.



Photo 3: Core location C-4 on Wood Canyon Drive, part of zone 4 streets. Core located within area containing low-severity alligator cracking and low-severity weathering.



Photo 4: Core sample C-4 measuring 8.75-inch thick AC.



Photo 5: Core location C-11 on Liberty Street, part of zone 5. Core located within area containing medium-severity transverse cracking, low- to medium-severity “bump-and-sag”, and low-severity weathering.



Photo 6: Core sample C-11 measuring 8.0-inch thick AC.



Photo 7: Core location C-14 on Oak View Drive, part of zone 5 streets. Core located within area containing to low- to medium-severity transverse cracking and low-severity weathering.



Photo 8: Core sample C-14 measuring 8.25-inch thick AC.



Photo 9: Core location C-19 on Enterprise Road, part of the select CIP streets. Core located within area containing to medium- to high-severity alligator cracking and medium-severity weathering.



Photo 10: Core sample C-19 measuring 7.0-inch thick AC.



Photo 11: Core location C-22 on Aliso Creek Road, a CIP street. Core located within area containing to low-severity alligator cracking, low- to medium-severity longitudinal cracking, and medium-severity weathering.



Photo 12: Core sample C-22 measuring 8.75-inch thick AC.

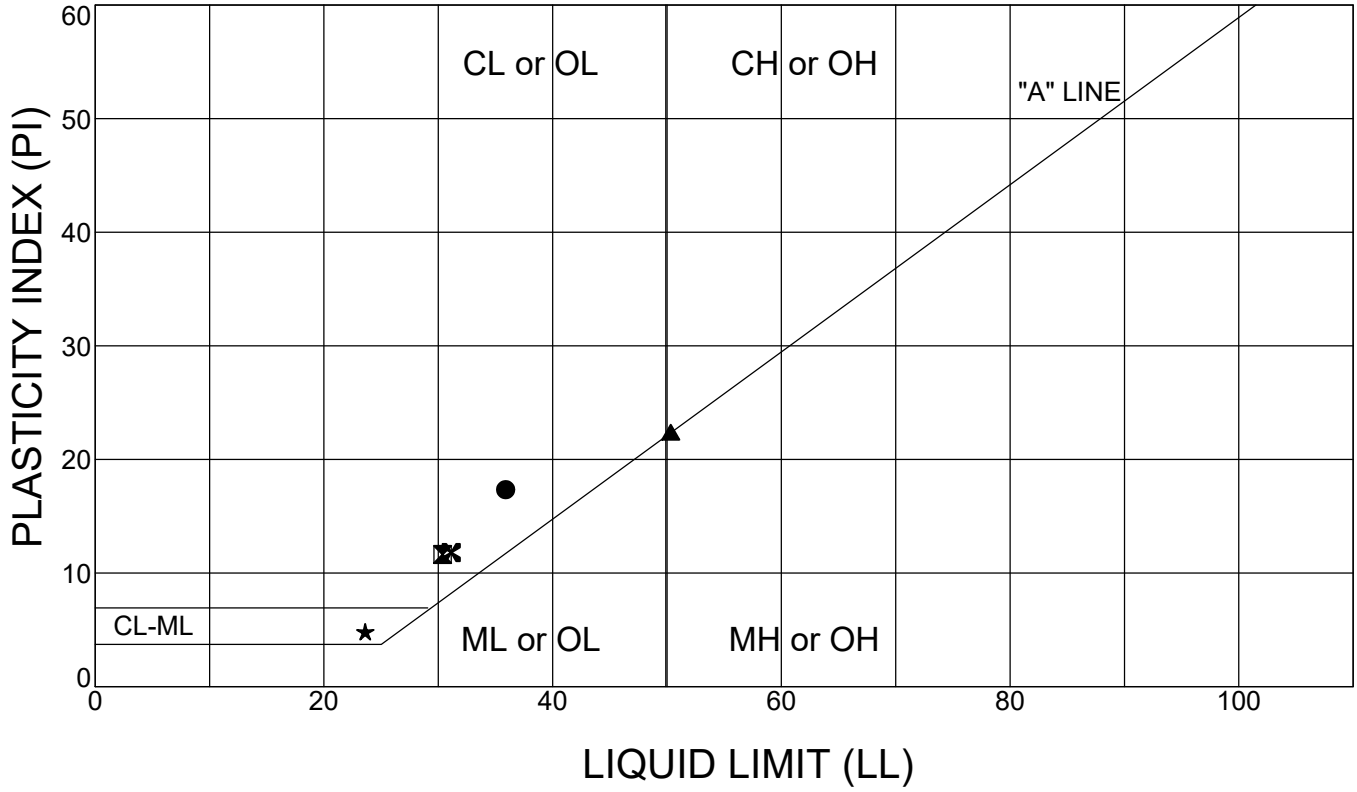
Appendix B
Laboratory Data Summary

TABLE B-1
SUMMARY OF SOIL LABORATORY DATA

Sample Information			Geologic Unit	USCS Group Symbol	In Situ Water Content, %	In Situ Dry Unit Weight, pcf	In Situ Satur-ation, %	Sieve/Hydrometer				Atterberg Limits			Compaction		Expansion Index	R-Value	Chemical Test Results			
Boring Number	Depth, feet	Elevation, feet						Gravel, %	Sand, %	<#200, %	<2μ, %	LL	PL	PI	Maximum Dry Unit Weight, pcf	Optimum Water Content, %			pH	Sulfate (ppm)	Chloride (ppm)	Min. Resistivity (ohm/cm)
C- 1	0.5	NA		ML	45.1	62	71								76.0	36.0						
C- 2	0.5	NA		SC						42		36	19	17				47				
C- 3	0.75	NA		SC						44		30	19	11				30				
C- 4	0.75	NA		ML	27.9	76	64								94.0	23.0						
C- 5	0.5	NA		ML	16.1	109	83								115.0	14.0						
C- 6	0.5	NA		CH						76		50	28	22				22				
C- 7	0.67	NA		ML	31.0	89	95								101.5	18.0						
C-10	0.75	NA		CL-ML						29		24	19	5				15				
C-11	0.75	NA		SM											115.0	9.5						
C-12	0.75	NA		ML											112.0	16.0						
C-13	0.33	NA		CL	21.6	97	81								115.0	14.0						
C-14	0.75	NA		ML	24.4	100	98											38				
C-16	0.5	NA		SC	16.7	111	89								115.0	14.0						
C-17	0.33	NA		SC						50		31	19	12				12				
C-18	0.5	NA		SM	19.7	100	80											36				
C-19	0.5	NA		ML	22.6	90	72											11				
C-20	0.5	NA		ML	56.0	63	92											34				
C-21	0.5	NA		SC	37.1	77	85															
C-22	0.75	NA		SM						6								73				
C-24	0.75	NA		SC	15.1	104	69								121.0	11.0						

GMU_TABLE_SOIL_LAB_DATA 20-100-00.GPJ FNC AB GWGN01.GDT 1/4/21

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00



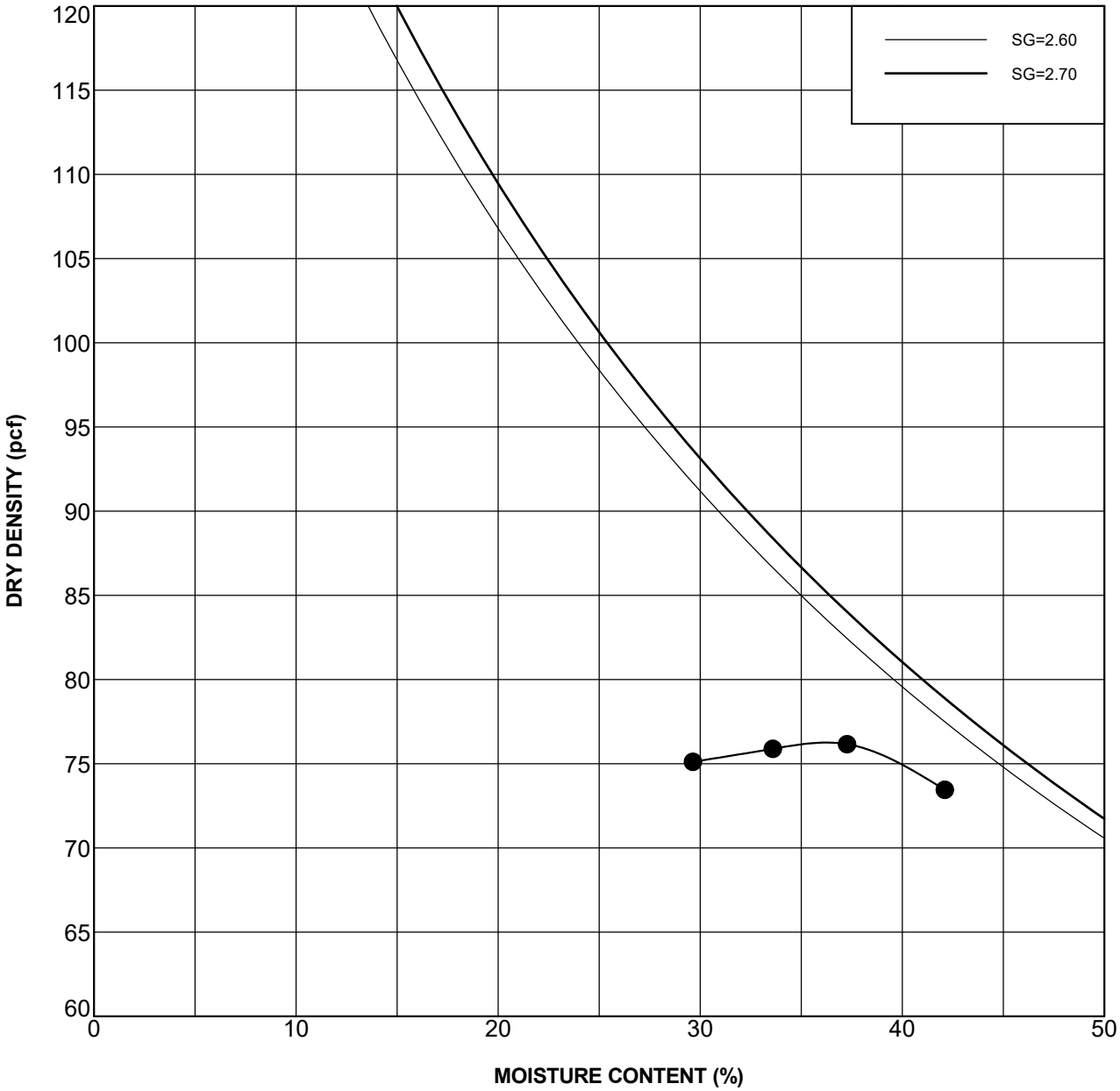
Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C- 2	0.5		●		36	19	17	CLAYEY SAND (SC)
C- 3	0.8		⊠		30	19	11	CLAYEY SAND (SC)
C- 6	0.5		▲		50	28	22	FAT CLAY (CH)
C-10	0.8		★		24	19	5	SILTY CLAY, CLAYEY SILT (CL-ML)
C-17	0.3		✖		31	19	12	CLAYEY SAND (SC)

LIMITS 20-100-00.GPJ 2/9/21

ATTERBERG LIMITS

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

GMU

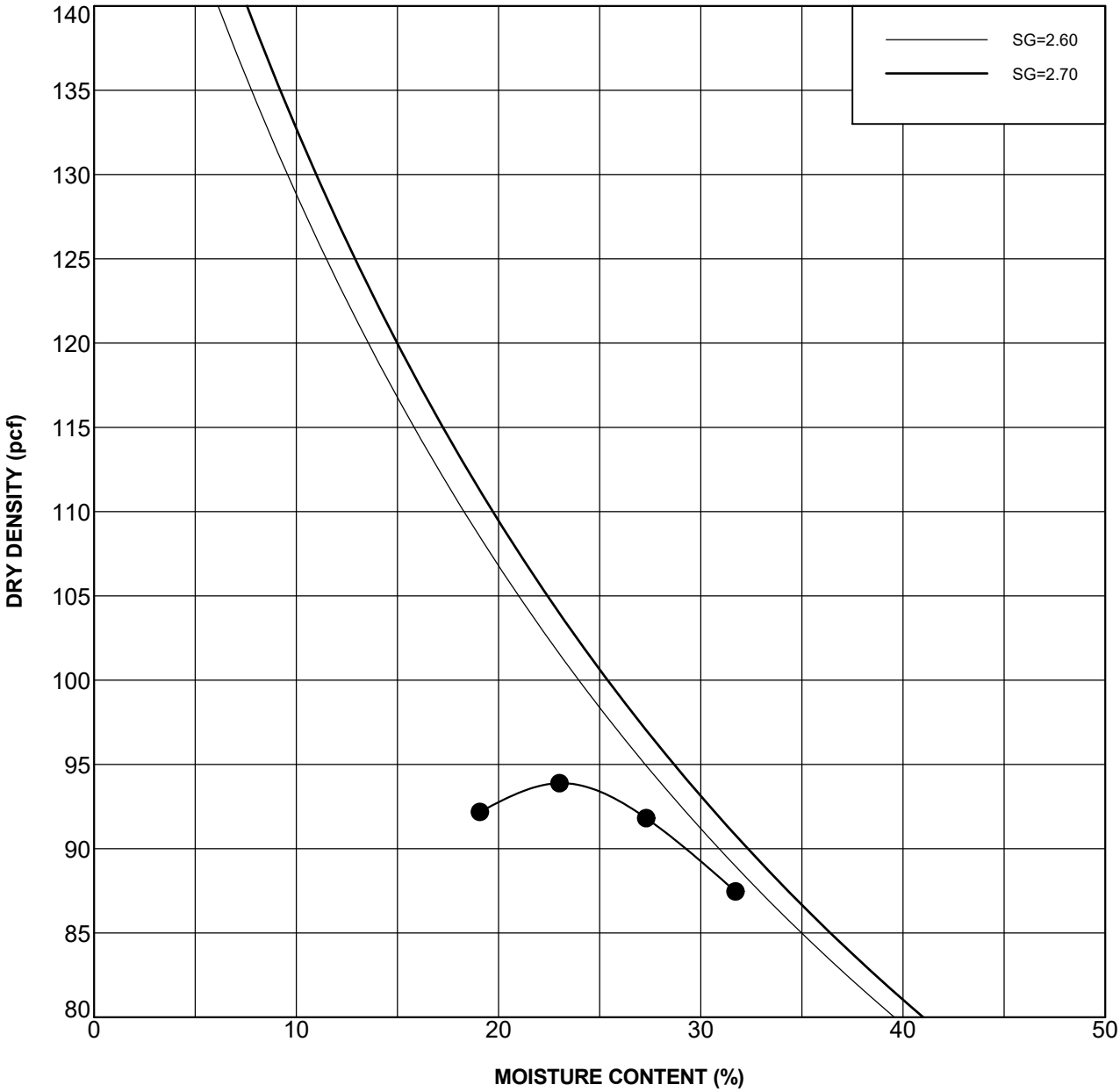


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 1	0.5		●	76	36	CLAYEY SILT (ML)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

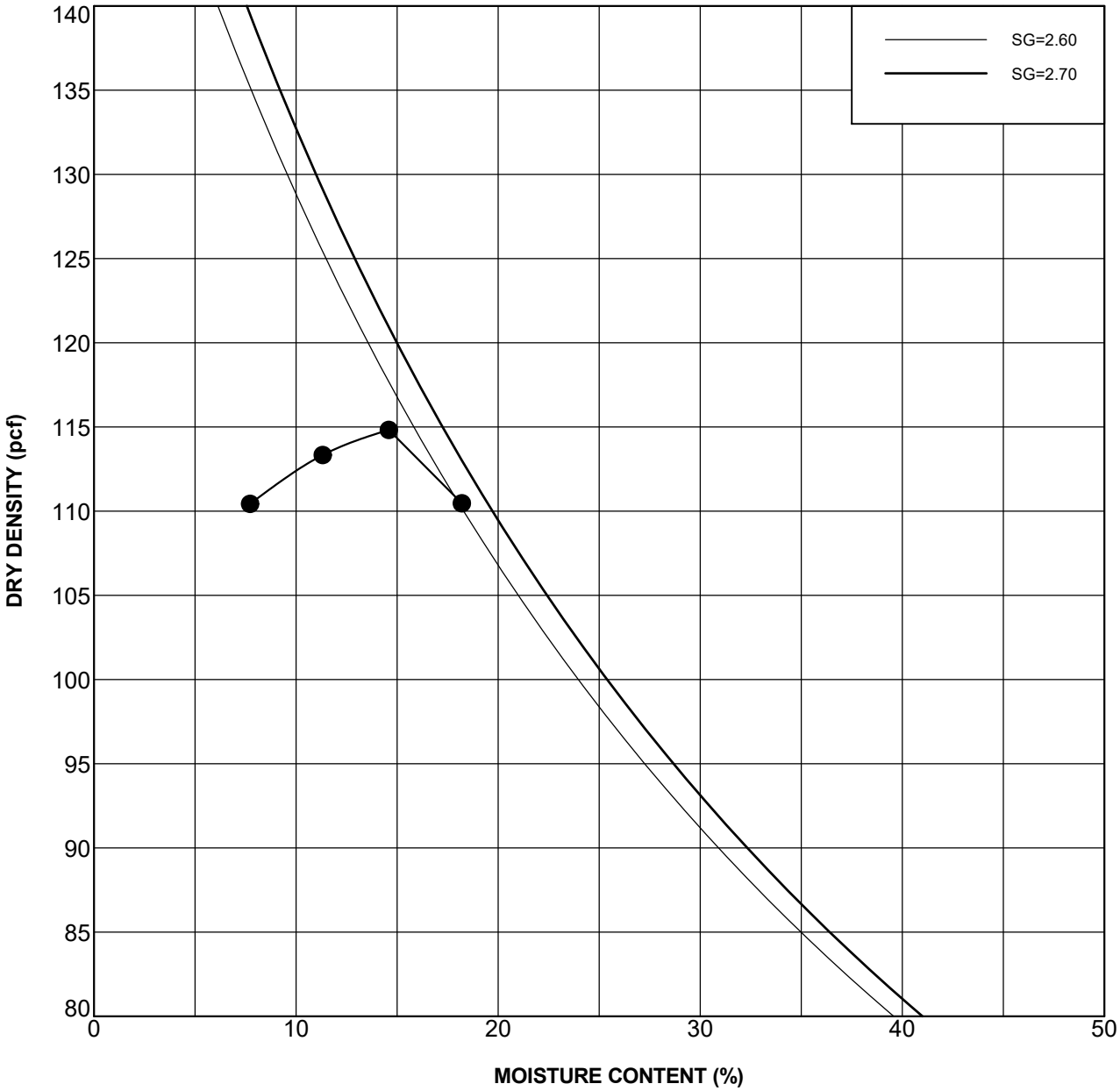


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 4	0.8		●	94	23	CLAYEY SILT (ML)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

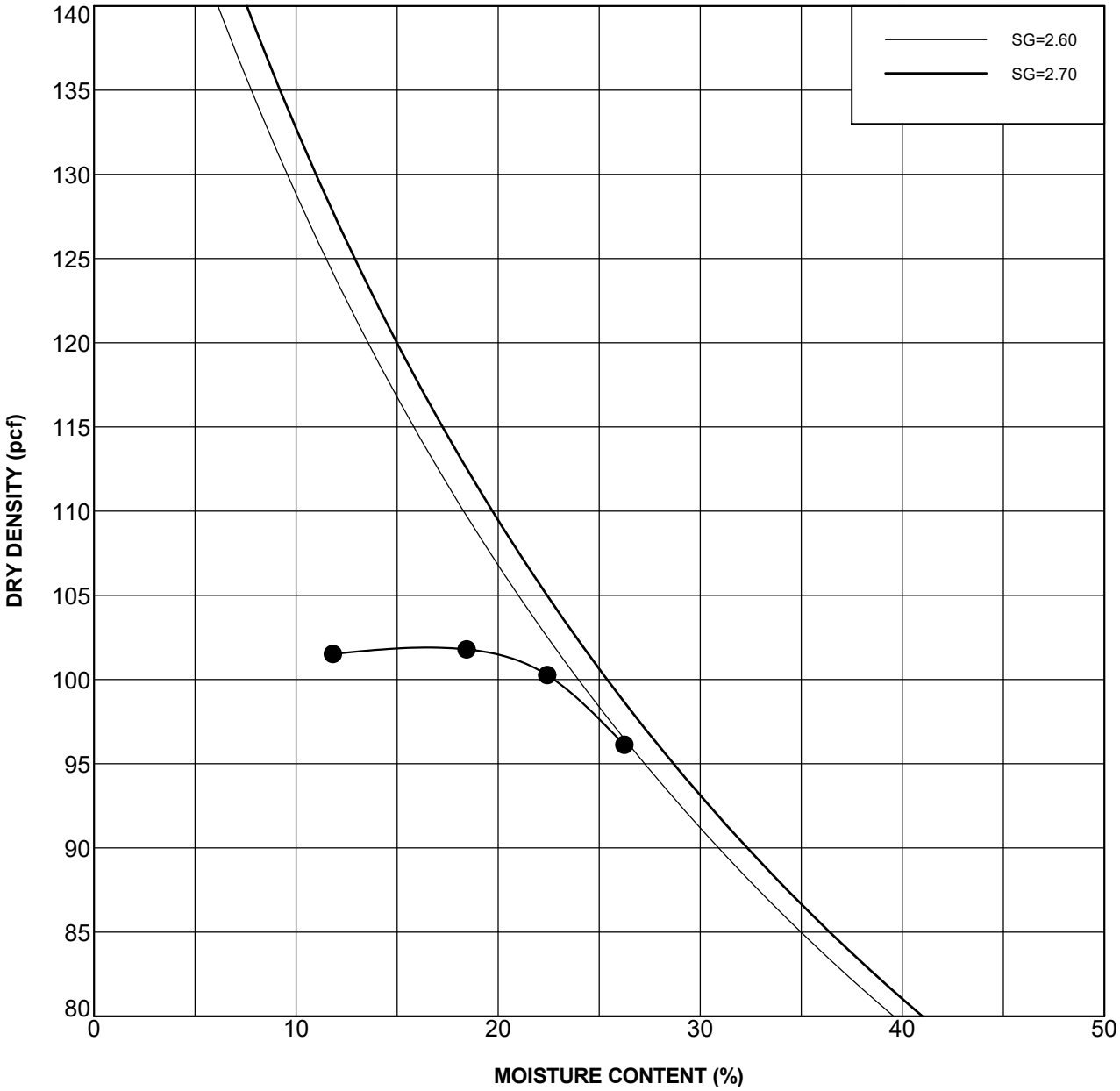


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 5	0.5		●	115	14	CLAYEY SILT (ML)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

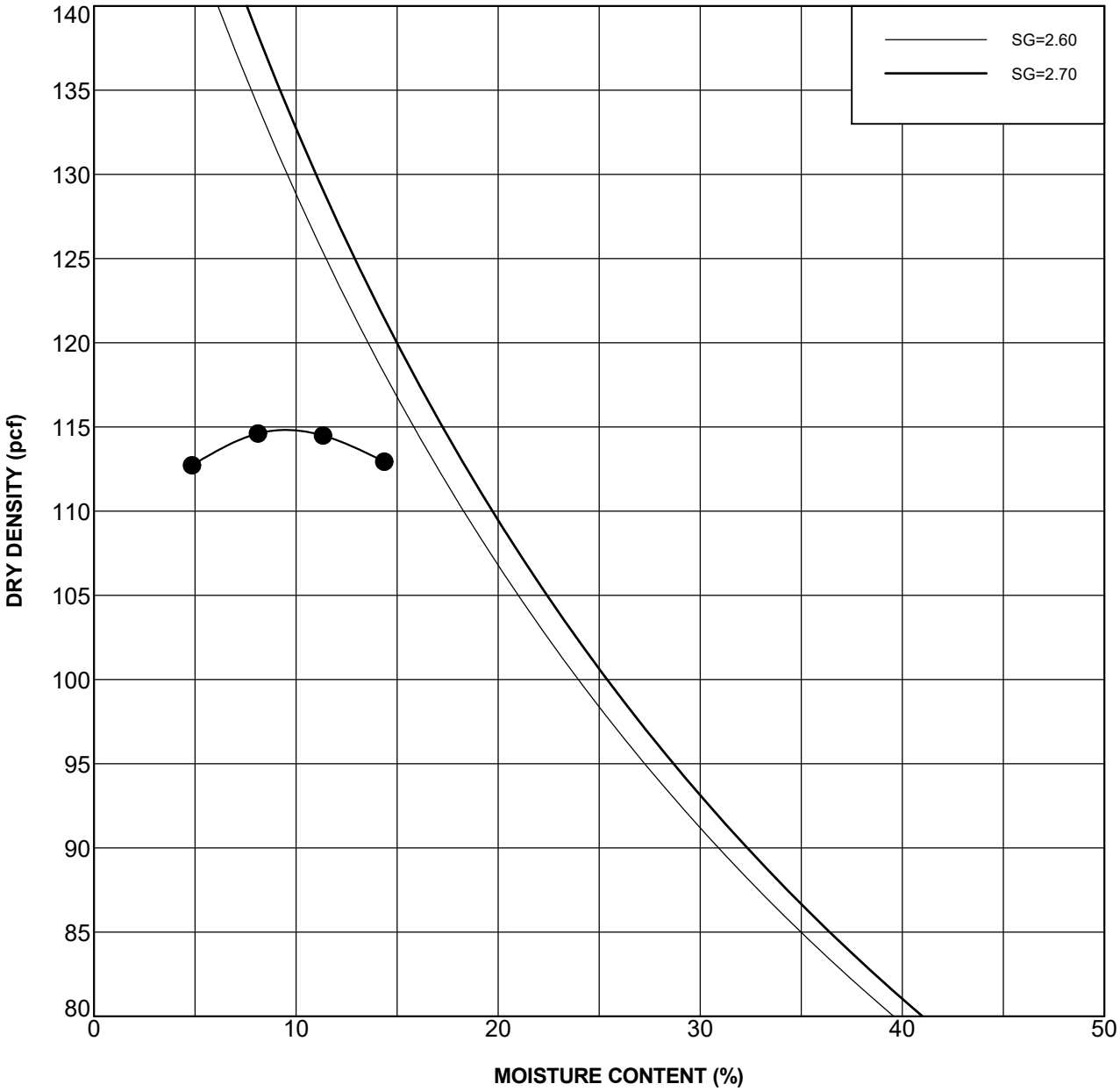


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 7	0.7		●	101.5	18	CLAYEY SILT with SAND (ML)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

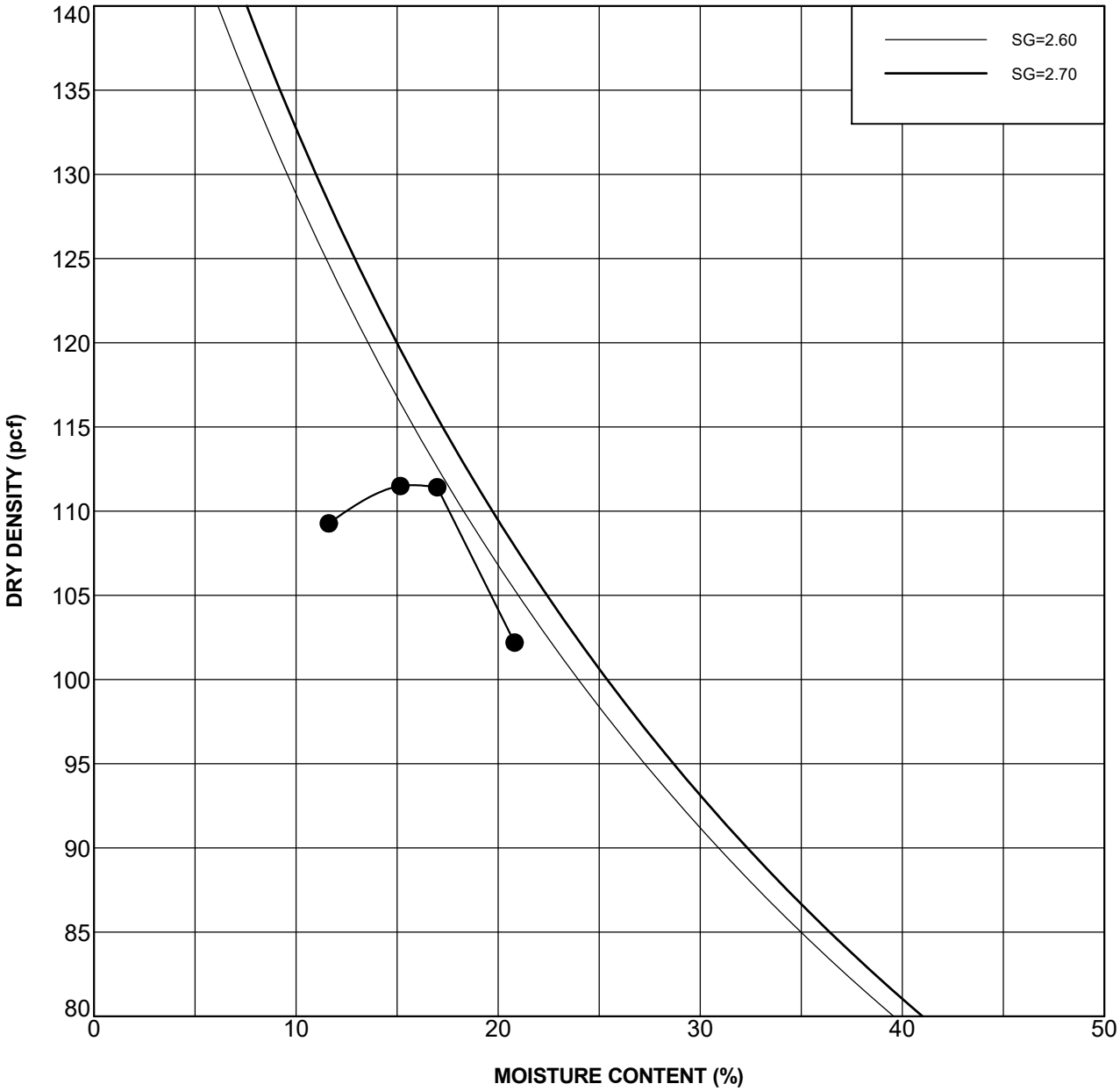


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-11	0.8		●	115	9.5	SILTY SAND (SM)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

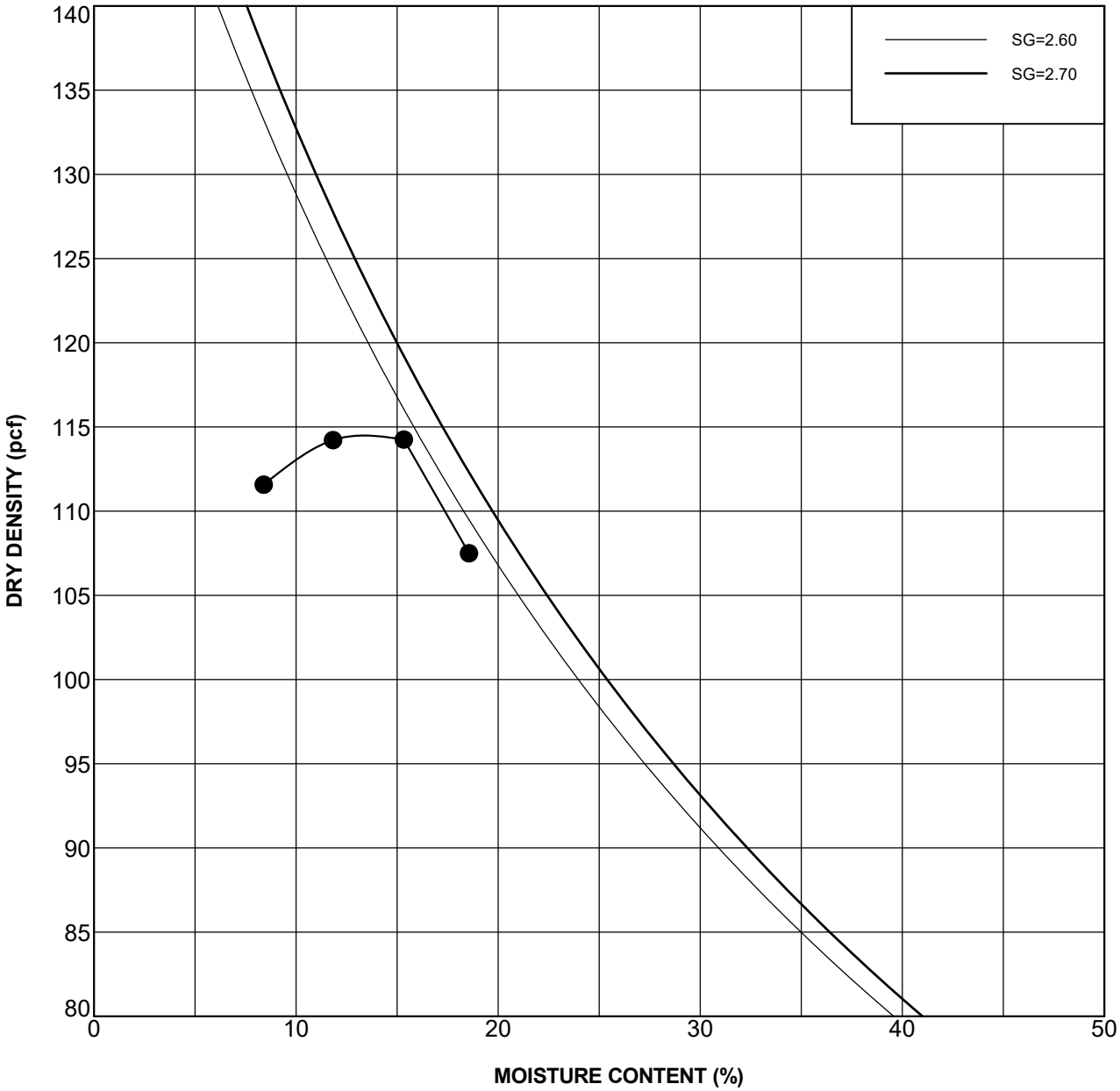


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-12	0.8		●	112	16	CLAYEY SILT (ML)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

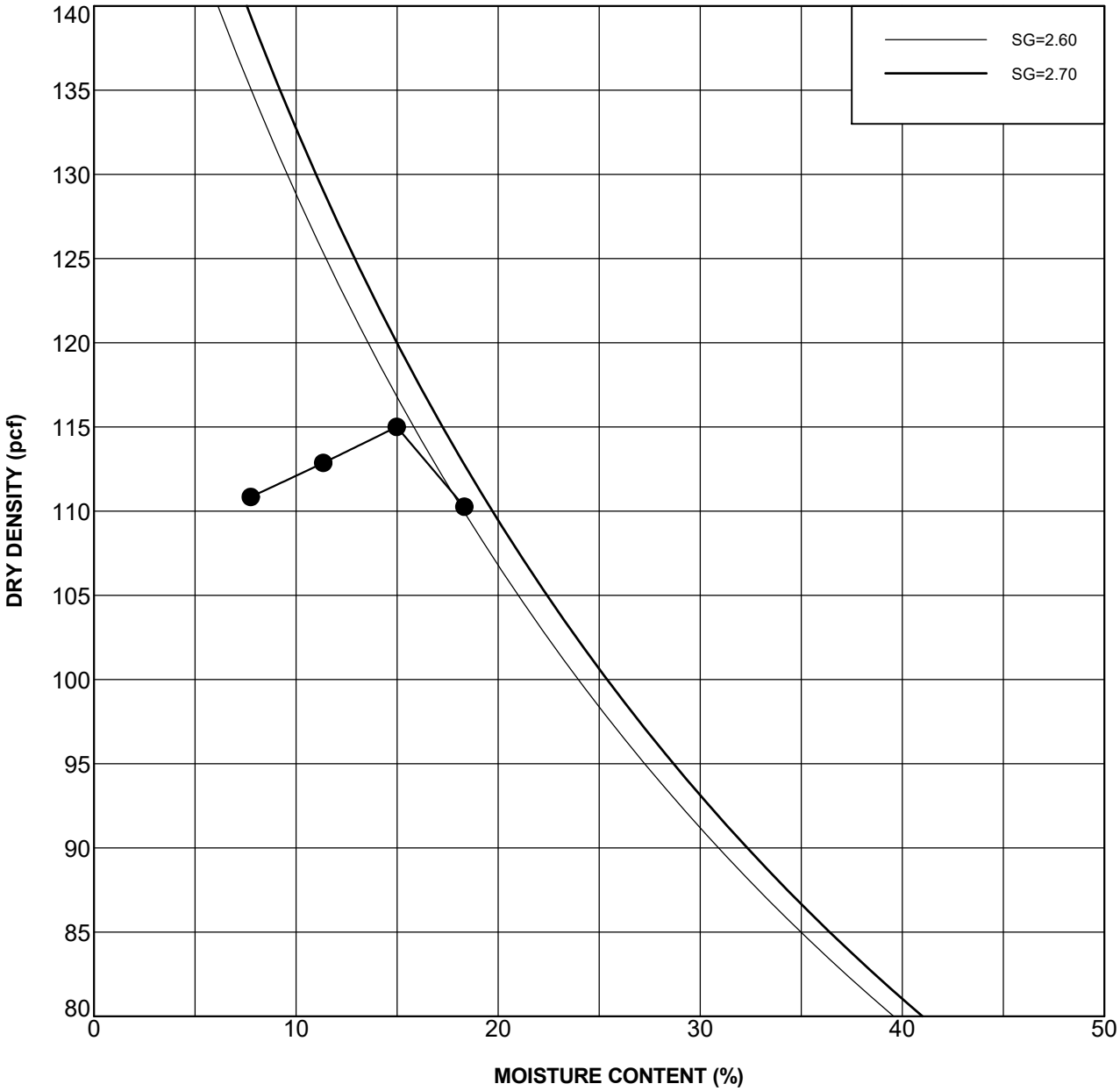


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-13	0.3		●	115	14	SANDY CLAY (CL)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

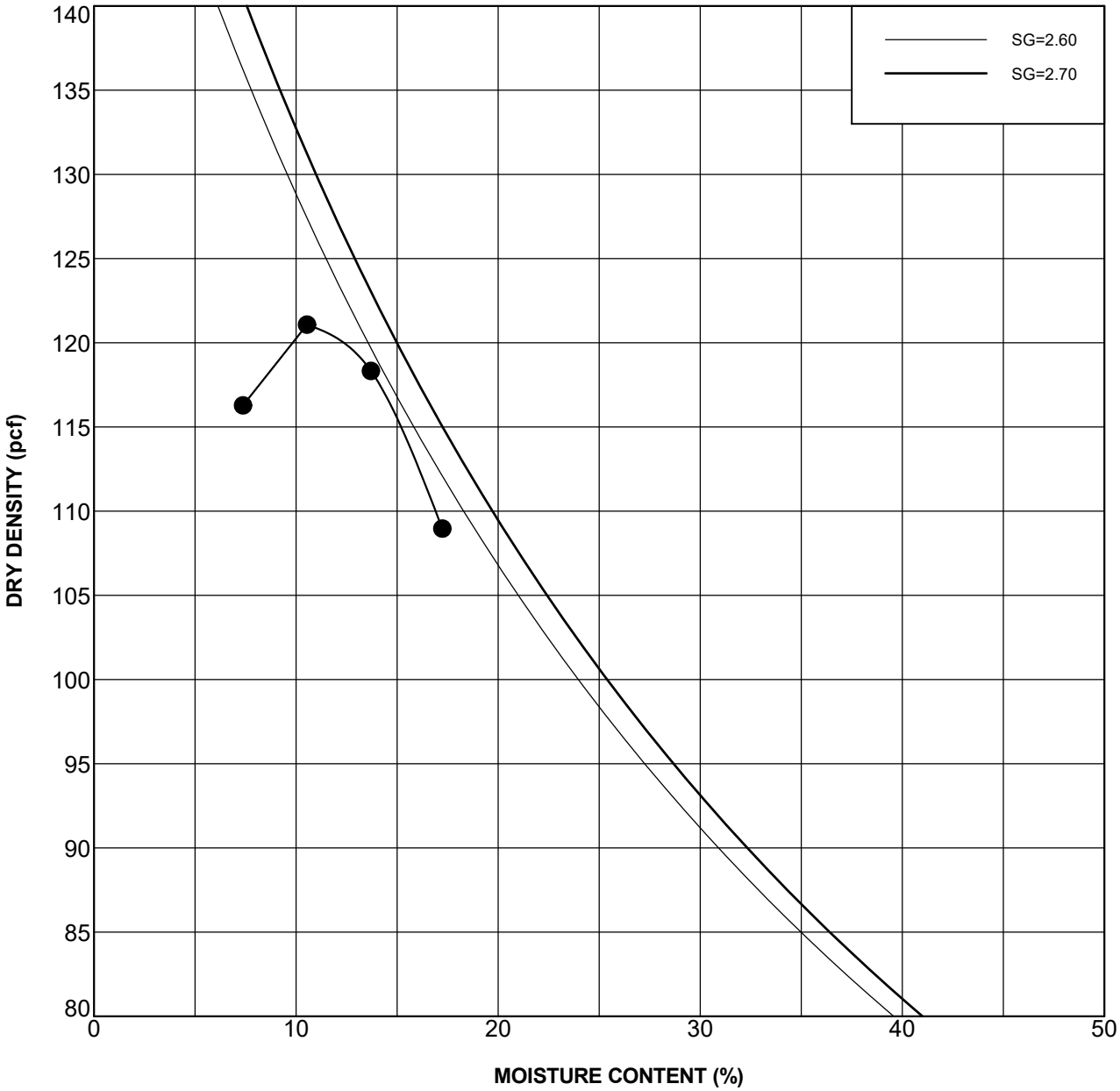


Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-16	0.5		●	115	14	CLAYEY SAND (SC)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00



Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-24	0.8		●	121	11	CLAYEY SAND (SC)

DVTCOMP 20-100-00.GPJ 2/9/21

COMPACTION TEST DATA

Project: Aliso Viejo City Wide Pavement Evaluation
Project No. 20-100-00

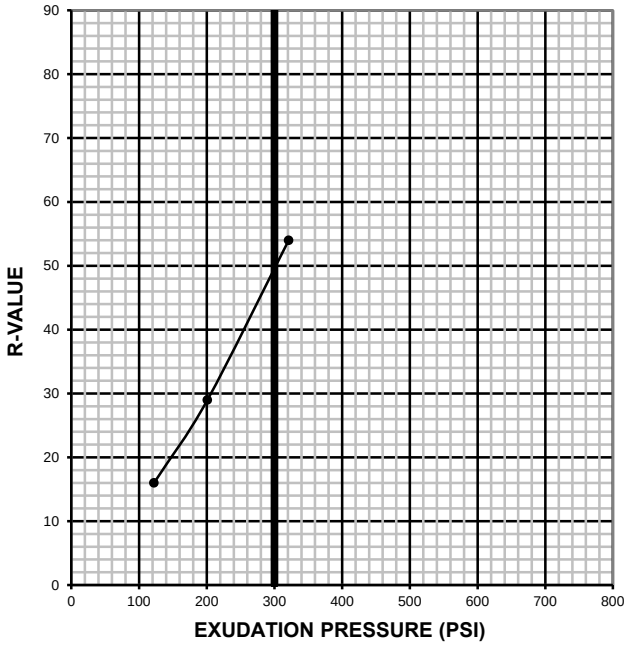
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

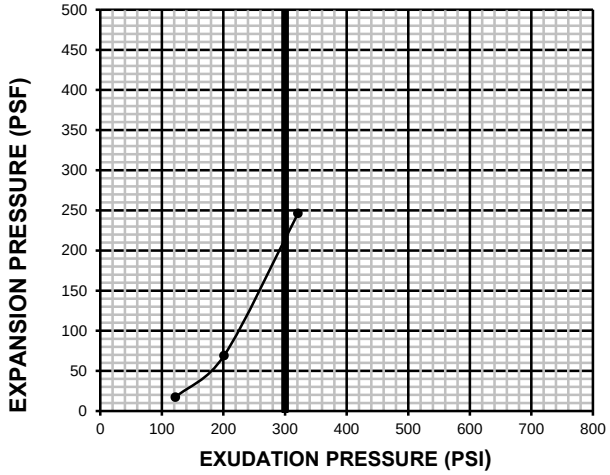
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-2
SAMPLE DESCRIPTION:	Clayey Sand (SC)	SAMPLE DEPTH:	5.5" - 28"
SAMPLED BY:	RA	TESTED BY:	ER
		DATE TESTED:	12/2/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	21.0	22.9	24.9
WEIGHT OF SAMPLE, grams	959	974	996
HEIGHT OF SAMPLE, Inches	2.36	2.43	2.53
DRY DENSITY, pcf	101.8	98.8	95.5
COMPACTOR AIR PRESSURE, psi	350	270	170
EXUDATION PRESSURE, psi	321	201	122
EXPANSION, Inches x 10exp-4	57	16	4
STABILITY Ph 2,000 lbs (160 psi)	44	87	113
TURNS DISPLACEMENT	4.86	4.99	5.49
R-VALUE UNCORRECTED	58	30	16
R-VALUE CORRECTED	54	29	16
EXPANSION PRESSURE (psf)	246.2	69.1	17.3

R-VALUE VS. EXUDATION PRESSURE



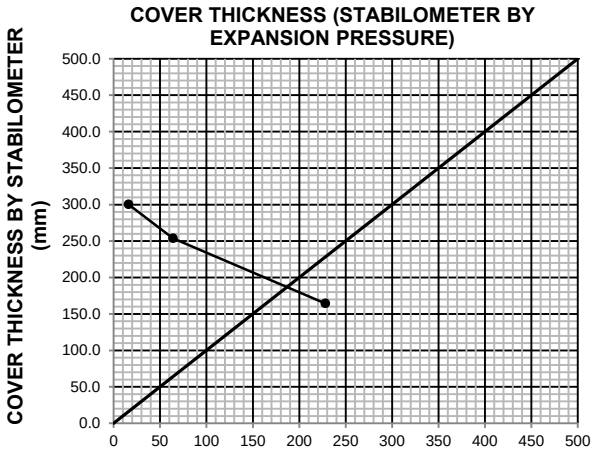
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	47

R-VALUE BY EXUDATION PRESSURE:	49
R-VALUE BY EXPANSION PRESSURE:	47
EXPANSION PRESSURE AT 300 PSI EXUDATION:	210
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



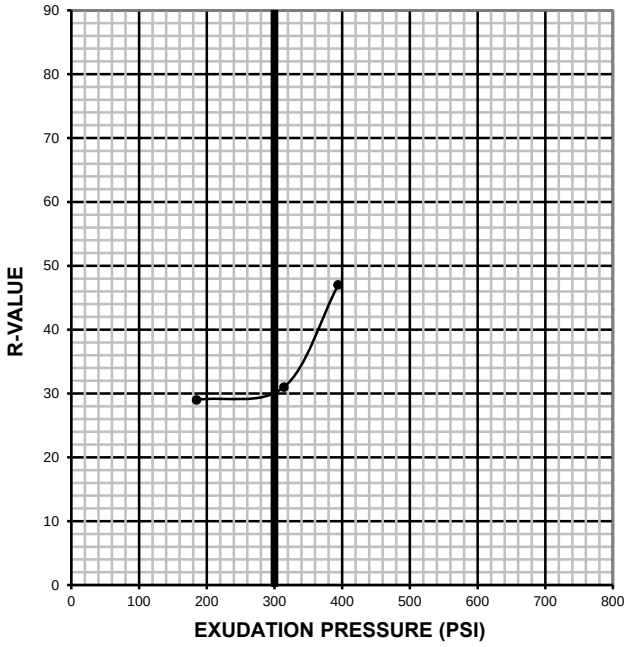
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

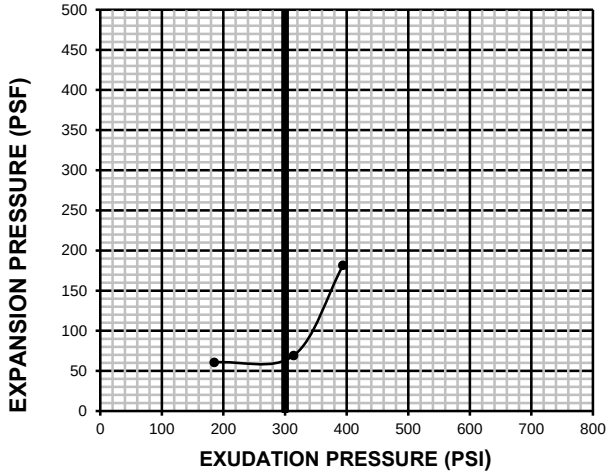
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-3
SAMPLE DESCRIPTION:	Clayey Sand (SC)	SAMPLE DEPTH:	9.5" - 32"
SAMPLED BY:	RA	TESTED BY:	ER
		DATE TESTED:	12/3/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	18.2	19.7	20.6
WEIGHT OF SAMPLE, grams	1024	1041	1090
HEIGHT OF SAMPLE, Inches	2.44	2.48	2.64
DRY DENSITY, pcf	107.6	106.3	103.7
COMPACTOR AIR PRESSURE, psi	320	240	170
EXUDATION PRESSURE, psi	394	314	185
EXPANSION, Inches x 10exp-4	42	16	14
STABILITY Ph 2,000 lbs (160 psi)	64	90	94
TURNS DISPLACEMENT	4.29	4.35	5.00
R-VALUE UNCORRECTED	47	31	26
R-VALUE CORRECTED	47	31	29
EXPANSION PRESSURE (psf)	181.4	69.1	60.5

R-VALUE VS. EXUDATION PRESSURE



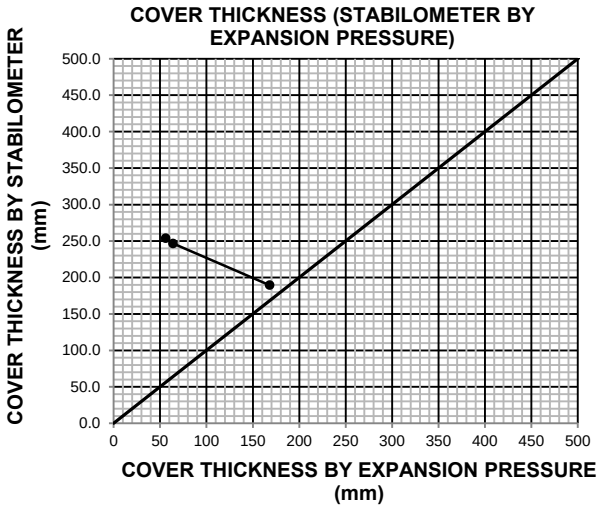
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	30

R-VALUE BY EXUDATION PRESSURE:	30
R-VALUE BY EXPANSION PRESSURE:	NA
EXPANSION PRESSURE AT 300 PSI EXUDATION:	60
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



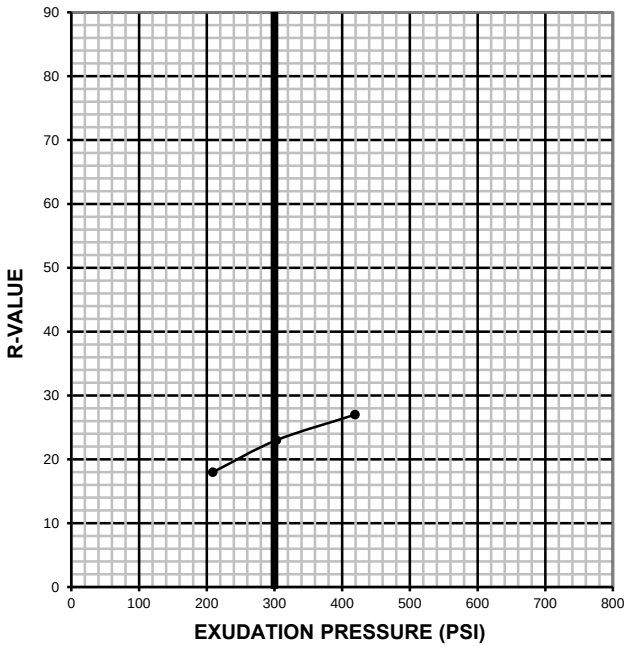
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

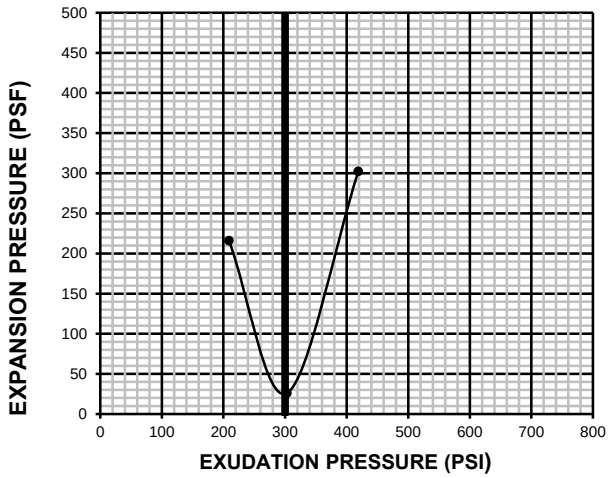
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-6
SAMPLE DESCRIPTION:	Fat Clay (CH)	SAMPLE DEPTH:	5" - 44"
SAMPLED BY:	RA	TESTED BY:	ER
		DATE TESTED:	11/4/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	28.3	26.5	25.0
WEIGHT OF SAMPLE, grams	1018	997	978
HEIGHT OF SAMPLE, Inches	2.56	2.47	2.40
DRY DENSITY, pcf	94.0	96.8	98.8
COMPACTOR AIR PRESSURE, psi	140	180	220
EXUDATION PRESSURE, psi	209	303	419
EXPANSION, Inches x 10exp-4	50	6	70
STABILITY Ph 2,000 lbs (160 psi)	120	111	98
TURNS DISPLACEMENT	3.89	3.72	3.81
R-VALUE UNCORRECTED	18	23	29
R-VALUE CORRECTED	18	23	27
EXPANSION PRESSURE (psf)	216.0	25.9	302.4

R-VALUE VS. EXUDATION PRESSURE



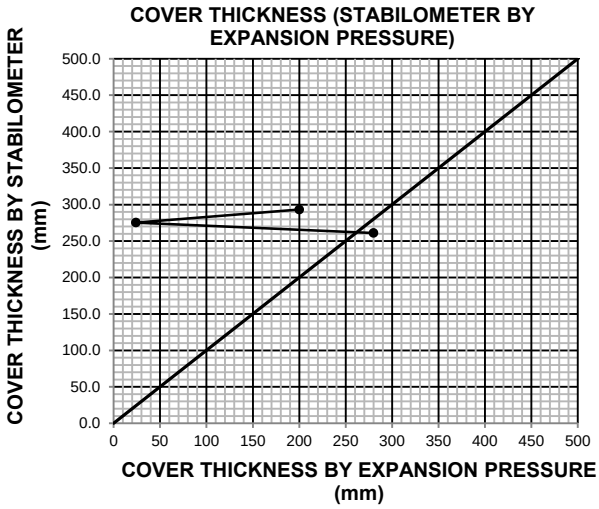
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	22

R-VALUE BY EXUDATION PRESSURE:	22
R-VALUE BY EXPANSION PRESSURE:	27
EXPANSION PRESSURE AT 300 PSI EXUDATION:	30
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



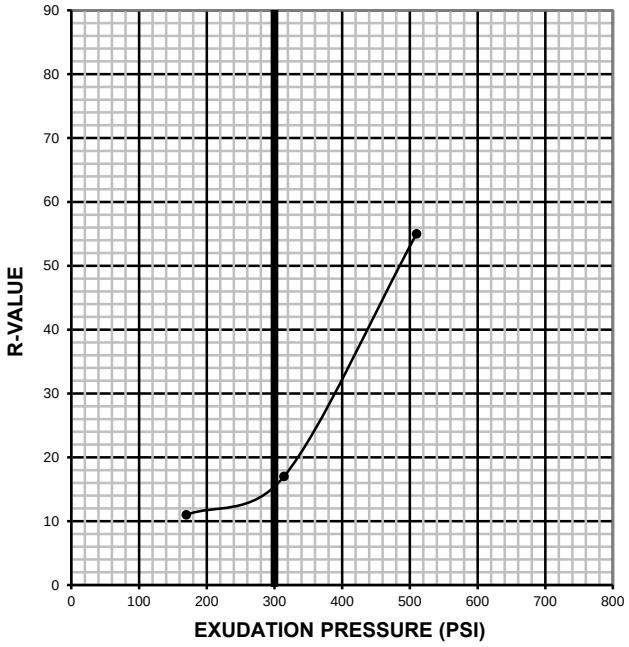
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

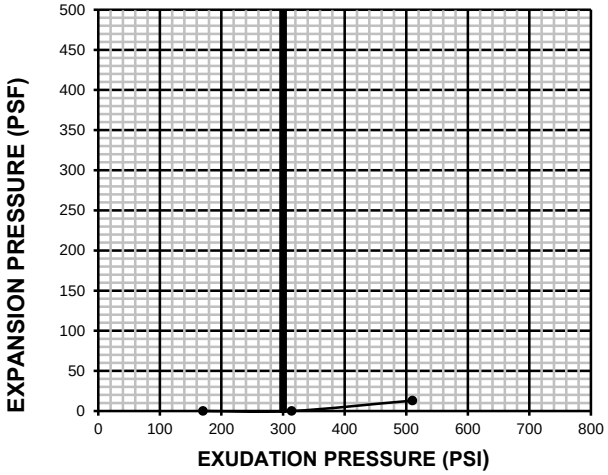
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-10
SAMPLE DESCRIPTION:	Silty Clay - Clayey Silt (CL-ML)	SAMPLE DEPTH:	8" - 48"
SAMPLED BY:	RA	TESTED BY:	LA
		DATE TESTED:	12/9/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	12.3	14.9	16.3
WEIGHT OF SAMPLE, grams	1026	1115	1158
HEIGHT OF SAMPLE, Inches	2.28	2.55	2.61
DRY DENSITY, pcf	121.5	115.4	115.6
COMPACTOR AIR PRESSURE, psi	300	150	125
EXUDATION PRESSURE, psi	510	314	170
EXPANSION, Inches x 10exp-4	3		
STABILITY Ph 2,000 lbs (160 psi)	44	113	131
TURNS DISPLACEMENT	4.28	5.00	5.12
R-VALUE UNCORRECTED	61	17	10
R-VALUE CORRECTED	55	17	11
EXPANSION PRESSURE (psf)	13.0		

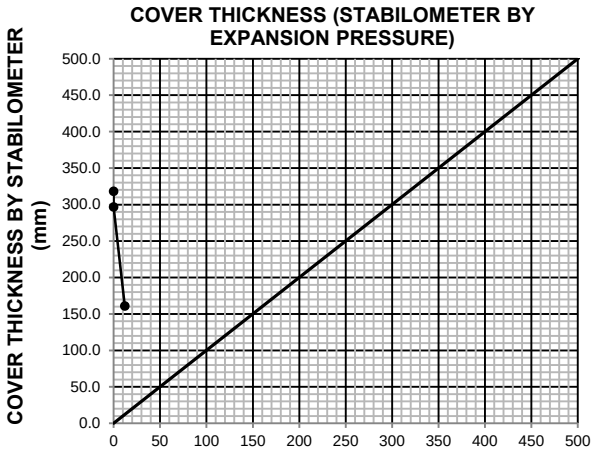
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	**15**

R-VALUE BY EXUDATION PRESSURE:	**15**
R-VALUE BY EXPANSION PRESSURE:	**NA**
EXPANSION PRESSURE AT 300 PSI EXUDATION:	**0**
TRAFFIC INDEX (Assumed):	**5.5**
GRAVEL FACTOR (Assumed):	**1.5**
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	**2100.0**

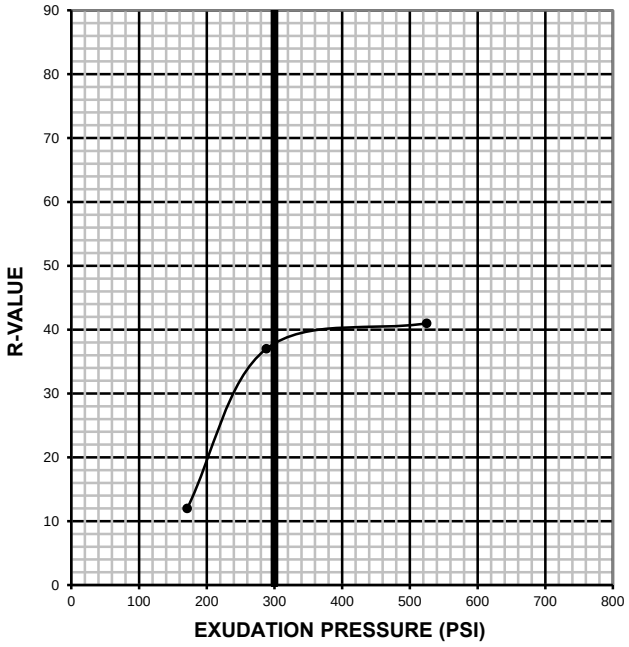
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

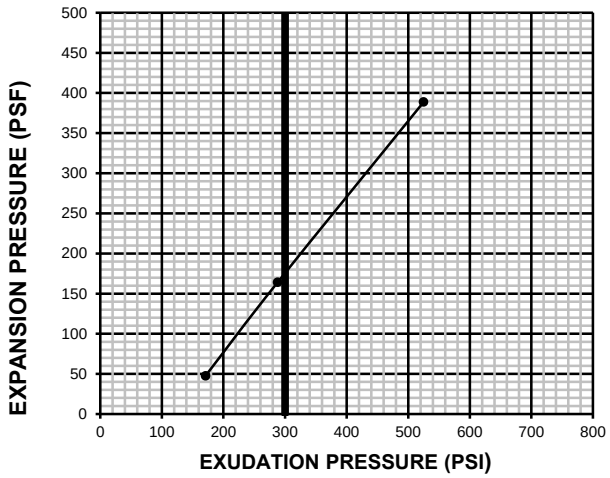
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-14
SAMPLE DESCRIPTION:	CLAYEY SILT (ML)	SAMPLE DEPTH:	8.25" - 48"
SAMPLED BY:	RA	TESTED BY:	LA
		DATE TESTED:	12/10/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	29.4	31.0	32.9
WEIGHT OF SAMPLE, grams	945	1000	970
HEIGHT OF SAMPLE, Inches	2.38	2.57	2.52
DRY DENSITY, pcf	93.0	90.0	87.8
COMPACTOR AIR PRESSURE, psi	200	175	150
EXUDATION PRESSURE, psi	525	288	171
EXPANSION, Inches x 10exp-4	90	38	11
STABILITY Ph 2,000 lbs (160 psi)	67	83	129
TURNS DISPLACEMENT	4.03	4.14	4.26
R-VALUE UNCORRECTED	46	36	12
R-VALUE CORRECTED	41	37	12
EXPANSION PRESSURE (psf)	388.8	164.2	47.5

R-VALUE VS. EXUDATION PRESSURE



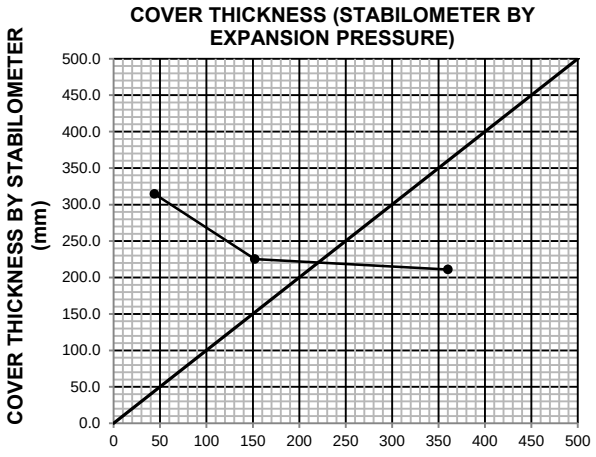
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	38

R-VALUE BY EXUDATION PRESSURE:	38
R-VALUE BY EXPANSION PRESSURE:	39
EXPANSION PRESSURE AT 300 PSI EXUDATION:	170
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



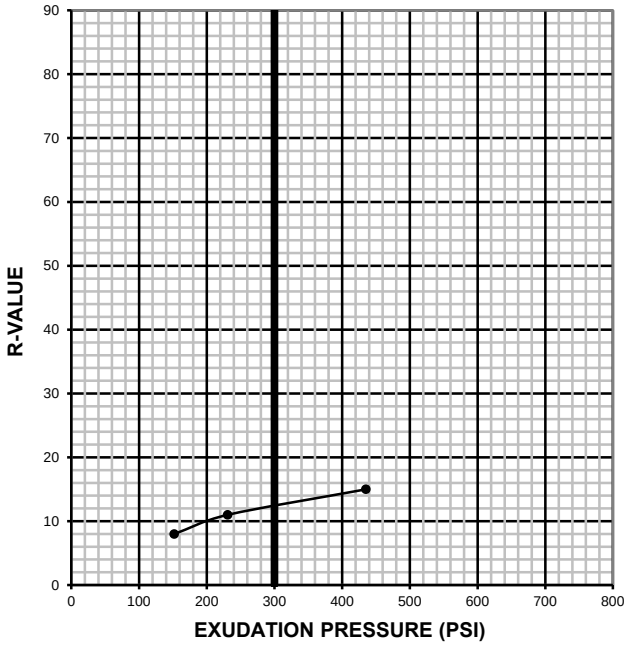
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

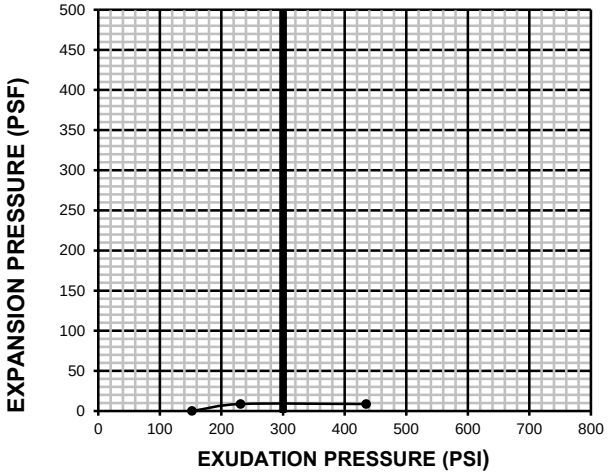
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-17
SAMPLE DESCRIPTION:	CLAYEY SAND (SC)	SAMPLE DEPTH:	4" - 48"
SAMPLED BY:	RA	TESTED BY:	LA
		DATE TESTED:	12/9/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	16.0	18.2	20.3
WEIGHT OF SAMPLE, grams	1070	1034	1151
HEIGHT OF SAMPLE, Inches	2.51	2.43	2.65
DRY DENSITY, pcf	111.4	109.2	109.5
COMPACTOR AIR PRESSURE, psi	350	150	100
EXUDATION PRESSURE, psi	435	231	152
EXPANSION, Inches x 10exp-4	2	2	
STABILITY Ph 2,000 lbs (160 psi)	120	128	136
TURNS DISPLACEMENT	4.57	5.14	5.46
R-VALUE UNCORRECTED	15	11	7
R-VALUE CORRECTED	15	11	8
EXPANSION PRESSURE (psf)	8.6	8.6	

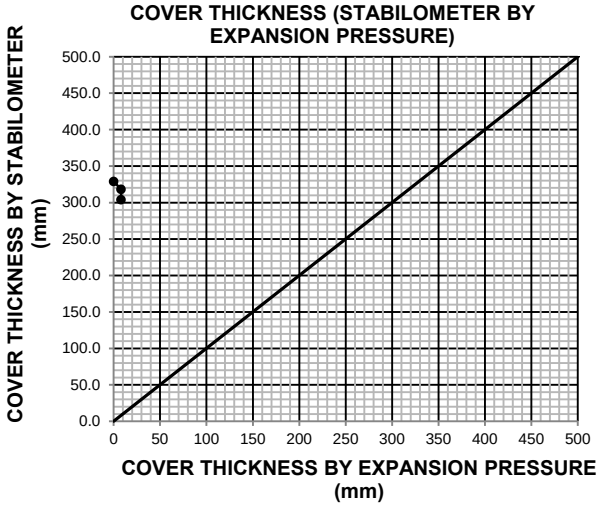
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	**12**

R-VALUE BY EXUDATION PRESSURE:	**12**
R-VALUE BY EXPANSION PRESSURE:	**NA**
EXPANSION PRESSURE AT 300 PSI EXUDATION:	**10**
TRAFFIC INDEX (Assumed):	**5.5**
GRAVEL FACTOR (Assumed):	**1.5**
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	**2100.0**

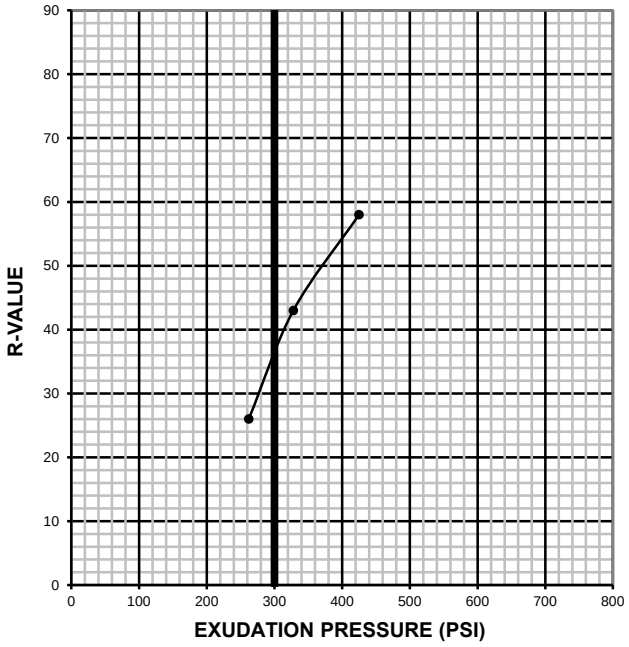
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

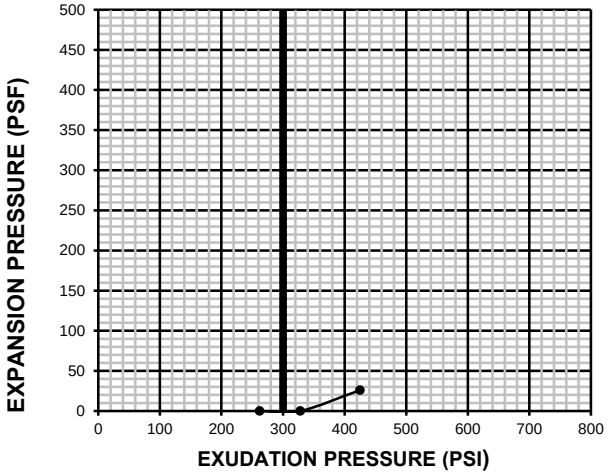
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-18
SAMPLE DESCRIPTION:	SILTY SAND (SM)	SAMPLE DEPTH:	4" - 48"
SAMPLED BY:	RA	TESTED BY:	ER
		DATE TESTED:	12/3/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	11.8	12.8	13.7
WEIGHT OF SAMPLE, grams	1062	1115	1141
HEIGHT OF SAMPLE, Inches	2.31	2.50	2.57
DRY DENSITY, pcf	124.6	119.8	118.4
COMPACTOR AIR PRESSURE, psi	350	250	180
EXUDATION PRESSURE, psi	425	328	262
EXPANSION, Inches x 10exp-4	6		
STABILITY Ph 2,000 lbs (160 psi)	41	66	94
TURNS DISPLACEMENT	4.24	4.79	5.29
R-VALUE UNCORRECTED	63	43	25
R-VALUE CORRECTED	58	43	26
EXPANSION PRESSURE (psf)	25.9		

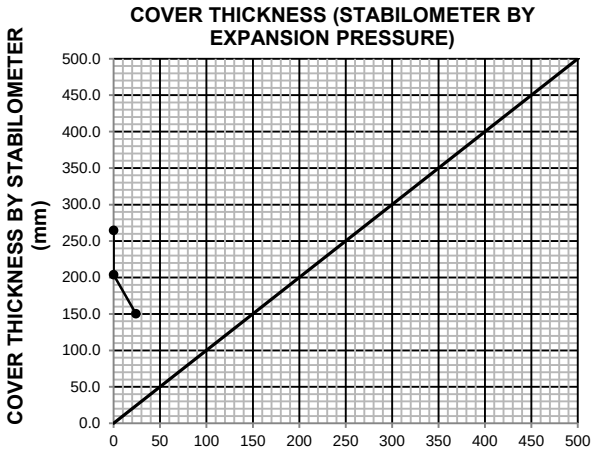
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	**36**

R-VALUE BY EXUDATION PRESSURE:	**36**
R-VALUE BY EXPANSION PRESSURE:	**NA**
EXPANSION PRESSURE AT 300 PSI EXUDATION:	**0**
TRAFFIC INDEX (Assumed):	**5.5**
GRAVEL FACTOR (Assumed):	**1.5**
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	**2100.0**

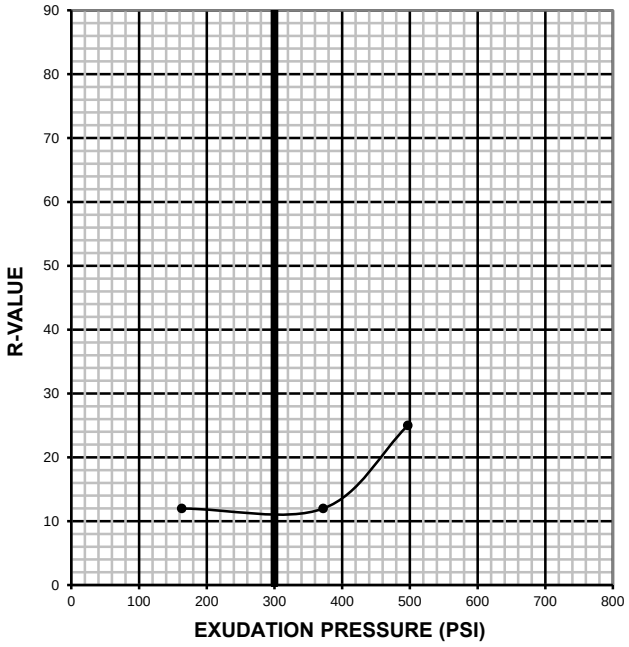
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

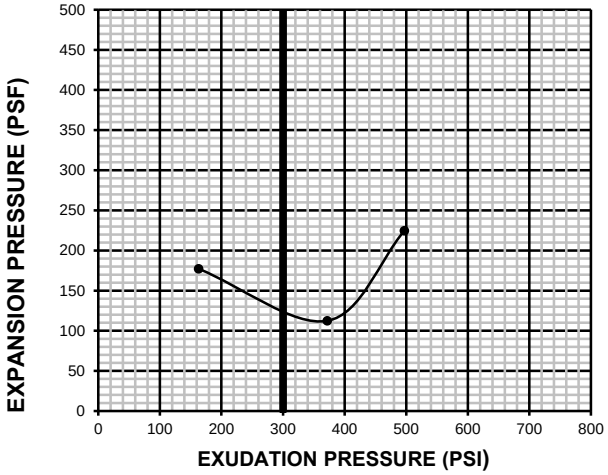
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-19
SAMPLE DESCRIPTION:	CLAYEY SILT (ML)	SAMPLE DEPTH:	6.5" - 34.5"
SAMPLED BY:	RA	TESTED BY:	LA
		DATE TESTED:	12/9/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	32.0	33.9	37.4
WEIGHT OF SAMPLE, grams	870	930	910
HEIGHT OF SAMPLE, Inches	2.34	2.55	2.50
DRY DENSITY, pcf	85.4	82.5	80.3
COMPACTOR AIR PRESSURE, psi	200	200	100
EXUDATION PRESSURE, psi	497	372	163
EXPANSION, Inches x 10exp-4	52	26	41
STABILITY Ph 2,000 lbs (160 psi)	98	129	126
TURNS DISPLACEMENT	4.04	4.27	4.73
R-VALUE UNCORRECTED	28	12	12
R-VALUE CORRECTED	25	12	12
EXPANSION PRESSURE (psf)	224.6	112.3	177.1

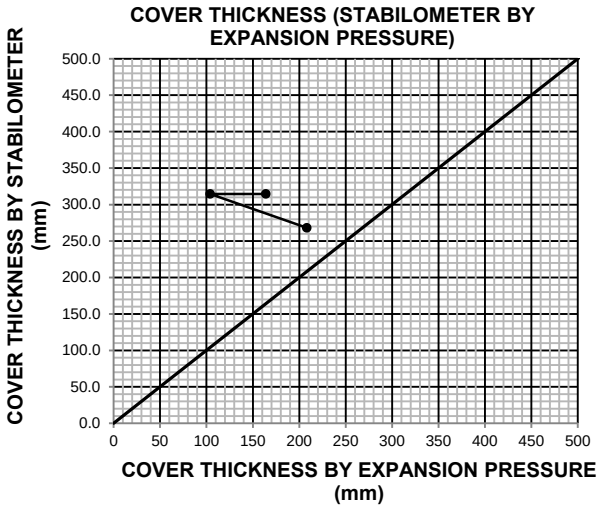
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	**11**

R-VALUE BY EXUDATION PRESSURE:	**11**
R-VALUE BY EXPANSION PRESSURE:	**NA**
EXPANSION PRESSURE AT 300 PSI EXUDATION:	**120**
TRAFFIC INDEX (Assumed):	**5.5**
GRAVEL FACTOR (Assumed):	**1.5**
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	**2100.0**

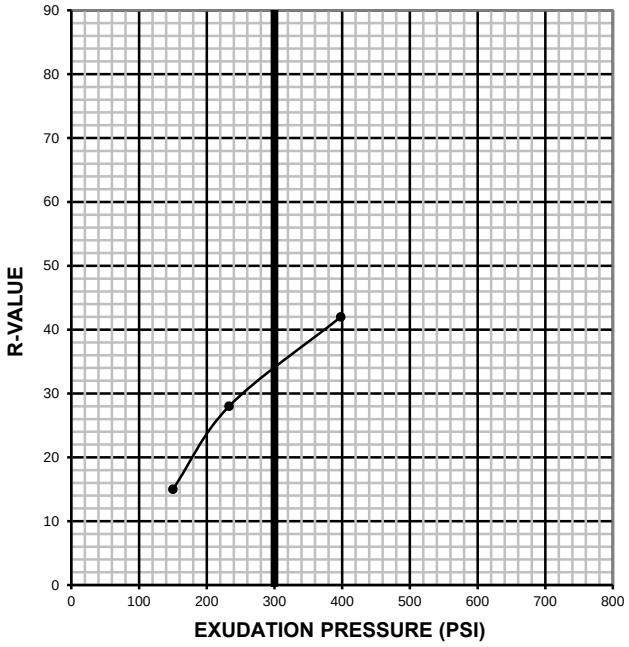
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

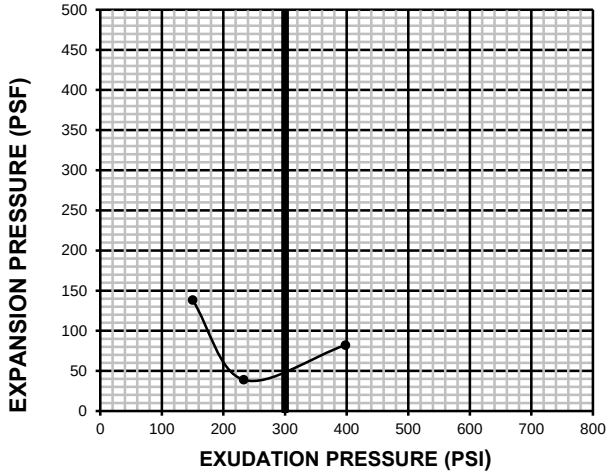
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-20
SAMPLE DESCRIPTION:	SANDY SILT (ML)	SAMPLE DEPTH:	4" - 48"
SAMPLED BY:	RA	TESTED BY:	ER
		DATE TESTED:	12/3/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	44.0	47.5	53.3
WEIGHT OF SAMPLE, grams	787	802	828
HEIGHT OF SAMPLE, Inches	2.43	2.39	2.53
DRY DENSITY, pcf	68.2	69.0	64.7
COMPACTOR AIR PRESSURE, psi	350	250	140
EXUDATION PRESSURE, psi	398	233	150
EXPANSION, Inches x 10exp-4	19	9	32
STABILITY Ph 2,000 lbs (160 psi)	69	87	119
TURNS DISPLACEMENT	4.12	4.36	4.78
R-VALUE UNCORRECTED	44	32	15
R-VALUE CORRECTED	42	28	15
EXPANSION PRESSURE (psf)	82.1	38.9	138.2

R-VALUE VS. EXUDATION PRESSURE



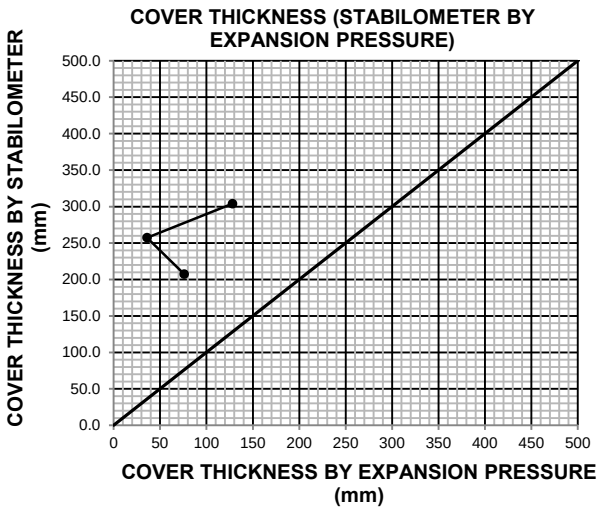
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	34

R-VALUE BY EXUDATION PRESSURE:	34
R-VALUE BY EXPANSION PRESSURE:	NA
EXPANSION PRESSURE AT 300 PSI EXUDATION:	50
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



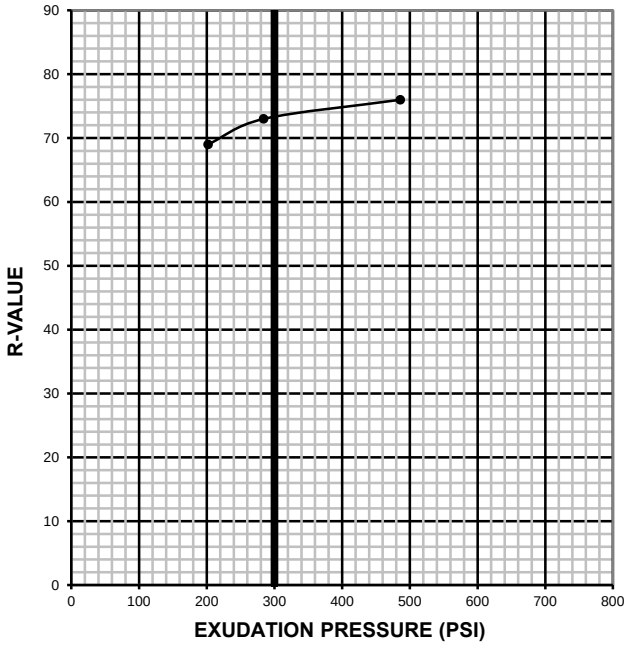
R-VALUE TEST REPORT

☑ CT-301 ☐ ASTM-D2844

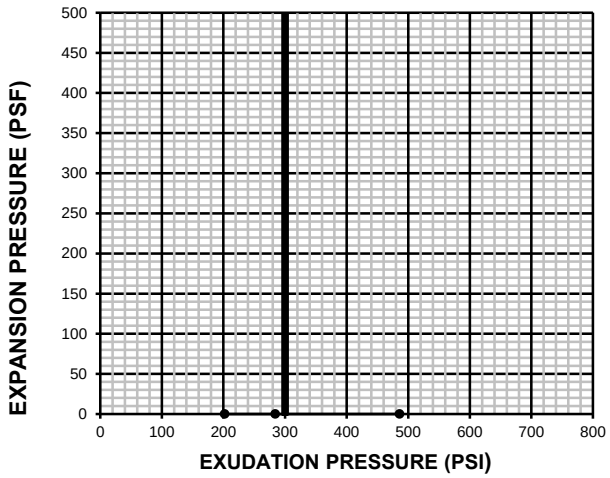
PROJECT NAME:	Aliso Viejo City Wide Pavement Evaluation	PROJECT NUMBER:	20-100-00
SAMPLE LOCATION:		SAMPLE NUMBER:	C-22
SAMPLE DESCRIPTION:	SILTY SAND (SM)	SAMPLE DEPTH:	8.75" - 48"
SAMPLED BY:	RA	TESTED BY:	LA
		DATE TESTED:	12/9/2020

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	12.3	12.9	13.5
WEIGHT OF SAMPLE, grams	1010	1014	1025
HEIGHT OF SAMPLE, Inches	2.54	2.58	2.51
DRY DENSITY, pcf	107.3	105.6	109.1
COMPACTOR AIR PRESSURE, psi	300	300	300
EXUDATION PRESSURE, psi	486	284	202
EXPANSION, Inches x 10exp-4			
STABILITY Ph 2,000 lbs (160 psi)	22	24	28
TURNS DISPLACEMENT	5.08	5.19	5.41
R-VALUE UNCORRECTED	76	73	69
R-VALUE CORRECTED	76	73	69
EXPANSION PRESSURE (psf)			

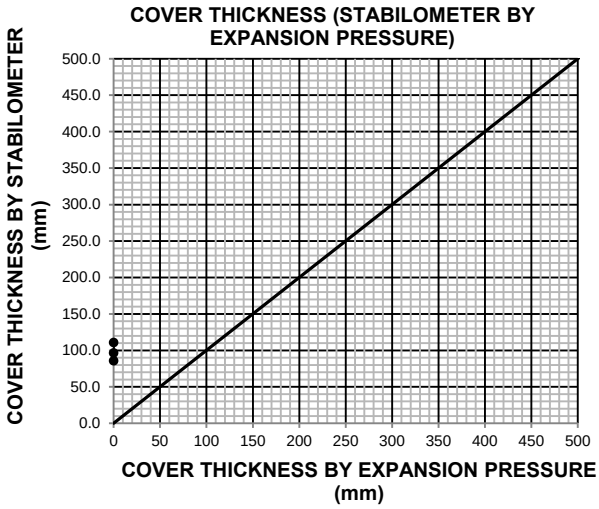
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	**73**

R-VALUE BY EXUDATION PRESSURE:	**73**
R-VALUE BY EXPANSION PRESSURE:	**NA**
EXPANSION PRESSURE AT 300 PSI EXUDATION:	**0**
TRAFFIC INDEX (Assumed):	**5.5**
GRAVEL FACTOR (Assumed):	**1.5**
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	**2100.0**

Appendix C
Pavement Repair Recommendations

Table C-1: Select CIP Streets Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Findings & Recommendations	Localized AC Repair Thickness (inches)[2][3][6]	AC Leveling Course Thickness (inches)[7]	AC/ARHM Overlay Thickness (inches)	Reflective Cracking Reduction Recommendation	Additional Comments	Recommended Repair and Schedule
					Design R-value	Assumed 20-Year TI[1]							
Deerhurst	Wolverine	Foxborough	60	72,320	12	6.0	Note 10	8.5	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2021-22**
Deerhurst	Foxborough	Pacific Park	55	69,880	12	6.0	Note 10	8.5	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2021-22**
Foxborough	Deerhurst	Dead End	55	25,380	12	6.0	Note 10	8.5	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2021-22**
Wolverine	Aliso Creek	Sandcastle	61	34,194	12	6.0	Note 10	8.5	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2021-22**
Wolverine	Sandcastle	CDS	60	38,304	12	6.0	Note 10	8.5	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2021-22**
Aliso Creek Rd	Wolverine (Aliso Viejo Pkwy)	Liberty	SB: 55 NB: 66	SB: 83,266 NB: 83,066	50	9.0	Note 11	9.0	1.0	1.5[9]	Notes 4, 9	NA	**Rehab: 2022-23**
Aliso Creek Rd	Liberty	Pursuit	SB: 67 NB: 72	SB: 43,666 NB: 43,430	50	9.0	Note 11	9.0	1.0	1.5[9]	Notes 4, 9	NA	**Rehab: 2022-23**
Aliso Creek Rd	Pursuit	Wood Cyn	SB: 68 NB: 73	SB: 47,280 NB: 45,342	50	9.0	Note 11	9.0	1.0	1.5[9]	Notes 4, 9	NA	**Rehab: 2022-23**
Aliso Creek Rd	Wood Cyn	City Limits (bridge)	SB: 67 NB: 69	SB: 35,520 NB: 35,830	50	9.0	Note 11	9.0	1.0	1.5[9]	Notes 4, 9	NA	**Rehab: 2022-23**
Enterprise	Aliso Viejo	Summit	SB: 81 NB: 78	SB: 37,450 NB: 39,006	11	7.0	Note 10	10.5	1.0	2.0[9]	Notes 4	NA	**Rehab: 2023-24**
Enterprise	Summit	Aliso Creek	SB: 58 NB: 36	SB: 77,915 NB: 78,936	11	7.0	Note 10	10.5	1.0	2.0[9]	Notes 4	NA	**Rehab: 2023-24**
Argonaut	Aliso Creek	Argonaut	64	65,252	34	6.0	Note 10	7.0	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2023-24**
Argonaut	Argonaut	Argonaut	60	71,852	34	6.0	Note 10	7.0	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2023-24**
Argonaut	Argonaut	Glenwood	70	17,432	34	6.0	Note 10	7.0	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2023-24**
Columbia	Aliso Creek	Aliso Viejo	65	71,208	34	6.0	Note 10	7.0	1.0	2.0[9]	Notes 4, 5	NA	**Rehab: 2023-24**

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.
Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.
Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair (or the localized AC repair thickness if thinner), extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).
Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with AC leveling and AC or ARHM overlay layers to reduce reflective cracking potential (not necessary for AC base layer).
Note (5): Pavement interlayer system, consisting of adequate tack application rate and Tensar GlasPave25, or equivalent, is recommended to be installed to further reduce reflective cracking potential.
Note (6): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (7): The recommended AC leveling course mix is Greenbook 3/8-inch maximum Type IIID3 PG 64-10 AC.
Note (8): The recommended AC overlay mix is Greenbook ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (9): The recommended ARHM overlay mix is Greenbook ½-inch maximum ARHM-GG-C, except in cul-de-sac areas where conventional AC is recommended (Note 8).
Note (10): The existing AC section is inadequately thick. We recommend increasing the structural capacity of the roadway by thickening the existing AC pavement by least 2-inches in the travel lanes. Perform an edge mill and install the recommended overlay section to thicken the travel lanes and crown. Changes to cross slope should be reviewed and confirmed by the Project Civil Engineer for other considerations, such as drainage, super-elevation, etc.
Note (11): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 6), the existing pavement appears to be structurally adequate and thickening of the roadway section is not necessary. Therefore, perform either a uniform-depth mill across the full width of the roadway or an edge mill, whichever is more economical or appropriate for other considerations, such as drainage, superelevation, etc. as determined by the Project Civil Engineer.

Table C-2: Zone 4 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Findings & Recommendations	Localized AC Repair Thickness (inches)[2][3][6]	AC Leveling Course Thickness (inches)[7]	AC/ARHM Overlay Thickness (inches)	Reflective Cracking Reduction Recommendation	Additional Comments	Recommended Repair and Schedule
					Design R-value	Assumed 20-Yr TI[1]							
Autumnglen	Aliso Creek Rd	Summerfield	73	52,800	11	5.0	Note 10	7.0	1.0	1.5[8]	Notes 4, 5	Note 13	**Rehab: 2021-22**
Summerfield	Autumnglen	Aliso Creek	74	61,720	11	5.0	Note 10	7.0	1.0	1.5[8]	Notes 4, 5	Note 13	**Rehab: 2021-22**
Springdale	Summerfield	Dead End	75	11,016	11	5.0	Note 10	7.0	1.0	1.5[8]	Notes 4, 5	Note 13	**Rehab: 2021-22**
Glenhurst	Aliso Creek	Gate	84	42,600	47	5.5	Note 11	6.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Knollwood	Wood Canyon Dr	City Line	75	21,120	30	6.0	Note 11	8.0	1.0	Rehab: 2022-23	Notes 4, 5	Note 13	
Wood Canyon Dr	Aliso Creek	Las Flores	87	53,850	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Las Flores	Valencia	88	83,200	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Valencia	Tivoli	85	49,600	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Tivoli	Cottage Ln	82	48,900	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Cottage Ln	SOKA South Entrance	90	93,897	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	SOKA South Entrance	Calypso St	93	67,222	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Calypso St	Oak View Dr	89	98,612	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Oak View Dr	Huntington Ln (Access Rd)	84	76,300	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Wood Canyon Dr	Huntington Ln (Access Rd)	Westridge Dr	90	62,535	30	7.0	Note 11	10.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Laurelwood	Wood Canyon	Cameo Dr	87	9,036	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Cameo Dr	Laurelwood St	Charlemont Dr	86	27,022	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Chancey Ct	Cameo Dr	Dead End	82	6,938	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Charlemont Dr	Cameo Dr	Deerborn Dr	86	11,988	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Deerborn Dr	Cameo Dr	Calypso St	89	30,744	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Deerborn Dr	Calypso St	Sherwood Dr	88	19,008	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Calypso St	Wood Canyon Dr	Sunbury Dr	86	20,880	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Sunbury Dr	Sherwood Dr	Calypso St	87	22,248	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Sherwood Dr	Deerborn Dr	Sunbury Dr	84	19,008	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). **6” AB encountered.**				**Maint: 2021-22**
Somerset Dr	Sunbury Dr	Brookstone Pl	89	9,504	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Brookstone Pl	Somerset Dr	Seton Dr	88	6,480	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Seton Dr	Brookstone Pl	Sunbury Dr	89	11,160	34	5.0	Note 11	4.0	Rehabilitation is not due at this time (note 12). Assumes 6” AB exist.				**Maint: 2021-22**
Cliffwood	Cranwell	Chesterwood	87	18,840	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Stockbridge	Cranwell	Chesterwood	84	22,855	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Barrington	Cranwell	Chesterwood	85	7,920	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Chesterwood	Cliffwood	Barrington	83	15,760	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Cranwell	Barrington	Cliffwood	76	15,840	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Berkshire	Cranwell	Chesterwood	84	12,800	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Oakgrove Dr	Wood Canyon Dr	Halfway South	76	53,480	22	4.5	Note 11	6.0	Note 14	2.0[8]	Note 4	Note 13	**Maint: 2021-22**
Mallorn Dr	Rowan Dr	Dead End	80	44,166	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Birch Dr	Rowan Dr	Mallorn Dr	90	9,720	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Rowan Dr	Mallorn	Birch	92	14,004	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Walnut Dr	Mallorn Dr	End	90	10,954	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Beech Dr	Poplar Dr	Pacific Grove Dr	83	31,680	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**
Chestnut Dr	Beech Dr	Pacific Grove Dr	93	19,008	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2021-22**

Sequoia Dr	Pacific Grove Dr	Beech Dr	95	26,208	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).	**Maint: 2021-22**
Maple Dr	Poplar Dr	Pacific Grove Dr	83	22,680	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).	**Maint: 2021-22**
Pacific Grove Dr	Oakgrove Dr	Maple Dr	87	21,120	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).	**Maint: 2021-22**
Poplar Dr	Maple Dr	Beech Dr	88	21,120	11	5.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).	**Maint: 2021-22**

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.
Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.
Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair (or the localized AC repair thickness if thinner), extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).
Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with AC leveling and AC or ARHM overlay layers to reduce reflective cracking potential (not necessary for AC base layer).
Note (5): Pavement interlayer system, consisting of adequate tack application rate and Tensar GlasPave25, or equivalent, is recommended to be installed to further reduce reflective cracking potential.
Note (6): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (7): The recommended AC leveling course mix is Greenbook 3/8-inch maximum Type IIID3 PG 64-10 AC.
Note (8): The recommended AC overlay mix is Greenbook ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (9): The recommended ARHM overlay mix is Greenbook ½-inch maximum ARHM-GG-C, except in cul-de-sac areas where conventional AC is recommended (Note 8).
Note (10): The existing AC section is inadequately thick. We recommend increasing the structural capacity of the roadway by thickening the existing AC pavement by least 2-inches in the travel lanes by performing an edge mill and installing the recommended overlay section to thicken the travel lanes and crown. Changes to cross slope should be reviewed and confirmed by the Project Civil Engineer for other considerations, such as drainage, super-elevation, etc.
Note (11): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 6), the existing pavement appears to be structurally adequate and thickening of the roadway section is not necessary. Therefore, perform either a uniform-depth mill across the full width of the roadway or an edge mill, whichever is more economical or appropriate for other considerations, such as drainage, super-elevation, etc. as determined by the Project Civil Engineer.
Note (12): Current roadway condition is suitable for approximately 2 more cycles of maintenance (localized AC repairs, crack repairs, followed by slurry sealing), then pavement rehabilitation will likely be necessary.
Note (13): Current roadway condition warrants rehabilitation (localized repairs + mill/overlay), however, it can receive at most 1 more cycle of maintenance (localized AC repairs, crack repairs, followed by slurry sealing).
Note (14): Based on the pavement's current condition, an AC leveling course does not appear to be required, therefore, it is not recommended at this time.

Table C-3: Zone 5 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Findings & Recommendations	Localized AC Repair Thickness (inches)[2][3][6]	AC Leveling Course Thickness (inches)[7]	AC/ARHM Overlay Thickness (inches)	Reflective Cracking Reduction Recommendation	Additional Comments	Recommended Repair and Schedule
					Design R-value	Assumed 20-Yr TI[1]							
Heather Ridge	Pacific Park Drive	Woodside	65	18,725	15	5.0	Note 10	7.0	1.0	2.0[8]	Notes 4, 5	Note 13	**Maint: 2022-23**
Woodside	Morning Ridge	Creekside	80	32,130	15	5.0	Note 10	7.0	1.0	2.0[8]	Notes 4, 5	Note 13	**Maint: 2022-23**
Creekside	Woodside	Morningridge	76	31,680	15	5.0	Note 10	7.0	1.0	2.0[8]	Notes 4, 5	Note 13	**Maint: 2022-23**
Morning Ridge	Alicia Pkwy	Creekside	70	22,440	15	5.0	Note 10	7.0	1.0	2.0[8]	Notes 4, 5	Note 13	**Maint: 2022-23**
Morning Ridge	Creekside	Woodside	72	45,040	15	5.0	Note 10	7.0	1.0	2.0[8]	Notes 4, 5	Note 13	**Maint: 2022-23**
City Lights Dr	Pacific Park	Prvt Prop	90	88,960	15	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Journey	Aliso Creek	Pacific Park Dr	87	82,155	15	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Journey	Journey (N)	Journey (S)	89	144,165	15	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Liberty	Aliso Viejo Pkwy	1033' s/o Aliso Viejo Pkwy	79	66,112	50	7.0	Note 11	8.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Liberty	1033' s/o Aliso Viejo Pkwy	Pursuit	80	139,456	50	7.0	Note 11	8.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Liberty	Pursuit	Aliso Creek Rd	84	61,120	50	7.0	Note 11	8.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Orion	Liberty	End	90	20,115	50	7.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Pursuit	Liberty	Rue Du Chateau	90	40,050	38	6.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Pursuit	Rue Du Chateau	Lyon Ridge	80	69,210	38	6.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Pursuit	Lyon Ridge	Aliso Creek Rd	85	71,100	38	6.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Duray Ct	Monstad St	End	93	11,810	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Monstad St	Pursuit	Grindlay Pl	84	40,610	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Monstad St	Monstad St	End	80	6,010	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Kewen Wy	Grindlay Pl	Monstad St	90	17,216	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Grindlay Pl	Monstad St	Kewen Wy	78	8,850	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Lyon Ridge	Lyon Ridge	Dead End	93	28,656	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Lyon Ridge	Pursuit	Lyon Ridge	89	5,652	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Lyon Ridge	Lyon Ridge	Dead End	93	3,168	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Mesa Cr	Lyon Ridge	End	90	9,360	38	5.0	Note 11	5.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Oakview Dr	Wood Canyon Dr	Crimson Canyon	91	37,600	38	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Oakview Dr	Crimson Canyon	Endless Vista	88	59,440	38	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Oakview Dr	Endless Vista	Gate	87	80,370	38	6.0	Note 11	8.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Southern Hills Dr	Bel Flora Ct	Dead End	94	40,290	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Bel Flora Ct	Oakview Dr	Country Walk Dr	88	21,680	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Country Walk Dr	Southern Hills Dr	Bel Flora Ct	88	19,000	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Westridge Dr	Oakview Dr	Wood Canyon Dr	84	34,480	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Midnight Ct	Dawn Ln	Dead End	82	6,938	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Dawn Ln	Oakview Dr	Dusk Wy	85	45,180	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Dusk Wy	Dawn Ln	Evening Light	87	9,504	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Evening Light Ln	Dusk Wy	Dawn Ln	88	31,176	38	5.0	Note 11	6.0	1.0	2.0[9]	Notes 4, 5	Note 13	**Rehab: 2023-24**
Style Dr	Gatewood Dr	Dead End	94	17,510	47	5.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Style Dr	Style Dr	End	90	3,528	47	5.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Gatewood Dr	Oakview Dr	Dead End	94	45,450	47	5.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**
Shining Star Wy	Gatewood Dr	End	94	4,922	47	5.0	Note 11	7.0	Rehabilitation is not due at this time (note 12).				**Maint: 2022-23**

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.
Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.
Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair (or the localized AC repair thickness if thinner), extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).
Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with AC leveling and AC or ARHM overlay layers to reduce reflective cracking potential (not necessary for AC base layer).
Note (5): Pavement interlayer system, consisting of adequate tack application rate and Tensar GlasPave25, or equivalent, is recommended to be installed to further reduce reflective cracking potential.
Note (6): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (7): The recommended AC leveling course mix is Greenbook 3/8-inch maximum Type IIID3 PG 64-10 AC.
Note (8): The recommended AC overlay mix is Greenbook ½-inch maximum Type IIIC3 PG 64-10 AC.
Note (9): The recommended ARHM overlay mix is Greenbook ½-inch maximum ARHM-GG-C, except in cul-de-sac areas where conventional AC is recommended (Note 8).
Note (10): The existing AC section is inadequately thick. We recommend increasing the structural capacity of the roadway by thickening the existing AC pavement by least 2-inches in the travel lanes by performing an edge mill and installing the recommended overlay section to thicken the travel lanes and crown. Changes to cross slope should be reviewed and confirmed by the Project Civil Engineer for other considerations, such as drainage, super-elevation, etc.
Note (11): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 6), the existing pavement appears to be structurally adequate and thickening of the roadway section is not necessary. Therefore, perform either a uniform-depth mill across the full width of the roadway or an edge mill, whichever is more economical or appropriate for other considerations, such as drainage, superelevation, etc. as determined by the Project Civil Engineer.
Note (12): Current roadway condition is suitable for approximately 2 more cycles of maintenance (localized AC repairs, crack repairs, followed by slurry sealing), then pavement rehabilitation will likely be necessary.
Note (13): Current roadway condition warrants rehabilitation (localized repairs + mill/overlay), however, it can receive at most 1 more cycle of maintenance (localized AC repairs, crack repairs, followed by slurry sealing).

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“Zone 1”, “Zone 2”, “Zone 3”, and Select CIP and Miscellaneous Streets
City of Aliso Viejo, California

Pavement Evaluation and Improvement Recommendations Report

September 25, 2024

GMU Project No. 20-100-01
GMU
30336 Esperanza
Rancho Santa Margarita, CA 92688

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Attachments:

Plate 1 – Project Limits Map
Plate 1.1 – Project Limits Table
Plate 2 – AC Coring Location Map
Plate 3 – Pavement Coring Summary Table
Plate 4 – Pavement Deflection Testing Data Map
Appendix A – Select Photographs
Appendix B – Laboratory Data Summary
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1. INTRODUCTION

1.1 PURPOSE AND OBJECTIVES

This report presents a summary of our pavement evaluation of various streets maintained by the City of Aliso Viejo. Specifically, the streets considered in this study include a majority of "Zone 1 (blue)", "Zone 2 (green)", "Zone 3 (yellow)", and certain collector, arterial, and miscellaneous streets (purple) planned for improvement in the coming years.

GMU previously provided the City with a Pavement Evaluation and Repair Recommendations Report for CIP, "Zone 4,", "Zone 5" and CIP and Misc street segments, dated March 15, 2021**.**

1.2 SCOPE

The following scope of work was performed, as outlined in our scope and fee proposal dated November 12, 2021:

- Pavement surface condition assessments were performed to evaluate the general condition of the subject streets.
- Coring locations were selected in areas of interest and delineated, in collaboration with the City of Aliso Viejo. Dig Alert was notified to identify potential conflicts with known underground utilities prior to drilling.
- Asphalt concrete (AC) corings were performed at various locations throughout the street segments to measure and identify the in-situ pavement layer types and thicknesses, including AC, aggregate base, treated soil, and subgrade materials.
- Pavement deflection testing was performed using a Falling-Weight Deflectometer (FWD) to collect deflection data for pavement structural evaluation and overlay thickness analysis and design for some selected streets.
- Samples collected from the pavement corings were returned to our laboratory and tested for various engineering properties, including R-value, soil classification, and moisture content testing.
- Pavement engineering analysis was performed to develop pavement repair recommendations.
- This report was prepared to summarize our work, findings, conclusions, and repair recommendations for the improvement of the subject streets.

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2. LOCATION AND PROJECT INFORMATION

This project involved performing a limited evaluation of a significant number of the City's streets. The following table summarizes the number and length of streets evaluated for this study.

Table 1: Summary of Streets Evaluated

Description	Approximate Quantities	Comments
Select CIP & Miscellaneous Streets (purple)	4 street segments 1 centerline miles	Primarily arterial or collector streets.
Select Zone 1 Streets (blue)	52 street segments 8.7 centerline miles	Primarily collector or residential streets.
Select Zone 2 Streets (green)	59 street segments 8.6 centerline miles	Primarily collector or residential streets.
Select Zone 3 Streets (yellow)	66 street segments 10.3 centerline miles	Primarily collector or residential streets.
Total	**181 street segments** **28.6 centerline miles**	

The general locations of the roadway segments considered in this study are illustrated on **Plate 1 – Project Limits Map** and summarized within **Plate 1.1 – Project Limits Table.**

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3. FIELD EXPLORATION

3.1 PAVEMENT SURFACE CONDITION ASSESSMENT

Pavement surface condition assessments were performed during August 2022. The type, severity, and extent of the various observed distresses were assessed in general accordance with ASTM D6433. Select photographs of the pavement surface condition are presented in **Appendix A – Select Photographs**.

3.2 PAVEMENT CORINGS

A total of 40 pavement coring locations were explored from August 29 through September 9, 2022, within the subject streets. The locations were selected based on the information gathered from the visual pavement surface condition assessments, as well as subsurface data from distributed and representative locations throughout the project limits. The locations of the pavement corings are illustrated on **Plate 2 – AC Coring Location Map.**

The corings were performed using a 6-inch-diameter electric core drill. The thickness of the asphalt concrete (AC), and underlying aggregate base (AB) layers, where encountered, was recorded. The depth to subgrade and visual classification of the subgrade samples were also logged during the pavement corings. Bulk samples of the subgrade were collected and delivered to GMU's laboratory for further evaluation. Drive samples were collected at the top of the subgrade at select locations. The corings were backfilled with aggregate base and capped with asphalt concrete cold patch.

Plate 3 – Pavement Coring Summary Table provides additional information gathered from the pavement corings.

3.2.1 Select CIP & Miscellaneous Streets

A total of 4 corings were performed within the various CIP & Miscellaneous Street segments. The existing roadway is surfaced with 8.0- to 15.25-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 13.25 inches.

Beneath the AC layer, the subgrade soil varies and includes Sandy Elastic SILT (MH), Silty SAND (SM), and Diatomaceous SILT (ML). The Diatomaceous SILT was encountered at C-2, located on Glenwood Drive.

An aggregate base (AB) layer was not encountered beneath the AC layer at any of the 4 coring locations explored within this group of streets.

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3.2.2 Select Zone 1 Streets

A total of 11 corings were performed within the Zone 1 streets. The existing roadway is surfaced with 5.0- to 8.75-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 6.5 inches.

Out of the 11 coring locations performed within Zone 1, only one coring location (C-26 located on Surfbird), revealed an aggregate base (AB) layer below the AC layer. The AB layer is 4.25 inches thick. Also, a 6.75-inch thick cement-treated base (CTB) was encountered at coring location C-20 (on Cedarbrook). For all other coring locations in Zone 1, the AC layer was constructed directly on top of the subgrade.

The subgrade soil varies and includes Silty SAND (SM), Clayey SAND (SC), Elastic SILT (MH), Diatomaceous SILT (ML), and Sandy Lean CLAY (CL) materials. The Diatomaceous SILT was encountered at C-20.

3.2.3 Select Zone 2 Streets

A total of 11 corings were performed within the Zone 2 streets. The existing roadway is surfaced with 3.5- to 6.5-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 4.25 inches.

Out of the 11 coring locations performed within Zone 2, five coring locations (C-31 through C-35) revealed an aggregate base (AB) layer below the AC layer, while the remaining four coring locations did not. The AB layer, where encountered, ranges from 4.5- to 6.25 inches thick, with an average thickness of 5-inches. A cement-treated base (CTB) layer was encountered in 2 out of 11 locations. The CTB layer is 10- and 12.25-inches thick at coring locations C-36 and C-37 respectively. All other coring locations in Zone 2 revealed an AC layer constructed directly on top of the subgrade.

The subgrade soil varies and includes Silty SAND (SM), Clayey SAND (SC), and Sandy Lean CLAY (CL) materials.

3.2.4 Select Zone 3 Streets

A total of 14 corings were performed along the Zone 3 streets. The existing roadway is surfaced with 5.5- to 13-inch thick asphalt concrete (AC) pavement. The average AC thickness is approximately 8.5 inches.

Beneath the AC layer, the subgrade soil varies and included Clayey SAND (SC), Sandy Elastic SILT (MH), Sandy CLAY (CL), and Fat CLAY (CH).

An aggregate base (AB) layer was not encountered beneath the AC layer at any of the 14 coring locations explored within this group of streets.

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3.3 FALLING-WEIGHT DEFLECTOMETER TESTING

Falling weight deflectometer (deflection) testing was performed on September 15, 2022 in accordance with Caltrans Test Method CT 356. In summary, this test method involved applying a 9,000-pound impact load to the pavement surface and measuring the pavement's deflection response. Higher deflection readings generally indicate lower pavement structural strength often due to thinner pavement, soft subgrade, more deteriorated pavement condition, or a combination of these factors.

Tests were conducted at intervals of approximately 150 to 200 feet on selected streets within the project limits. These streets were strategically chosen to provide representative data across the entire project area. Each deflection test point was geo-referenced using GPS, and the tests were staggered across lanes in both travel directions to enhance coverage.

Results of the deflection tests are visually depicted in **Plate 4 – Pavement Deflection Testing Data Map** and summarized in the following table.

Table 2: Deflection Analysis Summary and Findings

Zone	Section	Design 20-Year Traffic Index (TI)	"AC Thickness" for Analysis	Tolerable Deflections at Surface (TDS), mils	80th percentile of measured surface deflection (D_{80})	Findings
Select CIP & Miscellaneous Streets	**Aliso Creek Road** *From Enterprise to SR 73*	11.0	0.5	11.0	5.7	Structurally adequate
	Glenwood Dr *from SH 73 to Aliso Creek Road*	11.0	0.5	11.0	7.8	Structurally adequate
	Golf Dr *from Glenwood Dr to Santa Barbara Dr*	6.0	0.5	25.0	14.1	Structurally adequate
Zone 1	**Brookline** *from Aliso Creek Road to CDS*	7.0	0.5	20.0	29.3	**Structurally inadequate**
	Cedarbrook *from Glenwood Dr to Aliso Viejo Pkwy*	7.0	0.45	21.0	19.3	Structurally adequate
	Mallard Dr *from Moorhen Ln to CDS*	5.0	0.45	35.0	17.7	Structurally adequate

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Zone	Section	Design 20-Year Traffic Index (TI)	"AC Thickness" for Analysis	Tolerable Deflections at Surface (TDS), mils	80th percentile of measured surface deflection (D_{80})	Findings
	Osprey Ave *from Surfbird to CDS*	5.0	0.5	32.0	40.9	**Structurally inadequate**
	Surfbird Ln *from Merlin Ave to Seaguil Ln*	5.5	0.5	28.0	11.8	Structurally adequate
Zone 2	**EaglePoint** *from CDS to CDS*	5.0	0.35	40.0	26.2	Structurally adequate
	Golden Field *from Diamond Gate to CDS*	5.0	0.5	32.0	23.8	Structurally adequate
	Hummingbird Ln *from Aliso Creek Rd to CDS*	6.0	0.5	25.0	31.0	**Structurally inadequate**
	Mareblu *from Pacific Park Dr to CDS*	6.0	0.5	25.0	29.6	**Structurally inadequate**
	Phoebe Ct *from Royal Tern to CDS*	5.0	0.5	32.0	29.2	Structurally adequate
	San Bittern Ln *from Humington Ln to CDS*	5.0	0.5	32.0	25.6	Structurally adequate
Zone 3	**Enterprise** *from Pacific Park Dr to Aliso Viejo Pkwy*	7.0	0.5	20.0	8.6	Structurally adequate
	Chase *from Pacific Park Dr to Sanborn*	7.0	0.5	20.0	11.6	Structurally adequate

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Zone	Section	Design 20-Year Traffic Index (TI)	"AC Thickness" for Analysis	Tolerable Deflections at Surface (TDS), mils	80th percentile of measured surface deflection (D_{80})	Findings
	Oak Grove *from Wood Canyon Dr to Pleasant Walk*	6.0	0.5	25.0	26.2	**Structurally inadequate**
	Pierremont *from ParisVille to CDS*	5.0	0.5	32.0	21.1	Structurally adequate
	Rockrose *from Peppertree to Canyon Vistas*	5.5	0.5	28.0	23.7	Structurally adequate
	Sanborn Ln *from Chase to Aurora*	6.0	0.5	25.0	10.4	Structurally adequate

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4. LABORATORY TESTING

Laboratory tests were performed on select samples obtained retrieved from the corings to evaluate various engineering properties of the subgrade soils. The laboratory tests performed include:

- R-value
- Sieve No. 200 wash for soil classification
- Atterberg Limits for soil classification
- Maximum density and optimum moisture content
- In-place moisture/density
- pH
- Sulfate

The results of the laboratory testing are summarized and presented in **Appendix B – Laboratory Data Summary**.

5. PAVEMENT ENGINEERING ANALYSIS

Engineering analyses was performed in accordance with the 6th edition of the Caltrans Highway Design Manual. Topic 633 of the Caltrans Design Manual was followed to develop pavement thickness design recommendations. This design method considers the relationship between the

subgrade R-value, gravel factor of the various proposed pavement layers, and the traffic index (TI).

Traffic indices (TI's) were assumed for use in our analysis. A traffic engineer should confirm the suitability of these assumptions.

The results of GMU's laboratory R-value tests were utilized in the analysis. Design R-values were determined based on these laboratory tests. For streets where coring was not performed, R-value results from nearby coring locations with similar subgrade soil types were used as the design R-value.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

Based on our work and findings described in Sections 1 through 5 of this report, it is our opinion that multiple influencing factors have contributed to the roadway's current condition. These factors are summarized as follows:

- **Aggregate Base Influence:** One of the objectives of this study is to identify the presence of aggregate base, as well as whether its absence would have a significant influence on pavement performance.

  Similar to the findings from the phase-1 streets, this study also indicates that the lack of an aggregate base layer does not negatively impact pavement performance, as long as the AC layer is sufficiently thick. Streets without an aggregate base can still be maintained and rehabilitated cost-effectively, extending the roadway's lifespan and minimizing its life cycle costs.

- **Aging Influence:** Over time, streets naturally age and deteriorate due to environmental factors and traffic loading. All the streets evaluated in this study exhibit various degrees of aging-related distress, including raveling, weathering, and longitudinal, transverse, and block cracking. As pavement ages, it oxidizes and becomes brittle, leading to the development of these distresses. As the cracks progress, they allow moisture to infiltrate the pavement, which, when absorbed by the underlying subgrade, weakens its structural support. This can lead to more severe load-related distresses, such as permanent deformation, alligator cracking, depressions, and potholes.

  Expansive subgrade soil, which is prevalent in the region and identified at several coring locations (including lean and fat clays from coring locations C-7, C-9, C-14, C-18, and C-26), also contributes to the development of longitudinal, transverse, and block cracking. This type of soil expands when its moisture content increases and contracts as it dries.

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The repeated wetting and drying cycles cause expansion and contraction of the subgrade, which further exacerbates these distress types.

- **Load-related distresses:** Several load-related distresses were observed, including areas of alligator cracking, particularly concentrated within the wheel paths. Additionally, localized areas of structural failure, such as isolated regions with medium- to high-severity alligator cracking and/or depressions, were identified at various locations. However, widespread structural failure was not detected, suggesting that the pavement's structural section generally provides adequate load-bearing capacity, except for select streets determined to be structurally inadequate through deflection testing.

- **Separated Lifts**: Some asphalt concrete (AC) core samples separated at the interface between the AC lifts during coring or laboratory evaluation. This condition is typically caused by insufficient application of tack coat (the adhesive used to bond the overlaying lift to the underlying lift) during previous construction.

Most of the streets evaluated are in a condition suitable for another cycle of maintenance improvements (i.e., one more round of patch repairs, crack sealing, and slurry sealing). The streets should be re-evaluated approximately 6 years after its next cycle of slurry seal maintenance to determine if a more robust strategy, such as rehabilitation, will be necessary at that time.

6.2 RECOMMENDATIONS

Recommendations are provided in **Appendix C – Pavement Repair Recommendations**, which provides a tabular summary for each street zone. Given the extensive number of streets evaluated in this project, footnotes within the table offer important information specific to each group of streets, minimizing repetition while addressing the unique conditions of each area.

The final pavement repair recommendation for each street is listed in the rightmost column of the tables in **Appendix C – Pavement Repair Recommendations**. "Maint." refers to performing localized asphalt concrete (AC) repairs (i.e., patches), crack repairs, and applying a slurry seal. "Rehab." involves localized AC repairs, crack repairs, cold milling (either edge milling or uniform milling, depending on the need for structural capacity improvements), installing an AC leveling course (if AC cores separated at the lift interface during drilling), placing an interlayer system (to mitigate the potential for reflective cracking where full-depth cracks were identified in the AC cores), and applying an AC or asphalt rubber hot mix (ARHM) overlay.

6.3 UNSTABLE MATERIALS

Based on the soil types encountered and the moisture contents measured from select samples collected, it is our opinion that there is some potential for unstable materials to be exposed during construction.

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If unstable materials are exposed, the following recommendations can be implemented. Unstable or soft subgrade conditions can be identified during construction by surface yielding under rubber-tired equipment loading and/or the inability to achieve proper compaction. The condition of the subgrade should be evaluated by GMU during the scarification and re-compaction efforts.

Drying back of localized wet soil conditions can be performed to address unstable soils if time allows. If drying back soil is not a practical option, we recommend increasing the AC base lift thicknesses by an additional 4 to 8 inches to "bridge" over the unstable conditions. The recommended thicknesses of remediation could be greater, or less, depending on the conditions encountered. Any areas that require remediation should be observed by the project geotechnical engineer to confirm the effectiveness of the recommendations provided herein.

These recommended remediation methods intend to achieve a non-yielding subgrade when subjected to relatively heavy, rubber-tired construction equipment loading such as a loaded water truck or loader with full bucket. The remediated areas should be proof-rolled with this type of equipment after remediation to confirm that the subgrade is unyielding. Pavement constructed on top of an unstable section will likely not achieve the required compaction and/or will experience reduced pavement life.

6.4 SPECIFICATIONS

We recommend following the City of Aliso Viejo Specifications and the Standard Specifications for Public Works Construction (Greenbook) when implementing these repair recommendations. Requirements specified within the Greenbook should be followed, including but not limited to:

- Pavement surface preparation and tack coat application before installation of the overlay;
- Subgrade, aggregate base, and asphalt concrete relative compaction requirements;
- AC mixture requirements, including binder content, gradation, and Hveem Stability requirements;
- AC paving operations, including temperatures, lift thicknesses, rolling patterns, and more.

7. EXPECTATIONS

7.1 REFLECTIVE CRACKING

Reflective cracking refers to the propagation of pre-existing underlying cracks through a new overlay. The rate at which these underlying cracks reflect to the surface depends on several factors, many of which are difficult to predict with precision. Key factors include the width of the underlying cracks remaining after milling, variability in traffic loading, climate conditions (such as temperature fluctuations causing expansion and contraction), and the strength of the underlying pavement layers supporting the overlay.

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A general rule of thumb for reflective cracking is that cracks tend to propagate at a rate of approximately 1 inch per year. This suggests that for a 2-inch overlay using conventional asphalt concrete (AC), there is potential for underlying cracks to reach the surface within approximately two years.

7.2 DESIGN LIFE OF REHABILITATION RECOMMENDATIONS

Excluding the potential for reflective cracking to propagate sooner and assuming that rehabilitation construction is performed per our recommendations and the project specifications, we estimate that the proposed pavement repairs will achieve a 15- to 20-year design life. However, it is important to note that the pavement will naturally develop distresses over time and should not be expected to remain entirely crack-free throughout the 15- to 20-year period. Proper pavement maintenance, including localized AC repairs when needed, crack repairs, and proper maintenance, should be performed to achieve the intended design life. Areas that are structurally deficient and do not receive appropriate localized repairs may not meet the full intended lifespan.

8. LIMITATIONS

These recommendations are only intended to support the pavement repair map for the subject site. All parties reviewing or utilizing this report should recognize that the findings, conclusions, and recommendations presented represent the results of our professional engineering efforts and judgments. Due to the inexact nature of the state of the art of these professions and the possible occurrence of undetected variables in subsurface conditions, there is no guarantee that the conditions actually encountered during construction will be the same as those observed and sampled during our study or that there are no unknown subsurface conditions which could have an adverse effect on the use of the roadway. We have exercised a degree of care comparable to the standard of practice presently maintained by other professionals in the fields of geotechnical engineering and pavement engineering, and believe that our findings present a reasonably representative description of conditions and their probable influence on the grading and use of the streets. Surface cracks may develop sooner or later depending on several factors that are hard to predict or not provided to us, such as actual traffic volumes or the extent and severity of subsurface cracks that remain upon milling.

Because our conclusions and recommendations are based on a limited amount of geotechnical exploration and analysis, all parties should recognize the need for possible revisions to our conclusions and recommendations during the construction of the project. The recommendations provided in this report are based on the assumption that an adequate program of observations and testing will be conducted by our firm during the construction phases to evaluate compliance with our recommendations and to provide revised recommendations if necessary, depending on conditions encountered.

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GMU's recommendations for this project are, to a high degree, dependent upon appropriate quality control of subgrade preparation, mix design compliance, and pavement construction processes. Accordingly, the recommendations are made contingent upon the opportunity for GMU to observe the proposed construction. If parties other than GMU are engaged to provide such services, such parties must be notified that they will be required to assume complete responsibility as the engineer of record of the project by concurring with the recommendations in this letter and/or by providing alternative recommendations.

GMU performed its evaluation using the degree of care and skill ordinarily exercised under similar circumstances by reputable civil and/or geotechnical engineering professionals with experience in this area in similar soil conditions. No other warranty, either expressed or implied, is made as to the conclusions and recommendations contained in this report. This report has been prepared for the exclusive use of the City of Aliso Viejo in accordance with generally accepted pavement engineering practices.

9. CLOSURE

We appreciate this opportunity to provide our pavement evaluation services on you project. If there are any questions concerning our findings or recommendations, please do not hesitate to contact us and we will be happy to discuss them with you.

Respectfully submitted,

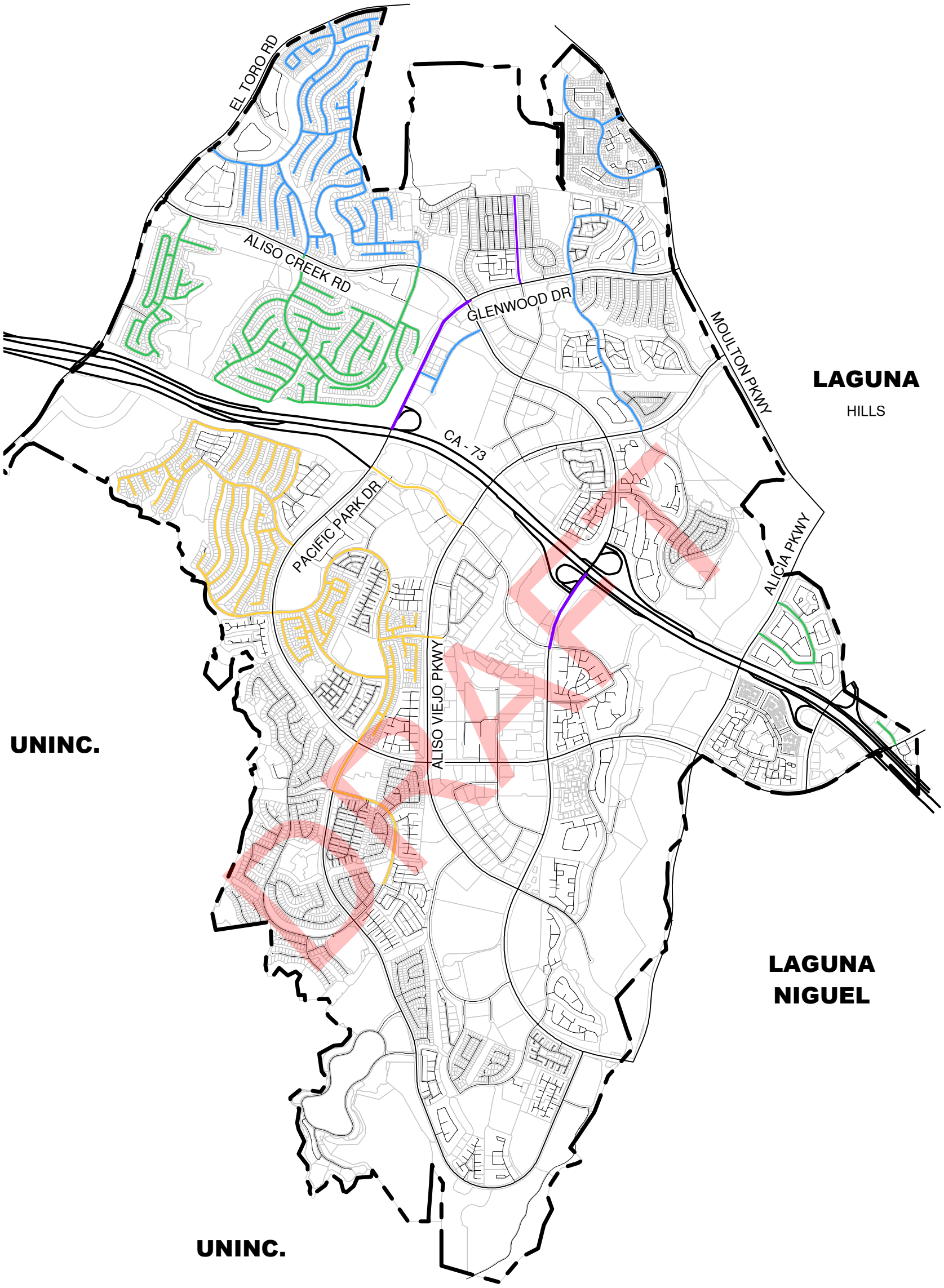
GMU GEOTECHNICAL, INC.

Amina Mannan, PhD, PE
Senior Engineer

Roger Schlierkamp, M.Sc., PE
Principal, Director of Pavement Engineering

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LAGUNA WOODS



LEGEND

- ZONE 1
- ZONE 2
- ZONE 3
- CIP AND MISCELLANEOUS STREETS

0 2000'

Project Limits Map

GMU	Date: September 20, 2024	Plate 1
	Project No.: 20-100-01	

DRAWING: \\gmugeo-dc1\autocad data\2020\20-100-01\dwg\2010001_plate 1_project limits map.dwg PLOTTED: 12/22/2023 11:00 AM BY: Christian Llacsa

Plate 1.1 - Project Limits Table

Project No. 20-100-01

Street Name	Functional Classification	Zone	From	To	Length (ft)
Select CIP & Miscellaneous Streets					
Aliso Creek Rd	MPAH	NA	73 Toll Overpass	Enterprise	1,405
Glennwood Dr	MPAH	NA	73 Toll Overpass	Brookline	997
Glennwood Dr	MPAH	NA	Brookline	Aliso Creek Road	1,549
Golf Drive	Local	NA	Santa Barbara Drive	Glenwood Drive	1,400
Zone 1					
Blue Jay Dr	LOCAL	1 (blue)	Woodstork Ln	Dead End West	470
Blue Jay Dr	LOCAL	1 (blue)	Woodstork Ln	Dead End East	398
Woodstork Ln	LOCAL	1 (blue)	Blue Jay Dr	Skylark Dr	264
Skylark Dr	LOCAL	1 (blue)	Eastwing	Larkspur Dr	1,166
Raven Ln	LOCAL	1 (blue)	Skylark Dr	Dead End	1,490
Larkspur Dr	LOCAL	1 (blue)	Skylark Dr	Spoonbill Dr	913
Macaw St	LOCAL	1 (blue)	Dove St	Larkspur Dr	264
Dove Ln	LOCAL	1 (blue)	Macaw St	Dead End	424
Spoonbill Dr	LOCAL	1 (blue)	Surfbird Ln	Lakespur Dr	528
Merlin Ave	LOCAL	1 (blue)	Surfbird Ln	Moorhen Ln	1,672
Moorhen Ln	LOCAL	1 (blue)	Westwing	Mallard Dr	392
Mallard Dr	LOCAL	1 (blue)	Moorhen	Dead End	432
Peacock Ct	LOCAL	1 (blue)	Moorhen Ln	Dead End	264
Eastwing	LOCAL	1 (blue)	Aliso Creek Rd	Skylark Dr	528
Westwing	LOCAL	1 (blue)	Calle Corta	Aliso Creek	1,784
Pheasant Ln	LOCAL	1 (blue)	Westwing	Dead End	950
Rosy Finch Ln	LOCAL	1 (blue)	Westwing	Dead End	964
Chickadee Ln	LOCAL	1 (blue)	Calle Corta	Dead End	1,056
King Eider Ln	LOCAL	1 (blue)	Calle Corta	Dead End	970
Sora Ct	LOCAL	1 (blue)	Westwing	Dead End	73
Calle Corta	LOCAL	1 (blue)	Westwing	El Toro Rd	1,364
Swan Ln	LOCAL	1 (blue)	Surfbird Ln	Dead End	370
Dunlin Ln	LOCAL	1 (blue)	Surfbird Ln	Dead End	528
Surfbird	LOCAL	1 (blue)	Spoonbill Dr	Seagull Ln	1,211
Surfbird	LOCAL	1 (blue)	Seagull Ln	Dead End	670
Solitaire Ln	LOCAL	1 (blue)	Seagull Ln	Dead End	1,040
Blackbird Ln	LOCAL	1 (blue)	Seagull Ln	Dead End	886
Seagull	LOCAL	1 (blue)	Surfbird Ln	Canyon Wren Ln	933
Canyon Wren Ln	LOCAL	1 (blue)	Westwing	Crane St	1,833
Canyon Wren Ln	LOCAL	1 (blue)	Crane St	El Toro Rd	1,208
Golden Eagle Ct	LOCAL	1 (blue)	Surfbird Ln	Dead End	264
Osprey Ave	LOCAL	1 (blue)	Surfbird Ln	Dead End	264
Egret Ln	LOCAL	1 (blue)	Prairie Falcon	Seagull Ln	2,039
Crane St	LOCAL	1 (blue)	Canyon Wren Ln	Prairie Falcon	101
Prairie Falcon	LOCAL	1 (blue)	Egret Ln	Crane St	1,223
Prairie Falcon	LOCAL	1 (blue)	Crane St	Dead End	829
Cuervo Dr	LOCAL	1 (blue)	Canyon Wren Ln	Wigeon Ln	1,066
Nutcracker Ln	LOCAL	1 (blue)	Cuervo Dr	Dead End	421
Bob White Ln	LOCAL	1 (blue)	Pinyon Jay	Cuervo Dr	264
Pinyon Jay Ln	LOCAL	1 (blue)	Wigeon Ln	Bob White Ln	206
Wigeon Ln	LOCAL	1 (blue)	Cuervo Dr	Pinyon Jay	264
Cardinal Ave	LOCAL	1 (blue)	Canyon Wren Ln	Bluebird Ln	918
Bluebird Ln	LOCAL	1 (blue)	Cardinal Ave	Dead End	921
Brookline	LOCAL	1 (blue)	Brookline	Glenwood Drive	380
Brookline	LOCAL	1 (blue)	Aliso Creek Rd	Dead End	1,551
Cedarbrook	LOCAL	1 (blue)	Rainwood	Aliso Viejo Pkwy	1,510

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Street Name	Functional Classification	Zone	From	To	Length (ft)
Cedarbrook	LOCAL	1 (blue)	Glenwood Dr	Rainwood	1,790
Cedarbrook	LOCAL	1 (blue)	Da Vinci	Glenwood Drive	1,071
Da Vinci	LOCAL	1 (blue)	Glenwood Dr	Cedarbrook	1,943
Via Iglesia	LOCAL	1 (blue)	Calle Cortez	Moulton Pkwy	1,950
Via Iglesia	LOCAL	1 (blue)	Calle Cortez	Moulton Pkwy	1,400
Calle Cortez	LOCAL	1 (blue)	Via Iglesia	Moulton Pkwy	443
Zone 2					
Royal Tern Ln	LOCAL	2 (Green)	Dead End	Phoebe	953
Phoebe Ct	LOCAL	2 (Green)	Royal Tern Ln	Dead End	306
Falcon Crest Ln	LOCAL	2 (Green)	Royal Tern Ln	Sanderling Ln	566
Sanderling Ln	LOCAL	2 (Green)	Falcon Crest Ln	Hummingbird Ln	569
Willet Ln	LOCAL	2 (Green)	Hummingbird Ln	Royal Tern Ln	232
Condor Ln	LOCAL	2 (Green)	Sanderling Ln	Hummingbird Ln	126
Hummingbird Ln	LOCAL	2 (Green)	Aliso Creek	San Bittern Ln	1,590
Hummingbird Ln	LOCAL	2 (Green)	San Bittern Ln	Dead End	1,052
Goldfinch Ln	LOCAL	2 (Green)	Hummingbird Ln	Woodswallow Ln	148
San Bittern Ln	LOCAL	2 (Green)	Hummingbird Ln	Dead End	827
Blue Heron Ln	LOCAL	2 (Green)	San Bittern Ln	Dead End	567
White Pelican Ln	LOCAL	2 (Green)	Blue Heron Ln	Dead End	268
Woodswallow Ln	LOCAL	2 (Green)	Songbird Ln	Songbird Ln	1,315
Songbird Ln	LOCAL	2 (Green)	Tempeter Ln	Firecrest Ln	1,320
Trempeter Ln	LOCAL	2 (Green)	Woodswallow Ln	Songbird Ln	264
Firecrest Ln	LOCAL	2 (Green)	Songbird Ln	Woodswallow Ln	156
Coral Bill Ln	LOCAL	2 (Green)	Hummingbird Ln	Woodswallow Ln	158
Starling Ln	LOCAL	2 (Green)	Hummingbird Ln	Dead End	686
Lindengrove	LOCAL	2 (Green)	Diamondgate	Briarcliff	1,165
Goldenfield	LOCAL	2 (Green)	Diamondgate	Dead End	114
Diamond Gate	LOCAL	2 (Green)	Lindengrove	Dead End	1,481
Briarcliff	LOCAL	2 (Green)	Lindengrove	Westwing	1,144
Grandbriar	LOCAL	2 (Green)	Briarcliff	Dead End	792
Helmcrest	LOCAL	2 (Green)	Briarcliff	Dead End	634
Thornbird	LOCAL	2 (Green)	Briarcliff	Dead End	536
Crystalglen	LOCAL	2 (Green)	Diamondgate	Dead End	332
Collingwood	LOCAL	2 (Green)	Briarcliff	Diamondgate	730
Satinbush	LOCAL	2 (Green)	Collingwood	Dead End	141
Crestview	LOCAL	2 (Green)	Meadow Point	Dead End	733
Meadow Point	LOCAL	2 (Green)	Skygate	Diamondgate	486
Skygate	LOCAL	2 (Green)	Westwing	Meadow Point	1,056
Mayflower	LOCAL	2 (Green)	ShoreCliff	Dead End	421
Shorecliff	LOCAL	2 (Green)	Ridgecrest	Dead End	1,848
Ramblewood	LOCAL	2 (Green)	ShoreCliff	Westwing	574
Timberbluff	LOCAL	2 (Green)	Ramblewood	Dead End	267
Flinstone	LOCAL	2 (Green)	Eastwing	Dead End	1,320
Windstar	LOCAL	2 (Green)	Flintsone	Dead End	95
Eastwing	LOCAL	2 (Green)	Heatherwood	Aliso Creek	1,229
Eastwing	LOCAL	2 (Green)	Heatherwood	Ramblewood	1,941
Highpoint	LOCAL	2 (Green)	Stonebrook	Dead End	957
Stonebrook	LOCAL	2 (Green)	Westwing	Dead End	528
Westwing	LOCAL	2 (Green)	Aliso Creek	Ramblewood	2,548
Ridgecrest	LOCAL	2 (Green)	Oakleigh	Shorecliff	1,584
Brooktree	LOCAL	2 (Green)	Oakleigh	Dead End	424
Oakleigh	LOCAL	2 (Green)	Eastwing	Brooktree	414
Sandbridge	LOCAL	2 (Green)	Highpoint	Heatherwood	1,169
Crossbow	LOCAL	2 (Green)	Sandbridge	Saddleridge	293
Saddleridge	LOCAL	2 (Green)	Highpoint	Dead End	1,097
Pathfinder	LOCAL	2 (Green)	Saddleridge	Eaglepoint	264
Eaglepoint	LOCAL	2 (Green)	End	End	507
Heatherwood	LOCAL	2 (Green)	Eastwing	Dead End	931

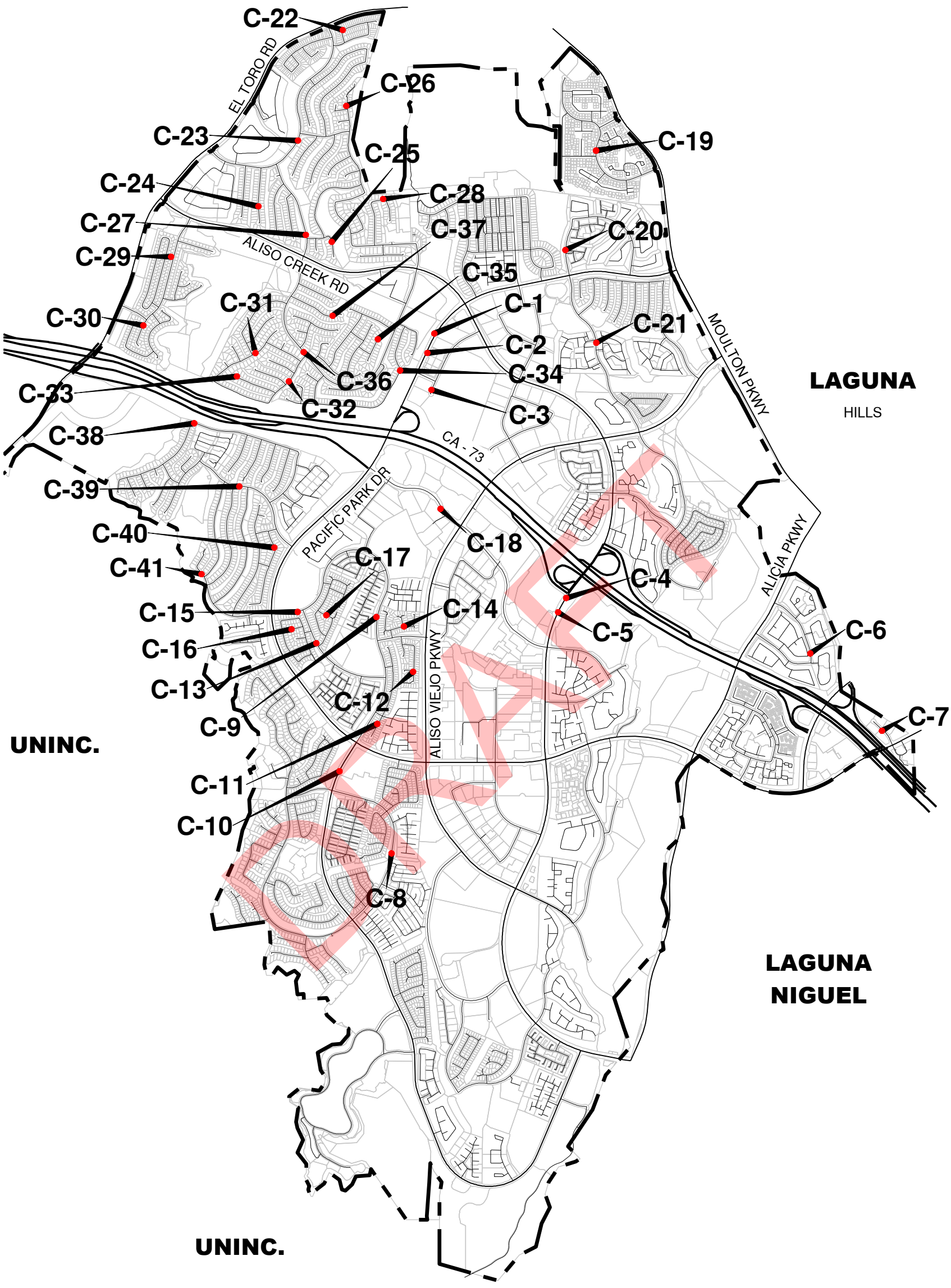
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Street Name	Functional Classification	Zone	From	To	Length (ft)
Bay Laurel	LOCAL	2 (Green)	Westwing	Coppercrest	514
Hazelbranch	LOCAL	2 (Green)	Bay Laurel	Dead End	196
Coppercrest	LOCAL	2 (Green)	End	End	921
Tanglewood	LOCAL	2 (Green)	Westwing	Dead End	1,050
Northwinds	LOCAL	2 (Green)	Westwing	Dead End	698
Hollyoak	LOCAL	2 (Green)	Alicia Pkwy	Laurelmont	1,225
Laurelmont	LOCAL	2 (Green)	Alicia Pkwy	Hollyoak	1,338
Mareblu	LOCAL	2 (Green)	Pacific Park	Dead End	565
Zone 3					
Hollyleaf	LOCAL	3 (Yellow)	Hopseed	Bottlebrush	984
Hollyleaf	LOCAL	3 (Yellow)	Bottlebrush	Dead End	1,111
Coffeeberry	LOCAL	3 (Yellow)	Hollyleaf	Dead End	422
Sugar Gum	LOCAL	3 (Yellow)	Hollyleaf	Dead End	335
Lilac	LOCAL	3 (Yellow)	Hollyleaf	Dead End	150
Hopseed	LOCAL	3 (Yellow)	Hollyleaf	Wood Vista	2,048
Bottlebrush	LOCAL	3 (Yellow)	Silkwood	Hollyleaf	480
Sugarbush	LOCAL	3 (Yellow)	Bottlebrush	Dead End	630
Silkwood	LOCAL	3 (Yellow)	Canyon Vistas	Dead End	1,206
Scrub Oak	LOCAL	3 (Yellow)	Silkwood	Dead End	453
Stone Pine	LOCAL	3 (Yellow)	Hopseed	Dead End	792
Lantana	LOCAL	3 (Yellow)	Hopseed	Dead End	792
Goldenrain	LOCAL	3 (Yellow)	Hopseed	Dead End	770
Deerwood	LOCAL	3 (Yellow)	Hopseed	Dead End	950
Wood Vista Way	LOCAL	3 (Yellow)	Hopseed	Canyon Vistas	1,136
Canyon Vistas	LOCAL	3 (Yellow)	Pacific Park	Wood Vista Way	953
Canyon Vistas	LOCAL	3 (Yellow)	Wood Vista Way	Silkwood	1,569
Coastal Oak	LOCAL	3 (Yellow)	Canyon Vistas	Peppertree	1,848
Rockrose	LOCAL	3 (Yellow)	Canyon Vistas	Peppertree	2,073
Sprucewood	LOCAL	3 (Yellow)	Canyon Vistas	Peppertree	2,423
Bearberry	LOCAL	3 (Yellow)	Timberland	Dead End	158
Timberland	LOCAL	3 (Yellow)	Peppertree	Dead End	2,213
Sagebrush	LOCAL	3 (Yellow)	Timberland	Canyon Vistas	312
Elderwood	LOCAL	3 (Yellow)	Sagebrush	Dead End	1,584
Clusterberry	LOCAL	3 (Yellow)	Timberland	Elderwood	158
Peppertree	LOCAL	3 (Yellow)	Pacific Park Dr	Sprucewood	1,162
Peppertree	LOCAL	3 (Yellow)	Sprucewood	End	1,046
Chase	LOCAL	3 (Yellow)	Paradise Bay	Sanborn	658
Chase	LOCAL	3 (Yellow)	Sanborn	Pacific Park Dr	587
Chase	LOCAL	3 (Yellow)	Paradise Bay	Thisledown	1,132
Northern Pine Loop	LOCAL	3 (Yellow)	Ponderosa	Ponderosa	2,112
Sierra Cir	LOCAL	3 (Yellow)	Northern Pine Loop	Dead End	185
Oak Ridge Cir	LOCAL	3 (Yellow)	Northern Pine Loop	Dead End	183
Boulder Cir	LOCAL	3 (Yellow)	Northern Pine Loop	Dead End	149
Sanborn	LOCAL	3 (Yellow)	Chase	Aurora	1,189
Sanborn	LOCAL	3 (Yellow)	Aurora	Wood Canyon Dr	999
Key Largo	LOCAL	3 (Yellow)	Sanborn	Cayman Brac	595
Cayman Brac	LOCAL	3 (Yellow)	Brittany Bay	Laguna Madre	643
Cayman Brac	LOCAL	3 (Yellow)	Brittany Bay	Key Largo	559
Brittany Bay	LOCAL	3 (Yellow)	Cayman Brac	Key Largo	310
Cape Coral	LOCAL	3 (Yellow)	Laguna Madre	Brittany Bay	712
Palm Hbr	LOCAL	3 (Yellow)	Cayman Brac	Cape Coral	292
Laguna Madre	LOCAL	3 (Yellow)	Cayman Brac	Cape Coral	284
Paradise Bay	LOCAL	3 (Yellow)	Chase	Cayman Brac	144
Wood Canyon Dr	LOCAL	3 (Yellow)	Thistledown	Alastair	1,896
Wood Canyon Dr	LOCAL	3 (Yellow)	Grand	Sanborn	703
Wood Canyon Dr	LOCAL	3 (Yellow)	Sanborn	Pacific Park Dr	1,346
Wood Canyon Dr	LOCAL	3 (Yellow)	Pacific Park Dr	Oakgrove	904
Oakgrove	LOCAL	3 (Yellow)	Wood Canyon Dr	Pleasant Walk	1,340

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Street Name	Functional Classification	Zone	From	To	Length (ft)
Boundary Oak	LOCAL	3 (Yellow)	Pleasant Walk	Weybridge	1,178
Picket Ln	LOCAL	3 (Yellow)	Wood Canyon Dr	Plateau	143
Plateau	LOCAL	3 (Yellow)	North End	Picket Ln	1,342
Plateau	LOCAL	3 (Yellow)	Picket Ln	South End	439
Plateau	LOCAL	3 (Yellow)	Plateau	Wood Canyon Dr	141
Nantais	LOCAL	3 (Yellow)	Pierremont	Dead End	264
Pierremont	LOCAL	3 (Yellow)	Parisville	Dead End	910
Parisville	LOCAL	3 (Yellow)	Grand	Dead End	398
Grand	LOCAL	3 (Yellow)	Aliso Viejo Pkwy	Wood Canyon Dr	909
Grand	LOCAL	3 (Yellow)	Aliso Viejo Pkwy	Vantis Dr (pvt)	264
Erica Ln	LOCAL	3 (Yellow)	Grand	Richemont Wy	146
Richemont Way	LOCAL	3 (Yellow)	Caledon Ct	Kara Ct	534
Caledon Ct	LOCAL	3 (Yellow)	Richemont Wy	Dead End	321
Gala Ct	LOCAL	3 (Yellow)	Richemont Wy	Dead End	264
Kara Ct	LOCAL	3 (Yellow)	Richemont Wy	Dead End	264
Enterprise	LOCAL	3 (Yellow)	Antares	Aliso Viejo Pkwy	1,672
Enterprise	LOCAL	3 (Yellow)	Antares	Pacific Park Dr	418

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LEGEND

- APPROXIMATE LOCATION OF AC CORE HOLE MARKOUT

0 2000'

AC Coring Location Map

GMU	Date: September 20, 2024	Plate 2.1
	Project No.: 20-100-01	

AC CORE HOLE #	AC THICKNESS (INCHES)	AB THICKNESS (INCHES)	SUBGRADE	MC	ZONE
C-1	15.25	0	MH	53.9%	
C-2	8	0	ML	69.3%	
C-3	6.75	0	SM	76.8%	1
C-4	15.25	0	CL	NA	
C-5	14.5	0	ML	NA	
C-6	6.25	0	CL	25.8%	2
C-7	5.5	0	CH	30.3%	2
C-8	5.75	0	MH	28.9%	3
C-9	12.25	0	CL-CH	27.9%	3
C-10	10.25	0	SC	20.9%	3
C-11	6	0	SM	10.6%	3
C-12	6.5	0	MH	49.6%	3
C-13	8	0	MH	37.0%	3
C-14	7.5	0	CH	49.9%	3
C-15	9.25	0	CL over ML	19.2%	3
C-16	5.5	0	CL	37.0%	3
C-17	13.25	0	CL	21.6%	3
C-18	9.25	0	CH	77.4%	1
C-19	8.75	0	MH	39.7%	1
C-20	5.25	6.75 CTB	ML	81.3%	1
C-21	5	0	MH	88.7%	1
C-22	6	0	SC-CL	13.2%	1
C-23	8	0	SC	10.8%	1
C-24	6	0	SC	10.9%	1
C-25	5	0	SC-CL	14.6%	1
C-26	7.75	4	CL over CH over SM	20.7% over 28.2% over 9.6%	1
C-27	8.25	0	CL	12.9%	1
C-28	5	0	CL	24.1%	1
C-29	5	0	SC	11.1%	2
C-30	4.5	0	CL-SC	12.9%	2
C-31	4	5 CTB	CL	12.2%	2
C-32	3.5	4.5 CTB	CL	7.8%	2
C-33	3.5	5 CTB	SC	12.4%	2
C-34	3.5	5.5 CTB	SC over SM over CL	21.0%	2
C-35	4.25	6	CL	13.3%	2
C-36	4	10 CTB	SC	10.5%	2
C-37	3.5	12.25 CTB	SC	13.5%	2
C-38	6	0	SC	12.9%	3
C-40	11.25	0	MH	73.2%	3
C-41	7.25	0	MH	24.9%	3

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AC Coring Location Map

GMU

Date: September 20, 2024

Project No.: 20-100-01

Plate 2.2

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Plate 3 - Pavement Coring Summary Table

GMU Project 20-100-01

Coring Performed on 8/29/2022 - 8/30/2022 & 9/8/202 - 9/9/2022

GMU PAVEMENT ENGINEERING

Location ID	C-1	C-2	C-3	C-4
Location Description	**Glenwood Dr, SB, Lane 2, across from Brookline Park sign**	**Glenwood Dr, NB, Lane 2, near 23 Brookline**	**88-99 Brookline**	**26521 Aliso Creek Rd, NB, Lane 3**
Pavement Structural Section Description and Thicknesses	**15.25-inches thick AC,** 1/2-inch wide crack extends 4.75 inches deep, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered	**8.0-inches thick AC,** 1/2-inch wide crack extends 4.25 inches deep, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered	**6.75-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 2.5 inches Separated lifts at 2.5 inches Paving fabric not encountered	**15.25-inches thick AC,** 1/4-inch wide crack extends 8.25-inches deep, existing surface lift is 1.25 inches Separated lifts at 1.25 inches Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**15.25 to 52.0 inches depth** ELASTIC SILT w/ SAND (MH); Yellowish grey, dry to damp, firm	**8.0 to 43.0 inches depth** DIATOMACEOUS SILT (ML); Yellowish grey, dry to damp, firm	**6.75 to 48.0 inches depth** SILTY SAND (SM); Olive grey, damp, medium dense soil becomes looser at 14 inches depth	**15.25 to 62.0 inches depth** SANDY ELASTIC SILT (MH); Olive, damp, stiff
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	52.0 inches Groundwater not encountered	43.0 inches (Refusal) Groundwater not encountered	48.0 inches Groundwater not encountered	62.0 inches Groundwater not encountered

Location ID	C-5	C-6	C-7	C-8
Location Description	**26531 Aliso Creek Rd, SB, Lane 3, near St. Moritza Apt sign**	**Intersection of Hollyoak and Laurel Mont**	**11 Mareblu**	**Boundary Oak, SB**
Pavement Structural Section Description and Thicknesses	**14.5-inches thick AC,** 1/4-inch wide crack extends 1.0-inch deep, existing surface lift is 2.25 inches Separated lifts at 4.25 inches Paving fabric not encountered	**6.5-inches thick AC,** Core taken on area free of cracking, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered	**5.5-inches thick AC,** 1/8-inch wide crack extends through the entire AC layer, existing surface lift is 3.0 inches Separated lifts at 3.0 inches Paving fabric not encountered	**5.75-inches thick AC,** 1/4-inch wide crack extends 3.25 inches deep, existing surface lift is 3.25 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**14.5 to 48.0 inches depth** SANDY SILT (ML); Grey, damp, firm	**6.5 to 48.0 inches depth** SILTY CLAY (CL); Grey, damp, firm	**5.5 to 48.0 inches depth** SANDY FAT CLAY (CH); Olive, damp, firm	**5.75 to 50.0 inches depth** SANDY ELASTIC SILT (MH); Olive brown, damp, hard
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	50.0 inches Groundwater not encountered

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Plate 3 - Pavement Coring Summary Table

GMU Project 20-100-01

Coring Performed on 8/29/2022 - 8/30/2022 & 9/8/202 - 9/9/2022

Location ID	C-9	C-10	C-11	C-12
Location Description	**Wood Canyon Dr near Grand, SB**	**Wood Canyon, NB, Lane 2**	**81 Plateau**	**39 Pierremont**
Pavement Structural Section Description and Thicknesses	**12.25-inches thick AC,** Core was taken in a non-cracked area, top lift is 3.25 inches Intact lifts Paving fabric not encountered	**10.25-inches thick AC,** 1/2-inch wide crack extends 3.25 inches deep, existing surface lift is 3.25 inches Intact lifts Paving fabric not encountered	**6.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered	**6.5-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 3.0 inches Separated lifts at 3.0 inches Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**12.25 to 51.0 inches depth** SILTY CLAY to FAT CLAY w/ GRAVEL (CL-CH); Grey, damp, firm	**10.25 to 49.0 inches depth** CLAYEY SAND (SC); Olive, damp, medium dense	**6.0 to 48.0 inches depth** SILTY SAND (SM); Brown, damp, medium dense Less clay present at 2 feet compared to upper pulls	**6.5 to 36.0 inches depth** ELASTIC SILT w/ SAND (MH); Grey, damp, soft
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	51.0 inches Groundwater not encountered	49.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	36.0 inches (Refusal) Groundwater not encountered

Location ID	C-13	C-14	C-15	C-16
Location Description	**31 Key Largo**	**18 Richemont Way**	**Chase, WB**	**5 Sierra Circle**
Pavement Structural Section Description and Thicknesses	**8.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 1.5 inches Separated lifts at 5.0 inches Paving fabric not encountered	**7.5-inches thick AC,** 3/4-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**9.25-inches thick AC,** 1/4-inch wide crack extends through entire AC layer, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered	**5.5-inches thick AC,** 1/8-inch wide crack extends 1.5 inches deep, existing surface lift is 1.5 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**8.5 to 48.0 inches depth** SANDY ELASTIC SILT (MH); Brown, damp, firm	**7.5 to 48.0 inches depth** FAT CLAY (CH); Olive, damp, firm	**9.25 to 36.0 inches depth** SANDY CLAY (CL); Orangish brown, damp, firm **36.0 to 48.0 inches depth** SANDY SILT (ML); Grey, damp, firm	**5.5 to 48.0 inches depth** SANDY CLAY (CL); Olive brown, damp, firm
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered

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Plate 3 - Pavement Coring Summary Table

GMU Project 20-100-01

Coring Performed on 8/29/2022 - 8/30/2022 & 9/8/202 - 9/9/2022

Location ID	C-17	C-18	C-19	C-20
Location Description	**14 Brittany Bay**	**Enterprise to the rear of bus stop, EB, Lane 2**	**Via Iglesia Near intersection of Via San Martine, NB**	**Intersection of Cedarbrook and Via Abruzzi**
Pavement Structural Section Description and Thicknesses	**13.0-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 2.5 inches Separated lifts at 2.5 inches Paving fabric not encountered	**9.25-inches thick AC,** Core was taken in non-cracked area, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**8.75-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Separated lifts at 2.0 inches Paving fabric encountered at 2.0 inches	**5.25-inches thick AC,** 3/4-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	**6.75 inches thick CTB,** Dry, subangular, very dense based on difficulty of excavation
Subgrade Soil Description	**13.0 to 48.0 inches depth** SANDY CLAY (CL); Olive, damp, soft to firm	**9.25 to 48.0 inches depth** SANDY FAT CLAY (CH) Grey, damp, firm	**8.75 to 54.0 inches depth** ELASTIC SILT (ML); Greyish brown, damp to moist, firm	**12.0 to 48.0 inches depth** DIATOMACEOUS SILT (ML); Grey, damp, firm
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	54.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered

Location ID	C-21	C-22	C-23	C-24
Location Description	**Cedarbrook, NB**	**Corner of Bluebird Lane**	**Near intersection of Canyon Wren Street and Seagull Lane**	**30 Chickadee, NB**
Pavement Structural Section Description and Thicknesses	**5.0-inches thick AC,** 3/4-inch wide crack extends 1.75 inches deep, existing surface lift is 1.5 inches Intact lifts Paving fabric not encountered	**6.0-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 2.5 inches Intact lifts Paving fabric not encountered	**8.0-inches thick AC,** Core was taken in non-cracked area, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**6.0-inches thick AC,** 1/8-inch wide crack extends 2.0 inches deep, existing surface lift is 1.75 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**5.0 to 49.0 inches depth** ELASTIC SILT (MH); Grey, dry to damp, dense	**6.0 to 45.0 inches depth** CLAYEY SAND to SANDY CLAY (SC-CL) Reddish brown, damp, medium dense/firm	**8.0 to 24.0 inches depth** CLAYEY SAND (SC); Orangish brown, dry to damp, medium dense	**6.0 to 49.5 inches depth** CLAYEY SAND (SC); Reddish brown, damp to moist, medium dense
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	49.0 inches Groundwater not encountered	45.0 inches Groundwater not encountered	24.0 inches (Refusal) Groundwater not encountered	49.5 inches Groundwater not encountered

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Plate 3 - Pavement Coring Summary Table

GMU Project 20-100-01

Coring Performed on 8/29/2022 - 8/30/2022 & 9/8/202 - 9/9/2022

GMU PAVEMENT ENGINEERING

Location ID	C-25	C-26	C-27	C-28
Location Description	**Mallard Drive**	**19 Surfbird**	**Near intersection of Westwing and Moorhen Lane**	**23 Raven Lane**
Pavement Structural Section Description and Thicknesses	**5.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 1.75 inches Separated lifts at 1.75 inches Paving fabric not encountered	**7.75-inches thick AC,** 1/8-inch wide crack extends 3.5 inches deep, existing surface lift is 3.5 inches Separated lifts at 3.5 inches Paving fabric encountered at 3.5 inches	**8.25-inches thick AC,** 1/8-inch wide crack extends 6.0 inches deep, existing surface lift is 2.0 inches Separated lifts at 2.0 inches Paving fabric not encountered	**5.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 1.75 inches Separated lifts at 1.75 inches Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	**4.25 inches thick AB,** Damp, subangular aggregates, very dense based on difficulty of excavation	Not encountered	Not encountered
Subgrade Soil Description	**5.0 to 45.0 inches depth** CLAYEY SAND to SANDY CLAY (SC-CL); Orangish brown, dry to damp, medium dense/firm	**12.0 to 21.0 inches depth** SANDY CLAY (CL); Dark grey w/ orange, damp, firm **21.0 to 28.0 inches depth** FAT CLAY (CH); Orangish brown, damp, firm **28.0 to 49.0 inches depth** SILTY SAND (SM); Orangish brown, damp, medium dense	**8.25 to 21.0 inches depth** SANDY CLAY (CL); Orangish brown, dry to damp, firm	**5.0 to 47.0 inches depth** SANDY LEAN CLAY (CL); Greyish brown, damp, firm
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	45.0 inches Groundwater not encountered	49.0 inches Groundwater not encountered	21.0 inches (Refusal) Groundwater not encountered	47.0 inches Groundwater not encountered

Location ID	C-29	C-30	C-31	C-32
Location Description	**Coral Bill Lane**	**50 Hummingbird Lane**	**22 Diamond Gate**	**27 Helmcrest**
Pavement Structural Section Description and Thicknesses	**5.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 1.75 inches Intact lifts Paving fabric not encountered	**4.5-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 1.0 inch Separated lifts at 2.5 inches Paving fabric not encountered	**4.0-inches thick AC,** 1/8-inch wide crack extends 1.75 inches deep, existing surface lift is 1.75 inch Separated lifts at 1.75 inches Paving fabric not encountered	**3.5-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	Not encountered	Not encountered	**5.75-inches thick AB.** Dry, subangular aggregates, medium dense based on difficulty of excavation	**4.5-inches thick AB.** Damp, angular aggregates, dense based on difficulty of excavation
Subgrade Soil Description	**5.0 to 18.0 inches depth** CLAYEY SAND w/ COBBLES (SC); Brown, damp, medium dense	**4.5 to 48.0 inches depth** SANDY CLAY to CLAYEY SAND (CL-SC); Brown, moist, soft	**9.75 to 34.0 inches depth** SANDY CLAY (CL); Reddish brown, damp, medium dense	**8.0 to 18.0 inches depth** SILTY SAND w/ CLAY & GRAVEL (SM); Brown, damp, medium dense
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	18.0 inches (Refusal) Groundwater not encountered	48.0 inches Groundwater not encountered	34.0 inches (Refusal) Groundwater not encountered	18.0 inches (Refusal) Groundwater not encountered

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Plate 3 - Pavement Coring Summary Table

GMU Project 20-100-01

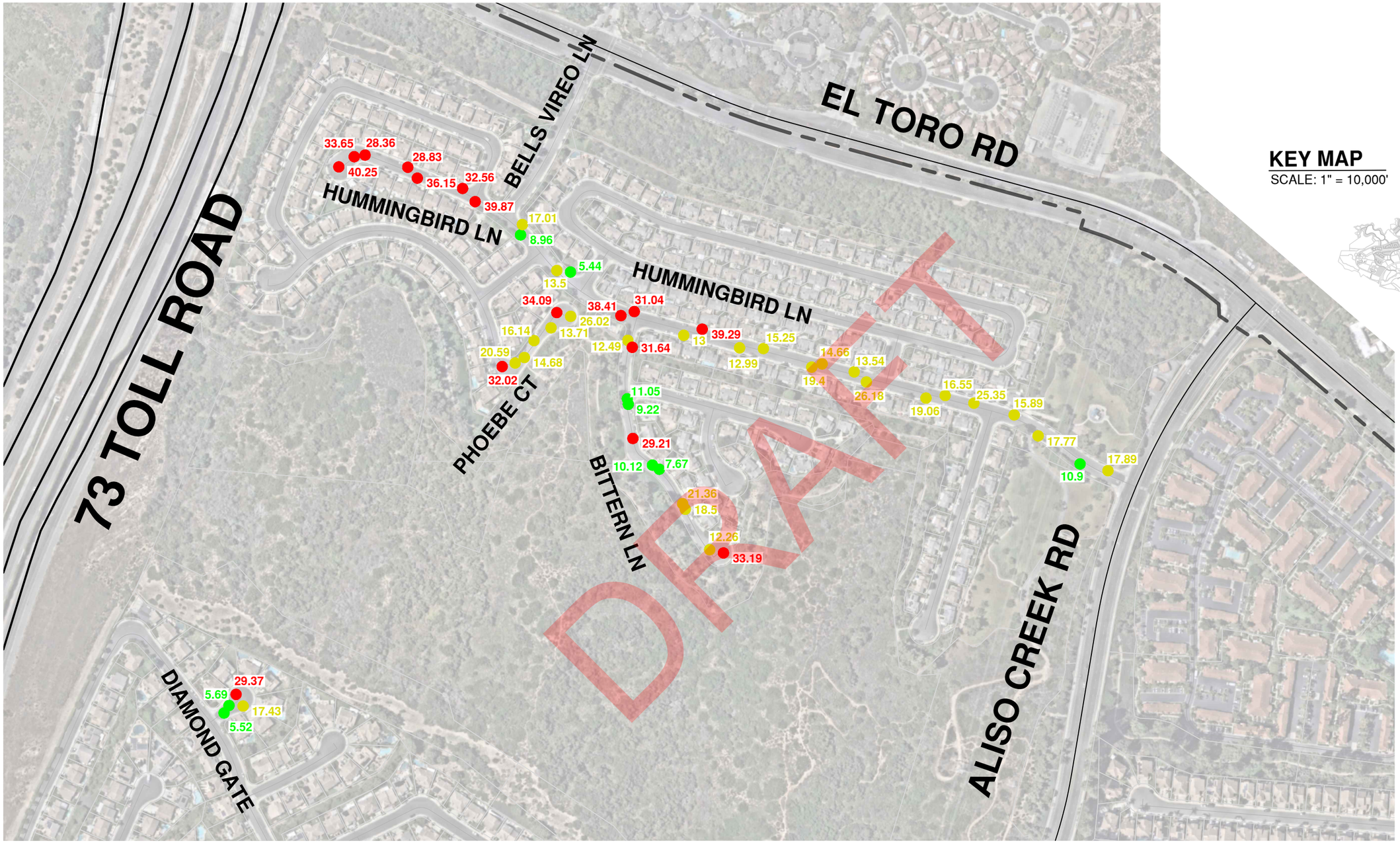
Coring Performed on 8/29/2022 - 8/30/2022 & 9/8/202 - 9/9/2022

GMU PAVEMENT ENGINEERING

Location ID	C-33	C-34	C-35	C-36
Location Description	**2 Grandbriar**	**29 Ridgecrest**	**9 Eagle Point**	**Near intersection of Westwing and Briarcliff**
Pavement Structural Section Description and Thicknesses	**3.5-inches thick AC,** 1/4-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**3.5-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**4.25-inches thick AC,** 1/4-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**4.0-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	**5.0 inches thick AB,** Damp, angular aggregates, dense based on difficulty of excavation	**5.5 inches thick AB,** Damp, subangular aggregates, medium dense based on difficulty of excavation	**6.25 inches thick AB,** Damp, subangular to angular aggregates, medium dense based on difficulty of excavation	**10.0 inches thick CTB,** Dry, subrounded to angular aggregates, very dense based on difficulty of excavation
Subgrade Soil Description	**8.5 to 48.0 inches depth** CLAYEY SAND w/ GRAVEL (SC); Reddish brown, damp, loose	**9.0 to 13.0 inches depth** CLAYEY SAND (SC); Grayish light brown, damp, medium dense **13.0 to 18.0 inches depth** SILTY SAND (SM); Orangish brown, damp, medium dense **18.0 to 48.0 inches depth** LEAN CLAY w/ SAND (CL); Grayish brown, damp, firm, gypsum fragments, All clay at 36.0 inches	**10.5 to 30.5 inches depth** SANDY CLAY (CL); Brown, damp, medium dense. clay at 17"	**14.0 to 37.0 inches depth** CLAYEY SAND w/ GRAVEL (SC); Reddish brown, damp, medium dense
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	30.5 inches (Refusal) Groundwater not encountered	37.0 inches (Refusal) Groundwater not encountered

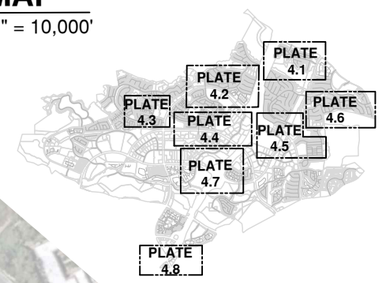
Location ID	C-37	C-38	C-40	C-41
Location Description	**31 Tanglewood**	**1 Hollyleaf**	**15 Elderwood**	**65 Coastal Oak**
Pavement Structural Section Description and Thicknesses	**3.5-inches thick AC,** 1/8-inch wide crack extends through entire AC layer, existing surface lift is 2.0 inches Intact lifts Paving fabric not encountered	**6.0-inches thick AC,** 1/2-inch wide crack extends through entire AC layer, existing surface lift is 1.5 inches Intact lifts Paving fabric not encountered	**11.25-inches thick AC,** 1/8-inch wide crack extends 4.25 inches deep, existing surface lift is 2.0 inch Separated lifts at 4.25 inches Paving fabric not encountered	**7.25-inches thick AC,** 1/4-inch wide crack extends through entire AC layer, existing surface lift is 2.25 inches Intact lifts Paving fabric not encountered
Aggregate Base (AB) Thickness & Description	**12.25 inches thick CTB,** Dry, angular aggregates, dense based on difficulty of excavation	Not encountered	Not encountered	Not encountered
Subgrade Soil Description	**15.75 to 22.0 inches depth** CLAYEY SAND w/ GRAVEL (SC); Orangish brown, damp, medium dense	**6.0 to 48.0 inches depth** CLAYEY SAND (SC); Brown, damp, medium dense Large gravel at 18.0 inches; green sandstone/siltstone at 27.0 inches	**11.5 to 48.0 inches depth** SANDY ELASTIC SILT (MH); Light grey, damp, soft	**7.25 to 33.0 inches depth** ELASTIC SILT (MH); Olive grey, damp, firm
Maximum Depth of Excavation **Depth to Groundwater (if encountered)**	22.0 inches (Refusal) Groundwater not encountered	48.0 inches Groundwater not encountered	48.0 inches Groundwater not encountered	33.0 inches (Refusal) Groundwater not encountered

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KEY MAP

SCALE: 1" = 10,000'



LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

PAVEMENT DEFLECTION TESTING DATA MAP

GMU

Date:	September 20, 2024
Project No.:	20-100-01

Plate 4.1

DRAWING: c:\2020\20-100-01\dwg\2010001_plate 4_fwd map_1_13017_86dc8c23.dwg PLOTTED: 1/5/2024 12:46 PM BY: Christian Llacsa

PEPPERTREE

ROCKROSE

PACIFIC PARK DR

ELDERWOOD

CANYON VISTA

CHASE

SANDBORN

73 TOLL ROAD

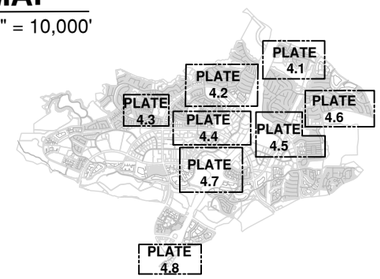
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9.07 13.03 10.37 5.93 9.25 10.81 11.76 9.6 5.71 6.53 9.98 10.02 7.79 7.72 7.92 8.89 10.2 9.97 12.98 10.83 8.07 7.41

DRAFT

KEY MAP

SCALE: 1" = 10,000'



LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

PAVEMENT DEFLECTION TESTING DATA MAP

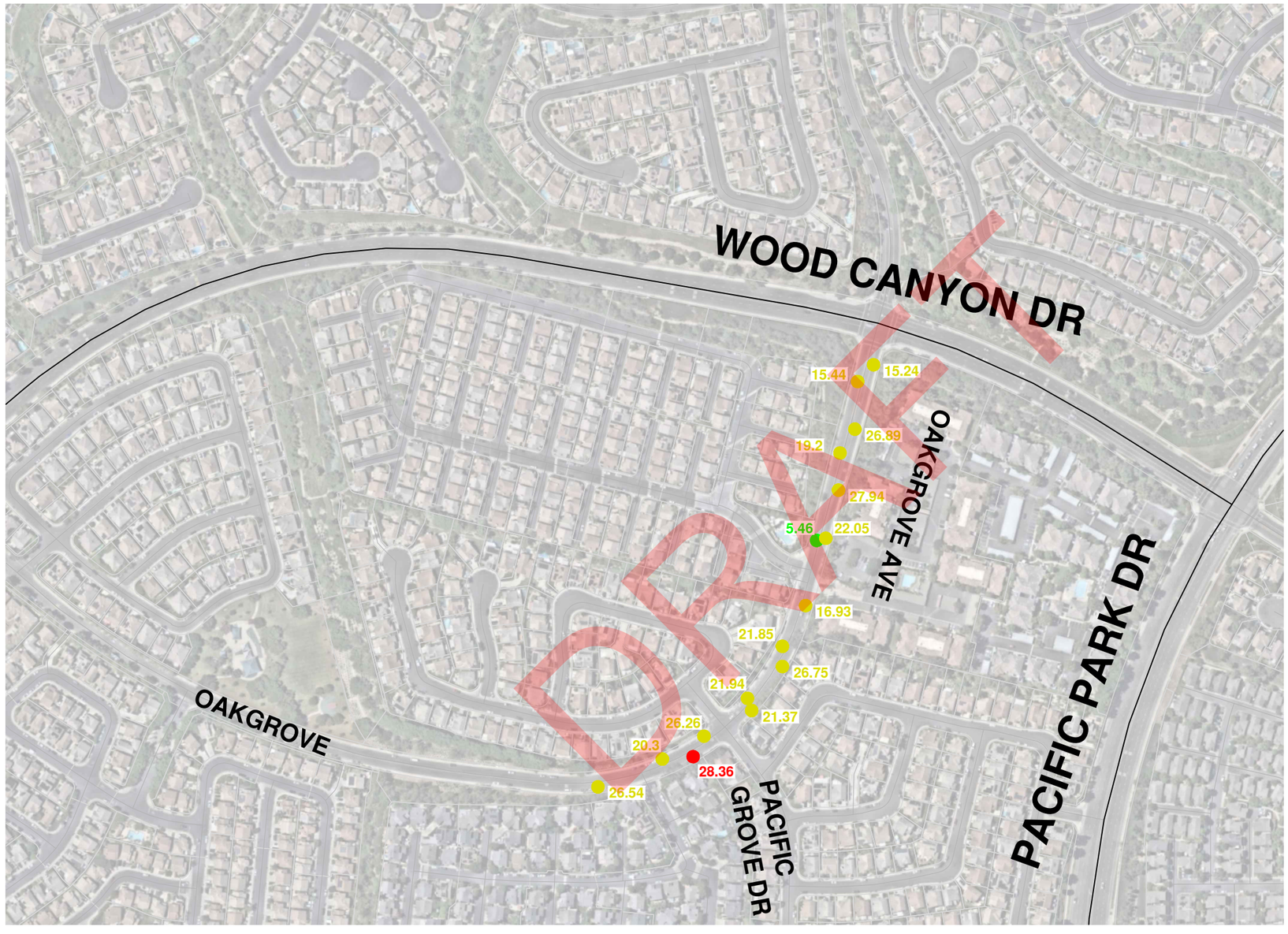
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Date: September 20, 2024

Project No.: 20-100-01

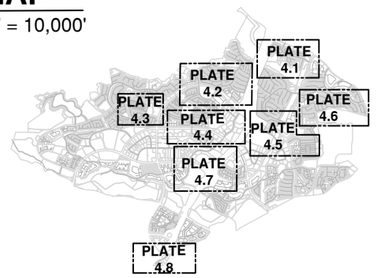
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KEY MAP

SCALE: 1" = 10,000'



LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

PAVEMENT DEFLECTION TESTING DATA MAP

GMU

Date: September 20, 2024

Project No.: 20-100-01

Plate 4.3

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WOOD CANYON DR

GRAND

PIERREMONT

ALISO VIEJO PKWY

ENTERPRISE

73 TOLL ROAD

23.47 25.79 20.32 15.98 18.3 17.72 12.33 18.66 14.67 15.18 14.12

2.93 3.64 3.32 3.23 3.2 4.41 4.04 3.7 3.77 3.27 3.25 4.57 4.71 4.7 3.42 5.53 6.23 3.02 3.22 2.89 4.14 7.09 8.31 8.82 7.97 6.42 7.89 9.03 11.6 10.74 8.36 10.18 8.64 6.91 10.48 8.94 8.11 8.98 10.77 8.81 5.86 8.7 8.53 9.52

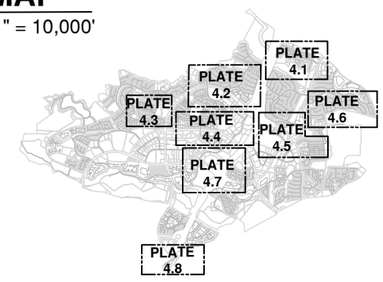
LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

KEY MAP

SCALE: 1" = 10,000'



PAVEMENT DEFLECTION TESTING DATA MAP

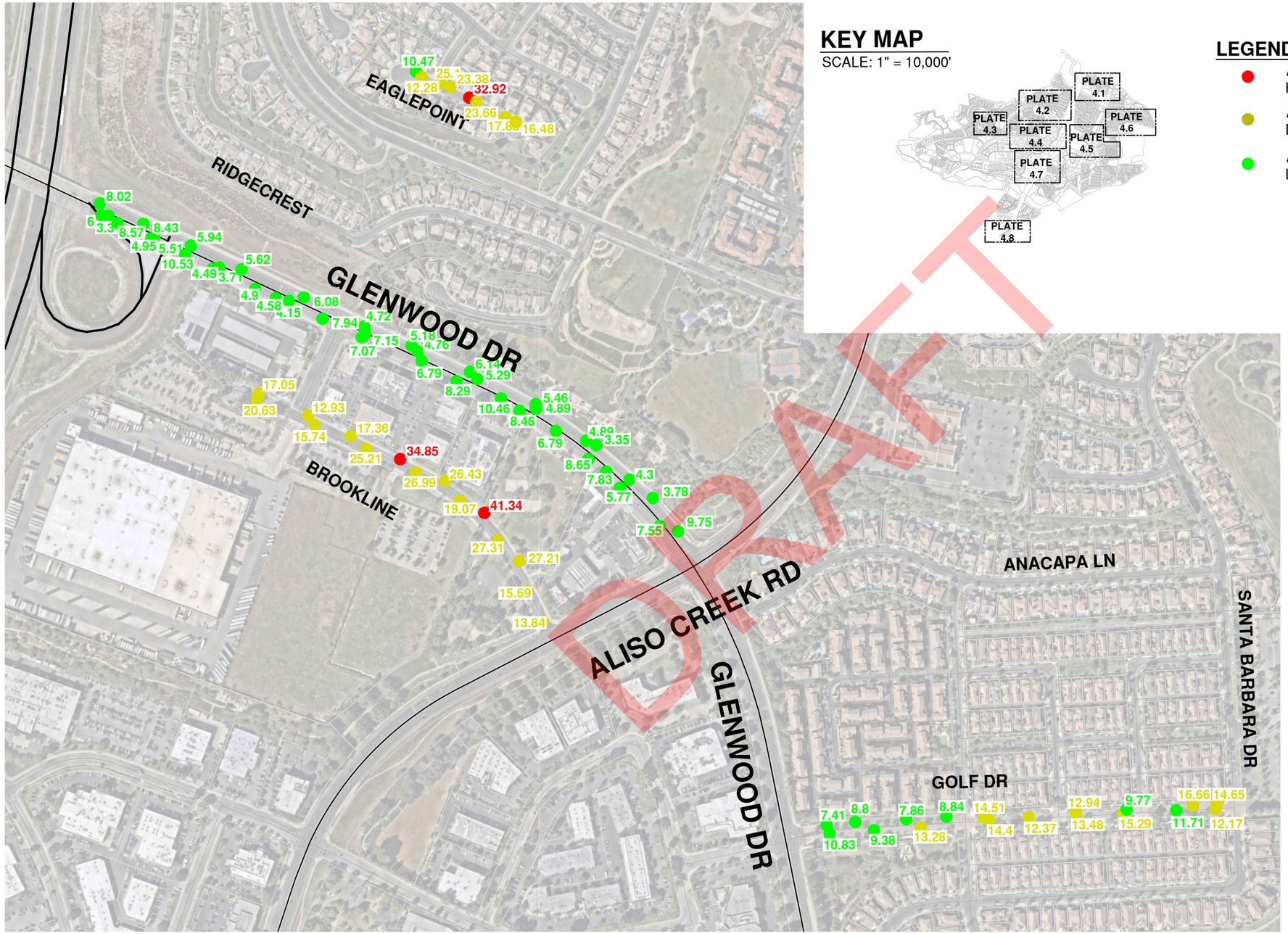
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Date: September 20, 2024

Project No.: 20-100-01

Plate 4.4

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KEY MAP

SCALE: 1" = 10,000'

LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 400'

PAVEMENT DEFLECTION TESTING DATA MAP

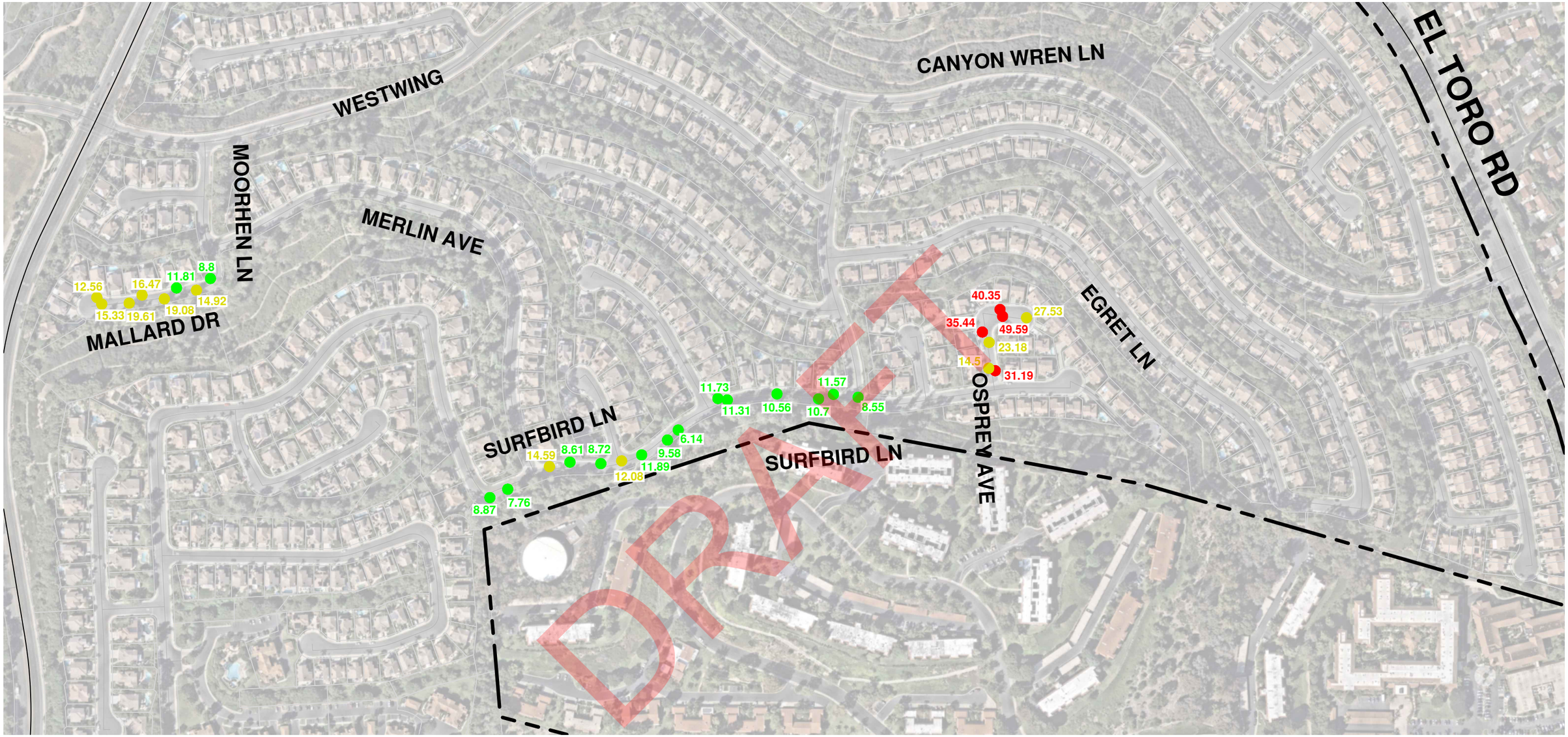
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Date: September 20, 2024

Project No.: 20-100-01

Plate 4.5

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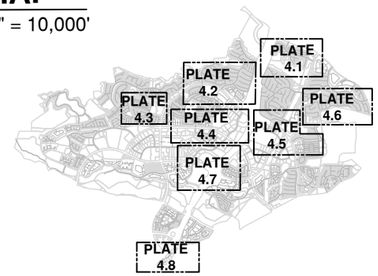
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- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

KEY MAP

SCALE: 1" = 10,000'



PAVEMENT DEFLECTION TESTING DATA MAP

GMU

Date: September 20, 2024

Project No.: 20-100-01

Plate 4.6

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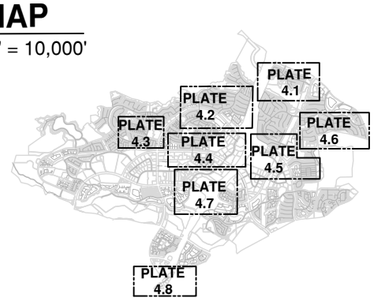


LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

KEY MAP

SCALE: 1" = 10,000'



0 300'

PAVEMENT DEFLECTION TESTING DATA MAP

GMU

Date: September 20, 2024

Project No.: 20-100-01

Plate 4.7

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ALISO NIGUEL RD

PACIFIC PARK DR

73 TOLL ROAD

MAREBLU

LA PAZ RD

MOUTON PKWY

32.52
26.27
20.94
20.64
26.62
38.51
16.86
24.66
12.53
24.22
12.58

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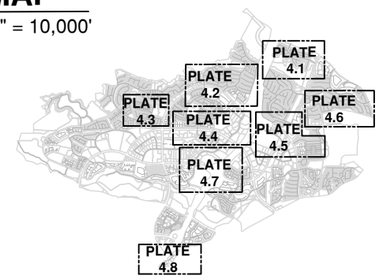
LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

0 300'

KEY MAP

SCALE: 1" = 10,000'



PAVEMENT DEFLECTION TESTING DATA MAP

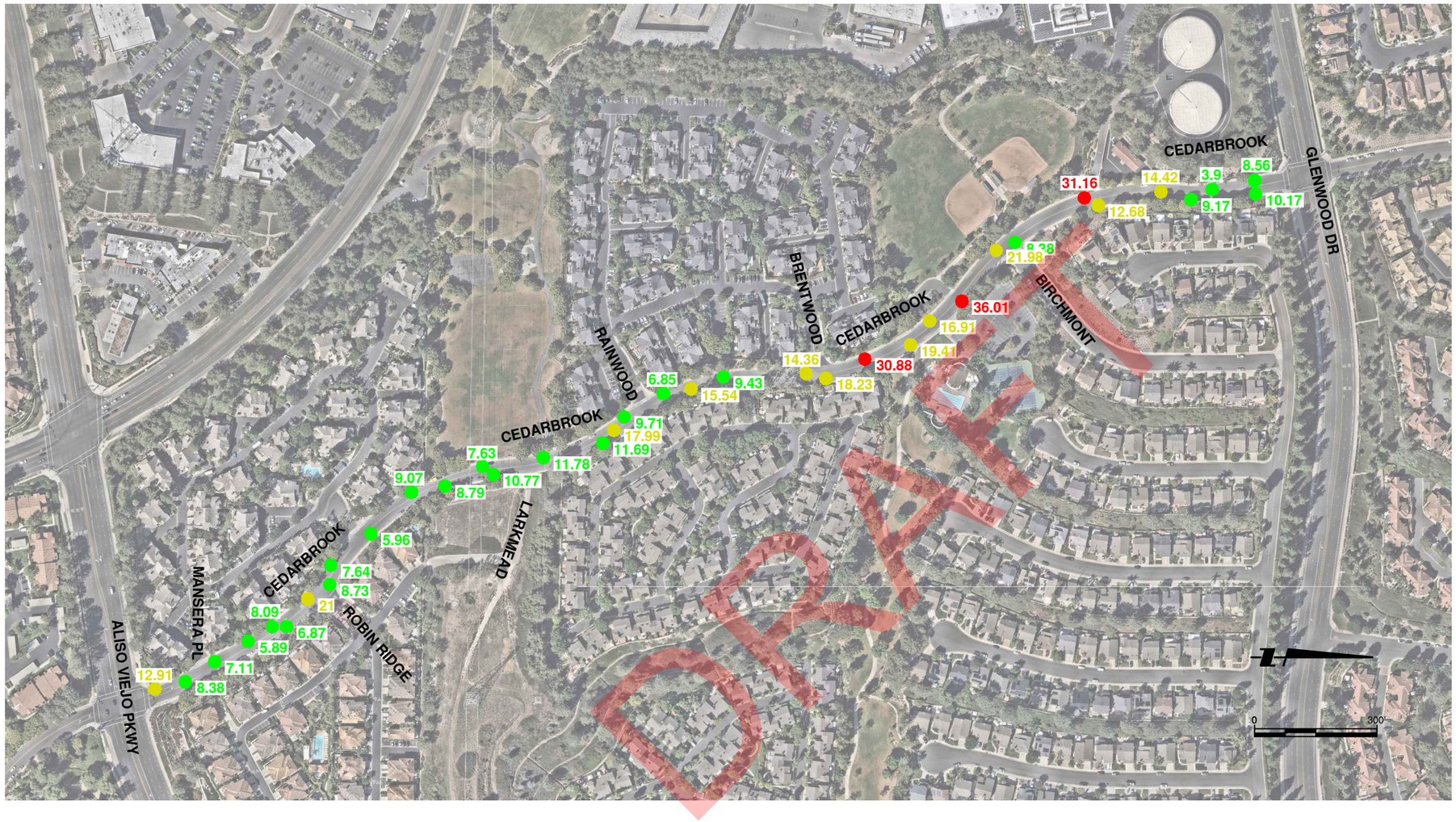
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Date: September 20, 2024

Project No.: 20-100-01

Plate 4.8

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LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

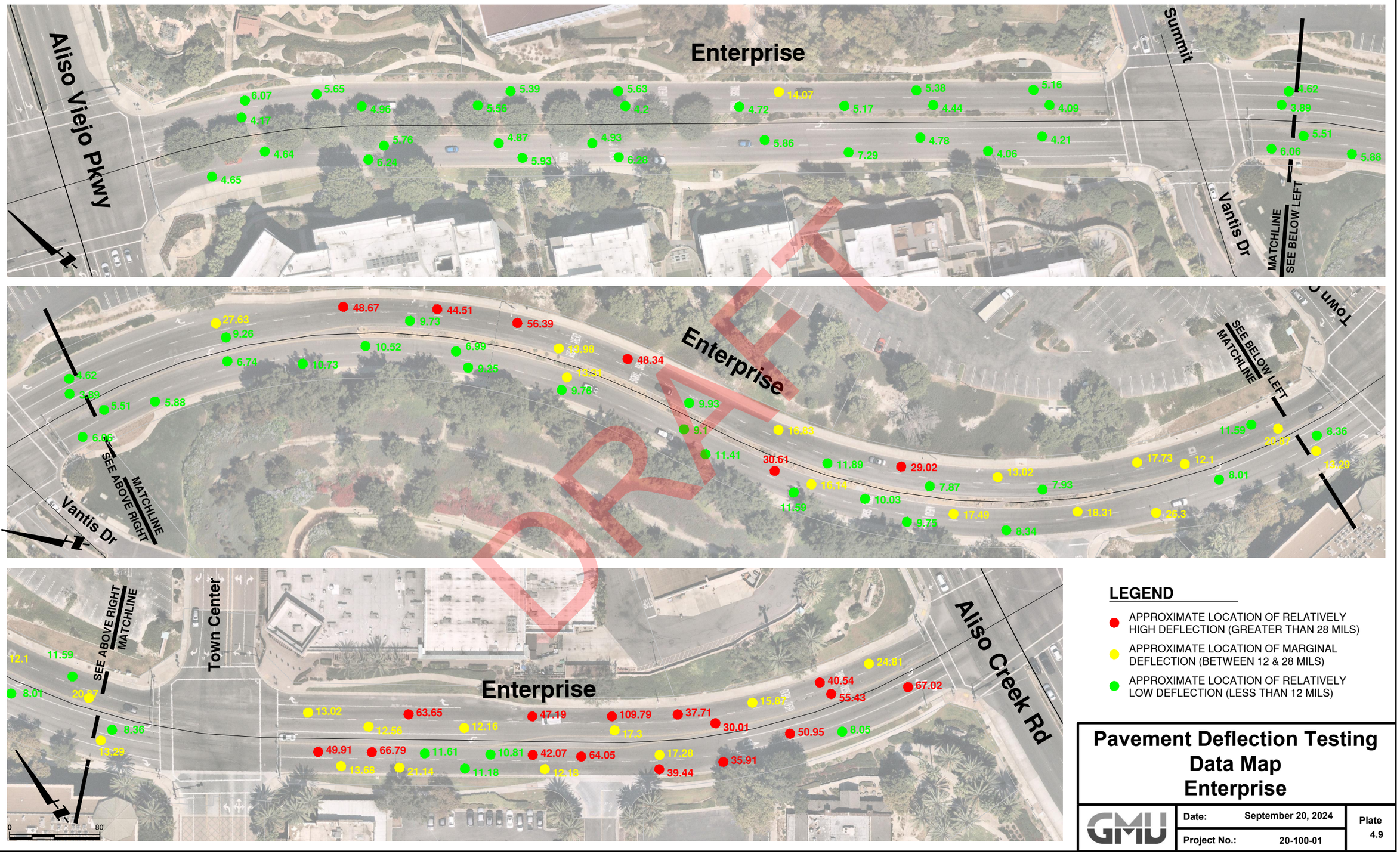
Pavement Deflection Testing Data Map

GMU

Date: February 2024

Project No.: 20-100-01

Plate 5



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LEGEND

- APPROXIMATE LOCATION OF RELATIVELY HIGH DEFLECTION (GREATER THAN 28 MILS)
- APPROXIMATE LOCATION OF MARGINAL DEFLECTION (BETWEEN 12 & 28 MILS)
- APPROXIMATE LOCATION OF RELATIVELY LOW DEFLECTION (LESS THAN 12 MILS)

Pavement Deflection Testing Data Map Enterprise

GMU

Date:	September 20, 2024
Project No.:	20-100-01

Plate 4.9

Appendix A
Select Photographs

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Photo 1: Coring location C-15 in the Westbound Lane of Chase. Surface contains low-severity longitudinal and transverse cracking, and low-severity weathering.



Photo 2: Core sample C-15 measuring 9.25-inches thick AC and a crack extends through the entire AC layer.

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Photo 3: Coring location C-16 in the center of Sierra Circle. Surface contains medium-severity longitudinal and transverse cracking, low-to-medium-severity alligator cracking, and medium-severity weathering.



Photo 4: Core sample C-16 measuring 5.5-inches thick AC.

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Photo 5: Coring location C-24 in the Northbound Lane of Chickadee Lane. Surface contains medium-severity longitudinal and transverse cracking, low-severity alligator cracking, and low-severity weathering.



Photo 6: Core sample C-24 measuring 6.0-inches thick AC. Lifts are intact.

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Photo 7: Coring location C-26 in the Southbound Lane of Surfbird Lane. Surface contains medium-severity longitudinal and transverse cracking, and low-to-medium-severity weathering.



Photo 8: Core sample C-26 measuring 7.75-inches thick AC. Lifts are separated.

DRAFT



Photo 9: Coring location C-29 in the Westbound of Coral Bill Lane. Surface contains medium-severity longitudinal and transverse cracking, high-severity alligator cracking, and high-severity weathering.

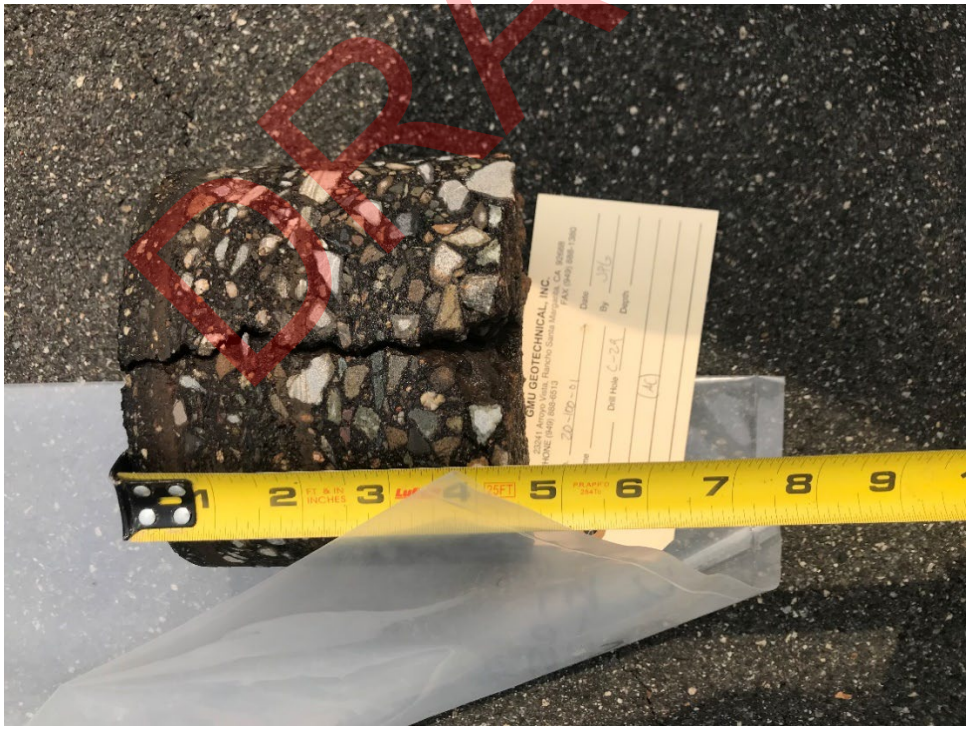


Photo 10: Core sample C-29 measuring 5.0-inches thick AC and a crack extends through the entire AC layer.

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Photo 11: Coring location C-38 in the Eastbound of Hollyleaf. Surface contains low-to-medium-severity longitudinal and transverse cracking, and low-to-medium-severity weathering.



Photo 12: Core sample C-38 measuring 6.0-inches thick AC and a crack extends through the entire AC layer.

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Appendix B
Laboratory Data Summary

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GMU PAVEMENT ENGINEERING

TABLE B-1
SUMMARY OF SOIL LABORATORY DATA

Sample Information			Geologic Unit	USCS Group Symbol	In Situ Water Content, %	In Situ Dry Unit Weight, pcf	In Situ Saturation, %	Sieve/Hydrometer				Atterberg Limits			Compaction		Expansion Index	R-Value	Chemical Test Results			
Boring Number	Depth, feet	Elevation, feet						Gravel, %	Sand, %	<#200, %	<2μ, %	LL	PL	PI	Maximum Dry Unit Weight, pcf	Optimum Water Content, %			pH	Sulfate (ppm)	Chloride (ppm)	Min. Resistivity (ohm/cm)
C- 1	0.63	NA	Qaf	MH	41.2														7.79	1002		
C- 1	1.27	NA	Qaf	MH	53.9					79		79	38	41								
C- 2	0.05	NA	Qaf	MH	41.4														8.09	144		
C- 2	0.67	NA	Qaf	ML	69.3										57.5	56.0						
C- 3	0.56	NA	Qaf	MH	76.8														7.79	465		
C- 4	0.56	NA	Qaf	MH	44.9													19				
C- 6	0.54	NA	Qaf	CL	25.8													23				
C- 7	0.46	NA	Qaf	CH	30.3					62		54	23	31	104.5	18.0						
C- 8	0.48	NA	Qaf	MH	28.9					60		53	31	22								
C- 9	1.02	NA	Qaf	CL-CH	27.9																	
C-10	0.85	NA	Qaf	SC	20.9																	
C-11	0.5	NA	Qaf	SM	10.6										126.5	10.0						
C-12	0.54	NA	Qaf	MH	49.6					81		71	36	35								
C-13	0.71	NA	Qaf	MH	37.0													24				
C-14	7.5	NA	Qaf	CH	49.9					73		73	31	42								
C-15	0.77	NA	Qaf	CL	19.2										115.0	14.0						
C-16	0.46	NA	Qaf	CL	37.0													25				
C-17	1.08	NA	Qaf	CL	21.6										115.0	14.0						
C-18	0.77	NA	Qaf	CH	77.4					58		100	36	64								
C-19	0.73	NA	Qaf	MH	39.7													30				
C-20	1	NA	Qaf	ML	81.3										52.5	69.0						
C-21	0.42	NA	Qaf	MH	88.7					85		136	69	67								
C-22	0.5	NA	Qaf	SC-CL	13.2													19				
C-23	0.67	NA	Qaf	SC	10.8					39		34	16	18								
C-24	0.5	NA	Qaf	SC	10.9										127.5	8.5						

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GMU_TABLE_SOIL_LAB_DATA 20-100-01.GPJ FNC AB GWGN01.GDT 2/20/23

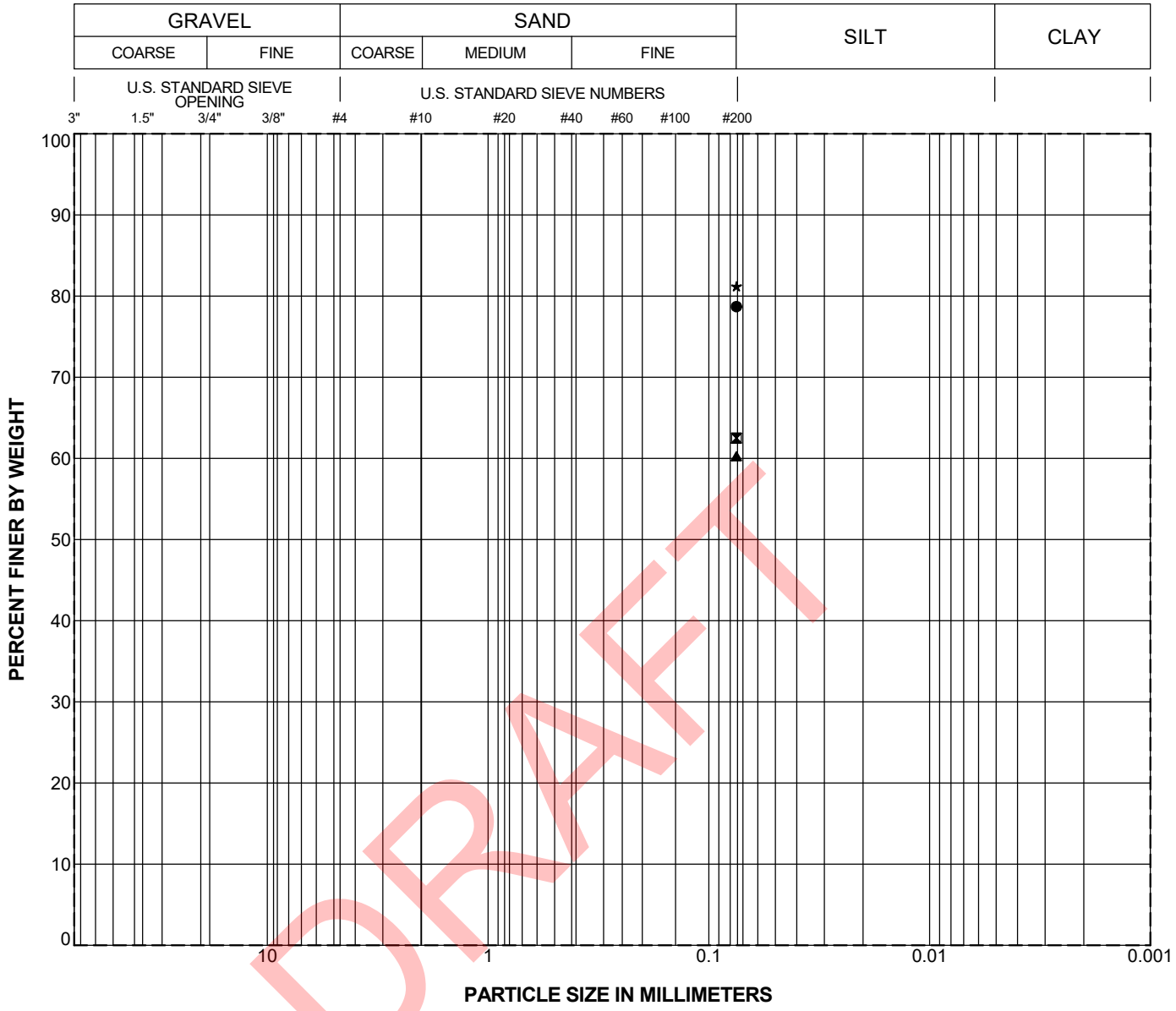
Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01

TABLE B-1
SUMMARY OF SOIL LABORATORY DATA

Sample Information			Geologic Unit	USCS Group Symbol	In Situ Water Content, %	In Situ Dry Unit Weight, pcf	In Situ Satur-ation, %	Sieve/Hydrometer				Atterberg Limits			Compaction		Expansion Index	R-Value	Chemical Test Results			
Boring Number	Depth, feet	Elevation, feet						Gravel, %	Sand, %	<#200, %	<2μ, %	LL	PL	PI	Maximum Dry Unit Weight, pcf	Optimum Water Content, %			pH	Sulfate (ppm)	Chloride (ppm)	Min. Resistivity (ohm/cm)
C-25	0.42	NA	Qaf	SC-CL	14.6																	
C-26	1	NA	Qaf	CL	20.7																	
C-26	1.75	NA	Qaf	CH	28.2																	
C-26	2.331	NA	Qaf	SM	9.6																	
C-27	0.69	NA	Qaf	CL	12.9																	
C-28	0.42	NA	Qaf	CL	24.1					51		49	19	30				18				
C-29	0.42	NA	Qaf	SC	11.1					31		28	18	10								
C-30	0.38	NA	Qaf	CL-SC	12.9										127.5	10.5						
C-31	0.81	NA	Qaf	CL	12.2																	
C-32	0.67	NA	Qaf	CL	7.8																	
C-33	0.7	NA	Qaf	SC	12.4					35		29	17	12				30				
C-34	0.75	NA	Qaf	SC	13.2					39		42	20	22								
C-34	1.5	NA	Qaf	CL	21.0					71		41	20	21	114.0	16.0						
C-35	0.92	NA	Qaf	CL	13.3																	
C-36	1.17	NA	Qaf	SC	10.5																	
C-37	1.33	NA	Qaf	SC	13.5																	
C-38	0.5	NA	Qaf	SC	12.9					35		29	15	14	129.0	9.5		23				
C-40	0.96	NA	Qaf	MH	73.2					51		98	59	39								
C-41	0.61	NA	Qaf	MH	24.9																	

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GMU_TABLE_SOIL_LAB_DATA 20-100-01.GPJ FNC AB GWGN01.GDT 2/20/23



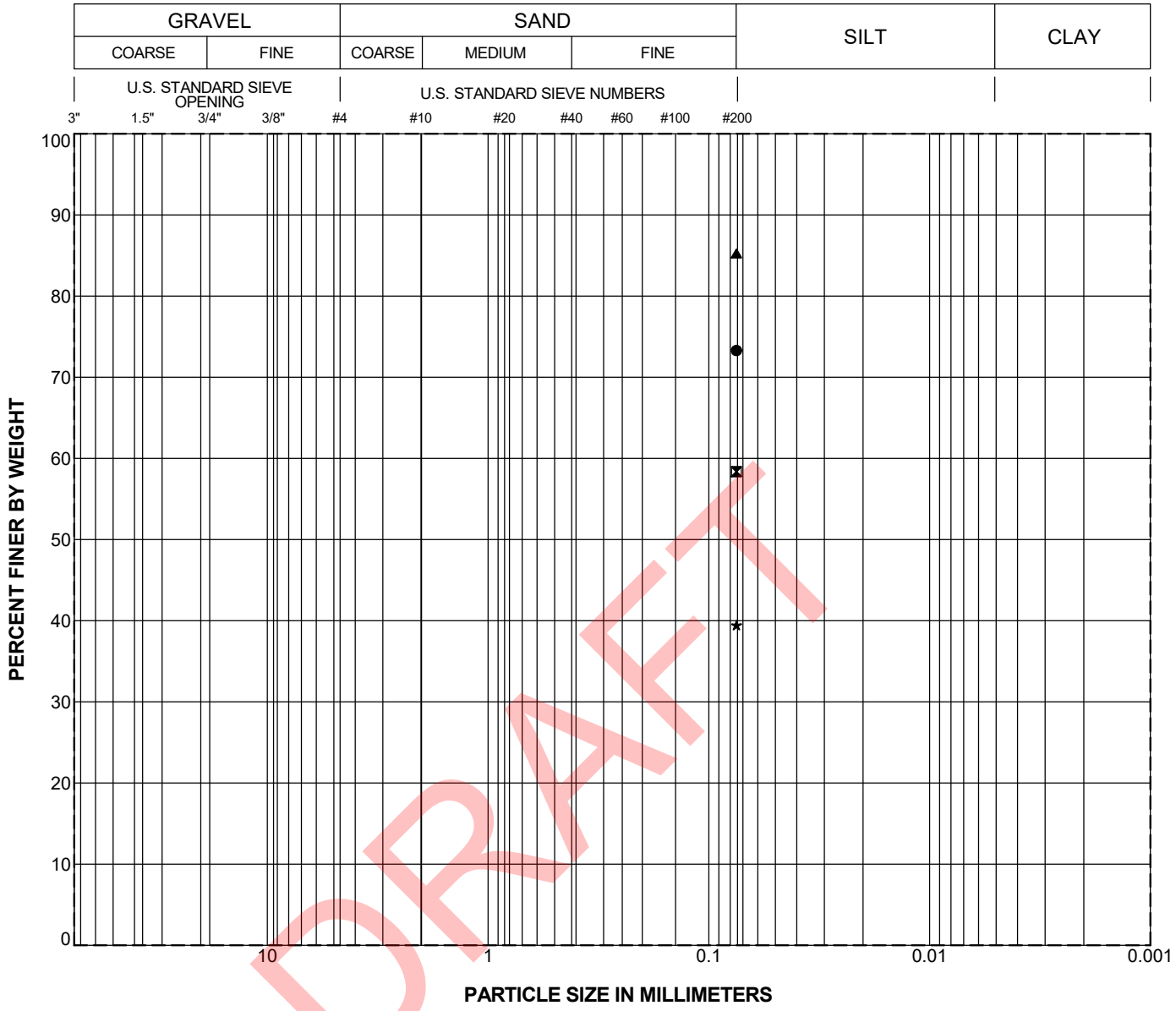
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	LL	PI	Classification
C- 1	1.3	Qaf	●	79	41	ELASTIC SILT with SAND (MH)
C- 7	0.5	Qaf	⊠	54	31	SANDY FAT CLAY (CH)
C- 8	0.5	Qaf	▲	53	22	SANDY ELASTIC SILT (MH)
C-12	0.5	Qaf	★	71	35	ELASTIC SILT with SAND (MH)

GMU_GRAIN_SIZE 20-100-01.GPJ 11/15/22

PARTICLE SIZE DISTRIBUTION

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



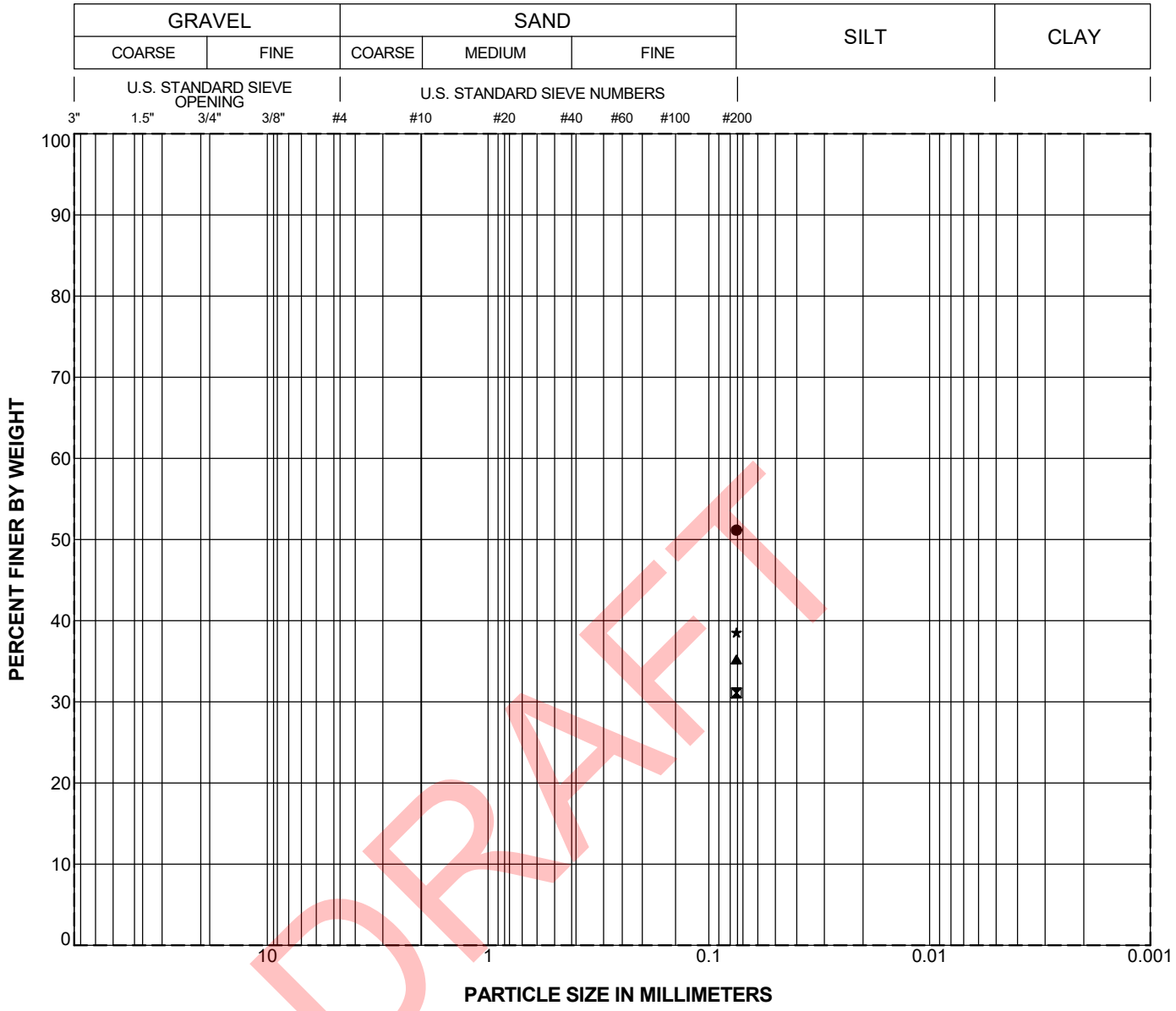
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	LL	PI	Classification
C-14	7.5	Qaf	●	73	42	FAT CLAY (CH)
C-18	0.8	Qaf	⊠	100	64	SANDY FAT CLAY (CH)
C-21	0.4	Qaf	▲	136	67	ELASTIC SILT (MH)
C-23	0.7	Qaf	★	34	18	CLAYEY SAND (SC)

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Project No. 20-100-01



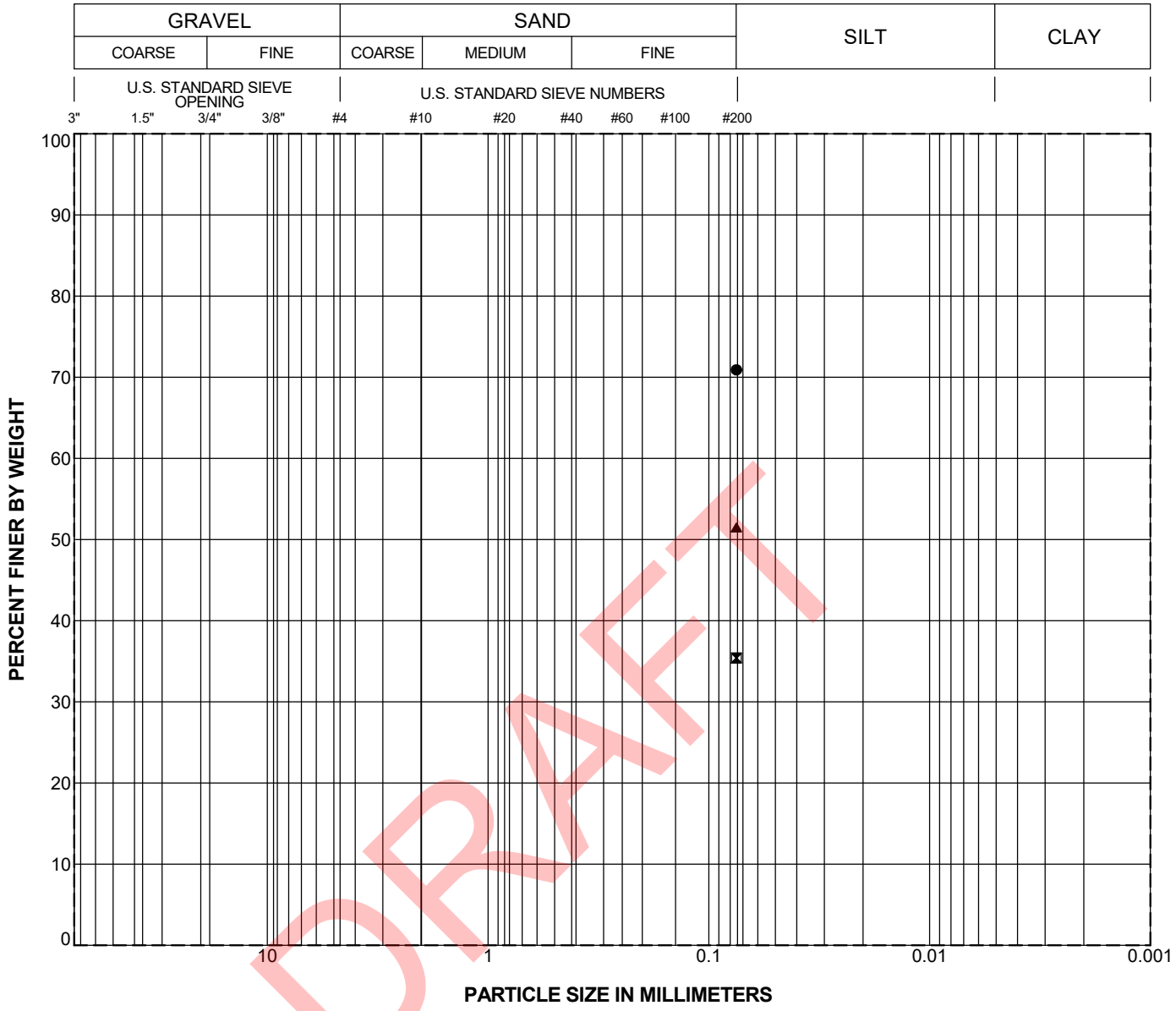
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	LL	PI	Classification
C-28	0.4	Qaf	●	49	30	SANDY LEAN CLAY
C-29	0.4	Qaf	⊠	28	10	CLAYEY SAND (SC)
C-33	0.7	Qaf	▲	29	12	CLAYEY SAND (SC)
C-34	0.8	Qaf	★	42	22	CLAYEY SAND (SC)

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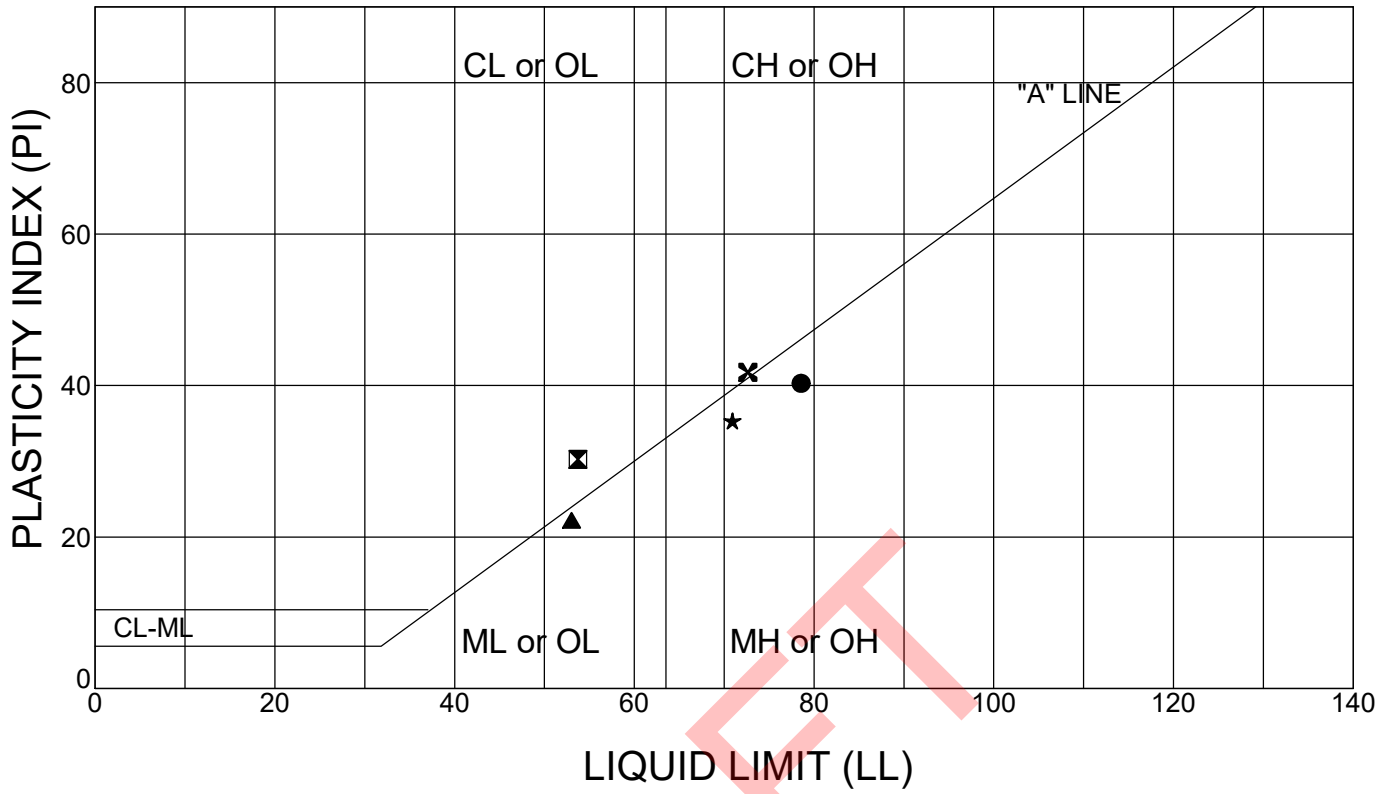
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	LL	PI	Classification
C-34	1.5	Qaf	●	41	21	LEAN CLAY with SAND (CL)
C-38	0.5	Qaf	⊠	29	14	CLAYEY SAND (SC)
C-40	1.0	Qaf	▲	98	39	SANDY ELASTIC SILT (MH)

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Project No. 20-100-01



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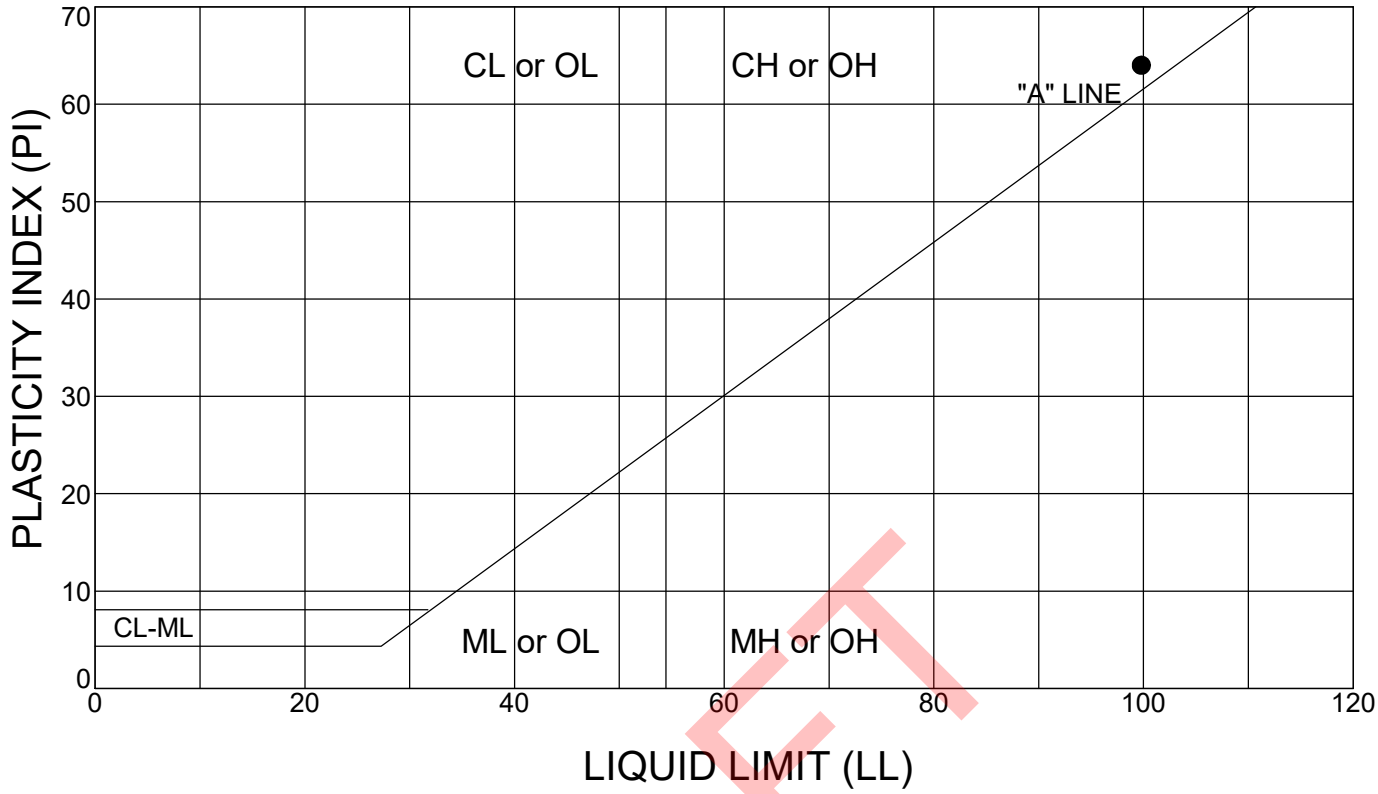
Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C- 1	1.3	Qaf	●	54	79	38	41	ELASTIC SILT with SAND (MH)
C- 7	0.5	Qaf	⊠	30	54	23	31	SANDY FAT CLAY (CH)
C- 8	0.5	Qaf	▲	29	53	31	22	SANDY ELASTIC SILT (MH)
C-12	0.5	Qaf	★	50	71	36	35	ELASTIC SILT with SAND (MH)
C-14	7.5	Qaf	✖	50	73	31	42	FAT CLAY (CH)

LIMITS 20-100-01.GPJ 11/15/22

ATTERBERG LIMITS

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01

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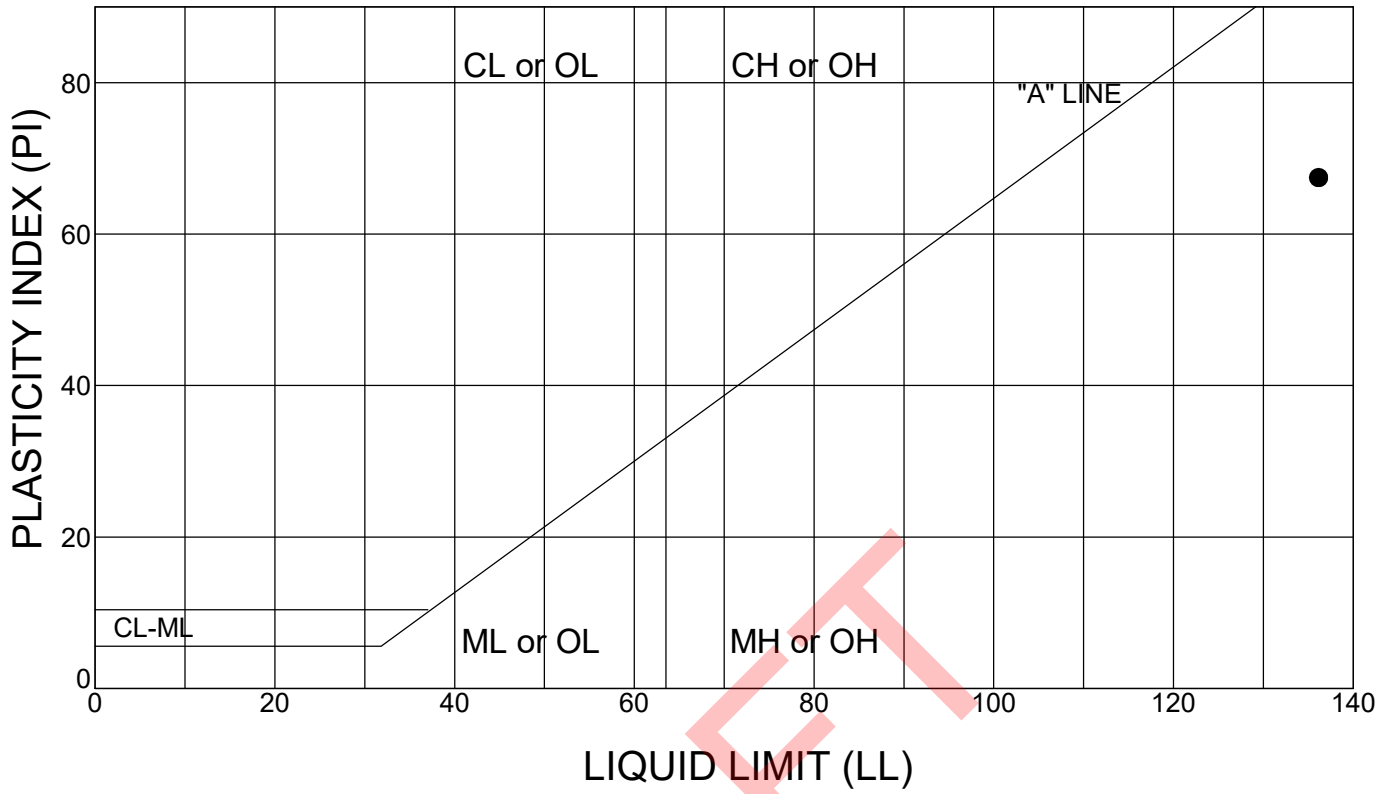
Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C-18	0.8	Qaf	●	77	100	36	64	SANDY FAT CLAY (CH)

LIMITS 20-100-01.GPJ 11/15/22

ATTERBERG LIMITS

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01

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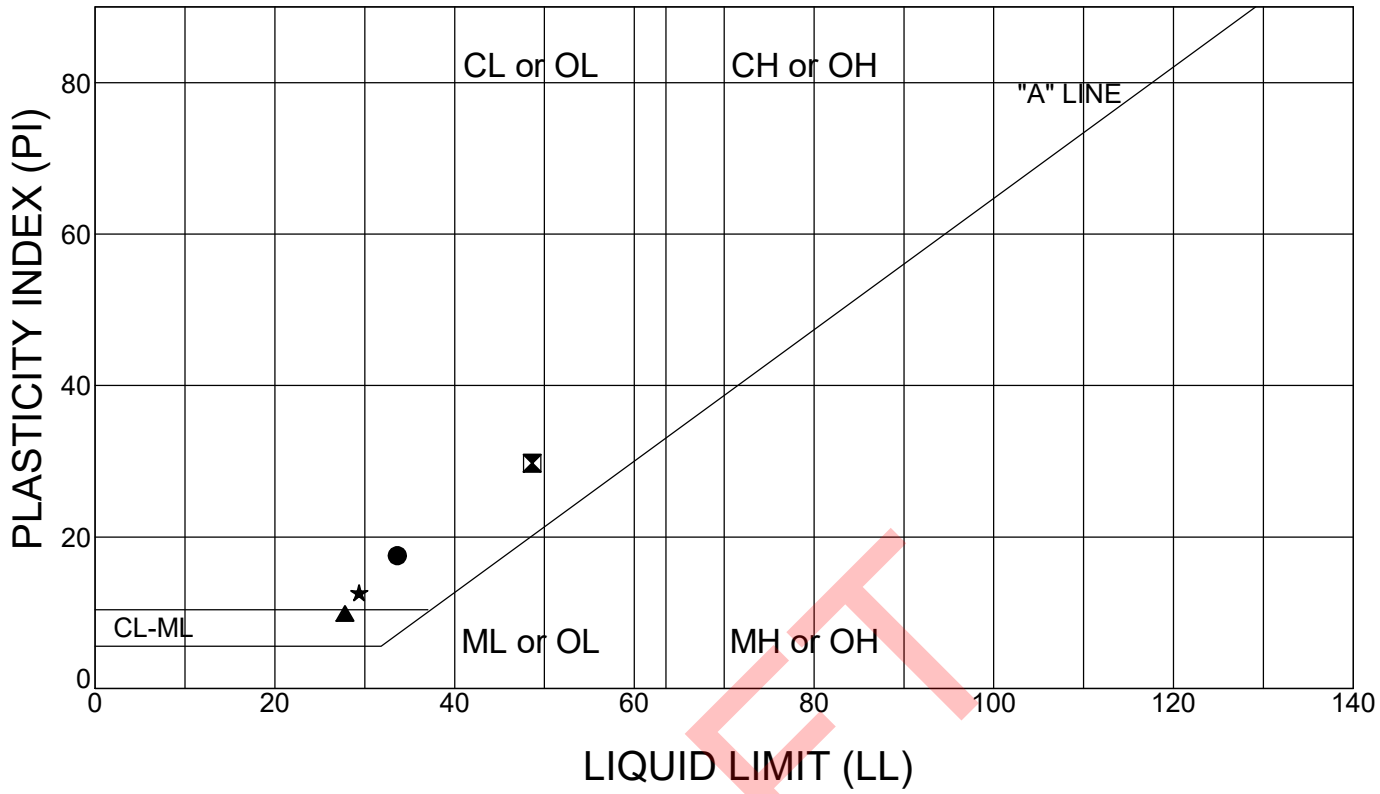
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C-21	0.4	Qaf	●	89	136	69	67	ELASTIC SILT (MH)

LIMITS 20-100-01.GPJ 11/15/22

ATTERBERG LIMITS

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



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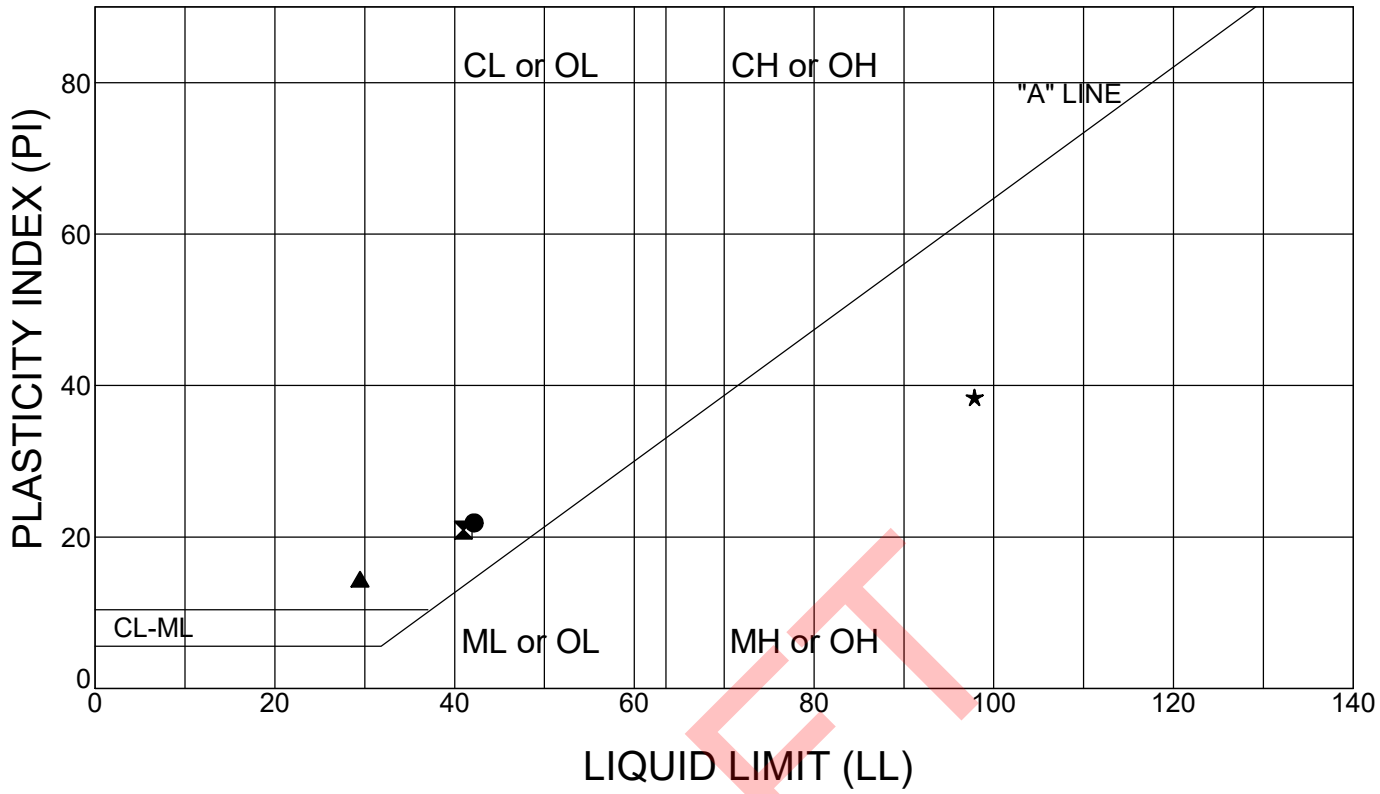
Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C-23	0.7	Qaf	●	11	34	16	18	CLAYEY SAND (SC)
C-28	0.4	Qaf	⊠	24	49	19	30	SANDY LEAN CLAY
C-29	0.4	Qaf	▲	11	28	18	10	CLAYEY SAND (SC)
C-33	0.7	Qaf	★	12	29	17	12	CLAYEY SAND (SC)

LIMITS 20-100-01.GPJ 11/15/22

ATTERBERG LIMITS

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01

GMU



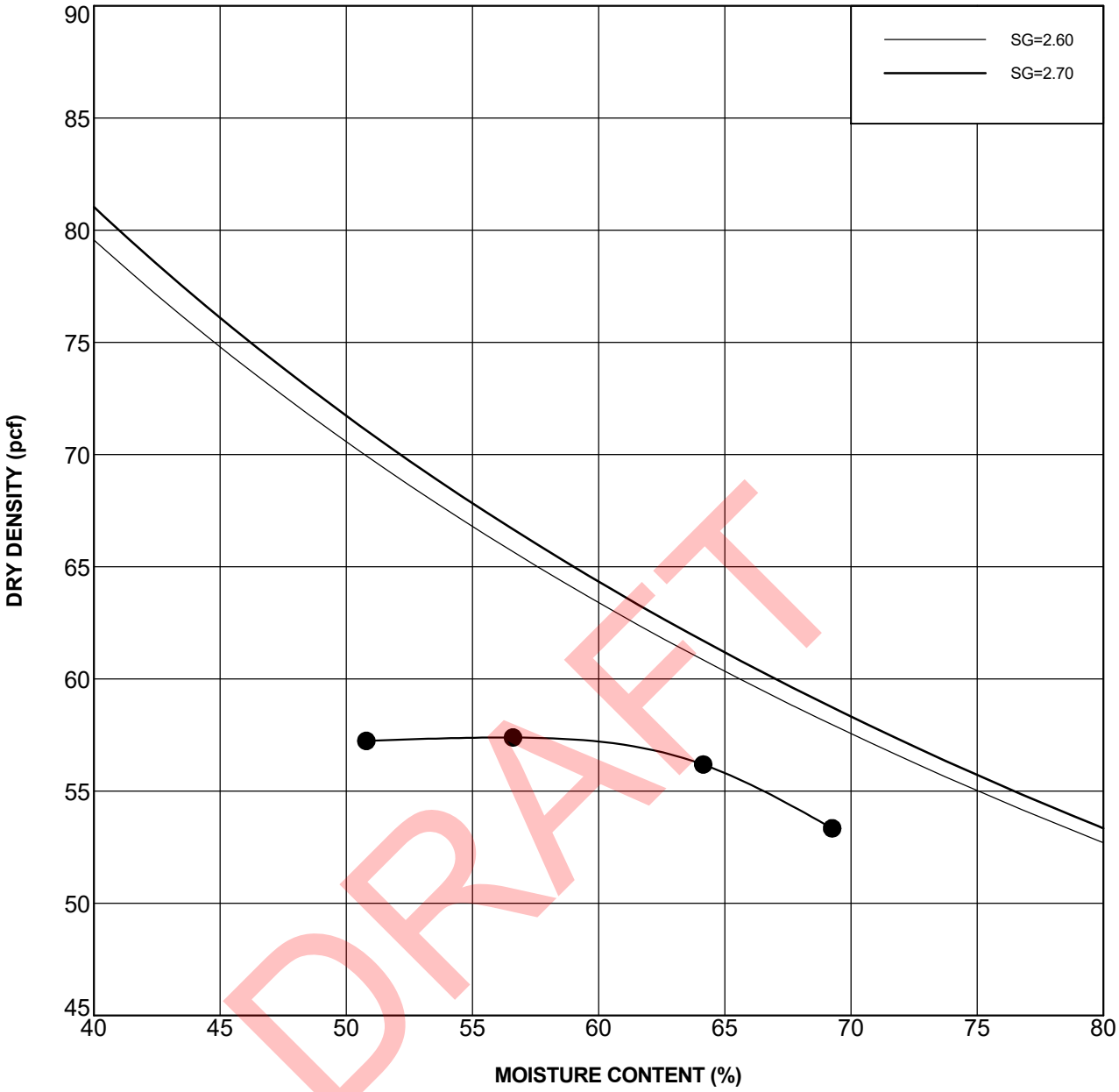
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Test Symbol	Insitu Water Content (%)	LL	PL	PI	Classification
C-34	0.8	Qaf	●	13	42	20	22	CLAYEY SAND (SC)
C-34	1.5	Qaf	⊠	21	41	20	21	LEAN CLAY with SAND (CL)
C-38	0.5	Qaf	▲	13	29	15	14	CLAYEY SAND (SC)
C-40	1.0	Qaf	★	73	98	59	39	SANDY ELASTIC SILT (MH)

LIMITS 20-100-01.GPJ 11/15/22

ATTERBERG LIMITS

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



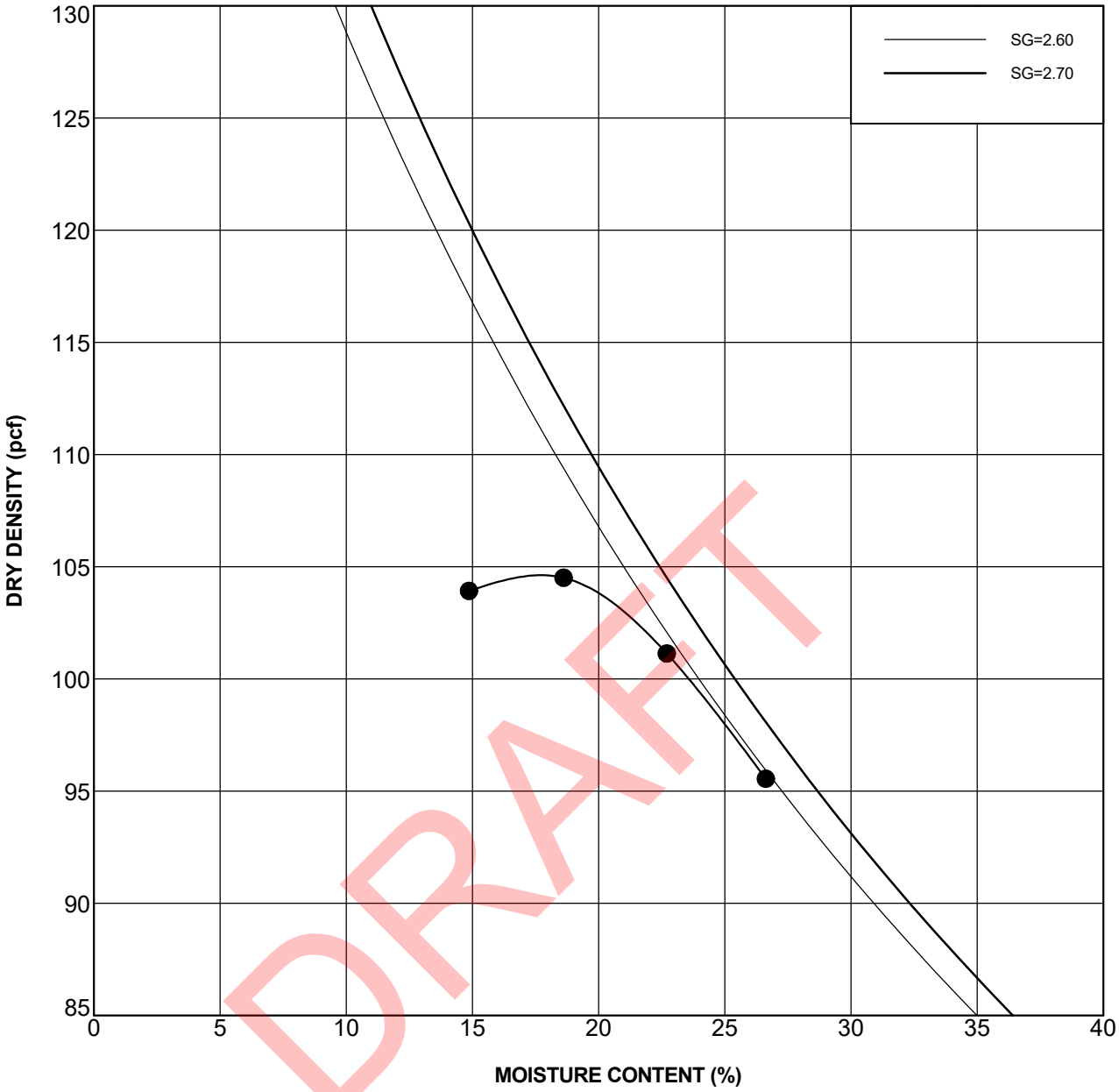
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 2	0.7	Qaf	●	57.5	56	Diatomaceous Silt (ML)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



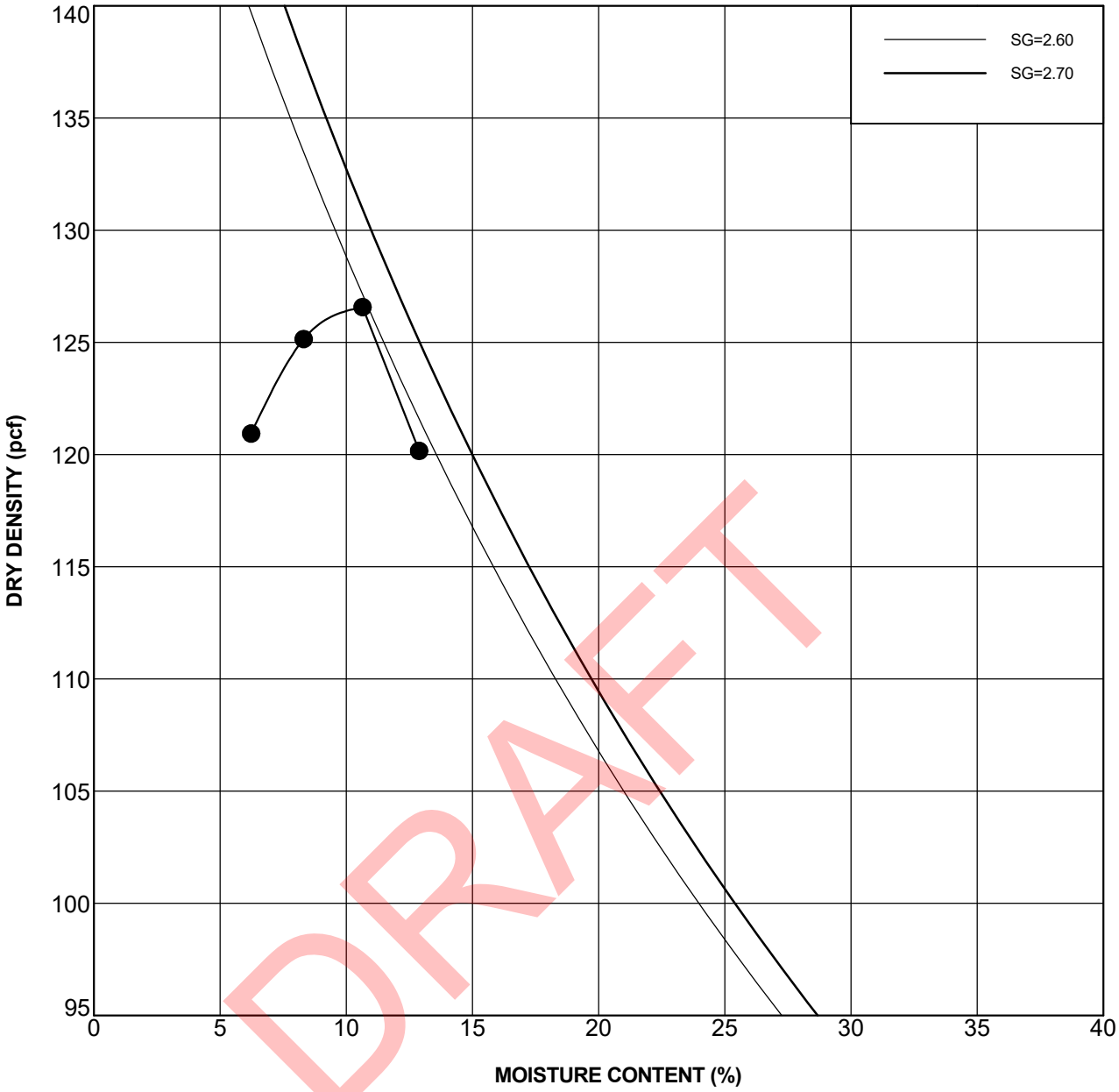
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C- 7	0.5	Qaf	●	104.5	18	SANDY FAT CLAY (CH)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



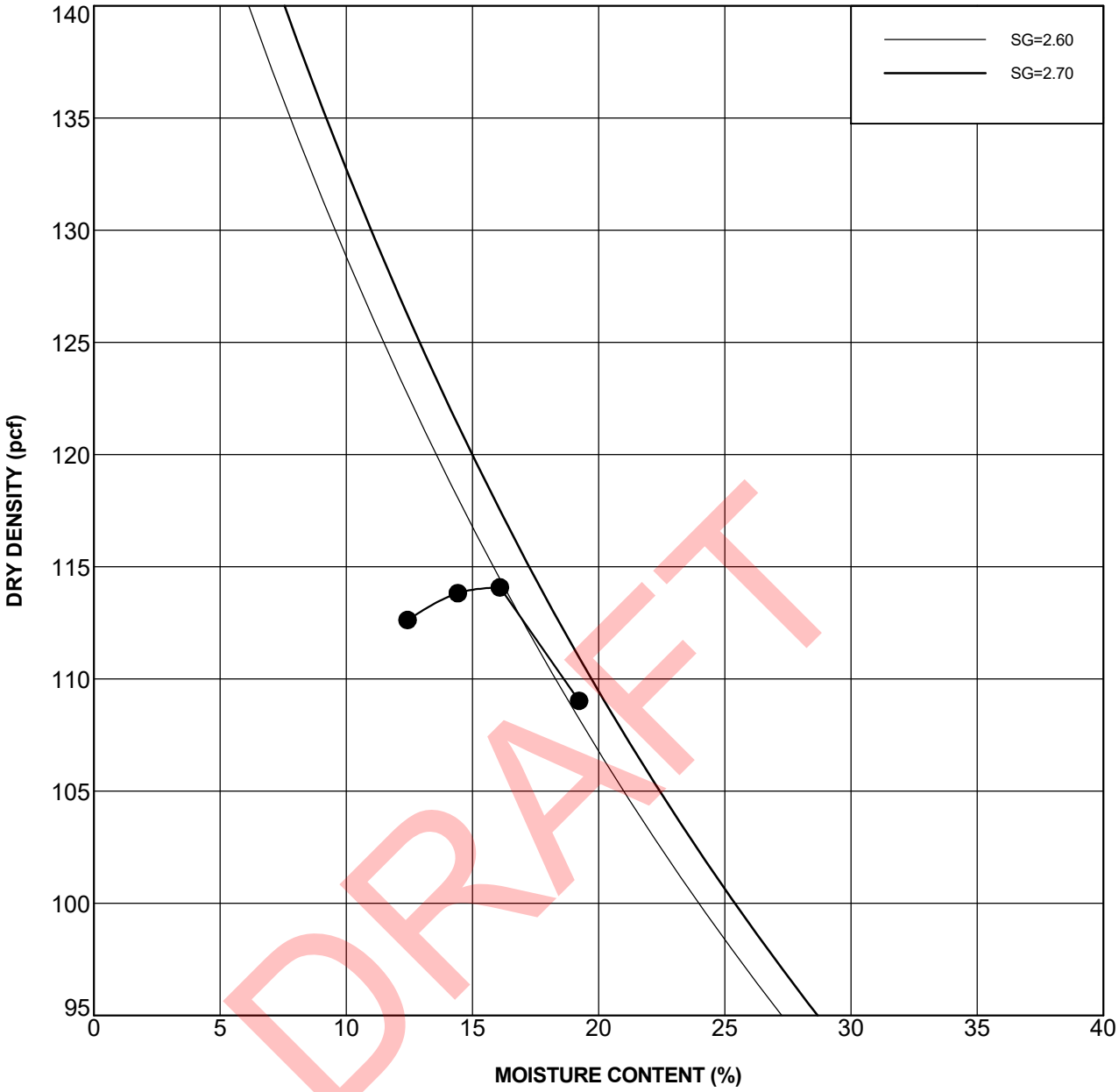
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-11	0.5	Qaf	●	126.5	10	SILTY SAND (SM)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



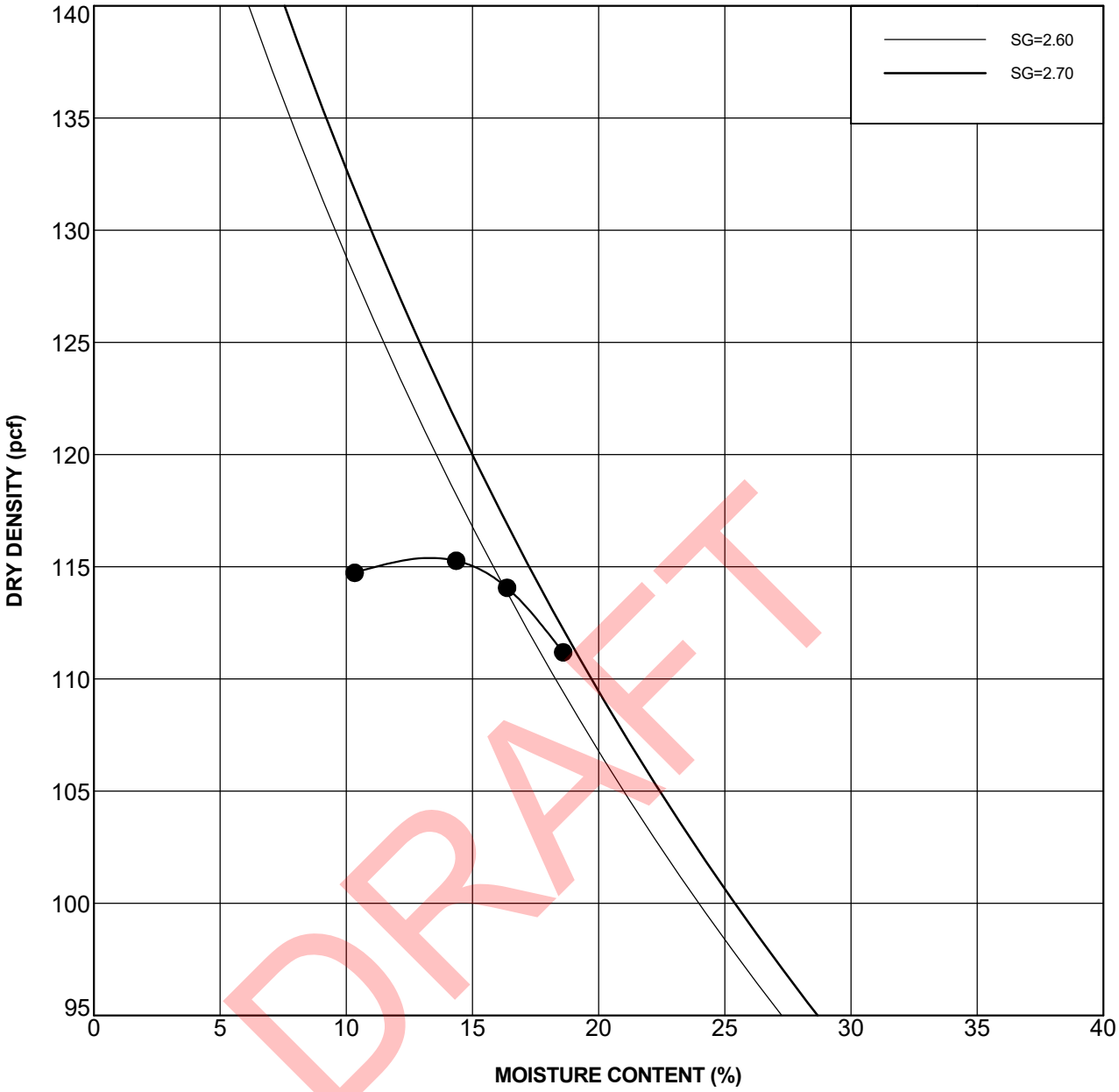
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-15	0.8	Qaf	●	115	14	SANDY CLAY (CL)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



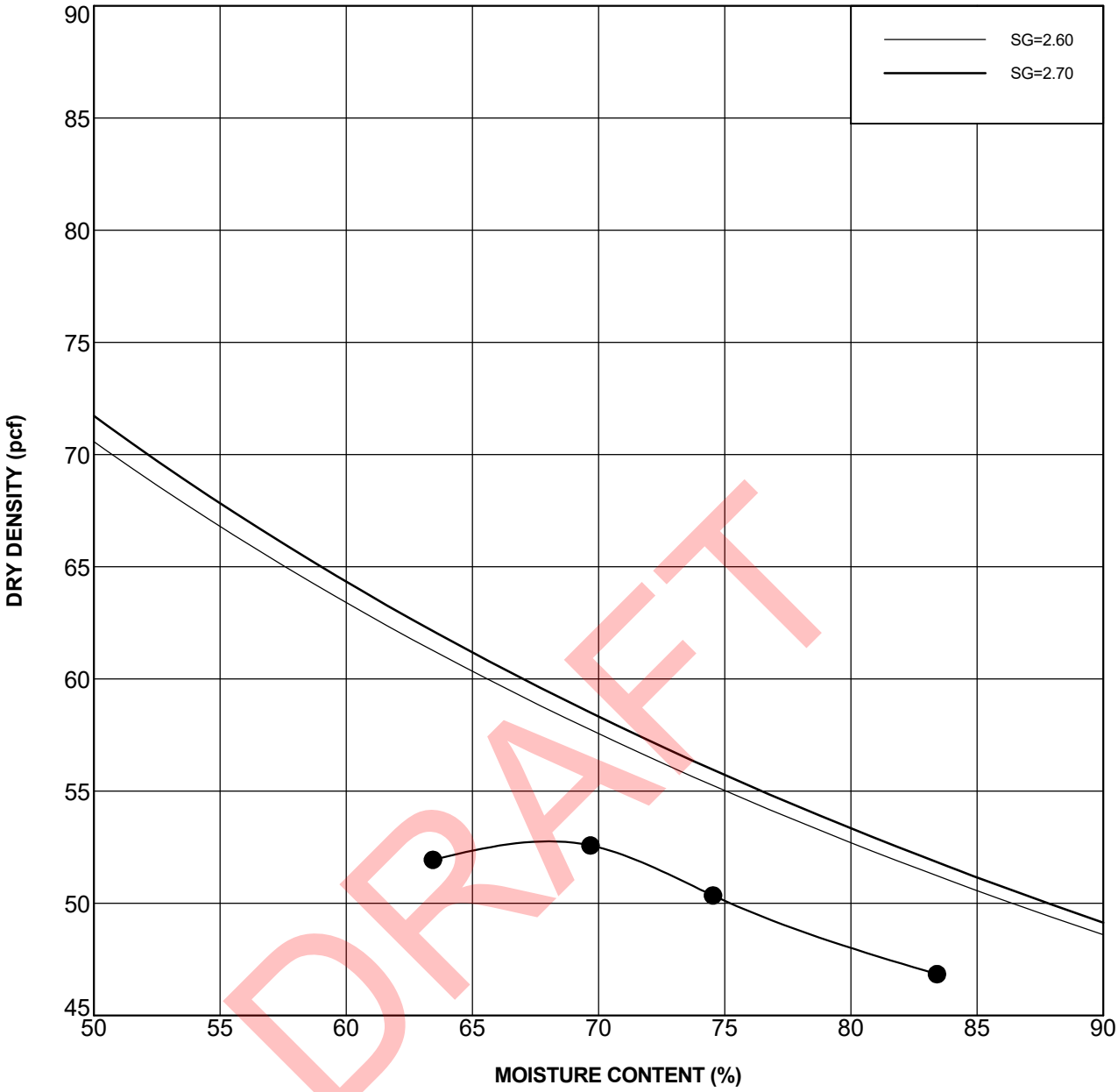
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-17	1.1	Qaf	●	115	14	SANDY CLAY (CL)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



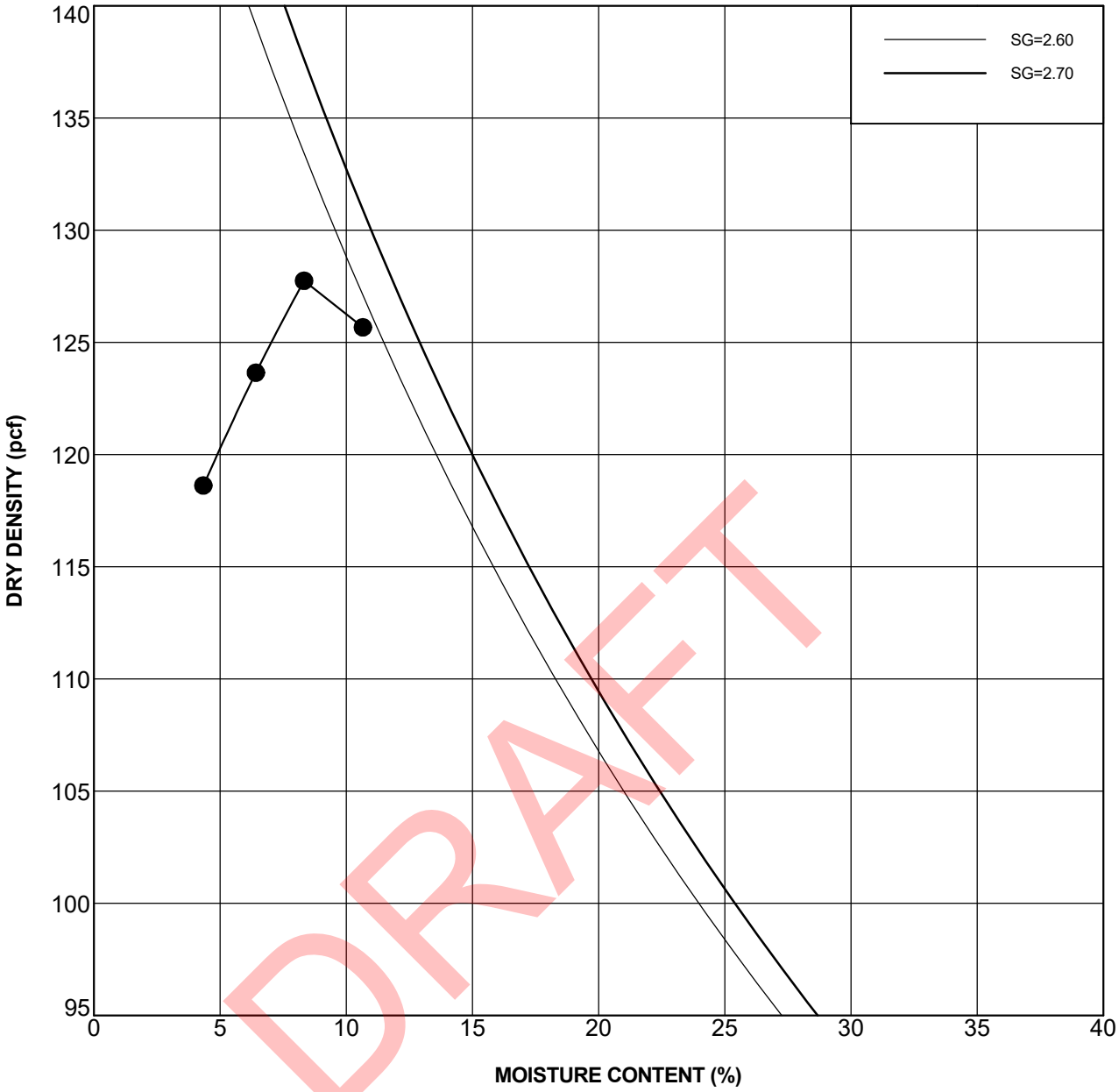
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-20	1.0	Qaf	●	52.5	69	DIATOMACEOUS SILT (ML)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



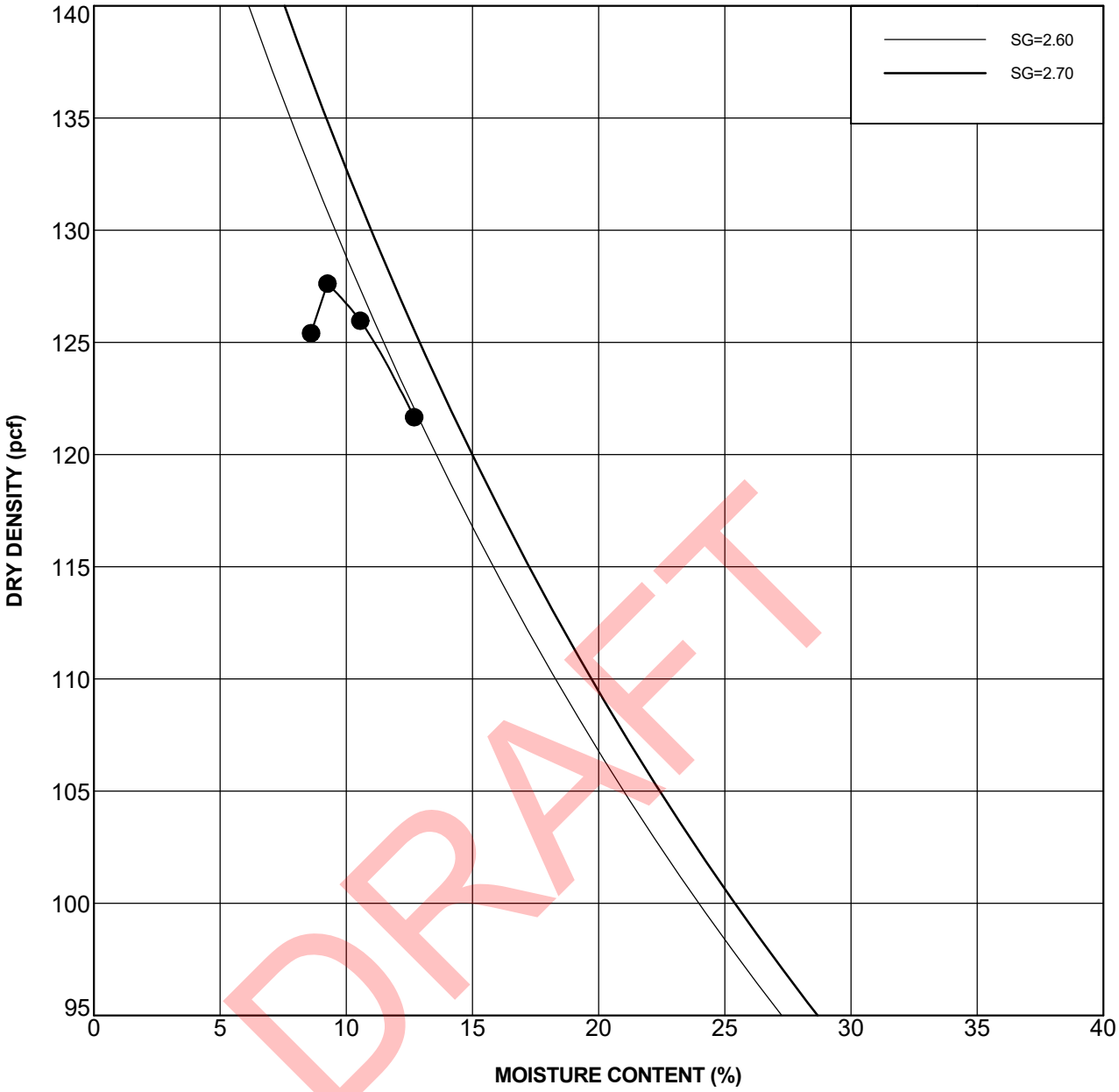
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-24	0.5	Qaf	●	127.5	8.5	CLAYEY SAND (SC)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



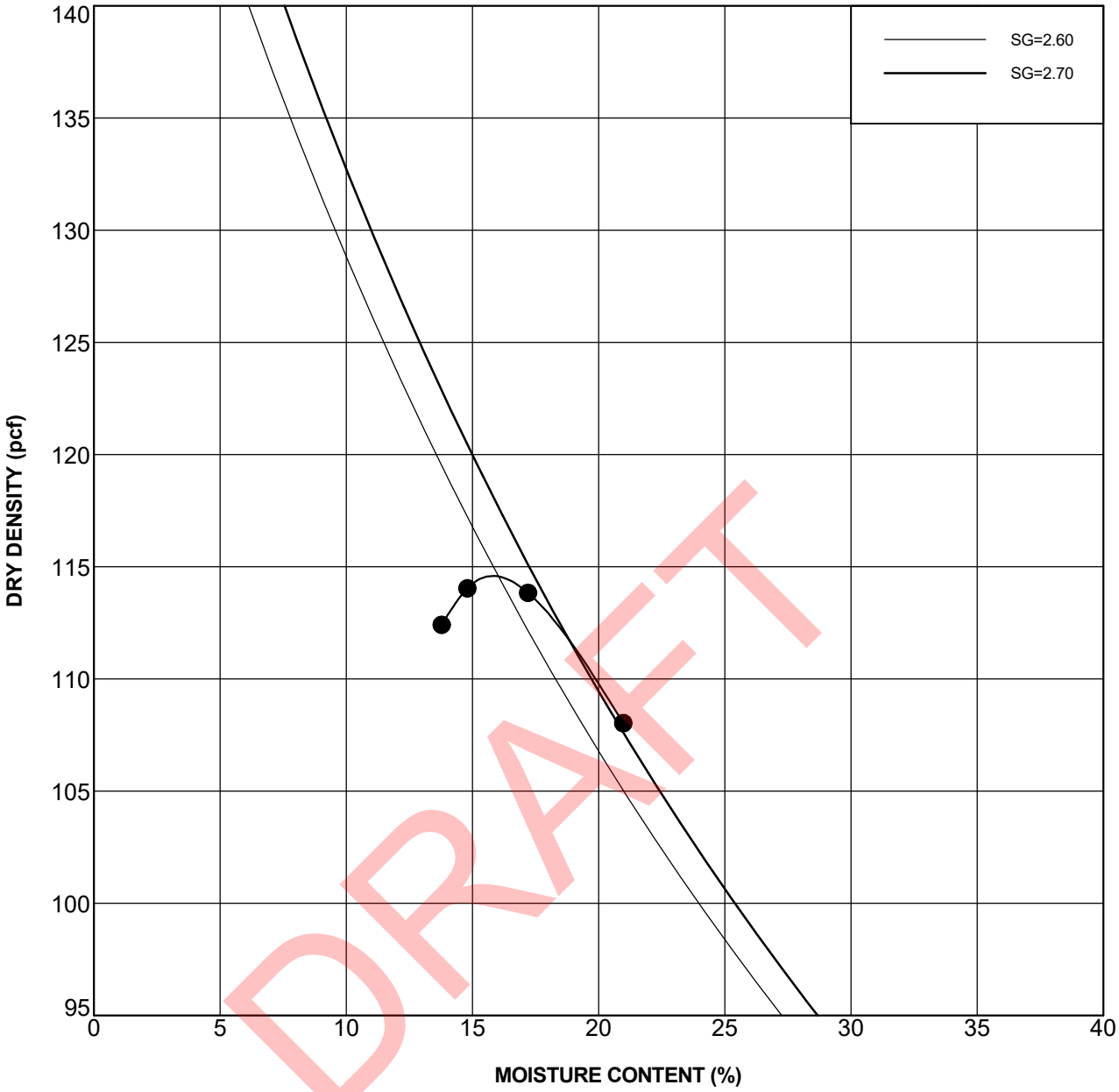
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Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-30	0.4	Qaf	●	127.5	10.5	SANDY CLAY (CL-SC)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



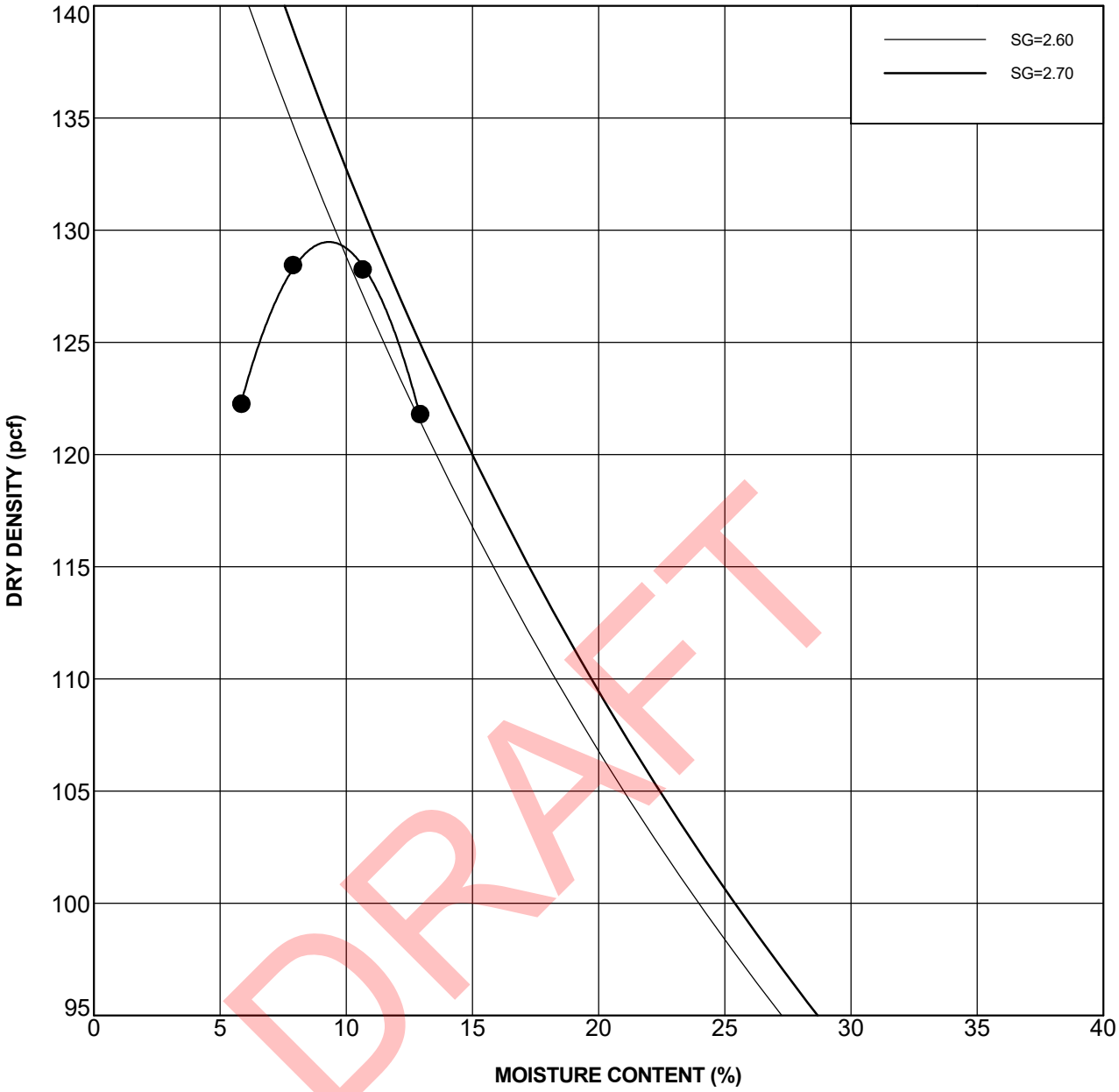
DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-34	1.5	Qaf	●	114	16	LEAN CLAY with SAND (CL)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation
Project No. 20-100-01



DRAFT

Boring Number	Depth (feet)	Geologic Unit	Symbol	Maximum Dry Density, pcf	Optimum Moisture Content, %	Classification
C-38	0.5	Qaf	●	129	9.5	CLAYEY SAND (SC)

DVTCOMP 20-100-01.GPJ 11/15/22

COMPACTION TEST DATA

Project: City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation

Project No. 20-100-01

R-VALUE TEST REPORT

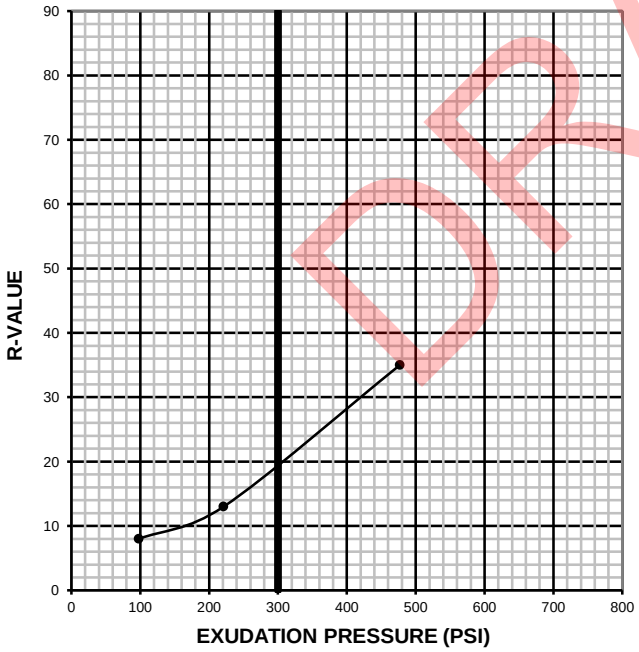
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C4
SAMPLE DESCRIPTION:	SANDY ELASTIC SILT (MH), olive	SAMPLE DEPTH:	
SAMPLED BY:	JM	TESTED BY:	JPG
		DATE TESTED:	9/14/2022

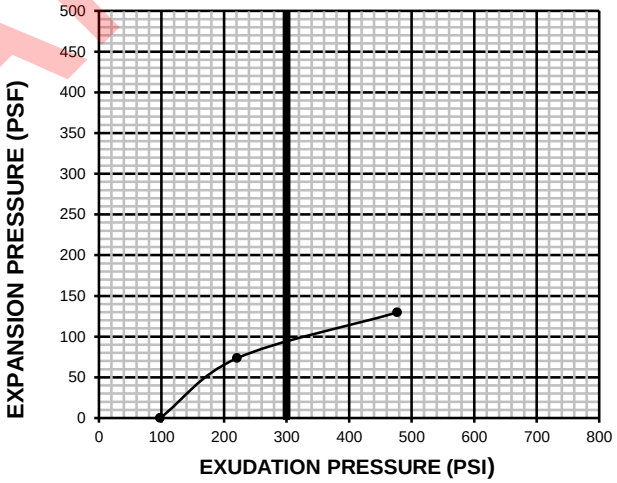
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	51.5	42.3	35.6
WEIGHT OF SAMPLE, grams	793	840	824
HEIGHT OF SAMPLE, Inches	2.40	2.42	2.37
DRY DENSITY, pcf	66.2	73.9	77.7
COMPACTOR AIR PRESSURE, psi	125	250	300
EXUDATION PRESSURE, psi	98	221	477
EXPANSION, Inches x 10exp-4	0	17	30
STABILITY Ph 2,000 lbs (160 psi)	142	130	78
TURNS DISPLACEMENT	3.66	3.64	4.04
R-VALUE UNCORRECTED	8	14	39
R-VALUE CORRECTED	8	13	35
EXPANSION PRESSURE (psf)	0.0	73.4	129.6

DRAFT

R-VALUE VS. EXUDATION PRESSURE



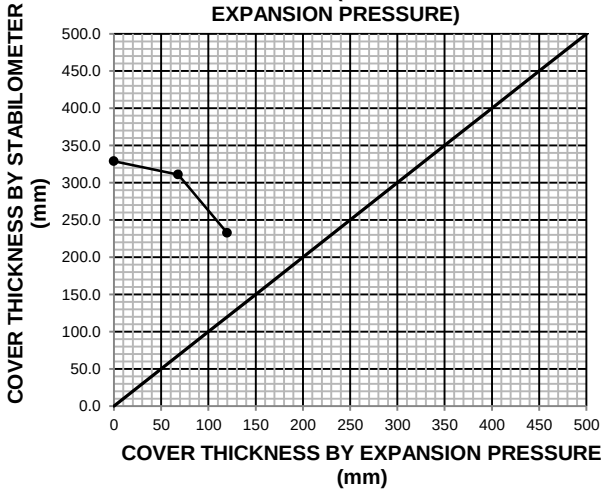
EXPANSION PRESSURE VS. EXUDATION PRESSURE



R-VALUE AT EQUILIBRIUM:	19

R-VALUE BY EXUDATION PRESSURE:	19
R-VALUE BY EXPANSION PRESSURE:	N.A.
EXPANSION PRESSURE AT 300 PSI EXUDATION:	93
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE TEST REPORT

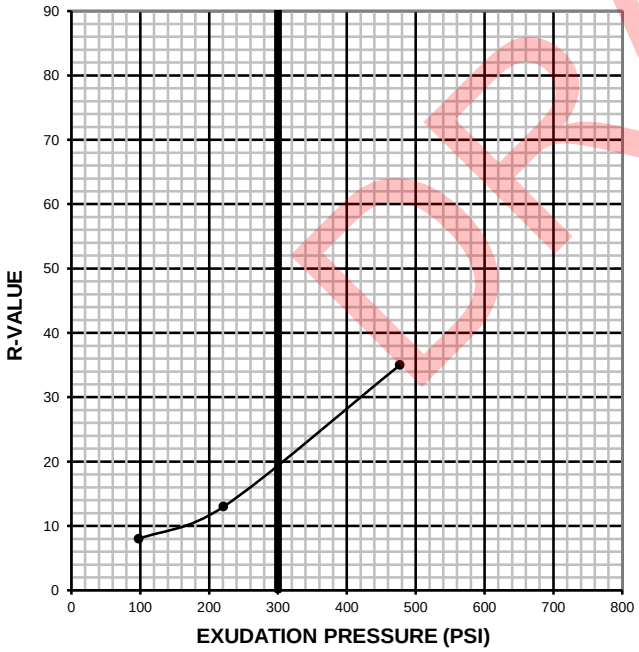
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	City of Aliso Viejo - Ph 2 Citywide Pavement Evaluation	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C4
SAMPLE DESCRIPTION:	SANDY ELASTIC SILT (MH), olive	SAMPLE DEPTH:	
SAMPLED BY:	JM	TESTED BY:	JPG
		DATE TESTED:	9/14/2022

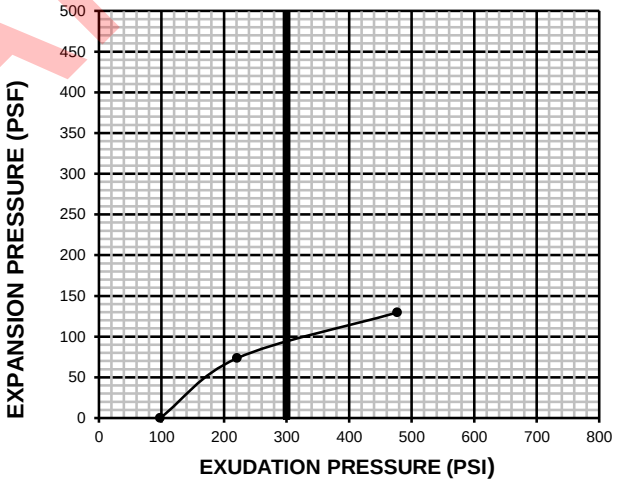
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	51.5	42.3	35.6
WEIGHT OF SAMPLE, grams	793	840	824
HEIGHT OF SAMPLE, Inches	2.40	2.42	2.37
DRY DENSITY, pcf	66.2	73.9	77.7
COMPACTOR AIR PRESSURE, psi	125	250	300
EXUDATION PRESSURE, psi	98	221	477
EXPANSION, Inches x 10exp-4	0	17	30
STABILITY Ph 2,000 lbs (160 psi)	142	130	78
TURNS DISPLACEMENT	3.66	3.64	4.04
R-VALUE UNCORRECTED	8	14	39
R-VALUE CORRECTED	8	13	35
EXPANSION PRESSURE (psf)	0.0	73.4	129.6

DRAFT

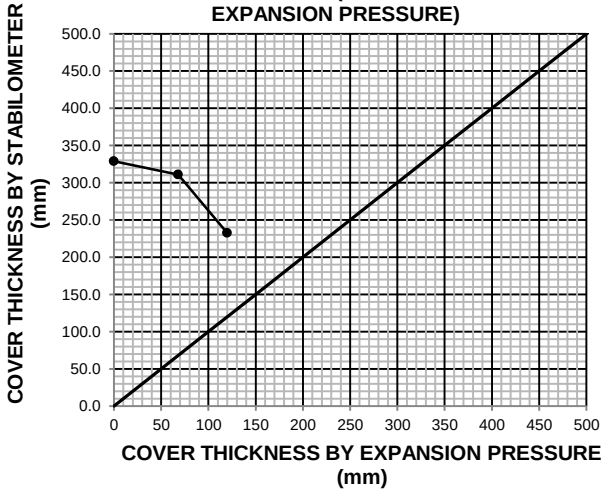
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	19

R-VALUE BY EXUDATION PRESSURE:	19
R-VALUE BY EXPANSION PRESSURE:	N.A.
EXPANSION PRESSURE AT 300 PSI EXUDATION:	93
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

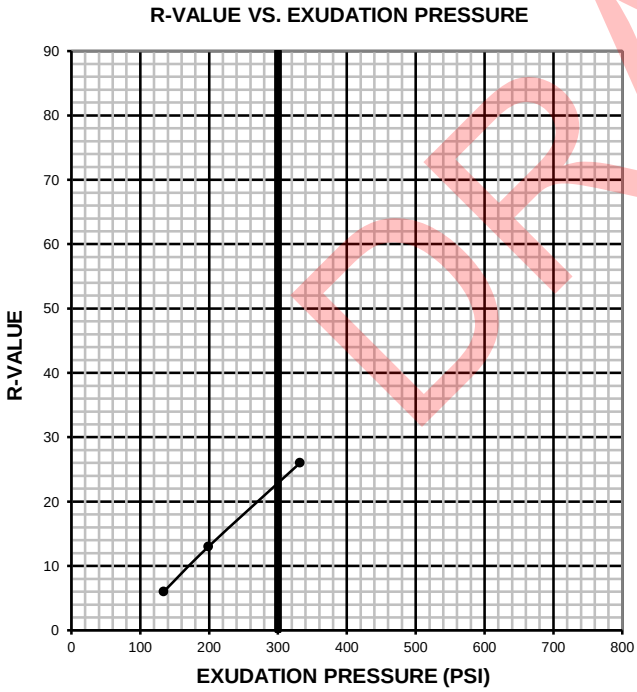
R-VALUE TEST REPORT

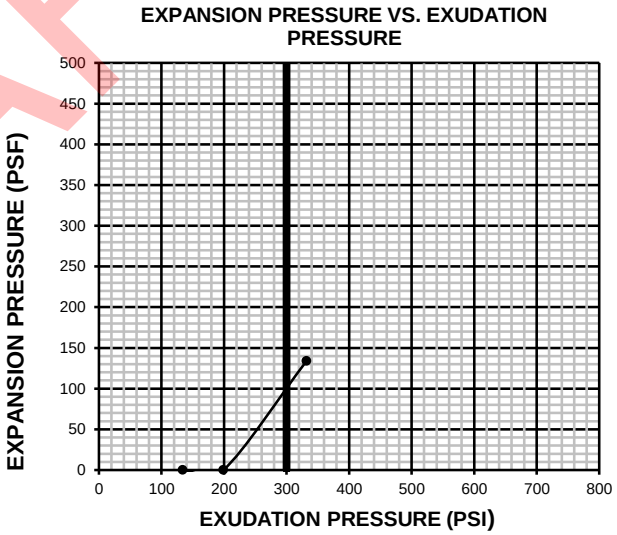
☑ CT-301 ☐ ASTM-D2844

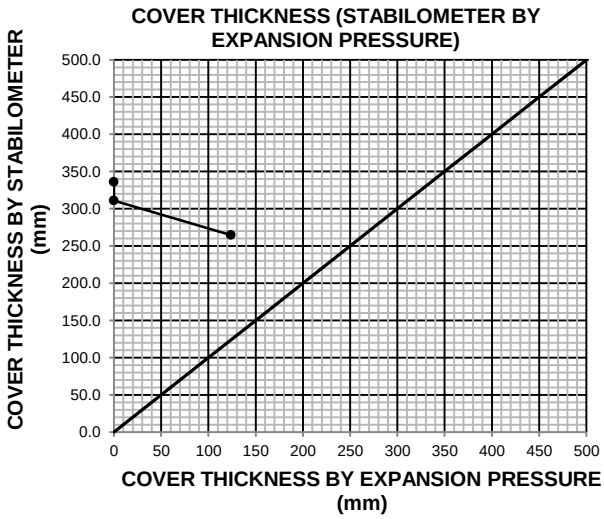
PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-6
SAMPLE DESCRIPTION:	SILTY CLAY (CL)	SAMPLE DEPTH:	0.54 - 4
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/21/2022

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	28.3	25.8	22.2
WEIGHT OF SAMPLE, grams	990	952	998
HEIGHT OF SAMPLE, Inches	2.58	2.44	2.45
DRY DENSITY, pcf	90.6	94.0	101.1
COMPACTOR AIR PRESSURE, psi	125	150	250
EXUDATION PRESSURE, psi	134	199	332
EXPANSION, Inches x 10exp-4	0	0	31
STABILITY Ph 2,000 lbs (160 psi)	142	130	108
TURNS DISPLACEMENT	4.83	3.92	3.49
R-VALUE UNCORRECTED	6	13	26
R-VALUE CORRECTED	6	13	26
EXPANSION PRESSURE (psf)	0.0	0.0	133.9

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R-VALUE AT EQUILIBRIUM:	23

R-VALUE BY EXUDATION PRESSURE:	23
R-VALUE BY EXPANSION PRESSURE:	N.A.
EXPANSION PRESSURE AT 300 PSI EXUDATION:	100
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

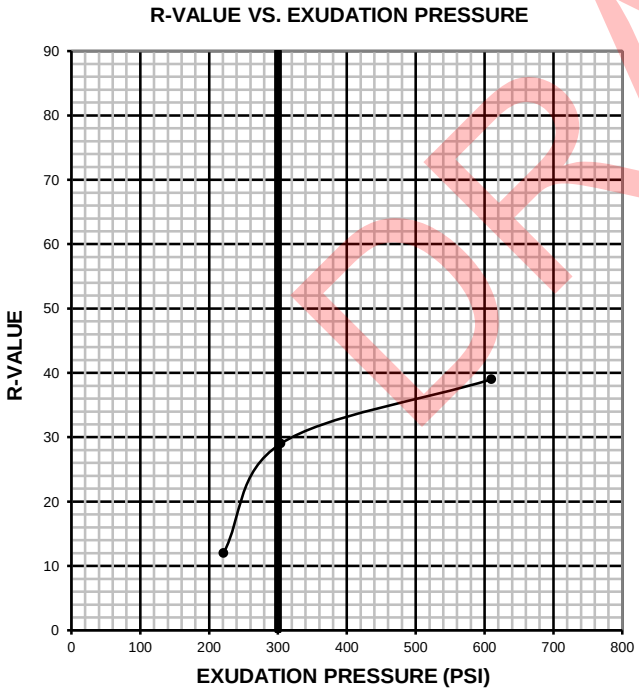
R-VALUE TEST REPORT

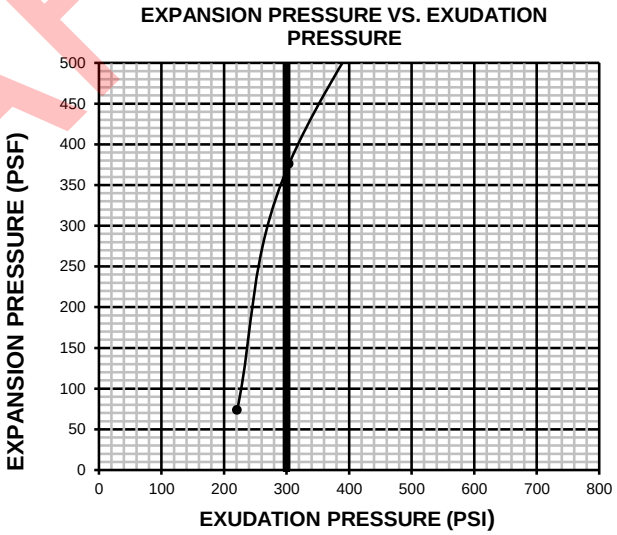
☑ CT-301 ☐ ASTM-D2844

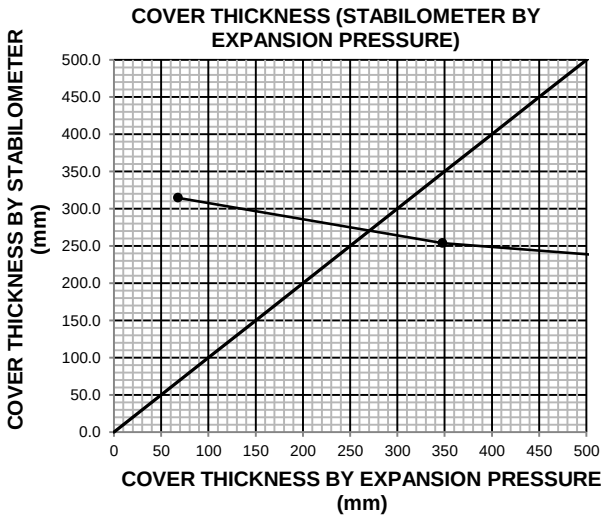
PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-13
SAMPLE DESCRIPTION:	SANDY ELASTIC SILT (MH)	SAMPLE DEPTH:	0.71 - 4
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/26/2022

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	37.0	31.5	28.1
WEIGHT OF SAMPLE, grams	952	941	860
HEIGHT OF SAMPLE, Inches	2.68	2.56	2.32
DRY DENSITY, pcf	78.6	84.8	87.7
COMPACTOR AIR PRESSURE, psi	150	200	250
EXUDATION PRESSURE, psi	221	304	610
EXPANSION, Inches x 10exp-4	17	87	178
STABILITY Ph 2,000 lbs (160 psi)	136	102	86
TURNS DISPLACEMENT	3.36	3.51	2.71
R-VALUE UNCORRECTED	12	29	44
R-VALUE CORRECTED	12	29	39
EXPANSION PRESSURE (psf)	73.4	375.8	769.0

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R-VALUE AT EQUILIBRIUM:	24

R-VALUE BY EXUDATION PRESSURE:	28
R-VALUE BY EXPANSION PRESSURE:	24
EXPANSION PRESSURE AT 300 PSI EXUDATION:	365
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

R-VALUE TEST REPORT

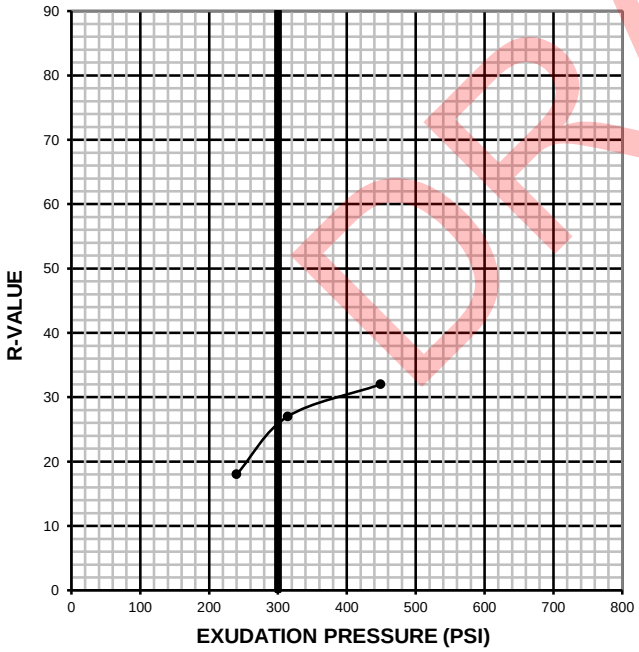
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-16
SAMPLE DESCRIPTION:	SANDY CLAY (CL)	SAMPLE DEPTH:	0.46 - 4
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/20/2022

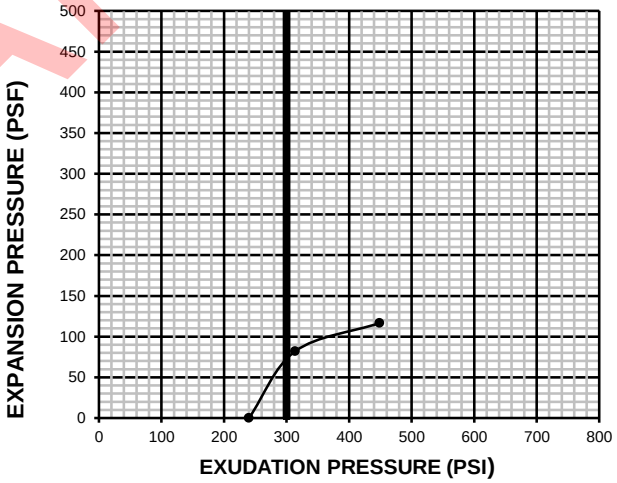
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	37.0	34.8	33.6
WEIGHT OF SAMPLE, grams	957	1019	975
HEIGHT OF SAMPLE, Inches	2.32	2.39	2.30
DRY DENSITY, pcf	91.3	95.9	96.2
COMPACTOR AIR PRESSURE, psi	200	250	300
EXUDATION PRESSURE, psi	240	314	449
EXPANSION, Inches x 10exp-4	0	19	27
STABILITY Ph 2,000 lbs (160 psi)	114	96	86
TURNS DISPLACEMENT	4.03	3.82	3.59
R-VALUE UNCORRECTED	20	30	37
R-VALUE CORRECTED	18	27	32
EXPANSION PRESSURE (psf)	0.0	82.1	116.6

DRAFT

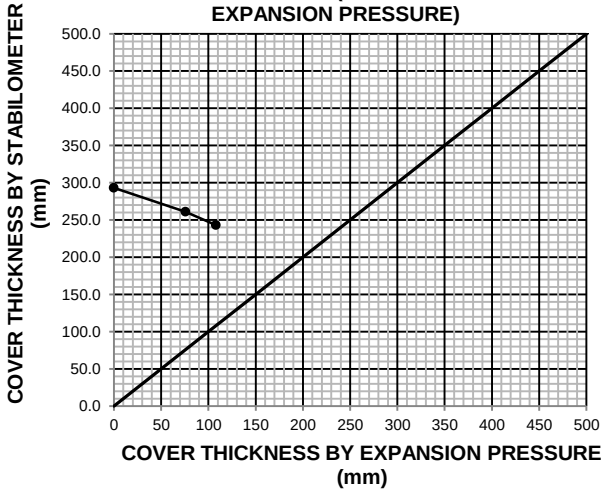
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	25

R-VALUE BY EXUDATION PRESSURE:	25
R-VALUE BY EXPANSION PRESSURE:	N.A
EXPANSION PRESSURE AT 300 PSI EXUDATION:	70
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

R-VALUE TEST REPORT

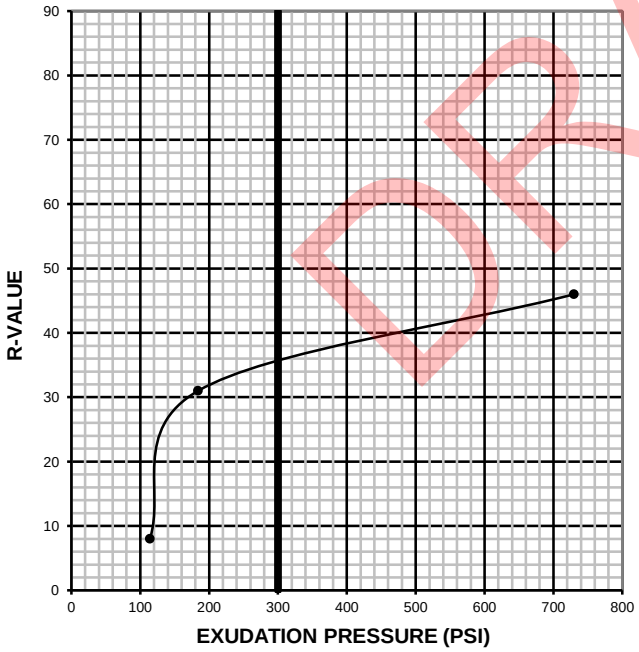
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-19
SAMPLE DESCRIPTION:	ELASTIC SILT (MH)	SAMPLE DEPTH:	0.73 - 4.5
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/18/2022

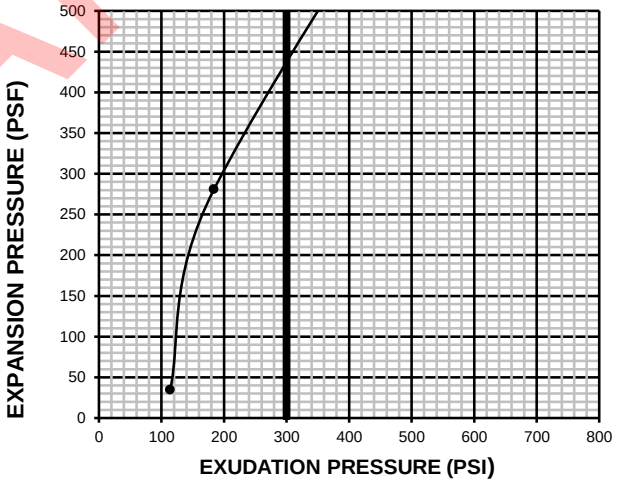
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	39.7	31.8	26.0
WEIGHT OF SAMPLE, grams	896	847	897
HEIGHT OF SAMPLE, Inches	2.62	2.33	2.45
DRY DENSITY, pcf	74.2	83.6	88.1
COMPACTOR AIR PRESSURE, psi	150	200	300
EXUDATION PRESSURE, psi	114	184	730
EXPANSION, Inches x 10exp-4	8	65	223
STABILITY Ph 2,000 lbs (160 psi)	138	84	65
TURNS DISPLACEMENT	4.78	4.27	4.21
R-VALUE UNCORRECTED	8	35	46
R-VALUE CORRECTED	8	31	46
EXPANSION PRESSURE (psf)	34.6	280.8	963.4

DRAFT

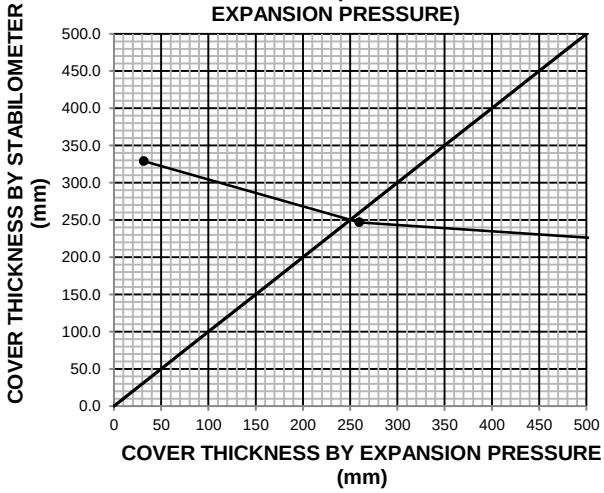
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	30

R-VALUE BY EXUDATION PRESSURE:	36
R-VALUE BY EXPANSION PRESSURE:	30
EXPANSION PRESSURE AT 300 PSI EXUDATION:	435
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

R-VALUE TEST REPORT

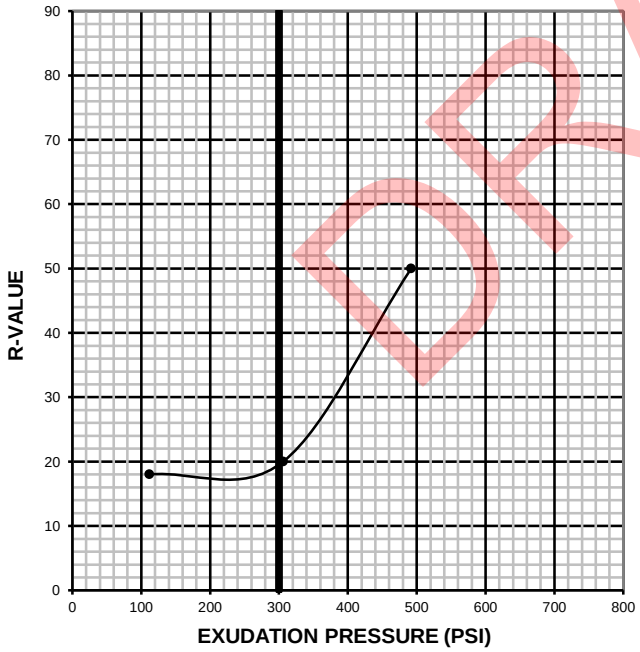
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-22
SAMPLE DESCRIPTION:	CLAYEY SAND to SANDY CLAY (SC-CL)	SAMPLE DEPTH:	0.5 - 3.75
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/15/2022

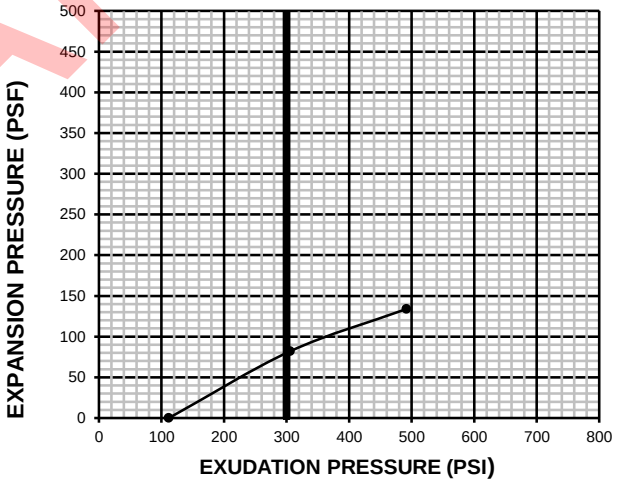
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	16.0	13.2	11.2
WEIGHT OF SAMPLE, grams	1138	1037	1053
HEIGHT OF SAMPLE, Inches	2.65	2.36	2.39
DRY DENSITY, pcf	112.2	117.7	120.1
COMPACTOR AIR PRESSURE, psi	100	250	300
EXUDATION PRESSURE, psi	112	306	492
EXPANSION, Inches x 10exp-4	0	19	31
STABILITY Ph 2,000 lbs (160 psi)	114	108	62
TURNS DISPLACEMENT	4.96	4.20	3.45
R-VALUE UNCORRECTED	17	22	53
R-VALUE CORRECTED	18	20	50
EXPANSION PRESSURE (psf)	0.0	82.1	133.9

DRAFT

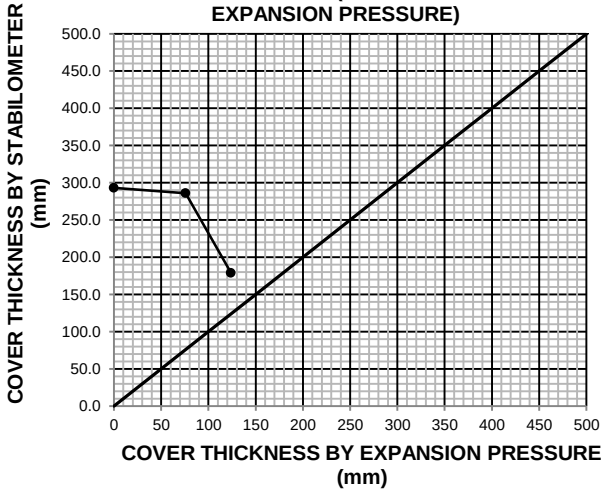
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	19

R-VALUE BY EXUDATION PRESSURE:	19
R-VALUE BY EXPANSION PRESSURE:	N.A
EXPANSION PRESSURE AT 300 PSI EXUDATION:	80
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

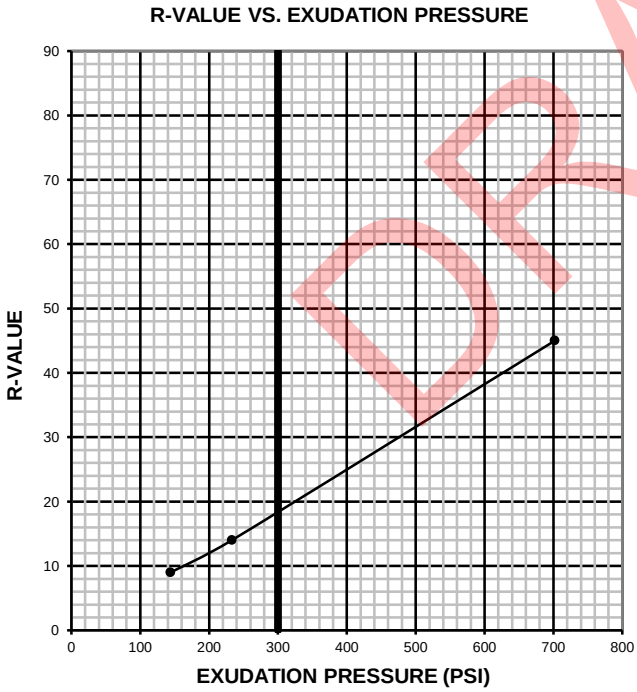
R-VALUE TEST REPORT

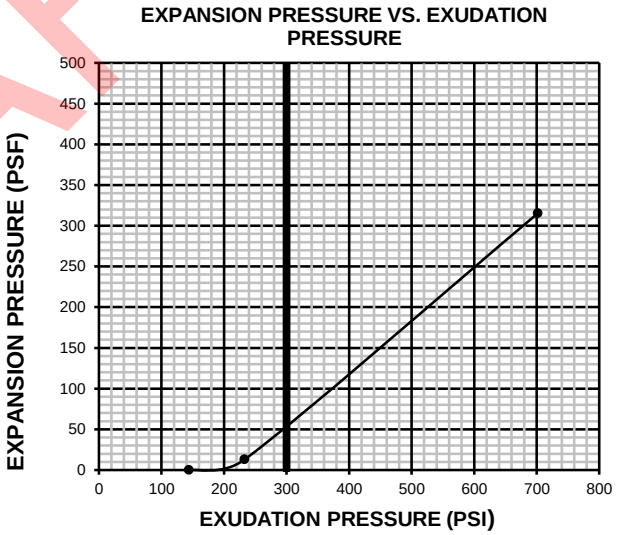
☑ CT-301 ☐ ASTM-D2844

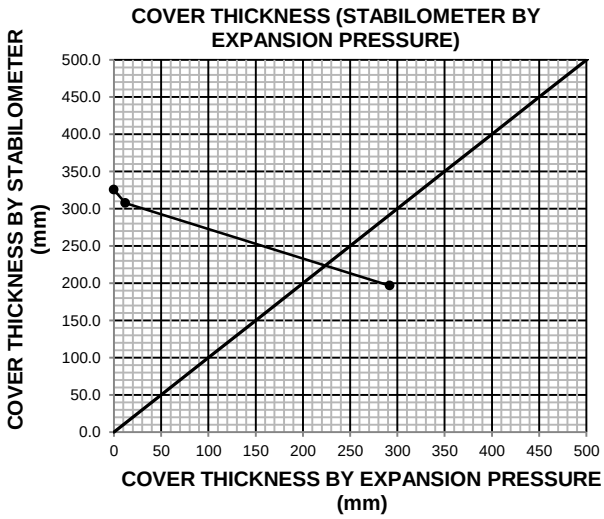
PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-28
SAMPLE DESCRIPTION:	SANDY LEAN CLAY (CL)	SAMPLE DEPTH:	0.42 - 3.92
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/20/2022

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	27.3	23.7	18.8
WEIGHT OF SAMPLE, grams	986	989	1010
HEIGHT OF SAMPLE, Inches	2.55	2.47	2.40
DRY DENSITY, pcf	92.1	98.1	107.4
COMPACTOR AIR PRESSURE, psi	90	150	300
EXUDATION PRESSURE, psi	144	233	702
EXPANSION, Inches x 10exp-4	0	3	73
STABILITY Ph 2,000 lbs (160 psi)	135	124	75
TURNS DISPLACEMENT	4.45	4.37	3.03
R-VALUE UNCORRECTED	9	14	48
R-VALUE CORRECTED	9	14	45
EXPANSION PRESSURE (psf)	0.0	13.0	315.4

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R-VALUE AT EQUILIBRIUM:	18

R-VALUE BY EXUDATION PRESSURE:	18
R-VALUE BY EXPANSION PRESSURE:	37
EXPANSION PRESSURE AT 300 PSI EXUDATION:	50
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

R-VALUE TEST REPORT

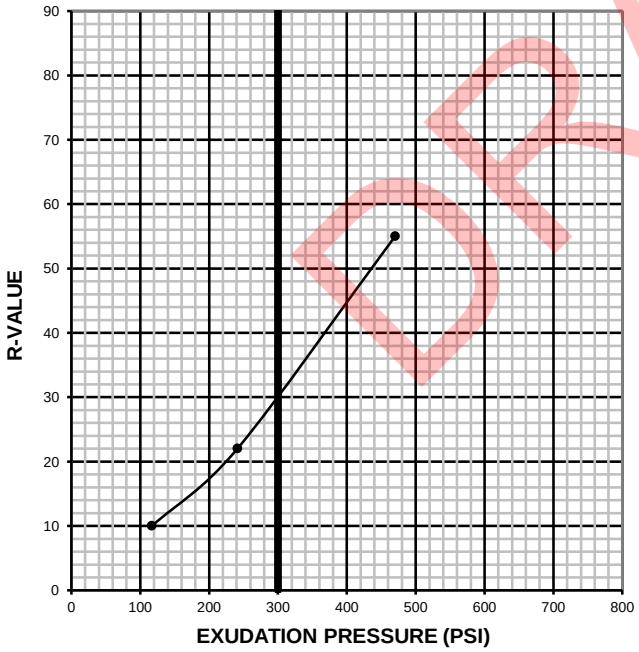
☑ CT-301 ☐ ASTM-D2844

PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-33
SAMPLE DESCRIPTION:	CLAYEY SAND (SC)	SAMPLE DEPTH:	0.71 - 4
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/15/2022

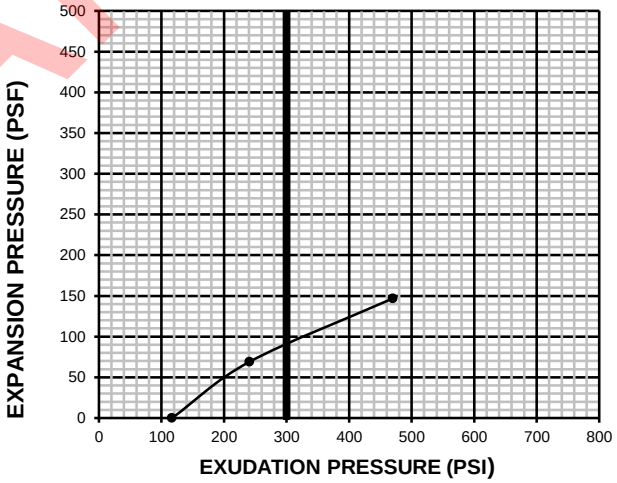
TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	16.4	13.5	11.6
WEIGHT OF SAMPLE, grams	1104	1055	1081
HEIGHT OF SAMPLE, Inches	2.59	2.49	2.40
DRY DENSITY, pcf	111.0	113.2	122.4
COMPACTOR AIR PRESSURE, psi	100	200	300
EXUDATION PRESSURE, psi	117	241	470
EXPANSION, Inches x 10exp-4	0	16	34
STABILITY Ph 2,000 lbs (160 psi)	132	108	50
TURNS DISPLACEMENT	4.81	4.37	3.96
R-VALUE UNCORRECTED	10	22	58
R-VALUE CORRECTED	10	22	55
EXPANSION PRESSURE (psf)	0.0	69.1	146.9

DRAFT

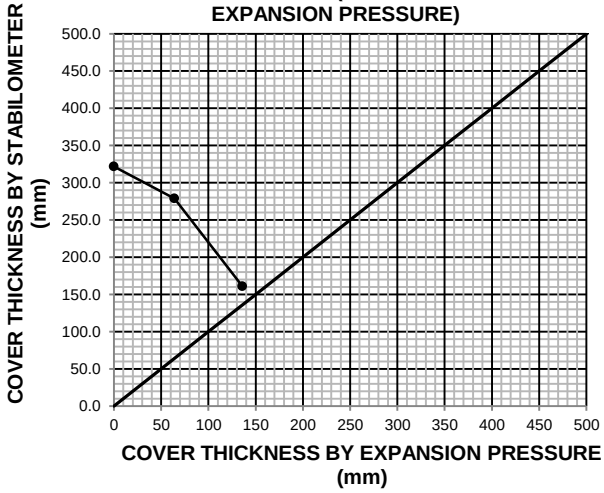
R-VALUE VS. EXUDATION PRESSURE



EXPANSION PRESSURE VS. EXUDATION PRESSURE



COVER THICKNESS (STABILOMETER BY EXPANSION PRESSURE)



R-VALUE AT EQUILIBRIUM:	30

R-VALUE BY EXUDATION PRESSURE:	30
R-VALUE BY EXPANSION PRESSURE:	N.A
EXPANSION PRESSURE AT 300 PSI EXUDATION:	90
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

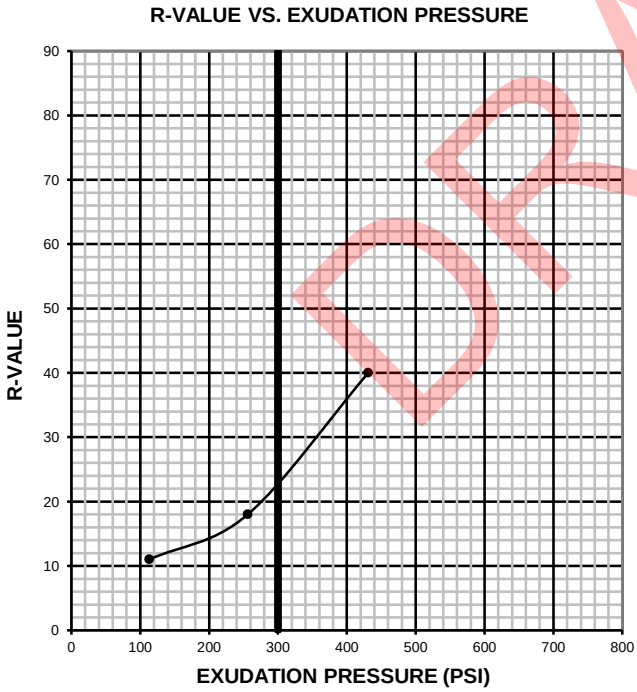
R-VALUE TEST REPORT

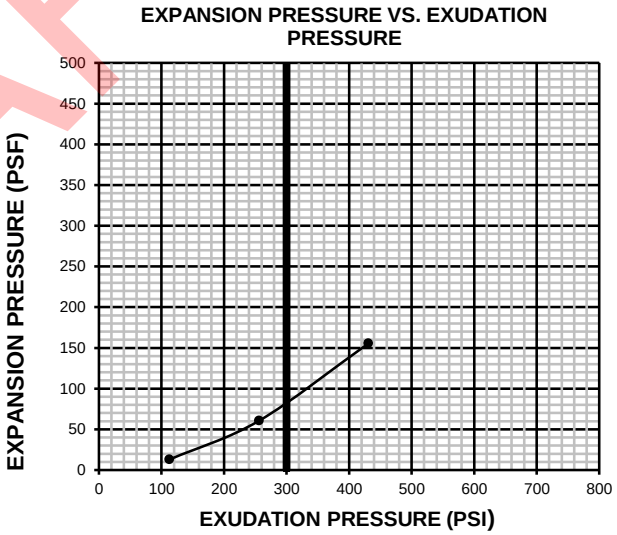
☑ CT-301 ☐ ASTM-D2844

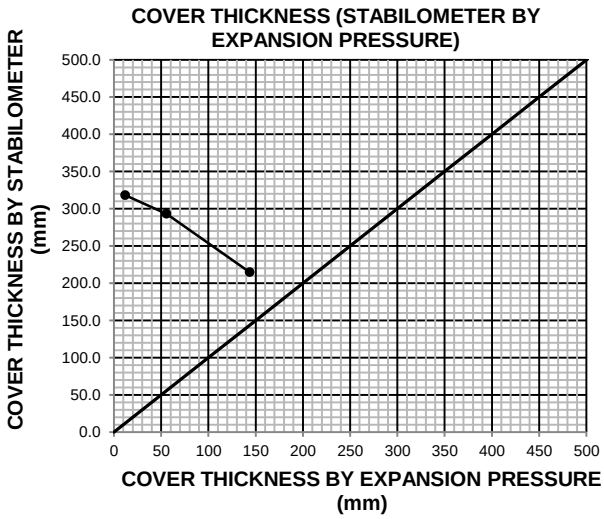
PROJECT NAME:	Aliso Viejo Pavement Eval	PROJECT NUMBER:	20-100-01
SAMPLE LOCATION:		SAMPLE NUMBER:	C-38
SAMPLE DESCRIPTION:	CLAYEY SAND (SC)	SAMPLE DEPTH:	0.5 - 3.42
SAMPLED BY:	JPG 9/9/22	TESTED BY:	JPG
		DATE TESTED:	10/17/2022

TEST SPECIMEN	A	B	C
MOISTURE AT COMPACTION %	14.9	12.6	10.5
WEIGHT OF SAMPLE, grams	1172	1074	1062
HEIGHT OF SAMPLE, Inches	2.69	2.42	2.34
DRY DENSITY, pcf	115.0	119.4	124.5
COMPACTOR AIR PRESSURE, psi	110	200	300
EXUDATION PRESSURE, psi	113	256	431
EXPANSION, Inches x 10exp-4	3	14	36
STABILITY Ph 2,000 lbs (160 psi)	132	113	72
TURNS DISPLACEMENT	4.81	4.30	3.67
R-VALUE UNCORRECTED	10	19	45
R-VALUE CORRECTED	11	18	40
EXPANSION PRESSURE (psf)	13.0	60.5	155.5

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R-VALUE AT EQUILIBRIUM:	23

R-VALUE BY EXUDATION PRESSURE:	23
R-VALUE BY EXPANSION PRESSURE:	N.A
EXPANSION PRESSURE AT 300 PSI EXUDATION:	82
TRAFFIC INDEX (Assumed):	5.5
GRAVEL FACTOR (Assumed):	1.5
UNIT MASS OF COVER MATERIAL, kg/m^3 (Assumed):	2100.0

Appendix C
Pavement Repair Recommendations

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GMU PAVEMENT ENGINEERING

Table C-1: Select CIP & Miscellaneous Streets Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input		Structural Capacity Prelim. Findings	Recommendations				
					Design R-Value	Assumed 20-Year TI[(1)]		Localized AC Repair Thickness (inches)[(2)(3)(5)]	AC Leveling Course Thickness (inches)[(6)]	ARHM Overlay Thickness (inches)[(7)]	Reflective Cracking Reduction Recommendation	Recommended Strategy and Schedule
Aliso Creek Rd	73 Toll Overpass	Enterprise	67	71,655	19	11.0	Note 8	None Anticipated	1.0	2.0	Notes 4	Rehab: 2024-25
Glenwood Dr	73 Toll Overpass	Brookline	70	41,874	10	11.0	Note 8	None Anticipated	1.0	1.5	Notes 4	Rehab: 2025-26
Glenwood Dr	Brookline	Aliso Creek Rd	70	65,062								
Golf Dr	Santa Barbara Dr	Glenwood Dr	-	56,000	10	6.0	Note 8	9.0	NA	2.5	Notes 4	Rehab: 2025-26

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.

Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.

Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair, extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).

Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with the AC leveling, AC overlay, and/or ARHM overlay layers to reduce reflective cracking potential (not necessary for AC base layer).

Note (5): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 R15 AC.

Note (6): The recommended AC leveling course mix is Greenbook 1/2-inch maximum Type IIIC3 PG 64-10 R15 AC for Aliso Creek Road, and Greenbook 3/8-inch maximum Class D2 PG 64-10 R15 AC for Glenwood Drive and Golf Drive.

Note (7): The recommended ARHM overlay mix is Greenbook ½-inch maximum ARHM-GG-C R0.

Note (8): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 6), the existing pavement appears to be structurally adequate. To confirm, additional investigation may be required at the project-level evaluation stage.

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Table C-2: Zone 1 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prlim. Findings	Recommendations			
					Design R-Value	Assumed 20-Year TI[1]		Localized AC Repair Thickness (inches)[2][3][5]	AC Overlay Thickness (inches)[6]	Reflective Cracking Reduction Recommendation	Recommended Strategy and Schedule
Blue Jay Dr	Woodstork Ln	Dead End West	93	18,170	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Blue Jay Dr	Woodstork Ln	Dead End East	94	15,548	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Woodstork Ln	Blue Jay Dr	Skylark Dr	95	9,464	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Skylark Dr	Eastwing	Larkspur Dr	96	46,520	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Raven Ln	Skylark Dr	Dead End	94	54,800	10	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Larkspur Dr	Skylark Dr	Spoonbill Dr	96	36,430	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Macaw St	Dove St	Larkspur Dr	97	9,504	10	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Spoonbill Dr	Surfbird Ln	Lakespur Dr	94	21,120	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Merlin Ave	Surfbird Ln	Moorhen Ln	96	56,788	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Moorhen Ln	Westwing	Mallard Dr	89	14,112	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Mallard Dr	Moorhen	Dead End	88	16,802	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Peacock Ct	Moorhen Ln	Dead End	96	10,754	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Eastwing	Aliso Creek Rd	Skylark Dr	90	21,570	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Westwing	Calle Corta	Aliso Creek	92	71,360	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Pheasant Ln	Westwing	Dead End	96	35,450	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Rosy Finch Ln	Westwing	Dead End	95	35,894	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Chickadee Ln	Calle Corta	Dead End	93	39,176	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
King Eider Ln	Calle Corta	Dead End	93	36,170	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Sora Ct	Westwing	Dead End	96	3,478	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Swan Ln	Surfbird Ln	Dead End	96	14,510	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Dunlin Ln	Surfbird Ln	Dead End	90	21,314	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Surfbird	Spoonbill Dr	Seagull Ln	92	45,657	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Surfbird	Seagull Ln	Dead End	89	26,040	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Solitaire Ln	Seagull Ln	Dead End	90	38,690	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Blackbird Ln	Seagull Ln	Dead End	94	33,146	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Seagull	Surfbird Ln	Canyon Wren Ln	94	37,320	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Canyon Wren Ln	Westwing	Crane St	92	73,320	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Canyon Wren Ln	Crane St	El Toro Rd	97	48,230	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Golden Eagle Ct	Surfbird Ln	Dead End	95	11,018	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Egret Ln	Prairie Falcon	Seagull Ln	95	81,500	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Crane St	Canyon Wren Ln	Prairie Falcon	94	4,010	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Prairie Falcon	Egret Ln	Crane St	92	48,920	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Prairie Falcon	Crane St	Dead End	94	34,320	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Cuervo Dr	Canyon Wren Ln	Wigeon Ln	94	38,376	18	5.5	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Nutcracker Ln	Cuervo Dr	Dead End	95	17,579	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Bob White Ln	Pinyon Jay	Cuervo Dr	95	10,276	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Pinyon Jay Ln	Wigeon Ln	Bob White Ln	95	8,034	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Wigeon Ln	Cuervo Dr	Pinyon Jay	95	10,296	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Cardinal Ave	Canyon Wren Ln	Bluebird Ln	93	31,122	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25

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Table C-2: Zone 1 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prlim. Findings	Recommendations			
					Design R-Value	Assumed 20-Year TI[(1)]		Localized AC Repair Thickness (inches)[(2)(3)(5)]	AC Overlay Thickness (inches)[(6)]	Reflective Cracking Reduction Recommendation	Recommended Strategy and Schedule
Bluebird Ln	Cardinal Ave	Dead End	95	32,564	18	5.0	Note 8	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Calle Corta	Westwing	El Toro Rd	82	54,470	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Osprey Ave	Surfbird Ln	Dead End	87	11,018	18	5.0	Note 10	6.5	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Tanager Ln	El Toro Rd	Dead End	-	16,670	18	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2024-25
Brookline	Brookline	Glenwood Drive	40	24,320	10	7.0	Note 7	9.5	2.0	Notes 4	Rehab: 2027-28
Brookline	Aliso Creek Rd	Dead End	56	69,404	10	7.0	Note 7	9.5	2.0	Notes 4	
Cedarbrook	Rainwood	Aliso Viejo Pkwy	80	55790	10	7.0	Note 8	8.0	2.5	Notes 4	Rehab: 2025-26
Cedarbrook	Glenwood Dr	Rainwood	78	66070	10	7.0	Note 8	8.0	2.5	Notes 4	
Cedarbrook	Da Vinci	Glenwood Drive	78	46,703	10	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2025-26
Da Vinci	Glenwood Dr	Cedarbrook	73	83,549	10	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2025-26
Via Iglesia	Calle Cortez	Moulton Pkwy	79	78,000	30	6.0	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2025-26
Via Iglesia	Calle Cortez	Dead End	79	5,700	30	6.0	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2025-26
Calle Cortez	Via Iglesia	Moulton Pkwy	74	14,903	30	6.0	Note 8	7.0	Rehabilitation is not due at this time (note 9).	NA	Maint: 2025-26

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.

Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.

Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair, extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).

Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with the AC leveling and AC overlay layers to reduce reflective cracking potential (not necessary for AC base layer).

Note (5): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 R15 AC.

Note (6): The recommended AC overlay mix is Greenbook ½-inch maximum Type IIIC3 PG 64-10 R15 AC.

Note (7): The existing AC section is inadequately thick. We recommend increasing the structural capacity of the roadway by thickening the existing AC pavement by least 2-inches in the travel lanes. Perform an edge mill and install the recommended overlay section to thicken the travel lanes and crown. Changes to cross slope should be reviewed and confirmed by the Project Civil Engineer for other considerations, such as drainage, super-elevation, etc.

Note (8): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 5), the existing pavement appears to be structurally adequate. To confirm, additional investigation may be required at the project-level evaluation stage.

Note (9): Current roadway condition is suitable for more cycle(s) of maintenance (localized AC repairs, crack repairs, followed by slurry sealing).

Note (10): Based on FWD testing, the roadway is structurally inadequate.

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Table C-3: Zone 2 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prelim. Findings	Recommendations	
					Design R-Value	Assumed 20-Year TI[1]		Localized AC Repair Thickness (inches)[2][3][4]	Recommended Strategy and Schedule[7]
Falcon Crest Ln	Royal Tern Ln	Sanderling Ln	90	20,376	23	5.0	Note 6	6.0	Maint: 2024-25
Willet Ln	Hummingbird Ln	Royal Tern Ln	90	8,352	23	5.0	Note 6	6.0	Maint: 2024-25
Condor Ln	Sanderling Ln	Hummingbird Ln	90	4,536	23	5.0	Note 6	6.0	Maint: 2024-25
Royal Tern Ln	Dead End	Phoebe	89	35,558	23	5.0	Note 6	6.0	Maint: 2024-25
Phoebe Ct	Royal Tern Ln	Dead End	84	10,430	23	5.0	Note 6	6.0	Maint: 2024-25
Sanderling Ln	Falcon Crest Ln	Hummingbird Ln	89	20,484	23	5.0	Note 6	6.0	Maint: 2024-25
Blue Heron Ln	San Bittern Ln	Dead End	90	21,612	23	5.0	Note 6	6.0	Maint: 2024-25
White Pelican Ln	Blue Heron Ln	Dead End	87	10,898	23	5.0	Note 6	6.0	Maint: 2024-25
San Bittern Ln	Hummingbird Ln	Dead End	70	30,962	23	5.0	Note 6	6.0	Maint: 2024-25
Coral Bill Ln	Hummingbird Ln	Woodswallow Ln	49	6,320	23	5.0	Note 6	6.0	Maint: 2024-25
Goldfinch Ln	Hummingbird Ln	Woodswallow Ln	85	5,920	23	5.0	Note 6	6.0	Maint: 2024-25
Starling Ln	Hummingbird Ln	Dead End	85	25,951	23	5.0	Note 6	6.0	Maint: 2024-25
Songbird Ln	Tempeter Ln	Firecrest Ln	84	47,520	23	5.0	Note 6	6.0	Maint: 2024-25
Woodswallow Ln	Songbird Ln	Songbird Ln	-	43,883	23	5.0	Note 6	6.0	Maint: 2024-25
Trempeter Ln	Woodswallow Ln	Songbird Ln	90	9,504	23	5.0	Note 6	6.0	Maint: 2024-25
Firecrest Ln	Songbird Ln	Woodswallow Ln	85	5,616	23	5.0	Note 6	6.0	Maint: 2024-25
Hummingbird Ln	Aliso Creek	San Bittern Ln	90	63,600	23	6.0	Note 5	7.5	Maint: 2024-25
Hummingbird Ln	San Bittern Ln	Dead End	90	42,080	23	6.0	Note 5	7.5	Maint: 2024-25
Bells Vireo Ln	El Toro Rd	Hummingbird Ln	-	18,280	23	6.0	Note 5	7.5	Maint: 2024-25
Bay Laurel	Westwing	Coppercrest	86	20,560	18	5.5	Note 6	7.0	Maint: 2025-26
Saddleridge	Highpoint	Dead End	85	40,742	18	5.5	Note 6	7.0	Maint: 2025-26
Crossbow	Sandbridge	Saddleridge	84	10,548	18	5.0	Note 6	6.5	Maint: 2025-26
Lindengrove	Diamondgate	Briarcliff	83	41,860	30	5.0	Note 6	5.0	Maint: 2025-26
Eastwing	Heatherwood	Ramblewood	83	77,640	18	6.0	Note 6	8.0	Maint: 2025-26
Crestview	Meadow Point	Dead End	82	27,638	30	5.0	Note 6	5.0	Maint: 2025-26
Shorecliff	Ridgecrest	Dead End	82	56,690	10	5.0	Note 6	7.0	Maint: 2025-26
Stonebrook	Westwing	Dead End	82	20,258	18	5.0	Note 6	6.5	Maint: 2025-26
Briarcliff	Lindengrove	Westwing	81	41,034	30	5.5	Note 6	5.5	Maint: 2025-26
Helmcrest	Briarcliff	Dead End	81	24,074	30	5.0	Note 6	5.0	Maint: 2025-26
Collingwood	Briarcliff	Diamondgate	80	26,280	30	5.0	Note 6	5.0	Maint: 2025-26
Highpoint	Stonebrook	Dead End	80	39,530	18	5.0	Note 6	6.5	Maint: 2025-26
Sandbridge	Highpoint	Heatherwood	80	46,760	18	5.5	Note 6	7.0	Maint: 2025-26
Hazelbranch	Bay Laurel	Dead End	80	8,306	18	5.0	Note 6	6.5	Maint: 2025-26
Tanglewood	Westwing	Dead End	80	38,990	18	5.0	Note 6	6.5	Maint: 2025-26
Grandbriar	Briarcliff	Dead End	79	29,762	30	5.0	Note 6	5.0	Maint: 2025-26
Skygate	Westwing	Meadow Point	79	42,240	30	5.5	Note 6	5.5	Maint: 2025-26

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Table C-3: Zone 2 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prelim. Findings	Recommendations	
					Design R-Value	Assumed 20-Year TI[(1)]		Localized AC Repair Thickness (inches)[(2)(3)(4)]	Recommended Strategy and Schedule[(7)]
Flinstone	Eastwing	Dead End	78	40,850	10	5.0	Note 6	7.0	Maint: 2025-26
Ramblewood	ShoreCliff	Westwing	76	19,456	10	5.5	Note 6	7.5	Maint: 2025-26
Ridgecrest	Oakleigh	Shorecliff	76	47,520	10	5.0	Note 6	7.0	Maint: 2025-26
Thornbird	Briarcliff	Dead End	75	20,546	30	5.0	Note 6	5.0	Maint: 2025-26
Eastwing	Heatherwood	Aliso Creek	75	49,160	18	6.0	Note 6	8.0	Maint: 2025-26
Westwing	Aliso Creek	Ramblewood	75	101,770	18	6.0	Note 6	8.0	Maint: 2025-26
Coppercrest	End	End	75	35,656	18	5.0	Note 6	6.5	Maint: 2025-26
Northwinds	Westwing	Dead End	75	25,680	18	5.0	Note 6	6.5	Maint: 2025-26
Oakleigh	Eastwing	Brooktree	74	12,420	10	5.0	Note 6	7.0	Maint: 2025-26
Heatherwood	Eastwing	Dead End	74	34,706	18	5.0	Note 6	6.5	Maint: 2025-26
Satinbush	Collingwood	Dead End	73	6,326	30	5.0	Note 6	5.0	Maint: 2025-26
Meadow Point	Skygate	Diamondgate	72	19,440	30	5.5	Note 6	5.5	Maint: 2025-26
Mayflower	ShoreCliff	Dead End	71	16,406	30	5.0	Note 6	5.0	Maint: 2025-26
Diamond Gate	Lindengrove	Dead End	69	54,706	30	5.0	Note 6	5.0	Maint: 2025-26
Crystalglen	Diamondgate	Dead End	68	13,202	30	5.0	Note 6	5.0	Maint: 2025-26
Timberbluff	Ramblewood	Dead End	65	10,862	10	5.0	Note 6	7.0	Maint: 2025-26
Brooktree	Oakleigh	Dead End	65	15,210	10	5.0	Note 6	7.0	Maint: 2025-26
Eaglepoint	End	End	65	18,252	18	5.0	Note 6	6.5	Maint: 2025-26
Pathfinder	Saddleridge	Eaglepoint	40	9,504	18	5.0	Note 6	6.5	Maint: 2025-26
Goldenfield	Diamondgate	Dead End	38	5,304	30	5.0	Note 6	5.0	Maint: 2025-26
Windstar	Flintsone	Dead End		5,675	10	5.0	Note 6	7.0	Maint: 2025-26
Mareblu	Pacific Park	Dead End	67	21,470	23	6.0	Note 5	7.5	Maint: 2027-28
Laurel Mont	Alicia Pkwy	Hollyoak	81	53,435	23	6.0	Note 6	7.5	Maint: 2027-28
Hollyoak	Alicia Pkwy	Laurelmont	73	49,000	23	6.0	Note 6	7.5	Maint: 2027-28

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.

Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.

Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair, extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).

Note (4): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 R15 AC.

Note (5): Based on FWD testing, the roadway is structurally inadequate.

Note (6): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 4), the existing pavement appears to be structurally adequate.To confirm, additional investigation may be required at the project-level evaluation stage.

Note (7): Current roadway condition is suitable for more cycle(s) of maintenance (localized AC repairs, crack repairs, followed by slurry sealing).

DRAFT

Table C-4: Zone 3 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prelim. Findings	Recommendations				
					Design R-Value	Assumed 20-Year TI[1]		Localized AC Repair Thickness (inches)[2][3][5]	AC Leveling Course Thickness (inches)[6]	ARHM Overlay Thickness (inches)[7]	Reflective Cracking Reduction Recommendation	Recommended Strategy and Schedule
Hollyleaf	Hopseed	Bottlebrush	83	35,424	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Hollyleaf	Bottlebrush	Dead End	90	40,786	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Coffeeberry	Hollyleaf	Dead End	90	16,442	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sugar Gum	Hollyleaf	Dead End	95	13,310	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Lilac	Hollyleaf	Dead End	91	6,615	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Hopseed	Hollyleaf	Wood Vista	89	81,920	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Bottlebrush	Silkwood	Hollyleaf	90	17,280	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sugarbush	Bottlebrush	Dead End	89	18,890	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Silkwood	Canyon Vistas	Dead End	90	44,666	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Scrub Oak	Silkwood	Dead End	84	17,558	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Stone Pine	Hopseed	Dead End	85	29,762	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Lantana	Hopseed	Dead End	87	29,762	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Goldenrain	Hopseed	Dead End	85	28,910	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Deerwood	Hopseed	Dead End	88	35,390	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Wood Vista Way	Hopseed	Canyon Vistas	80	45,440	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Canyon Vistas	Pacific Park	Wood Vista Way	70	37,970	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Canyon Vistas	Wood Vista Way	Silkwood	73	62,760	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Coastal Oak	Canyon Vistas	Peppertree	90	66,408	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Rockrose	Canyon Vistas	Peppertree	85	74,628	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sprucewood	Canyon Vistas	Peppertree	85	87,108	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Bearberry	Timberland	Dead End	80	6,938	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Timberland	Peppertree	Dead End	81	84,228	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sagebrush	Timberland	Canyon Vistas	83	12,400	23	5.5	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Elderwood	Sagebrush	Dead End	80	58,274	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Clusterberry	Timberland	Elderwood	89	5,608	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Peppertree	Pacific Park Dr	Sprucewood	87	46,360	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Peppertree	Sprucewood	End	90	42,690	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Northern Pine Loop	Ponderosa	Ponderosa	82	76,032	10	5.0	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sierra Cir	Northern Pine Loop	Dead End	90	6,985	10	5.0	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Oak Ridge Cir	Northern Pine Loop	Dead End	85	7,838	10	5.0	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Boulder Cir	Northern Pine Loop	Dead End	90	6,614	10	5.0	Note 9	7.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Key Largo	Sanborn	Cayman Brac	90	21,420	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Cayman Brac	Brittany Bay	Laguna Madre	85	23,148	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Cayman Brac	Brittany Bay	Key Largo	90	20,124	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Brittany Bay	Cayman Brac	Key Largo	88	11,160	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Cape Coral	Laguna Madre	Brittany Bay	90	25,632	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Palm Hbr	Cayman Brac	Cape Coral	88	10,512	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Laguna Madre	Cayman Brac	Cape Coral	95	10,224	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Paradise Bay	Chase	Cayman Brac	87	5,184	18	5.0	Note 9	6.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sanborn	Chase	Aurora	83	42,804	24	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Sanborn	Aurora	Wood Canyon Dr	83	35,824	24	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Chase	Paradise Bay	Sanborn	80	28,294	18	7.0	Note 9	9.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Chase	Sanborn	Pacific Park Dr	82	25,241	18	7.0	Note 9	9.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Chase	Paradise Bay	Thisledown	90	48,676	18	7.0	Note 9	9.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26

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Table C-4: Zone 3 Pavement Repair Recommendations

Street Name	From	To	2020 PMP PCI	2020 PMP Area (SF)	Design Input Parameters		Structural Capacity Prelim. Findings	Recommendations				
					Design R-Value	Assumed 20-Year TI[1]		Localized AC Repair Thickness (inches)[2][3][5]	AC Leveling Course Thickness (inches)[6]	ARHM Overlay Thickness (inches)[7]	Reflective Cracking Reduction Recommendation	Recommended Strategy and Schedule
Wood Canyon Dr	Thistledown	Alastair	81	81,528	24	7.0	Note 9	9.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Wood Canyon Dr	Grand	Sanborn	83	30,179	24	7.0	Note 9	9.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Wood Canyon Dr	Sanborn	Pacific Park Dr	80	57,878	24	7.0	Note 9	9.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Wood Canyon Dr	Pacific Park Dr	Oakgrove		2,002	24	7.0	Note 9	9.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2028-29
Oakgrove	Wood Canyon Dr	Pleasant Walk	76	53,480	10	6.0	Note 8	8.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2027-28
Boundary Oak	Pleasant Walk	Wood Canyon Dr	76	88,154	10	6.0	Note 9	8.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2027-28
Picket Ln	Wood Canyon Dr	Plateau	88	5,098	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Plateau	North End	Picket Ln	94	49,562	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Plateau	Picket Ln	South End	87	17,154	23	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Plateau	Plateau	Wood Canyon Dr	86	5,076	23	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Nantais	Pierremont	Dead End	73	10,754	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Pierremont	Parisville	Dead End	74	33,950	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Parisville	Grand	Dead End	81	15,578	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Grand	Aliso Viejo Pkwy	Wood Canyon Dr	83	39,405	24	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Grand	Aliso Viejo Pkwy	Vantis Dr (pvt)	90	15,310	24	6.0	Note 9	7.5	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Erica Ln	Grand	Richemont Wy	89	5,176	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Richemont Way	Caledon Ct	Kara Ct	88	19,224	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Caledon Ct	Richemont Wy	Dead End	88	12,806	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Gala Ct	Richemont Wy	Dead End	86	10,754	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Kara Ct	Richemont Wy	Dead End	88	10,754	24	5.0	Note 9	6.0	Rehabilitation is not due at this time (note 10).		NA	Maint: 2025-26
Enterprise	Antares	Aliso Viejo Pkwy	79	61,970	10	7.0	Note 9	9.5	1.0	1.5	Notes 4	Rehab: 2027-28
Enterprise	Antares	Pacific Park Dr	90	16,180	10	7.0	Note 9	9.5	1.0	1.5	Notes 4	Rehab: 2027-28

Note (1): Traffic indices (TI's) are assumed values. A traffic engineer should confirm these assumed values are valid.

Note (2): For areas containing medium- or high-severity load-related distresses (alligator cracking, depressions, potholes, etc.), perform full-depth localized AC repair with the thickness shown or match existing AC thickness, whichever is greater. The recommended thickness represents the total AC section (inclusive of AC leveling and AC/ARHM overlay layer thicknesses). We recommend processing, moisture conditioning, and re-compacting the top 6-inches of material below the bottom of excavation to at least optimum moisture content and at least 90 percent relative compaction.

Note (3): Areas that do not exhibit load-related distresses (alligator cracking, depressions, potholes) but contain relatively wide longitudinal/transverse cracks (≥3/4-inch wide) are recommended for 5.0-inch-thick localized AC repair, extending to 2 foot beyond the edge of the crack (4-foot wide minimum width).

Note (4): Fiber-reinforced AC (Forta-Fi or equivalent) is recommended for use with the AC leveling and ARHM overlay layers to reduce reflective cracking potential (not necessary for AC base layer).

Note (5): The recommended AC base course mix is Standard Specification for Public Works Construction (Greenbook) ½-inch maximum Type IIIC3 PG 64-10 R15 AC.

Note (6): The recommended AC leveling course mix is Greenbook 3/8-inch maximum Class D2 PG 64-10 R15 AC.

Note (7): The recommended ARHM overlay mix is Greenbook ½-inch maximum ARHM-GG-C R0.

Note (8): Based on FWD testing, the roadway is structurally inadequate.

Note (9): Other than the areas recommended for localized AC repair areas (which are areas recommended to be addressed through patching, Notes 2 and 4), the existing pavement appears to be structurally adequate. To confirm, additional investigation may be required at the project-level evaluation stage.

Note (10): Current roadway condition is suitable for more cycle(s) of maintenance (localized AC repairs, crack repairs, followed by slurry sealing).

DRAFT

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: Shaun Pelletier, Director of Public Works/City Engineer

SUBJECT: BIKE LANE DISCUSSION

Recommended Action:

Receive presentation and provide direction to Staff.

Fiscal Impact:

There is no fiscal impact for this report.

Background:

The City's current network of bike lanes is illustrated in Attachment 1. Presently, most of the City's arterial roads, including Aliso Creek Road, Pacific Park Drive, Glenwood Drive, Aliso Viejo Parkway, and Alicia Parkway, feature striped bike lanes. However, due to numerous driveway accesses and other right turn pockets, Aliso Creek Road between Pacific Park and Aliso Viejo Parkway (North) does not have a striped bike lane.

Bike lanes are categorized as follows:

- **Class I**: Multi-use trail or path
- **Class II**: Bike lanes or buffered bike lanes
- **Class III**: Bike route
- **Class IV**: Separated bikeway

In an initial review of the City's main arterial streets, Pacific Park/Glenwood, Aliso Creek Road, and Aliso Viejo Parkway, these streets can generally accommodate buffered bike lanes. However, each street and location poses distinct challenges that must be addressed for actual implementation. The construction cost and required effort will vary significantly depending on the type of buffer selected.

Additionally, the Orange County Transportation Authority (OCTA) is developing a regional bikeway plan that could be integrated with local improvements, enhancing connectivity between local and regional bike facilities and expanding the bikeway system throughout the County. OCTA is also beginning to review guidelines for e-bikes, which could aid local agencies in safety and enforcement efforts.

Discussion:

Buffered bike lanes, or cycle tracks, can take many different forms. The main goal of these facilities is to provide physical protection to cyclists from vehicular traffic. They are most commonly used on arterial streets with parking lanes that help provide this protective barrier, though they could be installed on any street with enough space to accommodate them.

A physical barrier could take the form of a landscaped buffer, concrete curb or median, bollards/delineators, or simply be pavement markings. Any existing on-street bike lane that is at least 8' wide could have a striped buffer added at a relatively low cost and very little lead time to demonstrate a striped cycle track. Very few existing locations are less than 8'.

There are several design factors that need to be carefully reviewed when determining how and where to construct any physical barrier such as a landscaped or concrete median. These include but are not limited to:

- Sight Distance
- Drainage
- Existing Utilities
- Driveway/Street Intersection Conflicts
- Bridge Deck Widths
- Street Sweeping
- Adjacent Slope/Property Maintenance Access
- Additional Ongoing Landscape/Street Maintenance Costs

Since 2021, the City has been enhancing the existing bike lanes by adding a 2-3' buffer when repaving roads. This upgrade was most recently applied to Aliso Creek Road. In 2024, the California Manual on Uniform Traffic Control Devices adopted a standard for incorporating green paint for bicycle legends and striping bike lanes at conflict areas such as driveways and intersections. These green bicycle lanes will be included in the upcoming Aliso Creek Road Street Rehabilitation Project between Enterprise and SR-73, slated for completion by Spring 2024.

The estimated cost to install buffered bike lanes with green paint over the existing pavement in the remaining bike lanes throughout the City is approximately $20 per foot, totaling around $1.3 million for construction. The City has approximately 62,500 feet of arterial roads. Currently, there is roughly $1.4 million available in Air Quality Management

District (AQMD) funds earmarked for bike lane improvements. The AQMD AB 2766 Subvention Fund Program provides funding to cities and counties for developing clean transportation programs and reducing vehicle emissions, including the design, development, and implementation of bike lanes. The City has previously used this funding to purchase hybrid vehicles and electric vehicle chargers.

The City has applied for grant funding without success. In the last call for projects under the Safe Streets and Roads for All (SS4A) Grant Program, the award criteria favored projects in areas with a high history of fatalities and within census tracts that include underserved communities. During the required reporting period, Aliso Viejo recorded no vehicle fatalities, and we do not have any census tracts classified as underserved. Additionally, while the Orange County Transportation Authority (OCTA) offers competitive grants for capacity improvement projects that could be utilized for bike lane projects, the city's traffic levels do not yield a high score in the competitive evaluation, nor do we have roadways requiring widening for capacity issues.

Staff respectfully seeks City Council direction on whether to continue integrating bike lane improvements during roadway repaving projects or to implement these enhancements beforehand. Undertaking striping improvements prior to paving may incur additional costs for removing conflicting striping and could leave visible marks where the striping previously existed. Furthermore, the consideration of physical barriers at specific locations should also take into account their potential drawbacks.

Environmental:

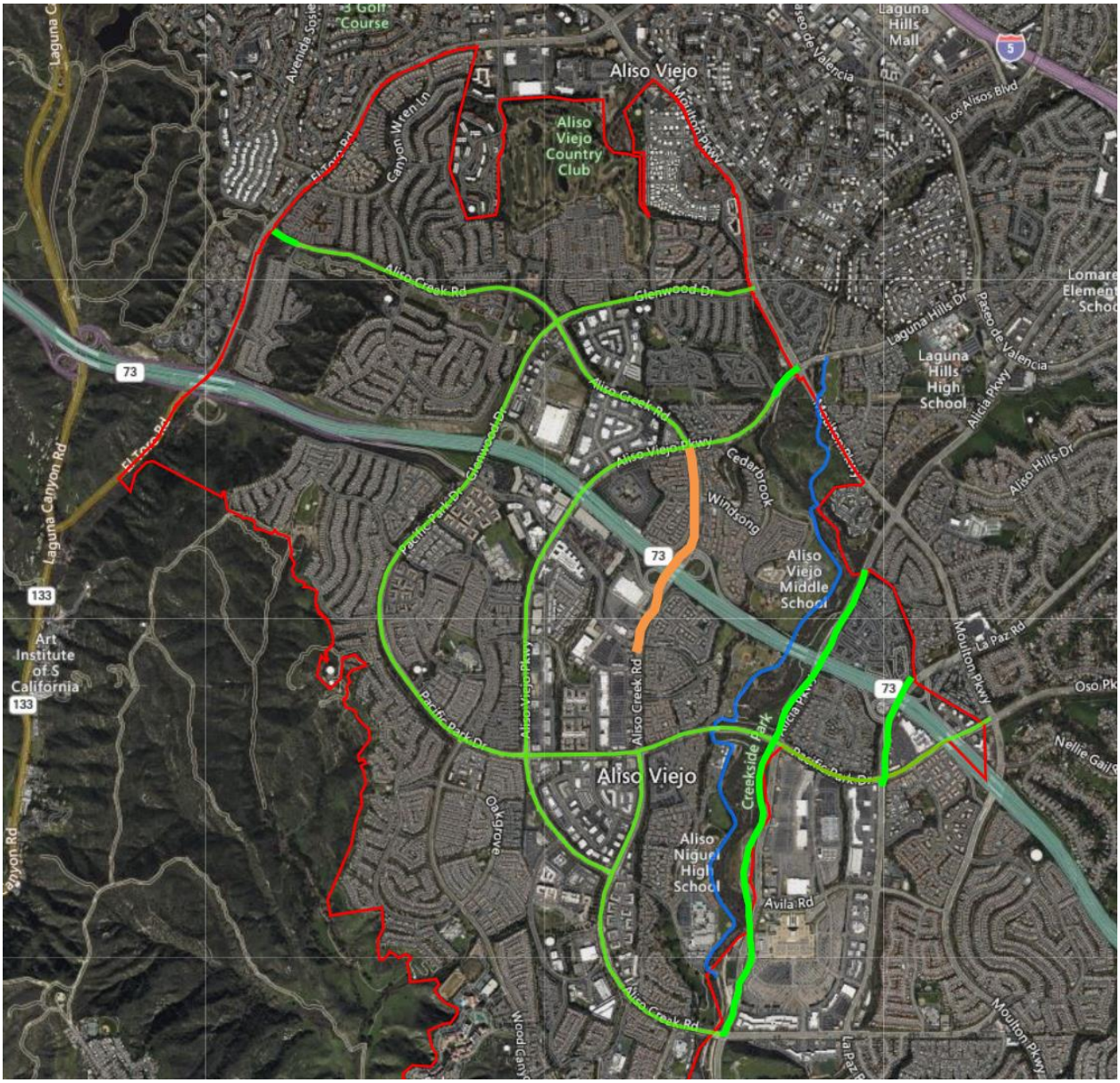
A feasibility study would not require environmental review as it is not considered a project under CEQA. Any potential projects proposed in a study would be reconsidered for environmental review as needed.

Attachment:

1. Bike Lane Map

2. Presentation

City of Aliso Viejo Bike Map



Bikeways

- Class I – Off Road Bikeway
- Class II – On-Road Striped Bikeway
- New Class II -On Road Striped Bikeway (estimated completion Spring 2025)

ALISO VIEJO

Bike Lane Discussion

Agenda

- Types of Bike Lanes
  - Class I, II, III, IV
  - Funding
  - Bike Lane Considerations

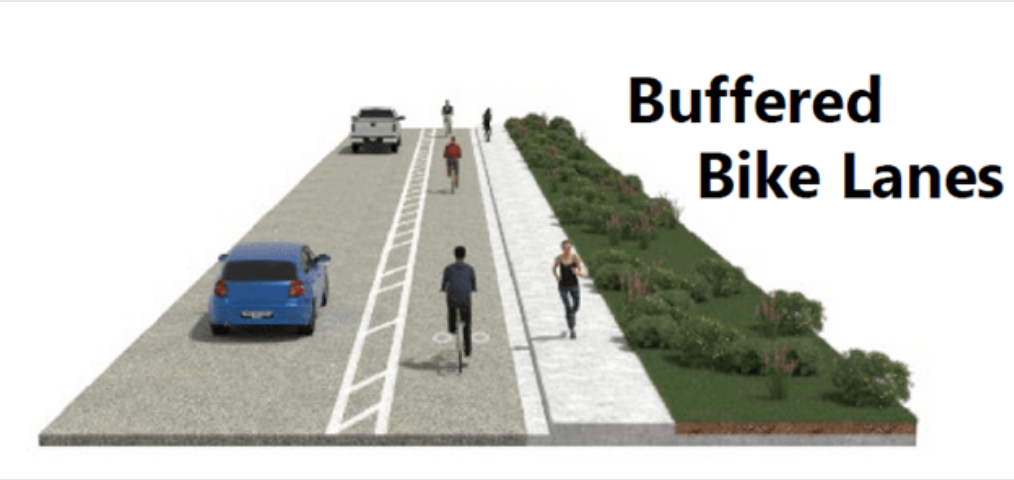
- Class I - Multi-Use Trail or Path
  - A separated path designed exclusively for bicycles and pedestrians, located off-street and away from vehicle traffic.





Aliso Creek Hiking and Riding Trail, Aliso Viejo, CA

- Class II - Bike Lanes or Buffered Bike Lanes
  - A separated path designed exclusively for bicycles and pedestrians, located off-street and away from vehicle traffic.



Aliso Creek Road
(Pacific Park Drive to
Wolverine Way),
Aliso Viejo, CA





Aliso Creek Road,
(Wolverine Way to
Alicia Parkway),
Aliso Viejo, CA

- Class II Bike Lane Enhancements
  - Green Paint at Bicycle Legends
  - Green Conflict Striping at Intersections
  - Adopted by the CA-MUTCD in January 2024





Aliso Creek Road,
(Wolverine Way to Alicia Parkway),
Aliso Viejo, CA

- Class III – Bike Route
  - A lower speed roadway where bicycles and motor vehicles share the same lane, indicated by signs or shared lane markings (sharrows)





Glenneyre Street,
Laguna Beach, CA

- Class IV – Separated Bikeway
  - A protected bike lane that is physically separated from vehicle traffic by vertical barriers such as curbs, bollards, or planters.





Aliso Creek Road (Alicia Parkway to La Paz Rd), Laguna Niguel, CA

- Class IV – Separated Bikeway Pros and Cons

Pros:

-Provides a barrier between cars and bikes

Cons:

-Street sweeping

-Landscape maintenance of the slopes

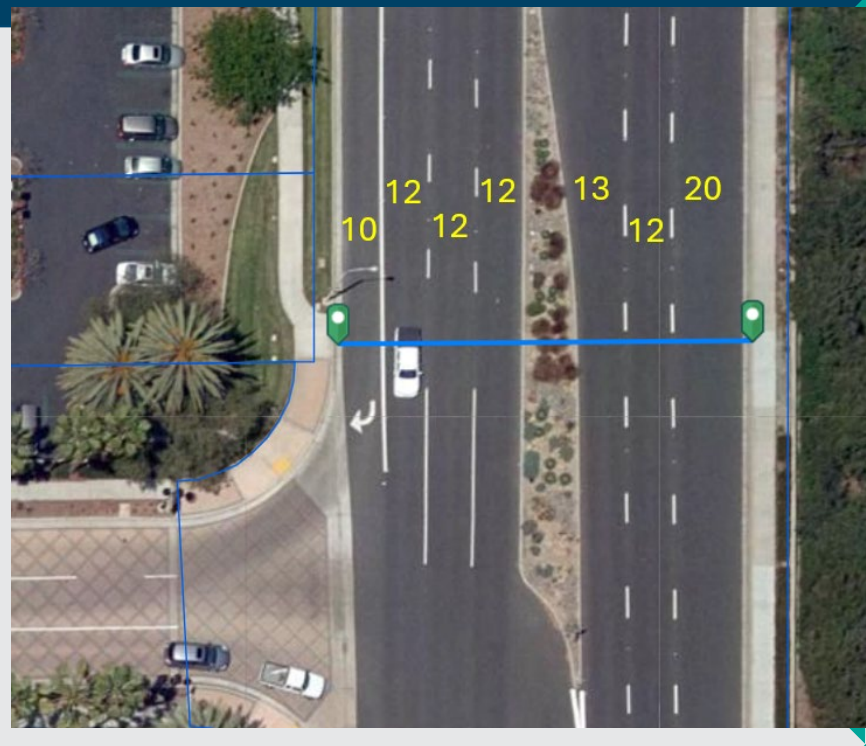
-Maintenance/replacement due to collisions/vandalism

Funding

AQMD Grant Funds Available: $1.4 Million

Cost Estimate to upgrade all Class II with green paint and buffers ~$1.3M

- Bike Lane Considerations
  - Road Width
  - Multiple Driveways
  - Right turn Pockets
  - Reduction/Removals of striped medians may be necessary
  - Removal of existing striping may leave marks behind







Questions

City of Aliso Viejo
AGENDA ITEM

DATE: February 5, 2025

TO: Mayor and City Council

FROM: Shaun Pelletier, Director of Public Works/City Engineer

SUBJECT: AGREEMENT WITH GFIVE ENTERPRISES INC. DBA ADVANCED POOL SPECIALISTS FOR THE AQUATIC CENTER POOL DECK SURFACE REHABILITAITON PROJECT

Recommended Actions:

1. Approve Contract Documents, Specifications, and Plans for Aquatic Center Pool Deck Rehabilitation Project;
2. Award an agreement in the amount of $238,312.00 to GFive Enterprises Inc. dba Advanced Pool Specialists for Aquatic Center Pool Deck Surface Rehabilitation Project;
3. Authorize the City Manager to execute an agreement with GFive Enterprises Inc. dba Advanced Pool Specialists;
4. Authorize City staff to make total compensation to GFive Enterprises Inc. dba Advanced Pool Specialists up to $238,312.00 plus $23,831.20 (10% of the agreement amount) to allow for contingencies, totaling 262,143.20; and
5. Declare this project categorically exempt from the California Environmental Quality Act (CEQA) process Per Title 14 of the California Code of Regulations, Chapter 3, Article 19, Section 15301 (Class 1: Existing Facilities).

Fiscal Impact:

The cost of this project is estimated to be $262,143.20 including construction and contingency. Funding in the amount of $275,000 is allocated in the FY 2024-25 budget.

Background:

The Aquatic Center opened in 2008, built as a community enhancement through the Glenwood development agreement. During the 16 years since opening, minor repairs have been completed to remove trip hazards and replace the mastic joint sealants. The consistent pool chemical exposure has worn the surface of the concrete deck and if not treated there is likely to be more extensive repair or replacement necessary.

Discussion:

Staff presented several options for the pool deck surface rehabilitation ranging in cost, lifespan, and aesthetics to the City Council in September 2024. The recommended product was KoolFlex and staff issued a notice to bid in October. One bid was received on October 30 from FlexGround, an installer of the KoolFlex product. Unfortunately, the bid was deemed non-responsive since bid items were changed or not included. The proposed cost also increased about 45% from an initial quote received about 6 months prior to bidding. For these reasons, staff rejected the bid.

After considering the options, a revised bid package was prepared in the form of a Request for Proposals and issued in December. This method allowed contractors to propose any product that they felt could fulfill the requirements of repairing and preserving the existing concrete deck. On January 15, 2025, 2 proposals were received and have been reviewed. FlexGround (KoolFlex) did not submit a new proposal. The proposed products are summarized below along with other considered options for comparison purposes only.

Grind and Seal – This method includes grinding and/or patching of any major defects and applying a clear sealcoat. This is the most inexpensive method but will not change the aesthetic of the deck and is recommended to repeat every 2 years.

MicroGlass (Recommended) – This method proposed by Advanced Pool Specialists includes patching of any major defects, light grinding of the entire concrete deck for a uniform non-slip surface and installing a cement densifier (MicroGlass). This is a clear material more suitable for resisting pool chemicals than a standard seal coat since it changes the physical composition of the concrete. The aesthetic will not change significantly from existing since there is no color added. The densifier has little maintenance once applied but may need spot repairs in high traffic/chemical areas.

Krete Kote – This method proposed by Construction Industry Specialties includes grinding and/or patching of any major defects and installing a thin multilayer cement-based surface treatment and colored sealant. This will require a color sealcoat at 5 years, and possible reapplication at 10 years. This could change the aesthetic of the pool deck depending on the color selected, but the feel will be similar to the existing concrete.

KoolFlex – This method previously proposed by FlexGround includes grinding and/or patching of any major defects and installing a thin thermoplastic surface treatment. This will require a color sealcoat every 5 years. This could change the aesthetic of the pool deck depending on the color selected and will change the feel of the deck providing a slightly cushioned layer.

Replace Concrete – This method is the most extensive, requiring complete removal and replacement of the concrete deck. This is the most time-consuming and expensive and would create the most disturbance to the facility and neighbors. Staff does not recommend this alternative but provided the information as a comparison.

All proposed products are manufactured to better withstand exposure to pool chemicals and prolong the existing concrete deck below.

Since all products have different installation and long-term maintenance costs, the table helps provide a cost comparison at installation, 10 years, and 20 years.

Product	Cost	Lifespan (Years)	10-Year Cost	20-Year Cost	On-Going Maintenance
Grind and Seal	$ 50,000	2	$ 314,000	$ 698,000	Seal every 2 years
MicroGlass	$ 201,593	10	$ 281,593	$ 381,593	Spot repair as needed
Krete Kote	$ 210,000	10	$ 365,000	$ 801,500	Seal every 5 years, Reapply every 10 years
Koolflex	$ 250,000	20	$ 332,500	$ 520,000	Seal every 5 years
Replace Concrete	$ 380,000	40	$ 644,000	$ 1,028,000	Seal every 2 years

Staff does recommend completing all three areas at this time to keep a uniform facility aesthetic, but should budget savings be desired, the Fireside area ($53,625) could be completed at a future date. We have also received an alternate bid price of $36,719 for a different type of coating (EcoFinish) on the Splash Pad which we would also recommend installing at this time. Although the proposals from each company are acceptable, the major difference is in the final aesthetic and long-term maintenance costs.

Staff has reviewed all the product information, alternative options and pricing and respectfully recommends awarding an agreement to Advanced Pool Specialists utilizing the MicroGlass product on the Lap Pool, Recreation Pool and Fireside surfaces, as well as the EcoFinish coating on the Splash Pad.

Attachment:

1. Agreement

CITY OF ALISO VIEJO
PROFESSIONAL SERVICES AGREEMENT
FOR
AQUATIC CENTER POOL DECK REHABILITATION

1. PARTIES AND DATE.

This Agreement is made and entered into this _____ day of _____, 20___, by and between the City of Aliso Viejo, a municipal corporation organized under the laws of the State of California with its principal place of business at 12 Journey, Suite 100, Aliso Viejo, California 92656 ("City") and **GFive Enterprises, Inc. dba Advanced Pool Specialists**, a **corporation**, with its principal place of business at **2326 N. Batavia St., Suite 116, Orange, CA 92865** ("Contractor"). City and Contractor are sometimes individually referred to herein as "Party" and collectively as "Parties."

2. RECITALS.

2.1 Contractor.

Contractor desires to perform and assume responsibility for the provision of professional **Pool Deck Rehabilitation** services required by the City on the terms and conditions set forth in this Agreement. Contractor represents that it is experienced in providing professional **Pool Deck Rehabilitation** services to public clients, is licensed in the State of California, and is familiar with the plans of City.

2.2 Project.

City desires to engage Contractor to render such services for the **Aquatic Center Pool Deck Rehabilitation** project ("Project") as set forth in this Agreement.

3. TERMS.

3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Contractor promises and agrees to furnish to the City all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the professional **Pool Deck Rehabilitation** services necessary for the Project ("Services"). The Services are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term. The term of this Agreement shall be from **February 17, 2025** to **June 30, 2025**, unless earlier terminated as provided herein. The City Manager shall have the unilateral option, at its sole discretion, to renew this Agreement annually for no more than two additional one-year terms. Contractor shall complete the Services within the term of this Agreement, and shall meet any other established schedules and deadlines.

3.2 Responsibilities of Contractor.

3.2.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Contractor or under its supervision. Contractor will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. City retains Contractor on an independent contractor basis and not as an employee. Contractor shall complete, execute, and submit to City a Request for Taxpayer Identification Number and Certification (IRS FormW-9) prior to commencement of any Services under this Agreement. Neither City, nor any of its officials, officers, directors, employees or agents shall have control over the conduct of Contractor or any of Contractor's officers, employees, or agents, except as set forth in this Agreement. Contractor retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Contractor shall also not be employees of City and shall at all times be under Contractor's exclusive direction and control. Contractor shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Contractor shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services.

3.2.2.1 Contractor shall perform the Services expeditiously, within the term of this Agreement, and in accordance with the Schedule of Services set forth in Exhibit "B" attached hereto and incorporated herein by reference. Contractor represents that it has the professional and technical personnel required to perform the Services in conformance with such conditions. In order to facilitate Contractor's conformance with the Schedule, City shall respond to Contractor's submittals in a timely manner. Upon request of City, Contractor shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.2.2 Neither City nor Contractor shall be considered in default of this Agreement for delays in performance caused by circumstances beyond the reasonable control of the non-performing Party. For purposes of this Agreement, such circumstances include a Force Majeure Event. A Force Majeure Event shall mean an event that materially affects a Party's performance and is one or more of the following: (1) Acts of God or other natural disasters; (2) terrorism or other acts of a public enemy; (3) orders of governmental authorities (including, without limitation, unreasonable and unforeseeable delay in the issuance of permits or approvals by governmental authorities that are required for the Services); (4) strikes and other organized labor action occurring at the site and the effects thereof on the Services, only to the extent such strikes and other organized labor action are beyond the control of Contractor and its subcontractors, and to the extent the effects thereof cannot be avoided by use of replacement workers; and (5) pandemics, epidemics or quarantine restrictions. For purposes of this section, "orders of governmental authorities," includes ordinances, emergency proclamations and orders, rules to protect the public health, welfare and safety, and other actions of a public agency applicable to the Services and Agreement.

3.2.2.3 Should a Force Majeure Event occur, the non-performing Party shall, within a reasonable time of being prevented from performing, give written notice to the other Party describing the circumstances preventing continued performance and the efforts being made to resume performance of this Agreement. Force Majeure Events and/or delays, regardless of the Party responsible for the delay, shall not entitle Contractor to any additional compensation. Notwithstanding the foregoing in this section, the City may still terminate this Agreement in accordance with the termination provisions of this Agreement.

3.2.3 Conformance to Applicable Requirements. All work prepared by Contractor shall be subject to the approval of City.

3.2.4 Substitution of Key Personnel. Contractor has represented to City that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Contractor may substitute other personnel of at least equal competence upon written approval of City. In the event that City and Contractor cannot agree as to the substitution of key personnel, City shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to the City, or who are determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by the Contractor at the request of the City. The key personnel for performance of this Agreement are as follows: **Brett Gereau**.

3.2.5 City's Representative. The City hereby designates the City Manager, or his or her designee, to act as its representative for the performance of this Agreement ("City's Representative"). City's Representative shall have the power to act on behalf of the City for all purposes under this Contract. The City Manager hereby designates **Public Works Director/City Engineer**, or his or her designee, as the City's contact for the implementation of the Services hereunder. Contractor shall not accept direction or orders from any person other than the City's Representative or his or her designee.

3.2.6 Contractor's Representative. Contractor hereby designates **Brett Gereau**, or his or her designee, to act as its representative for the performance of this Agreement ("Contractor's Representative"). Contractor's Representative shall have full authority to represent and act on behalf of the Contractor for all purposes under this Agreement. The Contractor's Representative shall supervise and direct the Services, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.7 Coordination of Services. Contractor agrees to work closely with City staff in the performance of Services and shall be available to City's staff, Contractors and other staff at all reasonable times.

3.2.8 Standard of Care; Performance of Employees. Contractor shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Contractor represents and maintains that it is skilled in the professional calling necessary to perform the Services. Contractor warrants that all employees and subcontractors shall

have sufficient skill and experience to perform the Services assigned to them. Finally, Contractor represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Contractor shall perform, at its own cost and expense and without reimbursement from the City, any services necessary to correct errors or omissions which are caused by the Contractor's failure to comply with the standard of care provided for herein. Any employee of the Contractor or its sub-Contractors who is determined by the City to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the City, shall be promptly removed from the Project by the Contractor and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.9 Laws and Regulations. Contractor shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Contractor shall be liable for all violations of such laws and regulations in connection with Services. If the Contractor performs any work knowing it to be contrary to such laws, rules and regulations, Contractor shall be solely responsible for all costs arising therefrom. Contractor shall defend, indemnify and hold City, its officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations.

3.2.10 Insurance.

3.2.10.1 Time for Compliance. Contractor shall not commence Work under this Agreement until it has provided evidence satisfactory to the City that it has secured all insurance required under this section. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the City that the subcontractor has secured all insurance required under this section.

3.2.10.2 Types of Insurance Required. As a condition precedent to the effectiveness of this Agreement for work to be performed hereunder and without limiting the indemnity provisions of the Agreement, the Contractor in partial performance of its obligations under such Agreement, shall procure and maintain in full force and effect during the term of the Agreement, the following policies of insurance. If the existing policies do not meet the Insurance Requirements set forth herein, Contractor agrees to amend, supplement or endorse the policies to do so.

(a) Commercial General Liability: Commercial General Liability Insurance which affords coverage at least as broad as Insurance Services Office "occurrence" form CG 0001, with minimum limits of at least $1,000,000 per occurrence, and if written with an aggregate, the aggregate shall be double the per occurrence limit. Defense costs shall be paid in addition to the limits.

The policy shall contain no endorsements or provisions limiting coverage for (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) contain any other exclusion contrary to the Agreement.

(b) Automobile Liability Insurance: Automobile Liability Insurance with coverage at least as broad as Insurance Services Office Form CA 0001 covering "Any Auto" (Symbol 1) with minimum limits of $1,000,000 each accident.

(c) Contractors Pollution Liability: (if necessary)

Contractors Pollution Liability Insurance covering all of the contractor's operations to include onsite and offsite coverage for bodily injury (including death and mental anguish), property damage, defense costs and cleanup costs with minimum limits of $5 million per loss and $10 million total all losses. The policy shall contain no endorsements or provisions limiting contractual liability or coverage for cross liability of claims or suits by one insured against another.

If coverage is written on a claims-made basis, the retroactive date shall precede the effective date of the initial Agreement and continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least three (3) years from termination or expiration of this Agreement.

(d) Professional Liability: Professional Liability insurance with minimum limits of $1,000,000. Covered professional services shall specifically include all work to be performed under the Agreement and delete any exclusions that may potentially affect the work to be performed (for example, any exclusions relating to lead, asbestos, pollution, testing, underground storage tanks, laboratory analysis, soil work, etc.).

If coverage is written on a claims-made basis, the retroactive date shall precede the effective date of the initial Agreement and continuous coverage will be maintained or an extended reporting period will be exercised for a period of at least three (3) years from termination or expiration of this Agreement.

(e) Workers' Compensation: Workers' Compensation Insurance, as required by the State of California and Employer's Liability Insurance with a limit of not less than $1,000,000 per accident for bodily injury and disease.

3.2.10.3 Endorsements. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the City for approval.

(a) The policy or policies of insurance required by Section 3.2.10.2 (a) Commercial General Liability and (c) Contractor's Pollution Liability shall be endorsed to provide the following:

(1) Additional Insured: The City of Aliso Viejo, its officials, officers, employees, agents, and volunteers shall be additional insureds with regard to liability and defense of suits or claims arising out of the performance of the Agreement.

Additional Insured Endorsements shall not (1) be restricted to "ongoing operations"; (2) exclude "contractual liability"; (3) restrict coverage to "sole" liability of Contractor; or (4) contain any other exclusions contrary to the Agreement.

(2) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

(b) The policy or policies of insurance required by Section 3.2.10.2 (b) Automobile Liability and (d) Professional Liability shall be endorsed to provide the following:

(1) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

(c) The policy or policies of insurance required by Section 3.2.10.2 (e) Workers' Compensation shall be endorsed to provide the following:

(1) Waiver of Subrogation: A waiver of subrogation stating that the insurer waives all rights of subrogation against the indemnified parties.

(2) Cancellation: Required insurance policies shall not be canceled or the coverage reduced until a thirty (30) day written notice of cancellation has been served upon the City except ten (10) days shall be allowed for non-payment of premium.

3.2.10.4 Primary and Non-Contributing Insurance. All insurance coverages shall be primary and any other insurance, deductible, or self-insurance maintained by the indemnified parties shall not contribute with this primary insurance. Policies shall contain or be endorsed to contain such provisions.

3.2.10.5 Waiver of Subrogation. Required insurance coverages shall not prohibit Contractor from waiving the right of subrogation prior to a loss. Contractor shall waive all subrogation rights against the indemnified parties. Policies shall contain or be endorsed to contain such provisions.

3.2.10.6 Deductible. Any deductible or self-insured retention must be approved in writing by the City and shall protect the indemnified parties in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention.

3.2.10.7 Evidence of Insurance. The Contractor, concurrently with the execution of the Agreement, and as a condition precedent to the effectiveness thereof, shall deliver either certified copies of the required policies, or original certificates and endorsements on forms approved by the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. At least fifteen (15 days) prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the City. If such coverage is cancelled or reduced, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the City evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies.

3.2.10.8 Failure to Maintain Coverage. Contractor agrees to suspend and cease all operations hereunder during such period of time as the required insurance coverage is not in effect and evidence of insurance has not been furnished to the City. The City shall have the right to withhold any payment due Contractor until Contractor has fully complied with the insurance provisions of this Agreement.

In the event that the Contractor's operations are suspended for failure to maintain required insurance coverage, the Contractor shall not be entitled to an extension of time for completion of the Services because of production lost during suspension.

3.2.10.9 Acceptability of Insurers. Each such policy shall be from a company or companies with a current A.M. Best's rating of no less than A:VII and authorized to do business in the State of California, or otherwise allowed to place insurance through surplus line brokers under applicable provisions of the California Insurance Code or any federal law.

3.2.10.10 Insurance for Subcontractors. All Subcontractors shall be included as additional insureds under the Contractor's policies, or the Contractor shall be responsible for causing Subcontractors to purchase the appropriate insurance in compliance with the terms of these Insurance Requirements, including adding the City as an Additional Insured to the Subcontractor's policies.

3.2.11 Safety. Contractor shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Contractor shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions where applicable shall include, but shall not be limited to: (A) adequate life protection and life saving equipment and procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

3.3 Fees and Payments.

3.3.1 Compensation. Contractor shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "C" attached hereto and incorporated herein by reference. The total compensation shall not exceed **Two Hundred Thirty Eight Thousand Three Hundred Twelve** Dollars (**$238,312.00**) ("Total Compensation") without written approval of City's **City Manager**. Extra Work may be authorized, as described below, and if authorized, will be compensated at the rates and manner set forth in this Agreement.

3.3.2 Payment of Compensation. Contractor shall submit to City a monthly itemized statement which indicates work completed and hours of Services rendered by Contractor. The statement shall describe the amount of Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. City shall, within 45 days of receiving such statement, review the statement and pay all non-disputed and approved charges thereon.

3.3.3 Reimbursement for Expenses. Contractor shall not be reimbursed for any expenses unless authorized in writing by City.

3.3.4 Extra Work. At any time during the term of this Agreement, City may request that Contractor perform Extra Work. As used herein, "Extra Work" means any work which is determined by City to be necessary for the proper completion of the Project, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. Contractor shall not perform, nor be compensated for, Extra Work without written authorization from the City. Extra work shall not exceed **$23,831.20** without an amendment to the Agreement.

3.3.5 Prevailing Wages; DIR Registration.

3.3.5.1 Contractor is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Contractor

agrees to fully comply with such Prevailing Wage Laws. City shall provide Contractor with a copy of the prevailing rates of per diem wages in effect at the commencement of this Agreement. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Contractor's principal place of business and at the project site. It is the intent of the parties to effectuate the requirements of sections 1771, 1774, 1775, 1776, 1777.5, 1813, and 1815 of the Labor Code within this Agreement, and Contractor shall therefore comply with such Labor Code sections to the fullest extent required by law. Contractor shall defend, indemnify and hold the City, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

3.3.5.2 If the Services are being performed as part of an applicable "public works" or "maintenance" project, in addition to the foregoing, then pursuant to Labor Code sections 1725.5 and 1771.1, the Contractor and all subcontractors must be registered with the Department of Industrial Relations ("DIR"). Contractor shall maintain registration for the duration of the project and require the same of any subcontractors. This project may also be subject to compliance monitoring and enforcement by the DIR. It shall be Contractor's sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

3.4 Accounting Records.

3.4.1 Maintenance and Inspection. Contractor shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Contractor shall allow a representative of City during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Contractor shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

3.5 General Provisions.

3.5.1 Termination of Agreement.

3.5.1.1 Grounds for Termination. City may, by written notice to Contractor, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Contractor of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Contractor shall be compensated only for those services which have been adequately rendered to City, and Contractor shall be entitled to no further compensation. Contractor may not terminate this Agreement except for cause. The rights and remedies of the City provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law, equity or under this Agreement.

3.5.1.2 Effect of Termination. If this Agreement is terminated as provided herein, City may require Contractor to provide all finished or unfinished Documents and

Data and other information of any kind prepared by Contractor in connection with the performance of Services under this Agreement. Contractor shall be required to provide such document and other information within fifteen (15) days of the request.

3.5.1.3 Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, City may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

Contractor:

Advanced Pool Specialists
2326 N. Batavia St. Suite 116
Orange, CA 92865

City:

City of Aliso Viejo
12 Journey, Suite 100
Aliso Viejo, CA 92656
Attn: **Shaun Pelletier, Public Works Department**

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Ownership of Materials and Confidentiality.

3.5.3.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for City to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Contractor under this Agreement ("Documents & Data"). Contractor shall require all subcontractors to agree in writing that City is granted a non-exclusive and perpetual license for any Documents & Data the subcontractor prepares under this Agreement. Contractor represents and warrants that Contractor has the legal right to license any and all Documents & Data. Contractor makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Contractor or provided to Contractor by the City. City shall not be limited in any way in its use of the Documents and Data at any time, provided that any such use not within the purposes intended by this Agreement shall be at City's sole risk.

3.5.3.2 Confidentiality. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information,

and other Documents and Data either created by or provided to Contractor in connection with the performance of this Agreement shall be held confidential by Contractor. Such materials shall not, without the prior written consent of City, be used by Contractor for any purposes other than the performance of the Services. Nor shall such materials be disclosed to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Contractor which is otherwise known to Contractor or is generally known, or has become known, to the related industry shall be deemed confidential. Contractor shall not use City's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of City.

3.5.3.3 Confidential Information. The City shall refrain from releasing Contractor's proprietary information ("Proprietary Information") unless the City's legal counsel determines that the release of the Proprietary Information is required by the California Public Records Act or other applicable state or federal law, or order of a court of competent jurisdiction, in which case the City shall notify Contractor of its intention to release Proprietary Information. Contractor shall have five (5) working days after receipt of the Release Notice to give City written notice of Contractor's objection to the City's release of Proprietary Information. Contractor shall indemnify, defend and hold harmless the City, and its officers, directors, employees, and agents from and against all liability, loss, cost or expense (including attorney's fees) arising out of a legal action brought to compel the release of Proprietary Information. City shall not release the Proprietary Information after receipt of the Objection Notice unless either: (1) Contractor fails to fully indemnify, defend (with City's choice of legal counsel), and hold City harmless from any legal action brought to compel such release; and/or (2) a final and non-appealable order by a court of competent jurisdiction requires that City release such information.

3.5.4 Fraud Policy. Contractor shall provide a copy of the City's Fraud Prevention Policy to each of its employees assigned to perform Services under this Agreement. Contractor shall submit to the City a statement signed by an authorized representative for Contractor certifying receipt of the City's Fraud Prevention Policy. A finding by the City that any of Contractor's employees have committed fraud against the City or have violated the City's Fraud Prevention Policy shall be grounds for appropriate discipline, up to and including such employee's removal from performance of this Agreement at City's request and/or termination of this Agreement. Contractor shall reimburse the City for any costs and expenses associated with fraud against the City.

3.5.5 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.6 Attorney's Fees. If either party commences an action against the other party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorney's fees and all other costs of such action.

3.5.7 Indemnification.

3.5.7.1 To the fullest extent permitted by law, Contractor shall defend (with counsel of City's choosing), indemnify and hold the City, its officials, officers, employees, volunteers and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury of any kind, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or incident to any alleged acts, errors or omissions, or willful misconduct of Contractor, its officials, officers, employees, subcontractors, Contractors or agents in connection with the performance of the Contractor's Services, the Project or this Agreement, including without limitation the payment of all damages, expert witness fees and attorneys fees and other related costs and expenses except such loss or damage caused by the sole negligence or willful misconduct of the City. Contractor's obligation to indemnify shall survive expiration or termination of this Agreement and shall not be restricted to insurance proceeds, if any, received by the Contractor or the City, its officials, officers, employees, agents or volunteers.

3.5.7.2 If Contractor's obligation to defend, indemnify, and/or hold harmless arises out of Contractor's performance as a "design professional" (as that term is defined under Civil Code section 2782.8), then, and only to the extent required by Civil Code section 2782.8, which is fully incorporated herein, Contractor's indemnification obligation shall be limited to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Contractor, and, upon Contractor obtaining a final adjudication by a court of competent jurisdiction, Contractor's liability for such claim, including the cost to defend, shall not exceed the Contractor's proportionate percentage of fault.

3.5.8 Entire Agreement. This Agreement contains the entire Agreement of the parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both parties.

3.5.9 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in Orange County.

3.5.10 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.6 City's Right to Employ Other Contractors. City reserves right to employ other Contractors in connection with this Project.

3.7 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the parties.

3.8 Assignment or Transfer. Contractor shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the City. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.9 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be

construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Contractor include all personnel, employees, agents, and subcontractors of Contractor, except as otherwise specified in this Agreement. All references to City include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.10 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.11 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.12 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.13 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.14 Prohibited Interests. Contractor maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Agreement. Further, Contractor warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, brokerage fee, gift or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, City shall have the right to rescind this Agreement without liability. For the term of this Agreement, no member, officer or employee of City, during the term of his or her service with City, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.15 Equal Opportunity Employment. Contractor represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination. Contractor shall also comply with all relevant provisions of City's Minority Business Enterprise program, Affirmative Action Plan or other related programs or guidelines currently in effect or hereinafter enacted.

3.16 Labor Certification. By its signature hereunder, Contractor certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance

in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.17 Authority to Enter Agreement. Contractor has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.18 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

3.19 Declaration of Political Contributions. Contractor shall, throughout the term of this Agreement, submit to City an annual statement in writing declaring any political contributions of money, in-kind services, or loan made to any member of the City Council within the previous twelve-month period by the Contractor and all of Contractor's employees, including any employee(s) that Contractor intends to assign to perform the Services described in this Agreement.

3.20 Subcontracting.

3.20.1 Prior Approval Required. Contractor shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of City. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

[Signatures on following page.]

SIGNATURE PAGE TO PROFESSIONAL SERVICES AGREEMENT BETWEEN THE CITY OF ALISO VIEJO AND ADVANCED POOL SPECIALISTS

IN WITNESS WHEREOF, the parties have executed this Professional Services Agreement on this ____ day of _____, 2025.

CITY OF ALISO VIEJO

Approved:

By:_____
Mitzi Ortiz
City Manager

ATTEST:

By:_____
Janet Martinez
City Clerk

APPROVED AS TO FORM:

_____
Best Best & Krieger LLP
City Attorney

APPROVED AS TO COMPLIANCE WITH BUDGET

By:_____
Ann Eiffert
Director of Financial Services

ADVANCED POOL SPECIALISTS

[If Corporation, TWO SIGNATURES, President OR Vice President AND Secretary OR Treasurer REQUIRED]

By:_____

Its:_____

Printed Name:_____

By:_____

Its:_____

Printed Name:_____

CITY OF ALISO VIEJO

DECLARATION OF POLITICAL CONTRIBUTIONS

Using the space provided below, please list any political contributions of money, in-kind services, or loans made to any member of the City Council within the last twelve (12) months by Contractor and all of Contractor's employees, including any employee(s) that applicant intends to assign to perform the work or services described in this Agreement:

_____

_____

_____

_____

_____

_____

_____

To the best of my knowledge, I declare under penalty of perjury that the foregoing is true and was executed at:

_____ _____

City/County/State Date

_____ _____

Name of Business Print Name

_____

Signature

NOTE: THIS DECLARATION IS INCLUDED AS PART OF THE AGREEMENT AND MUST BE SIGNED AND ATTACHED HERETO.

CITY OF ALISO VIEJO

ACKNOWLEDGMENT OF RECEIPT OF FRAUD POLICY

I hereby acknowledge that I have received a copy of the City's "Fraud Prevention Policy" dated October 1, 2008. I understand that I am to promptly read its contents and distribute copies to employees assigned to perform Services for the City of Aliso Viejo.

To the extent that provisions of this policy conflict with previously issued policies or practices, whether or not such policies and practices were contained in written policies, this policy shall prevail.

Name of Business	Print Name
Signature	
Date	

EXHIBIT "A"

SCOPE OF SERVICES

Attached scope.

Table of Contents

1. Table of Contents
2. Cover letter
3. Project Approach
4. Proposal
5. Summary Sheet-Required Forms

Aliso Viejo Aquatic Center Pool Deck Rehabilitation

City Of Aliso Viejo
Public Works Department
12 Journey, Suite 100
Aliso Viejo, CA 92656

Contractor:
GFive Enterprises, Inc.
DBA: Advanced Pool Specialists
CA License Number: C-53 918532
Brett Gereau

Advanced Pool Specialists (APS) would like to express our interest in working with the Aliso Viejo Aquatic Center on the pool deck rehabilitation project. As an experienced pool contractor with a proven track record of delivering high-quality renovations, we are excited about the opportunity to contribute to the transformation of your aquatic facilities to better serve the community.

We have attached my proposal, which outlines the scope of services, timeline, and budget for the pool rehabilitation project. We would be delighted to discuss this further and answer any questions you may have.

Thank you for considering our proposal. We look forward to the possibility of working with The Aliso Viejo Aquatic Center and ensuring it continues to serve as a cornerstone of community engagement and recreation.

Sincerely,

Brett Gereau
Advanced Pool Specialists
(714) 319-6584
brett@advanceyourpool.com

Project Approach

Lap Pool & Rec Pool Site Conditions:

The lap pool and rec pool decks are comprised of a colored concrete with a light wash finish. The concrete exhibits deterioration in some areas ranging from mild to severe. The deterioration is likely due to breakdown of cement from exposure to corrosive pool water. The deterioration in some areas has reached a point where standard bare foot aquatic traffic would be difficult.

It is our experience that once a concrete surface has seen this amount of deterioration, it is no longer a viable candidate for coating systems. Once coated there is a high risk of the concrete continuing to breakdown and delamination of the coating as a result.

Lap Pool & Rec Pool Proposed Remedy:

We recommend grinding the surface of the concrete to a semi-smooth, non-slip and walkable surface. In the most severe areas of deterioration there will still be visible and feelable highs and lows. During the grinding, areas of rust would be removed and the steel treated. Large cracks will be opened and grouted. Small hairline cracks causing no danger will remain.

After grinding the surface, we will apply a cement densifier MicroGlass, to the entire surface of the concrete. MicroGlass will help convert the more soluble calcium compounds in the matrix to a denser less soluble calcium compound i.e. calcium hydroxide to calcium silicates. This helps strengthen the concrete and extend its service life giving it more resistance to chemical attack.

Fireside Deck Site Conditions:

The Fireside deck is comprised of a colored concrete with a light wash finish. The concrete is in relatively good structural and surface condition, exhibiting deterioration in only a few small areas. The concrete has staining and discoloration throughout.

Fireside Deck Proposed Remedy:

For the sake of uniformity throughout the deck areas, we recommend following the same protocol as the pool decks to the fireside deck area.

Splash Pad Site Conditions:

The splash pad is exhibiting signs of deterioration however, it is still in a condition suitable for coating.

Splash Pad Proposed Remedy:

Due to the corrosive nature of splash pad water, it is recommended that this area (inside the splash pad control joint) be coated with EcoFinish thermoplastic coating system. This is highly recommended while the concrete is still in suitable condition.

EXHIBIT "B"

SCHEDULE OF SERVICES

In the event that this Agreement is renewed pursuant to Section 3.1.2, the first renewal period shall be from July 1, 2025 to June 30, 2026. The second renewal period shall be from July 1, 2026 to June 30, 2027.

EXHIBIT "C"

COMPENSATION

Attached bid.

DESCRIPTION **PRICE**

Fireside Deck – Grind and Apply Densifier

1. Protection of any structure, fencing and surrounding area
2. Patch any broken concrete causing danger to walk on
3. Saw cut areas of rust, remove steel, apply rust inhibitor and patch
4. Open and fill major cracks throughout deck. Minor cracks causing no danger will remain
5. Grind concrete surface to a useable, slip resistant semi-uniform finish
6. Apply 2 coats of MicroGlass cement densifier to strengthen concrete, reduce moisture migration and extend concrete service life.
7. Remove and replace up to 205 linear feet of lateral mastic

Area Subtotal 53,625

Lap Pool Deck – Grind and Apply Densifier

1. Protection of any structure, pool, fencing and surrounding area
2. Patch broken concrete causing danger to walk on
3. Saw cut areas of rust, remove steel, apply rust inhibitor and patch
4. Open and fill major cracks throughout deck. Minor cracks causing no danger will remain
5. Grind concrete surface to a useable, slip resistant semi-uniform finish
6. Apply 2 coats of MicroGlass cement densifier to strengthen concrete, reduce moisture migration and extend concrete service life.
7. Remove and replace up to 440 linear feet of lateral mastic
8. Remove and replace up to 290 linear feet of coping mastic
9. Install new deck depth and no diving markers around perimeter of pool/spa to coincide with waterline markers

Area Subtotal 75,117

Recreation Pool Deck— Grind and Apply Densifier

1. Protection of any structure, pool, fencing and surrounding area
2. Patch any broken concrete causing danger to walk on
3. Saw cut areas of rust, remove steel, apply rust inhibitor and patch
4. Open and fill major cracks throughout deck. Minor cracks causing no danger will remain
5. Grind concrete surface to a useable, slip resistant semi-uniform finish
6. Apply 2 coats of MicroGlass cement densifier to strengthen concrete, reduce moisture migration and extend concrete service life.
7. Remove and replace up to 320 linear feet of lateral mastic
8. Remove and replace up to 200 linear feet of coping mastic
9. Install new deck depth and no diving markers around perimeter of pool/spa to coincide with waterline markers

Area Subtotal 72,851

Notes and Disclaimers
Note: Coping not included
Important Note: Patches, crack fill and floating will not match existing surrounding concrete
Note: There is no guarantee against future rust protruding through the concrete
Note: Furniture and Aquatic Equipment to be removed prior to start of project

Contract Price 201,593

*****Recommended Upgrade*** Splash Pad Coating – EcoFinish Coating**

This is highly recommended to protect the splash pad with a protective coating.

1. Prepare concrete surface to accept coating system
2. Pressure wash to clean and etch concrete to prepare for new coating
3. Prepare masking on adjacent areas
4. Apply 2 coats epoxy primer to concrete
5. Apply 3 coats EcoFinish to concrete surface with slip resistance to meet slip resistance coefficient
6. Color to be at customer's choosing

Upgrade Subtotal 36,719

Notes and Disclaimers
Cracks will still be visible through coating