Placentia Planning Commission Agenda

Regular Meeting
May 11, 2021
City Council Chambers
401 E. Chapman Avenue, Placentia, CA 92870

SPECIAL PROCEDURES NOTICE DURING COVID-19 EMERGENCY

On March 4, 2020, Governor Newsom proclaimed a State of Emergency as a result of the threat of the COVID-19 virus. On March 17, 2020, Governor Newsom issued Executive Order N-29-20, which temporarily suspends requirements of the Brown Act allowing Planning Commission Members to hold public meetings via teleconferencing and make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the Planning Commission.

Given the health risks associated with COVID-19, please be advised that while the City Council Chambers are open to the public, some or all of the Placentia Planning Commission Members may attend this meeting via teleconference. Those locations are not listed on the agenda and are not accessible to the public. Seating in the Council Chambers will be limited.

How to Observe the Meeting
To maximize public safety while maintaining transparency and public access in addition to being open to the public, all Planning Commission meetings are available to view live on AT&T U-verse (Channel 99), Spectrum (Channel 3), and online at www.placentia.org/pctv.

Join Zoom Meeting
https://us02web.zoom.us/j/89936371588?pwd=SVFEUkVrb0prN0R3QldkMldDKy9hUT09
Meeting ID: 899 3637 1588 Passcode: 007627
or dial +16699006833, 89936371588#

How to Submit Public Comment
Members of the public may provide public comment in person in a safe and socially distanced manner. Masks are mandatory. Comments may also be sent for Planning Commission consideration by email to Sylvia Minjares at sminjares@placentia.org. Please limit submitted comments to 200 words or less. Comments received before or during a Planning Commission meeting, until the close of the **Oral Communications** portion of the agenda, may not be read during the Planning Commission meeting but will be summarized in the public record, subject to the regular time limitations per speaker. Longer submittals will be included in the public record. If you are unable to provide your comments in writing, please contact the Development Services Department for assistance at (714) 993-8124.

Americans with Disabilities Act Accommodation
In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Clerk's Office at cityclerk@placentia.org or by calling (714) 993-8231. Notification 48 hours prior to the meeting will generally enable City Staff to make reasonable arrangements to ensure accessibility while maintaining public safety. (28 CFR 35.102.35.104 ADA Title II)

Until further notice the City will implement the guidelines of the California Department of Public Health in regards to social distancing.

The City of Placentia thanks you in advance for taking all precautions to prevent the spread of the COVID-19 virus. The City will return to normal Planning Commission meeting procedures as soon as the emergency has ended.

Placentia Planning Commission Agenda

Regular Meeting
May 11, 2021
City Council Chambers
401 E. Chapman Avenue, Placentia, CA 92870

Christine J. Schaefer
Chair

Frank Perez
Vice Chair

Brandon Evans
Commissioner

Claudia Keller
Commissioner

Dennis Lee
Commissioner

Nick Polichetti
Commissioner

Matthew Rocke
Commissioner

Procedures for Addressing the Commission

*Any person who wishes to speak regarding an item on the agenda or on a subject within the Planning Commission's jurisdiction during the "**Oral Communications**" portion of the agenda should fill out a "**Speaker Request Form**" and give it to the Commission Secretary BEFORE that portion of the agenda is called. Testimony for Public Hearings will only be taken at the time of the hearing.*

The Commission encourages free expression of all points of view. To allow all persons the opportunity to speak, please keep your remarks brief. If others have already expressed your position, you may simply indicate that you agree with a previous speaker. If appropriate, a spokesperson may present the views of an entire group. To encourage all views, the Commission discourages clapping, booing or shouts of approval or disagreement from the audience.

PLEASE SILENCE CELL PHONES AND OTHER ELECTRONIC EQUIPMENT WHILE THE COMMISSION IS IN SESSION.

Special Accommodations

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(28 CFR 35.102.35.104 ADA Title II)

Copies of all agenda materials are available for public review in the Office of the City Clerk, City Planning Division Counter, Placentia Library Reference Desk and the internet at www.placentia.org under the Planning Commission page. Persons who have questions concerning any agenda item may call the City Planning Division at (714) 993-8124 to make inquiry concerning the nature of the item described on the agenda.

In compliance California Government Code Section 54957.5, any writings or documents provided to a majority of the Planning Commission regarding any item on this agenda that are not exempt from disclosure under the Public Records Act will be made available for public inspection at the City Clerk's Office at City Hall, 401 East Chapman Avenue, Placentia, during normal business hours.

Study Sessions are open to the public and held in the City Council Chambers or City Hall Community Room.

City of Placentia
401 E Chapman Avenue
Placentia, CA 92870

Phone: (714) 993-8124
Fax: (714) 528-4640
Website: www.placentia.org

REGULAR MEETING
6:30 p.m. – City Council Chambers

CALL TO ORDER:

ROLL CALL:

Commissioner Evans
Commissioner Keller
Commissioner Lee
Commissioner Polichetti
Commissioner Rocke
Vice Chair Perez
Chair Schaefer

PLEDGE OF ALLEGIANCE:

ORAL COMMUNICATIONS: (PLEASE SEE PAGE ONE FOR SPECIAL INSTRUCTIONS ON SUBMITTING PUBLIC COMMENT DURING THE COVID-19 CRISIS)

At this time the public may address the Planning Commission concerning any agenda item, which is not a public hearing item, or on matters within the jurisdiction of the Planning Commission. There is a five (5) minute time limit for each individual addressing the Planning Commission.

CONSENT CALENDAR:

1. **Planning Commission Meeting Minutes – April 13, 2021**
   Recommended Actions: Approve

REGULAR AGENDA:

1. **Applicant:** **City of Placentia**

   Project Location: **Citywide**

   General Plan Conformance Finding for Fiscal Year 2021-22 Capital Improvement Program

   Recommended Actions: It is recommended that the Planning Commission take the following actions:

   1. Adopt Resolution No. PC-2021-13, a Resolution of the Planning Commission of the City of Placentia, finding that the Fiscal Year 2021-22 Capital Improvement Program conforms to the adopted General Plan and recommending the City Council approve the Capital Improvement Program.

PUBLIC HEARINGS:

1. **Applicant:** **Francisco Miranda, dba El Cantarito Restaurant**

   Project Location: **120 W. Santa Fe Ave.**

Use Permit Modification (MOD) 92-09: A request to permit the modification of an existing Use Permit from the onsite sale and consumption of beer and wine (Type 41 ABC License – On-Sale Beer & Wine - Eating Place) to the proposed onsite sale and consumption of beer, wine, and distilled spirits (Type 47 – On-Sale General – Eating Place), at an existing 1,886-square foot restaurant located at 120 W. Santa Fe Avenue within the Old Town Placentia Revitalization Plan (O-T) Zoning District.

Recommended Actions: It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Use Permit Modification (MOD) 92-09; and

2. Receive the staff report and consider all public testimony **(PLEASE SEE PAGE ONE FOR SPECIAL INSTRUCTIONS ON SUBMITTING PUBLIC COMMENT DURING THE COVID-19 CRISIS)**; and

3. Close the public hearing; and

4. Adopt Resolution PC-2021-12, a Resolution of the Planning Commission of the City of Placentia, approving Use Permit Modification (MOD) 92-09 and making findings to permit the modification of an existing Use Permit from the onsite sale and consumption of beer and wine (Type 41 ABC License – On-Sale Beer & Wine - Eating Place) to the proposed onsite sale and consumption of beer, wine, and distilled spirits (Type 47 – On-Sale General – Eating Place), at an existing 1,886-square foot restaurant (El Cantarito Restaurant) on property within the Old Town Placentia Revitalization Plan (OT-Main Street Subarea) Zoning District, located at 120 W. Santa Fe Avenue; and making findings that the project is categorically exempt pursuant to the California Environmental Quality Act (CEQA) set forth in Title 14 CCR § 15301 (Class 1 – Existing Facilities) and the City of Placentia Environmental Guidelines.

2. **Applicant:** **Lee Smith, dba Vitality OC**

   Project Location: **1211 E. Imperial Highway**

Use Permit (UP) 2021-02: A request for a Use Permit for a personal training fitness center in a 2,100 square-foot commercial space at a multi-tenant commercial shopping center located at 1211 E. Imperial Highway, within the C-1 (Neighborhood Commercial) Zoning District.

Recommended Actions: It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Use Permit No. (UP) 2021-02; and

2. Receive the Staff Report and consider all public testimony **(PLEASE SEE PAGE ONE FOR SPECIAL INSTRUCTIONS ON SUBMITTING PUBLIC COMMENT DURING THE COVID-19 CRISIS**; and

3. Close the public hearing; and

4. Adopt Resolution PC-2021-10, a resolution of the Planning Commission of the City of Placentia, approving UP 2021-02 and making findings to permit the establishment and operation of a personal training fitness center in an existing 2,100 square-foot commercial office located at a multi-tenant commercial shopping center within the C-1 (Neighborhood Commercial) Zoning District on property located at 1211 E. Imperial Highway; and making findings that the project is categorically exempt pursuant to the California Environmental Quality Act (CEQA) set forth in Title 14 CCR § 15301 (Class 1 – Existing Facilities) and the City of Placentia Environmental Guidelines.

3. **Applicant:** **USA Properties Fund, Inc.**

Project Location: **207 & 209 W. Crowther Avenue**

Development Plan Review (DPR) 2020-03 and Development Agreement (DA) 2020-01: A request for approval of a Development Plan Review and Development Agreement to allow for the construction of a five-story, mixed use development featuring 189 affordable housing units with associated amenities for residents, 1,500 square feet of retail space, 1,500 square feet of leasing office space, and two-level semi-subterranean parking structure on property located at 207 and 209 W. Crowther Avenue. This project, if approved, would be the third development entitled in the Transit Oriented Development (TOD) Zoning District near Placentia's Old Town. The 2.13-gross acres city owned site is situated on the north side of Crowther Avenue between Melrose Street and Cameron Street, which abuts the BNSF tracks and the future south platform for Placentia's anticipated Metrolink station. In keeping with the goals of the new TOD zone, this will be the third TOD type of development approved in the City. It will likely an additional catalyst to more development within the TOD zone and in the nearby Old Town District, thus implementing the City's vision as an area that encourages high quality, transit-oriented development and to create a compact pattern of development that is conducive to walking, bicycling, and using public transportation.

Recommended Actions: It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Development Plan Review (DPR) 2020-03 and Development Agreement (DA) 2020-01; and

2. Receive the Staff Report and consider all public testimony **(PLEASE SEE PAGE ONE FOR SPECIAL INSTRUCTIONS ON SUBMITTING PUBLIC COMMENT DURING THE COVID-19 CRISIS**; and

3. Close the public hearing; and

4. Adopt Resolution No. PC-2021-11, a Resolution of the Planning Commission of the City of Placentia, recommending that the City Council of the City of Placentia approve DPR 2020-03 and DA 2020-01, and making findings to permit the development of a five-story, mixed-use building consisting of 189 affordable housing units, 1,500 square feet of ground floor retail space, a 1,500-square foot leasing office, and a two-level semi-subterranean parking structure consisting of a total of 272 onsite parking spaces located on a 2.13-gross acre City-owned vacant property within the Transit Oriented Development Packing House District (TOD) Zone; and Consideration of an Ordinance approving a Development Agreement and long term Lease Agreement between the City of Placentia and USA Properties Fund, Inc., for the subject project and property, granting certain vested rights, leasing terms and rates related to the property, and memorializing the amount of the development fees owed and/or deferred in exchange for a community benefit pursuant to the procedures described in California Government Code § 65867 on property located at 207 and 209 W. Crowther Avenue and recommending the adoption of an Addendum to Mitigated Negative Declaration No. MND 2017-01 pursuant to the California Environmental Quality Act Guidelines (CEQA) set forth in Title 14 CCR §15074 and the City of Placentia Environmental Guidelines.

OLD BUSINESS:

NEW BUSINESS:

DEVELOPMENT REPORT:

DIRECTOR'S REPORT:

PLANNING COMMISSION REQUESTS

Commission members may make requests or ask questions of Staff. If a Commission member would like to have formal action taken on a requested matter, it will be placed on a future Commission Agenda.

ADJOURNMENT

The Planning Commissioners CLOSE to the regular Planning Commission meeting on June 8, 2021 at 6:30 p.m. in the City Council Chambers located at 401 East Chapman Avenue, Placentia CA, 92870.

CERTIFICATION OF POSTING

I, Joseph M. Lambert, Secretary to the Planning Commission of the City of Placentia, hereby certify that the Agenda for the May 11, 2021 Regular Meeting of the Planning Commission of the City of Placentia was posted on May 6, 2021.

Joseph M. Lambert, Secretary

PLACENTIA PLANNING COMMISSION

MINUTES OF THE REGULAR MEETING

April 13, 2021

The regular meeting of the Placentia Planning Commission of April 13, 2021 was called to order at 6:32 p.m. in the City Council Chambers, 401 East Chapman Avenue, Placentia, by Chair Schaefer.

ROLL CALL:

PRESENT (VIDEO CONFERENCE):	Commissioners Evans, Keller, Lee, Polichetti, Rocke, Perez
ABSENT:	Lee

OTHERS PRESENT:	Kathya Firlik, Assistant City Attorney Joseph M. Lambert, Director of Development Services Andrew Gonzales, Senior Planner Lesley Whittaker, Associate Planner Arlen Beck, Assistant Planner Sylvia Minjares, Office Assistant

PLEDGE OF ALLEGIANCE: Commissioner Keller

ORAL COMMUNICATIONS:

CONSENT CALENDAR:

1. **Planning Commission Meeting Minutes – March 9, 2021**
   Recommended Actions: Approve

Motion by Keller, second by Perez carried on a (6-0-1-0) vote to approve the recommended actions.

Ayes:	Evans, Keller, Lee, Polichetti, Rocke, Perez
Noes:	None
Absent:	Lee
Abstain:	None

REGULAR AGENDA:

PUBLIC HEARINGS:

Director of Development Services Joseph Lambert noted that he met with all the Commissioners prior to this meeting regarding the Public Hearing items on this agenda.

1. **Applicant: Kevin Coleman, representing Net Development Co.**
   Project Location: 736 Richfield Road

Development Plan Review (DPR) 2021-01: A request for approval of a Development Plan Review to allow for the development of an improved 1.57-acre lot, resulting in the demolition of an existing 3,175-square foot building on the lot and the construction of a new two-story industrial building measuring approximately 36,966 square feet, in conjunction with various onsite hardscape and landscape improvements on property located within the M (Manufacturing) Zoning District, at 736 Richfield Road.

Recommended Actions: It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Development Plan Review (DPR) No. 2021-01; and

2. Receive the staff report and consider all public testimony; and

3. Close the public hearing; and

4. Adopt Resolution No. PC-2021-07, a Resolution of the Planning Commission of the City of Placentia, approving DPR 2021-01 and making findings to permit the development of an improved 1.57-acre lot, resulting in the demolition of an existing 3,175-square foot building and construction of a new two-story industrial building measuring approximately 36,966 square feet in conjunction with various onsite hardscape and landscape improvements on property located within the M (Manufacturing) Zoning District, at 736 Richfield Road; and making findings that the project is categorically exempt pursuant to the California Environmental Quality Act (CEQA) set forth in Title 14 CCR § 15332 (Class 32 – In-Fill Development Projects) and the City of Placentia Environmental Guidelines.

Chair Schaefer opened the public hearing.

Associate Planner Lesley Whittaker presented the staff report and provided an overview of the proposed project to the Commission.

Ms. Whittaker provided a project site plan, elevations, site zoning standards, and landscape plan.

Ms. Whittaker also provided the Commissioners with a brief background regarding the property owner, Jellco Container.

Senior Planner Andrew Gonzales answered Commissioner Evans' question regarding the compatibility of the proposed architectural design with the other buildings in the surrounding area.

Ms. Whittaker noted that no public comments were received for or against the proposed project.

The Applicant, Kevin Coleman, representing Net Development Co. provided an overview

of the proposed project plans and highlighted their other developments in surrounding cities.

The Applicant answered the Commissioners' questions regarding a Metropolitan Water District easement and their communication with the neighbors.

In response to questions from Chair Schaefer, the Applicant stated his understanding and acceptance of the Conditions of Approval for the Development Plan Review.

Chair Schaefer closed the public hearing.

Motion by Perez, second by Polichetti carried on a (6-0-1-0) vote to approve the recommended actions.

Ayes: Evans, Keller, Perez, Polichetti, Rocke, Schaefer
Noes: None
Absent: Lee
Abstain: None

2. **Applicant: Toffoli Investments**
   Project Location: 443 & 455 S. Van Buren Street
   Zone Change (ZC) 2018-01, Development Plan Review (DPR) 2018-01, and Tentative Tract Map (TTM) 19104: A request for approval of a Zone Change, Development Plan Review, and Tentative Tract Map to develop a partially improved 5.6-gross acre lot for the construction of 22, three-story, multi-family buildings consisting of 139 for-sale residential town home units and associated hardscape and landscaping improvements that will be utilized for a private internal street system, outdoor parking, and pedestrian walkways, including landscaping for the property perimeter and passive and non-passive open space areas. The property is bordered by a 100-foot wide Burlington Northern and Santa Fe Railway (BNSF) right-of-way to the north, 70-foot wide Atwood Channel to the south, and S. Van Buren Street and four existing single-family residences to the east. Access to the site will be provided from S. Van Buren Street and said access will be directly across the street from the western terminus of Oak Street.

   Recommended Actions: It is recommended that the Planning Commission take the following actions:

   1. Open the public hearing concerning Zone Change No. ZC 2018-01, Development Plan Review No. DPR 2018-01, and Tentative Tract Map No. TTM 19104; and

   2. Receive the Staff Report and consider all public testimony; and

   3. Close the public hearing; and

   4. Adopt Resolution No. PC-2021-09, a Resolution of the Planning Commission of the City of Placentia, recommending that the City Council of the City of

Placentia approve ZC 2018-01, DPR 2018-01, and TTM 19104, and making findings to change the existing Zoning District of the project site from Manufacturing (M) District and Oil Combining (O) Zoning District to High Density Residential (R-3) Zoning District to bring the zoning of the site into alignment with the updated General Plan High Density Residential land use designation, and permit the development of an approximately 5.6-gross acre lot for the construction of 22, three-story, multi-family buildings consisting of 139 for-sale residential townhome units and associated hardscape and landscape improvements within the proposed High Density Residential (R-3) Zoning District on property located at 443 and 455 S. Van Buren Street and recommending the adoption of Mitigated Negative Declaration No. MND 2020-01 pursuant to the California Environmental Quality Act Guidelines (CEQA) set forth in Title 14 CCR §15074 and the City of Placentia Environmental Guidelines.

Chair Schaefer opened the public hearing.

Senior Planner Andrew Gonzales presented the staff report and provided an overview of the proposed project to the Commission, noting that this item will also go before City Council for final approval at a noticed Public Hearing.

Mr. Gonzales recommended to the Commission that Mitigation Measure HAZ-6 should be amended to add language regarding Recognized Environmental Conditions – Oil Wells. This is based on consultation with the project CEQA consultant.

Mr. Gonzales provided a project site plan, unit floor plans, site zoning standards, architectural design, elevations, amenities, and CEQA determination.

Mr. Gonzales summarized the public comments and concerns received via email regarding spot zoning, and the proximity to a high pressure fuel line and railway.

Mr. Gonzales and Director of Development Services Joseph Lambert answered the Commissioner's questions regarding the contemplated selling price of the proposed units, the windows facing the railway, sound attenuation, possible hazardous waste from the previous business establishments, the adjacent pipeline and railway, the proposed trail system and dog park, the vacancy rate for existing developments that are adjacent to the railway, and the timeframe for site cleanup.

The Applicant, Alan Toffoli, and the Architect, Mike Woodley, presented a slide presentation of the proposed site plans and architectural designs of the project.

The Applicant answered Commissioner Rocke's questions regarding dust reduction during construction, electric vehicle charging regarding the project and the adjacent pipeline.

Placentia resident Eddie De La Torre expressed concerns regarding spot zoning, the adjacent pipeline and railway.

JoAnn Nau, 513 Van Buren, Placentia CA expressed concerns regarding the

possibility of the Home Owners Association adding a fence around the proposed dog park in the future, and the existing parking issue in the neighborhood.

Mr. Lambert and Mr. Gonzales addressed the public's concerns and clarified points regarding spot zoning, parking, and fencing around the proposed dog park.

In response to questions from Chair Schaefer, the Applicant stated his understanding and acceptance of the Conditions of Approval for the Zone Change, Development Plan Review, and Tentative Tract Map.

Chair Schaefer closed the public hearing.

Motion by Schaefer, second by Keller carried on a (6-0-1-0) vote to approve the recommended actions, with amendment to Mitigation Measure HAZ-6.

Ayes:	Evans, Keller, Perez, Polichetti, Rocke, Schaefer
Noes:	None
Absent:	Lee
Abstain:	None

3. **Applicant:** **City of Placentia**
   Project Location: **1) 946, 950, 954, 958 Vista Avenue, 503 W. La Jolla Street, 2) 106 E. Santa Fe Court, 3) 1470 S. Placentia Avenue, 4) 1952, 1958 E. Veterans Way, 2006, 2018 E. Lakeview Loop, 601, 613, 625 S. Lakeview Avenue, 5) 735 W. Orangethorpe Avenue, 6) 132-150 E. Crowther Avenue, and 7) 431, 437, 455, 503, 513 S. Van Buren Street**

   General Plan Amendment (GPA) 2021-01 and Zone Change (ZC) 2021-01: A request for approval of a General Plan Amendment to change the existing land use designation of project areas 1,3, and 6 above in order to "clean-up" inconsistencies found on the General Plan Land Use map that were not captured or were mistakenly mislabeled during the 2019 General Plan Update. The City also proposes a ZC to change the zoning district of project areas 2,3,4,5, and 7 above in order to make the zoning designation of the project areas consistent with the 2019 General Plan Land Use designation.

   Recommended Actions: It is recommended that the Planning Commission take the following actions:

   1. Open the public hearing concerning General Plan Amendment (GPA) 2021-01 and Zone Change (ZC) 2021-01; and

   2. Receive the staff report and consider all public testimony; and

   3. Close the public hearing; and

   4. Adopt Resolution No. PC-2021-08, a Resolution of the Planning Commission of the City of Placentia, recommending that the City Council of the City of

Placentia approve GPA 2021-01 and ZC 2021-01; and recommending the adoption of a "finding of consistency" regarding project area location Nos. 1, 2, 4, 5, 6, 7 identified above pursuant to Sections 15168 and 15162 of the State CEQA Guidelines, and recommending adoption of a "Common Sense" Statutory Exemption regarding project area location No. 3, identified above pursuant to the "Common Sense" exemption under Section 15061 (b) (3) of the State CEQA Guidelines and the City of Placentia Environmental Guidelines.

Chair Schaefer opened the public hearing.

Assistant Planner Arlen Beck presented the staff report and provided an overview of the proposal to the Commission.

Mr. Beck discussed the proposed mapping corrections and zoning changes for each of the 7 project areas.

Mr. Beck and Development Services Director Joseph Lambert answered the Commissioners' questions regarding the contemplated Zoning and General Plan designations for Project Area 1, Project Areas 2 and 3, and the proposed trail adjacent to Project Area 4.

Chair Schaefer closed the public hearing.

Motion by Rocke, second by Keller carried on a (6-0-1-0) vote to approve the recommended actions.

Ayes:	Evans, Keller, Perez, Polichetti, Rocke, Schaefer
Noes:	None
Absent:	Lee
Abstain:	None

OLD BUSINESS:

NEW BUSINESS:

DEVELOPMENT REPORT:

Mr. Lambert provided updates regarding JPI, The Herald, Shea Homes, Brandywine Homes, the Audi Dealership, and Village Plaza Phase 2.

DIRECTOR'S REPORT:

PLANNING COMMISSION REQUESTS:

ADJOURNMENT:

Chair Schaefer closed the Planning Commission Regular Meeting at 8:54 p.m. to the regular meeting of Tuesday, May 11, 2021 at 6:30 p.m. in the City Council Chambers at 401 East Chapman Avenue, Placentia, CA.

Submitted by,

_____

Joseph M. Lambert,
Secretary to the Planning Commission

Placentia Planning Commission

AGENDA STAFF REPORT

TO: PLANNING COMMISSION

FROM: DIRECTOR OF DEVELOPMENT SERVICES

DATE: MAY 11, 2021

SUBJECT: **GENERAL PLAN CONFORMANCE FINDING FOR FISCAL YEAR 2021-22 CAPITAL IMPROVEMENT PROGRAM**

RECOMMENDATION:

It is recommended that the Planning Commission adopt Resolution No. PC-2021-13, A Resolution of the Planning Commission of the City of Placentia, California finding that the Fiscal Year 2021-22 Capital Improvement Program conforms to the adopted General Plan and recommending the City Council approve the Capital Improvement Program.

DISCUSSION:

California Government Code § 65401 requires the City to prepare a coordinated program (i.e., Capital Improvement Program (CIP) identifying projects recommended for planning, initiation or construction during the ensuing fiscal year. In accordance with state law, the Planning Commission must review and report on the conformity of the CIP with the adopted General Plan.

The (CIP) serves as a single comprehensive plan of proposed capital improvement projects for the budget year FY 2021-22. The CIP is a budgeting and strategic planning tool used to determine the extent of future needs and sources of funding. The CIP also serves as a guide for the efficient evaluation, prioritization and implementation of public improvements and facilities. For FY 2021-22, the City has identified 39 new projects totaling $8.8 million which it expects to begin work on.

As part of the CIP process, capital improvement projects are evaluated to determine the estimated cost and prioritized to take full advantage of Federal, State, Orange County and other funding from outside agencies. The CIP is reviewed yearly, during which time the City's needs may be re-prioritized and the City's financial status may be re-evaluated.

The first CIP priority is safety within the City's right-of-way, parks, and facilities. This priority is addressed throughout each section of the CIP document in numerous ways, including streets, traffic control and operations, parks, public buildings, bridges, sewer systems and storm drain systems. Additionally, a primary focus of the CIP is to preserve and reinvest in the City's physical assets, as reflected in each of the ten CIP sections. This includes pavement rehabilitation projects for residential and arterial streets as well as improvements at City facilities and ADA improvements to improve accessibility. The

proposed CIP recommends several projects which address facilities or equipment that are no longer adequate to meet demand or serve our citizens. These projects include the replacement or upgrade of facilities or equipment, expansion or renovation of an existing facility, or construction of a new facility. Another important component of the CIP is to implement projects identified within a master plan or other planning document that are needed to maintain or meet adequate levels of service. These projects may include new facilities or improvements toward existing facilities. Finally, the CIP addresses several future planned projects through funding of studies or project construction plans.

Conformity Findings

The basis for making a conformity finding is determining that each project fits into a goal or implementation policy as outlined in the adopted General Plan. For example, if a project is proposed to pave over several acres of open space, and that open space is called out in the Open Space Element as being protected, then the project does not conform to that General Plan Element. Another example is, if a project is proposed to widen a street or add bicycle or pedestrian paths to increase mobility, such a project would conform to the Circulation Element goals to increase accessibility and mobility for alternative modes of transportation.

City Staff has reviewed each of the proposed projects to be undertaken during Fiscal Year 2021-22 in relation to the adopted General Plan. The individual elements of the General Plan have goals, policies or implementation programs to compare the projects against the narrative of the adopted elements and make a determination that they are each in conformity with the adopted General Plan for the City of Placentia. Additionally, the Commission's finding that a proposed CIP item conforms to the General Plan does not necessarily mean the City will have the ability to implement or construct a certain CIP item. All CIP projects and plans must go through separate individual environmental and Council review. Accordingly, Staff is recommending that the Planning Commission find that the proposed CIP projects are in conformity with the adopted General Plan.

Environmental Review

The proposed Finding of General Plan Conformity is not a project as defined by the California Environmental Quality Act (CEQA). The finding of conformity does not commit the City to any of the identified projects in the CIP. Therefore, approval of the CIP qualifies for an exemption from the California Environmental Quality Act (CEQA) per Guideline 15061 (b)(3) for activities that have no potential for causing a significant effect on the environment. Furthermore, individual projects identified within the CIP will be reviewed in accordance with CEQA requirements prior to their implementation and when specific project details are available for analysis.

Prepared and submitted by

Luis Estevez
Deputy City Administrator

Reviewed and approved by:

Joseph M. Lambert
Director of Development Services

Attachments:

1. Resolution No. PC-2021-13
2. General Plan Conformity Matrix

RESOLUTION NO. PC-2021-13

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PLACENTIA, CALIFORNIA FINDING THAT THE FISCAL YEAR 2021-22 CAPITAL IMPROVEMENT PROGRAM CONFORMS TO THE ADOPTED GENERAL PLAN AND RECOMMENDING THE CITY COUNCIL APPROVE THE CAPITAL IMPROVEMENT PROGRAM

A. Recitals.

(i). On May 11, 2021, this Planning Commission considered the conformity of the proposed Fiscal Year 2021-22 Capital Improvement Program to the adopted General Plan.

(ii). This Planning Commission has reviewed and considered all elements of the proposed Capital Improvement Program, including written staff reports and verbal testimony presented.

(iii). All legal prerequisites to the adoption of this Resolution have occurred.

B. Resolution.

NOW, THEREFORE, the Planning Commission of the City of Placentia does hereby find, determine, and resolve as follows:

1. This Commission hereby specifically finds that all the facts as set forth in the Recitals, Part A., of this Resolution are true and correct.

2. This Commission finds, and recommends the City Council find, that the Fiscal Year 2021-22 Capital Improvement Program (Attachment 2 to the Staff Report dated May 11, 2021 and incorporated by reference herein) is in conformance with the Placentia General Plan.

3. The proposed Fiscal Year 2021-22 Capital Improvement Program promotes implementation of the goals and policies set forth in the adopted General Plan.

4. The Planning Commission hereby makes, and recommends the City Council make, the following finding: There is no possibility that the proposed Fiscal Year 2021-22 Capital Improvement Program may have a significant effect on the environment and said amendments are therefore not subject to the requirements of the California Environmental Quality Act ("CEQA") pursuant to the provisions of §15061(b)(3) of Division 6 of Title 14 of the California Code of Regulations, and the City of Placentia Environmental Guidelines.

5. The Planning Commission hereby recommends that, upon adoption of the Fiscal Year 2021-22 Capital Improvement Program, a Notice of Exemption in accordance with CEQA be filed with the Orange County Clerk-Recorder, as required by law.

6. This Commission finds, and recommends the City Council find, that the facts supporting the above specified findings are contained in the staff report and exhibits, and information provided to this Planning Commission with respect to the proposed Fiscal Year 2021-22 Capital Improvement Program.

7. This Commission hereby recommends that the City Council of the City of Placentia approve the proposed Fiscal Year 2021-22 Capital Improvement Program.

8. The Secretary of this Commission shall:

a. Certify to the adoption of this Resolution; and

b. Forthwith transmit a certified copy of this Resolution to the City Council of the City of Placentia together with all documents prepared with respect to these considerations and transcripts of any and all hearings conducted with respect to the action recommended for approval herein.

ADOPTED, AND ARPROVED this 11th day of May 2021

_____
CHRISTINE SCHAEFER, CHAIR

I, Joseph M. Lambert, Secretary to the Planning Commission of the City of Placentia, do hereby certify that the foregoing Resolution was introduced at a regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May 2021, and was passed at this regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, by the following vote:

AYES:	COMMISSION MEMBERS:
NOES:	COMMISSION MEMBERS:
ABSENT:	COMMISSION MEMBERS:
ABSTAINED:	COMMISSION MEMBERS:

ATTEST:

_____
JOSEPH M. LAMBERT,
SECRETARY TO THE PLANNING COMMISSION

APPROVED AS TO FORM

_____
KATHYA FIRLIK,
ASSISTANT CITY ATTORNEY

City of Placentia - General Plan Conformity Capital Improvement Projects		
Project #	**Project Name**	**General Plan Element**
1101	FY 2020-21 Roadway Rehabilitation Project	Mobility
1201	FY 2021-22 Roadway Rehabilitation Project	Mobility
1202	FY 2021-22 Slurry Seal Project	Mobility
1203	FY 2021-22 Concrete Repair Program	Mobility
1204	Crowther Avenue Street Resurfacing Project	Mobility
2201	Opticom Traffic Signal Preemption Devices - 10 intersections	Mobility
2202	Traffic Signal Back-Up Batteries	Mobility
2203	Rose/Tustin Traffic Signal Synchronization Project	Mobility
2204	Crowther Avenue Parking Lot Rehabilitation Project	Mobility
5201	Storm Drain Master Plan	Conservation
5202	Refurbish PD Briefing/Break Room	Safety
5203	Refurbish PD Watch Commander Office	Safety
5204	Bradford Pedestrian Bridge Repainting Project	Mobility
5205	Oberle Gym Floor Resurfacing Project	Open Space & Recreation
6201	Permit Tracking Software	Land Use / Sustainability
6202	Opticom Units for Police Patrol Units	Safety
6203	Purchase New Desktop Computers for Police Department	Safety
6204	Bitech Finance System Upgrade	Land Use / Sustainability
6205	Development Services Microfiche Conversion Project	Land Use / Sustainability
6206	Security Cameras for Civic Center Campus	Safety
7201	Jaycee Parquette Improvement Project	Open Space & Recreation
7202	Kraemer Park Memorial Fountain and Plaza Restoration and ADA Project	Open Space & Recreation
7203	Playground Equipment Replacement Project	Open Space & Recreation
7204	Paint Backs Community Center Rooms 6 & 7	Open Space & Recreation
7205	Replace Park Benches	Open Space & Recreation
7206	Replace Park BBQs	Open Space & Recreation
7207	Replace Park Picnic Tables	Open Space & Recreation
7208	Replace Park Trash Cans	Open Space & Recreation
7209	Replace Park Drinking Fountains	Open Space & Recreation
7210	Playground Resurfacing - Various Parks	Open Space & Recreation
7211	Tenns Courts Resurfacing	Open Space & Recreation
7212	McFadden Pergola Replacement	Open Space & Recreation
7213	Koch Park Picnic Shelter Replacement	Open Space & Recreation
7214	Replace Carpet Backs Community Center Rooms 6&7	Open Space & Recreation
8201	Public Works Arrowboard Replacement	Sustainability
8202	Public Works 6-Wheel Dump Truck Replacement	Sustainability
8203	Public Works Facility Maintenance Technician Truck	Sustainability
8204	Community Services Stakebed Truck Replacement	Sustainability
9201	Citywide Wayfinding Signage Program Design	Mobility

Placentia Planning Commission

AGENDA STAFF REPORT

TO: PLANNING COMMISSION

FROM: ARLEN BECK, ASSISTANT PLANNER

DATE: MAY 11, 2021

SUBJECT: **USE PERMIT MODIFICATION 92-09 (EL CANTARITO RESTAURANT)**

RECOMMENDATION:

It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Use Permit Modification (MOD) 92-09;

2. Receive the staff report and consider all public testimony;

3. Close the public hearing;

4. Adopt Resolution PC-2021-12, a Resolution of the Planning Commission of the City of Placentia, approving Use Permit Modification (MOD) 92-09 and making findings to permit the modification of an existing Use Permit from the onsite sale and consumption of beer and wine (Type 41 ABC License – On-Sale Beer & Wine - Eating Place) to the proposed onsite sale and consumption of beer, wine, and distilled spirits (Type 47 – On-Sale General – Eating Place), at an existing 1,886-square foot restaurant (El Cantarito Restaurant) on property within the Old Town Placentia Revitalization Plan (OT-Main Street Subarea) Zoning District, located at 120 W. Santa Fe Avenue; and making findings that the project is categorically exempt pursuant to the California Environmental Quality Act (CEQA) set forth in Title 14 CCR § 15301 (Class 1 – Existing Facilities) and the City of Placentia Environmental Guidelines.

REQUEST:

The applicant, Francisco Miranda, dba El Cantarito Restaurant, is requesting to permit the modification of an existing Use Permit from the onsite sale and consumption of beer and wine (Type 41 ABC License – On-Sale Beer & Wine - Eating Place) to the proposed onsite sale and consumption of beer, wine, and distilled spirits (Type 47 – On-Sale General – Eating Place), at an existing 1,886-square foot restaurant located at 120 W. Santa Fe Avenue within the Old Town Placentia Revitalization Plan (O-T) Zoning District.

PROJECT BACKGROUND AND DESCRIPTION:

The subject property is located within the Old Town Placentia Revitalization Plan Zoning District, in the Main Street Subarea at 120 W. Santa Fe Avenue. The existing tenant, El Cantarito Restaurant, is a family restaurant that serves a variety of traditional Mexican food and drinks. El Cantarito

Restaurant is a fixture in the Old Town area and is committed to maintaining the Old Town aesthetics, while adding a unique cultural dining experience. This location currently employs nine (9) full-time employees and four (4) part-time employees at any given time. The restaurant's hours of operation are currently 8:00 AM to 8:00 PM, Monday to Sunday. Resolution PC-2021-12 allows operating hours of 8:00 AM to 11:00 PM, if the tenant of the space wishes to expand their hours of operation in the future.

ABC approval is necessary for the sale and consumption of alcoholic beverages for onsite consumption. El Cantarito is proposing an on-premises bar area designated primarily for the service of alcoholic beverages on the premise. All alcoholic beverages are to be served with food, as required by ABC. The addition of selling and serving beer, wine, and distilled spirits is not anticipated to pose any additional safety or security risks.

Applicable Code Section – Placentia Municipal Code

The subject property is currently zoned Old Town Placentia Revitalization Plan - Main Street Subarea. The project will be required to comply with all development standards and use requirements set forth in the Placentia Municipal Code (PMC) for projects within the Old Town Placentia Revitalization Plan Zoning District. Pursuant to PMC Section 23.112.040, any establishment selling alcoholic beverages including those for on-site and off-site consumption shall require a UP to be reviewed and evaluated at a noticed public hearing before the Planning Commission.

Subject Site and Surrounding Land Uses

The restaurant is located on the south side of Santa Fe Avenue, within the Old Town Placentia Revitalization Plan Zoning District. There are connecting tenants on both sides of El Cantarito. The chart, below shows surrounding existing land uses, zoning designations, and General Plan Land Use Designations:

Surrounding Land Uses:

Location	Existing Land Use	Land Use Element General Plan Designation	Zoning Map Designation
Subject Site	El Cantarito Restaurant	Old Town	OT-Main St. (2 Story)
North	Multi-Tenant Commercial (Golden State Coffee Roasters)	Old Town	OT-Main St. (2 Story)
South (across BNSF railway)	Vacant	TOD	TOD
West	Old Town Hair Salon	Old Town	OT-Main St. (2 Story)
East	Chiropractor	Old Town	OT-Main St. (2 Story)

ZONING COMPLIANCE ANALYSIS

Site Development Standards

The project is located within the Old Town Placentia Revitalization Plan (O-T) Zoning District, within the Main Street (2-Story) Subarea. Table 3 of PMC Section 23.112.060 identifies parking requirements for Eating and Drinking Establishments is five spaces per 1,000 square feet, and it is two spaces per 1,000 Square Feet for retail uses. No additional private parking spaces are proposed as part of this request, although a public parking lots are located to the east and south of the site. The existing restaurant has operated at the site since 2002, and staff has not received any complaints regarding parking for this use. PMC Section 23.112.060(c) provides an exception to parking requirements and states that providing parking in the Main Street Subarea is optional. Considering the lack of available land for additional parking, and the parking exception identified by the PMC, staff can support the request as proposed.

EXISTING ABC LICENSES WITHIN ONE-HALF MILE RADIUS OF SUBJECT SITE

The following chart shows all businesses within a one-half mile radius of the subject site with an existing ABC license and their ABC license type.

Business	Address	License Type
Mi Casita	330 W. Santa Fe Avenue	47, On-Sale General
301 Cafe	301 W. Santa Fe Avenue	47, On-Sale General
El Taco Sabroso	261 W. Santa Fe Avenue	41, On-Sale Beer and Wine
Mexico Super Market	134 W. Santa Fe Avenue	20, Off-Sale Beer and Wine
San Sushi Restaurant	161 W. Santa Fe Avenue	41, On-Sale Beer and Wine
Tlaquepaque Bakery & Grill	101 W. Santa Fe Avenue	47, On-Sale General
Imperial Restaurant & Market	242 S. Bradford Avenue	47, On-Sale General
American Legion Post 277	230 S. Bradford Avenue	52, Veterans Club
El Farolito	201 S. Bradford Avenue	47, On-Sale General
Rosa's Pizza	116 N. Bradford Avenue	41, On-Sale Beer and Wine
Step N Go Mini Mart	110 N. Bradford Avenue	21, Off-Sale General
Raffas	506 W. Chapman Avenue	20, Off-Sale Beer and Wine
Sam's Liquor	602 W. Chapman Avenue	21, Off-Sale General
Playa de Corales	640 W. Chapman Avenue	47, On-Sale General
El Pollo Fino, Inc.	714 W. Chapman Avenue	41, On-Sale Beer and Wine
Northgate Market	710 W. Chapman Avenue	21, Off-Sale General
The Bruery	190 E. Crowther Avenue	23. Small Beer Manufacturer

There are several other businesses that have a current ABC license within a one-half mile radius of the subject site, El Cantarito Restaurant. El Cantarito has an existing Type 41 ABC license, which allows the establishment to sell beer and wine for on-site consumption. This modification is to change their current license to a Type 47 license, which allows for the sale and consumption of beer, wine, and distilled spirits for on-site consumption. Although there are many alcohol permits

within a one-half mile radius, there is not an "undue concentration" in the area. State law defines "undue concentration" in an area if either of the following conditions exists:

(1) the proposed site is located in a district where there is a 20 percent greater number of reported crimes than the average number of reported crimes as determined from all crime reporting districts within the jurisdiction of the local law enforcement agency;

(2) the ratio of off-sale/on-sale retail licenses to population in the census tract or census division in which the applicant's premises is located exceeds the ratio of off-sale/on-sale to population in the county in which the applicant's premises is located.

This area does not meet the criteria of the definition of an "undue concentration. In addition, ABC has not indicated that the subject site is in an area of "undue concentration." Therefore, a finding for a necessity of public convenience is not necessary.

Other Departments Concerns and Requirements

The Divisions of Planning and Building, as well as the Placentia Police Department have reviewed the application, with no major concerns raised by other departments regarding the project proposal. The Planning Division identified comments and applicable code requirements that have been incorporated as conditions of approval into a draft Resolution for consideration by the Planning Commission (Attachment No. 1).

ISSUES ANALYSIS:

General Plan Consistency

The existing restaurant and the request to allow on-site sale, dispensing, and consumption of beer, wine, and distilled spirits is consistent with all of the policies, programs, and goals of the General Plan. More specifically, it is a goal of the General Plan Land Use Element under Goal LU – 1, to "Provide sites for a range of commercial uses, including shopping, dining, entertainment, and offices that provide a strong employment base and offer local services." Allowing the on-site sale and consumption of beer, wine, and distilled spirits at the El Cantarito restaurant will provide an additional service to customers and facilitate greater patronage to the Old Town shopping district. This proposal is also consistent with the Economic Development Element Goal ED – 1, to "Maintain a healthy, balanced budget by diversifying and increasing the city's revenue sources," as there will be a steady revenue stream from the restaurant and the ancillary sale of beer, wine, and distilled spirits for onsite consumption.

PMC Consistency

Incorporation of the recommended conditions of approval will result in a project that complies with the provisions of the Old Town Placentia Revitalization Plan zoning district. The proposed request, with incorporation of the recommended conditions of approval, will meet or exceed the provisions of the Old Town Placentia Revitalization Plan zoning district and other applicable provisions of the PMC.

Land Use Compatibility

The project will be compatible with the land uses of the surrounding area because the request to sell beer, wine, and distilled spirits for on-site consumption in conjunction with a restaurant brings an additional service within an established mixed-use district containing primarily complementary commercial uses. The nature of the use will not have adverse impacts on adjacent business and properties as there are no significant noise or safety concerns.

Alcohol Sales

The request is to permit the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant (ABC Type 47 License). To mitigate any impacts associated with alcohol sales, the Police Department is recommending several operational conditions of approval to address onsite security and prohibit alcohol sales between 11:00 PM and 8:00 AM to correspond with the restrictions of ABC. With the implementation of these provisions, it is not anticipated to generate any significant adverse impacts detrimental to the site and surrounding properties. The proposed hours of operation will end at 8:00 PM, with the potential to expand the hours to 11:00 PM.

CEQA:

The proposed application was reviewed by staff in accordance with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code §§ 21000 *et seq.,* the State CEQA Guidelines, 14 C.C.R. §§ 15000 *et seq.,* and the Environmental Guidelines of the City of Placentia. Staff recommends that the Planning Commission exercise its independent judgment and find that UP (MOD) 92-09 is exempt from CEQA pursuant to State CEQA Guidelines § 15301 (Class 1 – Existing Facilities) as the permit would be issued to an existing facility.

PUBLIC NOTIFICATION:

Legal notice was published in the Placentia News Times on April 29, 2021, and notices were sent to property owners of record within a 300-foot radius of the subject property on April 29, 2021. As of May 5, 2021, staff has received no comments in support or opposition of the request.

CONCLUSION:

The proposed request is consistent with the City's General Plan and meets the minimum standards of the PMC. With the recommended conditions of approval, the proposed request, to allow the on-site sale and consumption of beer, wine, and distilled spirits at an existing restaurant located at 120 W. Santa Fe Avenue within the Old Town Placentia Revitalization Plan (O-T) zoning district will be compatible with adjacent land uses and will not result in any adverse impacts onto the surrounding area.

RECOMMENDATION:

The Planning Division recommends that the Planning Commission of the City of Placentia adopt the Resolution PC-2021-12 recommending approval of UP (MOD) 92-09.

Prepared and submitted by:

Arlen Beck
Assistant Planner

Reviewed and approved by:

Joseph M. Lambert
Director of Development Services

Attachments:

1. Resolution No. 2021-12 with attached Conditions of Approval
2. Vicinity Map
3. Project Plans Dated and Received March 16, 2021
4. Statement of Use Submitted by the Applicant Dated and Received March 16, 2021

RESOLUTION NO. PC-2021-12

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PLACENTIA APPROVING USE PERMIT MODIFICATION NO. 92-09 AND MAKING FINDINGS TO PERMIT THE MODIFICATION OF AN EXISTING USE PERMIT FROM THE ONSITE SALE AND CONSUMPTION OF BEER AND WINE (ABC TYPE 41 LICENSE) TO ALLOW THE ONSITE SALE AND CONSUMPTION OF BEER, WINE, AND DISTILLED SPIRITS (ABC TYPE 47 LICENSE) AT AN EXISTING 1,886 SQUARE FOOT, MEXICAN FOOD RESTAURANT, LOCATED AT 120 W. SANTA FE AVENUE WITHIN THE OLD TOWN PLACENTIA REVITALIZATION PLAN (OT-MAIN STREET SUBAREA) ZONING DISTRICT.

A. Recitals.

WHEREAS, Francisco Miranda, representing El Cantarito Restaurant, ("Applicant" hereinafter), located at 120 W. Santa Fe Avenue, filed an application for approval of Use Permit Modification (MOD) No. 92-09, as described in the title of this Resolution. Hereinafter, in this Resolution, the subject Use Permit modification request is referred to as the "Application";

WHEREAS, on May 11, 2021, the Planning Commission conducted a duly noticed public hearing, as required by law, and after careful consideration of all pertinent testimony and the staff report offered in the case, the Planning Commission voted to approve UP MOD 92-09; and

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

B. Resolution.

NOW, THEREFORE, it is hereby found, determined, and resolved by the Planning Commission of the City of Placentia as follows:

SECTION NO. 1: Based on the evidence presented and the findings set forth, UP MOD 92-09 is hereby found to be consistent with the Placentia General Plan and the implementation thereof.

SECTION NO. 2: Based upon the evidence presented to this Commission during the public hearing conducted with regard to the Application, including written staff reports, verbal testimony and development plans, this Commission hereby specifically finds as follows:

a. The proposed request for the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant will not be: (1) detrimental to the health, safety or general welfare of the persons residing or working within the neighborhood of the proposed use or within the city, or (2) injurious to the property or improvements within the neighborhood or within the City. Subject to compliance with the attached

Conditions of Approval and Standard Development Requirements (Attachment "A"), this use complies with all applicable code requirements and development standards of the Old Town Placentia Revitalization Plan (OT-Main Street Subarea) zoning district and (3) it is not anticipated that the proposed request will generate any negative impacts onto adjacent properties or businesses. All primary activities shall be conducted within the enclosed building, while maintaining an environment free from objectionable noise, odor, or other nuisances, subject to compliance with the attached Special Conditions of Approval and Standard Development Requirements.

b. The proposed request for the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant is consistent with the City's General Plan. The General Plan Land Use designation for the subject site is Old Town, which encourages retail restaurant uses that attract pedestrians and other patrons.

c. The proposed request for the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant, subject to the attached Conditions of Approval and Standard Development Requirements (Attachment "A"), is consistent with the provisions of the Zoning Ordinance, or regulations applicable to the property. The proposed request for the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant is a conditionally permitted use in the Old Town Placentia Revitalization Plan-Main Street Subarea zoning district in the City of Placentia. Approval of the Use Permit Modification for the proposed request for the onsite sale and consumption of beer, wine, and distilled spirits at an existing restaurant will be consistent with the zoning as the site can accommodate the use, and other similar uses have been conditionally permitted within other similar commercial districts.

d. Conditions necessary to secure the purposes of this section, including guarantees and evidence of compliance with conditions are made part of the UP Modification approval. Attachment "A" of this resolution contains Conditions of Approval and Standard Development Requirements specific to UP MOD 92-09 to ensure compliance with the Placentia Municipal Code (PMC).

SECTION NO. 3: Based upon the environmental review of the project, the Planning Commission finds that UP MOD 92-09 is exempt from the California Environmental Quality Act ("CEQA"), Public Resources Code §§ 21000 *et seq.,* the State CEQA Guidelines, 14 C.C.R. §§ 15000 *et seq.,* and the Environmental Guidelines of the City of Placentia pursuant to the State CEQA Guidelines § 15301 (Class 1 – Existing Facilities) as the permit would be issued to an existing structure or facility.

SECTION NO. 4: The Planning Commission hereby directs that, upon approval of UP MOD 92-09, that a Notice of Exemption shall be filed with the Orange County Clerk/Recorder.

SECTION NO. 5: Based upon the findings and conclusions set forth herein, this Planning Commission hereby approves UP MOD 92-09.

SECTION NO. 6: The Secretary to the Planning Commission shall:

a. Certify to the adoption of this Resolution; and
b. Forthwith transmit a certified copy of this Resolution, by certified mail, to the Applicant at the address of record set forth in the Application.

ADOPTED AND APPROVED this 11th day of May, 2021

_____
CHRISTINE J. SCHAEFER, CHAIR

I, Joseph M. Lambert, Secretary to the Planning Commission of the City of Placentia, do hereby certify that the foregoing Resolution was introduced at a regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May 2021, and was passed at this regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAINED:

ATTEST:

_____
JOSEPH M. LAMBERT,
SECRETARY TO THE PLANNING COMMISSION

APPROVED AS TO FORM

_____
KATHYA FIRLIK,
ASSISTANT CITY ATTORNEY

ATTACHMENT “A”

Attachment A
Special Conditions of Approval and Standard Development Requirements for
Use Permit Modification 92-09
120 W. Santa Fe Avenue

SPECIAL CONDITIONS

If the above referenced application is approved, applicant and/or property owner shall comply with the Special Conditions listed below and the Standard Development Requirements attached.

ALL OF THE FOLLOWING SPECIAL CONDITIONS OF APPROVAL AND STANDARD DEVELOPMENT REQUIREMENTS SHALL BE FULLY COMPLIED WITH TO CONTINUE IN GOOD STANDING FOR THE USE PERMIT MODIFICATION TO PERMIT THE MODIFICATION OF AN EXISTING USE PERMIT FROM THE ONSITE SALE AND CONSUMPTION OF BEER AND WINE (TYPE 41 ABC LICENSE – ON-SALE BEER & WINE - EATING PLACE) TO THE PROPOSED ONSITE SALE AND CONSUMPTION OF BEER, WINE, AND DISTILLED SPIRITS (TYPE 47 – ON-SALE GENERAL – EATING PLACE), AT AN EXISTING 1,886-SQUARE FOOT RESTAURANT (EL CANTARITO RESTAURANT) ON PROPERTY WITHIN THE OLD TOWN PLACENTIA REVITALIZATION PLAN (OT-MAIN STREET SUBAREA) ZONING DISTRICT, LOCATED AT 120 W. SANTA FE AVENUE.

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION:

1. Use Permit Modification (UP MOD) 92-09 is valid for a period of one (1) year from the date of final determination. If the use approved by this action is not established within such a period of time, this approval shall be terminated and shall be null and void, unless an extension is applied for and approved by the Director of Development Services.

2. Use Permit Modification (UP MOD) 92-09 shall expire and be of no further force or effect if the use is discontinued or abandoned for a period of one (1) year.

3. Failure to abide by and faithfully comply with any and all conditions attached to this action shall constitute grounds for revocation of said action by the City of Placentia Planning Commission.

4. The applicant shall, as a condition of approval, at its sole expense, defend, indemnify and hold harmless the City, its officers, employees, agents and consultants from any claim, action, proceeding, liability or judgment against the City, its officers, employees, agents and/or consultants, which action seeks to set aside, void, annul or otherwise challenge any approval by the City Council, Planning Commission, or other City decision-making body or City staff action concerning applicant's project. The applicant shall pay the City's defense costs, including attorney fees and all other litigation-related

expenses, and shall reimburse the City for any and all court costs, which the City may be required to pay as a result of such defense. The applicant shall further pay any adverse financial award which may be issued against the City including but not limited to any award of attorney fees to a party challenging such project approval. The City shall retain the right to select its counsel of choice in any action referred to herein. The City agrees to promptly notify the applicant of any such claim filed against the City and to fully cooperate in the defense of any such action.

5. Any changes or modifications to Use Permit (UP MOD) 92-09 shall be subject to review and approval by the Director of Development Services or designee, with substantial changes or modifications subject to Planning Commission review and approval. Any proposed changes to the floor plan approved by (UP MOD) 92-09 and/or any proposed expansion of the bar area shall require a UP Modification.

6. This approval (UP MOD) 92-09 does not include live entertainment. Live entertainment will require a Modification of the Use Permit and an entrainment permit pursuant to Title 6 of the Placentia Municipal Code (PMC).

7. Any modifications to the approved floor plan or changes to the business operation hours, which do not expand or intensify the present use shall be reviewed by the Director of Development Services and may be modified administratively. Modifications to the approved floor plan or changes to the business operation hours, which expand or intensify the present use may be brought to the Planning Commission for modification at the discretion of the Director of Development Services.

8. If at any time in the future, the Director of Development Services determines that a parking/circulation study is necessary to address parking and/or circulation issues relative to the use, the applicant, current business owner, and/or property owner, shall be responsible for the cost of a parking and/or circulation study prepared by a consultant selected by the City. The applicant, current business owner, and/or property owner shall also be responsible for the implementation costs of any mitigation measures deemed appropriate by the City based upon the findings of this study.

9. The applicant, current business owner, and/or property owner shall be responsible for maintaining the property, including the landscaped areas, walkways, and all paved surfaces, free from graffiti, debris and liter. Graffiti shall be removed by the applicant, current business owner, and/or property owner within 48 hours of defacement and/or upon notification by the City. The paint utilized to cover the graffiti must substantially match the existing structure. In the event that the paint finish of the abated area is noticeably distinguishable from the rest of the structure, the property owner shall paint additional portions of the building to minimize the disparity, subject to the approval of the Director of Development Services.

10. The applicant, current business owner, and/or property owner shall obtain approval of a Building and Zoning Compliance Application and shall obtain approval of a City

Business License. The applicant, current business owner, and/or property owner shall maintain a valid City Business License at all times during operation of the business.

11. This Use Permit may be reviewed at the discretion of the Director of Development Services in order to determine if the business is operating in compliance with all required Special Conditions of Approval and Standard Development Requirements.

12. There shall be no special promotional events held on the property, unless a written request for such is received and approved by the City of Placentia Development Services Director and the Police Department's Administrative Lieutenant at least 14 days in advance.

13. Alcoholic beverages may not be sold between the hours of 11:00 PM and 8:00 AM from Monday through Sunday.

14. All conditions of the Department of Alcoholic Beverage Control (ABC) shall be applicable.

15. No live entertainment, i.e. dancing, karaoke, live music, sport bar or disc-jockey entertainment, etc., including amplified music, shall be permitted on the premises or outside dining area.

16. All signage must comply with PMC 23.112.070.

17. All commercial trash and waste bins shall be kept inside decorative trash enclosures. The dimensions and access gates of all trash enclosures shall comply with City standard and refuse company standard requirements at the time building permits are issued. All trash and waste enclosure gates shall remain closed at all times, except during disposal and pick-up. Trash pick-up shall be done on a regular basis.

18. Delivery and pickup of all store supplies shall occur before store opening. One additional pickup may occur daily. Delivery shall be made by a truck no larger than a 16-foot-long box truck.

19. The use shall comply with the following:

    a. Prior to any changes to the days and hours of operation, the applicant shall obtain written approval from the Director of Development Services or his/her designee. The following are the specified days and hours of operation:

Operating Hours	
Monday-Sunday	8:00 AM to 11:00 PM

    b. No vending machines of any kind shall be installed outdoors within the project site.

c. There shall be no public pay phones installed within or upon any portion of the premises.

d. No outside storage, including the display of vehicles within the parking lot area or displays shall be permitted at any time.

e. The use shall comply with all provisions of the PMC, including Chapter 23.76 Noise Control.

20. Prior to the issuance of any building permits, approval is needed from the Orange County Health Department.

DEVELOPMENT SERVICES DEPARTMENT – BUILDING DIVISION:

21. Applicant shall submit 2 sets of complete plans based on 2019 California Building Standards (2019 Editions of CBC, CEC, CMC, CPC, CALGreen, CFC, & California Energy Code) for Plan Checking and Permit Issuance prior to any operation.

22. The plans shall be prepared by a California Licensed Architect.

POLICE SERVICES – SECURITY:

23. All patrons who appear under the age of 30 shall be required to show some form of identification or they will not be served an alcoholic beverage. A sign indicating this policy shall be prominently posted in a place that is clearly visible to patrons. Only the following forms of identification will be acceptable:

    a. Valid driver's license
    b. Valid State identification card
    c. Valid passport
    d. Current military identification
    e. U.S. Government immigrant identification card

24. All forms of out-of-state identification shall be checked by the authorized representative of the owner of the licensed premises in the Driver's License Guide. Upon presentment to the authorized representative of the owner of the licensed premises, the patron's form of identification shall be removed from the patron's wallet or any plastic holder and inspected for any alterations through a close visual inspection and/or use of a flashlight or "Retro-reflective viewer" " or other electronic device as approved by the Police Department.

25. Patrons who appear obviously intoxicated shall not be served any alcoholic beverages.

26. There shall be no promotions encouraging intoxication or drinking contests or advertisements indicating "Buy one drink, get one free," "Two for the price of one," "All you can drink for …," or similar language.

27. There shall be no “stacking” of drinks, i.e., more than one drink at a time, to a single patron.

28. When serving pitchers exceeding 25 ounces of an alcoholic beverage, all patrons receiving such pitcher, as well as all patrons who will be consuming all or any portion of such pitcher, shall present an ID to the server if they appear to be under the age of 30, if not previously checked at the entrance to the licensed premises.

29. Except for wine bottles, oversized containers or pitchers containing in excess of 25 ounces of an alcoholic beverage shall not be sold to a single patron for their sole consumption.

30. A file containing the names and dates of employment of every person who serves alcoholic beverages for consumption by patrons on the licensed premises and every manager, which file shall also include a copy of each person’s certificate of completion of the Department of Alcohol Beverage Control L.E.A.D. course (Licensee Education on Alcohol and Drugs). Upon request, said file shall be made available for review to representative of the Police Department of the City of Placentia. New employees will have 60 days from date of employment to obtain L.E.A.D. certification, or a police department approved alternative training course meeting the objectives of L.E.A.D. training.

ATTACHMENT 2. VICINITY AND ZONING MAP
UP (MOD) 92-09; 120 W. SANTA FE AVENUE



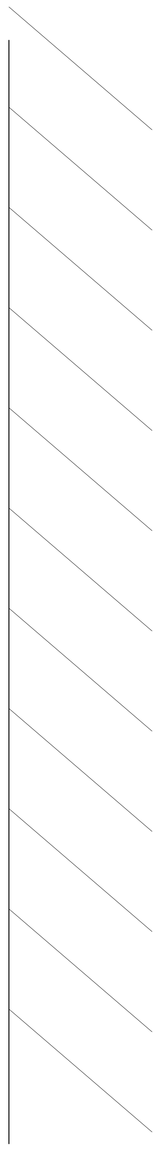
Aerial A.

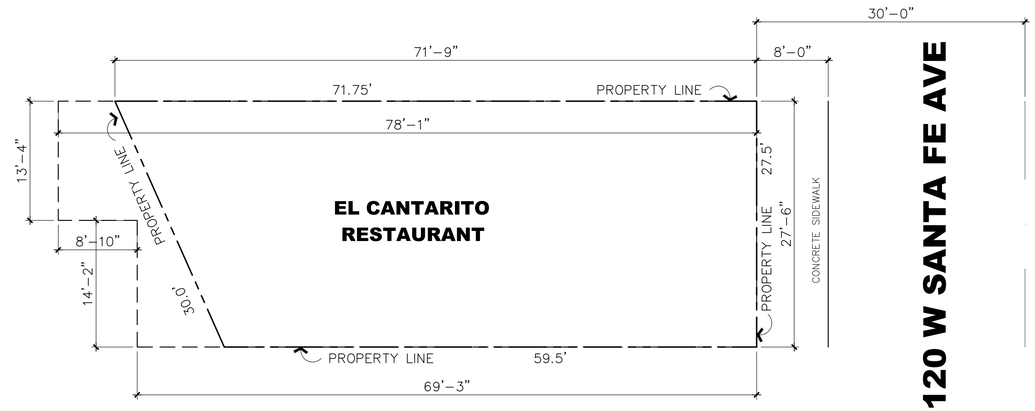


Aerial B.

Zoning Code

C-1	R-3
C-1 (O)	R-3 (O-1)
C-1 (O-1)	R-A
C-2	R-G
C-2-H65	R-G (O)
C-M	R-G(O) & C-1 (O)
C-O	RPC (O)
M	SP-1
M (O)	SP-2
M (PMD)	SP-3
PUD-1	SP-4
PUD-2	SP-5
PUD-2 (O)	SP-6 (O)
PUD-3	SP-7
PUD-3 (O)	SP-8
PUD-4	SP-9
R-1	SP-10
R-1 (MHP)	T-C
R-1 (O)	Old Town
R-2	TOD
R-2 (MHP)	N/A



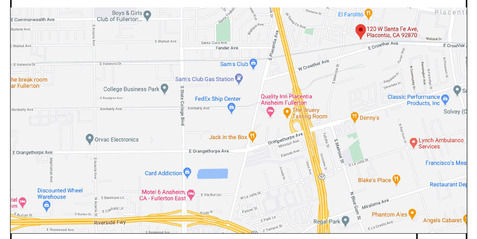


SITE PLAN

SCALE 1/8"= 1'

EL CANTARITO RESTAURANT

120 W SANTA FE AVE
PLACENTIA, CA 92870



VICINITY MAP | 3

TYPE OF CONSTRUCTION:	V-B (NO FIRE SPRINKLER)
OCCUPANCY GROUP	M / B
ZONING:	C2
FIRE SPRINKLERS:	NO
NO. OF STORIES	2
LOT SIZE:	2,794 SF
RESTAURANT AREA	1,886 SF
PARCEL #	339-394-04
LOT #	6
TRACT #	563

BUILDING DATA | 2

DESIGNER:
GONZALO HERRERA
245 N COUNTRY CLUB RD
GLENDORA, CA 91741
(626) 533-6120

OWNER:
HECTOR GONZALEZ
120 W SANTA FE AVE
PLACENTIA, CA 92870

CONSULTANTS | 1

GONZALO HERRERA
ag concepts
245 N COUNTRY CLUB RD
GLENDORA, CA 91741
TEL. 626.533.6120
agconceptsdesign@gmail.com
DESIGN STUDIO

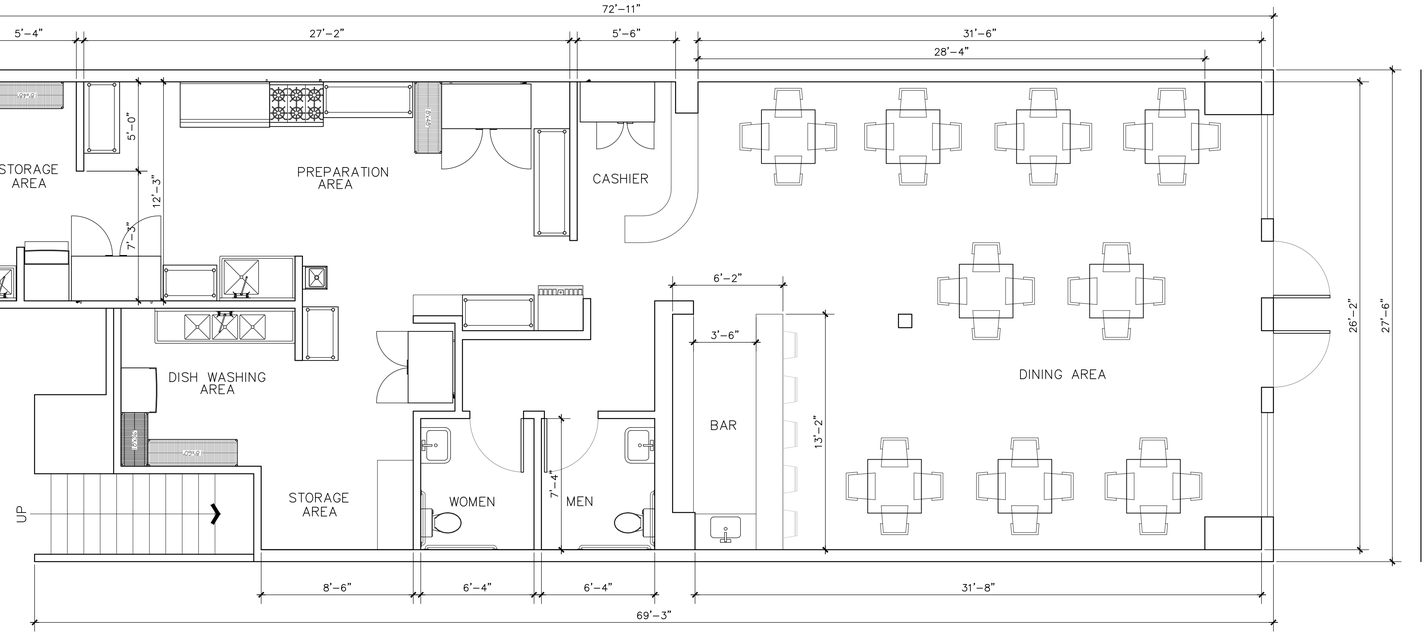
EL CANTARITO RESTAURANT
120 W SANTA FE AVE
PLACENTIA, CA 92870

SHEET TITLE
SITE PLAN

REVISIONS

NO.	DATE	DESCRIPTION

DRAWN G. H.
CHK.
APP.
SCALE AS SHOWN
JOB NO.
DATE 3/12/21
SHEET NO.
A-1
OF



FLOOR PLAN
SCALE 1/4" = 1'-0"

GONZALO HERRERA
concepts
245 N COUNTRY CLUB RD
GLENDORA, CA 91741
TEL. 626.333.9120
gonzoconcepts@gmail.com
DESIGN STUDIO

EL CANTARITO RESTAURANT

120 W SANTA FE
PLACENTIA, CA 92870

SHEET TITLE
PROPOSED FLOOR PLAN

REVISIONS

NO.	DATE	DESCRIPTION	APR

DRAWN G. H.
CHK.
APP.
SCALE AS SHOWN
JOB NO.
DATE 3/12/21
SHEET NO. **A-2**
OF

El Cantarito Restaurant

120 W. Santa Fe. Placentia CA
714-528-6090

March 16, 2021

To whom it may concern,

El Cantarito Restaurant is a family restaurant that serves Mexican food and drinks including beer and wine. We have been in business under the current ownership since 2002. Our goal is to provide outstanding traditional Mexican food and amazing customer service that makes people feel at home.

Javier Miranda bought El Cantarito Restaurant in 2002 and began to make changes to create his vision of his restaurant. A few years later he began teaching his two sons the business with a focus on the customers experience and the detail to the food. Javier brought his 15 years of restaurant experience into El Cantarito in 2002 and now almost 20 years later we are still working hard to make sure our guests leave with a memory of the great experience of dining here with us. Javier passed away last year of an unexpected and sudden heart attack on March 12, 2020. Since his passing the current owners are now his sons Francisco Miranda, Erick Miranda and his wife Lourdes Miranda. Days later the COVID pandemic shut down drastically affected the business by having to adapt to take out and deliver only. Thanks to our loyal customers we have been able to survive and we are working hard to bring our business back to where we were and continue to grow. One of Javier's dreams was to have a full liquor license and a small bar in the restaurant to help our business grow even more. His sons and team are working hard to keep his legacy alive and upgrading this license would help our business grow and make Javier's dream a reality.

We currently operate from 8am to 8pm everyday, we only close on Christmas day and New Years day. We have 9 full time employees and 4 part time employees. We own one cargo van that we use for the business. The restaurant is equipped with tables, chairs, one register, one two door commercial refrigerator, two 3 door commercial refrigerators, 2 soda machines, 3 cold table fridges, one 2 door freezer, one 4 compartment steamer, one 6 burner stove, one 3 burner griddle, one fryer, one large single burner stove, one hand wash sink, one prep sink, one 3 compartment dish wash sink, one dish wash machine, one dough mixing machine, one single door commercial fridge and 4 prep tables.

We hope to modify our permit so we can continue to grow our business and do what we can bring more guest to Old Town Placentia. Thank you for your time.

Sincerely,

Francisco Miranda
Owner/General Manager

Placentia Planning Commission

AGENDA STAFF REPORT

TO: PLANNING COMMISSION

FROM: ARLEN BECK, ASSISTANT PLANNER

DATE: MAY 11, 2021

SUBJECT: **USE PERMIT (UP) 2021-02; 1211 E. IMPERIAL HWY. (VITALITY OC)**

RECOMMENDATION:

It is recommended that the Planning Commission take the following actions:

1. Open the public hearing concerning Use Permit No. (UP) 2021-02; and
2. Receive the staff report and consider all public testimony; and
3. Close the public hearing; and
4. Adopt Resolution PC-2021-10, a resolution of the Planning Commission of the City of Placentia, approving UP 2021-02 and making findings to permit the establishment and operation of a personal training fitness center in an existing 2,100 square-foot commercial office located at a multi-tenant commercial shopping center within the C-1 (Neighborhood Commercial) Zoning District on property located at 1211 E. Imperial Highway; and making findings that the project is categorically exempt pursuant to the California Environmental Quality Act (CEQA) set forth in Title 14 CCR § 15301 (Class 1 – Existing Facilities) and the City of Placentia Environmental Guidelines.

REQUEST:

The applicant, Lee Smith, dba Vitality OC, is requesting a Use Permit for a personal training fitness center in a 2,100 square-foot commercial space at a multi-tenant commercial shopping center located at 1211 E. Imperial Highway, within the C-1 (Neighborhood Commercial) Zoning District.

PROJECT BACKGROUND AND DESCRIPTION:

The subject property is an existing one-story, multi-tenant commercial shopping center located along the northeast corner between E. Imperial Highway. and Rose Drive. A variety of commercial uses such as a jewelry shop and restaurants occupy the shopping center. The property is presently accessible from one driveway located along E. Imperial Highway with onsite parking is provided for the units. Commercial uses are located to the north and east in the same shopping center. A convenience store is located to the west of the subject site, and a building materials business is located to the south (across E. Imperial Highway).

Vitality OC will offer training programs that cater to small groups and focus on improving strength and agility. The training sessions will have no more than 4 to 6 people at a time. They currently have an existing clientele that will migrate to their new location. Mat Golla, operator and co-owner of Vitality OC, has studied physical fitness at Texas A&M University and focused his career on perfecting training programs that will be implemented at Vitality OC. Classes will be scheduled in one-hour increments with an open gym policy for limited numbers of members during operating hours, and no more than 8 people will be utilizing the gym space at a given time.

The equipment will consist of the following: three (3) rowing machines, two (2) cardio bikes, one dumbbell weight rack set, two (2) rogue fitness stations, two (2) multiple resistance band stations, and rubber and synthetic turf flooring. Vitality OC will also be selling resistance and other light workout equipment in the lobby in addition to UForia brand supplements. The facility will employ 3 part-time employees for the first 6 months with a transition to full time employment after the 6-month mark, and 1 to 2 trainers will be onsite during operating hours. The proposed hours of operation are Monday to Sunday from 7:00 AM to 8:00 PM.

Applicable Code Section – Placentia Municipal Code

The subject property is currently zoned Neighborhood Commercial (C-1). The project will be required to comply with the development standards and use requirements set forth in the Placentia Municipal Code (PMC 23.33, "C-1" – Neighborhood Commercial) for projects within the C-1 Zoning District. The purpose of the C-1 Zoning District is to provide for general retail and office uses which offer the sale of goods and services to the general public and which, through characteristics of their operation, cater primarily to residents of neighborhood market areas. Pursuant to PMC Section 23.33.040 (4), one of the uses permitted subject to obtaining a Use Permit are health clubs, which include but are not limited to racquetball clubs, swim clubs, tennis clubs and gymnasiums.

Subject Site and Surrounding Land Uses

The proposed fitness center is located in an existing commercial shopping center on the northeast corner between E. Imperial Highway and Rose Drive. The chart below shows surrounding existing land uses, zones, and General Plan Land Use Designations:

Surrounding Land Uses:

Location	Existing Land Use	Land Use Element General Plan Designation	Zoning Map Designation
Subject Site	Multi-tenant Commercial Shopping Center	Commercial	"C-1" – Neighborhood Commercial
North	Chuck E. Cheese	Commercial	"C-2"– Community Commercial

South (across E. Imperial Hwy)	Building Materials (Cougar Stone)	Commercial	"C-2" – Community Commercial
East	Retail shops and Restaurants	Commercial	"C-1" – Neighborhood Commercial
West	Convenience Store (ARCO AM/PM)	Commercial	"C-2" – Community Commercial

ZONING COMPLIANCE ANALYSIS

Site Development Standards

The project is located within the C-1 Zoning District. No changes to the overall building envelope will occur as a result of this project.

Other Departments Concerns and Requirements

The Divisions of Planning and Building, as well as CSG Consultants (Fire) have reviewed the application, with no major concerns raised with the project proposal. The Planning Division identified comments from other Departments and Divisions and applicable code requirements that have been incorporated as conditions of approval into a draft resolution for consideration by the Planning Commission (Attachment No. 1).

ISSUES ANALYSIS:

General Plan Consistency

In an overall review of the General Plan, the proposed personal training fitness center is consistent with all of the policies, programs, and goals of the General Plan. More specifically, it is a goal of the General Plan Land Use Element under Goal LU – 1, to "Provide sites for a range of commercial uses, including shopping, dining, entertainment, and offices that provide a strong employment base and offer local services." Allowing the operation of a fitness center will provide an additional service to surrounding residents and facilitate greater patronage in the shopping center. This proposal is also consistent with the Economic Development Element Goal ED – 1, to "Maintain a healthy, balanced budget by diversifying and increasing the city's revenue sources," since it will assist in maintaining a wide array and variety of commercial uses to help stimulate further investment in the community and strengthen the City's economic vitality. This use may also stimulate economic activity in the subject shopping center and surrounding shopping centers by increasing the overall customer base nearby.

PMC Consistency

Adoption of the recommended conditions of approval will result in a project that complies with the provisions of the C-1 Zoning District. The proposed project, with incorporation of the recommended conditions of approval, will meet or exceed the requirements of the C-1 Zoning District and other applicable provisions of the PMC.

Land Use Compatibility

The project will be compatible with the land uses of the surrounding area because the proposed fitness center brings an additional service within an established commercial district containing primarily complementary commercial office and retail uses. The nature of the use will not have adverse impacts on adjacent business and properties as there are no significant noise or safety concerns associated with the use.

CEQA:

The proposed application was reviewed by staff in accordance with the requirements of the California Environmental Quality Act ("CEQA"), Public Resources Code §§ 21000 *et seq.,* the State CEQA Guidelines, 14 C.C.R. §§ 15000 *et seq.,* and the Environmental Guidelines of the City of Placentia. Staff recommends that the Planning Commission exercise its independent judgment and find that UP 2021-02 is exempt from CEQA pursuant to State CEQA Guidelines § 15301 (Class 1 – Existing Facilities) as the permit would be issued to an existing facility.

PUBLIC NOTIFICATION:

Legal notice was published in the Placentia News Times on April 29, 2021 and legal notices were sent to property owners of record within a 300-foot radius of the subject property on April 29, 2021 pursuant to all applicable provisions of the PMC. As of May 5, 2021, staff has received no comments in support or opposition of the request.

CONCLUSION:

The proposed request is consistent with the City's General Plan and meets the minimum development standards of the PMC. With the recommended conditions of approval, the proposed establishment and operation of a personal training fitness center inside an existing 2,100 square-foot commercial office within an existing multi-tenant commercial shopping center will be compatible with adjacent land uses and will not result in any significant adverse impacts to the surrounding area.

RECOMMENDATION:

The Planning Division recommends that the Planning Commission of the City of Placentia adopt Resolution PC-2021-10 recommending approval of UP 2021-02 and finding that it is exempt from further CEQA review pursuant to Section 15301 of the State CEQA Guidelines.

Prepared and submitted by:

Kathrine Kuo
Planning Intern

Arlen Beck
Assistant Planner

Reviewed and approved by:

Joseph M. Lambert
Director of Development Services

Attachments:

1. Resolution No. PC-2021-10 with attached Conditions of Approval
2. Vicinity Map
3. Project Plans Dated and Received March 1, 2021
4. Statement of Use Submitted by the Applicant Dated and Received March 1, 2021

RESOLUTION NO. PC-2021-10

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PLACENTIA APPROVING USE PERMIT NO. 2021-02 AND MAKING FINDINGS TO PERMIT THE ESTABLISHMENT AND OPEATION OF A PERSONAL TRAINING FITNESS CENTER IN AN EXISTING 2,100 SQUARE-FOOT COMMERCIAL UNIT AT A MULTI-TENANT COMMERCIAL SHOPPING CENTER LOCATED AT 1211 E. IMPERIAL HIGHWAY, WITHIN THE C-1 (NEIGHBORHOOD COMMERCIAL) ZONING DISTRICT.

A. Recitals.

WHEREAS, Lee Smith, dba Vitality OC ("Applicant" hereinafter), located at 1211 E. Imperial Highway filed an application for approval of Use Permit (UP) No. 2021-02, as described in the title of this Resolution. Hereinafter, in this Resolution, the subject Use Permit request is referred to as the "Application";

WHEREAS, on May 11, 2021, the Planning Commission conducted a duly noticed public hearing, as required by law, and after careful consideration of all pertinent testimony and the staff report offered in the case, the Planning Commission voted to approve UP 2021-02; and

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

B. Resolution.

NOW, THEREFORE, it is hereby found, determined, and resolved by the Planning Commission of the City of Placentia as follows:

SECTION NO. 1: Based on the evidence presented and the findings set forth, UP 2021-02 is hereby found to be consistent with the Placentia General Plan and the implementation thereof.

SECTION NO. 2: Based upon the evidence presented to this Commission during the public hearing conducted with regard to the Application, including written staff reports, verbal testimony and development plans, this Commission hereby specifically finds as follows:

a. The proposed request for the establishment and operation of a fitness center will not be: (1) detrimental to the health, safety or general welfare of the persons residing or working within the neighborhood of the proposed use or within the city, or (2) injurious to the property or improvements within the neighborhood or within the City. Subject to compliance with the attached Conditions of Approval and Standard Development Requirements (Attachment "A"), this use complies with all applicable code requirements and development standards of the C-1 zoning district and (3) it is not anticipated that the proposed Vitality OC fitness center will generate any negative impacts onto adjacent properties and businesses. All primary activities shall be

conducted within the enclosed building, while maintaining an environment free from objectionable noise, odor, or other nuisances, subject to compliance with the attached Special Conditions of Approval and Standard Development Requirements.

b. The proposed request for the establishment and operation of a fitness center is consistent with the City's General Plan. The General Plan Land Use designation for the subject site is Commercial.

c. The proposed request for the establishment and operation of a fitness center, subject to the attached Conditions of Approval and Standard Development Requirements (Attachment "A"), is consistent with the provisions of the Zoning Ordinance, or regulations applicable to the property. The proposed request for the establishment and operation of a fitness center is a conditionally permitted use in the C-1 Zoning District in the City of Placentia. Approval of the Use Permit for the proposed request will be consistent with the zoning as the site can accommodate the use, and other similar uses have been conditionally permitted within other similar commercial districts.

d. Conditions necessary to secure the purposes of this section, including guarantees and evidence of compliance with conditions are made part of the UP approval. Attachment "A" contains Conditions of Approval and Standard Development Requirements specific to UP 2021-02 to ensure compliance with the Placentia Municipal Code (PMC).

SECTION NO. 3: Based upon the environmental review of the project, the Planning Commission finds that UP 2021-02 is exempt from the California Environmental Quality Act ("CEQA"), Public Resources Code §§ 21000 *et seq.,* the State CEQA Guidelines, 14 C.C.R. §§ 15000 *et seq.,* and the Environmental Guidelines of the City of Placentia pursuant to the State CEQA Guidelines § 15301 (Class 1 – Existing Facilities) as the permit would be issued to an existing structure or facility.

SECTION NO. 4: The Planning Commission hereby directs that, upon approval of UP 2021-02, that a Notice of Exemption shall be filed with the Orange County Clerk/Recorder.

SECTION NO. 5: Based upon the findings and conclusions set forth herein, this Planning Commission hereby approves UP 2021-02, subject to the Conditions of Approval set forth in Attachment A hereto.

SECTION NO. 6: The Secretary to the Planning Commission shall:

a. Certify to the adoption of this Resolution; and

b. Forthwith transmit a certified copy of this Resolution, by certified mail, to the Applicant at the address of record set forth in the Application.

ADOPTED AND APPROVED THIS 11TH DAY OF MAY, 2021

_____
CHRISTINE J. SCHAEFER, CHAIR

I, Joseph M. Lambert, Secretary to the Planning Commission of the City of Placentia, do hereby certify that the foregoing Resolution was introduced at a regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, and was passed at this regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, by the following vote:

AYES:
NOES:
ABSENT:
ABSTAINED:

ATTEST:

_____
JOSEPH M. LAMBERT,
SECRETARY TO THE PLANNING COMMISSION

APPROVED AS TO FORM

_____
KATHYA FIRLIK,
ASSISTANT CITY ATTORNEY

Attachment A: Conditions of Approval for Use Permit No. 2021-02

Attachment A
Special Conditions of Approval and Standard Development Requirements for
Use Permit 2021-02
1211 E. Imperial Highway

SPECIAL CONDITIONS

If the above referenced application is approved, applicant and/or property owner shall comply with the Special Conditions listed below and the Standard Development Requirements attached.

ALL OF THE FOLLOWING SPECIAL CONDITIONS OF APPROVAL AND STANDARD DEVELOPMENT REQUIREMENTS SHALL BE FULLY COMPLIED WITH FOR THE USE PERMIT TO CONTINUE IN GOOD STANDING.

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION:

1. Use Permit (UP) 2021-02 is valid for a period of one (1) year from the date of final determination. If the use approved by this action is not established within such a period of time, this approval shall be terminated and shall be null and void, unless an extension is applied for and approved by the Director of Development Services.

2. Use Permit (UP) 2021-02 shall expire and be of no further force or effect if the use is discontinued or abandoned for a period of one (1) year.

3. Failure to abide by and faithfully comply with any and all conditions attached to this action shall constitute grounds for revocation of said action by the City of Placentia Planning Commission.

4. The applicant shall, as a condition of approval, at its sole expense, defend, indemnify and hold harmless the City, its officers, employees, agents and consultants from any claim, action, proceeding, liability or judgment against the City, its officers, employees, agents and/or consultants, which action seeks to set aside, void, annul or otherwise challenge any approval by the City Council, Planning Commission, or other City decision-making body or City staff action concerning applicant's project. The applicant shall pay the City's defense costs, including attorney fees and all other litigation-related expenses, and shall reimburse the City for any and all court costs, which the City may be required to pay as a result of such defense. The applicant shall further pay any adverse financial award which may be issued against the City including but not limited to any award of attorney fees to a party challenging such project approval. The City shall retain the right to select its counsel of choice in any action referred to herein. The City agrees to promptly notify the applicant of any such claim filed against the City and to fully cooperate in the defense of any such action.

5. Any changes or modifications to Use Permit (UP) 2021-02 shall be subject to review and approval by the Director of Development Services or designee, with substantial changes or modifications subject to Planning Commission review and approval.

6. There shall be no additional modifications to the approved plans with approval from the Director of Development Services or his/her designee. Any additional changes to the approved plans, which has the effect of expanding or intensifying the present use, shall require a new Use Permit.

7. Any temporary signs or permanent signs shall be reviewed and approved by the City prior to fabrication and installation.

8. If at any time in the future, the Director of Development Services determines that a parking/circulation study is necessary to address parking and/or circulation issues relative to the use, the applicant, current business owner, and/or property owner, shall be responsible for the cost of a parking and/or circulation study prepared by a consultant selected by the City. The applicant, current business owner, and/or property owner shall also be responsible for the implementation costs of any mitigation measures deemed appropriate by the City based upon the findings of this study.

9. The applicant, current business owner, and/or property owner shall be responsible for maintaining the property, including the landscaped areas, walkways, and all paved surfaces, free from graffiti, debris and liter. Graffiti shall be removed by the applicant, current business owner, and/or property owner within 48 hours of defacement and/or upon notification by the City. The paint utilized to cover the graffiti must substantially match the existing structure. In the event that the paint finish of the abated area is noticeably distinguishable from the rest of the structure, the property owner shall paint additional portions of the building to minimize the disparity, subject to the approval of the Director of Development Services.

10. The applicant, current business owner, and/or property owner shall obtain approval of a Building and Zoning Compliance Application and shall obtain approval of a City Business License. The applicant, current business owner, and/or property owner shall maintain a valid City Business License at all times during operation of the business.

11. Change of ownership, to include new general partners, shall be noticed to the City of Placentia at least thirty (30) days prior to a legal change taking effect. Once legal change of ownership has occurred, new owner(s) shall obtain a Building and Zoning Compliance Application and shall obtain a valid City Business License prior to operating the business.

12. This site shall operate as a fitness facility at all times. All activities shall be conducted within the enclosed tenant space, while maintaining an environment free from objectionable noise, odor or other nuisances.

13. There shall be no deliveries to or from the premises before 8:00 a.m. and after 10:00 p.m., seven days a week.

14. Litter shall be removed daily from the premises, including adjacent public sidewalks and from all parking area under the control of the licensee. These areas shall be swept or cleaned, either mechanically or manually, on a weekly basis, to control debris.

15. All trash bins shall be kept inside the trash enclosure, and gates closed at all times, except during disposal and pick-up. Trash pick-up shall be done on a regular basis.

16. This Use Permit may be reviewed at the discretion of the Director of Development Services in order to determine if the business is operating in compliance with all required Special Conditions of Approval and Standard Development Requirements.

17. There shall be no special promotional events held on the property, unless a written request for such is received and approved by the City of Placentia Development Services Director and the Police Department's Administrative Lieutenant at least 14 days in advance.

18. The use shall comply with the following:
    a. Prior to any changes to the days and hours of operation, the applicant shall obtain written approval from the Director of Development Services or his/her designee. The following are the specified days and hours of operation:

       Sunday through Saturday: 7:00 AM to 8:00 PM

    b. No more than 10 clients (customers) shall be onsite at any time.
    c. No vending machines of any kind shall be installed outdoors within the project site.
    d. There shall be no public pay phones installed within or upon any portion of the premises.
    e. No outside storage, including the display of vehicles within the parking lot area or displays shall be permitted at any time.
    f. The use shall comply with all provisions of the PMC, including Chapter 23.76 Noise Control.

DEVELOPMENT SERVICES DEPARTMENT – BUILDING DIVISION:

19. The plans for subject project shall be prepared by a California licensed architect or civil/structural engineer based on 2019 CBC, CMC, CEC, CPC, CFC, CALGreen, & State Title 24-Energy Code.

20. The subject project is considered a Gymnasium with (A3 Occupancy) per CBC 2019 Sec.303.4 Group Occupancy A-3.

21. Occupant load factor per CBC 2019 TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT for exercise room is 50 S.F. gross per occupant. The total Occupant load will be 2,100 / 50 = 42.

22. An occupant load of 42 within a building/space that is not equipped with an approved fire sprinkler system requires two exits, which shall be minimum half a diagonal of the building/space apart and be equipped with panic hardware.

23. Since the building/space is an assembly occupancy approval of the plans by the City Fire Authority is required.

24. The Electrical, Mechanical/Plumbing plans shall be prepared, sealed, and signed by California licensed Electrical and Mechanical Engineers. Licensed contractors who are performing the Electrical, Mechanical, and Plumbing jobs may prepare the corresponding plans and sign them with indicating their license class and No. next to their signatures.

25. At least one of each exercise equipment shall be accessible for people with disability.

26. Complete site and interior accessibilities per CBC 2019 Chapter 11-B shall be addressed on plans. Please note the Building Division of the City is not authorized to check the accessibility of ADA requirements or perform any ADA accessibility inspection. All ADA requirements are the sole responsibility of the owner and the architect/engineer of record.

27. On the first sheet of plans shall specify complete scope of all works to be performed under the required permit application.

28. On the first sheet of plans shall address complete project data, which should include but not limited to Group Occupancy, Type of Construction, Occupant Load, Fire Sprinkler System installation or not.

CITY OF PLACENTIA LIFE AND SAFETY DEPARTMENT:

29. All building plans shall be submitted to the City's contracted Fire Department for review and approval. Approval of building plans by the Placentia Fire and Life Safety Department shall be obtained prior to issuance of any building or demolition permits.

CITY OF PLACENTIA POLICE DEPARTMENT:

30. The facility entrance shall be configured so patrons/visitors must check in with staff and cannot walk around or otherwise avoid contacting staff when they enter.

31. Applicant shall install cameras at the entrance to the facility and at the entrance to the locker rooms and/or restrooms. Cameras should be capable of producing highly recognizable facial features of persons entering these locations.

32. All cameras shall be color and positioned to provide facial features inside the facility and at patron entrances.

33. All cameras shall be digitally recorded and a library of 30 days shall be kept of the recordings.

34. The recorder shall be stored in a locked area and only accessible to management staff.

ATTACHMENT 2. VICINITY AND ZONING MAP
UP 2021-02; 1211 E. IMPERIAL HIGHWAY



Aerial A.



Aerial B.

Zoning Code

C-1	R-3
C-1 (O)	R-3 (O-1)
C-1 (O-1)	R-A
C-2	R-G
C-2-H65	R-G (O)
C-M	R-G(O) & C-1 (O)
C-O	RPC (O)
M	SP-1
M (O)	SP-2
M (PMD)	SP-3
PUD-1	SP-4
PUD-2	SP-5
PUD-2 (O)	SP-6 (O)
PUD-3	SP-7
PUD-3 (O)	SP-8
PUD-4	SP-9
R-1	SP-10
R-1 (MHP)	T-C
R-1 (O)	Old Town
R-2	TOD
R-2 (MHP)	N/A

TENANT IMPROVEMENT FOR

VITALITY OC

INTERIOR UPDATE OF SPACE FOR PERSONAL FITNESS STUDIO

1211 E. IMPERIAL HWY. PLACENTIA, CA 92870

SITE PLAN

SCALE: 1/16" = 1'-0"



LEGEND

- (H) (E) H/C PARKING STALL
- TYP. PATH OF TRAVEL FROM (E) H/C PARKING STALL (W/ 48" MIN. WIDTH)

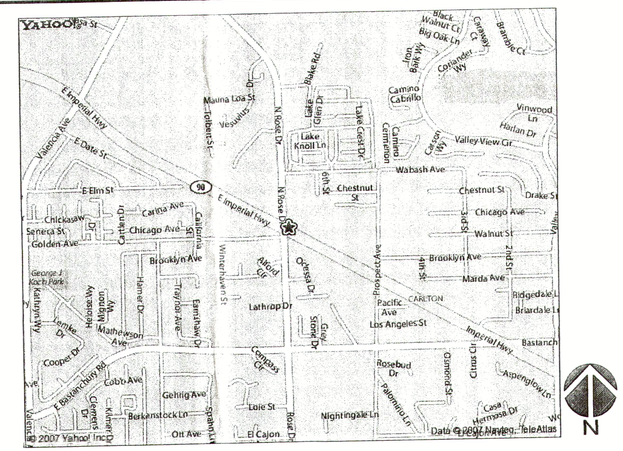
SHEET INDEX

ARCHITECTURAL DWG.	A-1	TITLE SHEET / SITE PLAN / PROJECT DATA / VICINITY MAP
	A-2	PROPOSED FLOOR PLAN
ENGINEER DWG.		

PROJECT DATA

SCOPE OF WORKS;	Interior update of space for personal training Studio a. Paint walls, update interior colors/aesthetics b. Install rubber & Synthetic grass Flooring c. Locate Fitness equipment TOTAL AREA OF LEASE PREMISS: 2,100 SQFT. (NET)
TENANT / OWNER:	MR. Lee Smith 6049 E Avenida Arbol, Anaheim, CA 92807 (425) 263-0878
LANDLORD:	INVESTMENT BROKERS OF ORANGE COUNTY 4841 MAIN STREET YORBA LINDA, CA 92886 CONTACT, RICK VIOLETT (714) 970-1425
MUNICIPAL REVIEW:	CITY OF PLACENTIA DEPARTMENT OF DEVELOPMENT SERVICES 401 E. CHAPMAN AVE. PLACENTIA, CA 92870 (714) 993-8124
GOVERNING CODES:	THE CODES IN EFFECT ARE; 2001 CALIF. BUILDING CODE ('01 CBC), PLUMBING CODE ('01 CPC) 2001 CALIF. MECH. CODE ('01 CMC), 2004 CALIF. ELEC. CODE ('01 CEC) 2004 CALIFORNIA ENERGY EFFICIENCY LOCAL BUILDING CODE / ORDINANCES 1997 UBC, 2000 UMC, UPC, 2000 UMC, NFPA NEC NOTE; STATE OF CALIFORNIA CODES ARE STATE AMENDED AND REVISED MODEL CODES '97 SUCH AS '97 UNIFORM BUILDING CODE '97 UBC, IS STATE AMENDED '98 CALIFORNIA BUILDING CODE, ETC.
BUILDING DATA:	a. TOTAL FLOOR AREA OF Space = 2,100 SQ.FT. (NET) b. CLASSIFICATION OF OCCUPANCY GROUP PER '01 CBC = A-3 c. TYPE OF CONSTRUCTION PER '01 CBC = V-N d. NUMBER OF STORIES = 1 e. FIRE SPRINKLER = NO

VICINITY MAP



REVISIONS	DATE
X XXXX XXXXX	X / X / XX

PROJECT OWNER

MR. Lee Smith

Phone: 425-263-0878

PROJECT ADDRESS

TENANT IMPROVEMENT FOR VITALITY OC

1211 E. IMPERIAL HWY. PLACENTIA, CA 92870

SHEET TITLE

TITLE SHEET
SITE PLAN
PROJECT DATA

SHEET

A-1

TENANT IMPROVEMENT FOR

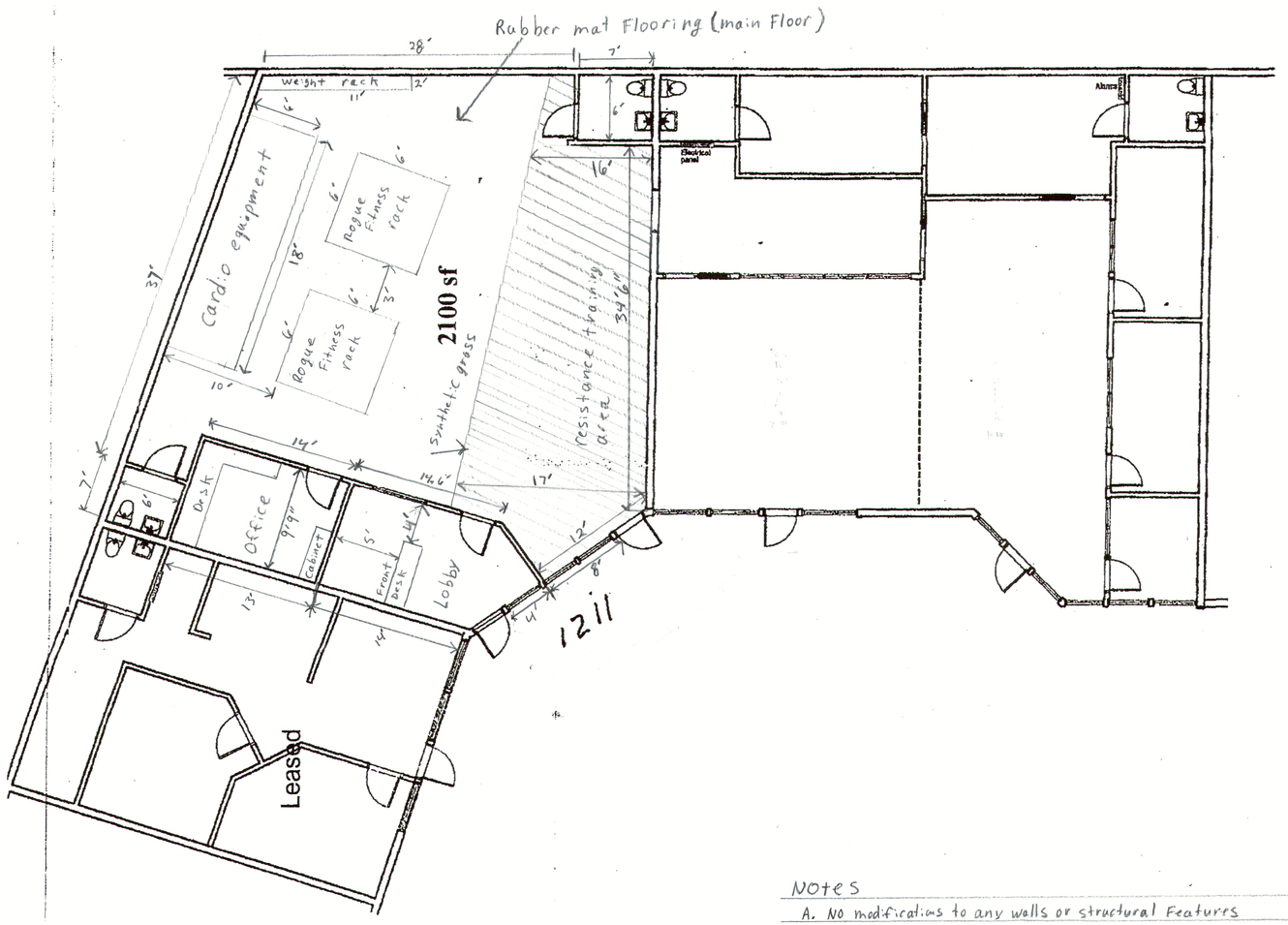
VITALITY OC

INTERIOR UPDATE OF SPACE FOR PERSONAL FITNESS STUDIO

1211 E. IMPERIAL HWY. PLACENTIA, CA 92870

Floor Plan

SCALE; 1/16" = 1'-0"



Notes

A. NO modifications to any walls or structural Features
B. NO changes to existing Floor plan
C. No electrical or plumbing changes or additions
D. Walls to be painted Blue & grey
E. all work out area Flooring will boy on existing cement slab
F. Front Lobby & Office will have new carpet or Laminate Flooring
G. All equipment is Lift + place - Nothing affixed

SHEET INDEX

ARCHITECTURAL DWG.	A-1	TITLE SHEET / SITE PLAN / PROJECT DATA / VICINITY MAP
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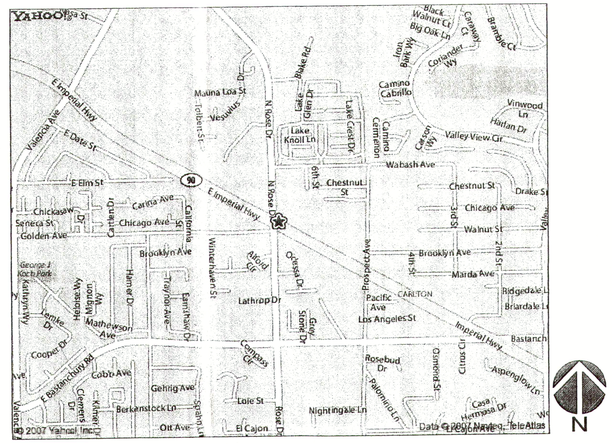
VICINITY MAP



REVISIONS	DATE
X XXXX XXXXX	X / X / XX

PROJECT OWNER

MR. Lee Smith

(425) 263-0878

PROJECT ADDRESS

TENANT IMPROVEMENT FOR
VITALITY OC
1211 E. IMPERIAL HWY. PLACENTIA, CA 92870

SHEET TITLE

TITLE SHEET
SITE PLAN
PROJECT DATA

SHEET

A-2

VITALITY OC

March 1st, 2021

City of Placentia
Development Services Department
401 E. Chapman Avenue, Placentia, CA 92870

Statement of Use

To Whom it May Concern,

Vitality OC operates a private, personal, small group approach to fitness focused on strength and agility. We have an existing book of clients that have been with Vitality who will be migrating to our new location. We are excited that the space will also allow us to expand our existing business and will serve as a test location for future planned expansion of our training offering. We train no more than 4 to 6 people at a time. The training consists of a specific use of equipment with a focus on core strength and body weight movement. Mat Golla, operator and co-owner of Vitality OC is an experienced "Master Trainer" who has studied physical fitness with a focus on agility, strength, and body movement. A graduate of Texas A&M, Mat has focused his career on perfecting training programs which he will now continue to implement at Vitality OC.

Vitality OC will operate 7 days a week, opening at 7am and closing at 8pm. Classes are scheduled in one hour increments with an open gym policy for limited numbers of members during operating hours. No more than (8) people at a time will be utilizing the gym space. Training is supported by certified trainers under the direction of Mat Golla. We will employee (3) part time employees for the first 6 months with a transition to full time employment at the 6 month mark. 1 to 2 trainers will be onsite during operating hours. Vitality will also be retailing resistance and other light workout equipment in our lobby in addition to UForia brand supplements. Uforia is a DNA based supplement we represent and will have on display in our front lobby.

Our equipment will consist of the following:

a. (3) rowing machines
b. (2) cardio bikes
c. (1) dumbbell weight rack set
d. (2) rogue fitness stations
e. (2) multiple resistance band stations
f. rubber and synthetic turf flooring for various workout routines

We believe and are experiencing a fantastic response to our training operation in the Placentia, Anaheim Hills, Yorba Linda communities and are excited to call this new location our "home base" as we continue and expand our offering.

Sincerely,

Lee Smith
Vitality OC
425-263-0878
Lee@vitality-oc.com
www.vitality-oc.com

Placentia Planning Commission

AGENDA STAFF REPORT

TO: PLANNING COMMISSION

FROM: ANDREW A. GONZALES, SENIOR PLANNER

DATE: MAY 11, 2021

SUBJECT: **DEVELOPMENT PLAN REVIEW NO. DPR 2020-03 AND DEVELOPMENT AGREEMENT NO. DA 2020-01 TO PERMIT THE DEVELOPMENT OF A FIVE-STORY, MIXED-USE BUILDING CONSISTING OF 189 AFFORDABLE HOUSING UNITS, INCLUDING 1,500 SQUARE FEET OF GROUND FLOOR RETAIL SPACE, A 1,500-SQUARE FOOT LEASING OFFICE, AND A TWO-LEVEL SEMI-SUBTERRANEAN PARKING STRUCTURE LOCATED ON A 2.13-GROSS ACRE CITY-OWNED VACANT PROPERTY WITHIN THE TRANSIT ORIENTED DEVELOPMENT PACKING HOUSE DISTRICT (TOD) ZONE, AND RECOMMENDING ADOPTION OF AN ADDENDUM TO MITIGATED NEGATIVE DECLARATION NO. MND 2017-01 AT 207 AND 209 W. CROWTHER AVENUE (USA PROPERTIES FUND, INC)**

RECOMMENDATION

It is recommended that the Planning Commission take the following actions:

1) Open Public Hearing, concerning Development Plan Review No. DPR 2020-03 and Development Agreement No. DA 2020-01; and

2) Receive the Staff Report and consider all Public Testimony; and

3) Close the Public Hearing; and

4) Adopt Resolution No. PC-2021-11, a Resolution of the Planning Commission of the City of Placentia, recommending that the City Council of the City of Placentia approve DPR 2020-03 and DA 2020-01, and making findings to permit the development of a five-story, mixed-use building consisting of 189 affordable housing units, 1,500 square feet of ground floor retail space, a 1,500-square foot leasing office, and a two-level semi-subterranean parking structure consisting of a total of 272 onsite parking spaces located on a 2.13-gross acre City-owned vacant property within the Transit Oriented Development Packing House District (TOD) Zone; and Consideration of an Ordinance approving a Development Agreement and long term Lease Agreement between the City of Placentia and USA Properties Fund, Inc., for the subject project and property, granting certain vested rights, leasing terms and rates related to the property, and memorializing the amount of the development fees owed and/or deferred in exchange for a

community benefit pursuant to the procedures described in California Government Code § 65867 on property located at 207 and 209 W. Crowther Avenue and recommending the adoption of an Addendum to Mitigated Negative Declaration No. MND 2017-01 pursuant to the California Environmental Quality Act Guidelines (CEQA) set forth in Title 14 CCR §15074 and the City of Placentia Environmental Guidelines.

DISCUSSION

The applicant, USA Properties Fund, Inc., requests approval of a Development Plan Review and Development Agreement to allow for the construction of a five-story, mixed use development featuring 189 affordable housing units with associated amenities for residents, 1,500 square feet of retail space, 1,500 square feet of leasing office space, and two-level semi-subterranean parking structure on property located at 207 and 209 W. Crowther Avenue. This project, if approved, would be the third development entitled in the Transit Oriented Development (TOD) Zoning District near Placentia's Old Town. The 2.13-gross acres city owned site is situated on the north side of Crowther Avenue between Melrose Street and Cameron Street, which abuts the BNSF tracks and the future south platform for Placentia's anticipated Metrolink station. In keeping with the goals of the new TOD zone, this will be the third TOD type of development approved in the City. It will likely an additional catalyst to more development within the TOD zone and in the nearby Old Town District, thus implementing the City's vision as an area that encourages high quality, transit-oriented development and to create a compact pattern of development that is conducive to walking, bicycling, and using public transportation.

PROJECT DESCRIPTION

The proposed project involves a mixed-use development consisting of 189 affordable housing units, 1,500 square feet of ground floor retail space, a 1,500-square foot leasing office, and a two-level semi-subterranean parking structure, to be developed on a vacant city-owned site that once served as the site for the historic Placentia Orange Grower's Association packing house, which was later demolished in 2014. The site is approximately 2.13 gross acres (92,818 sf) and bound by BNSF railway tracks to the north, W. Crowther Avenue to the south, a city parking lot and pedestrian bridge to the east, and S. Melrose Street to the west. Primary access to the site is provided along W. Crowther Avenue. The site is sloped with a slope differential of approximately 20 feet between the highest vertical datum point (northeast) to the lowest vertical datum point (southwest) of the property.



The overall density of the development is 88.6 dwelling units per gross acre which is below the maximum allowable density of 95 dwelling units per gross acre permitted within the TOD zone. The project amenities include two landscaped courtyards containing barbeques, picnic tables, benches, and a children's play structure, including a fitness room and community room.

189 affordable housing units will be provided comprised of a mixture of one-bedroom (135 quantity) and two-bedroom (54 quantity) units that are designed into 13 different plant types. The unit sizes will measure between 572 sf and 840 sf., with the "A" plan types containing one bedroom and one bathroom and the "B" plan types with two bedrooms and one bath. The total net square footage of the residential building is estimated to be at 168,171 square feet, which excludes shafts stairs and the parking garage. The ground floor of the of the building will contain 1,500 sf retail area and 1,500 sf leasing office that will both front onto Crowther Avenue. The proposed residential units will be offered as rentals.



UNIT PLAN A1
1 BEDROOM + 1 BATH
NET AREA = 531 SF
GROSS AREA = 572 SF

UNIT PLAN A3
1 BEDROOM + 1 BATH
NET AREA = 551 SF
GROSS AREA = 593 SF

UNIT PLAN B1
2 BEDROOM + 1 BATH
NET AREA = 703 SF
GROSS AREA = 758 SF

Of the 189 affordable units, 187 will be income restricted rental units and two will be manager units. The affordability mix of the units will be between 30% AMI (Area Median Income) and 70%, which translates to a rental range of $908 to $2,119 per unit. The income level mix will be negotiated between the City and the applicant and memorialized within the Affordable Housing Plan as prescribed by Condition No. 6(f).

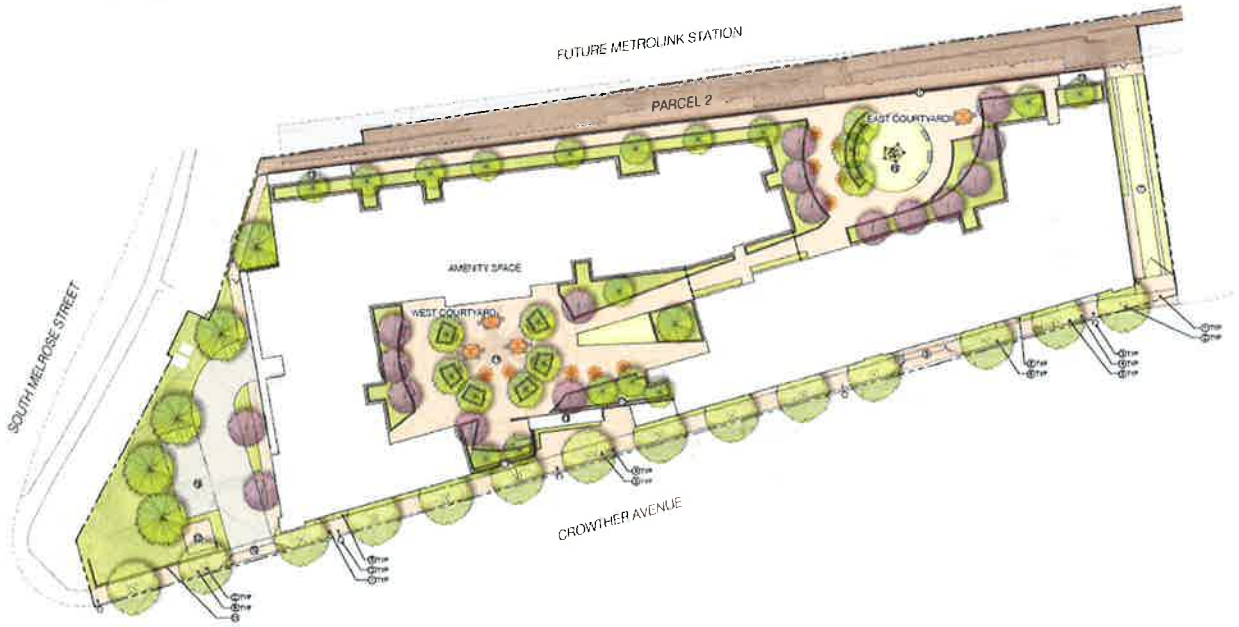
Access and Parking

Access for residents and guests will be provided by two entry points accessible along W Crowther Avenue. The first entry point, closest to the S. Melrose Avenue and W. Crowther Avenue intersection, will provide access to the lower-level parking garage. Four surface parking spaces are provided immediately to the west of the entry drive aisle which traverses into the entrance/exit of the lower parking garage. Within the lower parking garage residents and guests have access to 17 open parking spaces, with the remainder of the parking secured by two roll up gates. The second entry point is located to east of the leasing office along W. Crowther Avenue, which will provide direct access into the upper-level parking

garage. Residents and guest have access to eight parking spaces, with the remainder of the parking garage secured by a roll up gate.

A series of pedestrian walkways are proposed to accommodate resident/guest access to the units and recreational amenities. An access point located along W. Crowther Avenue and two access points along the east and west building façade, provide entree to the east and west courtyard area of the development. Around the northerly periphery of the building, an east and west access to the future Metrolink southerly platform will be provided for passengers.

Landscaping



Proposed landscaping for the project will include a mix of native and non-invasive ornamental varieties along much of the site perimeter, with exception of the area that will be abutting the future Metrolink south platform, the onsite and courtyards. Significant tree plantings will occur along all interior property boundaries and along Crowther Avenue. Plantings include varieties such as Chinese Elem, Strawberry Tree, Swan Hill Fruitless Olive, Mimosa Tree, Jacaranda, and other native/ornamental species. Within the courtyard area accent shade trees will be located within each courtyard and along each respective perimeter to provide screening and separation between active and passive recreation areas, including the adjacent residential units. The attractive landscaping plan is required to meet s the requirements of the MWELO (Model Water Efficient Landscape Ordinance) as required by the City's Municipal Code.

Architecture

The mixed-use buildings will employ a take on Contemporary style architecture, with elements of modern and urban aesthetics. The building employs sharp lines and angles that define modernism. Neutral spaces are accented by single wall pain in bold color and sleek. The building is broken up into approximately five volumes along Crowther Avenue, which assists in the minimization of the mass and bulk of the building and provides

opportunities to create architectural themes on the facade of those volumes. of Ranch and Mid-Century Modern architecture. Each volume is broken up by the employment of a number of design techniques as exterior façade pop outs/building projections, varying roof lines and styles, and contrasting building materials. These design techniques visually minimize the size/volume of the building. The project employs four-sided architecture by using the same material on all four sides of a structure so that, no matter what vantage point it is viewed from, the design is never interrupted, and all the parts are perceived as part of a unified whole.



PROJECT CHARACTERISTICS

Applicable Code Section – Placentia Municipal Code

The project is currently located within the Transit Oriented Development Packing House District (TOD). The project will be required to comply with the development standards and use requirements set forth in the Placentia Municipal Code (PMC) Chapter 23.111 for projects located within the TOD Zoning District. Pursuant to PMC Section 23.75.010(a), construction of new buildings shall require a DPR to be reviewed and approved at a noticed public hearing before the Planning Commission. According to TOD land use and permit requirements, mixed use projects with residential is permitted within the zoning district in accordance with PMC Section 23.111.030. Furthermore, in accordance with procedures described in California Government Code §65867 the City of Placentia and USA Properties Fund, Inc., is processing a long-term Lease Agreement for the subject project that will grant certain vested rights, leasing terms and rates related to the property, and memorialize the amount of the development fees owed and/or deferred in exchange for a community benefit. State law requires Planning Commission review at a noticed public hearing, to

review and solicit a recommendation for final action on the proposed DA by the City of Placentia City Council.

Subject Site and Surrounding Land Uses

The table below illustrates the site and surrounding existing land uses, General Plan Land Use designation and zoning:

Location	Existing Land Use	Land Use Element General Plan Designation	Zoning Map Designation
Existing	City-Owned Vacant Property	TOD	TOD
Proposed	Five-Story, 189 Affordable Housing Units Development Project Plus 1,500 SF of Retail, 1,500 SF Leasing Office, and Two-Level Semi-Subterranean Parking Structure with 272 Onsite Parking Spaces	TOD	TOD
North (Across BNSF Tracks)	Placita Santa Fe – Old Town: Various Commercial and Residential Buildings & Future Metrolink Parking Structure and North Platform	Old Town	Old Town Placentia Revitalization Plan
South (Across Crowther Avenue)	Torrez Trucking, Inc./EPC America & The Herald	TOD	TOD
East	City Parking Lot	TOD	TOD
West (S. Melrose Street)	The Placentia Mutual Orange Packinghouse	TOD	TOD

ZONING COMPLIANCE ANALYSIS

Site Development Standards

The project is located within the TOD Zoning District. The proposed five-story, mixed-use development project will be analyzed in accordance with the TOD development standards. The mixed-use development is permitted with a DPR subject to review and approval by the Planning Commission. In accordance with PMC Section 23.112.040, a "Mixed Use Project with Residential" uses are permitted within the TOD Zoning District. However, in pursuant to PMC 23.75.010, Development Plan Review, construction of new buildings in all zones requires the approval of a DPR by the Planning Commission.

The proposed development and use complies with the proposed base zoning district in terms of the maximum density, maximum building height limit, minimum setbacks, and minimum parking requirements, with exception of the TOD requirements related to maximum number of stories, minimum ceiling height for ground floor commercial, and minimum private open space per unit, which will be addressed through the DA and concessions by California's Density Bonus Law, a mechanism which allows more favorable local development requirements in exchange for building affordable housing units. of the agenda report. Concession will be discussed within the Affordable Housing section of the agenda report. The project is anticipated to result in little to no adverse impacts to nearby sensitive land use receptors (e.g., single-family residential) as the project is residential in nature and will provide adequate buffers along all peripheries of the site to nearby residential uses.

The following matrix provides a summary of the development's compliance with the identified development standards:

STANDARD	PROJECT
Height 3 stories minimum, 35' minimum, 5 stories maximum, not to exceed 68' *Note: Building height is measured from finished pad height to the top of the roof for building height measurements. Projections, including rooftop amenities, are permitted up to 16 feet above the 68-foot building height limit.	Building height varies across the site, but the overall height requirement is met at 68'. *The building has 6 levels, but the applicant is intending to remedy the additional level by addressing it through the DA and as a concession through and California's Density Bonus Law.
Setbacks Front Yard Setback – 3 ft. min./15 ft. max. Street Side Yard Setback - 5 ft. min./15 ft. Interior Side Yard Setback – 0 ft. min. Rear Yard Setback - 10 ft. min.	Front: 9 to 12 ft. (Crowther Avenue) Street Side Yard Setback - 6.6 Feet Interior Side Yard Setback – 20 ft. Rear Yard Setback - 10 ft. min.

Density 65 dwelling units/acre minimum and 95 dwelling units/acre maximum.	89 du/ac
Parking This is project is required to provide a minimum 257 of spaces based on the following: Spaces per Studio unit-1 min./1.5 max. Spaces per 1 bed unit-1 min./1.5 max. Spaces per 2 bed unit-1.5 min./2 max. Guest spaces per 10 units-2 min./3 max. Retail Space-2 min./4 max. per 1,000 SF	272 spaces
Minimum Lot Size: 20,000 sf	92,818 sf
Lot Area and Dimensions Minimum Lot Area: 8,000 sq. ft. Minimum Lot Width: 80 linear ft.	Lot Area: 242,629 sq. ft. (5.6 gross acres) Approx. 369 linear ft.
Common Open Space 50 sf/unit: 9,450 sf. required Common Open Space: • Must be fully landscaped; • 50% of rooftop amenities may count towards total common open space requirement; and • Rooftop amenities shall be setback from the building edge such that no more than 20% of the rooftop structure can be visible from the primary public right-of-way.	25,784 sf
Private Open Space 64 sf/unit: 12,096 required	1,037 sf *The applicant is intending to remedy the deficiency in private open space by addressing it through the DA and as a concession through California's Density Bonus Law.

Bicycle Parking 39 Short Term Bike Parking Spaces required based on: 1 resident bicycle parking space for every 5 residential units.	39 Short Term bicycle parking spaces.
Bicycle Storage 43 Long Term Bike Storage Spaces required based on: 2 bicycle storage units for every 5 dwelling units for the first 20, and 1 for every 5 additional units.	43 Long Term Bicycle Storage Spaces
Electric Vehicle Charging 28 Level 2 station or 14 Fast Charging Stations based on a minimum 10% of project's parking spaces must provide EV Level 2 charging stations. Alternatively, 5% of total spaces if installing DC Fast Charging Stations.	Electric vehicles (EV) are increasingly driven, especially in Southern California. Providing charging facilities for EV is crucial for sustainability and for promoting the use of EV. As such, EV charging stations are required in the TOD zone. * The site plan includes a total of 28 parking stalls set aside for EV charging which will be wired to the mechanical room and provided with an adequately sized panel per CALGreen standards. Based on our experience managing apartment communities and the fact that this is a workforce housing development we will be puchasing and installing 3 of the required 28 units which is above typical tenant demand in similar existing USA communities. A Parking Management Plan pursuant to Section 4.9 of the Development Agreement will be required for the development which will also require assessment of EV Charging demand. Additional EV charging units will be purchased and installed as necessary based on tenant demand.
Public Art Public art and public plazas are encouraged in every development. Public art or plazas may be required as part of a development agreement for those developments that include 20 or more units or which are over 20,000 sf. Public art is	A Condition of Approval shall address public art to the satisfaction of the Development Services Director.

encouraged in all projects and is encouraged to reflect the history of the Packing House District and citrus growing industry.	

Other Departments Concerns and Requirements

The Divisions of Planning and Building, Public Works Department, Police Department, and Fire and Life Safety Department have reviewed the application and submitted comments, but had no major concerns with the proposal. All applicable code requirements and conditions of approval have been incorporated into draft resolutions for consideration and recommendation by the Planning Commission to the City Council for DPR 2020-03 and DA 2020-01.

ISSUES ANALYSIS:

Consistency with the General Plan

The General Plan features policies that promotes the reinvestment of underutilized properties while being sensitive to the suburban atmosphere and requires new developments to provide adequate improvements and pay impact fees to offset the demand costs on city services and facilities. The proposed development and subdivision is consistent with the following Land Use Element and Housing Element policies and goals of the General Plan:

Land Use Element

Policy 1.2 – Allow for a variety of residential infill opportunities including single family, multi-family, mixed-use, manufactured housing and mobile homes, in designated areas to satisfy regional housing needs.

Policy 1.6 – Encourage mixed-use development within the Old Town District, TOD District and other appropriate areas.

Policy 2.17 – Encourage the development of Mixed-Use and transit-oriented development to promote a wider range of residential opportunities, to help meet the regional housing needs, and to complement the principles of the Complete Streets model.

Policy 2.18 – Work pro-actively with Orange County Transportation Authority (OCTA) to properly plan appropriate land uses around existing and future planned transportation projects building by OCTA.

Goal 3 – Revitalize underutilized, abandoned or dilapidated commercial, industrial, and residential uses and properties.

Policy 3.1 – Encourage opportunities for redevelopment and improvements in the Old Town area, the TOD district, industrial areas, neighborhoods in the southern sector of the City, and commercial centers along major roadway corridors.

Development of a large vacant property will promote further compatibility with existing developments within the surrounding area and stimulate investment and business activity which will strengthen the economic vitality of the City. The development will provide necessary improvements within the public right-of-way including street resurfacing and installation of new sidewalks, gutters, and driveway approaches, and miscellaneous street infrastructure. Overall, the proposed development will be consistent with the General Plan and will result in a compatible continuation to existing land uses and development within the surrounding area.

Housing Element

Goal 1 – Develop and maintain an adequate supply of housing that varies sufficiently in cost, size, type, and tenure to meet the economic and social needs of existing and future residents within the constraints of available land.

Program 1.2 – The development serves to located housing near transportation to increase livability within new housing developments and locates a major workforce housing development near transportation option.

Program 1.9 – This development will provide housing for extremely low-income households and has been incentive through the development of the TOD district.

California Housing Element law mandates that each city show it has adequate sites available through appropriate zoning and development standards and with the requirement public services and facilities for a range of housing types and incomes. The City must demonstrate that it has the capacity or adequate sites to accommodate the project needs for housing at all income levels.

Southern California Association of Governments (SCAG), the Council of Governments (COG) representing the region, in cooperation with local jurisdictions, is responsible for allocating the region's projected new housing demand in each jurisdiction. The process is known as the Regional Housing Needs Assessment (RHNA) and the goals are referred to as the "regional share" goals for new housing construction. The market rate housing development on a site that permits housing assists the City in achieving the goal for new housing construction in an area that otherwise prohibited housing. Furthermore, it will greatly assist in providing additional units to address California's current housing crisis and assist in offsetting the city's "regional share" of housing units which is 4,374 residential units for the upcoming planning cycle.

Land Use Compatibility

The project will be compatible with the surrounding area as the development will revitalize an underutilized/vacant city owned property with the development of 189 affordable housing units, 1,500 square feet of ground floor retail space, a 1,500-square foot leasing office, and a two-level semi-subterranean parking structure. The development will be development with the TOD zoning district, which is experiencing the revitalization of underutilized properties will serve to encourage economic investment within the TOD and Old Town districts. The project aims to serve as an additional catalyst to the area by triggering more development. The development will provide a compatible transition between nearby land uses that complement the residential densities of the housing developments to the east and west along W. Crowther Avenue. Based upon the use, overall site layout, and building design, the proposed development is not anticipated to result in any significantly adverse impacts to the surrounding area.

Planning, Community, Economic Development, and Housing Ad Hoc Committee

All major development projects within the City of Placentia require review by the Planning, Community, Economic Development, and Housing Ad Hoc Committee. The Committee reviewed this development several times, most recently on April 14, 2021. The Ad Hoc Committee recommends approval of this development as presented.

CEQA

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code §§21000-21177) and pursuant to §15063 of Title 14 of the California Code of Regulations (CCR), the City of Placentia, acting in the capacity of the Lead Agency, is required to undertake the preparation of an Initial Study to determine if the proposed Project would have a significant environmental impact. This Initial Study was conducted relying on findings from the Initial Study/Mitigated Negative Declaration (IS/MND) approved for the re-zoning of this area from Manufacturing to TOD (MND 2017-01). For this project, an Addendum to the previously adopted Initial Study/Mitigated Negative Declaration of Environmental Impacts (MND 2017-01) was prepared for the project wherein it was found that, with implementation of Mitigation Measures, including a Mitigation Monitoring and Reporting Program ("MMRP"), the proposed project will not have a significant effect on the environment. The Mitigation Measures are attached to this staff report and have also been added as conditions of approval. The Mitigation Measures were established to ensure any potential impact is less than significant with the implementation of the identified Mitigation Measures. The Addendum to the Mitigated Negative Declaration (MND) and the Mitigation Monitoring and Reporting Program are provided as attachments to this report and staff recommends that the Planning Commission adopt the Addendum.

PUBLIC NOTIFICATION

Legal notice was published in the Placentia News-Times on April 29, 2021. Notices were sent to property owners of record within a 300-foot radius of the subject property on April 28, 2021, and posted at the Civic Center and on the City website on April 29, 2021. As of

May 5, 2021, staff has received no comments in opposition or support of the development project.

CONCLUSION

The proposed project is consistent with the City's General Plan and, with exception of the requested concessions, meets the minimum development standards of the PMC. With the recommended conditions of approval, it is the determination of city staff that the proposed development will be compatible with adjacent land uses and will not result in any adverse impacts onto the surrounding neighborhood.

RECOMMENDATION

Staff recommends that the Planning Commission recommend to the City Council of the City of Placentia adoption of Resolution PC-2021-11 recommending approval of DPR 2020-03, and DA 2020-01, and adoption for the Addendum to MND 2017-01.

Prepared and submitted by:

JL FOR
Andrew A. Gonzales
Senior Planner

Joseph Lambert
Development Services Director

ATTACHMENTS:

1. Resolution No. PC-2021-11 recommending City Council approval of Development Plan Review No. DPR 2020-03, Development Agreement No. DA 2020-01, and adopting an Addendum to Initial Study/Mitigated Negative Declaration of Environmental Impacts (MND 2017-01) for the project
2. Draft Development Agreement (DA) 2020-01 and Related Draft Ground Lease Agreement
3. Addendum to Mitigated Negative Declaration (MND 2017-01) and Mitigation Monitoring & Reporting Program, Appendices
4. Project Plans including the Site Plan, Floor Plans, Building Elevations, Preliminary Landscape Plan, Colored Renderings
5. Colors and Materials Board
6. Vicinity Map
7. Site Photographs

RESOLUTION NO. PC-2021-11

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PLACENTIA RECOMMENDING TO THE CITY COUNCIL APPROVAL OF DEVELOPMENT PLAN REVIEW NO. DPR 2020-03 AND DEVELOPMENT AGREEMENT NO. DA 2020-01 TO PERMIT THE DEVELOPMENT OF A FIVE-STORY, MIXED-USE BUILDING CONSISTING OF 189 AFFORDABLE HOUSING UNITS, INCLUDING 1,500 SQUARE FEET OF GROUND FLOOR RETAIL SPACE, A 1,500-SQUARE FOOT LEASING OFFICE, AND A TWO-LEVEL SEMI-SUBTERRANEAN PARKING STRUCTURE LOCATED ON A 2.13-GROSS ACRE CITY-OWNED VACANT PROPERTY WITHIN THE TRANSIT ORIENTED DEVELOPMENT PACKING HOUSE DISTRICT (TOD) ZONE, AND RECOMMENDING ADOPTION OF AN ADDENDUM TO MITIGATED NEGATIVE DECLARATION NO. MND 2017-01 AT 207 AND 209 W. CROWTHER AVENUE.

A. Recitals.

WHEREAS, Leatha Clark, representing USA Properties Fund, Inc., ("Applicant" hereinafter), regarding real property located at 207 and 209 W. Crowther Avenue, filed two applications for approval of Development Plan Review No. DPR 2020-03 and Development Agreement No. DA 2020-01, as described in the title of this Resolution. Hereinafter, in this Resolution, the subject Development Plan Review and Development Agreement requests are referred to as the "Applications"; and

WHEREAS, on May 11, 2021, the Planning Commission of the City of Placentia conducted, an concluded, a duly noticed public hearing, as required by law, and received a staff report and other relevant information from City staff recommending to the City Council of the City of Placentia, adoption of an Addendum to Mitigated Negative Declaration No. MND 2017-01, approval of Development Plan Review No. 2020-03 and Development Agreement No. 2020-01 for the project located at 207 and 209 W. Crowther Avenue; and

WHEREAS, an Addendum to MND 2017-01 was prepared to review and consider the environmental impacts of development of 189 affordable housing units, including 1,500 square feet of ground floor retail space, a 1,500-square foot leasing office, and a two-level semi-subterranean parking structure in accordance with the California Environmental Quality Act and the City of Placentia Environmental Guidelines as codified in Title 14 of the California Code of Regulations ("CCR") Section 15000 et. seq., Public Resources Code Section 21000 et. seq. and the City of Placentia Environmental Guidelines; and

WHEREAS, the City of Placentia provided notice of public hearing in accordance with California Government Code Section 65090 and the City of Placentia Municipal Code Section 23.96.030 by publication in a local newspaper at least 10 days prior to the public hearing and by direct U.S. mail to all property owners within 300-feet of the proposed project boundaries; and

WHEREAS, after careful consideration of all pertinent testimony and the staff report offered in the case, the Planning Commission voted to recommend approval of the "Applications" to the City Council; and

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

B. Resolution.

NOW, THEREFORE, it is hereby found, determined and resolved by the Planning Commission of the City of Placentia as follows:

Section 1. Development Plan Review. The development, as modified by the attached Conditions of Approval and Standard Development Requirements (Attachment "A"), meets the overall requirements of PMC Chapter 23.111 (Transit Oriented Development Packing Housing District Development Standards) and PMC Chapter 23.75 (Development Plan Review). As such, the Planning Commission finds as follows:

a. The project meets or exceeds the criteria established in PMC Section 23.75.020; in terms of minimum setbacks, parking, and open space requirements; and maximum density and building height development standards; and,

b. Conditions of Approval have been prepared as necessary to prevent: (A) detriment to the health, safety or general welfare of the persons residing or working within the neighborhood of the proposed development or within the city, or (B) injurious to the property or improvements within the neighborhood or within the city; and,

c. The proposed development will be consistent with the latest adopted General Plan Land Use designation of the project area of "TOD"; and,

d. Conditions necessary to secure the purposes of Section 23.75.020, including guarantees and evidence of compliance with conditions, are made part of the development approval.

Section 3. Development Agreement. The applicant filed an application for approval of Development Agreement No. 2020-01, as described in the title of this Resolution, attached to the staff report dated May 11, 2021 and incorporated herein by reference. The City and Applicant have faithfully negotiated the Development Agreement pursuant to the procedures described in California Government Code § 65867, which authorizes cities to enter into development agreements with any person having a legal or equitable interest in real property for the development of such property. The Planning Commission hereby finds that the Development Agreement between the City and Applicant conforms to the policies and programs of the General Plan and recommends that the City Council consider adoption of the Development Agreement and related Ground Lease Agreement.

Section 4. The Planning Commission hereby recommends: (a). The City Council of the City of Placentia adopt an Addendum to a Mitigated Negative Declaration and find that the Addendum to the Mitigated Negative Declaration, adopted with respect to the project, was prepared in compliance with the California Environmental Quality Act ("CEQA"), California Public Resources Code §§ 21000, *et seq.,* the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, §§ 15000, *et seq.,* and the Environmental Impact Report Guidelines of the City of Placentia and that the Council review and consider the information contained in said Mitigated Negative Declaration with respect to the Application:

a. The City Council find and determine that, based upon the findings set forth below, and changes and alterations which have been incorporated into and conditioned upon the proposed project, no significant adverse environmental effects will occur; and

b. The City Council find that facts supporting the above-specified findings are contained in the Addendum to the Mitigated Negative Declaration, the staff report and exhibits, and the information provided during the public hearing conducted with respect to the Application and the Addendum to the Mitigated Negative Declaration. Mitigation measures are made a condition of approval of said project and are intended to mitigate and/or avoid environmental effects identified in the Mitigated Negative Declaration.

Section 5. If any section, subsection, sentence, clause, or phrase of this resolution and/or the documents in support of this resolution is/are for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this resolution.

Section 6. Based upon the findings and conclusions set forth herein, this Planning Commission hereby recommends approval of DPR 2020-03 and DA 2020-01 as modified herein, and specifically subject to the conditions set forth in Attachment "A" attached hereto and by this reference incorporated herein, and recommends adoption of the Addendum to MND 2017-01 referenced in this resolution and the related staff report.

Section 7. The Secretary to the Planning Commission shall:

a. Certify to the adoption of this Resolution; and

b. Forthwith transmit a certified copy of this Resolution, by certified mail, to the applicant at the address of record set forth in the Application.

ADOPTED AND APPROVED THIS 11TH DAY OF MAY, 2021.

_____

CHRISTINE J. SCHAEFER, CHAIR

I, Joseph M. Lambert, Secretary to the Planning Commission of the City of Placentia, do hereby certify that the foregoing Resolution was introduced at a regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, and was passed at this regular meeting of the Planning Commission of the City of Placentia held on the 11th day of May, 2021, by the following vote:

AYES:	COMMISSION MEMBERS:
NOES:	COMMISSION MEMBERS:
ABSENT:	COMMISSION MEMBERS:
ABSTAINED:	COMMISSION MEMBERS:

ATTEST:

_____
JOSEPH M. LAMBERT,
SECRETARY TO THE PLANNING COMMISSION

APPROVED AS TO FORM:

_____
KATHYA M. FIRLIK
ASSISTANT CITY ATTORNEY

Attachment A:	Conditions of Approval for Development Plan Review No. DPR 2020-03 & Addendum to Mitigated Negative Declaration No. 2017-01
Attachment B:	Police Department – Standard Development Requirements Residential

Attachment "A"
Special Conditions of Approval and Standard Development Requirements for Development Plan Review No. DPR 2020-03 and Addendum to Mitigated Negative Declaration No. MND 2017-01 207 & 209 W. Crowther Avenue (APNs 339-402-05, -07, -08 & -11)

SPECIAL CONDITIONS

If the above referenced application is approved, applicant and/or property owner shall comply with the Special Conditions listed below and the Standard Development Requirements attached.

ALL THE FOLLOWING SPECIAL CONDITIONS OF APPROVAL AND STANDARD DEVELOPMENT REQUIREMENTS SHALL BE FULLY COMPLIED WITH FOR THE DEVELOPMENT PLAN REVIEW TO CONTINUE IN GOOD STANDING.

DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION:

1. Development Plan Review No. DPR 2020-03 is valid for a period of twenty-four (24) months from the date of final determination, unless extended pursuant to Placentia Municipal Code (PMC) Sections 23.75.080. If the development of the site and/or use approved by this action is not established by obtaining Building Permits within such a period of time, this approval shall be terminated and shall be null and void, unless an extension is applied for and approved.

2. Failure to abide by and faithfully comply with any and all conditions attached to this action shall constitute grounds for revocation of said action by the City of Placentia Planning Commission.

3. The applicant shall, as a condition of project approval, at its sole expense, defend, indemnify and hold harmless the City, its officers, employees, agents and consultants from any claim, action, proceeding, liability or judgment against the City, its officers, employees, agents and/or consultants, which action seeks to set aside, void, annul or otherwise challenge any approval by the City Council, Planning Commission, or other City decision-making body or City staff action concerning applicant's project. The applicant shall pay the City's defense costs, including attorney fees and all other litigation-related expenses, and shall reimburse the City for any and all court costs, which the City may be required to pay as a result of such defense. The applicant shall further pay any adverse financial award which may issue against the City including but not limited to any award of attorney fees to a party challenging such project approval. The City shall retain the right to select its counsel of choice in any action referred to herein. The City agrees to promptly notify the applicant of any such claim filed against the City and to fully cooperate in the defense of any such action.

4. The site plan, floor plans, and elevations, including all associated architectural, landscape, and civil drawings, received and dated February 26, 2021, including the colors and materials palette, shall be the conceptually approved design.

5. Any significant modifications to the approved site plan, floor plans, and elevation plans, including any modifications which will change, expand or intensify the use(s) shall be subject to review and approval by the Director of Development Services. The Director of Development Services or his/her designee may determine if such modifications require approval by the City of Placentia Planning Commission or may be approved administratively by City staff.

6. Prior to issuance of building permits, except as otherwise noted, the following shall be completed:

    a. Project plans shall be submitted for the review and certification for inclusion into the entitlement file by the Director of Development Services and shall include the following information:

        i. All Special Conditions of Approval and Standard Development Requirements of DPR 2020-03. Include any project revisions on the applicable sheets of the project plans. Additionally, include separate sheets with approved Special Conditions of Approval and Standard Development Requirements to be printed verbatim on one of the first three pages of all the working drawing sets used for issuance of building permits (architectural, structural, electrical, mechanical, and plumbing) and shall be referenced in the sheet index. The minimum font size utilized for printed text shall be 12 point.

        ii. Typical cross section views and details through the property and across each property line as directed by the Director of Development Services.

        iii. Location of transformers, meters, and all other aboveground appurtenances.

        iv. All mechanical equipment shall be screened from public view to the satisfaction of the Development Services Director or his/her designee.

    b. The developer shall submit for City approval a construction staging plan that indicates how safe vehicular and pedestrian access to the site will be maintained for the duration of the construction period. The construction stage plan shall include measures such as, but not limited to the following:

        i. A telephone number and name of a designated contact person(s) for

registering complaints or comments shall be posted in a clearly visible manner along the perimeter of the site.

ii. A flag person shall be employed to direct traffic when it is anticipated that construction vehicles accessing the site will impede pedestrian and vehicular access along W. Crowther Avenue and S. Melrose Street.

iii. If any sidewalk is blocked during construction, alternate routes for pedestrians and bicycles shall be clearly marked with signs approved by the City.

iv. All access points shall be clearly marked during construction, and if an access point is blocked during construction, a detour sign to an alternate access point shall be clearly posted.

v. A detailed timeline outlining the course of drilling, grading/construction work that will take place on the property.

c. An exterior lighting (photometric) plan showing location, type of fixtures and areas of illumination shall be submitted and reviewed for compliance with City standards and the Placentia Municipal Code. Lighting shall neither negatively impact adjacent properties nor the public right-of-way.

d. Complete landscape and irrigation plans. The applicant must follow the procedure for approval under the MWELO for the proposed project landscaping. A MWELO procedure and approval package is available from the front counter in the Development Services Department.

e. Postmaster approval of the location and design of the mailboxes, if applicable.

f. An Affordable Housing Plan in accordance with PMC Section 5.30.070.

g. All applicable provisions of the Placentia Municipal Code (PMC) shall be met prior to issuance of Building Permits and shall be adhered to at all times.

h. To the satisfaction of the Development Services Director and City Engineer all existing lots that comprise the property shall be legally merged and/or consolidated.

7. At the request of the Director of Development Services, applicant and/or property owner will provide a Parking Management Plan at their own expense to be reviewed by the Director of Development Services to remedy any parking concerns that may arise with the project, including providing the appropriate number of EV charging

stations to meet resident demand. The staff review of the Parking Management Plan will be at the expense of the property owner/property management company.

8. Developer shall pay all applicable citywide Development Impact Fees adopted by and set forth in City Council Ordinance O-2017-10 and as amended from time to time, excluding the citywide Affordable Housing Fee adopted by and set forth in City Council Ordinance O-2017-11. Developer shall comply with all applicable provisions PMC Section 5.30.110, to be eligible for a waiver of the affordable housing fee.

9. Developer shall pay in full to the City of Placentia, any and all applicable TOD Development Impact Fees (including, but not limited to fees relating to sewer facilities, traffic and transportation infrastructure, and streetscape infrastructure) adopted by and set forth by the City Council in effect at the time building permits are issued prior to issuance of the first grading permit for the project.

10. Developer and/or property owner agrees to approve the incorporation of the project into the Community Facilities District No. CFD 2014-01 (Public Services) pursuant to the provisions of California Government Code Section 53311, et seq. Said annexation into CFD No. 2014-01 shall be fully completed in accordance with California law prior to issuance of any Certificate of Occupancy for the project.

11. Developer and/or property owner agrees to approve the incorporation of the project into Community Facilities District No. 2018-01 (Transit Oriented Development District Maintenance Services) pursuant to the provisions of California Government Code Section 53311, et seq. Said annexation into CFD No. 2018-01 shall be fully completed in accordance with California law prior to issuance of any Certificate of Occupancy for the project.

12. The final Certificate of Occupancy cannot be approved and utilities cannot be released until the following is completed for each respective portion of the property:

    a. The property owner(s) and/or their successor(s) willfully agree to annex into those district(s) for the project area identified by Condition Nos. 10-11 above. If the subject property is sold prior to annexation into the three districts, the future property owner(s) must complete the annexation process and no Certificates of Occupancy shall be issued prior to completion of annexation.

    b. The property owner(s) shall pay in full all applicable impact fees associated with the development project.

    c. As required by Development Agreement (DA) 2020-01, provide a total of 28 electrical vehicle (EV) parking spaces. All spaces must be wired according to the specifications of the level II charger requirements with an adequately sized panel per CALGreen standards. 3 of these spaces must also contain the actual Level II charging unit, and be completely operable. Installation of the remaining Twenty-

Five (25) of the charging units can be installed as necessary based on resident demand which will be assessed as part of the Parking Management Plan referenced in Condition Number 7. The applicant may also consider installing DC Fast Charging Stations, instead of Level II charging stations, the requirement for these stations is 5% of total parking spaces. This condition shall be satisfied pursuant to the requirements of Chapter 23.111 of the Placentia Municipal Code.

d. 39 short term bicycle parking spaces are required based on: 1 resident bicycle parking space for every 5 residential units and 1 bicycle space for every 5,000 square feet of nonresidential floor area. These spaces are defined in the TOD Development Standards (PMC Ch. 23.111) as: a fixture to which one or more bicycles can be securely locked, generally for 2 hours or less. The style, design, location and installation of the bicycle parking shall be subject to the satisfaction of the Director of Development Services.

e. 43 long term Bike Storage Spaces are required based on: 2 bicycle storage units for every 5 dwelling units for the first 20 units, and 1 for every 5 additional units, including a minimum ratio of 1 space per 20 vehicles spaces for establishments with a parking structure containing a minimum of 10,000 square feet of non-residential space. These spaces are defined in the TOD Development Standards (PMC Ch. 23.111). The style, design, location and installation of the bicycle storage units shall be subject to the satisfaction of the Director of Development Services.

13. Public art is required. The required public art is encouraged to reflect the history of the Packing House District and citrus growing industry related to the City of Placentia. The style, design, and location of public art shall be to the satisfaction of the Director of Development Services.

14. The proposed development shall comply with all identified recommendations noted within the submitted Noise and Vibration Studies prepared by PlaceWorks and dated March 3, 2021.

15. The primary project entrance including the private driveway and plaza area shall be improved with decorative paving (such as interlocking pavers) and shall incorporate decorative human scale features to highlight the main entrance to the site and to increase aesthetics and safety for pedestrians, cyclists and motorists. Said entrance/plaza improvement plans shall be subject to the review and approval of the Development Services Director.

16. The development shall fully comply with the Transit Oriented Development (TOD) Packing House District Zone (Chapter 23.111 of the Placentia Municipal Code), TOD Streetscape Master Plan adopted by Resolution No. R-2017-15, Public Realm Standards adopted by Resolution No R-2017-15, the City of Placentia General Plan, and all other applicable provisions of the Placentia Municipal Code at all times to the satisfaction of the Director of Development Services.

17. The use shall comply with the following:

    a. The applicant, property owner(s), and/or respective land management company shall be responsible for maintaining their respective properties, including the landscaped areas, walkways, and all paved surfaces, free from graffiti, debris and liter. Graffiti shall be removed by the applicant/business owner(s) within 72 hours of defacement and/or upon notification by the City.

    b. If applicable, all communal waste bins shall be kept within a fully secured and lockable trash enclosure so as not to be visible from public view or from the different vantages points along the development's private streets and pedestrian walkways or individual waste bins to be securely stored within the garage area of each respective unit.

    c. All access gates shall be decorative in nature and fabricated of high gauge metal to withstand continual wear and tear. All walls and gates shall be designed with colors, materials, and of design satisfactory to the Development Services Director or his/her designee.

18. The final action of DPR 2020-03 shall be contingent upon final approval of DA 2020-01. In the event the DA is denied, approval of any of the aforementioned entitlements shall be deemed to be null and void.

19. **CEQA MITIGATION MEASURES:**

Air Quality

Air-1 For each future project implemented within the TOD project area, the development shall identify project construction related emissions and specific best available control measures (BACMs) identified in Rule 403 required to ensure that fugitive dust or construction equipment exhaust emissions will not exceed SCAQMD construction thresholds of significance or emission concentrations at the nearest receptors identified by local significance thresholds. The specific BACMs identified shall be made conditions of approval to ensure implementation.

Air-2 Only "Low-Volatile Organic Compounds" paints (no more than 100 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.

Air-3 Prior to approval of a specific development project within the new TOD project area, as part of the required air quality study, a health risk assessment (HRA) shall be provided to the City indicating what measures will need to be implemented to reduce exposure to any toxics to less than significant impact. Also, as part of the mitigation, the City shall require that a permanent funding source be identified to ensure that the mitigation systems are maintained and do not degrade to the point of being ineffective at controlling exposure to potential toxics to a less

than significant exposure level.

Cultural Resources

Cul-1 During ground disturbing activities (including but not limited to pavement removal, pot-holing, grading, excavation, trenching and initial well site disturbance) at least one Native American Monitor will be present at the project site to monitor subsurface areas as they are exposed. The monitors shall compile a monitoring log on a daily basis that will provide descriptions of daily activities, including construction activities, locations, soil characteristics and any cultural materials exposed and identified. The monitors shall photo document the ground disturbing activities on a daily basis. If any cultural materials are exposed, the monitors shall have the authority to redirect construction activities until the extent and importance of the materials are assessed. Subsequent management of any Native American cultural materials shall be determined through consultation between the City, property owner and the Native American Band supplying the monitor. Any human remains encountered shall be handled through the County Coroner's office and if necessary, in conjunction with the Native American Heritage Commission and Native American Band supplying the monitor.

Hazards and Hazardous Materials

Haz-1 All spills or leakage of petroleum products or other hazardous materials during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP or erosion control plan prepared for site specific development within the project area.

Haz-2 Prior to approval of any project under the TOD designation, a Phase I and/or Phase II Environmental Site Assessment shall be prepared to document the potential for any residual contamination at a site being developed within the TOD area. Any identified residual contamination shall be remediated to a level that will permit residential use prior to approval of any project proposed under the TOD designation.

Hydrology and Water Quality

Hyd-1 Concurrent with individual project applications in the future, the applicant for a project in the TOD area shall submit a review of existing water consumption on the property, and a forecast of future water consumption by the proposed development. If water consumption by the new project is less than currently occurs on the property, no further action is required. If water consumption is forecast to increase by more 25% than current water demand or 5,000 gallons per day per

acre, the project applicant shall fund sufficient water conservation measures within the project area (including the proposed project) to offset the increase in demand on the local water purveyor. Specific conservation measures that can be funded include, but are not limited to: use of recycled water for exterior landscaping, ultra-low flush toilets; interior water fixtures that reduce water consumption, such as OnDemand water heaters; replacement of existing high-water demand landscaping with xeric landscaping; installation of smart landscape/irrigation management/control systems (such as drip systems); and use of onsite low water demand landscaping. To verify adequate water demand offset, the City shall consult with the local water purveyor and verify the adequacy of the offset.

Noise

Noi-1 Future projects that may adversely impact noise sensitive uses shall use noise reducing barriers and other devices to reduce exterior noise levels at the nearest sensitive receptor to 65 CNEL or less during the daytime construction hours. This shall include installation of a temporary construction barrier around the source of construction noise.

Noi-2 No construction activities shall occur during the hours of 7 PM through 7 AM, Monday through Saturday and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists. Stated differently, construction activities shall be limited to 7 AM to 7 PM on weekdays; and no construction activities on Sunday or federal holidays.

Noi-3 Stationary construction equipment that generates noise above the 65-dB threshold at the nearest sensitive receptor shall be placed behind a temporary noise construction barrier while in use.

Noi-4 The project developer shall establish a noise complaint response program and shall respond to any noise complaints received for future specific project by measuring noise levels at the affected receptor site. If the noise level exceeds an CNEL of 60 dBA exterior or an CNEL of 45 dBA interior at the sensitive receptor, the applicant will implement adequate measures (which may include portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc.) to reduce noise levels to the greatest extent feasible.

Noi-5 Project developer will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.

Noi-6 Equipment not in use for five minutes shall be shut off.

Noi-7 Equipment shall be maintained and operated such that loads are secured

from rattling or banging.

Noi-8 Where available, electric-powered equipment shall be used rather than diesel equipment and hydraulic-powered equipment shall be used instead of pneumatic power.

Noi-9 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.

Noi-10 No radios or other sound equipment shall be used at this site unless required for emergency response by the contractor.

Noi-11 Public notice shall be given 10 days prior to initiating construction. This notice shall be provided to all property owners and residents within 300 feet of the project site and shall be provided to property owners/residents at least one week prior to initiating construction. The notice shall identify the dates of construction and the name and phone number of a construction supervisor (contact person) in case of complaints. One contact person shall be assigned to the project. The public notice shall encourage the adjacent residents to contact the supervisor in the case of a complaint. Resident's would be informed if there is a change in the construction schedule. The supervisor shall be available 24/7 throughout construction by mobile phone. If a complaint is received, the contact person shall take all feasible steps to remove or attenuate the sound source causing the complaint.

Transportation/Traffic

Tra-1 Each future TOD project shall pay fair share fees for the intersection improvement costs at the time of entitlement based on the percentage of trips contributed at each intersection. A high level "order of magnitude" cost estimate is also provided in subsequent mitigation identified in the Traffic Impact Study. These are rough estimate costs for engineering and construction and will need to be refined during future preliminary engineering phase. The mitigation measures should be re-evaluated for any refinement of the Draft General Plan Update and/or additional development of the TOD project over and beyond 5,000 trips. All significantly impacted intersections require mitigation prior to Future Buildout. Mitigation for each intersection and estimated costs are listed below:

- Placentia/Crowther Avenue: Upgrade left turn signal phasing for all movements from permissive left turns to protected/permissive left turn phasing. Estimated Cost - $100,000;

- Orangethrope Avenue/Placentia Avenue: Provide eastbound/westbound dual left-turn Lanes at Orangethorpe Avenue/Placentia Avenue. Estimated

Cost - $450,000;

• Orangethorpe Avenue/SR-57 Northbound Ramps: Restripe

• Northbound Off-Ramp middle lane as shared Left Turn/Thru/Right-Turn Lane. Estimated Cost - $50,000;

• Orangethorpe Avenue/SR-57 Northbound Ramps: The westbound right turn movement is expected to increase from 550 vehicles per hour (vph) to 800 vph during the PM period for year 2035. This movement should be closely monitored and may require additional improvements to reduce congestion and queuing. An additional improvement would be to modify the existing median on Orangethorpe Avenue to add an exclusive Westbound Right-Turn Lane. Estimated Cost - $200,000;

• Orangethorpe Avenue/Melrose Street: Provide an exclusive southbound right-turn lane without overlap signal phasing and northbound dual left-turn lanes at Orangethorpe Avenue/Melrose Street. Estimated Cost - $100,000;

Kraemer Boulevard/Orangethorpe Avenue: Restripe Orangethrope Avenue to provide eastbound dual left-turn lanes. Add additional north/south thru lane (three lanes each) by restriping the northbound and southbound right turn lanes to thru lanes. Consider modifying the north/south left turn movements from protected-only left-turn phasing to protected- permissive left-turn phasing. Restripe the southbound left-turn approach to provide a positive offset for better sight distance between the north/south left turn movements. Estimated Cost - $100,000.

Tra-2 Truck access for the parcel on the southwest corner of Melrose Street and Crowther Avenue must be maintained to and from this site.

Tra-3 Construction hours should be five days a week, and in accordance with the City of Placentia Municipal Code, limited to the hours of 7 AM and 7 PM on working days (Monday through Friday).

Tra-4 Construction truck and worker automobile traffic will utilize the proposed driveways along Melrose Street and Crowther Avenue for access to and from the project site.

Tra-5 Trucks transporting materials to and from the project site must utilize the designated truck routes along Placentia Avenue, Crowther Avenue, Melrose Street, and Orangethorpe Avenue.

Tra-6 Trucks entering or exiting the construction site will need to yield to public traffic at all times.

Tra-7 It is unlikely that street traffic will be impacted by on-site construction activities; however, should it be necessary for temporary lane closures and/or detour routes for utility work or other such work in the public right-of-way those temporary traffic control activities are to be conducted in compliance with the requirements and guidelines outlined in the California Manual of Uniform Traffic Control Devices (MUTCD).

Tra-8 Construction staging should be conducted on-site and under no circumstances will be allowed on local or residential streets.

Tra-9 Construction work within the public right-of-way needs to be in compliance with City standards and the construction site shall be posted with the name, company and a phone number of a person to call for complaints.

Tra-10 The applicant will be fully responsible for the repair of damages to any public facility due to the hauling or transporting of construction related materials.

Tra-11 Parking for the construction trucks and worker trucks will be on-site, away from the adjacent public roadways and existing active businesses.

Tra-12 The City shall coordinate with OCTA to ensure that one or more bus routes to the future Placentia Metrolink Station will serve the TOD project area.

Utilities and Service Systems

Uti-1 Future projects implemented under the TOD district shall submit a detailed evaluation of stormwater drainage from the new project relative to the existing development. If the future project will generate stormwater runoff that exceeds the existing volume or time of accumulation, onsite stormwater detention shall be installed as part of the site development of offset any increase that would exceed the capacity of the existing stormwater collection and transport systems. In no instance shall a project be approved that would cause significant environmental effects on either the existing drainage system, unless the system incremental stormwater increase is detained onsite or the drainage system altered to accommodate any change.

DEVELOPMENT SERVICES DEPARTMENT – BUILDING DIVISION:

20. The project shall comply with all applicable building codes and regulations adopted by Title 20, Building Codes and Regulations, of the PMC.

PUBLIC WORKS DEPARTMENT:

General Requirements

21. Prior to issuance of a Certificate of Occupancy, the engineer of record shall submit all Public Improvements approved project plans on an AutoCAD DWG and PDF formats to the Public Works Department.

22. All improvements and grading plans shall be drawn on the city's templates, twenty-four (24) inch by thirty-six (36) inch Mylar in size and signed by a registered civil engineer or other registered/licensed professional as required. Please contact the Department of Public Works for a template.

23. Provide Signature block for City Engineer: License Number: C52786.

24. Provide details for the new driveways, ADA ramps, and sidewalks per the guidelines depicted in the adopted Transit Oriented District (TOD) Streetscape Masterplan standards and requirements. In addition, all other City of Placentia Standards (OC Standard Plans) and the latest Standard Specifications of Public Works Contraction (The Green Book) will also apply for the design and construction of the public improvements. All new and existing sidewalk and driveway will have to be ADA compliant and replaced from joint to joint over the entire frontage of the parcel. Applicant must hire a CASp consultant to certify all ADA Improvements, per the latest ADA/California Building Code requirements for design, construction and obtain a final CASp certification for all ADA ramps and pathways within the public right-of-way.

25. Prior to issuance of Certificate of Occupancy or building final, all existing and new utility lines including electric power, telephone, telecommunication fiber and/or cable TV in the street adjacent to and on-site shall be placed underground in accordance with the City of Placentia's TOD standards and ordinances.

26. Provide a Bond Estimate for all improvements. Performance and Labor/Material bonds shall be required prior to issuance of grading and encroachment permits. This is to guarantee completion of all public improvements to the satisfaction of the City.

27. Show all existing easements on the plans and provide easement documents including exhibits by a licensed Land Surveyor.

28. It is the applicant's responsibility to notify all utility companies and the City of Placentia for disconnection and removal of the existing utilities, vaults and meters. It is also the applicant's responsibility to notify the Public Works and Building Inspection Division to inspect and to ensure that these utilities have been properly disconnected.

29. Provide a Boundary Survey, stamped and wet signed by a surveyor, showing all easements, including public utility easements and the County's Flood Control easement.

30. All private slopes of 4 feet or more in vertical height and of 4:1 or greater slope, but less than 2:1 slope, shall be, at minimum, irrigated and landscaped with appropriate

ground cover for erosion control. Slope planting required by this section shall include a permanent irrigation system to be installed by the developer prior to occupancy.

31. All public improvements shown on the plans shall be constructed to City of Placentia standards, ordinances, policies and/or reasonably determined by the City Engineer to be applicable.

32. Prior to recordation of the Final Map, the public improvements plan shall be prepared and signed by the City Engineer.

33. All new street and public improvements shall comply and follow the requirements of the City's adopted Transit Oriented Development (TOD) Streetscape Master Plan. Developer acknowledges to coordinate all planning, design and construction efforts for the project with the City of Placentia, OCTA and others as necessary for the planned Metrolink Station project. Developer will also be required to provide all the access and temporary easements that OCTA or others will need to construct the South Platform. Developer, further acknowledges that the USA properties may begin construction before the Metrolink's South Platform begins construction, in which case USA properties will have to cooperate and coordinate with OCTA and the City to maximum extent possible to facilitate the Construction of the planned station.

Demolition

34. Provide a full set of plans for demolition of the existing facilities and utilities, including above ground and underground structures, footings, utilities, vaults, fences, walls, sewer lines, storm drain pipes, waterlines, etc., Plans shall address conditions and procedures, as are necessary, to show that the demolition work will be conducted without creating a hazardous condition, when excavating next to other existing footings, walls and slopes. A separate demolition permit may be required from the Building Department, prior to performing any kind of demolition on site.

35. The existing sanitary sewer lines must be removed and capped at the property line. The sewer capping shall be inspected and shall not be covered until an inspection has been made by the Department of Public Works Inspector. This inspection shall be requested at least 24 hours before the inspection is needed.

36. Provide AQMD Rule 1403 permit number, prior to starting any demolition work.

37. Provide an erosion control, and Storm Water Pollution Prevention Plans (SWPPP) for protection of the site during and post demolition and excavation activities.

38. A copy of the Grant deed and owner's permission on the application for demolition is required at the time of issuance of the permit.

Sewer Line Improvements and Construction

39. Onsite water improvement and fire protection plans shall be approved by the City's Fire Code Official, the local water district, and City Engineer. The water distribution lines and appurtenances shall conform to the applicable laws and adopted regulations enforced by the Golden State Water Company.

40. Provide details for sewer capping and connections.

41. The applicant shall submit a Will Serve Letter from Orange County Sanitation District and Golden State Water Company.

42. Prior to issuance of building permit, the developer's engineer shall analyze and mitigate any sewer system deficiencies for all phases of the proposed development. Results of the system analysis may require special construction such as booster pumps, upsize the downstream pipes and backwater valves. The engineering analysis and special construction requirements shall be subject to review and approval of City Engineer.

43. Prior to the issuance of a building permit, the applicant shall dedicate ingress and egress of the access route within the project site and improve it fully operational as required by the Placentia Fire and Life Safety Department and satisfaction to the City Engineer.

Storm Drain Improvements and Construction

44. The project street and lot grading shall be designed in a manner that perpetuates the existing natural drainage patterns with respect to tributary drainage area and outlet points. Unless otherwise approved by the Public Works Director.

45. Drainage easements, when required, shall be shown on the grading plans and noted as follows: "Drainage Easement - no buildings, obstructions, or encroachments by landfills are allowed." There is an existing City storm drain easement on the property in favor of the City and the boundaries of the existing easement will need to be redrawn and re-recorded to ensure the City maintains access to the existing storm drain pump station located adjacent to the property as well as underground storm drain infrastructure.

46. Please provide Hydrology/Hydraulic Calculations and show the drainage and runoff to the street. Please contact the Department of Public Works for a checklist of items.

47. Prior to the approval of the improvement plans, the hydrology study shall show that the 25-year storm flow will be contained within the street from curb to curb and the 100-year storm flow shall be contained within the street right-of-way. When either of these criteria are exceeded, additional drainage facilities shall be installed. All analysis shall comply with the Orange County Hydrology Manual and County Local Drainage Manual.

48. The project shall be designed to accept and properly dispose of all off-site drainage flowing onto or through the site. The storm drain design and improvements shall be subject to review and approval by City Engineer. The hydraulics and hydrology report shall include detailed drainage studies indicating how the grading, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, BMP treatment and LID, will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood per the Orange County Hydrology Manual. The project development shall be designed to accept and properly dispose of all off-site drainage flowing onto or through the site. If the quantities exceed the existing downstream capacity, the developer shall provide adequate drainage facilities to mitigate the impact as approved by the City Engineer.

49. The post development peak flow rate generated from the project site shall be less than or equal to the pre-development peak flow rate from the site for all frequency storms up to and including 100-year return.

50. Drainage facilities with sump conditions shall be designed to convey the tributary 100-year storm flows. Secondary emergency flow bypass shall also be provided as approved by City Engineer.

51. Developer will install a new discharge pipe to connect the adjacent water well's pump to waste feature to the nearest catch basin on Crowther Avenue. Developer will need to coordinate the design and construction of those improvements with the Golden State Water Company.

Public Improvements and Construction

52. Existing pavement and sidewalks along Crowther Avenue are to be replaced per the City's adopted TOD Streetscape Master Plan which includes dedication of right-of-way to the City. The applicant shall provide street resurfacing of entire section of pavement, full width, along the full length of property frontage (grind to a depth of 2-inch and 2-inch overlay of rubberized asphalt.) All public improvements shown on the plans and/or tentative map shall be constructed to City of Placentia standards, ordinances, policies and/or reasonably determined by the City Engineer to be applicable to the project and based upon the design standards/requirements outlined in the adopted TOD Streetscape Master Plan.

53. All utilities serving the project site will be undergrounded. Two (2) existing overhead utility poles and overhead lines currently located on the project site must be removed and undergrounded. A third utility pole and overhead lines located in the City's right-of-way immediately adjacent to the existing water well site must be removed and undergrounded as well.

54. Improvement plans shall be based upon a centerline profile extending beyond the

project boundaries a minimum distance of 150 feet at a grade and alignment approved by the City Engineer.

55. Prior to issuance of 1st occupancy permit or pursuant to a timeframe outline in a construction Phasing plan approved by the Public Works Director, all new public improvements shall be constructed satisfactorily to the adopted TOD Streetscape Masterplan specifications and the City Standards and match the adjacent public improvements.

56. Prior to recordation of final map or issuance of building permit if recordation has already been accomplished, the applicant shall enter into an agreement and post security bond, in a form and amount acceptable to the City Engineer, guaranteeing the construction of public improvements in conformance with applicable City standards and the City Code, including, but not limited to the following:

    a. Street improvement including, but not limited to: pavement, curb and gutter, sidewalks, driveway approaches, street lights, signing, striping, traffic signal systems and other traffic control devices as appropriate.

    b. Storm drain facilities.

    c. Landscaping

    d. Sewer systems

    e. Street lighting

57. All of the street improvements shall follow the design standards depicted in the adopted TOD Streetscape Masterplan including but not limited to tree grates, benches, trash receptacles, bike racks, street and pedestrian lights, in addition to the following requirements:

    a. Driveways shall conform to the TOD and applicable City of Placentia standards and shall be shown on the street improvement plans.

    b. Driveways shall be located at a minimum of two (2) feet from the property line prolongation at the curb.

    c. Concrete sidewalks shall be constructed along all public street frontages in accordance with TOD Streetscape Master Plan and City Standards.

    d. The minimum centerline and flowline grades shall be one percent unless otherwise approved by the City Engineer.

    e. Streetlights shall be provided along streets adjoining and within the subject site in accordance with TOD Streetscape Master Plan and the City Standard or and approved by the City Engineer.

    f. Provide irrigation service to the new trees planted in the ROW – the City will assume ownership of all the equipment and irrigation costs once installed.

g. Provide landscape up-lighting for the new trees in the street medians - the City will also own all the related electrical equipment and electricity costs once installed.

h. Drake Chinese Elm Trees – must include tree grates and tree guards at each tree location per the specified manufacturer's cut sheet attached to the TOD streetscape master plan.

i. Decorative street/pedestrian combination lights with banner attachment poles and speakers per the specified manufacturer's cut sheet attached to the TOD streetscape master plan.

j. Decorative bike racks per the specified manufacturer's cut sheet attached to the streetscape master plan.

k. New sidewalks constructed per the specifications in the TOD Streetscape Master Plan specifications.

l. All engineered street and public improvement plans and specifications shall be prepared in accordance with the adopted TOD Streetscape Masterplan with the layout and arrangements as depicted on the TOD Streetscape Master Plan. Shop drawings and product data shall be provided for the City's review and approval for all the public improvement items listed above, PRIOR to their installation.

Grading

58. Provide volumes of cut and fill on the grading plan.

59. The development site shall be graded to drain surface water to the existing City storm drain system with no cross-lot drainage permitted. Drainage shall be indicated on the precise grading plans.

60. Prior to the issuance of a grading permit, the applicant shall prepare a Low Impact Development (LID) specifically identifying the Best Management Practices (BMP's) that will be used on site to control predictable pollutant runoff. The plan shall identify the types of structural and/or non-structural measures to be used. The plan shall comply with the Orange County Drainage Area Management Plan (DAMP) and Local Implementation Plan (LIP) Guideline. Website available at (http://ocwatersheds.com/publiced/residents/glltd) Particular attention should be addressed to the appendix section "Best Management Practices for priority redevelopment." The LID shall clearly show the locations of structural or Nonstructural BMP's, and assignment of long term maintenance responsibilities. The plan shall be prepared to the general form and content and submitted to the Director of Public Works/City Engineer for review and approval.

61. Prior to approval of the final design plans and issuance of a grading permit, the applicant shall conduct a site-specific geotechnical investigation for the entire site and prepare a report that fully assesses the geologic and soil conditions of the site. As part

of the report preparation, soil sampling and any geotechnical testing will be completed at each location where structures are to be erected. The report shall provide grading and structural design recommendations for avoiding liquefaction, subsidence or collapse for each of the proposed structures. The recommendations shall be implemented by Applicant.

62. Prior to the issuance of grading permits, the applicant shall prepare and submit a precise grading plan prepared by a licensed civil engineer to the Engineering Division of the Public Works Department showing building footprints, new and revised pads and elevations of finished grades, drainage routes, retaining walls, erosion control, slope easements, structural best management practices (BMPs) conforming to the approved water quality management plan, and other pertinent information. The project development shall accept and make provisions for the existing surface water that are the natural flows from the adjacent properties immediately abutting to the development site.

63. Prior to the issuance of a grading permit, the applicant shall demonstrate to the City Engineering that coverage has been obtained under the California's General permit for Discharge of the Storm Water Associated with Construction Activity by providing a copy of the Notice of Intent (NOI) submitted to the State Water Resource Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification (WDID) Number of the city engineer. Construction Activity subject to this permit includes clearing, grading and disturbance to the ground such as stockpiling, and excavation. Prior to the issuance of a grading permit, the applicant shall submit to the city engineer for review a stormwater pollution prevention plan (SWPPP). A copy of the approved SWPPP shall be kept at the project site and available for review upon request.

64. The final grading plan for parcel shall be substantially the same, specifically regarding pad elevations, size, and configurations; as the proposed grading illustrated on the approved site plan. If there is a significant deviation between the two plans the Community development Director and City Engineer will review the plans and determine if a finding of substantial conformance can be made prior to issuance of the grading permit. The Community Development Director and the City Engineer may refer the matter to the planning Commission for an opinion before deciding. Failure to achieve such a finding will require processing a revised site plan.

65. Surety and agreement guaranteeing completion of all on-site grading improvements including drainage, structural BMPs, erosion control, grading operations shall be posted and executed to the satisfaction of the City Engineer prior to the issuance of grading permits.

66. Prior to the issuance of a grading permit, erosion control plans and notes shall be submitted and approved by the Engineering Division of Public Works Department.

67. The site grading, landscape, irrigation, and street improvement plans shall be coordinated for consistency with each other and for consistency with the requirements and standards of the City of Placentia.

68. All parking, common, and storage areas shall be lighted to maintain a minimum of 1-foot candle power. These areas should be lighted from sunset to sunrise and be on photo censored cell.

69. Preliminary WQMP shall include a feasibility check to ensure the proposed infiltration BMPs are not proposed to be within 100 feet horizontally of a water supply well and/or non-potable well for the protection of groundwater quality per Orange County TGD. Golden State Water Company currently operates a water well pump at the northwest corner of Bradford Avenue and Crowther Avenue.

FIRE AND LIFE SAFETY DEPARTMENT

70. A fire flow determined by 2019 CA Fire Code Appendix B Table B105.1(2) and Appendix C Table C102.1 of 7,250 gallons per-minute from eight (8) hydrants, either on-site or off-site is required. A will-serve letter with fire flow availability will be required to be submitted with the Fire Master Plan.

71. Emergency Access: KNOX automatic key switches are required at automatic gates. KNOX key boxes will be required at each building for access to residential unit corridors and utility rooms that contain fire protection equipment in accordance with 2019 CA Fire Code section 506.1.

72. Premises Identification: Addressing shall be on the access side of the building with a minimum size of 4 inches with a ½ stroke in accordance with 2019 CA Fire Code section 505.1. An address monument at the entrances of the complex may also be required. (To be reviewed and approved on the Fire Master Plan).

73. The fire apparatus/hose reach of 150’ is not in compliance with the 2019 CA Fire Code section 503.1.1, specifically to the north side units and the interiors court-yards. Proposed fire hydrants will not suffice for the requirements as there is not fire apparatus access in those areas. 2019 CA Fire Code section 105.4 allows for the proposal of alternate designs to meet code requirements, it is recommended that this is utilized. This condition may be addressed by the incorporation of a fire standpipe(s) system rather than the noted fire hydrants.

74. A fire sprinkler system designed to 2016 NFPA 13 standards is required to be installed throughout each building in accordance with 2019 CA Fire Code section 903.

75. A class I standpipe system designed to 2016 NFPA 14 standards is required to be installed in accordance with 2019 CA Fire Code section 905.

76. A fire alarm system (fire sprinkler monitoring) designed to 2016 NFPA 72 standards is required to be installed for each building in accordance with 2019 CA Fire Code section 907.

77. 2A10BC fire extinguisher(s) shall be installed on the interior corridors and the exterior of the building(s), in a secured cabinet with no more than 75^{ft} travel distance from each living units and in each retail and community use building in accordance with CA Fire Code Section 906.

78. All utility rooms including shall be clearly labeled with 6-inch lettering and shall be red in color to identify location(s) of fire protection equipment.

79. Emergency parking zones shall be designated and painted red with signage reading "No Parking, Fire Lane." Street widths of more than 28^{ft} but less than 36^{ft} are permitted to have designated parking on one side only. (To be reviewed and approved on the Fire Master Plan)

80. Emergency parking zones shall be designated and painted red with signage reading "No Parking, Fire Lane." Street widths of more than 28^{ft} but less than 36^{ft} are permitted to have designated parking on one side only. (To be reviewed and approved on the Fire Master Plan

81. A Methane Mitigation Report is required to be submitted and reviewed.

82. The following plan submittals are required to be submitted and reviewed by the Fire Dept.:

    a. Alternate Means & Methods Report (only required if necessary)
    b. Fire Master Plan
    c. Architectural Plan
    d. Fire Sprinkler Plan
    e. Fire Alarm Plan

POLICE DEPARTMENT

83. Comply with the Police Department Residential Development Requirements located in Attachment B.

Attachment "B"

PLACENTIA POLICE DEPARTMENT

STANDARD DEVELOPMENT REQUIREMENTS
NON-RESIDENTIAL

The following standards shall be required for all non-residential portions of the development. No modifications shall be made without the approval of the Chief of Police or his/her designee.

Doors-Exterior Swinging

Swinging exterior glass doors, wood or metal doors with glass panels, solid wood or metal doors shall be constructed or protected as follows:

1. All wood doors shall be of solid core construction with a minimum thickness of one and three-fourths (1 3/4) inches.

2. Hollow steel doors shall be of a minimum 16 U.S. gauge and have sufficient reinforcement to maintain the designated thickness of the door when any locking device is installed; such reinforcement being able to restrict collapsing of the door around any locking device.

3. A single or double door shall be equipped with a double or single cylinder deadbolt lock. The bolt shall have a minimum projection of one (1) inch and be constructed so as to repel cutting tool attack. The deadbolt shall have an embedment of at least three-fourths (3/4) inch into the strike receiving the projected bolt. The cylinder shall have a cylinder guard, a minimum of five pin tumblers, and shall be connected to the inner portion of the lock by connecting screws of at least one-fourth (1/4) inch in diameter.

4. The strike plate for deadbolts on all wood framed doors shall be constructed of minimum sixteen (16) U.S. gauge steel, bronze, or brass and secured to the jamb by minimum of two screws, which must penetrate at least two (2) inches into solid backing beyond the surface to which the strike is attached.

5. Aluminum frame swinging doors shall be equipped as follows:

   a. The jamb on all aluminum frame swinging doors shall be so constructed or protected to withstand 1,600 pounds of pressure in both a vertical distance of three inches and a horizontal distance of one inch each side of the strike, so as to prevent violation of the strike.

   b. A single or double door shall be equipped with a double cylinder deadbolt with a bolt projection exceeding one inch or a hook-shaped or expanding

deadbolt that engages the strike sufficiently to prevent spreading. The deadbolt lock shall have a minimum of five-pin tumblers and a cylinder guard.

6. All exterior doors equipped with lever-handled locking devices which operate the deadbolt shall have thresholds designed and installed so as to prevent the passing of rigid materials between the door and threshold to the interior.

7. Double doors shall be equipped as follows:

a. The inactive leaf of double door(s) shall be equipped with metal flush bolts having a minimum embedment of 5/8 inch into the head and threshold of the doorframe.

b. Double doors shall have an astragal constructed of steel a minimum of 0.125 inch thick, which will cover the opening between the doors. The astragal shall be a minimum of two inches wide, and extend a minimum of one inch beyond the edge of the door to which it is attached. The astragal shall be attached to the outside of the active door by means of welding or with nonremovable bolts spaced apart on not more than ten inches centers. (The door to which such an astragal is attached must be determined by the fire safety codes.)

8. Door stops on wooden jambs for in-swinging doors shall be of one-piece construction with the jamb.

9. Panic hardware, whenever required by the Uniform Building Code or Title 24, California Code of Regulations, shall be installed as follows:

a. Panic hardware shall contain a minimum of two locking points on each door; or

b. On single doors, panic hardware may have one locking point, which is not to be located at either the top or bottom rails of the doorframe. The door shall have an astragal constructed of steel 0.125 inch thick, which shall be attached with nonremovable bolts to the outside of the door. The astragal shall extend a minimum of six inches vertically above and below the latch of the panic hardware. The astragal shall be a minimum of two inches wide and extend a minimum of one inch beyond the edge of the door to which it is attached.

c. Double doors containing panic hardware shall have an astragal attached to the doors at their meeting point, which will close the opening between them, but not interfere with the operation of either door.

10. Hinges for out-swinging doors shall be equipped with non-removable hinge pins or a mechanical interlock to preclude removal of the door from the exterior from the exterior by removing the hinge pins.

11. In office buildings (multiple occupancy), all entrance doors to individual office suites shall meet the construction and locking requirements for exterior doors.

Windows

1. Except when double cylinder deadbolts are utilized, any glazing utilized within 24 inches of any door locking mechanism shall be constructed or protected as follows:

a. Fully tempered glass or rated burglary resistant glazing; or

b. Iron or steel grills of at least 1/8-inch material with a minimum two-inch mesh secured on the inside of the glazing may be utilized; or

c. The glazing shall be covered with iron bars of at least½ inch round or one-inch by¼-inch flat steel material, spaced not more than five inches apart, secured on the inside of the glazing.

d. Items b. and c., above, shall not interfere with the operation of opening windows if such windows are required to be openable by the Uniform Building Code.

2. No louvered windows shall be used.

3. Sliding windows shall incorporate an anti-lift device.

Phone Panels

There shall be no exterior phone panels.

Lighting-Parking Lots, Walkways, Buildings

Buildings, open parking lots, walkways, and accesses thereto shall conform to the following light standards:

1. All types of exterior egress doors shall be illuminated during the hours of darkness, with a minimum maintained one foot-candle of light, measured within a five-foot radius on each side of the door at ground level. The light source shall be controlled by a photocell device or a timeclock with an astronomic clock feature and capable of operating during a power outage.

2. Recessed areas of buildings or fences, which have a minimum depth of two feet, a minimum height of five feet, and do not exceed six feet in width and

are capable of human concealment, shall be illuminated with a minimum maintained 0.25 foot-candles of light at ground level during the hours of darkness. This requirement applies to defined recessed areas which are within six feet of the edge of a designated walking surface with an unobstructed pathway to it, not hindered by walls or hedge row landscaping a minimum of two feet in height.

3. Stairways shall be illuminated with a minimum maintained one foot-candle of light on all landings and stair treads, during the hours of operation, including one hour thereafter.

4. All interior or exterior corridors, passageways and walkways in any hotel, motel or inn shall be illuminated at all times with a minimum maintained one foot-candle of light on the walking surface.

5. All exterior pedestrian walkways, interior common corridors, and open parking lots shall be illuminated with a minimum maintained one foot-candle of light on the walking or driving surface during the hours of operation and one hour thereafter.

6. The light source utilized to comply with this section to meet parking and drive surface lighting shall have a rated average bulb life of not less than 15,000 hours.

7. Accessible luminaires utilized to meet the requirements of this section have vandal resistant light fixtures and be not less than three feet in height from ground level when used to illuminate walkways and a minimum of eight feet in height from ground level when illuminating surfaces associated with vehicles. Light fixtures shall be deemed accessible if mounted within fifteen feet vertically or six feet horizontally from any accessible surface or any adjoining roof, balcony, landing, stair tread, platform or similar structure.

8. A site plan shall be provided, showing buildings, parking areas, walkways, detailed landscaping, fixture schedule, mounting height, the lighting ratio and a point-by-point photometric calculation of the required light levels. If a parking lot is equipped with an occupancy sensor, then a point-by-point photometric calculation is required to show it meets the required minimum level of light. Foot-candles shall be measured at grade on a horizontal plane and conform to a uniformity ratio of six to one (6:1) average/minimum. Landscaping shall not be planted so as to obscure required light levels with light fixtures exceeding eight feet in height installed at least two feet from a tree's canopy at 70 percent maturity.

9. The light source shall be controlled by a photocell device or a timeclock with an astronomic feature.

Parking Garages & Structures

Parking garage or structure designed to park multiple cars shall conform to the following:

1. Directional signage, including floor designation and section, shall be provided on each level to expedite movement within the facility. Signage shall be a minimum of 12 inches in height and of a contrasting color to the background. It shall be displayed not less than 60 inches from the parking surface and be highly visible from within any portion of the facility.

2. Bicycle storage units or racks shall be located in high visibility areas.

3. Solid perimeter walls shall be either full height floor to ceiling or not exceed 42 inches in height from the parking surface.

4. The number of pedestrian and vehicular access points shall be minimized. Except at vehicle and primary pedestrian openings, the structure shall be designed, to the satisfaction of the City, to preclude human entry from any exterior accessible surface to a height of eight feet. Chain link fencing shall not be utilized if visible from a public right of way. When required, fire authority openings in the form of swing-out gates shall be provided and secured by a padlock with a minimum 3/8-inch diameter shackle and five-pin tumbler operation.

5. Exterior pedestrian doors which provide access into the parking facility, shall be constructed and equipped as follows:

   a. A minimum 18-gauge steel and equipped with automatic hydraulic closure device.

   b. A minimum 100-square-inch vision panel, with the width not less than five inches, to provide visibility into the area being entered. Vision panels shall meet requirements of the Uniform Building Code.

   c. Emergency exits not intended, as a primary entrance shall have no exterior handles, knobs, or levers.

6. Stairways shall be designed as follows:

   a. Interior doors shall have glazing panels a minimum of five inches wide and 20 inches in height and meet requirements of the Uniform Building Code.

   b. Areas beneath stairways at or below ground level shall be fully enclosed or access to them restricted.

   c. Stairways shall be designed to be completely visible from either the interior or exterior or both, unless mandated by the Uniform Building Code to be enclosed.

   d. Fully enclosed interior or exterior stairways with solid walls, when required,

shall have shatter resistant mirrors or other equally reflective material at each level and landing and be designed or placed in such a manner as to provide visibility around corners.

7. Elevator cabs and lobbies shall be designed as follows:

a. Elevator cabs, the interiors of which are not completely visible when the door is open from a point centered on and 36 inches away from the door, shall have shatter resistant mirrors or other equally reflective material so placed as to make visible the entire elevator cab from this point. The elevator cab shall be illuminated at all times with a minimum maintained two foot-candles of light at floor level.

b. Elevator emergency stop buttons shall be so installed and connected as to activate the elevator alarm when utilized.

8. Lighting of driveways, parking areas, walkways and doors shall conform to the following standards:

a. All parking, driving, and walking surfaces, except stairways, shall be illuminated at all times with a minimum maintained 1.25 foot-candles of light.

b. Stairways shall be illuminated at all times with a minimum maintained two foot-candles of light on all landings and stair treads.

c. All types of exterior doors shall be illuminated, during the hours of darkness, with a minimum maintained one foot-candle of light, measured within a five-foot radius of each side of the door at ground level.

d. Recessed areas of buildings or fences, which have a minimum depth of two feet, a minimum height of five feet, and do not exceed six feet in width and are capable of human concealment, shall be illuminated with a minimum maintained 0.25 foot-candles of light at ground level during the hours of darkness. This requirement applies to defined recessed areas which are within six feet of the edge of a designated walking surface with an unobstructed pathway to it, not hindered by walls or hedge row landscaping a minimum of two feet in height.

e. All luminaires utilized to meet the requirements of this section shall have vandal resistant light fixtures, if on the exterior, with no portion of the fixture placed less than 72 inches above the walking or driving surface.

d. The light source utilized to comply with this section to meet parking and drive surface lighting shall have rated average bulb life of not less than 15,000 hours.

e. A site plan shall be provided showing buildings' parking area, walkways, detailed landscaping and a point-by-point photometric calculation of the

required light levels. Foot-candles shall be measured on a horizontal plane and conform to a uniformity ratio of 6:1 average/minimum. Landscaping shall not be planted so as to obscure required light levels.

f. Light fixtures for roof top parking shall be Dark-Sky compliant per the International Dark-Sky Association standards for casting light downward.

g. The light source shall be controlled by a photocell device or a timeclock with an astronomic feature and capable of operating during a power failure.

9. Cameras shall be installed as follows:

a. Color cameras shall be installed at all vehicle entry locations and shall be capable of viewing all vehicles and their license plates when entering and exiting the garage or structure. The license plate shall be clearly readable.

b. Cameras shall be digitally recorded and the information keep for a minimum of 30 days. There shall be an accurate date and time stamp on the images.

Emergency Access

Private roads and parking areas or parking facilities when controlled by unmanned automated parking gates shall provide for police emergency access utilizing Click2Enter radio-controlled entry system and Knox key switch device to be installed and designed as follows:

1. The key switch control shall be installed at a height of 42 inches from finished driveway grade and a minimum of 15 feet from the entry/exit gate, and be located on the driver's side of the road or driveway. The key switch is to be accessible in such a manner as to not require a person to exit their vehicle to reach it; nor to require any back-up movements in order to enter/exit the gate. The key switch may be installed within a visitor telephone/intercom call box if meeting the above criteria. The control housing shall consist of heavy gauge metal, and be vandal- and weather-resistant and be mounted on a substantial structure such as a steel post, concrete, or masonry pedestal.

2. Key switches shall be secured to the control housing or telephone/intercom call box utilizing tamper resistant screws.

3. Except for an open surface parking lot with less than 100 parking spaces, a radio controlled entry system shall be installed per City specifications.

4. Vehicle gates shall be designed to open in a power failure.

5. All lockable pedestrian gates or doors to common area walkways shall provide for police emergency access utilizing Click2Enter and Knox key switch device which shall be installed as follows:

a. Pedestrian gates/doors using an electrically automated type lock shall be provided with Click2Enter and a Knox key switch within a telephone/intercom console, or installed adjacent to the door inside a wall/door frame, or in a control housing as described in No. 1 above or in a method approved by the police department. Key switches shall be secured utilizing tamper resistant screws. The Click2Enter main unit or a remote receiver shall be visible in order to determine, when activated, if the signal was received by illuminating a light. More than one gate or door which is in close proximity to another may be operated by Click2Enter if approved by the police department.

b. Pedestrian gates or doors utilizing mechanical locks shall be provided with a Knox key vault adjacent to each gate or door, securely attaching it to a fence or wall, mounted 4 feet above finished grade and within 2 feet of the locking device.

c. Interior stairway doors are not required to have a Click2Enter radio controlled entry system

d. Elevators with access control systems shall be provided with a key switch adjacent to the access control reader utilizing tamper resistant screws.

6. Emergency vehicle access gates shall be designed so as to provide access to the padlock from either side of the gate. A key vault shall be installed on each side of the gate. Owner's padlock shall be used to secure the gate.

7. All key switches, key vaults, and padlocks shall be sub-mastered to an Orange County Fire Authority key for access by the police department. The radio controlled entry system shall be programmed to frequencies approved by the police department and Orange County Fire Authority.

8. Key switches, key vaults, padlocks, and radio controlled entry system installations shall be identifiable to approaching police personnel in a manner as approved by the police department.

9. An Emergency Access Plan shall be required when a radio controlled entry system, key switch, or key vault is required to be installed. The plan is to identify the location of each device on a site plan.

Construction Site Security

The number of access points onto the site shall be minimized and, where feasible, situated in locations that are highly visible from an adjacent street, and conform to the following:

1. Perimeter construction site fencing shall be installed adjacent to streets and designed as ` follows:

a. Chain link or other metal fencing and gates, at least six feet in height, and

(1) Vehicle and pedestrian access gates shall not be covered with any fabric. Fencing with fabric shall not be covered for the first 50 feet in lineal length, or greater where necessary for sight distance control, on each side of a gate.

b. All vehicle and pedestrian openings shall have gates secured after hours of operation by a padlock(s) designed to prohibit cutting of the shackle; and

(1) Coil chain, minimum 30 grade, at least 3/8-inch thick, if used to secure a gate, or

(2) Cable at least 5/16-inch thick, if used to secure a gate.

c. Perimeter fencing may be removed when there is no longer outside storage of building materials or building fixtures and when there are no remaining exterior construction activities requiring separation of non-construction related personnel and public from exterior construction activity.

d. Alternative fencing and protection may be approved by the police department.

2. Office trailers and temporary buildings shall be secured as follows:

a. At a minimum, doors shall have a deadbolt lock and an auxiliary locking device using a hasp or slide bolt with a protective device to prohibit cutting of a padlock, attached with non-removable bolts from the exterior, and locked with a padlock having a minimum ½-inch thick shackle with heel and toe locking; or secured in a manner as approved by the police department.

b. All windows shall be secured from entry using either:

(1) Steel bars of at least ½-inch round or one-inch by ¼-inch flat steel material, spaced not more than five inches apart, securely attached on the inside of the trailer using bolts that are nonremovable from the exterior; or

(2) Steel grate mesh of at least 1/8-thick material, securely attached on the interior or exterior of the trailer using means that are resistant to removal from the exterior.

3. Storage containers with at least 64 square feet of storage area shall be secured as follows:

a. Doors shall be secured using a hasp or slide bolt with a protective device to prohibit cutting of the padlock, attached with nonremovable bolts from the exterior, and locked with a padlock having a minimum ½-inch thick shackle with

heel and toe locking; or secured in a manner as approved by the police department.

b. Exterior hinge pins shall be rendered nonremovable by design or welding.

4. Site lighting shall be installed and designed as follows:

a. Where lighting required would impinge on occupied residential properties:

(1) Motion sensors may be used to control light fixtures.

(2) Elements of the lighting provisions below may be modified or not required when approved by the police department.

b. All vehicle gate locations shall be illuminated, during the hours of darkness, with an approximate minimum maintained one foot-candle of light on the ground, within and on all sides of the gated opening for a distance of 15 feet beyond the opening. Outdoor lighting shall be maintained and installed so that direct rays are confined to the site and adjacent properties and streets open to the public are protected from glare.

c. All open centralized storage areas for building materials or building fixtures shall be illuminated, during the hours of darkness, with an approximate minimum maintained one foot-candle of light on the ground, within and on all sides of the stored items for a distance of 15 feet beyond the materials or fixtures.

d. All trailers, temporary buildings, or containers used as an office or for storage of building materials, or fixtures for buildings, or construction equipment shall be illuminated on all sides with openings, during the hours of darkness, with an approximate minimum maintained one foot-candle of light on the ground for a distance of 15 feet beyond the exterior walls.

e. Luminaries utilized to meet this section shall be installed at least 18 feet from the ground, have tempered or polycarbonate lenses, and meet or exceed U.L. Bulletin 1572 for wet locations.

5. Forklifts shall be rendered inoperable, when hours of operation are ceased, by removing the key and adding a device to either disable the engine or other measure to prohibit moving it.

6. A record shall be developed and maintained of on-site motorized construction vehicle equipment, which have wheels a minimum of 15 inches in diameter, listing the manufacturer, model, license plate number, vehicle identification number (VIN), and product identification number (PIN).

7. An address sign shall be installed at all perimeter vehicle access points and include the street name and number, using minimum six-inch high letters and

numbers, and shall be posted at the top of the perimeter fence or at least five feet from the ground.

8. A "No Trespassing" sign, conforming to the requirements of California Penal Code, Section 602, shall be installed at all perimeter access points, posted at the top of the perimeter fence or at least five feet from the ground.

9. A 24-hour emergency phone number, for management of the site, shall be posted at the main gated entrance and on the exterior of an on-site office trailer or building near the main vehicle entrance.

10. The following additional security measures shall be required if the residential construction site has 25 or more dwelling units:

a. Institute at least one of the following additional security measures:

(1) Provide color cameras that view all vehicle access points and record vehicle license plates when the hours of operation cease, saving recorded activity for at least 60 days; or

(2) Utilize a California State Licensed Security Guard for every contiguous 20 acres or portion thereof, to monitor the site when hours of operation cease, recording persons and vehicles entering and leaving it, saving recorded activity for at least 60 days; or

(3) Other alternate measure(s) approved by the police department that are found to provide at least the equivalent security of providing one of measures (1) or (2) above.

b. Develop a written procedure and implement a property identification program approved by the police department that is designed to readily identify ownership of heavy equipment, building materials where feasible, and building equipment.

Definitions

Astragal is a device, either fixed or movable, which eliminates the vertical opening between a pair of doors when in the closed position.

Burglary resistant glazing means those materials as defined in Underwriters' Laboratories Bulletin 972.

Fully tempered glass means those materials meeting or exceeding UCB Standard 24-2 for Safety Glazing.

Glazing is all glass, plastics, and fiberglass utilized as an exterior window, vision panel, light, or pane within any type of door.

Hours of operation shall mean the time period when any activity requires the presence of employees or workers within or about the affected business.

Hours of darkness shall mean any time from one-half hour before sunset and one-half hour after sunrise and any other time when the illumination level is less than the required lighting for uses as designated in this chapter.

Luminaire is a complete lighting device consisting of a light source together with its direct appurtenances, such as globe, reflector refractor, housing and such support as is integral with the housing. The pole, post or bracket is not considered a part of the luminaire.

Minimum maintained foot-candles of light is the amount of light falling on that point of a surface with the least illumination, calculated through application of a maintenance factor, which is a multiplier applied to account for aging of the lamp and for dirt build-up on the luminaire during the period for which a lamp is in place.

Vandal resistant light fixture has a lens constructed of materials meeting or exceeding U.L. Bulletin 972 (Burglary Resistant Glazing) and a housing meeting or exceeding U.L. Bulletin 1572 (Wet Locations.)

RECORDING REQUESTED

Clerk, City Council
City of Placentia

WHEN RECORDED MAIL TO:

City of Placentia
401 E. Chapman Avenue
Placentia, CA 92870

Attn: City Clerk

Exempt from Filing Fees Gov. Code Section 27383

DEVELOPMENT AGREEMENT

between

CITY OF PLACENTIA,
a California municipal corporation

and

_____, L.P.,
a California limited partnership

DEVELOPMENT AGREEMENT

This Development Agreement (**"Agreement"**) is entered into effective on the date it is recorded with the Orange County Recorder (hereinafter the **"Effective Date"**) by and between the CITY OF PLACENTIA (**"City"** or **"Lessor"**), and _____, L.P., a California limited partnership (hereinafter **"Developer"** or **"Lessee"**), may collectively be referred to herein as the **"Parties"**.

RECITALS

WHEREAS, City is authorized to enter into binding development agreements with persons having legal or equitable interests in real property for the development of such property, pursuant to Section 65864, *et seq.* of the Government Code; and

WHEREAS, Developer is under contract to lease the real property that is the subject of this Agreement (the **"Property"**); and

WHEREAS, the Project consists of the development of 189 multiple-family residential dwelling units with an overall density of 89 dwelling units (DU) per acre, as well as related amenities such as two landscaped courtyards (with courtyards programmed with passive, landscaped outdoor amenities including benches, walking paths, a dog run area and open gathering space.), 1,000-1,500 square feet of commercial space on the first floor, leasing and management office, resident lounge and lobby, and resident bike storage and shop, and two levels of structured parking on approximately 2.13 acres located in the City of Placentia along the north side of West Crowther Avenue, just east of South Melrose Street and;

WHEREAS, Developer has requested City to enter into a Development Agreement and proceedings have been taken in accordance with Section 68564, *et seq.* of the Government Code and the rules and regulations of City; and

WHEREAS, all of the rights and benefits granted to Developer in this Agreement shall inure to the benefit of the Property and Developer and Developer's successors-in-interest; and

WHEREAS, all of the duties and obligations of Developer shall remain the duties and obligations of Developer and Developer's successors-in-interest except as otherwise provided for herein; and

WHEREAS, all actions taken and approvals given by City have been duly taken or approved in accordance with all applicable legal requirements for notice, public hearings, findings, votes, and other procedural matters; and

WHEREAS, development of the Property in accordance with this Agreement will provide substantial benefits to City and will further enhance the policies and goals of City; and

WHEREAS, this Agreement will eliminate uncertainty in planning and provide for the orderly development of the Property, ensure progressive installation of necessary improvements, provide for public services appropriate to the development of the Project, and generally serve the purposes for which development agreements under Sections 65864, *et seq.* of the Government Code are intended; and

WHEREAS, Developer has incurred and will in the future incur substantial costs in excess of the

generally applicable requirements in order to assure vesting of legal rights to develop the Property in accordance with this Agreement.

COVENANTS

NOW, THEREFORE, in consideration of the above recitals and of the mutual covenants hereinafter contained and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. DEFINITIONS AND EXHIBITS.

1.1 Definitions. The following terms when used in this Agreement shall be defined as follows:

1.1.1. ***"Agreement"*** means this Development Agreement.

1.1.2. ***"City"*** means the City of Placentia, a California municipal corporation and charter city.

1.1.3. ***"City Council"*** means the City Council of the City.

1.1.4. ***"Development"*** means the improvement of the Property for the purposes of completing the structures, improvements and facilities comprising the Project including, but not limited to: grading; the construction of infrastructure and public and private facilities related to the Project whether located within or outside the Property; the construction of buildings and structures; and the installation of landscaping. "Development" includes the maintenance, repair, reconstruction or redevelopment of any building, structure, improvement or facility after the construction and completion thereof.

1.1.5. ***"Development Approvals"*** mean all permits and other entitlements for use subject to approval or issuance by City in connection with development of the Property including, but not limited to Development Plan Review and Vesting Tentative Map.

1.1.6. ***"Development Exaction"*** means any requirement of City in connection with or pursuant to any Land Use Regulation or Development Approval for the dedication of land, the construction of improvements or public facilities, or the payment of fees in order to lessen, offset, mitigate or compensate for the impacts of development on the environment or other public interests.

1.1.7. ***"Development Impact Fee"*** means a monetary exaction other than a tax or special assessment, whether established for a broad class of projects by legislation of general applicability or imposed on a specific project on an ad hoc basis, that is charged by a local agency to the applicant in connection with approval of a development project, for the purpose of defraying all or a portion of the cost of public facilities related to the development project, but does not include fees specified in Government Code Section 66477, fees for processing applications for governmental regulatory actions or approvals, fees collected under development agreements adopted pursuant to Article 2.5 (commencing with Section 65864 of Chapter 4 of the Government Code). "Development Impact Fee" expressly excludes processing fees and charges of every kind and nature imposed by City to cover the estimated actual costs to City of processing applications for Development Approvals or for monitoring compliance with any Development Approvals granted or issued, including, without limitation, fees for zoning variances; zoning changes; use permits; building inspections; building permits; filing and processing applications and petitions filed with the local agency formation commission or conducting preliminary proceedings or proceedings under the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Division 3 (commencing with Section 56000) of Title 5 of the Government Code. For purposes of this Agreement, Development Impact Fees include those fees

listed in Exhibit "E" attached hereto.

1.1.8. ***"Development Plan"*** means the Development Approvals and the Existing Land Use Regulations applicable to Development of the Property.

1.1.9. ***"Developer"*** means _____, L.P., a California limited partnership, and its successors in interest to all or any part of the Property.

1.1.10. ***"Existing Development Approvals"*** means all Development Approvals approved or issued by City prior to or contemporaneously with City's approval of this Agreement. The Existing Development Approvals include, without limitation, the approvals incorporated herein as Exhibit "C".

1.1.11. ***"Existing Land Use Regulations"*** mean all Land Use Regulations in effect on the Effective Date. Existing Land Use Regulations shall include the Transient Oriented Development Standards ("Transient Oriented Development") and any other Regulations incorporated herein as Exhibit "D" as of the Effective Date.

1.1.12. ***"Feasibility Threshold Funding Program Award"*** means a commitment to award funds pursuant to the State of California Department of Housing and Community Development Affordable Housing and Sustainable Communities program, the California Housing Finance Agency Mixed-Income Program and/or the MIP Program and/or the California Low Income Housing State Tax Credit program administered by the California Tax Credit Allocation Committee as further described in Exhibit "H" Developer shall apply for all rounds of funding described in Exhibit "H" until the appropriate funding needed to construct the Development is secured by the Developer. This also includes any agreed upon funding source by the Developer and the City that would be applicable to this Development.

1.1.13. ***"Good Faith Deposit "*** means a deposit made by the Developer to the City pursuant to Section 3.3 hereof. All Good Faith Deposits shall be held by the City pursuant to the terms and conditions of this Agreement.

1.1.13. ***"Land Use Regulations"*** mean all ordinances, resolutions, codes, rules, regulations and official written policies of City governing the development and use of land, including, without limitation, the permitted use of land, the intensity of use, subdivision requirements, the maximum height and size of proposed buildings, the provisions for reservation or dedication of land for public purposes, and the design, improvement and construction standards and specifications applicable to the development of the property, as modified or supplemented by the Existing Development Approvals. "Land Use Regulations" does not include any City ordinance, resolution, code, rule, regulation or official policy, governing:

(a) the conduct of businesses, professions, and occupations;

(b) taxes and assessments;

(c) the control and abatement of nuisances;

(d) the granting of encroachment permits and the conveyance of rights and interests that provide for the use of or the entry upon public property; or

(e) the exercise of the power of eminent domain.

1.1.14. ***"Lot"*** means a legally subdivided lot.

1.1.15. ***"Mortgagee"*** means a mortgagee of a mortgage, a beneficiary under a deed of trust or any other security-device lender, and their successors and assigns.

1.1.16. ***"Project"*** means the Development of the Property contemplated by the Development Plan as such Plan may be further defined, enhanced or modified pursuant to the provisions of this Agreement.

1.1.17. ***"Property"*** means the approximately 2.13 acres of real property described on Exhibit "A" and shown on Exhibit "B" of this Agreement.

1.1.18. ***"Reservations of Authority"*** means the rights and authority excepted from the assurances and rights provided to Developer under this Agreement and reserved to City under Section 3.6 of this Agreement.

1.1.19. ***"Subsequent Development Approvals"*** means all Development Approvals approved by City subsequent to the Effective Date.

1.1.20. ***"Subsequent Land Use Regulations"*** means any Land Use Regulations adopted and effective after the Effective Date of this Agreement.

1.1.21. ***"Transient Oriented Development"*** means the Packing House District Transit Oriented Development Plan and Zoning Regulations.

1.2 Exhibits. The following documents are attached to, and by this reference made a part of, this Agreement:

Exhibit "A"	Legal Description of Property
Exhibit "B"	Map of Property
Exhibit "C"	Development Approvals
Exhibit "D"	Land Use Regulations
Exhibit "E"	Development Impact Fees
Exhibit "F"	Off Site Streetscape Improvements Area
Exhibit "G"	Schedule of Performance
Exhibit "H"	Feasibility Threshold Funding Program Award Schedule

2. LEASE/PURCHASE OF PROPERTY

2.1 Lease. Developer agrees to comply with the lease terms, payments, and other obligations as set out in the Schedule of Performance as fully described in Exhibit "G" and the Ground Lease by and between the City of Placentia as Landlord and _____L.P. as tenant.

2.2 Execution of Lease. The City and the Developer shall execute the Lease concurrently with the closing of the Developer's construction financing for the development of the Project.

2.3 Purchase of Property. Notwithstanding anything to the contrary set forth herein, if the City and the Developer have not executed the Lease by the Termination Date, the Developer shall have the option to purchase the Property for a price equal to the fair market value of the Property as of the Termination Date less any Good Faith Deposits previously made by the Developer to the City. The fair market value of the Property shall be determined by an appraisal conducted by an appraiser with at least five (5) years'

experience appraiser real property is Southern California.

3 GENERAL PROVISIONS.

3.1 Binding Effect of Agreement. The Property is hereby made subject to this Agreement upon the Effective Date. Development of the Property is hereby authorized and shall be carried out only in accordance with the terms of this Agreement and the Lease. Notwithstanding the foregoing, nothing contained in this Agreement shall be deemed to be a covenant to develop or construct the Project or any portion of the Project; provided, however, that to the extent that any phase of the Project is developed, Developer shall be obligated to construct the public improvements required herein related to that phase of development. Developer is authorized to execute this Agreement and have it recorded pursuant to the terms of this Agreement.

3.2 Ownership. City represents and covenants that it has a legal or equitable interest in the Property.

3.3 Term. The term of this Agreement shall commence on the Effective Date and shall continue for a period of five (5) years thereafter or such earlier date as set forth in this Section 3.3 (the "Termination Date").

3.3.1 If the Developer has not received a Feasibility Threshold Funding Program Award on or before December 31, 2022 this Agreement shall terminate unless on or before December 31, 2022, the Developer has made a Good Faith Deposit to the City in the amount of Fifty Thousand Dollars ($50,000). Developer must provide fifteen (15) day written notice or no later than December 15, 2022 to the City of its intent to terminate or extend the agreement for another twelve (12) month period.

3.3.2 If the Developer has not received a Feasibility Threshold Funding Program Award on or before December 31, 2023 this Agreement shall terminate unless on or before December 31, 2023, the Developer has made an additional Good Faith Deposit to the City in the amount of Seventy-Five Thousand Dollars ($75,000). Developer must provide fifteen (15) day written notice or no later than December 15, 2023 to the City of its intent to terminate or extend the agreement for another twelve (12) month period.

3.3.3 If the Developer has not received a Feasibility Threshold Funding Program Award on or before December 31, 2024 this Agreement shall terminate unless on or before December 31, 2024, the Developer has made an additional Good Faith Deposit to the City in the amount of One Hundred Twenty-Five Thousand Dollars ($125,000). Developer must provide fifteen (15) day written notice or no later than December 15, 2024 to the City of its intent to terminate or extend the agreement for another twelve (12) month period.

3.4 Assignment. This Agreement may not be assigned except as otherwise contemplated herein.

3.5 Amendment or Cancellation of Agreement. This Agreement may be amended or cancelled in whole or in part only by written mutual consent of all parties or their respective successors or assigns with respect to their respective portions of the Property in the manner provided for in Government Code Section 65868. This provision shall not limit any remedy for default of City or Developer as provided by this Agreement.

3.6 Termination. This Agreement shall be deemed terminated and of no further effect upon the occurrence of any of the following events:

(a) Upon the Termination Date as set forth in Section 3.3.

(b) Entry of a final judgment setting aside, voiding or annulling the adoption of the ordinance approving this Agreement.

(c) The adoption of a referendum measure overriding or repealing the ordinance approving this Agreement.

(d) Completion of the Project in accordance with the terms of this Agreement, including, without limitation, issuance of all required occupancy permits and acceptance by City or applicable public agency of all required dedications, completion of all improvements for the Project, payment by Developer of all fees/sums due under this Agreement, and implementation of all of Developer's obligations hereunder.

Termination of this Agreement shall not constitute termination of any other land use entitlements approved for the Property including but not limited to, all conditions and mitigation measures imposed as part of such entitlements prior to the date of termination. Upon the termination of this Agreement, no party shall have any further right or obligation hereunder except with respect to any obligation to have been performed prior to such termination or with respect to any default in the performance of the provisions of this Agreement that has occurred prior to such termination or with respect to any obligations that are specifically set forth as surviving this Agreement.

If this Agreement is terminated pursuant to Section 3.6(a) hereof, (i) the City shall retain all previously received Good Faith Deposits and (ii) the City shall have to right, but not the obligation to purchase from Developer all of Developer's non-legally privileged third party work product developed in connection with the proposed development of the Project (the "Developer Work Product") for an amount equal to fifty percent (50%) of Developer's actual out-of-pocket costs incurred in connection with the production of the Developer Work Product (the "Work Product Purchase Price"). Upon receipt of the Work Product Purchase Price the Developer shall transfer the Developer Work Product to the City on an AS-IS WHERE-IS basis without any representation or warranty subject to any required consent from third parties. The Developer Work Product shall include but not be limited to all construction documents and engineered improvement plans required for the project along with all electronic CAD files.

3.7 Notices.

(a) As used in this Agreement, "notice" includes, but is not limited to, the communication of notice, request, demand, approval, statement, report, acceptance, consent, waiver, appointment or other communication required or permitted hereunder.

(b) All notices shall be in writing and shall be considered given either: (i) when delivered in person to the recipient named below; or (ii) on the date of delivery shown on the return receipt, after deposit in the United States mail in a sealed envelope as either registered or certified mail with return receipt requested, and postage and postal charges prepaid, and addressed to the recipient named below; or (iii) on the date of delivery shown in the records of the telegraph company after transmission by telegraph to the recipient named below. All notices shall be addressed as follows:

If to City:

City of Placentia,
401 E. Chapman Avenue
Placentia, CA 92870
Attn: City Administrator

With a copy to:

Christian L. Bettenhausen, City Attorney
Jones & Mayer
3777 N. Harbor Blvd.
Fullerton, CA 92835

If to Developer:

_____, L.P.
c/o USA Properties Fund, Inc.
3200 Douglas Blvd., Suite 200
Roseville, CA 95661
Attention: Steve Gall

And:

The Pinyon Group
949 S Hope Street, Suite 100
Los Angeles, California 90015
Attention: Jay Stark

With a copy to:

Bocarsly Emden Cowan Esmail & Arndt LLP
633 W. 5th Street, 64th Floor
Los Angeles, California 90071
Attention: Kyle Arndt

(c) Either party may, by notice given at any time, require subsequent notices to be given to another person or entity, whether a party or an officer or representative of a party, or to a different address, or both. Notices given before actual receipt of notice of change shall not be invalidated by the change.

4 DEVELOPMENT OF THE PROPERTY.

4.1 Rights to Develop. Subject to the terms of this Agreement including the Reservations of Authority, Developer shall have a vested right to develop the Property in accordance with, and to the extent of, the Development Plan and the Existing Land Use Regulations; however, if Developer has not met the Schedule of Performance for completion of work as set forth in the Schedule of Performance attached hereto in Exhibit "G", and such failure continues for thirty (30) after the City Administrator had provided Developer with notice of such failure (or such longer period of time as is reasonably necessary to cure any such failure) the City Administrator shall have the sole discretion upon written notice to Developer, to extend the Schedule of Performance based on Developer's written explanation of not meeting the Schedule of Performance, or to terminate this Agreement after thirty (30) days written notice to the Developer for failure to meet the Schedule of Performance. The Project shall remain subject to all Subsequent Development Approvals required to complete the Project as contemplated by the Development Plan. Except as otherwise provided expressly in this Agreement, the permitted uses of the Property, the intensity of use, the maximum height and size of proposed buildings,

the design, improvement, and construction standards applicable to development of the Property, and provisions for reservation and dedication of land for public purposes and Development Exactions shall be those set forth in the Development Plan. Notwithstanding the foregoing, nothing contained in this Agreement shall be deemed to be a covenant by Developer to develop or construct the Project or any portion of the Project; provided, however, that to the extent that any phase of the Project is developed, Developer shall be obligated to construct the public improvements required herein related to that phase of development.

4.2 Effect of Agreement on Land Use Regulations. Except as otherwise provided expressly under the terms of this Agreement including the Reservations of Authority, the rules, regulations and official policies of City governing permitted uses of the Property, the intensity of use of the Property, the maximum height and size of proposed buildings, and the design, improvement and construction standards and specifications applicable to development of the Property shall be the Existing Land Use Regulations. In connection with any Subsequent Development Approval, City shall exercise its discretion in accordance with the Development Plan, the Existing Land Use Regulations, and as provided by this Agreement including, but not limited to, the Reservations of Authority.

4.3 Term of Maps and Development Approvals. The term of all Development Approvals and Subsequent Development Approvals and any and all subsequently-approved tentative subdivision maps approved for the Project shall be equal to the Term of this Agreement in accordance with applicable laws, unless this Agreement is earlier terminated pursuant to the provisions hereof, in which event the term of such tentative subdivision maps shall be governed by the applicable provisions of the Subdivision Map Act.

4.4 Timing of Development. The parties acknowledge that Developer cannot at this time predict when or the rate at which phases of the Property will be developed. Such decisions depend upon numerous factors that are not within the control of Developer, such as availability of tax credit and tax exempt private activity volume cap, construction costs, market orientation and demand, interest rates, absorption, completion and other similar factors. Since the California Supreme Court held in Pardee Construction Co. v. City of Camarillo (1984) 37 Cal.3d 465, that the failure of the parties therein to provide for the timing of development resulted in a later adopted initiative restricting the timing of development to prevail over such parties' agreement, it is the parties' intent to cure that deficiency by acknowledging and providing that Developer shall have the right to develop the Property in such order and at such rate and at such times as Developer, in its sole and absolute discretion deems appropriate, subject only to any timing requirements set forth in the Development Plan and Schedule of Performance referred to in Section 3.4.

4.5 Schedule of Performance. Development of the Property shall be subject to all timing established by the Development Plan and Schedule of Performance attached hereto as Exhibit G and Developer shall use all commercially reasonable efforts to comply with the Schedule of Performance.

4.6 Changes and Amendments. The parties acknowledge that refinement and further development of the Project will require Subsequent Development Approvals and may demonstrate that changes are appropriate and mutually desirable in the Existing Development Approvals. During the term of this Agreement, in the event Developer finds that a change in the Existing Development Approvals is necessary or appropriate, Developer shall apply for a Subsequent Development Approval to effectuate such change and City shall process and act on such application in accordance with the Existing Land Use Regulations, except as otherwise provided by this Agreement, including, without limitation, the Reservations of Authority. If approved, any such change in the Existing Development Approvals shall be attached to this Agreement as an addendum to Exhibit "C" and may be further changed from time to time as provided in this Section.

4.7 Reservations of Authority

4.7.1 Limitations. Reservations and Exceptions. Notwithstanding any other provision of this Agreement, the following Subsequent Land Use Regulations shall apply to the development of the Property.

(a) Processing fees and charges of every kind and nature imposed by City to cover the estimated actual costs to City of processing applications for Development Approvals or for monitoring compliance with any Development Approvals granted or issued.

(b) Procedural regulations relating to hearing bodies, petitions, applications, notices, findings, records, hearings, reports, recommendations, appeals and any other matter of procedure.

(c) Regulations governing construction standards and specifications including, without limitation, City's Building Code, Plumbing Code, Mechanical Code, Electrical Code, Fire Code and Grading Code that are applied uniformly and on a city-wide basis to all development projects of a similar type as the Project.

(d) Regulations that are in conflict with the Development Plan but that are reasonably necessary to protect the public health and safety of the residents of the Project or the immediate community. To the extent possible, any such regulations shall be applied and construed so as to provide Developer with all of the rights and assurances provided under this Agreement. Any regulation, whether adopted by initiative or otherwise, limiting the permitted uses, density, intensity, or rate or timing of development of the Property to the extent permitted by law shall be deemed to conflict with the Development Plan and shall therefore not be applicable to the development of the Property.

(e) Regulations that are not in conflict with the Development Plan provided Developer has given written consent to the application of such regulations to development of the Property.

4.7.2 Subsequent Development Approvals. This Agreement shall not prevent City, in acting on Subsequent Development Approvals, from applying Subsequent Land Use Regulations that do not conflict with the Existing Land Use Regulations or Development Plan, nor shall this Agreement prevent City from denying or conditionally approving any Subsequent Development Approval on the basis of the Existing Land Use Regulations or any Subsequent Land Use Regulation not in conflict with the Development Plan. Upon approval of any Subsequent Development Approval, such Subsequent Development Approval shall be deemed vested pursuant to the provisions of this Agreement, without any further action by City or Developer being required.

4.7.3 Modification or Suspension by State or Federal Law. In the event any State or Federal law or regulation that is enacted or adopted after the Effective Date of this Agreement, or any other action of any governmental entity that is not under City's control, prevents or precludes compliance with any provision of this Agreement, then that provision of this Agreement shall be modified or suspended only to the extent and for the time necessary to achieve compliance with that law, regulation or other governmental action and the remaining provisions of this Agreement shall continue in full force and effect and the parties shall negotiate in good faith for such amendments to this Agreement as may be necessary to achieve its intent, notwithstanding the existence of such law or regulation or other governmental action. Upon the repeal of any such law, regulation or other governmental action or on the occurrence of any other circumstance that removes the effect of the same on this Agreement, provided this Agreement is otherwise still in effect, the provisions of this Agreement shall be automatically restored to their full original effect and any amendment to this Agreement that the parties have entered into as a result of any such law, regulation or other governmental action, shall terminate.

4.7.4 Intent. The parties acknowledge and agree that City is entering into this Agreement pursuant to the Development Agreement Law, Government Code Sections 65864- 65869.5, and that the foregoing limitations, reservations and exceptions are intended to reserve to City all of its police power that cannot be so limited. This Agreement shall be construed to reserve to City all such power and authority that cannot be restricted by development agreement.

4.7.5 Public Works. Developer shall construct all public improvements related to the Project required as a condition of approval in accordance with City's or other public works engineering standards including (the "Project Related Infrastructure Work"), including but not limited to, the City of Placentia Transit Oriented Development Streetscape Master Plan and Public Realm standards (the "TOD Master Plan") and the Old Town Placentia Revitalization Streetscape Master Plan and Public Realm standards (the Old Town Master Plan) The Developer has informed the City that certain portions of Project Related Infrastructure Work may be eligible to be financed pursuant to the certain federal, state and/or local public funding sources (each, a "Public Infrastructure Financing Source"). One or more Public Infrastructure Financing Sources may also be available for public improvements and site work which do not constitute Project Related Infrastructure Work which work may be directly or indirectly beneficial to the Developer and the City ("Non-Project Related Infrastructure Work"). The City and the Developer shall reasonably cooperate to obtain financing from Public Infrastructure Financing Sources, including, without limitation, acting as a co-applicants on applications submitted to Public Infrastructure Financing Sources. For public utilities, the Developer shall design and construct all public utility facilities within the public rights-of-way in the project boundary as required by the public utility purveyors, including those related to cable/telephone or related communication transmission facilities, energy transmission facilities, fiber optic, electric, gas to service the property. The City shall determine whether the Developer shall dedicate said public utility facilities and the public access easements thereto and the entities to whom those dedications shall be made. Developer shall modify an existing City storm drain access easement over a portion of the Property as necessary to maintain City access to the existing storm water pump station, pipeline and appurtenant equipment located on the western edge of the property. Developer shall grant a temporary construction access easement to the Orange County Transportation Authority, City, and their agents and contractors for the purpose of construction of the south platform of the planned adjacent Placentia Metrolink Station. Developer shall install electrical or communication appurtenances (such as transformers) underground unless said appurtenance is a service pedestal for electrical, phone, traffic signal control cabinets, or irrigation control devices.

4.7.6 On-Site Improvements. All on-site public improvements shall be constructed to City standards including, but not limited to, the City of Placentia Transient Oriented Development Streetscape Master Plan and Public Realm standards, and as set forth in the conditions of approval for the project. The public onsite improvements required in the conditions of approval shall be made to that area indicated on Exhibit "F". Upon completion, the Developer shall offer for dedication utility improvements as part of the project subdivision maps. These improvements include all potable water mains, sewer mains and storm water collection facilities intended to serve the property within the Project boundaries. Developer is required to remove the existing parkway drain pipe connection between the pump to waste feature on the southernly portion of the Golden State Water Company water well site and install a new pipeline to connect the ground water pump waste to the nearest catch basin located on Crowther Avenue immediately adjacent to the Property. In addition, Developer is required to remove two existing utility poles on the property and a third utility pole located in the existing City right-of-way in front of the Golden State Water Well site, and underground all overhead utility lines and associated equipment currently installed on those poles.

4.7.7 Off-Site Improvements to be Constructed by Developer. Developer is given the option to construct certain public off-site improvements as set forth in the conditions of approval for the project

and receive a credit towards the applicable TOD Streetscape Development Impact Fee. The fee credit will be calculated based on quantity take-offs and unit pricing utilized to develop an engineer's estimate of the master planned TOD streetscape improvements. The off-site improvements required in the conditions of approval shall be made to the area indicated on Exhibit "F." and more fully explained in the Transient Oriented Development Streetscape Master Plan adopted by Resolution No. R-2017-15 and Public Realm Standards adopted by Resolution No. R-2017-15. All off-site improvements will be accepted by the City or other public agencies upon satisfactory completion.

4.7.8 On-Site Improvements to be Constructed by Developer. Developer is required by the conditions of approval to construct certain public improvements as set forth in the conditions of approval for the project. The on-site improvements required in the conditions of approval shall be made to the areas indicated on Exhibit "F". All on-site improvements will be accepted by the City or other public agencies upon satisfactory completion. In anticipation of construction of the south rail platform of the Placentia Metrolink Station, as depicted in construction drawings by Willdan Engineering and approved OCTA and the City of Placentia, the developer will construct a direct pedestrian connection from the building to the south platform as required by the City, for the exclusive use of the residential tenants of this Project.

4.7.9 Parking Covenant. Developer agrees to grant a fifteen (15) space parking easement within the Development's parking structure for the benefit of the adjacent property owner of the existing Packing House site at 341 S. Melrose Street (APN: 339-401-16) (the "Easement Recipient") pursuant to an Easement Agreement reasonably acceptable to Developer, which shall require, among other matters, that Easement Recipient and all persons using as a permittee of the Easement Recipient abide by all parking structure rules.

4.7.10 Provision of Real Property Interests by City. In any instance where Developer is required to construct any public improvement on land not owned by Developer, Developer shall at its sole cost and expense provide or cause to be provided, the real property interests necessary for the construction of such public improvements. Developer shall exercise reasonable and diligent good faith efforts to acquire the real property interests necessary for the construction of such public improvements at a cost and upon terms acceptable to the owner of the real property and approved by City. If, despite such efforts, Developer is unable to acquire such property after one-hundred eighty days (180), at Developer's request and upon Developer's provision of adequate security for costs City incurs, City shall negotiate the purchase of the necessary real property interests to allow Developer to construct the public improvements as required by this Agreement. If necessary, in accordance with the procedures established by law, the City may use its power of eminent domain to acquire such required real property interests. Developer shall pay all costs associated with any such negotiation or condemnation proceedings. This Section 4.7.10 is not intended by the parties to impose upon the Developer an enforceable duty to acquire land or construct any public improvements on land not owned by Developer, except to the extent that the Developer elects to proceed with the development of the Project.

4.8 Regulation by Other Public Agencies. It is acknowledged by the parties that other public agencies not within the control of City possess authority to regulate aspects of the development of the Property separately from or jointly with City and this Agreement does not limit the authority of such other public agencies.

4.9 Parking Management Plan. The Developer shall adopt a parking management plan reasonably acceptable to the City. A one-time Parking Management Plan fee of $25,000 will be required upon the issuance of the first development permit. The Parking Management Plan fee shall be expended by the City should the City require further analysis/amendment of the Parking Management Plan during the duration

of the Lease Agreement.

5. PUBLIC BENEFITS.

5.1 Intent. The parties acknowledge and agree that development of the Property will result in substantial public benefit in continuing the revitalization of the Packing House District Transit Oriented Development area and by the Developer constructing and operating approximately 189 workforce rental dwelling units for individuals and families, where household income does not exceed 30% to 70% of the Area Median Income at an affordable rent for the term of the Lease Agreement .

5.1.1 Concessions to Developer. In exchange for Developer constructing and operating a development described in Section 5.1 of this agreement, the following concessions shall be granted:

5.1.1.2 Building Height: The building height shall comply with the maximum overall height allowed pursuant to the PMC, however, the building may consist of a total of 6 stories in lieu of 5 stories;

5.1.1.3 Retail Height: The floor to ceiling height of the ground floor retail shall be at least 12 feet 6 inches in height in lieu of 15 feet in height, because the placement of the retail at the northeast corner of Crowther and Melrose along with the use of glass, architectural features, placement of signage, and the location of units above the retail make it a prominent architectural feature of the project which is the intent of the TOD Standard;

5.1.1.4 Open Space Requirements: The development shall provide a total of 1,037 sf of private open space which is below the PMC requirement, however, 25,784 square feet of common open space shall be provided, which is 2.5 times more common open space than is required pursuant to the PMC. By providing the stated levels of open space, the development meets the intent of providing ample open space overall;

5.1.1.5 EV Charging Requirement: The site plan includes a total of 28 parking stalls set aside for EV charging which will be wired to the mechanical room and provided with an adequately sized panel per CALGreen standards. Based on our experience managing apartment communities and the fact that this is a workforce housing development we will be puchasing and installing 3 of the required 28 units which is above typical tenant demand in similar existing USA communities. A Parking Management Plan pursuant to Section 4.9 of this Agreement, will be required for the development which will also require assessment of EV Charging demand. Additional EV charging units will be purchased and installed as necessary based on tenant demand.

5.1.1.6 Precedence: The aforementioned concessions listed in this agreement shall take precedence over the Conditions of Approval adopted as part of DPR 2020-03.

5.2 Development Impact Fees.

5.2.1 Amount and Components of Fee. Developer shall pay to City the Development Impact Fees in the amounts determined by the City as identified in Exhibit "E".

5.2.2 No Increases In Fees. During the term of this Agreement, commencing as of the Effective Date, and, except as provided herein, those per unit and per square foot Development Impact Fees set forth in Exhibit "E" shall not be increased with respect to this Project in excess of the lesser of (i) the City's periodic increases to the Development Impact Fee as established by the City Council, or (ii) three percent (3%) increase per annum. Upon expiration of the term of this Agreement, Developer shall thereafter pay the amount of such Development Impact Fees legally adopted and in effect by the then-

applicable City ordinance or resolution.

5.2.3 Time of Payment. Development Impact Fees required pursuant to Subsection 5.2.1, shall be paid to City at the time of issuance of the first grading permit as described in Exhibit "E". Development Impact Fees shall be paid at the rate described in Section 5.2.2 of this agreement.

5.3 Miscellaneous Provisions Regarding Credits.

5.3.1 Developer Credit for DIF Program Improvements. Developer shall be entitled to a credit against any applicable Transit Oriented Development or City-wide Development Impact Fee as set forth in Exhibit "E ".

5.3.2 Affordable Housing Fees owed pursuant to the provisions of Chapter 5.30 of the Placentia Municipal Code (PMC) and Exhibit E attached hereto may be waived pursuant to the provisions of Chapter 5.30 of the PMC. To be eligible for an Affordable Housing Fees waiver, the Developer shall apply for said waiver pursuant to all applicable provisions of PMC Section 5.30.110. Upon City Council approval of a waiver of Affordable Housing Fees, said fees shall be considered waived. Said Affordable Housing Fees waiver application shall be the responsibility of Developer to apply for and obtain pursuant to provisions of the PMC prior to issuance of first grading permit for the project.

5.4 Design and Construction of Improvements. Developer shall receive approval from the Director of Public Works as to the timing of the off-site improvements to ensure coordination of construction of undergrounding utilities by other outside agencies.

5.4.1 Construction of Improvements by Others. In the event that, at the time Developer would otherwise be required to construct improvements as set forth in Section 4.7.7, such improvements have been constructed by others, Developer's obligation to construct such improvements shall be deemed satisfied and Developer shall not receive credit against Development Impact Fees or reimbursement for the cost of such improvements.

5.4.2 Reimbursement of City Costs. Developer shall pay all reasonable costs incurred by City in connection with the Development Approvals sought to be granted related to the Project. Developer shall pay all costs of any private financing for the Project, including all of City's costs therefor. Costs to be paid by Developer include, but are not limited to, City fees due for processing of all applications, City Attorneys' fees incurred in connection with negotiation and preparation of this Agreement and all Development Approvals, City's, costs reasonably borne for staff time related to the Project and this Agreement, including all administrative and staff costs, and any out of pocket costs incurred by City in connection with the Development Agreement, Development Approvals, and consulting, permits, noticing, and environmental evaluation and mitigation, including overseeing any Mitigation Monitoring Program. A reimbursement schedule and a reimbursement process for all such costs which have not been reimbursed directly to City by Developer shall be mutually agreed upon prior to the issuance of building permits. City shall require Developer to submit a deposit against which such costs will be billed. Developer shall reimburse the City for the cost to redesign one of the south platform footings to accommodate a new shear wall for the Project for a cost of $7,000. Developer shall split the cost 50/50 with the City to prepare a separate set of bid documents for the construction of the minimum structural elements of the south rail platform located entirely within City owned Property or Right of Way necessary to allow construction of the Project in advance of the full south rail platform construction. City shall pursue the construction for the structural elements of the south rail platform to facilitate construction of the Developer's Project. Both parties acknowledge the risk associated with constructing these structural elements without a final approval to proceed with the full construction of the Placentia Metrolink Station. Developer and City shall split the risk 50/50 with the Developer placing funds equal to 50% of the final

construction, construction management and inspection costs of the structural elements of the south rail platform in a joint escrow account. The funds are to be released to the City if the planned station has not been released for construction within ten (10) years of the effective date of this agreement. Notwithstanding anything to the contrary contained herein, Developer shall have no obligation to reimburse the City for any cost or expense incurred by the City in connection with negotiations with Orange County Transportation Authority, MetroLink or other public or quasi-public entity regarding the development or transit related projects and/or infrastructure in the vicinity of the Project site. This should not preclude City or Developer to pursue "***Feasibility Threshold Funding Program Award"*** for funding of transportation related expenditures such as the parking structure and/or pedestrian bridge.

5.5 The Project will comply with the new California Green Building Code and Title 24 and the City's local ordinances and development standards. The project will use LED as standard interior lighting for the residential uses.

6 PUBLIC FINANCING.

6.1 Financing. Developer shall be conditioned to annex the property into Community Facilities District No. 2018-01 upon receiving development entitlements from the City. The annual assessment will be applied on the tax year following issuance of the first building occupancy permit. The District's special tax rate or assessment for multifamily housing projects at the time of this writing is $127 per unit per year and $0.09 per square foot on retail space. The special tax or assessment is subject to annual adjustment in an amount equal to the percentage increase during the preceding year in the Consumer Price Index (CPI) for All Urban Consumers in the - Los Angeles/Long Beach/Anaheim area, or three (3%), whichever is greater. Developer shall pay the annual per unit and square foot costs of CFD 2014-01 and CFD 2018-01 assessment rates in place at the time building occupancy permits are granted.

7 REVIEW FOR COMPLIANCE.

7.1 Periodic Review. During the term of this Agreement, the Director of Development Services shall review this Agreement annually, on or before the anniversary of the Effective Date, in order to ascertain the good faith compliance by Developer with the terms of the Agreement. Developer shall submit an annual monitoring report to review compliance with Exhibit G and Exhibit H ("Annual Monitoring Report"), in a form acceptable to the Director of Development Services, within 30 days after written notice from City Staff demonstrating Developer's good faith compliance with all the material terms of this Agreement. The Annual Monitoring Report shall be accompanied by an annual review and administration fee sufficient to defray the estimated costs of review and administration of the Agreement during the succeeding year. The amount of the annual review and administration fee shall be set annually by resolution of the City Council. Upon completion of a periodic review, the Director of Development Services shall submit a report to the City Council setting forth the evidence concerning good faith compliance by Developer with the terms of this Agreement and his or her recommended finding on that issue. If the City Council finds that Developer has not complied in good faith with the terms and conditions of this Agreement, the City Council may modify or terminate this Agreement after providing Developer with a reasonable opportunity to cure any non-compliance by Developer.

7.2 Certificate of Agreement Compliance. If, at the conclusion of a periodic review, Developer is found to be in compliance with this Agreement, City shall, upon request by Developer, issue a Certificate of Agreement Compliance ("Certificate") to Developer stating that after the most recent periodic or special review and based upon the information known or made known to the Director of Development Services and City Council that (1) this Agreement remains in effect and (2) Developer is not in default. The Certificate shall be in recordable form, shall contain information necessary to

communicate constructive record notice of the finding of compliance, shall state whether the Certificate is issued after a periodic or special review and shall state the anticipated date of commencement of the next periodic review. Developer may record the Certificate with the Orange County Recorder.

Whether or not the Certificate is relied upon by assignees or other transferees or Developer, City shall not be bound by a Certificate if a default existed at the time of the periodic or special review, but was concealed from or otherwise not known to the Director of Development Services or City Council.

8 PREVAILING WAGES.

8.1 Public Works Determination. Developer has been alerted to the requirements of California Labor Code section 1770, *et seq.*, including, without limitation S.B. 975, which require the payment of prevailing wage rates and the performance of other requirements if it is determined that this Development Agreement or any portion of the Development constitutes a public works contract. It shall be the sole responsibility of Developer to determine whether to pay prevailing wages for any or all work required by this Development Agreement. As a material part of this Development Agreement, Developer agrees to assume all risk of liability arising from any decision not to pay prevailing wages for work required by this Development Agreement.

8.2 Indemnification. As a further material part of this Development Agreement, Developer agrees to indemnify, defend and hold harmless City, its officials, officers, employees, consultants and agents from any and all claims, liability, loss, costs, damages, expenses, fines and penalties, of whatever the or nature, including all costs of defense and reasonable attorneys' fees, arising from any alleged failure of the Developer or Developer's contractors to comply with the prevailing wage laws of the State of California. If City or any of the other indemnified parties is named as a party in any dispute arising from the failure of Developer or Developer' s contractors to pay prevailing wages, Developer agrees that City and those other indemnified parties may appoint their own independent counsel, and Developer agrees to pay all attorneys' fees and defense costs of City and the other indemnified parties as billed, in addition to all other damages, fines, penalties, and losses incurred by City and those other indemnified parties as a result of the action.

9 DEFAULT AND REMEDIES.

9.1 Remedies in General. It is acknowledged by the parties that neither party would have entered into this Agreement if it were to be liable in damages under this Agreement, or with respect to this Agreement or the application thereof. In general, each of the parties hereto may pursue any remedy at law or equity available for the breach of any provision of this Agreement, except that neither party shall be liable in damages to the other party, or to any successor in interest of such party, or to any other person, and each party covenants not to sue for damages or claim any damages:

(a) For any breach of this Agreement or for any cause of action that arises out of this Agreement; or

(b) For the taking, impairment or restriction of any right or interest conveyed or provided under or pursuant to this Agreement; or

(c) Arising out of or connected with any dispute, controversy or issue regarding the application or interpretation or effect of the provisions of this Agreement.

9.2 Specific Performance. The parties acknowledge that money damages and remedies at law generally are inadequate and specific performance and other non-monetary relief are particularly

appropriate remedies for the enforcement of this Agreement and should be available to all parties for the following reasons:

(a) Money damages are unavailable against City or Developer as provided in Section 9.1 above; provided nothing in this Agreement precludes City from exercising its rights to enforce bonds or other security furnished by Developer to City as required in the Development Plan, or from enforcing its right to indemnification from Developer as set forth herein and requiring Developer to pay money damages for failure to do so.

(b) Due to the size, nature and scope of the Project, it may not be practical or possible to restore the Property to its natural condition once implementation of this Agreement has begun. After such implementation, Developer may be foreclosed from other choices it may have had to utilize the Property or portions thereof. Developer has invested significant time and resources and performed extensive planning and processing of the Project in agreeing to the terms of this Agreement and will be investing even more significant time and resources in implementing the Project in reliance upon the terms of this Agreement, and it is not possible to determine the sum of money that would adequately compensate Developer for such efforts.

9.3 Release. Except for non-damage remedies, including the remedy of specific performance as provided in Section 9.2, and judicial review as provided for in Section 7, Developer, for itself, its successors and assignees, hereby releases City, its officials, officers, agents and employees from any and all claims, demands, actions, or suits of any kind or nature arising out of any liability, known or unknown, present or future, including, but not limited to, any claim or liability, based or asserted, pursuant to Article I, Section 19 of the California Constitution, the Fifth Amendment of the United States Constitution, or any other law or ordinance that seeks to impose any other liability or damage, whatsoever, upon City because it entered into this Agreement or because of the terms of this Agreement.

9.4 Default of Developer. City may terminate this Agreement for any failure of Developer to perform any material duty or obligation of Developer under this Agreement, or to comply in good faith with the terms of this Agreement (hereinafter referred to as "default"); provided, however, City shall first provide written notice to Developer of default setting forth the nature of the default and demanding the Developer to cure such default. If Developer fails to cure such default within 60 days after the service of such notice or, in the event that such default cannot be cured within such 60 day period but can be cured within a longer time, has failed to commence the actions necessary to cure such default within such 60 day period and to diligently proceed to complete such actions and cure such default, City may terminate this agreement. Upon the termination of the Agreement pursuant to this Section 9.4 the City shall have the right to retain all previously received Good Faith Deposits.

9.5 Termination of Agreement for Default of City. Developer may terminate this Agreement only in the event of a default by City in the performance of a material term of this Agreement and only after providing written notice to City of default setting forth the nature of the default and the actions, if any, required by City to cure such default and, where the default can be cured, City has failed to take such actions and cure such default within 60 days after the effective date of such notice or, in the event that such default cannot be cured within such 60 day period but can be cured within a longer time, has failed to commence the actions necessary to cure such default within such 60 day period and to diligently proceed to complete such actions and cure such default in a reasonable period. Upon the termination of the Agreement pursuant to this Section 9.5, the City shall immediately return all Good Faith Deposits to the Developer.

10 THIRD PARTY LITIGATION.

10.1 General Plan Litigation. City has determined that this Agreement is consistent with its General

Plan, herein called General Plan, and Existing Land Use Regulations. Developer has reviewed the General Plan and concurs with City's determination. City shall have no liability in damages under this Agreement for any failure of City to perform under this Agreement or the inability of Developer to develop the Property as contemplated by the Development Plan of this Agreement as the result of a judicial determination that on the Effective Date, or at any time thereafter, the General Plan, Existing Regulations or the Mitigated Negative Declaration, or portions thereof, applied to the Development Plan are invalid or inadequate or not in compliance with law.

10.2 Third Party Litigation Concerning Agreement. Developer shall defend, at its expense, including attorneys' fees, indemnify, and hold harmless City, its agents, officials, officers, independent contractors, subcontractors, and employees, from any claim, action or proceeding against City, its agents, officials, officers, independent contractors, subcontractors, or employees to attack, set aside, void, or annul the approval of this Agreement or the approval of any Subsequent Development Approval granted pursuant to this Agreement. City shall promptly notify Developer of any such claim, action or proceeding, and City shall cooperate in the defense.

10.3 Indemnity. In addition to the provisions of 8.2 above, Developer shall indemnify and hold City, its officials, officers, agents and employees free and harmless from any liability whatsoever, based or asserted upon any act or omission of Developer, its officers, agents, employees, subcontractors and independent contractors, for property damage, bodily injury, or death (Developer's employees included) or any other element of damage of any kind or nature, relating to or in any way connected with or arising from the activities contemplated hereunder, including, but not limited to, the study, design, engineering, construction, completion, failure or conveyance of the public improvements, save and except claims for damages to the extent arising through the illegal activities, gross active negligence or willful misconduct of City or any of its officers, officials, agents or employees. Developer shall defend, at its expense, including attorneys' fees, City, its officers, officials, agents and employees in any action or proceeding based upon such alleged acts or omissions. City may, in its discretion, participate in the defense of any such action or proceeding.

10.4 Environmental Assurances. Developer shall indemnify and hold City, its officers, officials, agents and employees free and harmless from any liability, based or asserted, upon any act or omission of Developer, its officers, agents, employees, subcontractors, predecessors in interest, successors, assigns and independent contractors for any violation of any federal, state or local law, ordinance or regulation relating to industrial hygiene or to environmental conditions on, under or about the Property, including, but not limited to, soil and groundwater conditions, and Developer shall defend and indemnify, at its expense, including reasonable attorneys' fees, City, its officers, officials, agents and employees in any action based or asserted upon any such alleged act or omission save and except claims for damages to the extent arising through the illegal activities, gross active negligence or willful misconduct of City or any of its officers, officials, agents or employees.. City may, in its discretion, participate in the defense of any such action.

10.5 Reservation of Rights. With respect to Sections 10.2, 10.3 and 10.4 herein, City reserves the right to either (1) approve the attorney(s) that Developer selects, hires or otherwise engages to defend City hereunder, which approval shall not be unreasonably withheld, or (2) conduct its own defense, provided, however, that Developer shall reimburse City forthwith for any and all expenses incurred for such defense, including attorneys' fees, upon billing and accounting therefor. In the event City chooses Option (2), then Developer shall also be entitled to participate in the proceedings that are the subject of Sections 10.2, 10.3 or 10.4 herein.

10.6 Survival. The provisions of this Sections 10.1 through 10.6, inclusive, shall survive the termination of this Agreement.

11 MORTGAGEE PROTECTION.

The parties hereto agree that this Agreement shall not prevent or limit Developer, in any manner, at Developer's sole discretion, from encumbering the Leasehold Estate or any portion thereof or any improvement thereon by any mortgage, deed of trust or other security device securing financing with respect to the Leasehold Estate. City acknowledges that Mortgagees providing such financing may require certain Agreement interpretations and modifications and agrees upon request, from time to time, to meet with Developer and representatives of such Mortgagees to negotiate in good faith any such request for interpretation or modification. City will not unreasonably withhold its consent to any such requested interpretation or modification provided such interpretation or modification is consistent with the intent and purposes of this Agreement. Any Mortgagee of the Leasehold Estate shall be entitled to the following rights and privileges:

(a) Neither entering into this Agreement nor a breach of this Agreement shall defeat, render invalid, diminish or impair the lien of any mortgage on the Leasehold Estate made in good- faith and for value, unless otherwise required by law.

(b) The Mortgagee of any mortgage or deed of trust encumbering the Leasehold Estate, or any part thereof, which Mortgagee has submitted a request in writing to City in the manner specified herein for giving notices, shall be entitled to receive written notification from City of any default by Developer in the performance of Developer's obligations under this Agreement.

(c) If City timely receives a request from a Mortgagee requesting a copy of any notice of default given to Developer under the terms of this Agreement, City shall provide a copy of that notice to the Mortgagee within 10 days of issuing the notice of default to Developer. The Mortgagee shall have the right, but not the obligation, to cure the default during the remaining cure period allowed such party under this Agreement.

(d) Any Mortgagee who comes into possession of the Leasehold Estate, or any part thereof, pursuant to foreclosure of the mortgage or deed of trust, or deed in lieu of such foreclosure, shall take the Leasehold Estate, or part thereof, subject to the terms of this Agreement. Notwithstanding any other provision of this Agreement to the contrary, no Mortgagee shall have an obligation or duty under this Agreement to perform any of Developer's obligations or other affirmative covenants of Developer hereunder (including, without limitation, any indemnification obligation of Developer for any acts or omission arising prior to the date said Mortgagee comes into possession of the Leasehold Estate), or to guarantee such performance; provided, however, that to the extent that any covenant to be performed by Developer is a condition precedent to the performance of a covenant by City, the performance thereof shall continue to be a condition precedent to City's performance hereunder, and if further provided that any transfer or assignment by any Mortgagee in possession shall be subject to the provisions of this Agreement.

12 MISCELLANEOUS PROVISIONS.

12.1 Recordation of Agreement. This Agreement and any amendment or cancellation thereof shall be recorded with the Orange County Recorder by the City Clerk within the period required by Section 65868.5 of the Government Code.

12.2 Entire Agreement. This Agreement sets forth and contains the entire understanding and agreement of the parties, and there are no oral or written representations, understandings or ancillary covenants, undertakings or agreements that are not contained or expressly referred to herein. No testimony or evidence of any such representations, understandings or covenants shall be admissible in

any proceeding of any kind or nature to interpret or determine the terms or conditions of this Agreement.

12.3 Severability. If any term, provision, covenant or condition of this Agreement shall be determined invalid, void or unenforceable, the remainder of this Agreement shall not be affected thereby to the extent such remaining provisions are not rendered impractical to perform taking into consideration the purposes of this Agreement. Notwithstanding the foregoing, the provision of the public benefits set forth in Section 5 of this Agreement, including the payment of the fees set forth therein, are essential elements of this Agreement and City would not have entered into this Agreement but for such provisions, and therefore in the event such provisions are determined to be invalid, void or unenforceable, this entire Agreement shall be null and void and of no force and effect whatsoever.

12.4 Interpretation and Governing Law. This Agreement and any dispute among hereunder shall be governed and interpreted in accordance with the laws of the State of California. This Agreement shall be construed as a whole according to its fair language and common meaning to achieve the objectives and purposes of the parties hereto, and the rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be employed in interpreting this Agreement, all parties having been represented by counsel in the negotiation and preparation hereof.

12.5 Operating Memoranda. The parties acknowledge that circumstances may arise which demonstrate that changes are appropriate with respect to the details and performance of the parties under this Agreement. The parties desire to retain a certain degree of flexibility with respect to those items covered in general terms under this Agreement. If and when the parties mutually find that changes, adjustments, or clarifications that are in substantial conformance with the original Project are appropriate to further the intended purposes of this Agreement, they may, unless otherwise required by law, effectuate such changes, adjustments, or clarifications without amendment to this Agreement through one or more operating memoranda mutually approved by the parties. The Operating Memoranda may be approved on behalf of the City by the City Administrator of the City, or such person designated in writing by the City Administrator, and by any corporate officer or other person designated for such purpose in a writing signed by a corporate officer on behalf of Developer. After execution of an Operating Memoranda it shall be attached hereto as an addenda and become a part hereof. Unless otherwise required by law or by this Agreement, no such changes, adjustments, or clarifications shall require prior notice or hearing, public or otherwise. Notwithstanding the foregoing, in no event shall any Operating Memoranda reduce the Developer Impact Fees approved by this Agreement.

12.6 Section Headings. All section headings and subheadings are inserted for convenience only and shall not affect any construction or interpretation of this Agreement.

12.7 Singular and Plural. As used herein, the singular of any word includes the plural.

12.8 Joint and Several Obligations. If at any time during the term of this Agreement the Property is owned, in whole or in part, by more than one Developer (collectively the "Obligors"), all obligations of such Obligors under this Agreement shall be joint and several, and the default of any such Obligors shall be the default of all such Obligors. Notwithstanding the foregoing, no Obligors of a single rentable unit that has been finally subdivided and such rentable unit leased to a member of the general public or other ultimate user, shall have any further obligation under this Agreement with respect to such rentable unit.

12.9 Time of Essence. Time is of the essence in the performance of the provisions of this Agreement as to which time is an element.

12.10 Waiver. Failure by a party to insist upon the strict performance of any of the provisions of this Agreement by the other party, or the failure by a party to exercise its rights upon the default of the other party, shall not constitute a waiver of such party's right to insist and demand strict compliance by the other party with the terms of this Agreement thereafter.

12.11 No Third-Party Beneficiaries. This Agreement is made and entered into for the sole protection and benefit of the parties and their successors and assigns. No other person shall have any right of action based upon any provision of this Agreement.

12.12 Force Majeure. Neither party shall be deemed to be in default where failure or delay in performance of any of its obligations under this Agreement is caused by floods, earthquakes, other acts of God, pandemics, fires, wars, riots or similar hostilities, strikes and other labor difficulties beyond the party's control, (including the party's employment force), government regulations, court actions (such as restraining orders or injunctions), or other causes beyond the party's control. If any such events shall occur, the term of this Agreement and the time for performance by either party of any of its obligations hereunder may be extended by the written agreement of the parties for the period of time that such events prevented such performance, provided that the term of this Agreement shall not be extended under any circumstances for more than 1 years.

12.13 Mutual Covenants. The covenants contained herein are mutual covenants and also constitute conditions to the concurrent or subsequent performance by the party benefited thereby of the covenants to be performed hereunder by such benefited party.

12.14 Successors in Interest. The burdens of this Agreement shall be binding upon, and the benefits of this Agreement shall inure to, all successors in interest to the parties to this Agreement. All provisions of this Agreement shall be enforceable as equitable servitudes and constitute covenants running with the land. Each covenant to do or refrain from doing some act hereunder with regard to development of the Property: (a) is for the benefit of and is a burden upon every portion of the Property; (b) runs with the Property and each portion thereof; and, (e) is binding upon each party and each successor in interest during ownership of the Property or any portion thereof.

12.15 Counterparts. This Agreement may be executed by the parties in counterparts, which counterparts shall be construed together and have the same effect as if all of the parties had executed the same instrument.

12.16 Jurisdiction and Venue. Any action at law or in equity arising under this Agreement or brought by a party hereto for the purpose of enforcing, construing or determining the validity of any provision of this Agreement shall be filed and tried in the Superior Court of the County of Orange, State of California, and the parties hereto waive all provisions of law providing for the filing, removal or change of venue to any other court.

12.17 Project as a Private Undertaking. It is specifically understood and agreed by and between the parties hereto that the development of the Project is a private development, that neither party is acting as the agent of the other in any respect hereunder, and that each party is an independent contracting entity with respect to the terms, covenants and conditions contained in this Agreement.

12.18 Further Actions and Instruments. Each of the parties shall cooperate with and provide reasonable assistance to the other to the extent contemplated hereunder in the performance of all obligations under this Agreement and the satisfaction of the conditions of this Agreement. Upon the request of either party at any time, the other party shall promptly execute, with acknowledgment or affidavit if reasonably required, and file or record such required instruments and writings and take any

actions as may be reasonably necessary under the terms of this Agreement to carry out the intent and to fulfill the provisions of this Agreement or to evidence or consummate the transactions contemplated by this Agreement.

12.19 Eminent Domain. No provision of this Agreement shall be construed to limit or restrict the exercise by City of its power of eminent domain.

12.20 Agent for Service of Process. In the event Developer is not a resident of the State of California or it is an association, partnership or joint venture without a member, partner or joint venture resident of the State of California, or it is a foreign corporation, then in any such event, Developer shall file with the Director of Development Services, upon its execution of this Agreement, a designation of a natural person residing in the State of California, giving his or her name, residence and business addresses, as its agent for the purpose of service of process in any court action arising out of or based upon this Agreement, and the delivery to such agent of a copy of any process in any such action shall constitute valid service upon Developer. If for any reason service of such process upon such agent is not feasible, then in such event Developer maybe personally served with such process out of Orange County and such service shall constitute valid service upon Developer. Developer is amenable to the process so served, submits to the jurisdiction of the Court referenced in Section 12.16 so obtained and waives any and all objections and protests thereto. Developer for itself, assigns and successors hereby waive the provisions of The Hague Convention (Convention on the Service Abroad of Judicial and Extra Judicial Documents in Civil or Commercial Matters, 20 U.S.T. 361, T.I.A.S. No. 6638).

12.21 Authority to Execute. The person or persons executing this Agreement on behalf of Developer warrants and represents that he or she or they has/have the authority to execute this Agreement on behalf of such corporation, partnership or business entity and warrants and represents that he or she or they has/have the authority to bind Developer to the performance of its obligations hereunder.

12.22 Conflict with Transit Oriented Development. Notwithstanding any other provision of this Agreement, in the event of any conflict between any provision of this Agreement and any provision of Transient Oriented Development Standards and Exhibit "D" the conflicting provision of this Agreement shall supersede and control.

12.23 Minor Modifications to Development Plan. Minor modifications to the Development Plan may be approved by the City Administrator, or his or her designee, evidenced by a written memorandum from the City, which shall not require recordation but shall be retained by the City as a public record. A "Minor Modification" shall not increase unit count or reduce parking spaces, or building heights.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year set forth below.

[SIGNATURES FOLLOW]

"DEVELOPER"

_____, L.P., a
California limited partnership
By: _____ Inc., ,
a California corporation, it administrative general partner

Attest:

"CITY"

THE CITY OF PLACENTIA,
a municipal corporation

_____
City Clerk

By: _____
Name:_____
Title: City Administrator

APPROVED AS TO FORM:

By: _____
Name:_____
Title: City Attorney

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Signature of Notary (Seal)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, before me, _____,
(insert name and title of the officer)

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

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____

Signature of Notary (Seal)

EXHIBIT "A"

LEGAL DESCRIPTION OF PROPERTY

LEGAL DESCRIPTION OF PARCELS BEING MERGED

LOTS 3, 4, 5, 6, 7, 8, AND 9 IN BLOCK G OF THE TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38, OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THAT PORTION OF SAID LOT 8 LYING WESTERLY OF THE EASTERLY LINE OF MELROSE AVENUE, HAVING AN EASTERLY HALF-WIDTH OF 40.00 FEET;

ALSO EXCEPT ANY PORTION OF SAID LAND WITHIN THE DEDICATED AREA OF CROWTHER AVENUE

ALSO EXCEPTING THEREFROM THAT PORTION AS DESCRIBED IN THE DEED TO THE CITY OF PLACENTIA RECORDED JUNE 26, 1985 AS INSTRUMENT NO. 85-234338 OF OFFICIAL RECORDS.

TOGETHER WITH A PARCEL OF LAND LYING IN LOT 2 OF BLOCK G OF THE KRAEMER TRACT AS SAID TRACT IS SHOWN ON MAP RECORDED IN BOOK 12, PAGE 87 OF MISCELLANEOUS RECORDS OF LOS ANGELES COUNTY, DESCRIBED AS FOLLOWS:

THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA, AND SANTA FE RAILWAY COMPANY) RECORDED IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6, BLOCK G OF THE TOWNSITE OF PLACENTIA, AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

.

LEGAL DESCRIPTION OF MERGED PARCEL

PARCEL A:

LOTS 3, 4, 5, 6, 7, 8, AND 9 IN BLOCK G OF THE TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38, OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THAT PORTION OF SAID LOT 8 LYING WESTERLY OF THE EASTERLY LINE OF MELROSE AVENUE, HAVING AN EASTERLY HALF-WIDTH OF 40.00 FEET;

ALSO EXCEPT ANY PORTION OF SAID LAND WITHIN THE DEDICATED AREA OF CROWTHER AVENUE

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THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA, AND SANTA FE RAILWAY COMPANY) RECORDED IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6, BLOCK G OF THE TOWNSITE OF PLACENTIA, AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

PREPARED UNDER MY SUPERVISION

David O. Knell 10-13-2016

DAVID O. KNELL PLS 5301 DATE



EXHIBIT "B"

MAP OF PROPERTY

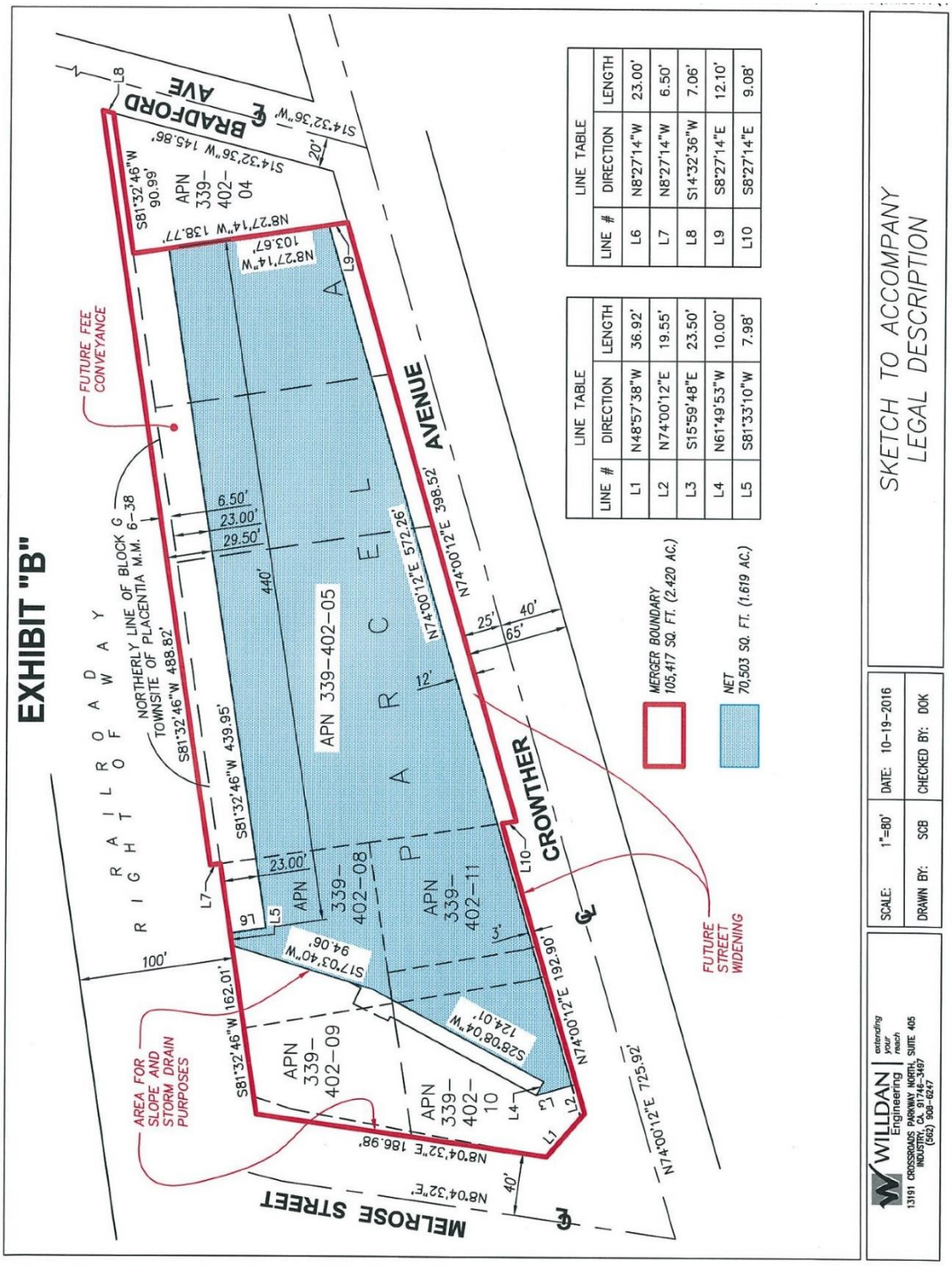


EXHIBIT "C"

DEVELOPMENT APPROVALS

DEVELOPMENT PLAN REVIEW NO. DPR 2020-03

DEVELOPMENT AGREEMENT NO. DA 2020-01 AND RELATED GROUND LEASE AGREEMENT

ADDENDUM TO MITIGATED NEGATIVE DECLARATION MND NO. 2017-01

EXHIBIT "D"

LAND USE REGULATIONS

Transit Oriented Development Packing House District Zone (Chapter 23.111 of the Placentia Municipal Code)

Transit Oriented Development Streetscape Master Plan adopted by Resolution No. R-2017-15

Public Realm Standards adopted by Resolution No. R-2017-15

City of Placentia General Plan

All other applicable provisions of the Placentia Municipal Code

EXHIBIT "E"

SUMMARY OF TOD DEVELOPMENT IMPACT FEES

Type of Development Impact Fees	**Per Unit**	**Total (189 units)**
Traffic Impact Fee (Residential)	$1,219	$230,391
Sewer Impact Fee (Residential)	$3,379	$638,631
Streetscape Fee (Residential)	$5,987	$1,131,543
Traffic Impact Fee (Retail)	$2.05(sq ft)	$3,075
Sewer Impact Fee (Retail)	$3.07 (sq ft)	$4,605
Streetscape Impact Fee (Retail)	$5.55 (sq ft)	$8,325
Traffic Impact Fee (Office)	$2.93 (sq ft)	$4,395
Sewer Impact Fee (Office)	$4.61 (sq ft)	$6,915
Streetscape Impact Fee (Office)	$6.64 (sq ft)	$9,960
Public Safety Impact Fee (Residential)	$979	$185,031
Public Safety Impact Fee (Office)	$1.03 (sq ft)	$1,545
Public Safety Impact Fee (Retail)	$0.72 (sq ft)	$1,080
Affordable Housing (Residential)	$2,026	$382,914**
Park and Recreation Fee	$2,845	$537,705
Quimby In Lieu	$4,282	$0
Total Development Impact Fees		**$2,763,201 not including****

**May be waived Pursuant to Section 5.3 of this Development Agreement

SUMMARY OF COMMUNITY FACILITIES DISTRICT (CFD's) ANNUAL ASSESSMENT

Type of CFD's	**Per Unit**	**Total (189 units)**
TOD Services CFD	$127	$24,003
Public Safety CFD 2014-01	$206.64	$39,054.96
CFD – TOD Retail	$0.09 (sq ft)	$94.50
CFD – TOD Office	$0.13 (sq ft)	$305.89
Total Community Facilities District Annual Assessment		$63,458.35

EXHIBIT "F"

STREETSCAPE IMPROVEMENTS AREA

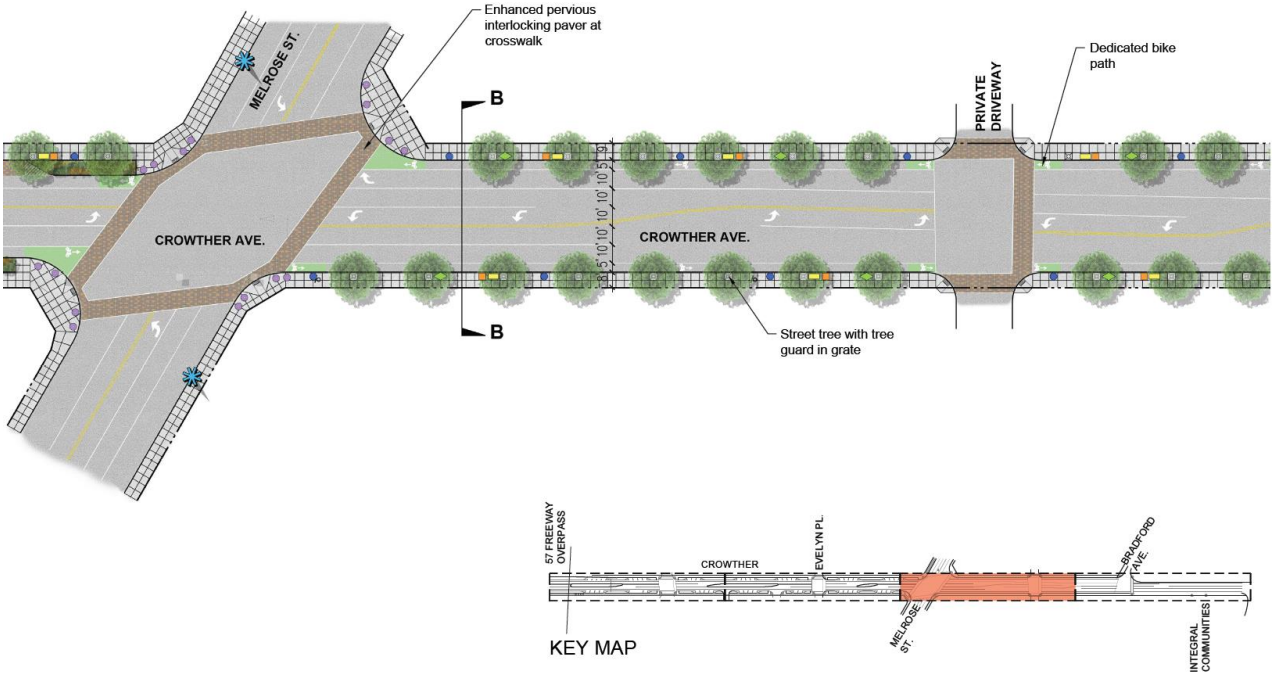


EXHIBIT "F1"

OFF SITE STREETSCAPE IMPROVEMENTS AREA

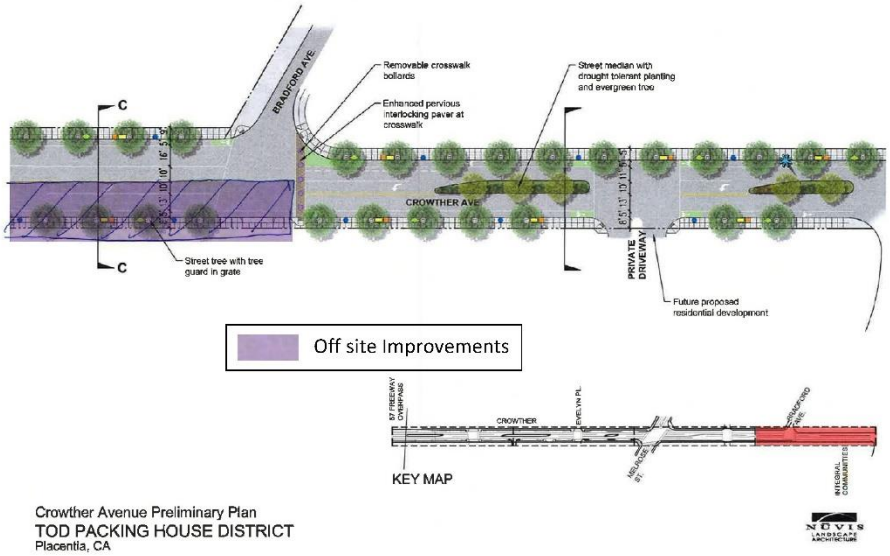


EXHIBIT "F2"

OFF SITE STREETSCAPE IMPROVEMENTS AREA

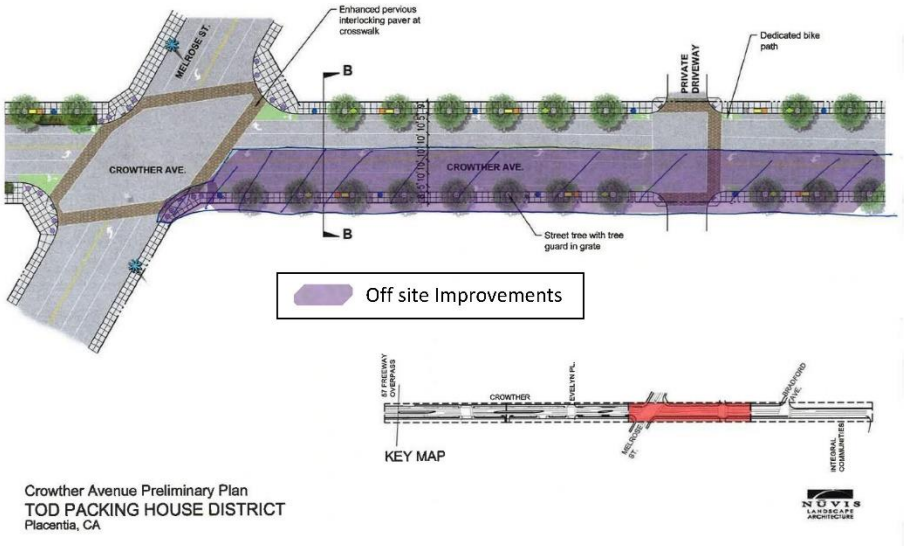
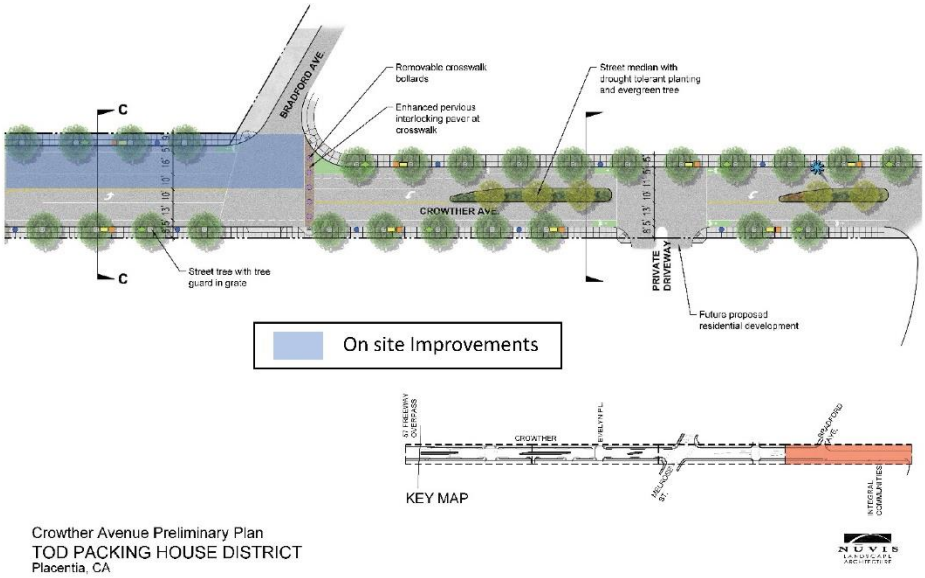


EXHIBIT "F3"

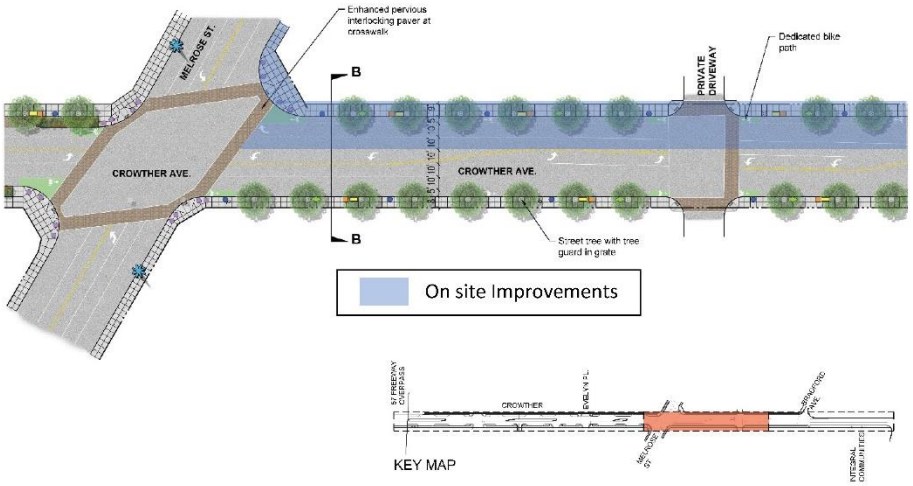
ON SITE STREETSCAPE IMPROVEMENTS AREA



Crowther Avenue Preliminary Plan
TOD PACKING HOUSE DISTRICT
Placentia, CA

EXHIBIT "F4"

ON SITE STREETSCAPE IMPROVEMENTS AREA



Crowther Avenue Preliminary Plan
TOD PACKING HOUSE DISTRICT
Placentia, CA

EXHIBIT "G"

SCHEDULE OF PERFORMANCE

Action	**Deadline**
Planning Commission Approval of Entitlements, DA and GLA	May 11, 2021
ENA Expires	May 12, 2021
City Council Meeting (1st Reading of Entitlements, DA and GLA	May 18, 2021
Outside date for Developer's Commencement of Production of Construction Drawings	October 29, 2021
First Submittal of Working Drawings for Plan Check	9 months after Council Approval of Entitlements
Written City Comments Returned on Submittal of Working Drawings (Plan Check)	30 days after each submittal[2]
Second Resubmittal of Working Drawings for Plan Check	30 days after receipt of each set of comments from City[3]
Project Construction Loan Closing	15 months after receipt of a Feasibility Threshold Funding Program Award subject to a 12 month extension of the Project was not received an allocation private activity tax exempt bond volume cap prior to the expiration of the initial 15 month period
Payment of all development impact fees	Issuance of First Development Permit
Lease Term of 66 years (additional 33-year option) Commences	Project Construction Loan Closing
Payment of the initial Rent Payment of Property as contemplated in the Ground Lease	Issuance of First Grading Permit
Construction Commences (e.g. footings, framing, underground plumbing, etc.)	Within 15 days of Issuance of First Development Permit
Successfully passing Building Inspection	No more than 90 days shall lapse between passing Building Inspections
Issuance of First Certificate of Occupancy	To be determined and agreed upon prior to start of construction
Construction completed and issuance of Final Certificate of Occupancy	No later than 36 months from date of First Building Inspection

[2] Applies to any resubmittals made after the First Submittal.

[3] Developer will resubmit working drawings to respond to City's comments within this time period, or within such longer time as agreed to by City considering nature and extent of corrections required.

Payment of the second installment of the initial Rent Payment of the Property as contemplated in the Ground Lease	Issuance of the Final Certificate of Occupancy but no more than 28 Months from issuance of First Building Inspection
Annual Ground Lease Payment of Property Begins in the amount of $10,000. Payment made on July 1st of every lease year. Adjusted by CPI every five years thereafter	Beginning in the 8th Lease Year after Issuance of the First Certificate of Occupancy or Final Building Inspection Approval

EXHIBIT "H"

FEASIBILITY THRESHOLD FUNDING PROGRAM AWARD SCHEDULE

First Round				
Milestone	Plan A: AHSC + IIG	Plan B: AHSC + State Tax Credits	Plan C: CalHFA MIP + State Tax Credits	Notes
AHSC NOFA Release	2/26/2021	2/26/2021		
IIG NOFA Release	4/23/2021	4/23/2021		IIG exact dates yet to be announced
Applications due to AHSC				
Application due to IIG	7/6/2021			IIG exact dates yet to be announced
Application due to CalHFA MIP			3/15/2022	based on 2021 timeline
AHSC Award Date				
IIG Award Date	12/21/2021			IIG exact dates yet to be announced
CalHFA MIP Award Date			5/6/2022	based on 2021 timeline
Submit application to CDLAC for bond and state tax credit allocation if applicable	5/13/2022	5/13/2022	5/13/2022	based on 2021 timeline
CDLAC Award Date	8/11/2022	8/11/2022	8/11/2022	based on 2021 timeline
Start Construction Deadline	2/7/2023	2/7/2023	2/7/2023	180 days from bond allocation
Finish Construction	6/7/2025	6/7/2025	6/7/2025	based on 28 month construction period

Second Round				
Milestone	Plan A: AHSC + IIG	Plan B: AHSC + State Tax Credits	Plan C: CalHFA MIP + State Tax Credits	Notes
AHSC NOFA Release	2/28/2022	2/28/2022		based on 2021 timeline
IIG NOFA Release	4/25/2022	4/25/2022		based on 2021 timeline
Applications due to AHSC	6/8/2022	6/8/2022		based on 2021 timeline
Application due to IIG	7/6/2022			based on 2021 timeline
Application due to CalHFA MIP			3/15/2023	based on 2021 timeline
AHSC Award Date	10/28/2022	10/28/2022		
IIG Award Date	12/21/2022			based on 2021 timeline
CalHFA MIP Award Date			5/8/2023	based on 2021 timeline
Submit application to CDLAC for bond and state tax credit allocation if applicable	2/3/2023	2/3/2023	5/15/2023	based on 2021 timeline
CDLAC Award Date	4/28/2023	4/28/2023	8/11/2023	based on 2021 timeline
Start Construction Deadline	10/25/2023	10/25/2023	2/7/2024	180 days from bond allocation
Finish Construction	2/25/2026	2/25/2026	6/7/2026	based on 28 month construction period

Third Round				
Milestone	Plan A: AHSC + IIG	Plan B: AHSC + State Tax Credits	Plan C: CalHFA MIP + State Tax Credits	Notes
AHSC NOFA Release	2/24/2023	2/24/2023		based on 2021 timeline
IIG NOFA Release	4/24/2023	4/24/2023		based on 2021 timeline
Applications due to AHSC	6/8/2023	6/8/2023		based on 2021 timeline
Application due to IIG	7/6/2023			based on 2021 timeline
Application due to CalHFA MIP			3/15/2024	based on 2021 timeline
AHSC Award Date	10/28/2023	10/28/2023		
IIG Award Date	12/21/2023			based on 2021 timeline
CalHFA MIP Award Date			5/6/2024	based on 2021 timeline
Submit application to CDLAC for bond and state tax credit allocation if applicable	2/2/2024	2/2/2024	5/13/2024	based on 2021 timeline
CDLAC Award Date	4/29/2024	4/29/2024	8/12/2024	based on 2021 timeline
Start Construction Deadline	10/26/2024	10/26/2024	2/8/2025	180 days from bond allocation
Finish Construction	2/26/2027	2/26/2027	6/8/2027	based on 28 month construction period

Fourth Round				
Milestone	Plan A: AHSC + IIG	Plan B: AHSC + State Tax Credits	Plan C: CalHFA MIP + State Tax Credits	Notes
AHSC NOFA Release	2/26/2024	2/26/2024		based on 2021 timeline
IIG NOFA Release	4/23/2024	4/23/2024		based on 2021 timeline
Applications due to AHSC	6/7/2024	6/7/2024		based on 2021 timeline
Application due to IIG	7/5/2024			based on 2021 timeline
Application due to CalHFA MIP			3/14/2025	based on 2021 timeline
AHSC Award Date	10/28/2024	10/28/2024		
IIG Award Date	12/20/2024			based on 2021 timeline
CalHFA MIP Award Date			5/6/2025	based on 2021 timeline
Submit application to CDLAC for bond and state tax credit allocation if applicable	2/4/2025	2/4/2025	5/13/2025	based on 2021 timeline
CDLAC Award Date	4/28/2025	4/28/2025	8/11/2025	based on 2021 timeline
Start Construction Deadline	10/25/2025	10/25/2025	2/7/2026	180 days from bond allocation
Finish Construction	2/25/2028	2/25/2028	6/7/2028	based on 28 month construction period

Fifth Round				
Milestone	Plan A: AHSC + IIG	Plan B: AHSC + State Tax Credits	Plan C: CalHFA MIP + State Tax Credits	Notes
AHSC NOFA Release	2/26/2025	2/26/2025		based on 2021 timeline
IIG NOFA Release	4/23/2025	4/23/2025		based on 2021 timeline
Applications due to AHSC	6/9/2025	6/9/2025		based on 2021 timeline
Application due to IIG	7/1/2025			based on 2021 timeline
Application due to CalHFA MIP			3/16/2026	based on 2021 timeline
AHSC Award Date	10/28/2025	10/28/2025		
IIG Award Date	12/19/2025			based on 2021 timeline
CalHFA MIP Award Date			5/6/2026	based on 2021 timeline
Submit application to CDLAC for bond and state tax credit allocation if applicable	2/4/2026	2/4/2026	5/13/2026	based on 2021 timeline
CDLAC Award Date	4/28/2026	4/28/2026	8/11/2026	based on 2021 timeline
Start Construction Deadline	10/25/2026	10/25/2026	2/7/2027	180 days from bond allocation
Finish Construction	2/25/2029	2/25/2029	6/7/2029	based on 28 month construction period

GROUND LEASE

THIS GROUND LEASE ("**Lease**") is made and effective as of the ___ day of _____ ("**Effective Date**"), by and between the CITY OF PLACENTIA, a political subdivision of the State of California (hereinafter called "**City**") and _____, a California limited partnership (hereinafter called "**Tenant**") (each a "**Party**" and collectively, the "**Parties**").

Recitals

A. City is the fee owner of the Premises (as hereinafter defined); and

B. Tenant and City desire that Tenant shall ground lease the Premises from City on the terms set forth herein; and

C. Tenant and City have entered into a Development Agreement relative to the construction of Tenant's project which shall be enforceable concurrently with this Lease, the Parties intend that all of the terms and conditions of the Development Agreement and the Lease shall bind the Parties, and should conflicting provisions of this Lease or the Development Agreement occur the more restrictive term shall apply unless waived in writing by the benefited Party; and

D. The Project consists of the development of 189 multiple-family residential dwelling units with an overall density of 89 dwelling units (DU) per acre, as well as related amenities as set forth in greater detail in the Development Agreement and the Project Entitlements as approved by the Planning Commission and City Council on approximately 1.619 net acres located in the City of Placentia along the north side of West Crowther Avenue, just east of South Melrose Street, as fully described in Exhibit A; and

E.

F. City and Tenant have jointly agreed to enter into this Lease as of the date set forth above.

NOW, THEREFORE, in consideration of the above recitals which are hereby incorporated into this Lease by reference, and mutual covenants and agreements hereinafter contained, City and Tenant mutually agree to the following:

ARTICLE I
DEFINITIONS

I.1 **Definitions**: The following defined terms used in this Lease shall have the meanings set forth below. Other terms are defined in other provisions of this Lease, and shall have the definitions given to such terms in such other provisions.

I.1.1. "**Additional Rent**" shall have the meaning set forth in Section 4.9.

I.1.2. "**Adjustment Date**" shall have the meaning set forth in Section 4.2.

I.1.3. "**Affiliate**" means, with respect to any person (which as used herein includes an individual, trust or entity), any other person which directly or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such person.

I.1.4. "**Aggregate Transfer**" shall refer to the total percentage of the shares of stock, partnership interests, membership interests, or any other equity interests (which other equity interests constitute "Beneficial Residual Interests" in Tenant) transferred or assigned in one transaction or a series of related transactions (other than an Excluded Transfer) occurring since the latest of (a) the Effective Date, (b) the execution by Tenant of this Lease, or (c) the most recent Tenant Ownership Change; provided, however, that there shall be no double counting of successive transfers of the same interest in the case of a transaction or series of related transactions involving successive transfers of the same interest. Isolated and unrelated transfers shall not be treated as a series of related transactions for purposes of the definition of "Aggregate Transfer."

I.1.5. "**Appraised Value**" means the agreed upon value of the Premises determined by an Appraisal or Appraisals in accordance with Article IV, hereof.

I.1.6. "**Base Rent**" means the annual rent payment set forth in Section 4.2.

I.1.7. "**City Council**" means the City Council of the City of Placentia, a political subdivision of the State of California.

I.1.8. "**Certificate of Occupancy**" means a temporary or final certificate of occupancy (or other equivalent entitlement, however designated) which entitles Tenant to commence normal operation and occupancy of the Improvements.

I.1.9. "**Claims**" means liens, claims, demands, suits, judgments, liabilities, damages, fines, losses, penalties, costs and expenses (including without limitation reasonable attorney's fees and expert witness costs, and costs of suit), and sums reasonably paid in settlement of any of the foregoing.

I.1.10. "**Commencement Date**" means the earlier of (i) date the first building permit for construction of improvements on the Property is issued by the City of Placentia or (ii) the closing of Leasehold Mortgage secured in accordance with the terms hereof for the purpose of financing the development and construction of the Improvements (the "Commencement Date").

I.1.11. "**Completion Deadline**" means the date which is five (5) year following the Commencement Date.

I.1.12. "**City**" means the City of Placentia, a political subdivision of the State of California. Any reference to the City herein, unless expressly stated to the contrary, shall refer to the City solely in its capacity as owner of the Premises and not the City in its capacity as a land use or other governmental approval authority.

I.1.13. "**City Administrator**" means the City Administrator of the City, or designee, or upon written notice to Tenant, such other person as may be designated by the City Council.

I.1.14. "**City's Fee Interest**" means all of City's interest in this Lease and City's reversionary interest in the Premises and Improvements.

I.1.15. "**City Parties**" means the City and City's Affiliates, agents, employees, members, officers, directors and attorneys.

I.1.16. "**CPI Index**" means the CPI Index for All Urban Consumers, All Items (1982-84=100) for Los Angeles-Anaheim-Riverside, as published by the United States Department of Labor, Bureau of Labor Statistics. If the base year is changed, the CPI Index shall be converted in accordance with the conversion factor published by the United States Department of Labor, Bureau of Labor Statistics.

I.1.17. "**DA**" means that certain Development Agreement for the Property between the City and the Tenant, dated June 1, 2021.

I.1.18. "**Effective Date**" is defined in the introductory paragraph to this Lease.

I.1.19. "**Effective Gross Income**" means the actual rental income Tenant receives from renting apartments units, retail spaces, storage spaces and parking space plus any other income Tenant receives from operating the Project.

I.1.20. "**Event of Default**" is defined in Section 12.1 below.

I.1.21. "**Excluded Financing**" shall mean:

(a) Leasehold Mortgage secured in accordance with the terms hereof and for the purpose of financing the development and construction of the Improvements, provided that any such Leasehold Mortgage shall not be cross collateralized with any other asset;

(b) A Financing Event that refinances a Leasehold Mortgage used to finance the development and construction of the Improvements, or a Leasehold Mortgage from any previously approved financing, provided that any such Leasehold Mortgage shall not be cross collateralized with any other asset, nor be in an amount exceeding the original Leasehold Mortgage amount;

(c) Any Financing Event that occurs in connection with a simultaneous Tenant Ownership Change; or

(d) With respect to a Financing Event secured by Ownership Interests, any Financing Event, the foreclosure of the security interests of which would not result in an Aggregate Transfer.

I.1.22. "**Excluded Transfer**" shall mean any of the following, and must include prior approval by the City

(a) A transfer by any direct or indirect partner, shareholder, or member of Tenant (or of a limited partnership, corporation, or limited liability company that is a direct or indirect owner in Tenant's ownership structure) as of the Effective Date or the date on which a Tenant Ownership Change occurred as to the interest transferred, to any other direct or indirect partner, shareholder, or member of Tenant (or of a limited partnership, corporation, or limited liability company that is a direct or indirect owner in Tenant's ownership structure) as of the Effective Date, including in each case to or from a trust for the benefit of the partner or member of Tenant who is an individual or for the benefit of the immediate family of any direct or indirect partner or member of Tenant who is an individual;

(b) A transfer to a spouse in connection with a property settlement agreement or decree of dissolution of marriage or legal separation;

(c) A transfer of ownership interests in Tenant or in constituent entities of Tenant (i) to a member of the immediate family of the transferor (which for purposes of this Lease shall be limited to the transferor's spouse, children, grandchildren or great-grandchildren, parents and siblings); (ii) to a trust for the benefit of a member of the transferor or immediate family of the transferor; (iii) from such a trust or any trust that is an owner in a constituent entity of Tenant as of the Effective Date, to the settlor or beneficiaries of such trust or to one or more other trusts created by or for the benefit of any of the foregoing persons, whether any such transfer described in this subsection is the result of gift, devise, intestate succession, or operation of law; or (iv) in connection with a pledge by any partners or members of a constituent entity of Tenant to an affiliate of such partner or member;

(d) A transfer of a beneficial interest resulting from public trading in the stock or securities of an entity, when such entity is a corporation or other entity whose stock and/or securities is/are traded publicly on a national stock exchange or traded in the over-the-counter market and the price for which is regularly quoted in recognized national quotation services;

(e) A mere change in the form, method, or status of ownership (including, without limitation, the creation of single-purpose entities) as long as the ultimate beneficial ownership remains the same as of the Effective Date, or is otherwise excluded in accordance with subsections (i) – (iv) above;

(f) Any assignment of the Lease by Tenant to an Affiliate of Tenant in which there is no change to the direct and indirect beneficial ownership of the leasehold interest;

(g) A direct or indirect transfer of any limited partner interest in Tenant so long as an USA Entity remains a general partner of Tenant;

(h) The removal of one or more general partners of Tenant by a Tax Credit Equity Investor in accordance with the terms and conditions of the Organizational Documents of Tenant; or

(i) The subleasing of residential, commercial and/or retail space to subtenants of Tenant.

I.1.23. "**Financing Event**" shall mean any financing or refinancing consummated by Tenant or by the holders of Ownership Interests that is not an "Excluded Financing," whether with private or institutional investors or lenders, when such financing or refinancing results in any grant, pledge, assignment, transfer, mortgage, hypothecation, grant of security interest, or other encumbrance, of or in all or any portion of (A) the leasehold interest of Tenant's or (B) Ownership Interests.

I.1.24. "**Force Majeure Event**" is defined in Article XV below.

I.1.25. "**Ground Lease Appraisal**" means the valuation for purposes of establishing the Base Rent for the Extension Term.

I.1.26. "**Hazardous Material(s)**" shall have the meaning set forth in Section 5.5.

I.1.27. "**Improvements**" means and includes all buildings (including above-ground and below ground portions thereof, and all foundations and supports), building systems and equipment (such

as HVAC, electrical and plumbing equipment), physical structures, fixtures, hardscape, paving, curbs, gutters, sidewalks, fences, landscaping and all other improvements of any type or nature whatsoever now or hereafter made or constructed on the Premises. The term Improvements means the Initial Improvements and any replacement improvements constructed in accordance with the terms of this Lease.

I.1.28. "**Initial Improvements**" means the improvements first constructed by Tenant on the Premises at its sole cost and expense in accordance with the DA and Article VI hereof as more particularly described in **Exhibit D** attached hereto and incorporated herein.

I.1.29. "**Institutional Lender**" shall mean: (a) a bank, savings bank, investment bank, savings and loan association, mortgage company, insurance company, trust company, commercial credit corporation, real estate investment trust, pension trust or real estate mortgage investment conduit; or (b) some other type of lender engaged in the business of making commercial loans who is licensed by the State of California, provided that such other type of lender has total assets of at least $2,000,000,000 and capital/statutory surplus or shareholder's equity of at least $500,000,000 (or a substantially similar financial capacity if the foregoing tests are not applicable to such type of lender).

I.1.30. "**Interest Rate**" means the highest rate of interest permissible under the Laws not to exceed the rate of ten percent (10%) per annum.

I.1.31. "**Laws**" means all laws, codes, ordinances, statutes, orders and regulations now or hereafter made or issued by any federal, state, City, local or other governmental agency or entity that are binding on and applicable to the Premises and Improvements.

I.1.32. "**Lease**" means this Lease (including any and all addenda, amendments and exhibits hereto), as now or hereafter amended.

I.1.33. "**Leasehold Estate**" is defined in Section 18.1.1.

I.1.34. "**Leasehold Foreclosure Transferee**" is defined in Section 18.1.2.

I.1.35. "**Leasehold Mortgage**" is defined in Section 18.1.3.

I.1.36. "**Leasehold Mortgagee**" is defined in Section 18.1.4.

I.1.37. "**New Lease**" is defined in Section 18.10.1.

I.1.38. "**Ownership Interests**" shall mean the stock, partnership interests, membership interests, or other direct or indirect ownership interests in Tenant, including Beneficial Residual Interests.

I.1.39. "**Permitted Use**" means any lawful purpose permitted in accordance with the Laws.

I.1.40. "**person**" includes firms, associations, partnerships, joint ventures, trusts, corporations and other legal entities, including public or governmental bodies, agencies or instrumentalities, as well as natural persons.

I.1.41. "**Premises**" and "Property" means that certain real property containing approximately _____ square feet [acres] with an address of 207-209 West Crowther Avenue in the City, together with all easements, rights and privileges appurtenant thereto, to be leased to Tenant pursuant to this Lease and on which Tenant intends to construct the Improvements. The legal description of the Premises is attached hereto as **Exhibit A**. A map depicting the approximate boundaries of the Premises is attached hereto as **Exhibit A-1**.

I.1.42. **"Project"** is defined in Recital D of this Lease.

I.1.43. "**Rent**" means and includes the Base Rent and Additional Rent payable by Tenant under this Lease. A schedule of all rent due and adjustment dates is included as Exhibit B to this Lease.

I.1.44. "**Risk Manager**" means the Deputy City Administrator or upon written notice to Tenant, such other person as may be designated by the City Administrator.

I.1.45. "**Tax Credits**" means federal and/or state low income housing tax credits.

I.1.46. "**Tax Credit Equity Investor**" means, to the extent the Project is financed in whole or in part using the proceeds of Tax Credits, a limited partner of Tenant.

I.1.47. "**Taxes**" has the meaning set forth in Section 4.9.2.

I.1.48. "**Tenant Group**" means Tenant and Tenant's Affiliates, agents, employees, members, officers, directors and attorneys.

I.1.49. "**Tenant Ownership Change**" shall mean (a) any transfer by Tenant of the leasehold interest in this Lease or (b) any transaction or series of related transactions that constitute an "Aggregate Transfer" of twenty-five percent (25%) of the "Beneficial Residual Interests" in Tenant, in each case that is not an "Excluded Transfer." Any transfer of an Ownership Interest owned directly or through one or more layers of constituent partnerships, corporations, limited liability companies, or trusts shall be treated as a transfer of the Beneficial Residual Interests, the owners of which directly or indirectly own such Ownership Interest. Tenant Ownership Change must be approved by the City prior to any transfers.

I.1.50. "**Title Exceptions**" means all matters shown on the attached **Exhibit C**.

I.1.51. "**Transfer**" has the meaning set forth in Section 11.1.1.

I.1.52. "**Transfer Notice**" has the meaning set forth in Section 11.4.

I.1.53. "**USA Entity**" means USA Properties Fund, Inc., a California corporation, or any entity in which USA Properties Fund, Inc. owns at least 51% of the equity interests and has control of management and operations.

I.1.54. "**Utility Costs**" shall have the meaning set forth in Section 4.6.6.

I.1.55. "**Work**" means both Tenant's construction activity with respect to the Improvements, including permitted future changes, alterations and renovations thereto and also including,

without limiting the generality of the foregoing, site preparation, landscaping, installation of utilities, street construction or improvement and grading or filling in or on the Premises.

ARTICLE II
PROPERTY

2.01. **Property**. The City owns vacant parcels at 207 West Crowther Ave. and 209 West Crowther Ave., Placentia, CA, and desires to have a Project constructed on this site which will provide affordable rental housing and commercial space in a mixed-use development. The real properties listed in this Section 2.01. are more particularly described in Exhibit A and depicted in Exhibit A-1 attached hereto and incorporated herein, and are hereinafter called the "Property."

2.02 "**As Is**". Landlord shall provide Tenant with all information of which it has actual knowledge and/or possession concerning the physical condition of the Property, including, without limitation, information about any Hazardous Materials, as defined below. Tenant acknowledges and agrees that it is leasing the Property from Landlord "as is," in its current physical condition, with no warranties, express or implied, as to the physical condition thereof, the presence or absence of any latent or patent condition thereon or therein, including without limitation, any Hazardous Materials thereon or therein, and any other matters affecting the Property. It shall be the sole responsibility of Tenant, at Tenant's sole expense, to investigate and determine the soil conditions of the Property and the suitability of such soil conditions for the improvements to be constructed by the Tenant. If the soil conditions are not in all respects entirely suitable for the use or uses to which the Property will be put, then it is the sole responsibility and obligation of Tenant to take such action as may be necessary to place the soil conditions of the Property in a condition suitable for the development of the Property.

ARTICLE III
TERM

3.01. Term. Unless terminated earlier in accordance with the provisions of this Lease, the term of this Lease shall be for a period of sixty-six (66) years. The term shall expire at 11:59 p.m. on the last day of the month during which the sixty sixth (66th) anniversary of the Commencement Date occurs (as defined in Section 3.3.).

Tenant shall have the option to renew this lease for one additional extension term of thirty-three (33) years. The terms for exercise of the extension option to renew, and the conditions of renewal, are as follows:

a. Written notice of exercise of the option shall be given by Tenant not later than two years prior to Termination of the initial sixty-six (66) year term.
b. Notice shall be given to Landlord at the address specified in this Lease for the giving of notice, or at such other place as may be designated in writing by Landlord.
c. Rent for the extension term shall be negotiated between Landlord and Tenant to reflect the fair market value of the Leasehold Estate for the remaining term of the Lease (reflecting any income restriction which remain on the occupancy of any

portion of the Project) at the time of the exercise of the option to extend the term of this Lease, payable as specified in Article 4 of this Lease.

d. All other terms and conditions set forth in this Lease shall be in full force and effect during any extension of the Term.

3.2. Commencement. The term of this Lease shall commence upon the earlier of (i) date the first building permit for construction of improvements on the Property is issued by the City of Placentia or (ii) the closing of Leasehold Mortgage secured in accordance with the terms hereof for the purpose of financing the development and construction of the Improvements (the "Commencement Date").

The Commencement Date will be reflected in a memorandum of this Lease to be recorded in the office of the County Recorder of Orange County pursuant to Section 19.20 of this Lease.

ARTICLE IV
RENT

4.1 **Prepaid Rent**

Initial Rent Payment. An Initial Rent Payment in the amount of Three Million Four Hundred Thousand and 00/100 Dollars ($3,400,000.00) less any Good Faith Deposits previously received by the City shall be due and payable to Landlord concurrently with the Commencement Date.

Second Rent Payment. A Second Rent Payment in the amount of One Million and 00/100 Dollars ($1,000,000.00) shall be due and payable to Landlord concurrently with the issuance of the first certificate of occupancy for the Project improvements, or on the day that is twenty-four (24) months after the Commencement Date, whichever occurs first.

4.2 **Base Rent**. Commencing upon the 1st day of July following the eighth (8th) anniversary of the date of issuance of the Final Certificate of Occupancy (the "Base Rent Commencement Date"), and thereafter annually, Tenant shall pay Landlord a base rental (the "Base Rent") in the amount of Ten Thousand and 00/100 Dollars ($10,000) per year.

Base Rent shall increase in the manner provided below at the expiration of the five (5) year period immediately following the commencement of Base Rent set forth above, and at the expiration of each successive five (5) year period thereafter during the Term (each such date on which such an adjustment takes effect under this Section 4.2 is referred to as an "**Adjustment Date**"). On each Adjustment Date, the Base Rent in effect during the five (5) year period immediately prior to such Adjustment Date shall be increased by an amount proportionate to the percentage increase, if any, in the CPI Index (as defined below) during the period from the third (3rd) month prior to the commencement of each five (5) year period through the third (3rd) month prior to the expiration of such prior five (5) year period. "However, in no event shall the rent adjustment be less than 10% nor greater than 20% of the then current rate." City shall notify Tenant in writing of the increased Base Rent thirty (30) days prior to the applicable Adjustment Date (or following such later date on which the necessary CPI Index figures have been published), and shall set forth in such notice the basis for the amount of the increased Base Rent.

4.3 Rent **during Extension.** In the event the Lessee elects to extend the Lease, the new Base Rent shall be determined as follows:

(a) At least twelve (12) months prior to the expiration, as applicable, City and Tenant shall endeavor in good faith to negotiate the new Base Rent for the ensuing period.

(b) Each Party shall propose a Base Rent based on such Party's estimation of the then fair market value of the Premises (taking into account the items in (g) below). If agreed upon by the Parties, such Rent shall continue until the next Adjustment Date.

(c) If, however, by the date which is nine (9) months prior to the termination date, City and Tenant have not so agreed upon the new Base Rent to commence on such date, then the new Base Rent shall be determined in accordance with this Section 4.3.

(d) **Setting of Base Rent**. If City and Tenant have not theretofore agreed on the Base Rent, the City and Tenant shall each engage an MAI appraiser (with experience as required by Section 4.3(f), below) selected by the respective Party to establish a Base Rent, with each Party paying the expense for its own appraiser. Each Party shall give the other notice of engagement of its appraiser within five (5) business days after such engagement. Upon receipt of its Appraisal, each Party shall, within five (5) business days, deliver a copy thereof to the other Party. If the appraisals are within 10% (higher or lower) of each other, then the two appraisals shall be averaged to set the Base Rent at issue and shall be utilized for the determination of Base Rent for the Extension Term.

(e) **Third Appraisal to Determine Base Rent (If Necessary)**. If the two appraisals are not within 10% (higher or lower) of each other, then the two appraisers shall choose a third MAI appraiser within twenty (20) business days of exchange of the appraisals by the Parties, and the third MAI appraiser shall complete his or her own valuation of the Appraised Value. Thereafter the two closest of the three appraisals will be averaged to determine the appraised value at issue. The Parties shall each pay 50% of the costs and fees charged by the third MAI appraiser.

(f) All appraisals pursuant to this Article must be completed within one hundred twenty (120) days by an MAI (or a successor organization of appraisers) appraiser with at least ten (10) years of experience appraising (i) undeveloped, but entitled land similar to the Premises, located in Orange, Los Angeles or San Diego counties; and (ii) land that is subject to a ground lease, with each Party paying the expense for its own appraiser. The appraiser also shall not be directly affiliated in any business relationship with the party soliciting the appraiser. Directly affiliated does not include contracts for appraisals in the normal course of real property transactions.

(g) Factors to be included in determining the Appraised Value shall include (i) income or rent restriction on the Premises, (ii) current lease rate of return; and (iii) other covenants or restrictions applicable to the property.

(h) Notwithstanding the foregoing clauses pertaining to adjustments based on changes in the Value of the Premises, the rent that is calculated based on such changes in the Premises Value (if any) shall be not less than the most immediately prior Base Rent, as increased by the CPI adjustment as of the current Adjustment Date.

4.4 **Payment of Rent**. Base Rent shall be payable in advance and without any deduction, offset, prior demand or notice, commencing upon the Base Rent Commencement Date and thereafter on the first day of each year during the Term. Base Rent due under this Lease for any partial annual shall be calculated by dividing the number of days for which Base Rent is actually owing by the actual number of days in the year, and multiplying the resulting percentage by the Base Rent amount then in effect. All Base Rent or other amounts owing to City under this Lease shall be paid, in lawful currency of the United States of America, by check delivered to City or by electronic payment as City shall direct. All monetary payments owing by Tenant to City under this Lease other than Base Rent shall be deemed additional rent owing under this Lease.

4.5 **Triple Net Rent**. It is the intent of the parties that all Rent shall be absolutely net to City and that, except as otherwise provided herein, Tenant will pay all costs, charges, insurance premiums, taxes, utilities, expenses and assessments of every kind and nature incurred for, against or in connection with the Premises which arise or become due during the Term or any extension thereof as a result of Tenant's use and occupancy of the Premises. Under no circumstances or conditions, whether now existing or hereafter arising, or whether beyond the present contemplation of the parties, shall City be obligated or required to make any payment of any kind whatsoever or be under any other obligation or liability under this Lease except as expressly provided herein.

4.6 **Insufficient Funds**. If any payment of Rent or other fees made by check is returned due to insufficient funds, or otherwise, more than once during the Term, City shall have the right to require Tenant to make all subsequent Rent payments by cashier's check, certified check or ACH automatic debit system. All Rent shall be paid in lawful money of the United States of America, without offset or deduction or prior notice or demand. No payment by Tenant or receipt by City of a lesser amount than the Rent due shall be deemed to be other than on account of the Rent due, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as rent be deemed an accord and satisfaction, and City shall accept such check or payment without prejudice to City's right to recover the balance of said Rent or pursue any other remedy in this Lease.

IV.7 **Charge for Late Payment**.

4.7.1 Tenant hereby acknowledges that the late payment of Rent or any other sums due hereunder will cause City to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include but are not limited to costs such as administrative processing of delinquent notices, increased accounting costs, etc.

4.7.2 Accordingly, if any payment of Rent or of any other sum due City is not received by City within ten (10) business days that such payment is due, a late charge of one and one-half percent (1.5%) of the payment due and unpaid plus $100 shall be added to the payment, and the total sum shall become immediately due and payable to City. An additional charge of one and one-half percent (1.5%) of said payment, excluding late charges, shall be added for each additional month that said payment remains unpaid. Any payments of any kind by Tenant that are returned for insufficient funds will be subject to an additional handling charge of Two Hundred Fifty and 00/100 Dollars ($250.00).

4.7.3 Tenant and City hereby agree that such late charges represent a fair and reasonable estimate of the costs that City will incur by reason of Tenant's late payment. Acceptance of such late charges (and/or any portion of the overdue payment) by City shall in no event constitute a waiver of

Tenant's default with respect to such overdue payment, or prevent City from exercising any of the other rights and remedies granted hereunder.

IV.8 **RESERVED**

IV.9 **Additional Rent**.

IV.9.1. **Additional Rent**. During the Term, the annual Base Rent shall be absolutely net to City so that this Lease shall yield to City the rental amounts specified above in each year of the Term, and that all costs (including but not limited to Operating Costs and Utility Costs, as defined below), fees, taxes (including but not limited to Real Estate Taxes and Equipment Taxes, as defined below), charges, expenses, impositions, reimbursements, and obligations of every kind relating to the Premises shall be paid or discharged by Tenant as additional rent ("**Additional Rent**"). Tenant may pay, under protest, any impositions, and/or contest and defend against same. Any imposition rebates shall belong to Tenant.

IV.9.2. **Taxes**. During the Term, Tenant shall pay directly to the taxing authorities all Taxes (as herein defined) at least five (5) days prior to delinquency thereof. For purposes hereof, "**Taxes**" shall include any form of unabated assessment, license fee, license tax, business license fee, commercial rental tax, levy, penalty, sewer use fee, real property tax, charge, tax or similar imposition (other than inheritance or estate taxes), imposed by any authority having the direct or indirect power to tax, including any city, City, state or federal government, or any school, agricultural, lighting, drainage, flood control, water pollution control, public transit or other special district thereof, as against any legal or equitable interest of City in the Premises or any payments in lieu of taxes required to be made by City, including, but not limited to, the following:

(a) Any assessment, tax, fee, levy, improvement district tax, charge or similar imposition in substitution, partially or totally, of any assessment, tax, fee, levy, charge or similar imposition previously included within the definition of Taxes. It is the intention of Tenant and City that all such new and increased assessments, taxes, fees, levies, charges and similar impositions be included within the definition of "**Taxes**" for the purpose of this Lease.

(b) Any assessment, tax, fee, levy, charge or similar imposition allocable to or measured by the area of the Premises or the rent payable hereunder, including, without limitation, any gross income tax or excise tax levied by the city, City, state or federal government, or any political subdivision thereof, with respect to the receipt of such rent, or upon or with respect to the possession, leasing, operating, management, maintenance, alteration, repair, use or occupancy by Tenant of the Premises, or any portion thereof;

(c) Any assessment, tax, fee, levy, charge or similar imposition upon this transaction or any document to which Tenant is a party, creating or transferring an interest or an estate in the Premises, including any possessory interest tax levied on the Tenant's interest under this Lease;

(d) Any assessment, tax, fee, levy, charge or similar imposition by any governmental agency related to any transportation plan, fund or system instituted within the geographic area of which the Premises are a part.

The definition of "**Taxes**," including any additional tax the nature of which was previously included within

the definition of "**Taxes**," shall include any increases in such taxes, levies, charges or assessments occasioned by increases in tax rates or increases in assessed valuations, whether occurring as a result of a sale or otherwise. Nothing herein shall in any way limit Tenant's ability to apply for, and maintain, a partial or full property tax abatement for the Premises, provided such tax abatement is solely based upon the Project being an affordable housing project..

IV.9.3. **Contest of Taxes**. Tenant shall have the right to contest, oppose or object to the amount or validity of any Taxes or other charge levied on or assessed against the Premises and/or Improvements or any part thereof; provided, however, that the contest, opposition or objection must be filed before the Taxes or other charge at which it is directed becomes delinquent. Furthermore, no such contest, opposition or objection shall be continued or maintained after the date the tax, assessment or other charge at which it is directed becomes delinquent unless Tenant has either: (i) paid such tax, assessment or other charge under protest prior to its becoming delinquent; or (ii) obtained and maintained a stay of all proceedings for enforcement and collection of the tax, assessment or other charge by posting such bond or other matter required by law for such a stay; or (iii) delivered to City a good and sufficient undertaking in an amount specified by City and issued by a bonding corporation authorized to issue undertakings in California conditioned on the payment by Tenant of the tax, assessments or charge, together with any fines, interest, penalties, costs and expenses that may have accrued or been imposed thereon within thirty (30) days after final determination of Tenant's contest, opposition or objection to such tax, assessment or other charge.

IV.9.4. **Payment by City**. Should Tenant fail to pay any Taxes required by this Article IV to be paid by Tenant within the time specified herein, and if such amount is not paid by Tenant within ten (10) days after receipt of City's written notice advising Tenant of such nonpayment, City may, without further notice to or demand on Tenant, pay, discharge or adjust such tax, assessment or other charge for the benefit of Tenant. In such event Tenant shall promptly on written demand of City reimburse City for the full amount paid by City in paying, discharging or adjusting such tax, assessment or other charge, together with interest at the Interest Rate from the date advanced until the date repaid.

IV.9.5. **Operating Costs**. Tenant shall pay all Operating Costs during the Term. As used in this Lease, the term "**Operating Costs**" shall mean all charges, costs and expenses related to the Premises, including, but not limited to, management, operation, maintenance, overhaul, improvement or repair of the Improvements and/or the Premises.

IV.9.6. **Utility Costs**. Tenant shall pay all Utility Costs during the Term. As used in this Lease, the term "**Utility Costs**" shall include all charges, surcharges and other costs of installing and using all utilities required for or utilized in connection with the Premises and/or the Premises or the Improvements, including without limitation, costs of heating, ventilation and air conditioning for the Premises, costs of furnishing gas, electricity and other fuels or power sources to the Premises, and the costs of furnishing water and sewer services to the Premises.

ARTICLE V
USE OF PREMISES

V.1 **Permitted Use of Premises**. Tenant may use the Premises for the construction, development, entitlement, operation, occupancy, maintenance, replacement and repair of the Improvements permitted hereunder and/or pursuant to the DA and activities related thereto. Tenant agrees

not to use the Premises for any other purpose nor to engage in or permit any other activity within or from the Premises, except as set forth herein with the prior written approval of the City Administrator.

V.2 **Required and Optional Facilities and Services.**

V.2.1. Required Services and Uses. City's primary purpose for entering into this Lease is to promote the development of the Improvements consistent with applicable Laws. In furtherance of that purpose, Tenant shall construct and during the entire Term operate and maintain the Improvements in a manner consistent with the Laws and for one or more of the following uses:

(a) Multifamily residential development and related amenities; and

(b) 1,000 square feet of commercial and/or retail space as required by zoning applicable to the Property.

V.2.2. Ancillary Services and Uses. Consistent with the Entitlements and Laws, Tenant may provide those additional services and uses which are ancillary to and compatible with the required services and uses herein without any further consent or approvals from the City.

V.2.3. Additional Concessions or Services. Tenant may establish, maintain, and operate such other additional facilities, concessions, and services as Tenant and City Administrator may jointly from time to time determine to be reasonably necessary for the use of the Premises and which are otherwise permitted by the Entitlements and consistent with the Laws. Such other facilities, concessions, and services may be approved in writing by the City Administrator, which approval shall not be unreasonably withheld, conditioned or delayed. Nothing in this Section 5.2 shall require City Administrator approval for concessions, events or services which are not permanent in nature so long as such concessions, events or services comply with all applicable laws, rules and regulations and are not incompatible with the mixed-use nature of the Improvements.

V.2.4. Parking Covenant. Tenant agrees to maintain and provide a fifteen (15) space parking easement within the Tenant's parking structure for the benefit of the adjacent property owner of the existing Packing House site at 341 S. Melrose Street (APN: 339-401-16) (the "Easement Recipient") pursuant to an Easement Agreement reasonably acceptable to Tenant and City, which shall require, among other matters, that Easement Recipient and all persons using as a permittee of the Easement Recipient abide by all parking structure rules and that the Easement Recipient contribute its proportional share of operating and maintenance costs.

V.2.5. Restricted Use. The services and uses listed in this Article IV, both required and optional, shall be the only services and uses permitted. Tenant agrees not to use the Premises for any other purpose or engage in or permit any other activity within or from the Premises except as approved in writing by the City Administrator.

V.2.6. Change in Use. Upon written request by Tenant to the City Administrator, the approved uses herein may be modified or amended to any other use permitted by the Entitlements and otherwise consistent with the Laws (or as such Entitlements or Laws may be amended, whether by the City, Tenant or otherwise). The City Administrator's approval of such modified or amended uses may not be unreasonably withheld conditioned or delayed.

V.3 **Nuisance; Waste**. Tenant shall not maintain, commit, or permit the maintenance or commission of any nuisance as now or hereafter defined by any statutory or decisional law applicable to the Premises and Improvements or any part thereof. Tenant shall not commit or allow to be committed any waste in or upon the Premises or Improvements and shall keep the Premises and the Improvements thereon in good condition, repair and appearance.

V.4 **Compliance with Laws**. Tenant shall not use or permit the Premises or the Improvements or any portion thereof to be used in any manner or for any purpose that violates any applicable Laws in any material respect. Tenant shall have the right to contest, in good faith, any such Laws, and to delay compliance with such Laws during the pendency of such contest (so long as there is no material threat to life, health or safety that is not mitigated by Tenant to the satisfaction of the applicable authorities). City shall cooperate with Tenant in all reasonable respects in such contest, including joining with Tenant in any such contest if City's joinder is required in order to maintain such contest; provide, however, that any such contest shall be without cost to City, and Tenant shall indemnify, defend and protect the Premises and City from Tenant's failure to observe or comply with the contested Law during the pendency of the contest.

V.5 **Hazardous Materials**.

V.5.1. Definition of Hazardous Materials. For purposes of this Lease, the term "Hazardous Material" or "Hazardous Materials" shall mean any hazardous or toxic substance, material, product, byproduct, or waste, , including, without limitation, petroleum (including crude oil or any fraction or additive thereof), asbestos or asbestos containing materials, radon, radiation and radioactive materials, lead-based paints, and polychlorinated biphenyls, which is or shall become regulated by any governmental entity, including, without limitation, the City acting in its governmental capacity, the State of California or the United States government.

V.5.2. Prior Use. The Parties acknowledge that the Property is part of a former packing house property for citrus growers.

V.5.3. Use of Hazardous Materials. Except for those Hazardous Materials which are customarily used in connection with any permitted use of the Premises and Improvements under this Lease (which Hazardous Materials shall be used in compliance with all applicable Laws), Tenant or Tenant's employees, agents, independent contractors or invitees (collectively "**Tenant Parties**") shall not cause or permit any Hazardous Materials to be brought upon, stored, kept, used, generated, released into the environment or disposed of on, under, from or about the Premises (which for purposes of this Section shall include the subsurface soil and ground water).

V.5.4. Tenant Obligations. If the presence of any Hazardous Materials on, under or about the Premises caused or permitted by Tenant or Tenant Parties, or otherwise located on the Premises for any reason (unless deposited there by the City or any agent thereof) results in (i) injury to any person, (ii) injury to or contamination of the Premises (or a portion thereof), or (iii) injury to or contamination of any real or personal property wherever situated, Tenant, at its sole cost and expense, shall promptly take all actions necessary or appropriate to return the Premises to the condition existing prior to the introduction of such Hazardous Materials to the Premises and to remedy or repair any such injury or contamination. Without limiting any other rights or remedies of City under this Lease, Tenant shall pay the cost of any cleanup or remedial work performed on, under, or about the Premises as required by this Lease or by

applicable laws in connection with the removal, disposal, neutralization or other treatment of such Hazardous Materials located on the Premises. Notwithstanding the foregoing, Tenant shall not take any remedial action in response to the presence, discharge or release, of any Hazardous Materials on, under or about the Premises, or enter into any settlement agreement, consent decree or other compromise with any governmental or quasi-governmental entity without first obtaining the prior written consent of City. All work performed or caused to be performed by Tenant as provided for above shall be done in good and workmanlike manner and in compliance with plans, specifications, permits and other requirements for such work approved by City.

V.5.5. Indemnification for Hazardous Materials.

(a) To the fullest extent permitted by law, during the term of this Lease, Tenant shall indemnify, hold harmless, protect and defend (with attorneys acceptable to City) City, its elected officials, officers, employees, agents, independent contractors, and the Premises from and against any and all liabilities, losses, damages (including, but not limited to, damages for the loss or restriction on use of rentable or usable space or any amenity of the Premises but not damages arising from any adverse impact on marketing or diminution in the value of the Premises), judgments, fines, demands, claims, recoveries, deficiencies, costs and expenses (including, but not limited to, reasonable attorneys' fees, disbursements and court costs and all other professional or consultant's expenses), whether foreseeable or unforeseeable ("**Claims**"), arising directly or indirectly out of the presence, use, generation, storage, treatment, on or off-site disposal or transportation of Hazardous Materials on, into, from, under or about the Premises, and Claims relating to Hazardous Materials arising out of the actions or use of the Premises by Tenant or Tenant Parties, unless the Hazardous Materials are brought onto the Premises by the City. The foregoing indemnity shall also specifically include the cost of any required or necessary repair, restoration, clean-up or detoxification of the Premises and the preparation of any closure or other required plans.

V.6 **Access by City**. City reserves the right for City and City's authorized representatives acting in their capacity as landlord (upon at least three (3) Business Days' prior telephonic notice to Tenant, except in the case of an emergency in which event no prior notice shall be required, and subject to all rights of tenants and occupants and all security rules and procedures imposed by Tenant) to enter the Premises (but excluding any residential areas or units which are occupied by third parties in the Improvements pursuant to Resident Agreements, leases or otherwise) at any reasonable time during business hours, in order to (i) determine whether Tenant is complying with Tenant's obligations hereunder, or (ii) enforce any rights given to City under this Lease. City shall take all necessary measures not to unreasonably interfere with Tenant's or any subtenant's business at the Premises in exercising its rights under this Section. Tenant shall have the right to be present during any such entry upon the Premises.

ARTICLE VI
CONSTRUCTION OF IMPROVEMENTS

VI.1 **Construction of Improvements**.

VI.1.1. **Initial Improvements**. Upon payment for and issuance of all permits required under the Laws, Tenant shall construct the Initial Improvements in substantial conformance with the Schedule of Performance set forth in the Development Agreement as Exhibit G.

VI.1.2. **Preconditions**. No Work for development of the Initial Improvements shall be commenced, and no building or other materials shall be delivered to the Premises, until:

(a) after written notice has been given by Tenant to City of the proposed commencement of construction of the Premises or the delivery of construction materials in order to permit City to take all necessary actions under California Civil Code section 3094, including posting of a notice of non-responsibility at the Premises; and

(b) Tenant shall have provided to City evidence that (i) Tenant has entered into a Construction Contract with a Contractor in accordance with Section 6.2 below, and (ii) Tenant has secured the construction funding required under Section 6.1.4 below, and (iii) Tenant has obtained the bonds required (if any) by Section 6.3 below.

VI.1.3. **Utilities**. To the extent not already constructed, Tenant, at no cost to City, shall construct, or cause to be constructed, all utility facilities necessary for the development and operation of the Premises as set forth in, and to the extent required by, the DA.

VI.1.4. **Construction Funding**. Prior to commencement of construction of the Initial Improvements, Tenant shall provide to City evidence reasonably satisfactory to City of funding available to Tenant that is sufficient to pay for Tenant's estimated total cost of constructing the Initial Improvements, which evidence may consist of (i) a written commitment to Tenant from an Institutional Lender selected by Tenant to provide a construction loan to Tenant for the purpose of constructing the Initial Improvements (which may be secured by a Leasehold Mortgage encumbering Tenant's leasehold interest under this Lease), (ii) actual equity funds then held by Tenant (or committed from an investor reasonably acceptable to City) and set-aside for the purpose of constructing the Initial Improvements, (iii) evidence of affordable housing funding commitments including grants, loans and low income housing tax credits, or (iv) any combination of the foregoing. Tenant may from time to time change any of the foregoing funding sources and the allocation thereof, so long as the aggregate available funding continues to be sufficient to pay for Tenant's estimated remaining cost of constructing the Initial Improvements, provided that Tenant shall promptly notify City of any such material change.

VI.1.5. **Compliance With Laws and Permits**. Tenant shall cause all Improvements made by Tenant to be constructed in substantial compliance with all applicable Laws, including all applicable grading permits, building permits, and other permits and approvals issued by governmental agencies and bodies having jurisdiction over the construction thereof.

VI.1.6. **Reports**. Not less than quarterly from the commencement of construction of the Initial Improvements, Tenant shall provide City with written construction status reports in the form of AIA No. G702, augmented by oral reports if so requested by City.

VI.1.7. **Certificate of Occupancy**. Tenant shall provide City with a copy of the Certificate of Occupancy promptly following issuance thereof.

VI.1.8. **Insurance**. Tenant (or the Contractor, as applicable) shall deliver to City (i) certificates of insurance evidencing coverage for "builder's risk" as specified in Section 9.1, and (ii) evidence of worker's compensation insurance covering all persons employed in connection with the construction of any Improvements upon the Premises and with respect to whom death or bodily injury claims could be asserted against City, the Premises or the Improvements. Tenant shall (or shall cause Contractor to) maintain, keep in force and pay all premiums required to maintain and keep in force all insurance above at all times during which construction Work is in progress.

VI.1.9. **Mechanic's Liens**.

(a) **Payment of Liens**. Tenant shall pay or cause to be paid the total cost and expense of all "Work of Improvement," as that phrase is defined in the California Mechanics' Lien law in effect and as amended from time to time. Tenant shall not suffer or permit to be enforced against the Premises or Improvements or any portion thereof, any mechanics', materialmen's, contractors' or subcontractors' liens arising from any work of improvement, however it may arise. Tenant may, however, in good faith and at Tenant's sole cost and expense contest the validity of any such asserted lien, claim, or demand, provided Tenant (or any contractor or subcontractor, as applicable) has furnished the release bond (if required by City or any construction lender) required in California Civil Code §8424 (or any comparable statute hereafter enacted for providing a bond freeing the Premises from the effect of such lien claim). In the event a lien or stopnotice is imposed upon the Premises as a result of such construction, repair, alteration, or installation, Tenant shall either:

(1) Record a valid Release of Lien, or

(2) Procure and record a bond in accordance with Section 8424 of the Civil Code, which releases the Premises from the claim of the lien or stopnotice and from any action brought to foreclose the lien, or

(3) Post such security as shall be required by Tenant's title insurer to insure over such lien or stop-notice, or

(4) Should Tenant fail to accomplish either of the three optional actions above within 30 days after Tenant receives notice of the filing of such a lien or stopnotice, it shall constitute an Event of Default hereunder.

(b) **Indemnification**. Tenant shall at all times indemnify, defend with counsel approved in writing by City and save City harmless from all claims, losses, demands, damages, cost, expenses, or liability costs for labor or materials in connection with construction, repair, alteration, or installation of structures, improvements, equipment, or facilities within the Premises, and from the cost of defending against such claims, including attorney fees and costs.

(c) **Protection Against Liens**. City shall have the right to post and maintain on the Premises any notices of non-responsibility provided for under applicable California law. During the course of construction, Tenant shall obtain customary mechanics' lien waivers and releases. Upon completion of the construction of any Improvements, Tenant shall record a notice of completion in

accordance with applicable law. Promptly after the Improvements have been completed, Tenant shall (or shall cause Contractor to) record a notice of completion as defined and provided for in California Civil Code Section 3093.

(d) **City's Rights**. If Tenant (or any contractor or subcontractor, as applicable) does not cause to be recorded the bond described in California Civil Code §8424 or otherwise protect the Premises and Improvements under any alternative or successor statute, and a final judgment has been rendered against Tenant by a court of competent jurisdiction for the foreclosure of a mechanic's, materialman's, contractor's or subcontractor's lien claim, and if Tenant fails to stay the execution of judgment by lawful means or to pay the judgment, City shall have the right, but not the duty to pay or otherwise discharge, stay or prevent the execution of any such judgment or lien or both. Upon any such payment by City, Tenant shall immediately upon receipt of written request therefor by City, reimburse City for all sums paid by City under this paragraph together with all City's reasonable attorney's fees and costs, plus interest at the Interest Rate from the date of payment until the date of reimbursement.

VI.1.10. **No Responsibility**. Any approvals by City with respect to any Improvements shall not make City responsible for the Improvement with respect to which approval is given, or the construction thereof. Tenant shall indemnify, defend and hold City harmless from and against all liability and all claims of liability (including, without limitation, reasonable attorneys' fees and costs) arising during the term of this Lease for damage or injury to persons or property or for death of persons arising from or in connection with such Improvement or construction.

VI.2 **Construction Contracts**.

VI.2.1. **GMax Contracts**. Tenant shall enter into written "Guaranteed Maximum Price" or "Fixed Price" contract with a general contractor for construction of the Initial Improvements. All construction of the Initial Improvements shall be performed by contractors and subcontractors duly licensed as such under the laws of the State of California. Tenant shall give City a true copy of the contract or contracts with the general contractor.

VI.2.2. **Assignment to City**. Subject to the rights of any Leasehold Mortgagee, Tenant shall obtain the written agreement of the general contractor that, at City's election and in the event that Tenant fails to perform its contract with the general contractor and is in default under this Lease, such general contractor will recognize City as the assignee of the contract with the general contractor, and that City may, upon such election, assume such contract with credit for payments made prior thereto.

VI.3 **Payment and Performance Bonds**. To the extent the General Contractor is not an affiliate of Tenant, Tenant shall provide or cause its general contractor (or major subcontractors) to provide payment and/or performance bonds for major subcontracts in connection with the construction of the Initial Improvements, and shall name City as an additional obligee on, with the right to enforce, any such bonds (subject to the rights of any Leasehold Mortgagee).

VI.4 **Ownership of Improvements**.

VI.4.1. **During Term**. Title to all Improvements constructed or placed on the Premises by Tenant and paid for by Tenant are and shall be vested in Tenant during the entire Term of this Lease, until the expiration or earlier termination thereof. The parties agree for themselves and all persons claiming under them that the Improvements are real property.

VI.4.2. **Upon Expiration of Term**. All Improvements on the Premises at the expiration or earlier termination of the Term of this Lease shall, without compensation to Tenant, then become City's property free and clear of all claims to or against them by Tenant and free and clear of all Leasehold Mortgages and any other liens and claims arising from Tenant's use and occupancy of the Premises, and with Taxes paid current as of the expiration or termination date. Tenant shall upon the expiration or earlier termination of the Term deliver possession of the Premises and the Improvements to City in a well-maintained condition consistent with the requirements of this Lease, taking into account reasonable wear and tear and the age of the Improvements.

(a) City retains the right to require Tenant, at Tenant's cost, to remove, demolish and clear all Improvements located on the Premises at the expiration or termination hereof. Said removal shall include leveling the Premises, the removal of any underground obstructions, and the compaction of filled excavations to ninety percent (90%) compaction. Notwithstanding the forgoing, tenant's obligations under this Section 6.4(a) shall be limited to the amount then remaining in the Capital Improvement Fund.

(b) Reserved. [not acceptable, need further discussion with developer]

VI.5 **"ASBUILT" Plans**. Within sixty (60) days following completion of any substantial improvement within the Premises, Tenant shall furnish the City Administrator a complete set of reproducibles and two sets of prints of "As-Built" plans and a magnetic tape, disk or other storage device containing the "As-Built" plans in a form usable by City, to City's satisfaction, on City's computer aided mapping and design ("**CAD**") equipment. CAD files are also to be converted to Acrobat Reader (*.pdf format), which shall be included on the disk or CD ROM. In addition, Tenant shall furnish City Administrator copy of the final construction costs for the construction of such improvements.

VI.6 **Capital Improvement Fund**

VI.6.1. Commencing with the month during which the fifth (5th) anniversary of the issuance of the Final Certificate of Occupancy for the Improvements occurs, and continuing until five (5) years prior to the expiration of the Term of the Lease, Tenant shall establish and maintain a reserve fund (the **"Capital Improvement Fund**") in accordance with the provisions of this Section 6.6 designated to pay for Permitted Capital Expenditures (as defined below) for the Improvements. Tenant and City agree and acknowledge that the purpose of the Capital Improvement Fund shall be to provide sufficient funds to pay for the costs of major replacements, renovations or significant upgrades of or to the Improvements, including without limitation building facade or structure and major building systems (such as HVAC, mechanical, electrical, plumbing, vertical transportation, security, communications, structural or roof) that significantly affect the capacity, efficiency, useful life or economy of operation of the Improvements or their major systems, after the completion of the Initial Improvements ("**Permitted Capital Expenditure(s)**"). The Capital Improvement Fund shall not be used to fund any portion of the cost of the Initial Improvements. In addition, Permitted Capital Expenditures shall not include the cost of periodic, recurring or ordinary maintenance expenditures or maintenance, repairs or replacements that keep the Improvements in an ordinarily efficient operating condition, but that do not significantly add to their value or appreciably prolong their useful life. Permitted Capital Expenditures must constitute capital replacements, improvements or equipment under generally accepted accounting principles consistently applied or constitute qualifying aesthetic improvements. All specific purposes and costs for which Tenant desires to utilize amounts from the Capital Improvement Fund shall be at Tenant's reasonable

discretion and subject to City Administrator's approval as provided for in Section 6.6.4 below. Tenant shall furnish to the City Administrator applicable invoices, evidence of payment and other back-up materials concerning the use of amounts from the Capital Improvement Fund.

VI.6.2. The Capital Improvement Fund shall be held in an account established with an Institutional Lender acceptable to the City, into which deposits shall be made by Tenant pursuant to this Section 6.6, provided, however, City shall not withhold its consent to the Capital Improvement Fund being held by any current holder of a Leasehold Mortgage or any designee thereof. Tenant shall have the right to partly or fully satisfy the Capital Improvement Fund obligations of this Section 6.6 with capital improvement reserves required by Tenant's Leasehold Mortgagee, as long as such capital improvement reserves are in all material respects administered in accordance, and otherwise comply, with the terms, provisions and requirements of this Section 6.6.

VI.6.3. Commencing in the first month after the 5th anniversary of the Commencement Date, and continuing each month thereafter until five (5) years prior to the expiration of the Term, Tenant shall make a monthly deposit to the Capital Improvement Fund in an amount equal to the greater of (a) $300 per unit per year or (b) the amount required by any holder of a Leasehold Mortgage. All interest and earnings on the Capital Improvement Fund shall be added to the Capital Improvement Fund, but shall not be treated as a credit against the Capital Improvement Fund deposits required to be made by Tenant pursuant to this Section 6.6.

VI.6.4. Disbursements shall be made from the Capital Improvement Fund only for costs which satisfy the requirements of this Section 6.6. Notwithstanding anything to the contrary set forth herein, any disbursements from the Capital Improvement Fund mandated by a Leasehold Mortgage holder shall not require the City Administrator's prior approval. For the purpose of obtaining the City Administrator's prior approval of any Capital Improvement Fund disbursements, Tenant shall submit to the City Administrator on an annual calendar year basis a capital expenditure plan for the upcoming three (3) year period which details the amount and purpose of anticipated Capital Improvement Fund expenditures ("**Capital Improvement Plan**"). City Administrator shall approve or disapprove such Capital Improvement Plan within thirty (30) days of receipt, which approval shall not be unreasonably withheld, conditioned or delayed and which disapproval shall be accompanied by a detailed explanation for any such disapproval. If the City Administrator has not disapproved the Capital Improvement Plan within (30) days of receipt, the City Administrator shall be deemed to have approved the Capital Improvement Plan. Any expenditure set forth in the approved Capital Improvement Plan shall be considered pre-approved by City (but only up to the amount of such expenditure set forth in the Capital Improvement Plan) for the duration of the upcoming year. Notwithstanding the foregoing, the approval of the City Administrator shall not be needed for cumulative expenditures not contemplated in the Capital Improvement Plan to the extent that such annual cumulative expenditures do not exceed $10,000 per annum. Tenant shall have the right during the course of each year to submit to the City Administrator for the City Administrator's approval revisions to the then current Capital Improvement Plan, or individual expenditures not noted on the previously submitted Capital Improvement Plan. In the event of an unexpected emergency that necessitates a Permitted Capital Expenditure not contemplated by the Capital Improvement Plan, the Tenant may complete such work using the funds from the Capital Improvement Fund with contemporaneous or prior (if possible) written notice to the City and provide applicable documentation to the City thereafter for City approval. If the City disapproves the emergency expenditure, Tenant shall refund the amount taken from the Capital Improvement Fund within thirty (30) days of written notice from the City of its decision.

VI.6.5. Reserved. [Not acceptable, please explain.]

VI.6.6. Notwithstanding anything above to the contrary, if Tenant incurs expenditures that constitute Permitted Capital Expenditures but which are not funded out of the Capital Improvement Fund because sufficient funds are not then available in such fund, then Tenant may credit the Permitted Capital Expenditures so funded by Tenant out of its own funds against future Capital Improvement Fund contribution obligations of Tenant; provided, that such credit must be applied, if at all, within four (4) years after such Permitted Capital Expenditure is incurred by the Tenant.

ARTICLE VII
REPAIRS, MAINTENANCE, ADDITIONS AND RECONSTRUCTION

VII.1 **Maintenance by Tenant**. Throughout the Term of this Lease, Tenant shall, at Tenant's sole cost and expense, keep and maintain the Premises and any and all Improvements now or hereafter constructed and installed on the Premises in good order, condition and repair (*i.e.*, so that the Premises does not deteriorate more quickly than its age and reasonable wear and tear would otherwise dictate) and in a safe and sanitary condition and in compliance with all applicable Laws in all material respects. Tenant's performance of this ordinary and routine alteration, maintenance and repair to the Improvements and Premises may occur without City consent.

VII.2 **Interior Improvements, Additions and Reconstruction of Improvements**. Following the completion of construction of the Initial Improvements, Tenant shall have the right from time to time, without City's prior written consent, but with prior written notice to the City: (i) to make any interior improvements to the Improvements that are consistent with the City approved use of the Premises as reflected in this Lease; (ii) to restore and reconstruct the Improvements, and in that process make any modifications otherwise required by changes in Laws, following any damage or destruction thereto (whether or not required to do so under Article VII); and/or (iii) to make changes, revisions or improvements to the Improvements for uses consistent with the City approved use of the Premises as reflected in this Lease, to the extent that such changes, revisions or improvements do not increase or reduce the square footage of the buildings and structures (except for minor variations in the square footage). Tenant shall perform all work authorized by this Section at its sole cost and expense and in compliance with all applicable Laws in all material respects.

VII.3 **All Other Construction, Demolition, Alterations, Improvements and Reconstruction**. Following the completion of construction of the Initial Improvements, and except as specified in Sections 7.1 and 7.2, any construction, alterations, additions, repairs, maintenance, demolition, improvements or reconstruction of any kind shall require the prior written consent of the City, which consent shall not be unreasonably conditioned, delayed or withheld. Tenant shall perform all work authorized by this Section at its sole cost and expense and in compliance with all applicable Laws in all material respects.

VII.4 **Requirements of Governmental Agencies**. At all times during the Term of this Lease, Tenant, at Tenant's sole cost and expense, shall: (i) make all alterations, improvements, demolitions, additions or repairs to the Premises and/or the Improvements required to be made by any law, ordinance, statute, order or regulation now or hereafter made or issued by any federal, state, City, local or other governmental agency or entity; (ii) observe and comply in all material respects with all Laws now or hereafter made or issued respecting the Premises and/or the Improvements (subject to Tenant's right to

contest such Laws in accordance with Section 5.4); (iii) indemnify, defend and hold City, the Premises and the Improvements free and harmless from any and all liability, loss, damages, fines, penalties, claims and actions resulting from Tenant's failure to comply with and perform the requirements of this Article VI.

VII.5 **City Obligations**. Tenant specifically acknowledges and agrees that City shall not have any obligations with respect to the maintenance, alteration, improvement, demolition, addition or repair of any Improvements, except only as specifically provided in this Lease to the contrary.

ARTICLE VIII
DAMAGE AND RESTORATION

VIII.1 **Damage and Restoration**. In the event the whole or any part of the Improvements shall be damaged or destroyed by fire or other casualty, damage or action of the elements which is covered by insurance required to be carried by Tenant pursuant to this Lease or in fact caused by Tenant, at any time during the Term, Tenant shall (except as provided in Section 8.2) with all due diligence, at Tenant's sole cost and expense, repair, restore and rebuild the Improvements on substantially the same plan and design as existed immediately prior to such damage or destruction and to substantially the same condition that existed immediately prior to such damage, with any changes made by Tenant to comply with then applicable Laws and with any upgrades or improvements that Tenant may determine in its reasonable discretion. If Tenant desires to change the use of the Premises following such casualty, then Tenant may make appropriate changes to the Premises to accommodate such changed use after approval of such change of use by the City pursuant to Article V above. This Article shall not apply to cosmetic damage or alterations.

VIII.2 **Damage During Last 10 Years**. If the Improvements are destroyed or damaged during the last ten (10) years of the Term, and provided further that the extent of such damage or destruction is twenty percent (20%) or more of the replacement value of the Improvements immediately prior to the occurrence of such damage or destruction, then Tenant may cancel this Lease by giving written notice of its election to do so to City within sixty (60) days after such damage or destruction, in which event Tenant need not restore or rebuild the Improvements provided Tenant complies with all the following conditions: (i) Tenant pays all Rent due hereunder through the date of termination of this Lease, (ii) Tenant delivers possession of the Premises to City and quitclaims by deed or such other instruments as City's title insurer may require, all right, title and interest in the Premises and remaining Improvements if, and promptly after, ceasing to do business on the Premises; (iii) Tenant causes to be discharged all Leasehold Mortgages and any other liens and claims arising from Tenant's use and occupancy of the Premises, and with Taxes paid current as of the expiration or termination date; and (iv) Tenant razes and removes the damaged Improvements and any other Improvements designated by the City for removal and delivers the Land to City in a safe condition (in which case any available property insurance proceeds attributable to such damage or destruction shall first be paid to any Leasehold Mortgagee until paid in full, and any remaining proceeds shall then be paid to and retained by Tenant), provided that City may elect by written notice to Tenant to instead have Tenant deliver the Improvements to City in their then existing damaged condition (in which case any available property insurance proceeds attributable to such damage or destruction shall first be paid to any Leasehold Mortgagee until paid in full, and any remaining proceeds shall then be paid to and retained by City).

VIII.3 **Restoration**. In the event of any restoration or reconstruction pursuant to this Section, all such work performed by Tenant shall be constructed in a good and workmanlike manner according to and in conformance with the laws, rules and regulations of all governmental bodies and agencies and the requirements of this Lease applicable to the construction of the Initial Improvements.

VIII.4 **No Rental Abatement**. Tenant shall not be entitled to any abatement, allowance, reduction, or suspension of Rent because part or all of the Improvements become untenantable as a result of the partial or total destruction of the Improvements, and Tenant's obligation to pay Base Rent and other charges under this Lease, and Tenant's obligation to keep and perform all other covenants and agreements on its part to be kept and performed hereunder, shall not be decreased or affected in any way by any destruction of or damage to the Improvements.

VIII.5 **Application of Insurance Proceeds**. If following the occurrence of damage or destruction to the Premises or Improvements, Tenant is obligated to or otherwise elects to restore the Premises and Improvements pursuant to this Article VIII, then (subject to the rights of holders of Leasehold Mortgages) all proceeds from the insurance required to be maintained by Tenant on the Premises and the Improvements shall be applied to fully restore the same, and any excess proceeds shall be paid to Tenant and any deficit in necessary funds plus the amount of any deductible shall be paid by Tenant. If the insurance proceeds shall be insufficient to pay all costs to fully restore the Improvements, Tenant shall pay the deficiency and shall nevertheless proceed to complete the restoration of the Improvements and pay the cost thereof. Upon lien free completion of the restoration, any balance of the insurance proceeds remaining over and above the cost of such restoration shall be paid to Tenant (subject to the rights of any Leasehold Mortgagee). If Tenant elects to terminate this Lease pursuant to a right to do so under Section 8.2, then all property insurance proceeds attributable to such damage or destruction giving rise to such right of termination shall be applied as set forth in Section 8.2.

VIII.6 **Exclusive Remedies**. Notwithstanding any destruction or damage to the Premises and/or the Improvements, Tenant shall not be released from any of its obligations under this Lease, except to the extent and upon the conditions expressly stated in this Article VIII. City and Tenant hereby expressly waive the provisions of California Civil Code Sections 1932(2) and 1933(4) with respect to any damage or destruction of the Premises and/or the Improvements and agree that their rights shall be exclusively governed by the provisions of this Article VIII.

ARTICLE IX
INSURANCE AND INDEMNITY

IX.1 **Tenant's Required Insurance**.

IX.1.1. Prior to the start of construction of the Project Improvements and the provision of services under this Lease, the Tenant agrees to purchase all required insurance at Tenant's expense and to deposit with the City Certificates of Insurance, including all endorsements required herein, necessary to satisfy the City that the insurance provisions of this Lease have been complied with and to keep such insurance coverage and the certificates therefore on deposit with the City during the entire term of this Lease**.** The City reserves the right to request the declarations pages showing all endorsements and a complete certified copy of the policy. In addition, all general contractors/subcontractors/engineers/consultants (hereinafter referred to as "**Insured Parties**"), performing work on behalf of Tenant pursuant to this Lease shall obtain insurance subject to the same terms and conditions exclusive of insurance limits as set forth herein for Tenant. Subcontractor insurance limits will be established by mutual agreement between City and Tenant.

IX.1.2. Tenant shall ensure that all Insured Parties performing work on behalf of Tenant pursuant to this Lease shall be covered under Tenant's insurance or maintain insurance subject to the terms and conditions as set forth herein. Tenant shall not allow any Insured Parties to commence work until the insurance requirements have been satisfied. It is the obligation of the Tenant to provide notice of the insurance requirements to all Insured Parties and to obtain evidence of insurance prior to allowing any Insured Parties to commence work. Evidence of insurance must be maintained by Tenant through the entirety of this Lease for inspection by City at any reasonable time.

IX.1.3. Tenant will require Builders Risk insurance for all new construction of Improvements. The Builders Risk policy shall be written on a Special Causes of Loss Form with the exclusion of earthquake and flood. The limit of insurance shall be 100% of the completed project value with no coinsurance and replacement cost valuation.

IX.1.4. All self-insured retentions ("**SIR(s)**") or deductibles shall be clearly stated on the Certificate of Insurance. If no deductibles or SIRs apply, indicate this on the Certificate of Insurance with a zero (0) by the appropriate line of coverage. Any deductible or self-insured retention (SIR) in an amount in excess of $25,000 ($5,000 for automobile liability) carried by Tenant, shall specifically be declared to and approved by the Deputy City Administrator or designee. At the option of the City, either: the contractor shall cause the insurer shall to reduce or eliminate such self-insured retentions as respects the City, its officers, officials, employees, and volunteers; or the Contractor shall provide a financial guarantee satisfactory to the City guaranteeing payment of losses and related investigations, claim administration, and defense expenses. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or City.

IX.1.5. If the Tenant fails to maintain insurance required by this Lease the City may terminate this Lease after providing Tenant a thirty (30) day period in which to cure.

IX.1.6. **Terms & Conditions Applicable to Tenant and All Insured Parties**

(a) **Qualified Insurer**.

(1) The policy or policies of insurance must be issued by an insurer licensed to do business in the state of California (California Admitted Carrier) and have a minimum rating of A- (Secure A.M. Best's Rating) and VII (Financial Size Category) as determined by the most current edition of the **Best's key Rating Guide/Property-Casualty/United States or ambest.com**.

(2) If the Tenant's insurance carrier is not an admitted carrier in the state of California and does not have an A.M. Best rating of A-/VII, the Deputy City Administrator or designee retains the right to approve or reject a carrier after a review of the company's performance and financial ratings. Tenant is responsible to enforce this requirement with the Insured Parties.

(3) The policy or policies of insurance maintained by the Tenant shall provide the minimum limits and coverage as set forth below:

Coverages	Minimum Limits
Commercial General Liability	$5,000,000 per occurrence $5,000,000 aggregate
Automobile Liability including coverage for owned, non-owned and hired vehicles	$1,000,000 limit per occurrence
Workers' Compensation	Statutory Minimum
Employers' Liability Insurance	$1,000,000 per occurrence

(4) The policy or policies of insurance maintained by the contractors shall provide the minimum limits and coverage as set forth below (Subcontractor insurance limits will be established by mutual agreement between City and Developer):

Coverages	Minimum Limits
Commercial General Liability	$5,000,000 per occurrence $5,000,000 aggregate
Automobile Liability including coverage for owned, non-owned and hired vehicles	$1,000,000 limit per occurrence
Workers' Compensation	Statutory Minimum
Employers' Liability Insurance	$1,000,000 per occurrence

Builder's Risk (Course of Construction) insurance utilizing an "All Risk" (Special Perils) coverage form, with limits equal to the completed value of the project and no coinsurance penalty provisions.	Completed Project value

(5) The policy or policies of insurance maintained by architects, engineers and other licensed professionals:

Coverages	Minimum Limits
Commercial General Liability	$1,000,000 per occurrence $2,000,000 aggregate
Professional Liability For Structural Engineers and Architects Professional Liability with limits no less than $2,000,000 per occurrence or claim, and $2,000,000 policy aggregate. The retroactive date must be shown, and this date must be before the execution date of the contract or the beginning of contract work. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective, or start of work date, the Contractor must purchase extended reporting period coverage for a minimum of five (5) years after completion of contract work. A copy of the claims reporting requirements must be submitted to the City for review.	$2,000,000 per claim or occurrence $2,000,000 aggregate
Professional Liability for Others	$1,000,000 per claim or occurrence $2,000,000 aggregate

Automobile Liability including coverage for owned, non-owned and hired vehicles	$1,000,000 limit per occurrence
Workers' Compensation	Statutory Minimum
Employers' Liability Insurance	$1,000,000 per occurrence

(6) Post vertical construction insurance requirements for lessees/sublessees shall be determined by the City once occupancy is established.

(7) If the any of the Insured Parties maintains broader coverage and/or higher limits than the minimums shown above for all policies, the City requires and shall be entitled to the broader coverage and/or higher limits maintained by the contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.

(b) **Required Coverage Forms**.

(1) Commercial General Liability coverage shall be at least as broad as Commercial General Liability (CGL): Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than $5,000,000 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit. Coverage shall include blanket contractual liability and broad form property damage, premises, operations, explosion, collapse, underground hazard (commonly referred to as "**X**", "**C**" and "**U**" coverages

(2) The Business Auto Liability coverage shall be written on ISO form CA 00 01, or a substitute form providing equivalent liability coverage covering Code 1 (any auto), with limits no less than $1,000,000 per accident for bodily injury and property damage.

(c) **Required Endorsements**. The Commercial General Liability policy shall contain the following endorsements, which shall accompany the Certificate of insurance:

(1) An Additional Insured endorsement using ISO form CG 2010 or CG 2033 or an equivalent form naming the City, its elected and appointed officials, officers, employees, agents as Additional Insureds.

(2) A primary non-contributing endorsement evidencing that the Tenant's insurance is primary and any insurance maintained by the City shall be excess and non-contributing.

(3) The Workers' Compensation policy shall contain a waiver of subrogation endorsement waiving all rights of subrogation against the City and members of the Board of Supervisors, its elected and appointed officials, officers, employees and agents.

(4) All insurance policies required by this Lease shall waive all rights of subrogation against the City, its elected and appointed officials, officers, agents and employees when acting within the scope of their appointment or employment.

(5) The Commercial General Liability policy shall contain a severability of interests clause (standard in the ISO CG 001 policy).

IX.1.7. **Terms & Conditions Specific to Tenant**

(a) Tenant shall notify City in writing prior to any lapse of insurance coverage and provide a copy of the cancellation notice to City. Failure to provide written notice of cancellation may constitute a material breach of the Lease, upon which the City may suspend or terminate this Lease.

(b) The Tenant is granted the option of procuring insurance under a single policy or by a combination of underlying policies with the balance provided by an Excess or Umbrella policy with Follow Form coverage to the total per occurrence and aggregate limits required under this Lease.

(c) City will have the right, but not the obligation of prohibiting the Tenant from entering the project site until such Evidence of Insurance has been submitted to the City.

(d) Failure of City to demand delivery of or identify deficiency with such Evidence of Insurance shall not be construed as a waiver of Tenant's obligations under this section.

(e) By requiring insurance, the City does not represent that coverage and limits will necessarily be adequate to protect the Tenant. Insurance procured by the Tenant will not reduce or limit the Tenant's contractual obligation to indemnify and defend the City for claims or suits that result from or are connected with the performance of this Lease.

(f) Tenant shall not be relieved of its responsibility for any and all loss, damage or liability stemming from any risk or exposure that is not insured, or not covered within any deductibles or self-insured retentions, or not covered as a result of policy exclusions or limitations.

(g) Insurance certificates should be forwarded to:

City of Placentia
Risk Management
401 E. Chapman Avenue
Placentia, CA 92870
Attn: Manager

(h) City expressly retains the right to request a change in insurance requirements. If so requested, Tenant and City will strive to mutually agree to increase or decrease insurance of any of the above insurance types throughout the term of this Contract. Any increase or decrease in insurance will be as deemed by City Risk Manager as appropriate to adequately protect City.

(i) Following mutual agreement, Tenant will then deposit copies of acceptable certificates of insurance and endorsements with City incorporating such changes within thirty days of procuring such revised insurance.

(j) The procuring of such required policy or policies of insurance shall not be construed to limit Tenant's liability hereunder nor to fulfill the indemnification provisions and requirements of this Agreement, nor act in any way to reduce the policy coverage and limits available from the insurer.

IX.2 **Indemnification**. Tenant hereby releases and waives all claims and recourse against City, including the right of contribution for injury to or death of any person or loss of or damage to property, arising from, growing out of or in any way connected with or related to this Lease, except claims arising from the concurrent active or sole negligence of City, its officers, agents, employees and contractors. Tenant shall indemnify, defend (with counsel approved in writing by City), protect and hold City and the City Parties harmless from all Claims arising from or related to (i) Tenant's lease, use or occupancy of the Premises and the Improvements, (ii) Claims made by any tenant, resident, employee, agent, contractor or invitee to the Premises, (iii) the conduct of Tenant's business, or (iv) any activity, work or thing done, permitted or suffered by Tenant in or about the Premises or the Improvements. Tenant shall further indemnify, defend and hold City and the City Parties harmless from all Claims arising from any breach or default in the performance of any obligation to be performed by Tenant under the terms of this Lease, or arising from any act, neglect, fault or omission of Tenant or of its agents or employees, and from and against all costs, attorneys' fees, expenses and liabilities incurred in or about such Claim or any action or proceeding brought thereon. In case any action or proceeding shall be brought against City or a member of the City Parties by reason of any such Claim, Tenant, upon notice from City, shall defend the same at Tenant's expense, by counsel designated by Tenant and approved in writing by City, which approval shall not be unreasonably withheld. Tenant, as a material part of the consideration to City, hereby assumes all risk of damage to property or injury to person in, upon or about the Premises from any cause whatsoever except that which is caused by City's negligence or willful misconduct. Neither City nor the City Parties shall be liable to Tenant or any Tenant Party for any loss, injury or damage to Tenant or to the Tenant Group or to any other person, or to its or their property, irrespective of the cause of such injury, damage or loss, unless and to the extent caused by or resulting from the negligence or willful misconduct of City or the City Parties. The provisions of this Section shall survive the expiration or earlier termination of this Lease as to all matters arising prior to such expiration or termination or prior to Tenant's vacation of the Premises. If judgment is entered against City and Tenant by a court of competent jurisdiction because of the concurrent active negligence of City and Tenant, City and Tenant agree that liability will be apportioned as determined by the court. Neither Party shall request a jury apportionment.

Tenant acknowledges that it is familiar with the language and provisions of California Civil Code §1542 which provides as follows:

"A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which, if known by him or her must have materially affected his or her settlement with the debtor."

Tenant, being aware of and understanding the terms of §1542, hereby waives all benefit of its provisions to the extent described in this paragraph.

IX.3 **Damage to Tenant's Premises**. City shall not be liable for injury or damage which may be sustained by the person, goods, wares, merchandise, or other property of Tenant, of Tenant's employees, invitees, customers, or of any other person in or about the Premises or the Improvements caused by or resulting from any peril which may affect the Premises or Improvements, including fire, steam, electricity, gas, water, or rain which may leak or flow from or into any part of the Premises or the Improvements, whether such damage or injury results from conditions arising upon the Premises or from other sources.

ARTICLE X
CONDEMNATION

X.1 **Definitions**.

X.1.1. "**Condemnation**" means (i) the taking or damaging, including severance damage, by eminent domain or by inverse condemnation or for any public or quasi-public use under any statute, whether by legal proceedings or otherwise, by a Condemnor (hereinafter defined), and (ii) a voluntary sale or transfer to a Condemnor, either under threat of condemnation or while condemnation legal proceedings are pending.

X.1.2. "**Date of Taking**" means the later of (i) the date actual physical possession is taken by the Condemnor; or (ii) the date on which the right to compensation and damages accrues under the law applicable to the Premises.

X.1.3. "**Award**" means all compensation, sums or anything of value awarded, paid or received for a Total Taking, a Substantial Taking or a Partial Taking (hereinafter defined), whether pursuant to judgment or by agreement or otherwise.

X.1.4. "**Condemnor**" means any public or quasi-public authority or private corporation or individual having the power of condemnation.

X.1.5. "**Total Taking**" means the taking by Condemnation of all of the Premises and all of the Improvements.

X.1.6. "**Substantial Taking**" means the taking by Condemnation of so much of the Premises or Improvements or both that one or more of the following conditions results: (i) The remainder of the Premises would not be economically and feasibly usable by Tenant; and/or (ii) A reasonable amount of reconstruction would not make the Premises and Improvements a practical improvement and reasonably suited for the uses and purposes for which the Premises were being used prior to the Condemnation; and/or (iii) The conduct of Tenant's business on the Premises would be materially and substantially prevented or impaired.

X.1.7. "**Partial Taking**" means any taking of the Premises or Improvements that is neither a Total Taking nor a Substantial Taking.

X.1.8. "**Notice of Intended Condemnation**" means any notice or notification on which a reasonably prudent person would rely and which he would interpret as expressing an existing intention of Condemnation as distinguished from a mere preliminary inquiry or proposal. It includes but is not limited to service of a Condemnation summons and complaint on a party hereto. The notice is considered

to have been received when a party receives from the Condemnor a notice of intent to condemn, in writing, containing a description or map reasonably defining the extent of the Condemnation.

X.2 **Notice and Representation**.

X.2.1. **Notification**. The party receiving a notice of one or more of the kinds specified below shall promptly notify the other party of the receipt, contents and dates of such notice: (i) a Notice of Intended Condemnation; (ii) service of any legal process relating to the Condemnation of the Premises or Improvements; (iii) any notice in connection with any proceedings or negotiations with respect to such a Condemnation; (iv) any notice of an intent or willingness to make or negotiate a private purchase, sale or transfer in lieu of Condemnation.

X.2.2. **Separate Representation**. City and Tenant each have the right to represent its respective interest in each Condemnation proceeding or negotiation and to make full proof of his claims. No agreement, settlement, sale or transfer to or with the Condemnor shall be made without the consent of City and Tenant. City and Tenant shall each execute and deliver to the other any instruments that may be required to effectuate or facilitate the provisions of this Lease relating to Condemnation.

X.3 **Total or Substantial Taking**.

X.3.1. **Total Taking**. On a Total Taking, this Lease shall terminate on the Date of Taking.

X.3.2. **Substantial Taking**. If a taking is a Substantial Taking, Tenant may, by notice to City given within ninety (90) days after Tenant receives a Notice of Intended Condemnation, elect to treat the taking as a Total Taking. If Tenant does not so notify City, the taking shall be deemed a Partial Taking.

X.3.3. **Early Delivery of Possession**. Tenant may continue to occupy the Premises and Improvements until the Condemnor takes physical possession. At any time following Notice of Intended Condemnation, Tenant may in its sole discretion elect to relinquish possession of the Premises to City before the actual Taking. The election shall be made by notice declaring the election and agreeing to pay all Rent required under this Lease to the Date of Taking. Tenant's right to apportionment of or compensation from the Award shall then accrue as of the date that the Tenant relinquishes possession.

X.3.4. **Apportionment of Award**. On a Total Taking all sums, including damages and interest, awarded for the fee or leasehold or both shall be distributed and disbursed as finally determined by the court with jurisdiction over the Condemnation proceedings in accordance with applicable law. Notwithstanding anything herein to the contrary, Tenant shall be entitled to receive compensation for the value of its leasehold estate under this Lease including its interest in all Improvements, personal property and trade fixtures located on the Premises, its relocation and removal expenses, its loss of business goodwill and any other items to which Tenant may be entitled under applicable law.

X.4 **Partial Taking**.

X.4.1. **Effect on Rent**. On a Partial Taking this Lease shall remain in full force and effect covering the remainder of the Premises and Improvements, except that the Base Rent (including any adjustments thereto) shall be equitably reduced based on the impact (if any) of such Partial Taking on the operating income and revenue derived from Tenant's operations and the decrease (if any) in the market value of the leasehold interest. Such adjustment shall be determined by mediation, non-binding arbitration, or a court of law if the parties are unable to mutually agree on the amount of such decrease.

X.4.2. **Restoration of Improvements**. Promptly after a Partial Taking, Tenant shall repair, alter, modify or reconstruct the Improvements ("**Restoring**") so as to make them reasonably suitable for Tenant's continued occupancy for the uses and purposes for which the Premises are leased.

X.4.3. **Apportionment of Award**. Subject to the rights of any holder of a Leasehold Mortgage, on a Partial Taking, City shall be entitled to receive the entire award for such Partial Taking, except that (i) the proceeds of such Partial Taking shall first be applied towards the cost of Restoring the Premises pursuant to Section 10.4.2 and (ii) Tenant shall be entitled to receive any portion of such award allocated to Tenant's interest in any of Tenant's Improvements, personal property and trade fixtures taken.

X.5 **Waiver of Termination Rights**. Both parties waive their rights under Section 1265.130 of the California Code of Civil Procedure (and any successor provision) and agree that the right to terminate this Lease in the event of Condemnation shall be governed by the provisions of this Article X.

ARTICLE XI
ASSIGNMENT AND ENCUMBERING

XI.1 **General**. The parties hereto agree that this Agreement shall not prevent or limit Developer, in any manner, at Developer's sole discretion, from encumbering the Leasehold Estate or any portion thereof or any improvement thereon by any mortgage, deed of trust or other security device securing financing with respect to the Leasehold Estate, provided such encumbrance is consistent with the terms of Article XI of the Ground Lease between City and Developer. After the payment of the Initial Rent Payment, Tenant may assign or sublet this Lease with City's consent to a Permitted Transferee (as defined below). All other assignments and transfers (other than subletting to residential, retail and/or commercial tenants and related activities) shall require the consent of City, which may not be unreasonably withheld, conditioned or delayed.

XI.1.1. Except for the Leasehold Mortgage allowed by Article XVIII and transfers to a Permitted Transferee, any mortgage, pledge, hypothecation, encumbrance, transfer, sublease of Tenant's entire Lease interest or assignment (hereinafter in this section referred to collectively as "**Transfer**") of Tenant's interest in the Premises, or assignment of any part or portion thereof, shall first be approved in writing by City Administrator, unless otherwise provided herein. Failure to obtain City Administrator's required written approval of a Transfer will render such Transfer void. Occupancy of the Premises by a prospective transferee, sublessee, or assignee before approval of the Transfer by City shall constitute an Event of Default.

XI.1.2. Except for a Permitted Transfer (as defined in Section 11.3, below), if Tenant hereunder is a corporation, limited liability company, an unincorporated association or partnership, the Transfer of any stock or interest in said corporation, company, association, partnership in the aggregate

exceeding twenty-five percent (25%) shall be deemed a Transfer within the meaning of this Lease that requires City written consent.

XI.1.3. Should City consent to any Transfer, such consent shall not constitute a waiver of any of the terms, covenants, or conditions of this Lease nor be construed as City's consent to any further Transfer. Such terms, covenant or conditions shall apply to each and every Transfer hereunder and shall be severally binding upon each and every party thereto. Any document to mortgage, pledge, hypothecate, encumber, transfer, sublet, or assign the Premises or any part thereof shall not be inconsistent with the provisions of this Lease and in the event of any such inconsistency, the provisions of this Lease shall control.

XI.1.4. This section shall not be interpreted to disallow or require City approval for space leases (subleases of less than Tenant's entire Lease interest) or concession agreements within the Premises or the Improvements between the Tenant and a sub-tenant, which are consistent with the approved uses under this Lease.

XI.2 **Leasehold Mortgage**. Tenant shall have the right to hypothecate its leasehold interest in this Lease (including its interest in the Improvements) without City's consent to the extent provided in Article XVIII of this Lease, which shall govern in the event of any inconsistency with this Article XI. However, under no circumstances may Tenant mortgage, encumber or hypothecate City's Fee Interest.

XI.3 **Permitted Transfers**. Following the first payment of Base Rent, City's consent shall not be required to any of the following Transfers (each party to whom a Permitted Transfer may be made is a "**Permitted Transferee**"): (i) an Excluded Transfer, (ii) any Transfer to any successor corporation or other entity resulting from a merger or consolidation of Tenant or a conversion of Tenant into a limited liability company or other form of entity, or an Affiliate of Tenant, if the transferee or its constituent members has a net worth equal to or greater than seventy five percent (75%) the value of the leasehold estate created by this Lease and senior management that individually have more than ten (10) years of experience managing, maintaining and operating developments like that on the Premises, or (iii) any encumbrance to a Leasehold Mortgagee; provided, however, that in each case (1) Tenant shall notify City of such Transfer at least sixty (60) days prior to the consummation of such Transfer, and shall provide City with complete information regarding the transferee and information evidencing that the Transfer falls within the parameters of this paragraph, and (2) if such Transfer involves an assignment of Tenant's rights under this Lease, Tenant or such transferee shall provide City with a written assumption of Tenant's obligations under this Lease executed by such transferee in a form approved by the City, which approval shall not be unreasonably withheld, conditioned or delayed in the event that the assignment is consistent with the terms of this Lease. Any transfer of an indirect equity interest in Tenant or any Affiliate of Tenant shall not constitute a Transfer and shall not require City's consent.

XI.4 **Transfer Procedure**. If Tenant desires at any time to enter into a Transfer for which City's consent is required hereunder, Tenant shall provide City with written notice ("**Transfer Notice**") at least ninety (90) days prior to the proposed effective date of the Transfer. The Transfer Notice shall include (i) the name and address of the proposed transferee, (ii) the nature of the Transfer (*i.e.*, whether an assignment, sublease or encumbrance), (iii) the proposed effective date of the Transfer, (iv) income statements and "fair market" balance sheets of the proposed transferee for the two (2) most recently completed fiscal or calendar years (provided however, if the proposed transferee is a newly formed entity and has not been in existence for such two (2) year period, the financial statements submitted shall be

those if its principals), (v) a detailed description of the proposed transferees qualifications and experience that demonstrates the transferee meets the criteria for a Tenant as established by this Lease, and (vi) a bank or other credit reference. Thereafter, Tenant shall furnish such supplemental information as City may reasonably request concerning the proposed transferee. City shall, no later than thirty (30) days after City's receipt of the information specified above, deliver written notice to Tenant which shall (i) indicate whether City gives or withholds its consents to the proposed Transfer, and (ii) if City withholds its consent to the proposed Transfer, setting forth a detailed explanation of City's grounds for doing so. If City consents to a proposed Transfer, then Tenant may thereafter effectuate such Transfer to the proposed transferee. If City fails to respond to Tenant's request for consent to such Transfer by Tenant, then Tenant may provide a second written notice which shall include the following statement set forth in all capital letters and 10 point or larger type: "NOTE: YOU HAVE FAILED TO RESPOND TO A REQUEST FOR CONSENT TO A TRANSFER OF A LEASE AT THE 207-209 WEST CROWTHER AVENUE PROJECT. THE TRANSFER WILL BE DEEMED APPROVED WITHOUT YOUR CONSENT IF YOU DO NOT CONSENT OR INDICATE YOUR FAILURE TO CONSENT ON OR BEFORE THIRTY (30) DAYS FOLLOWING THE DATE HEREOF." If City still fails to respond within a thirty (30) day period after receipt of that second written notice, then it shall be conclusively presumed that City has consented to the proposed Transfer.

XI.5 **Liability of Transferors/Transferees For Lease Obligations**. Each permitted assignee of this Lease shall assume in writing all of Tenant's obligations under this Lease. All transferees of any interest in this Lease or the Premises or Improvements (whether or not directly liable on this Lease) shall be subject to the terms and provisions of this Lease.

XI.6 **Conditions of Certain City Approvals**.

XI.6.1. City agrees that it will not arbitrarily withhold consent of any Transfer which is not expressly permitted pursuant to this Article XI, but City may withhold consent at its sole discretion if any of the following conditions exist:

(a) An Event of Default exists under this Lease.

(b) The prospective Transferee has not agreed in writing to keep, perform, and be bound by all the terms, covenants, and conditions of this Lease.

(c) The first payment of Base Rent has not occurred if then due.

(d) The construction required of Tenant as a condition of this Lease has not been completed.

(e) All the material terms, covenants, and conditions of the Transfer that are relevant to the City approval of the Transfer have not been revealed in writing to City.

(f) The processing fee required by City and set out below has not been paid to City by delivery of said fee to City.

(1) A fee of $3,000 shall be paid to City for processing each consent to Transfer submitted to City as required by this Lease. This processing fee shall be deemed earned by City when paid and shall not be refundable.

(2) If a processing fee has been paid by Tenant for another phase of the same transaction, a second fee will not be charged. Such fee shall be increased every ten years during the Lease term based on any increase in the CPI Index. Under no circumstances shall the fee decrease.

XI.7 **Conditions Deemed Reasonable**. Tenant acknowledges that each of the conditions to a Transfer, and the rights of City set forth in this Article XI in the event of a Transfer is a reasonable restriction for the purposes of California Civil Code Section 1951.4.

ARTICLE XII
DEFAULT AND REMEDIES

XII.1 **Event of Default**. Each of the following events shall constitute an "**Event of Default**" by Tenant:

XII.1.1. **Failure to Pay**. Tenant's failure or omission to pay any Rent or other sum payable hereunder on or before the date due where such failure shall continue for a period of ten (10) business days after written notice thereof from City to Tenant; provided, however, that any such notice shall be in lieu of, and not in addition to, any notice required under California Code of Civil Procedure §1161 *et. seq*.

XII.1.2. **Failure to Perform**. Tenant's failure or omission to observe, keep or perform in any material respect any of the other terms, agreements or conditions contained in this Lease to be performed by Tenant, where such failure shall continue for a period of thirty (30) days after written notice thereof from City to Tenant. If the nature of Tenant's default is such that more than thirty (30) days are reasonably required for its cure, then such thirty (30) period shall be extended automatically so long as Tenant commences a cure within such thirty (30) day period and thereafter diligently and continuously pursues such cure to completion.

XII.1.3. **Abandonment**. The abandonment (as defined in California Civil Code Section 1951.3) or vacation of the Premises by Tenant.

XII.2 **City's Remedies**. If an Event of Default occurs and is continuing, City shall have the following remedies in addition to all rights and remedies provided by law or equity to which City may resort cumulatively or in the alternative:

XII.2.1. **Termination of Lease**. City shall have the right to terminate this Lease and all rights of Tenant hereunder including Tenant's right to possession of the Premises. In the event that City shall elect to so terminate this Lease then City may recover from Tenant:

(a) the worth at the time of award of any unpaid rent and other charges which had been earned at the time of such termination; plus

(b) the worth at the time of award of the amount by which the unpaid rent and other charges which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(c) the worth at the time of award of the amount by which the unpaid rent and other charges for the balance of the term after the time of award exceeds the amount of such rental loss that Tenant proves could be reasonably avoided; plus

(d) any other amount necessary to compensate City for all the detriment proximately caused by Tenant's failure to perform Tenant's obligations under this Lease or which in the ordinary course of things would be likely to result therefrom, including, but not limited to, the cost of recovering possession of the Premises, expenses of reletting, including necessary repair, renovation and alteration of the Premises, reasonable attorneys' fees, expert witness costs, and any other reasonable costs; Plus

(e) any other amount which City may by law hereafter be permitted to recover from Tenant to compensate City for the detriment caused by Tenant's default.

As used in clauses (a) and (b) above, the "worth at the time of award" is computed by allowing interest at the maximum rate an individual is permitted to charge by law. As used in clause (c) above, the "worth at the time of award" is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). In determining the amount of rental loss that Tenant proves could have been reasonably avoided (as referred to in clauses (b) and (c) above), the parties' shall take into account the value added by the Improvements that have reverted to City as a result of the termination of the Lease.

XII.2.2. **Continue Lease in Effect**. City shall have the remedy described in California Civil Code Section 1951.4 (*i.e.*, City may continue the Lease in effect after Tenant's breach and abandonment and recover Rent, as it becomes due, if Tenant has the right to sublet or assign, subject only to reasonable limitations).

XII.2.3. **Removal of Personal Property Following Termination of Lease**. City shall have the right, following a termination of this Lease and Tenant's rights of possession of the Premises under Section 12.2.1 above, to re-enter the Premises and, subject to applicable law, to remove Tenant's personal property from the Premises. Such property may be removed and stored in a public warehouse or elsewhere at the cost of and for the account of Tenant in accordance with applicable California law.

XII.3 **City's Right to Cure Tenant Defaults**. If Tenant shall have failed to cure, after expiration of the applicable time for curing, a particular default under this Lease, City may at its election, but is not obligated to, make any payment required of Tenant under this Lease or perform or comply with any term, agreement or condition imposed on Tenant hereunder, and the amount so paid plus the reasonable cost of any such performance or compliance, plus interest on such sum at the Interest Rate from the date of payment, performance or compliance until reimbursed shall be deemed to be additional rent payable by Tenant on City's demand. No such payment, performance or compliance shall constitute a waiver of default or of any remedy for default, or render City liable for any loss or damage resulting from the same.

XII.4 **City's Default**. City shall not be considered to be in default under this Lease unless Tenant has given City written notice specifying the default, and either (i) as to monetary defaults, City has failed to cure the same within ten (10) business days after written notice from Tenant, or (ii) as to nonmonetary defaults, City has failed to cure the same within thirty (30) days after written notice from Tenant, or if the nature of Tenant's nonmonetary default is such that more than thirty (30) days are reasonably required for

its cure, then such thirty (30) period shall be extended automatically so long as City commences a cure within such thirty (30) day period and thereafter diligently pursues such cure to completion. Tenant shall have no right to offset or abate alleged amounts owing by City under this Lease against Base Rent owing by Tenant under this Lease, except that Tenant shall have the right to fully offset against Base Rent or any other amounts owing under this Lease the full amount of any final arbitration award or final judgment in any court proceeding that City fails to pay within sixty (60) days after such award or judgment is entered.

XII.5 **Remedies Cumulative**. All rights and remedies of City contained in this Lease shall be construed and held to be cumulative, and no one of them shall be exclusive of the other, and City shall have the right to pursue any one or all of such remedies or any other remedy or relief which may be provided by law, whether or not stated in this Lease.

XII.6 **Waiver by City**. No waiver of any default of Tenant hereunder shall be implied from any acceptance by City of any Rent or other payments due hereunder or any omission by City to take any action on account of such default if such default persists or is repeated. City's waiver of any breach by Tenant of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of the same or of any other term, covenant or condition herein contained. The consent or approval of City to or of any act by Tenant requiring City's consent or approval shall not be deemed to waive or render unnecessary City's consent or approval to or of any subsequent similar acts by Tenant. The acceptance of Rent hereunder by City shall not be deemed to be a waiver of any preceding breach by Tenant or any term, covenant or condition of this Lease, other than the failure of Tenant to pay the particular Rent so accepted. Acceptance by City of a sum less than the Base Rent or other sum then due shall not be deemed to be other than on account of the earliest installment of such Rent or other amount due, nor shall any endorsement or statement on any check or any letter accompanying any check be deemed an accord and satisfaction, and City may accept such check or payment without prejudice to City's right to recover the balance of such installment or other amount or pursue any other remedy provided in this Lease.

XII.7 **Waiver by Tenant**. Tenant's waiver of any breach by City of any term, covenant or condition herein contained shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition herein contained.

XII.8 **Interest.** Any installment of rent due under this Lease or any other sums not paid to City when due (other than interest) shall bear interest at the maximum rate allowed by law from the date such payment is due until paid, provided, however, that the payment of such interest shall not excuse or cure the default.

XII.9 **Tenant Covenants and Agreements.** All covenants and agreements to be performed by Tenant under any of the terms of this Lease shall be performed by Tenant at Tenant's sole cost and expense and without any abatement of rent. If Tenant shall fail to pay any sum of money, other than rent required to be paid by it hereunder or shall fail to perform any other act on its part to be performed hereunder, or to provide any insurance or evidence of insurance to be provided by Tenant, then in addition to any other remedies provided herein, City may, but shall not be obligated to do so, and without waiving or releasing Tenant from any obligations of Tenant, make any such payment or perform any such act on Tenant's part to be made or performed as provided in this Lease or to provide such insurance. Any payment or performance of any act or the provision of any such insurance by City on Tenant's behalf shall not give rise to any responsibility of City to continue making the same or similar payments or performing the same

or similar acts. All costs, expenses, and other sums incurred or paid by City in connection therewith, together with interest at the maximum rate permitted by law from the date incurred or paid by City shall be deemed to be additional rent hereunder and shall be paid by Tenant with and at the same time as the next installment of rent hereunder, and any default therein shall constitute an Event of Default under this Lease.

ARTICLE XIII
HOLDING OVER

If Tenant holds over after the expiration or earlier termination of the Term hereof without the express written consent of City, Tenant shall become a Tenant at sufferance only, at a Base Rental rate equal to the greater of (i) one hundred fifty percent (150%) of the last Base Rental in effect, or (ii) the then fair market rental value of the Premises, and otherwise subject to the terms, covenants and conditions herein specified. Acceptance by City of Rent after such expiration or earlier termination shall not result in an extension of this Lease. If Tenant fails to surrender the Premises and the Improvements upon the expiration of this Lease despite demand to do so by City, Tenant shall indemnify and hold City harmless from all loss or liability, including any claim made by any succeeding tenant founded on or resulting from such failure to surrender and any attorneys' fees and costs incurred by City.

ARTICLE XIV
ESTOPPEL CERTIFICATES

At any time and from time to time, within ten (10) business days after written request by either City or Tenant (the "**requesting party**"), the other party (the "**responding party**") shall execute, acknowledge and deliver an estoppel certificate addressed to the requesting party, and/or to such other beneficiary (as described below) as the requesting party shall request, certifying (i) that this Lease is in full force and effect, (ii) that this Lease is unmodified, or, if there have been modifications, identifying the same, (iii) the dates to which Rent has been paid in advance, (iv) that, to the actual knowledge of the responding party, there are no then existing and uncured defaults under the Lease by either City or Tenant, or, if any such defaults are known, identifying the same, and (v) any other factual matters (which shall be limited to the actual knowledge of the responding party) as may be reasonably requested by the requesting party. Such certificate may designate as the beneficiary thereof the requesting party, and/or any third party having a reasonable need for such a certificate (such as, but not limited to, a prospective purchaser, transferee or lender).

ARTICLE XV
FORCE MAJEURE

Unless otherwise specifically provided herein, the period for performance of any nonmonetary obligation by either party shall be extended by the period of any delay in performance caused by Acts of God, strikes, boycotts, lock-outs, inability to procure materials not related to the price thereof, failure of electric power, riots, civil unrest, acts of terrorism, insurrection, war, declaration of a state or national emergency, pandemics, global and/or national health crises, epidemics, quarantine or shelter in place restrictions and/or government orders related thereto, weather that could not have reasonably been anticipated, changes in the Laws which would prevent the Premise from being operated in accordance with this Lease, or other reasons beyond the reasonable control of City, Tenant, or their respective agents or representatives (collectively, "**Force Majeure Events**"). In no event, however, shall Force Majeure

Events include the financial inability of a party to this Lease to pay or perform its obligations hereunder. Further, nothing herein shall extend the time for performance of any monetary obligation owing under this Lease (including Tenant's obligation to pay Rent owing hereunder).

ARTICLE XVI
FINANCIAL STATEMENTS

Tenant acknowledges that it has made available to City its financial statement(s) as a material inducement to City's agreement to lease the Premises to Tenant, and that City has relied on the accuracy of such financial statement(s) in entering into this Lease. Tenant represents and warrants that such statements have been prepared in accordance with generally accepted accounting principles consistently applied (with such variations thereto as Tenant ordinarily and customarily makes in preparing such financial statements), and the information contained in such financial statement(s) is true, complete and correct in all material aspects. If requested by City in connection with the sale or financing of the Premises by City, Tenant shall, within fifteen (15) business days following Tenant's receipt of such written request from City, make available to City financial statements for the current year and the two (2) years prior to the current year for review. Such statements shall be prepared in accordance with Tenant's normal accounting standards and shall be certified by Tenant, except that Tenant will provide audited financial statements if audited financial statements are otherwise available. At any time that Tenant is a publicly traded company, or is owned by a publicly traded company, Tenant's obligations under this Section shall be deemed satisfied by making available to City any public financial statements that have been filed with applicable regulatory authorities (which may be consolidated financial statements). City shall use such financial information only for its own purposes, and may disclose any financial information which is not otherwise available to the public only to third parties with a reasonable need to know (such as prospective purchaser or lenders) or as required by law, and shall otherwise maintain the confidentiality of such financial information.

ARTICLE XVII
CITY MORTGAGES

City shall have the right to hereafter assign, mortgage, convey and encumber its fee interest in the Premises at any time, and Tenant hereby consents thereto, to a public entity controlled by the City or a joint powers authority to which the City is a member. All other transfers, assignment, mortgages and conveyances shall be subject to Tenant's and any Leasehold Mortgagee's reasonable prior approval. City represents and warrants to Tenant that no City mortgage, deed of trust, security deed, conditional deed, deed to secure debt or any other security instrument, exists as of the Commencement Date. Any City Mortgage shall be subject and subordinate in all respects to, and no default, foreclosure or other enforcement of remedies under any City Mortgage shall extinguish or otherwise affect in any manner, and any person who acquires title to the City's Fee Interest pursuant to any foreclosure, assignment in lieu of foreclosure or other exercise of remedies under any City Mortgage, and shall take title to the City's Fee Interest subject to, (i) this Lease and all of Tenant's rights hereunder, (ii) any Leasehold Mortgage and the rights of any Leasehold Mortgagee thereunder, and (iii) any New Lease and the rights of the tenant thereunder.

ARTICLE XVIII
LEASEHOLD MORTGAGES

XVIII.1 **Definitions**. The following definitions are used in this Article (and in other Sections of this Lease):

XVIII.1.1. "**Leasehold Estate**" means Tenant's leasehold estate in and to this Lease, including Tenant's rights, title and interest in and to the Premises and Improvements, or any applicable portion thereof or interest therein.

XVIII.1.2. "**Leasehold Foreclosure Transferee**" means any person (which may, but need not be, a Leasehold Mortgagee) which acquires the Leasehold Estate pursuant to a foreclosure, assignment in lieu of foreclosure or other enforcement of remedies under or in connection with a Leasehold Mortgage.

XVIII.1.3. "**Leasehold Mortgage**" means and includes a mortgage, deed of trust, security deed, conditional deed, deed to secure debt or any other security instrument (including any assignment of leases and rents, security agreement and financing statements) held by an Institutional Lender by which Tenant's Leasehold Estate is mortgaged, conveyed, assigned, or otherwise transferred to secure a debt or other obligation, including a purchase money obligation.

XVIII.1.4. "**Leasehold Mortgagee**" means an Institutional Lender which is the holder of a Leasehold Mortgage.

XVIII.1.5. "**Tenant**" as used in this Article XVIII only shall mean all of the following: (i) the Tenant under this Lease; (ii) an assignee, transferee or subtenant of the Tenant under this Lease who is or becomes directly and primarily liable to City; and (iii) any further assignee, transferee or subtenant of any of the parties listed in (ii) who is or becomes directly and primarily liable to City.

XVIII.2 **Tenant's Right to Encumber Leasehold Estate; No Right to Encumber City's Fee Interest**. Tenant may, at any time during the Term of this Lease, without the consent of City (but with prior written notice providing evidence that all requirements of this Lease have been complied with) encumber all or any portion of Tenant's Leasehold Estate with one (1) or more Leasehold Mortgages; provided, however:

XVIII.2.1. Such Leasehold Mortgage(s) (as of the date recorded) shall not exceed 80% of project costs prior to completion and 80% of the Leasehold Estate value after completion;

XVIII.2.2. That Tenant shall not have the power to encumber, and no Leasehold Mortgage shall encumber, City's Fee Interest;

XVIII.2.3. The Leasehold Mortgage and all rights acquired under it shall be subject to each and all of the covenants, conditions, and restrictions set forth in this Lease and to all rights and interests of City hereunder, except as otherwise provided in this Lease, and;

XVIII.2.4. Nothing in this Lease shall be construed so as to require or result in a subordination in whole or in part in any way of the City's Fee Interest to any Leasehold Mortgage.

XVIII.2.5. In the event of any conflict between the provisions of this Lease and the provisions of any such trust Leasehold Mortgage, the provisions of this Lease shall control.

XVIII.3 **Notification to City of Leasehold Mortgage**. Tenant or any Leasehold Mortgagee shall, prior to making any Leasehold Mortgage, provide City with notice of such Leasehold Mortgage and the name and address of the Leasehold Mortgagee. At the time of notice, Tenant shall furnish to City Administrator a complete copy of any trust deed and note to be secured thereby, together with the name and address of the holder thereof. Thereafter, Tenant or any Leasehold Mortgagee shall notify City of any change in the identity or address of such Leasehold Mortgagee. City shall be entitled to rely upon the addresses provided pursuant to this Section for purposes of giving any notices required by this Article XVIII.

XVIII.4 **Notice Procedures**. All notices given by City to any Leasehold Mortgagee shall be given in the manner required by Section 19.16 below, and to the address provided to City pursuant to Section 19.16. All notices given by any Leasehold Mortgagee to City shall be given in the manner required and to the address specified in Section 19.16 below (provided that City may change its address for notice purposes by giving written notice to any Leasehold Mortgagee of such change of address in the manner provided in this Section).

XVIII.5 **Recorded Request for Notice of Leasehold Mortgage Default**. Upon and immediately after the recording of a Leasehold Mortgage affecting the Premises (which shall only be recorded against Tenant's Leasehold Estate), Tenant at Tenant's expense, shall cause to be recorded in the office of the Recorder, County of Orange, California, a written request, executed and acknowledged by City, for a copy of any notice of default and of any notice of sale under the Leasehold Mortgage provided by the statutes of the State of California relating thereto.

XVIII.6 **Cancellation or Modification of Lease**. No cancellation, surrender, modification or termination of this Lease shall be effective as to any Leasehold Mortgagee unless either consented to in writing by such Leasehold Mortgagee or effected in accordance with the provisions of this Article XVIII.

XVIII.7 **Notice and Cure Rights of Leasehold Mortgagees With Respect to Tenant Defaults**. City, upon delivery to Tenant of any notice of a default under this Lease or a matter as to which City may predicate or claim a default, shall concurrently deliver a copy of such notice to each Leasehold Mortgagee. No such notice by City to Tenant shall be deemed to have been duly given unless and until a copy thereof has been so provided to each Leasehold Mortgagee in the manner provided in Section 19.16 From and after the date such notice has been given to any Leasehold Mortgagee, such Leasehold Mortgagee shall have the same cure period (measured from its receipt of such notice) for such default (or act or omission which is the subject matter of such notice) that is provided to Tenant under this Lease (plus the additional time specified in Sections 18.8 and 18.9 if City gives a notice under Section 18.8 of City's intention to terminate this Lease), to commence and complete a cure of such default (or act or omission which is the subject matter of such notice) specified in City's notice. City shall accept any and all performance by or on behalf of any Leasehold Mortgagee(s), including by any receiver obtained by any Leasehold Mortgagee(s), as if the same had been done by Tenant (and whether or not any applicable cure periods provided to Tenant in this Lease have expired). Tenant authorizes each Leasehold Mortgagee to take any such action at such Leasehold Mortgagee's option, and hereby authorizes any Leasehold Mortgagee (or any receiver or agent) to enter upon the Premises for such purpose.

XVIII.8 **Limitation on City's Termination Right**. If any Event of Default occurs and is continuing (and is not cured by any Leasehold Mortgagee under Section 18.7 above) which entitles City

to terminate this Lease, City shall have no right to terminate this Lease unless City shall notify each and every Leasehold Mortgagee who has complied with Section 18.3 of City's intent to so terminate (and shall include in such notice a description of each Event of Default upon which such intent to terminate is based and stating the aggregate amount necessary to cure any monetary Events of Default stated in such notice) at least thirty (30) days in advance of the proposed effective date of such termination. If any Leasehold Mortgagee, within such thirty (30) day period, (i) notifies City of such Leasehold Mortgagee's desire to nullify such notice, and (ii) pays or cause to be paid the amount that is necessary to cure any monetary Events of Default as stated in such notice, then Section 18.7 shall apply.

XVIII.9 **Leasehold Mortgagee Foreclosure Period**. If any Leasehold Mortgagee gives to City the notice and makes the payment described in the last sentence of Section 18.8 above, then the following provisions shall apply:

XVIII.9.1. If City's notice under Section 18.8 specified as the basis for City's election to terminate only monetary Events of Default, and Leasehold Mortgagee has fully paid the monetary amount designed by City in its notice, then such payment shall be deemed to have cured the Event of Default. If any remaining Event of Default specified in City's notice is continuing notwithstanding any such payment, then the date of termination specified in City's notice shall be extended for a period of twelve (12) months, provided that such Leasehold Mortgagee shall, during such twelve (12) month period:

(a) pay or cause to be paid all Rent under this Lease as the same becomes due; and

(b) continue (subject to any stay as described in Section 18.9.2 below) its good faith efforts to perform (and complete performance of) all of Tenant's nonmonetary obligations under this Lease, excepting nonmonetary obligations (whether or not a default exists with respect thereto) that are not reasonably susceptible of being cured by Leasehold Mortgagee; and

(c) commence and pursue with reasonable diligence until completion (subject to any stay as described in Section 18.9.2 below) a judicial or nonjudicial foreclosure or other enforcement of remedies under its Leasehold Mortgage.

XVIII.9.2. The twelve (12) month period described in Section 18.9.1 above shall automatically be extended by the length of any delay caused by any stay (including any automatic stay arising from any bankruptcy or insolvency proceeding involving Tenant), injunction or other order arising under applicable Laws or issued by any court (which term as used herein includes any other governmental or quasi-governmental authority having such power) (the foregoing being collectively referred to as a "**stay**"). Further, Leasehold Mortgagee's obligations stated in Section 18.9.1(b) and (c) shall be automatically suspended during any period that any stay prevents Leasehold Mortgagee from taking any such actions. Nothing herein, however, shall be construed to extend this Lease beyond the Term hereof nor to require a Leasehold Mortgagee to continue such foreclosure proceedings after the Event of Default has been cured. If the Event of Default has been cured and the Leasehold Mortgagee shall discontinue such foreclosure proceedings, this Lease shall continue in full force and effect as if Tenant had not defaulted under this Lease.

XVIII.9.3. So long as any Leasehold Mortgagee is complying with Sections 18.9.1 and 18.9.2 above, then upon the acquisition of Tenant's Leasehold Estate by a Leasehold Foreclosure

Transferee, this Lease shall continue in full force and effect as if Tenant had not defaulted under this Lease.

XVIII.9.4. Tenant's encumbrance of its Leasehold Estate with a Leasehold Mortgage shall not constitute an assignment or other Transfer under Article XI or otherwise, nor shall any Leasehold Mortgagee, as such, be deemed to be an assignee or transferee of this Lease or of the Leasehold Estate so as to require such Leasehold Mortgagee, as such, to assume the performance of any of the terms, covenants or conditions on the part of the Tenant to be performed hereunder; provided, however, that any Leasehold Foreclosure Transferee shall be deemed to be an assignee or transferee and shall be deemed to have agreed to perform all of the terms, covenants and conditions on the part of the Tenant to be performed hereunder from and after the effective date on which such Leasehold Foreclosure Transferee acquires title to the Leasehold Estate, but only for so long as such purchaser or assignee is the owner of the leasehold estate.

XVIII.9.5. Any Leasehold Mortgagee (or its designee) that becomes a Leasehold Foreclosure Transferee, upon acquiring title to Tenant's Leasehold Estate, without causing a default under this Lease and without obtaining City's consent, shall have a one-time right to assign the Leasehold Estate to an assignee having a net worth equal to or greater than sixty percent (60%) the value of the leasehold estate created by this Lease and senior management that individually have more than ten (10) years of experience managing, maintaining and operating developments like that on the Premises. Upon such assignment, the Leasehold Foreclosure Transferee shall automatically be released of all obligations thereafter accruing under this Lease, provided that, substantially concurrently with such assignment, the assignee delivers to City a written agreement assuming Tenant's obligations under the Lease thereafter accruing. Any subsequent Transfers occurring after the one-time assignment permitted under this Section shall be subject to Article XI.

XVIII.9.6. Notwithstanding any other provisions of this Lease to the contrary, any sale, assignment or other transfer of this Lease and the Leasehold Estate to any Leasehold Foreclosure Transferee completed in accordance with the terms of this Lease shall be deemed to be a permitted sale, assignment or transfer of this Lease and of the Leasehold Estate, and shall not cause any default under this Lease nor require the consent of City.

XVIII.10 **Leasehold Mortgagee's Right to New Lease**.

XVIII.10.1. Notwithstanding anything in this Lease to the contrary, if this Lease is terminated for any reason (including by reason of any Event of Default or rejection or disaffirmance of this Lease pursuant to bankruptcy law or any other law affecting creditor's rights) without the prior written consent of all Leasehold Mortgagees, other than by reason of a Total Taking, City shall give prompt notice thereof to any Leasehold Mortgagee of whom City has received notice pursuant to Section 18.3 above. Such Leasehold Mortgagee (subject to Section 18.11 below if more than one Leasehold Mortgagee then exists) shall then have the right, exercisable by written notice to City at any time within thirty (30) days following receipt of such notice, to require City to enter into a new lease of the Premises with such Leasehold Mortgagee, or its designee, which new lease (a "**New Lease**") shall commence as of the date of such termination of this Lease and shall continue for the remainder of the scheduled term of this Lease, at the same Rent that is payable under this Lease, and on the same terms, covenants, conditions and agreements that are contained in this Lease (including any extension options, purchase options and rights of first refusal, if any, provided for in this Lease), and subject to the rights of any residents under Resident Agreements or other subtenants then in valid occupancy of the Premises and Improvements and further

subject to any then existing senior Leasehold Mortgagees, provided that, substantially concurrently with the delivery of such notice requiring City to enter into a New Lease, Leasehold Mortgage shall pay to City all Rent or any other amounts payable by Tenant hereunder which is then due and shall commence and proceed with diligence to cure all nonmonetary defaults under this Lease, other than those nonmonetary defaults which are personal to the foreclosed tenant and impossible for the Leasehold Mortgagee to remedy.

XVIII.10.2. If such Leasehold Mortgagee elects to enter into a New Lease pursuant to Section 18.10.1 above, then City and the Leasehold Mortgagee (or its designee) shall promptly prepare and enter into a written New Lease, but until such written New Lease is mutually executed and delivered, this Lease shall be deemed to constitute the New Lease, as modified by this Section 18.10, and Leasehold Mortgagee (or its designee) shall, from and after the giving of notice pursuant to Section 18.10.1, (i) be entitled to possession of the Premises and to exercise all rights of Tenant hereunder, (ii) pay to City all Rent accruing under the New Lease as it becomes owing, and (iii) perform or cause to be performed all of the other covenants and agreements under the New Lease on Tenant's part to be performed. Further, at such time as the written New Lease is mutually executed and delivered, Leasehold Mortgagee (or its designee) shall pay to City its reasonable expenses, including reasonable attorneys' fees, incurred in connection with the termination of this Lease and with the preparation, execution and delivery of such written New Lease.

XVIII.10.3. In the event that City receives any net income (*i.e.*, gross income less gross expenses on a cash basis), if any, from the Premises and Improvements during any period that City may control the same, then the tenant under the New Lease shall be entitled to an offset against the next Rent then owing under the New Lease in the amount of such net income received by City except to the extent that it was applied to cure any default of Tenant.

XVIII.10.4. All rights and claims of Tenant under this Lease shall be subject and subordinate to all right and claims of the tenant under the New Lease.

XVIII.10.5. Any New Lease made pursuant to this Section 18.10 (including any extensions or renewals thereof) with a Leasehold Mortgagee or its designee shall be prior to any City Mortgage or any other lien, charge or encumbrance on the City's fee interest in the Premises, and the tenant under the New Lease shall have the same right, title and interest in and to the Premises and the Improvements thereon as Tenant had under this Lease.

XVIII.10.6. If a Leasehold Mortgagee elects to enter into a New Lease, City agrees, upon the request of any Leasehold Mortgagee, and on behalf of and at the expense of such Leasehold Mortgagee, to cooperate with such Leasehold Mortgagee in obtaining possession and control of the Premises and Improvements, including commencing and prosecuting appropriate legal proceedings in the name of City if reasonably necessary.

XVIII.10.7. Unless and until City has received notice from each Leasehold Mortgagee that such Leasehold Mortgagee elects not to enter into a New Lease, or until the period provided for above within which such Leasehold Mortgagee must make such election has expired without any election having been made, City shall not, unless all Leasehold Mortgagees have consented in writing, cancel or agree to the termination or surrender of any subleases or occupancy agreements affecting the Premises or Improvements.

XVIII.11 **Multiple Leasehold Mortgages**. If more than one Leasehold Mortgagee shall make a written request upon City for a New Lease in accordance with the provisions of Section 18.10, then such New Lease shall be entered into pursuant to the request of the Leasehold Mortgagee holding the Leasehold Mortgage that is junior in priority to all other requesting Leasehold Mortgagees, provided that: (a) any junior Leasehold Mortgagee whose Leasehold Mortgage was made in violation of any restrictions on junior encumbrances included in any bona fide senior Leasehold Mortgagee made in good faith and for value shall be disregarded for purposes of Sections 18.10 and 18.11 and shall have no rights under this Lease; (b) all Leasehold Mortgagees that are senior in priority shall have been paid all amounts then due and owing under such Leasehold Mortgagees, plus all expenses, including attorneys' fees, incurred by such senior Leasehold Mortgagees in connection with any default by Tenant under this Lease and in connection with the New Lease; (c) the new Tenant will assume, in writing, all of the obligations of the mortgagor(s) under all senior Leasehold Mortgages, subject to any nonrecourse or other exculpatory provisions (if any) therein contained; (d) the New Lease shall contain all of the same provisions and rights in favor of and for the benefit of Leasehold Mortgagees thereof as are contained in this Lease; and (e) all senior Leasehold Mortgagees (at no expense to such senior Leasehold Mortgagees or City) shall have received endorsements or other assurances satisfactory to such senior Leasehold Mortgagees from their respective title insurers insuring that their respective senior Leasehold Mortgages (and any assignment of rents and other security instruments executed in connection therewith) will continue as a Leasehold Mortgage with respect to such New Lease in the same manner and order of priority of lien as existed with respect to this Lease; and thereupon the leasehold estate of the new tenant under the New Lease shall be subject to the lien of each of the senior Leasehold Mortgages in the same manner and order of priority of lien as existed with respect to this Lease.

In the event that not all of the foregoing provisions shall have been satisfied by or with respect to any such junior Leasehold Mortgagee, the Leasehold Mortgagee next senior in priority to such junior Leasehold Mortgagee shall have paramount rights to the benefits set forth in Section 18.10 above, subject nevertheless to the provisions hereof respecting the senior Leasehold Mortgagees, if any. In the event of any dispute as to the respective senior and junior priorities of any such Leasehold Mortgages, the certification of a national title company licensed in the State of California shall be conclusively binding on all parties concerned. Should there be a dispute among Leasehold Mortgagees as to compliance with the foregoing provisions, City may rely on the affidavit of the most senior Leasehold Mortgagee as to compliance by any junior Leasehold Mortgagee. City's obligation to enter into a New Lease with any junior Leasehold Mortgagee shall be subject to the receipt by City of evidence reasonably satisfactory to it that the conditions set forth in clauses (a), (b) and (c) in the paragraph immediately above in this Section have been satisfied with respect to each senior Leasehold Mortgagee.

The right of a senior Leasehold Mortgagee under Section 18.10 above to request a New Lease may, notwithstanding any limitation of time set forth above in this Section 18.10, be exercised by the senior leasehold Mortgagee within twenty (20) days following the failure of a junior Leasehold Mortgagee to have exercised such right, but not more than sixty (60) days after the giving of notice by City of termination of this Lease as set forth in Section 18.10 above.

If a junior Leasehold Mortgagee shall fail or refuse to exercise the rights set forth in this Section 18.11, any senior Leasehold Mortgagee, in the inverse order of the seniority of their respective liens, shall have the right to exercise such rights subject to the provisions of this Lease.

Further, in addition to the above, at any time that more than one Leasehold Mortgagee exists, the Leasehold Mortgagee holding the most senior Leasehold Mortgage shall have the first and prior right over any junior Leasehold Mortgagee to receive any payments or to exercise any rights afforded to Leasehold Mortgages under this Article XVIII or any other provision of this Lease, subject to the provisions of any subordination or intercreditor agreements that may be entered into between such Leasehold Mortgagees.

Notwithstanding anything herein to the contrary, City shall have no duty or obligation to resolve any disputes or conflicting demands between Leasehold Mortgagees. In the event of any conflicting demands made upon City by multiple Leasehold Mortgagees, City may (subject to any applicable court orders to the contrary) rely on the direction of the Leasehold Mortgagee whose Leasehold Mortgage is recorded first in time in the Official Records of the City, as determined by any national title company.

XVIII.12 **Defaults Not Reasonably Susceptible of Cure by Leasehold Mortgagee**. Notwithstanding anything in this Lease to the contrary, nothing in this Article XVIII or any other provision of this Lease shall require any Leasehold Mortgagee to cure any nonmonetary default of Tenant that is not reasonably susceptible of being cured by such Leasehold Mortgagee or its designee. No failure of any Leasehold Mortgage or its designee to cure any nonmonetary default of Tenant that is not reasonably susceptible of being cured by such Leasehold Mortgagee or its designee shall prevent such Leasehold Mortgagee or its designee from exercising its right to enter into a New Lease or any other right of a Leasehold Mortgagee as provided herein.

XVIII.13 **Condemnation and Insurance Proceeds**. Any condemnation proceeds or insurance proceeds to which Tenant is entitled pursuant to this Lease shall be subject to and paid in accordance with the requirement of any Leasehold Mortgage, subject, however, to any requirement in this Lease that such proceeds must be used to repair and restore the Improvements to the Premises which were damaged or destroyed by such condemnation or casualty (including, without limitation, as required in Section 8.1(b) following a casualty and in Section 10.4.3 following a condemnation). The handling and disbursement of any such proceeds used to repair or restore the Improvements to the Premises shall be subject to the requirements of any Leasehold Mortgage, so long as such proceeds are used towards repair or reconstruction of the Improvements to the Premises to the extent required by this Lease.

XVIII.14 **Mortgagee Clauses**. A standard mortgagee clause naming each Leasehold Mortgagee may be added to any and all insurance policies required to be carried by Tenant hereunder, provided that any such Leasehold Mortgagee shall hold and apply such insurance proceeds subject to the provisions of this Lease.

XVIII.15 **Proceedings**. City and Tenant shall give each Leasehold Mortgagee of whom City has been notified pursuant to Section 18.3 prompt notice of (i) any arbitration, litigation or other legal proceeding between City and Tenant, (ii) any Condemnation notices received by them, (iii) any pending adjustment of insurance claims, and (iv) any notices given between City and Tenant involving obligations under this Lease. Each Leasehold Mortgagee shall have the right to participate or intervene in any such negotiations or proceedings and to be made a party to any such proceedings, and the parties hereto do hereby consent to the same. If any Leasehold Mortgagee elects not to participate or intervene in or become a party to any proceeding, Tenant shall give each Leasehold Mortgagee notice and a copy of any award or decision made in connection with such proceeding.

XVIII.16 **No Waiver**. No payment made to City by a Leasehold Mortgagee shall constitute agreement that such payment was, in fact, due under the terms of this Lease; and a Leasehold Mortgagee having made any payment to City pursuant to City's wrongful, improper or mistaken notice or demand shall be entitled to the return of any such payment or portion thereof.

XVIII.17 **No Merger**. There shall be no merger of this Lease, nor of the leasehold estate created by this Lease, with the fee estate in the Premises by reason of the fact that this Lease or the leasehold estate created by this Lease or any interest in this Lease or said leasehold estate may be held, directly or indirectly, by or for the account of any person or persons who shall own the fee estate in the Premises or any interest in such fee estate, and no such merger shall occur unless and until all persons at the time having an interest in the fee estate in the Premises and all persons (including Leasehold Mortgagees) having an interest in this Lease or in the estate of City and Tenant shall join in a written instrument effecting such merger and shall duly record the same.

XVIII.18 **Amendments/Agreements/Acknowledgments Required by Leasehold Mortgagees**. City acknowledges that Tenant's ability to obtain construction, take-out and other financing pursuant to Leasehold Mortgages is a material consideration to Tenant's entering into this Lease. Accordingly, City agrees to reasonably cooperate with Tenant and any prospective Leasehold Mortgagee in entering into any reasonable amendment to this Lease (pending City Council approval if required), or any supplemental agreement or written acknowledgment, reasonably requested by any proposed Leasehold Mortgagee, for the purposes of (i) updating or supplementing the mortgagee protection provisions of this Lease to comply with prevailing standards, (ii) otherwise providing such prospective Leasehold Mortgagee with additional reasonable means of protecting and preserving the existence of this Lease and the lien of the Leasehold Mortgage as an encumbrance on the Leasehold Estate, so long as City continues to be paid Rent owing under this Lease, and (iii) acknowledging that such prospective Leasehold Mortgagee is recognized by City as a Leasehold Mortgagee under this Lease and entitled to all of the rights and privileges afforded to Leasehold Mortgagees under this Lease; provided, however, that no such amendment, agreement or acknowledgment shall contain provisions that would materially adversely change the Term or Rent under the Lease or materially adversely change the obligations of Tenant or rights of or protections afforded the City under this Lease.

XVIII.19 **Fees and Costs**. Tenant agrees to reimburse City for its reasonable attorneys fees and costs incurred in connection with City's review and/or approval of any documentation which may be required in connection with any Leasehold Mortgage by Tenant as provided herein.

XVIII.20 **Restrictions on Liability of Leasehold Mortgagees**. Nothing herein shall be deemed or construed to require any Leasehold Mortgagee to cure any default of Tenant or to enter into a New Lease as provided herein, except to the extent that such Leasehold Mortgagee has elected in writing to do so in accordance with the procedures set forth in this Article XVIII. In the event any Leasehold Mortgagee or its designee becomes the Tenant under this Lease or the tenant under any New Lease, such Leasehold Mortgagee or its designee shall be personally liable for the obligations of Tenant under this Lease or the tenant under the New Lease only to the extent that they arise during the period of time that the Leasehold Mortgagee or its designee constitutes the actual beneficial holder of the leasehold estate under this Lease or the New Lease.

ARTICLE XIX
GENERAL CONDITIONS & MISCELLANEOUS PROVISIONS

XIX.1 **Nondiscrimination.** Tenant agrees not to discriminate against any person or class of persons by reason of sex, age, race, color, creed, physical handicap, or national origin in employment practices and in the activities conducted pursuant to this Lease.

XIX.2 **Taxes and Assessments**. Pursuant to California Revenue and Taxation Code Section 107.6, Tenant is specifically informed that this Lease may create a possessory interest which is subject to the payment of taxes levied on such interest. It is understood and agreed that all taxes and assessments (including but not limited to said possessory interest tax) which become due and payable upon the Premises or upon fixtures, equipment, or other property installed or constructed thereon, shall be the full responsibility of Tenant, and Tenant shall cause said taxes and assessments to be paid promptly.

XIX.3 **Quitclaim of Interest upon Termination**. Upon termination of this Lease for any reason, Tenant shall execute, acknowledge, and deliver to City, within thirty (30) days after receipt of written demand therefor, a good and sufficient deed whereby all right, title, and interest of Tenant in the Premises and Improvements are quitclaimed to City excluding any of Tenants' personal property. Should Tenant fail or refuse to deliver the required deed to City, City may prepare and record a notice reciting the failure of Tenant to execute, acknowledge, and deliver such deed and said notice shall be conclusive evidence of the termination of this Lease and of all rights of Tenant or those claiming under Tenant in and to the Premises.

XIX.4 **Public Records**. City acknowledges Tenant's contention that financial statements and records (not including Gross Receipts Statements) are intended to constitute corporate financial records, corporate proprietary information including trade secrets, and shall be exempt from public disclosure as authorized by §6254.15 of the California Government Code. In the event that a public records act request is made for such financial statements and records (not including Gross Receipts Statements) and the City determines that he records must be turned over, the City will give Tenant fifteen (15) days written notice prior to turning over such records so that Tenant can take any necessary action. Tenant acknowledges that any other written information (other than the foregoing corporate financial statements and trade secrets) submitted to and/or obtained by City from Tenant or any other person or entity having to do with or related to this Lease and/or the Premises, either pursuant to this Lease or otherwise, at the option of City, may be treated as a public record open to inspection by the public pursuant to the California Records Act (Government Code §6250, *et seq*.) as now in force or hereafter amended, or any Act in substitution thereof, or otherwise made available to the public, unless such information is exempt from disclosure pursuant to the applicable sections of the California Records Act.

XIX.5 **Compliance with Labor Code**. This Agreement is subject to, and Tenant agrees to comply with, all of the applicable provisions of the Labor Code including, but not limited to, the wage and hour, prevailing wage, workers compensation, and various other labor requirements in Division 2, Part 7, Chapter 1, including Sections 1720 to 1740, 1770 to 1780, 1810 to 1815, 1860 and 1861, which provisions are specifically incorporated herein by reference as though set forth herein in their entirety. Tenant shall expressly require compliance with the provisions of this Section in all agreements with contractors and subcontractors for the performance of the improvements hereunder. It is the intent of Tenant and Landlord that the Tenant has paid to Landlord the fair market value of the Leasehold Interest created hereby.

XIX.6 **Declaration of Knowledge by Tenant**. Tenant warrants that Tenant has carefully examined this Lease and by investigation of the site and of all matters relating to the Lease arrangements has fully informed itself as to all existing conditions and limitations affecting the construction of the Lease improvements and business practices required in the operation and management of the uses contemplated hereunder.

XIX.7 **Governing Law**. This Lease shall be governed by and construed in accordance with the laws of the State of California.

XIX.8 **Venue.** The Parties hereto agree that this Lease has been negotiated and executed in the State of California and shall be governed by and construed under the laws of California. In the event of any legal action to enforce or interpret this Lease, the sole and exclusive venue shall be a court of competent jurisdiction located in county of Orange, California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such court, notwithstanding Code of Civil Procedure Section 394. Furthermore, the Parties hereto specifically agree to waive any and all rights to request that an action be transferred for trial to another City.

XIX.9 **Headings and Titles**. The captions of the Articles or Sections of this Lease are only to assist the parties in reading this Lease and shall have no effect upon the construction or interpretation of any part hereof.

XIX.10 **Interpretation**. Whenever required by the context of this Lease, the singular shall include the plural and the plural shall include the singular. The masculine, feminine and neuter genders shall each include the other. In any provision relating to the conduct, acts or omissions of Tenant, the term "**Tenant**" shall include Tenant's agents, employees, contractors, invitees, successors or others using the Premises with Tenant's expressed or implied permission. In any provision relating to the conduct, acts or omissions of City, the term "**City**" shall include City's agents, employees, contractors, invitees, successors or others using the Premises with City's expressed or implied permission.

XIX.11 **Ambiguities**. Each party hereto has reviewed this Lease with legal counsel, and has revised (or requested revisions of) this Lease based on the advice of counsel, and therefore any rules of construction requiring that ambiguities are to be resolved against a particular party shall not be applicable in the construction and interpretation of this Lease or any exhibits hereto.

XIX.12 **Successors and Assigns**. Except as otherwise specifically provided in this Lease, all of the covenants, conditions and provisions of this Lease shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, personal representatives, successors and assigns.

XIX.13 **Time is of the Essence**. Time is of the essence with respect to the performance of every provision of this Lease in which time of performance is a factor.

XIX.14 **Severability**. If any term or provision of this Lease is held invalid or unenforceable to any extent under any applicable law by a court of competent jurisdiction, the remainder of this Lease shall not be affected thereby, and each remaining term and provision of this Lease shall be valid and enforceable to the fullest extent permitted by law.

XIX.15 **Integration**. This Lease, along with any exhibits, attachments or other documents affixed hereto or referred to herein, constitutes the entire agreement between City and Tenant relative to

the leasing of the Premises. This Lease and such exhibits, attachments and other documents may be amended or revoked only by an instrument in writing signed by both City and Tenant. City and Tenant hereby agree that no prior agreement, understanding or representation pertaining to any matter covered or mentioned in this Lease shall be effective for any purpose.

XIX.16 **Notices**. All notices pursuant to this Lease shall be addressed as set forth below or as either Party may hereafter designate by written notice and shall be sent through the United States mail in the State of California, duly registered or certified, return receipt requested, with postage prepaid. If any notice is sent by registered or certified mail, as aforesaid, the same shall be deemed to have been served or delivered twenty-four (24) hours after mailing thereof as above provided. Notwithstanding the above, City may also provide notices to Tenant by personal delivery or by regular mail and any such notice so given shall be deemed to have been given upon receipt.:

If to City:	City of Placentia City Administrator Attn: Damien R. Arrula Facsimile: (714) 961-0283 Email: administration@placentia.org
With a copy to:	City Attorney Attn: Christian Bettenhausen Phone: (714) 446-1400 Facsimile: (714) 446-1448 Email: clb@jones-mayer.com
If to Tenant:	_____, L.P. c/o USA Properties Fund, Inc. 3200 Douglas Blvd., Suite 200 Roseville, CA 95661 Attention: Steve Gall And The Pinyon Group 949 S Hope Street, Suite 100 Los Angeles, California 90015 Attention: Jay Stark

With a copy to:

Bocarsly Emden Cowan Esmail & Arndt LLP
633 W. 5th Street, 64th Floor
Los Angeles, California 90071
Attention: Kyle Arndt

XIX.17 **Brokers**. City and Tenant each represent and warrant to the other that it has not engaged or dealt with any broker, finder or other agent in connection with this Lease or the transactions contemplated hereby. City and Tenant (each, an "**indemnifying party**") each hereby agree to indemnify and hold the other (each, an "**indemnified party**") harmless from and against all costs, expenses or liabilities (including attorney fees and court costs, whether or not taxable and whether or not any action is prosecuted to judgment) incurred by the indemnified party in connection with any claim or demand by a person or entity for any broker's, finder's or other commission or fee from the indemnified party in connection with the indemnifying party's entry into this Lease and the transactions contemplated hereby based upon any alleged statement or representation or agreement of the indemnifying party. No broker, finder or other agent of any party hereto shall be a third-party beneficiary of this Lease.

XIX.18 **No Partnership**. This Lease shall not be construed to constitute any form of partnership or joint venture between City and Tenant. City and Tenant mutually acknowledge that no business or financial relationship exists between them other than as City and tenant, and that City is not responsible in any way for the debts of Tenant or any other party.

XIX.19 **Authorization**. City and Tenant (each, a "**signing party**") each represents and warrants to the other that the person or persons signing this Lease on behalf of the signing party has full authority to do so and that this Lease binds the signing party. Concurrently with the execution of this Lease, each signing party shall deliver to the other a certified copy of a resolution of the signing party's board of directors or other governing board authorizing the execution of this Lease by the signing party.

XIX.20 **Recording**. This Lease itself shall not be recorded, but a memorandum hereof shall be recorded in the form of **Exhibit E** attached hereto (the "**Memorandum**"). The Memorandum shall be executed concurrently with this Lease and thereafter recorded in the Official Records of the City Recorder only after the Commencement Date of this Lease has occurred. Tenant shall be responsible for the payment of all charges imposed in connection with the recordation of the Memorandum, including, without limitation, any documentary transfer tax imposed in connection with this transaction and all recording fees and charges.

XIX.21 **Exhibits**. This Lease contains the following exhibits, schedules and addenda, each of which is attached to this Lease and incorporated herein in its entirety by this reference:

Exhibit A	Legal Description of the Premises
Exhibit A-1	Depiction of the Premises
Exhibit B	Rent Payment Schedule
Exhibit C	Title Exceptions
Exhibit D	Initial Improvements
Exhibit E	Memorandum of Lease

XIX.22 **Consent/Duty to Act Reasonably**. Except as otherwise expressly provided herein, whenever this Lease grants City or Tenant the right to take any action, grant any approval or consent, or exercise any discretion, City and Tenant shall act reasonably and in good faith and take no action which might result in the frustration of the other party's reasonable expectations concerning the benefits to be enjoyed under this Lease.

XIX.23 **No liability of Officers, Directors, Etc.** In consideration of the benefits accruing hereunder, City and Tenant each agree that the respective obligations of City and Tenant under this Lease do not constitute obligations of the officers, directors, members, partners, shareholders or Affiliates of such parties.

XIX.24 **Counterparts**. For the convenience of the parties to this Lease, this Lease may be executed in several original counterparts, each of which shall together constitute but one and the same agreement. Original executed pages may be assembled together into one fully executed document.

XIX.25 **Tax Credit Provisions**. The City agrees and acknowledges that the Improvements may be financed, in part, with the proceeds of Tax Credits. In the event Tax Credits are used to financing a portion of the Improvements, the following provisions shall be applicable:

XIX.25.1. The California Tax Credit Allocation Committee ("TCAC") requires that any lessor in a Tax Credit transaction enter into a Tax Credit Lease Rider in form and substance acceptable to TCAC. The City and the Developer shall enter into a Tax Credit Lease Rider as required by TCAC rules and regulations.

XIX.25.2. Notwithstanding anything to the contrary set forth herein, the City shall not terminate this Lease once the Tenant has received a certificate of occupancy for the Improvements if such termination would cause Tenant to become ineligible for any portion of the Tax Credits.

XIX.25.3. The Tax Credit Equity Investor shall be copied on all notices to Tenant. Any cure of any default by Tenant hereunder tendered by the Tax Credit Equity Investor shall be accepted or rejected on the same terms and conditions as if tendered by Tenant.

[Signatures On Following Pages]

IN WITNESS WHEREOF, the Parties have executed this Lease the day and year first above written.

APPROVED AS TO FORM:
CITY ATTORNEY

By: _____

Date _____

RECOMMENDED FOR APPROVAL:

By: _____

SIGNED AND CERTIFIED

ATTEST:

_____
City Clerk
Placentia, California

TENANT
a California limited liability company

By: _____

By: _____
_____
Name:
_____
Title:
_____

By: _____
_____
Name:
_____
Title:

CITY

CITY OF PLACENTIA,
a political subdivision of the State of California

_____
Mayor,
Placentia, California

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

[to be attached]

EXHIBIT A-1

RENDERING OF THE PROPERTY

EXHIBIT B

SCHEDULE OF RENT AND ADJUSTMENTS

RENT DUE	RENT DUE DATE
Lease Term of 66 years (additional 33-year option) Commences	Project Construction Loan Closing
Initial Pre-paid Rent Payment $3,400,000 (Sec. 4.1)	Concurrently with the Issuance of the First Grading Permit
Second Rent Payment $1,000,000 (Sec. 4.1)	Concurrently with the Issuance of Final Certificate of Occupancy or 24 months from issuance of the first building inspection
First Base Rent Payment $10,000 (Sec. 4.2)	By July 1st following the 8th anniversary of 2nd rent payment
Annual Base Rent Payment $10,000 (Sec. 4.2)	By July 1st of the next 4 years after the first base rent payment
First Adjusted Base (Sec. 4.2)	July 1st of the 6th year after the first payment of base rent
Consecutive Adjustments of Base Rent	Every 5th year after the first adjusted base rent payment.
Recalculation of Rent for the Lease Extension Period. (See Article III – Term and Sec. 4.3)	Two Years prior to Termination of the initial sixty-six (66) year term.
First Extension Period Base Rent (Sec. 4.3)	July 1st of the year in which the initial 66 year lease term expires

EXHIBIT C
TITLE EXCEPTIONS
[see attached]

EXHIBIT D

DESCRIPTION OF IMPROVEMENTS

[see attached]

EXHIBIT E

FORM OF MEMORANDUM OF LEASE

MEMORANDUM OF LEASE

This is a Memorandum of Lease ("**Memorandum**") made and entered into as of this _____ day of _____, 20___, by and between the CITY OF PLACENTIA, a political subdivision of the State of California ("**City**"), and **_____,** ("**Tenant**"), residing at _____, upon the following terms:

1. **Lease.** The provisions set forth in a written lease between the parties hereto dated _____ ("**Lease**"), are hereby incorporated by reference into this Memorandum.

2. **Subject Premises.** The Premises which are the subject of the Lease are more particularly described as on Exhibit A, attached hereto

3. **Commencement Date of Lease.** The Lease shall be deemed to have commenced _____ as set forth within the terms of the Lease.

4. **Term.** The Term of the Lease shall be _____ years from the Commencement Date as stated in the written Lease. The initial term shall commence on the date hereof and terminate on _____. Tenant shall have the right to extend the term of the Lease by _____ extension periods of _____ years each or in any other such manner as prescribed in the Lease.

5. **Duplicate Copies** of the originals of the Lease are in the possession of the City and Tenant and reference should be made thereto for a more detailed description thereof and for resolution of any questions pertaining thereto. The addresses for City and Tenant are as follows:

CITY: City of Placentia
401 E. Chapman Avenue
Placentia, CA 92870

TENANT:

6. **Purpose.** It is expressly understood and agreed by all parties that the sole purpose of this Memorandum o is to give record notice of the Lease; it being distinctly understood and agreed that said Lease constitutes the entire lease and agreement between City and Tenant with respect to the Premises and is hereby incorporated by reference. The Lease contains and sets forth additional rights, terms, conditions, duties, and obligations not enumerated within this instrument which govern the Lease. This Memorandum is for information purposes only and nothing contained herein may be deemed in any way to modify or vary any of the terms or conditions of the Lease. In the event of any inconsistency between the terms of the Lease and this instrument, the terms of the Lease shall control. The rights and obligations set forth herein shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, representatives, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Memorandum pursuant to due authorization on the dates herein acknowledged.

CITY:

By: _____

Name: _____
Title: _____

TENANT:

By: _____

Name: _____
Title: _____

By: _____

Name: _____
Title: _____

March 2021 | MND Addendum

207-209 WEST CROWTHER AVENUE DEVELOPMENT (PACKING HOUSE DISTRICT TOD) PROJECT ADDENDUM

for USA Multifamily Development

Prepared for:

City of Placentia
Contact: Andrew Gonzales, Senior Planner
401 East Chapman Avenue
Placentia, CA 92870
714.993.8124

Prepared by:

PlaceWorks
Contact: William Halligan, Esq.,
Managing Principal, Environmental Services
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

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1. Introduction

1.1 BACKGROUND, PURPOSE, AND SCOPE

This document is an Addendum to the previously adopted Mitigated Negative Declaration (MND) (State Clearinghouse No. 2017021012) for the approved General Plan Amendment GPA 2017-01 and Zone Change ZC 2017-01 to establish the Packing House District Transit-Oriented District and related development standards (2017 Approved Project), which included the 2.13-acre Centerpointe at Placentia (Project Site), and addresses development of a community (Proposed Project) consisting of five-story buildings over a single subterranean parking level (68 feet in height). The proposed total gross building area is approximately 167,260 square feet including 189 apartments and resident-serving amenity uses, commercial space, and parking facilities. The Proposed Project would have a prominent street presence on Crowther Avenue and would provide residents with a direct connection to the future Metrolink south platform. As with the 2017 MND, the Proposed Project would occur in the City of Placentia, see Figure 1, *Regional Location* and Figure 2, *Local Vicinity*.

The adopted 2017 MND, in conjunction with this Addendum, serve as the environmental review for the Proposed Project, as required by the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Sections 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3, Sections 15000–15387). Pursuant to the provisions of CEQA and the State CEQA Guidelines, the City of Placentia (City) is the Lead Agency charged with deciding whether or not to approve the Proposed Project. This Addendum addresses the potential environmental impacts associated with the Proposed Project as compared to the 2017 Approved Project. Packing House Transit-Oriented Development District (2017 Approved Project).

The Proposed Project would be developed within the area governed by the City of Placentia's Packing House District TOD Zoning Code. The TOD zone classification and land use designation in the Packing House District was adopted in 2017. The objective of the TOD land use designations/classifications is to allow high-density transit-oriented development in the immediate vicinity of the train platform to facilitate use of the regional system and redevelopment of the area surrounding the new train station. To comply with the California Environmental Quality Act (CEQA), the City adopted an MND for the Packing House District TOD District in 2017. The adopted 2017 MND analyzed mixed-use development of up to 5,000 vehicle trips (net) at buildout assumes that an estimated 752 dwelling units (DU) could be constructed under an all residential development scenario and stay within the 5,000 vehicle trip cap. Alternatively, a mix of 75 percent residential (564 DU) and 25 percent commercial (approximately 30,000 square feet of gross liable area) could also stay within the 5,000 vehicle trip cap.

It is our understanding that to date, a total of 633 residential dwelling units have been approved within the TOD District, generating a total of 3,671 average daily trips (ADTs) with transit reduction. Therefore, the new remaining trips approved under the adopted 2017 MND is 1,329 ADT.

1. Introduction

2017 Approved Project/MND (Packing House District TOD District)

The City of Placentia, in conjunction with the County of Orange and the Orange County Transit Authority (OCTA), proposed to install a new train station to accommodate access for City residents to the regional passenger train (Metrolink and Surfliner) system. In support of this new regional transportation system, the City created a Transit Oriented Development (TOD) zone classification and land use designation immediately adjacent to the proposed train platform, herein referred to as the Packing House TOD. The Packing House TOD encompassed approximately 28.2 acres south of and adjacent to the existing BNSF Railway east-west rail corridor.

The 2017 Approved Project established new TOD land use designations and related development standards, listing residential units and commercial activities within the TOD to the generation of a maximum of 5,000 daily vehicle trips. The stated objectives of the TOD are as follows:

- Encourage mixed-use and transit-oriented development;
- Encourage people to walk, ride a bicycle or use transit;
- Promote public art and creative public spaces;
- Allow for a complementary mix of land uses to create an environment that engages people at the pedestrian level;
- Achieve a compact pattern of development that is more conducive to walking and bicycling;
- Provide sufficient density of employees, residents and recreational users to support transit;
- Provide a high level of amenities that create a comfortable environment for pedestrians, bicyclists, and other users;
- Create a physical connection with Old Town Placentia by activating the station area with a plaza and ground floor shops and restaurants in the TOD Packing House District;
- Promote affordable housing and provide housing for all economic segments of the community consistent with the City's housing goals;
- Maintain an adequate level of parking and access for automobiles;
- Create fine-grained detail in architectural and urban form that provides interest and complexity at the level of the pedestrian and bicyclist;
- Generate a relatively high percentage of trips serviceable by transit;
- Encourage integrated development, including the consolidation of parcels; and

- Encourage lot and building orientation on Crowther Avenue and parcels extending from Crowther to the Railroad right-of-way, to create an active streetscape.

The uses permitted under the TOD district range from retail commercial through service uses and residential uses to office uses, some allowed only with a use permit. Maximum residential density within the project area would be 95 units per acre with a 65 unit per acre minimum. Maximum number of units within the new TOD district area will be 752 units, unless supplemental environmental evaluation is completed. For all but residential uses the floor area ratios established in the existing zone classification, such as commercial use or office use, would control the maximum square footage of development within the TOD area.

The adopted 2017 MND examined the potential impacts of future development under the TOD district Development Standards compared to the existing environmental setting and the existing land use designation/zoning classification, Industrial (GPA) and Manufacturing Zone (M).

On April 18, 2017, the Placentia City Council adopted the Ordinance No. O-2017-04 to establish Transit Oriented Development Packing House District Development Standards and the associated Mitigated Negative Declaration (MND) for the 2017 Approved Project.

2017 Adopted MND

The 2017 Adopted MND analyzed environmental impacts of the 2017 Approved Project. All impacts addressed in the Initial Study were determined to be less than significant or less than significant after implementation of mitigation measures. Mitigation measures were incorporated in the following environmental topics to reduce impacts:

- Aesthetics
- Air Quality
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Public Services (Police and Recreation)
- Transportation and Traffic
- Utilities and Service Systems

2020 MND Addendum (207-209 West Crowther Avenue Development Project)

The 2020 Approved Project is within the Packing House TOD, approved in April 2017. Figure 3, *2017 Approved Project Boundaries*, shows the TOD boundary in addition to the Proposed Project Site boundary. The Project Applicant proposes to develop and operate 189 mixed-income apartment units with 1,500 square feet of retail space, and a 2,000 square foot leasing office with subterranean and street level parking combining 272 on-site parking spaces on a 2.13-acre site (Project Site). Figures 4a, 4b, and 4c show Project Site floor plans for the

1. Introduction

Proposed Project and Figure 5 shows building sections. Figure 6 and 7 detail plans for the subterranean and street level parking. The Project Site occurs at 207-209 west Crowther Avenue and includes the following assessor's parcel numbers:

- Assessor's parcel number 339-402-05
- Assessor's parcel number 339-402-07
- Assessor's parcel number 339-402-08
- Assessor's parcel number 339-402-11

The Proposed Project is subject to the applicable requirements of the 2017 Approved Project, evaluated under the 2017 Adopted MND. The analysis within this Addendum therefore, uses analysis and technical studies prepared for the 2017 Approved Project, as well as site-specific technical studies and analysis focused on the Proposed Project. Where applicable, information from 2017 Adopted MND has been incorporated by reference and summarized in the Addendum for the Proposed Project as permitted by the CEQA Guidelines Section 15150.

The Addendum incorporates the 2017 MND's Mitigation Monitoring and Reporting Program (MMRP) as modified for the Proposed Project (see Attachment A to this Addendum) and the following technical studies prepared for the Proposed Project.

- Attachment A. Mitigation Monitoring and Reporting Program
- Attachment B. Geotechnical Report
- Attachment C. Phase I and II Environmental Assessment
- Attachment D. Noise Study
- Attachment E. Preliminary Water Quality Management Plan
- Attachment F. Traffic Memo
- Attachment G. Water and Sewer Technical Report

Table 1 summarizes the content of the approved TOD Development Standards and describes how the Proposed Project is consistent with these standards. Where more detailed information is needed, please refer to Appendix 1 of the 2017 Adopted MND.

Table 1 Consistency With the 2017 Approved Project Land Use Development Standards

TOD Standards	Proposed Project
All new development fronting Crowther Avenue within the TOD district must be mixed use development, except for the catalyst site, which is defined in the definitions section of the Packing House District Development Standards.	***Consistent:*** The Proposed Project provides 189 residential units and 1,500 square feet of retail.

Table 1 Consistency With the 2017 Approved Project Land Use Development Standards

TOD Standards	Proposed Project
Allowable Land Uses: Mixed Use development is required for all developments fronting Crowther Avenue within the TOD zone, except for the catalyst site, which can be developed as all residential and is defined in the definitions section of the Zoning Code.	***Consistent:*** Residential and retail, including leasing spaces are allowed land uses.
Mixed use residential can have a maximum of 3 bedrooms per unit and ground floors must have exhaust and grease traps installed for future restaurant possibilities.	***Consistent:*** The Proposed Project would provide unit types maximum of 2 bedrooms and ground floors will have exhaust and grease traps installed for future restaurant possibilities.
Density: 65 du/ac min. and 95 du/ac max.; Setbacks: front yard 3 feet min/15 feet max; side yard: 5 feet min/15 feet max	***Consistent:*** The Proposed Project would have a density of 89 du/ac; 3 feet minimum front yard setback; and 5 feet minimum side yard setback
Building Height: 3 stories minimum, 35 feet minimum, and five stories maximum, not to exceed 68 feet; and minimum 15-foot ground floor, floor to ceiling height required.	***Consistent:*** The Proposed Project is generally consistent with the TOD regulations. City will seek approvals for items that are inconsistent as part of the Discretionary Approvals for the Proposed Project.
Open Space: 50/64 square feet for each residential unit and Live Work Units. Rooftop amenities do not count for square footage requirements for private or common open space.	***Consistent:*** The Proposed Project would provide 26,821 square feet of combined common and private open space, exceeding the required 21,318 square feet of combined open space.
Parking: Parking requirements vary from three spaces minimum per 1,000 square feet of retail to 1.5 spaces minimum for a two-bedroom unit. This section also includes bicycle parking requirements, electric vehicle charging station requirements, and includes requirements for surface and parking structure requirements.	***Consistent:*** The Proposed Project would provide a total of 272 parking spaces, within the required 218-312 spaces.

1.2 PROJECT LOCATION

The Proposed Project would be developed on a 2.13-acre site located at 207-209 W. Crowther Avenue in Placentia, California, at the northeast corner of W. Crowther Avenue and Melrose Street (Assessor's Parcel Numbers 339-402-05, 339-402-07, 339-402-08, and 339-402-11). The Proposed Project site would be accessed only via Crowther Avenue. The site is currently vacant.

1.3 PROJECT DESCRIPTION

The Proposed Project consists of a community of five-story buildings over a single subterranean parking level (68'-0" total height). The proposed total gross building area is approximately 167,260 square feet, including apartments and resident-serving amenity uses, commercial space, and parking facilities. The community has been designed with the focus of having a prominent street presence on Crowther Avenue and to provide residents with a direct and convenient connection to the future Metrolink south platform.

The proposed building setback along Crowther is approximately 3-feet and the second floor (street level) of the community includes seven residential units, 2,000 square feet of leasing space and 1,500 square feet of retail space which all have direct frontage and access onto Crowther Avenue activating that street frontage. The remaining residential units are housed on the second through the fifth floors of the building. Unit sizes range between 572 square feet and 850 square feet and include 135 one-bedroom units and 54 two-bedroom units

(189 units total). The overall density of the Proposed Project of 89 dwelling units (DU) per acre is below the maximum allowable density of 95 DU per acre permitted in the TOD District. The residential units are organized around two outdoor courtyards elevated above the street on the third floor, one facing south (Crowther), and the other is facing north (future Metrolink station). Both courtyards are programmed with passive, landscaped outdoor amenities including benches, walking paths, a dog run (Dog Run at grade not on deck) area and open gathering space.

The Proposed Project includes 222 on-site parking spaces which are housed within two structured parking levels. The subterranean parking level houses 101 spaces, 15 of which would benefit the adjacent property owner at the Packing House. The remaining spaces serve residents and their guests.

1.4 LEAD AGENCY AND DISCRETIONARY APPROVALS

This MND Addendum documents the City's consideration of the potential environmental impacts resulting from the Proposed Project and explains why CEQA analysis in the form of a (mitigated) negative declaration or an EIR is not required. The City of Placentia is the lead agency and has approval authority over the Proposed Project. Discretionary approvals for the Proposed Project include the following:

- Development Plan Review (DPR)

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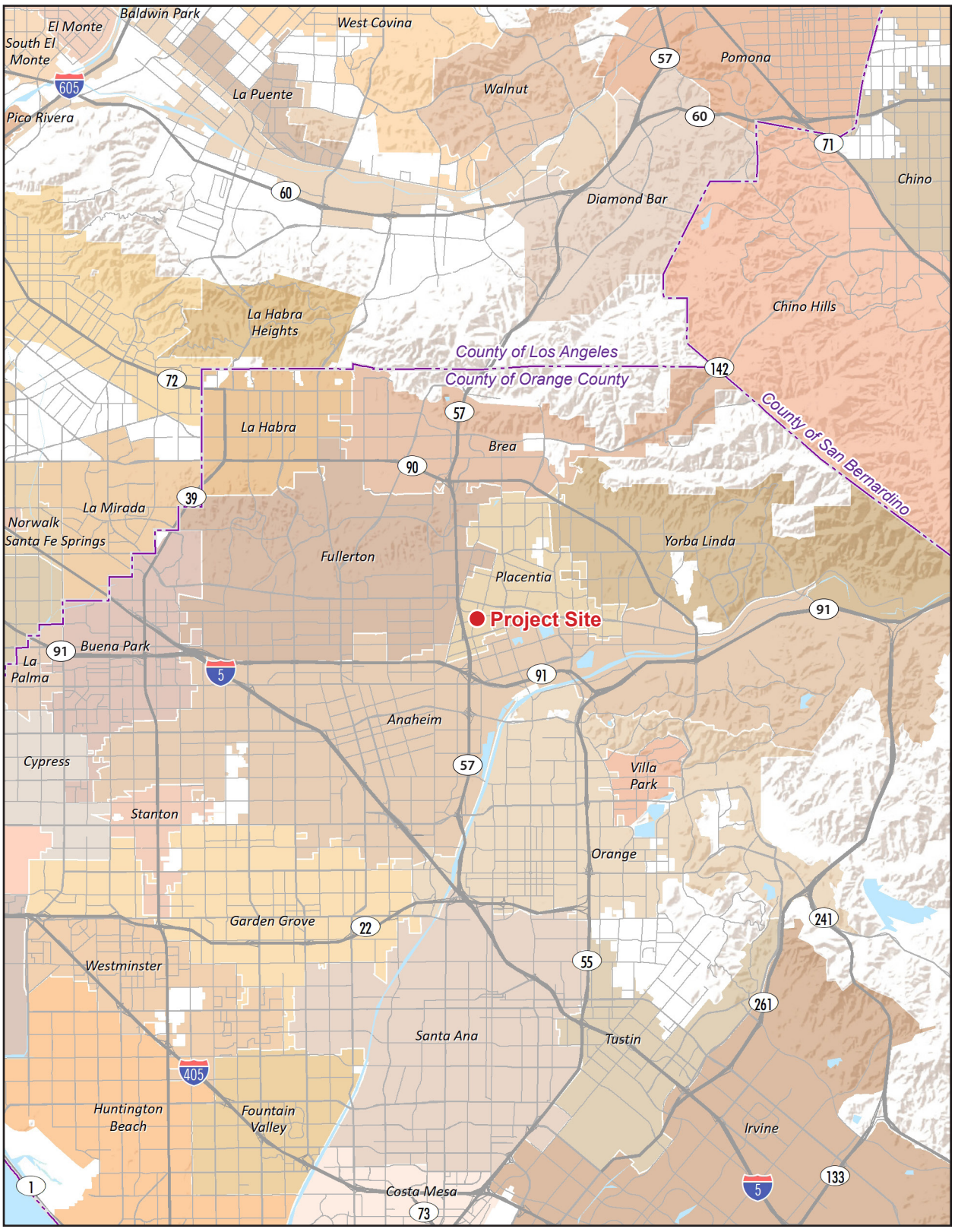
1. Introduction

Figure 1 Regional Location

Figure 1 - Regional Location

1. Introduction



Note: Unincorporated county areas are shown in white.

Source: ESRI, 2020

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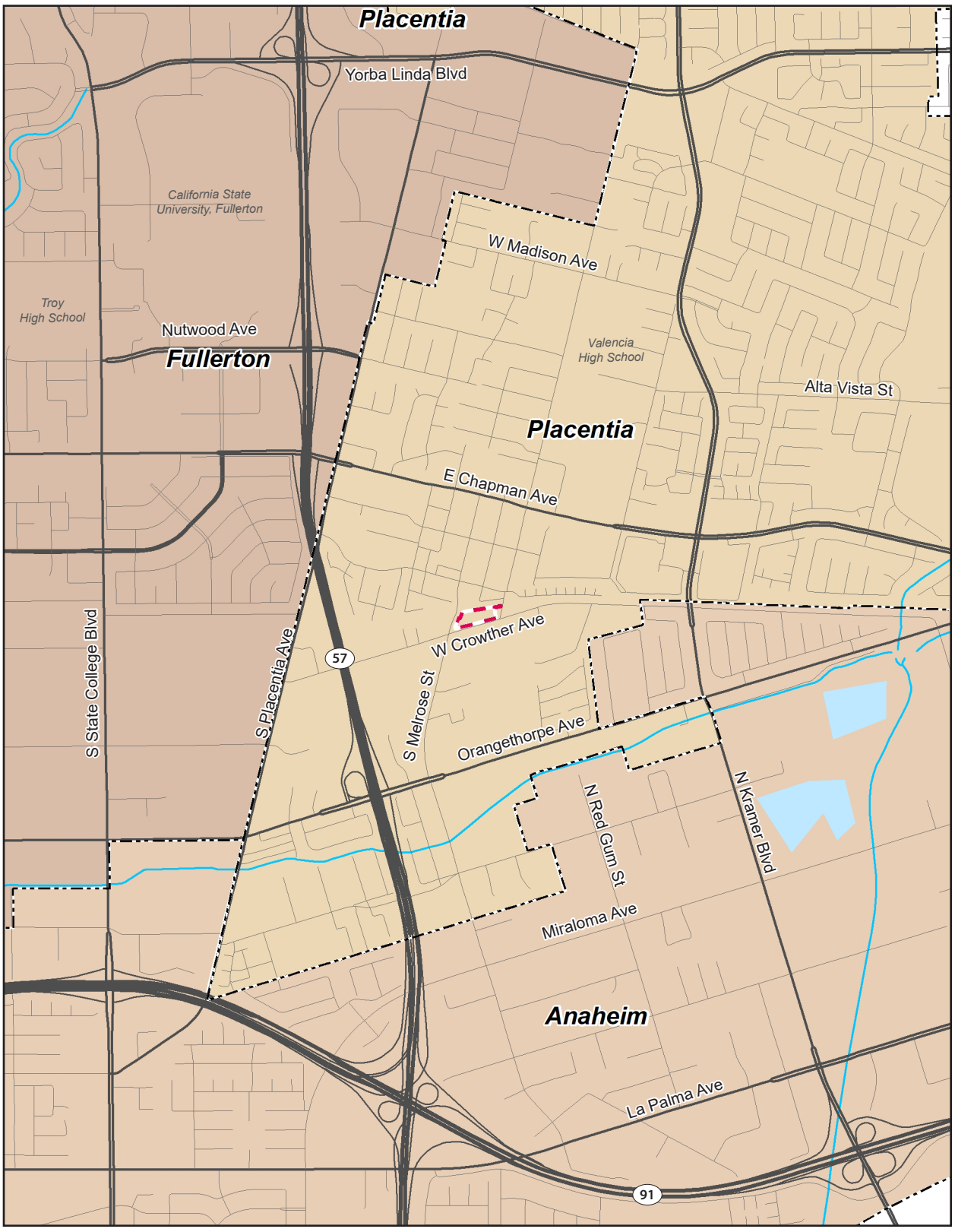
1. Introduction

Figure 2 Local Vicinity

Figure 2 - Local Vicinity
1. Introduction



Project Boundary

Note: Unincorporated county areas are shown in white.

Source: ESRI, 2020

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1. Introduction

Figure 3 2017 Approved Project Boundaries

Figure 3 - 2017 Approved Project Boundaries



TOD Boundary

Project Boundary

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Source: Nearmap, 2020

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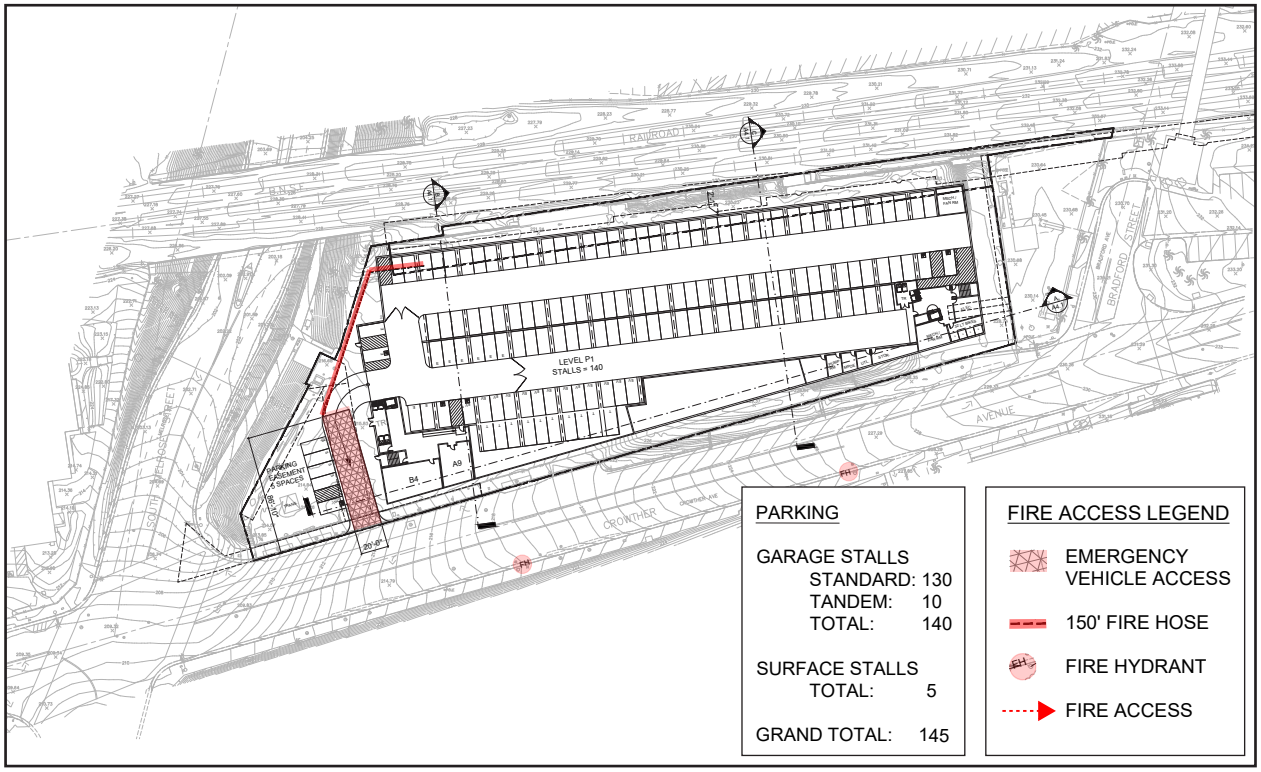
1. Introduction

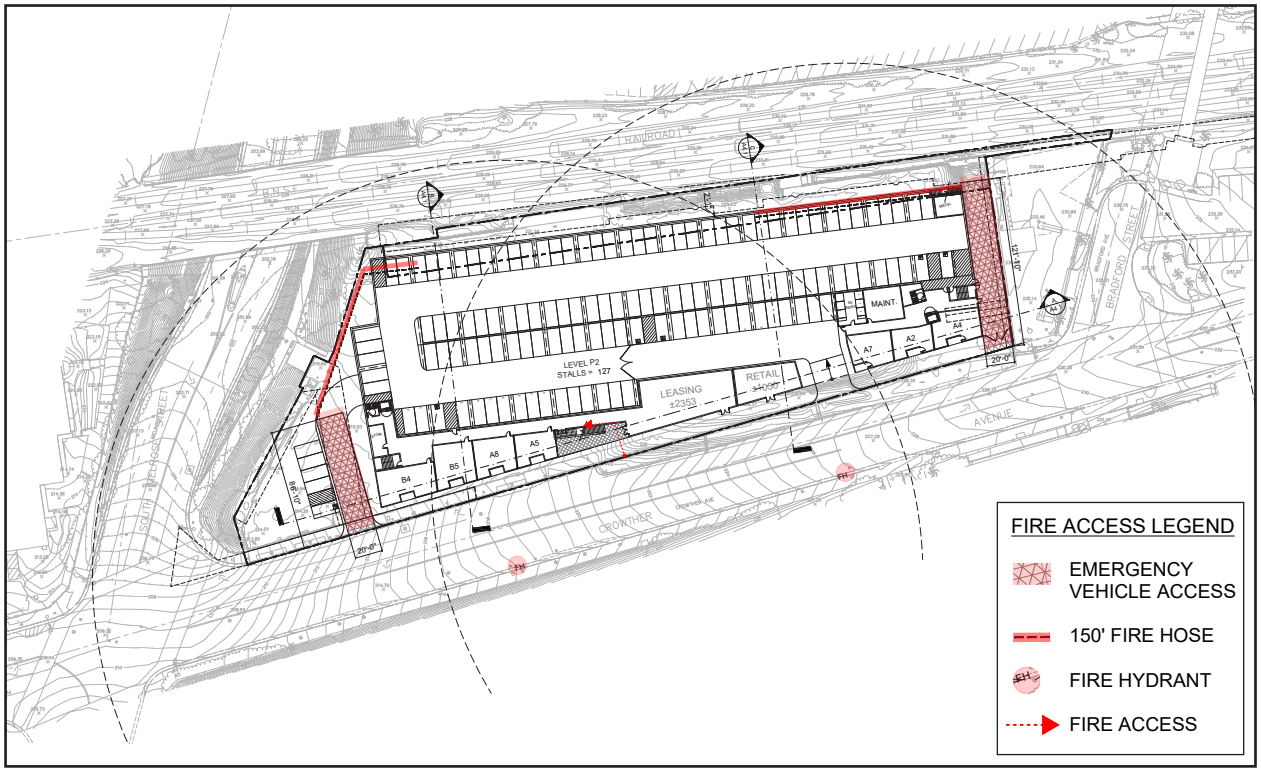
Figure 4a Project Site Plan Floors 1 to 2

Figure 4a - Project Site Plan - Floors 1 to 2

1. Introduction



First Floor



Second Floor

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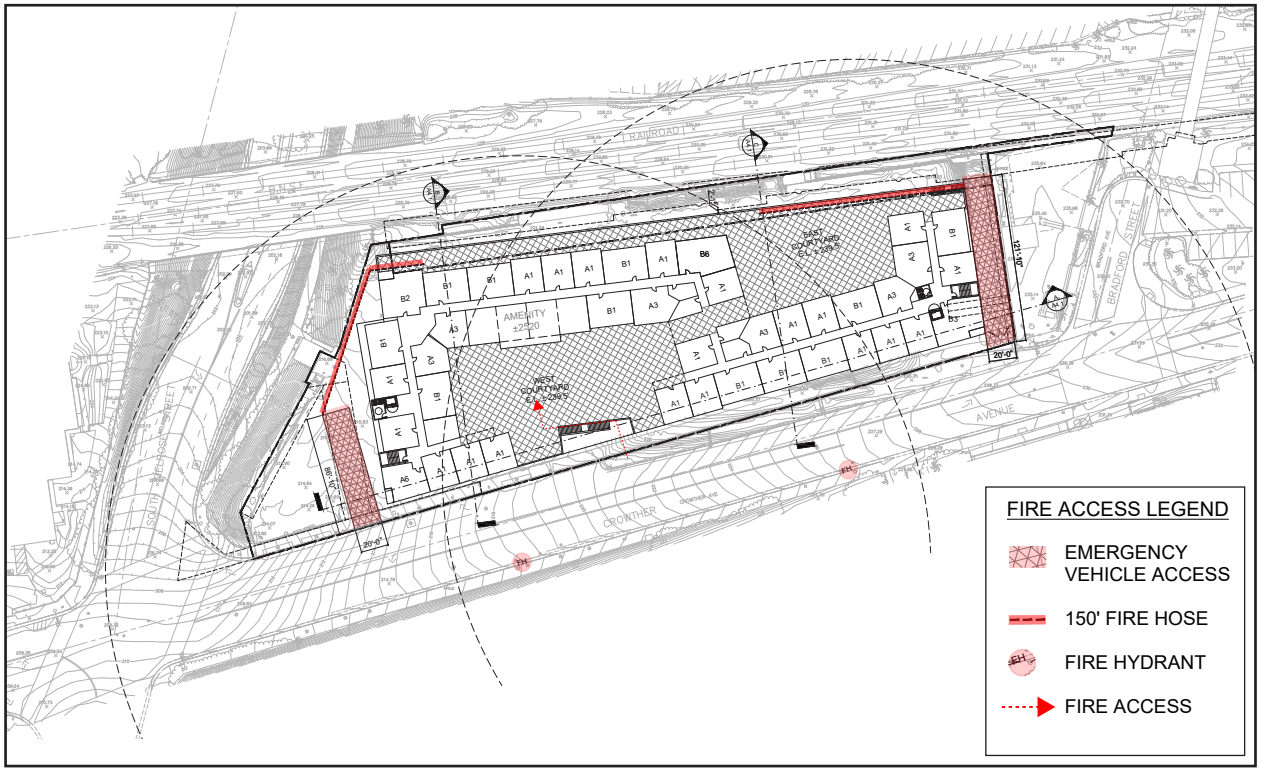
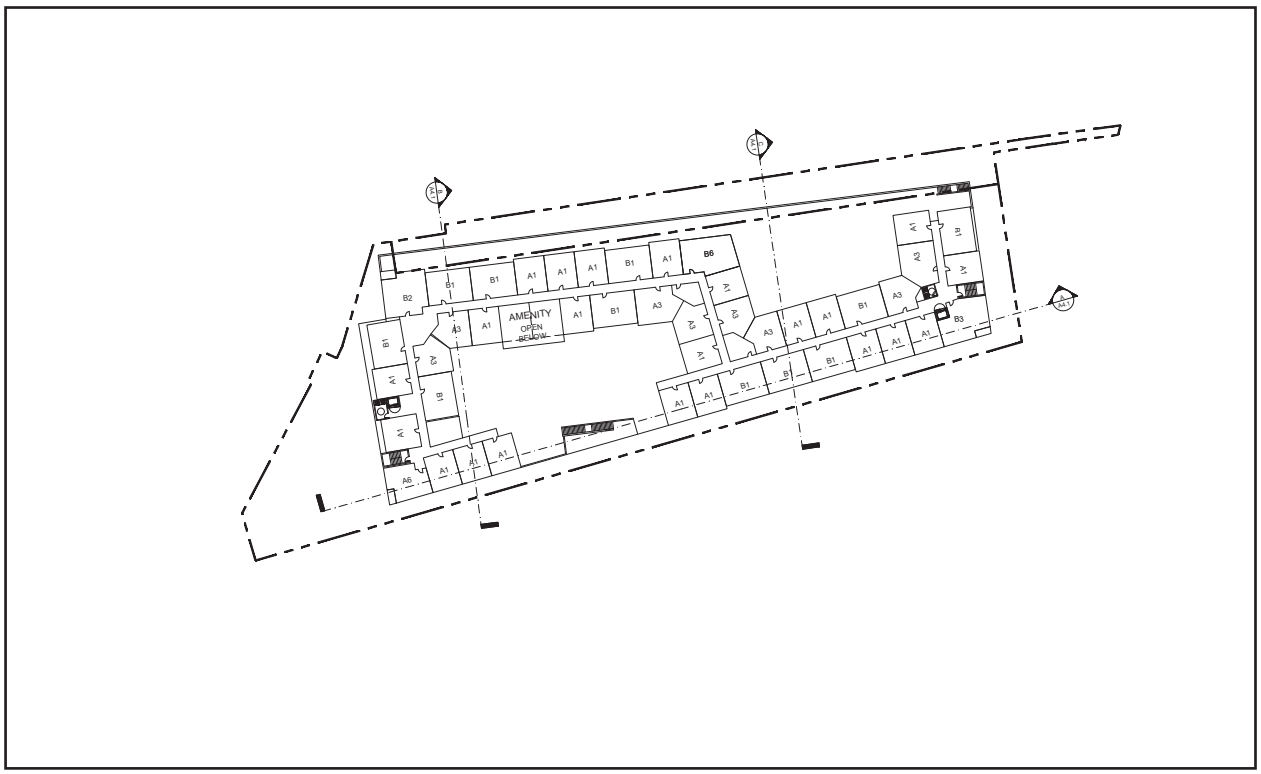
1. Introduction

Figure 4b Project Site Plan Floors 3 to 4

Figure 4b - Project Site Plan - Floors 3 to 4



Third Floor



Fourth Floor

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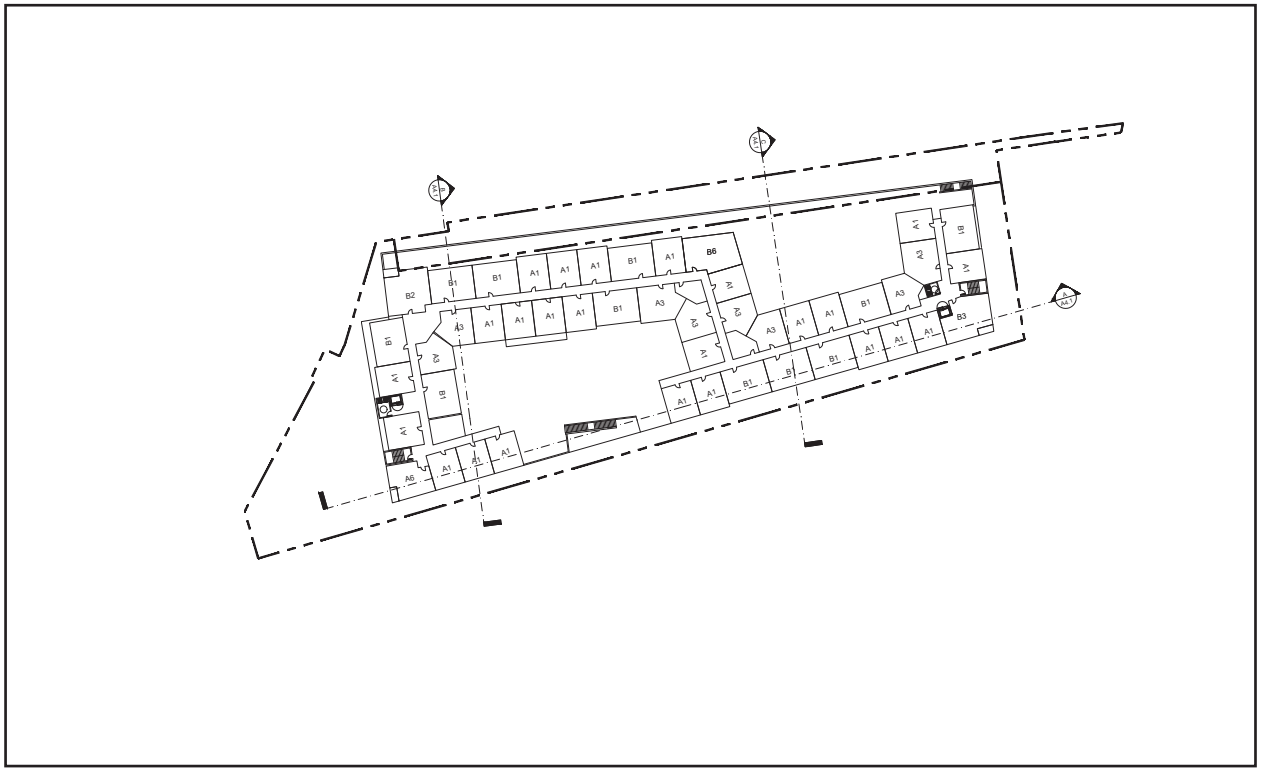
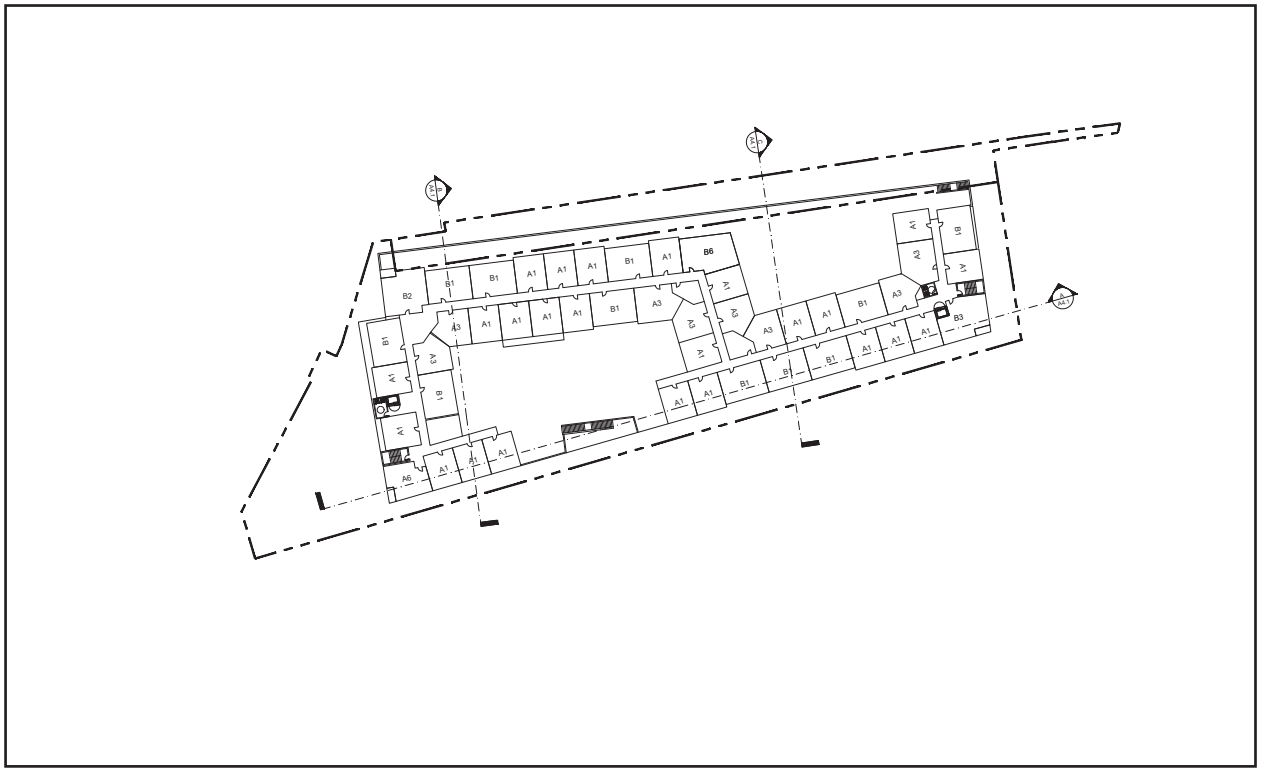
1. Introduction

Figure 4c Project Site Plan Floors 5 to 6

Figure 4c - Project Site Plan - Floors 5 to 6



Fifth Floor



Sixth Floor

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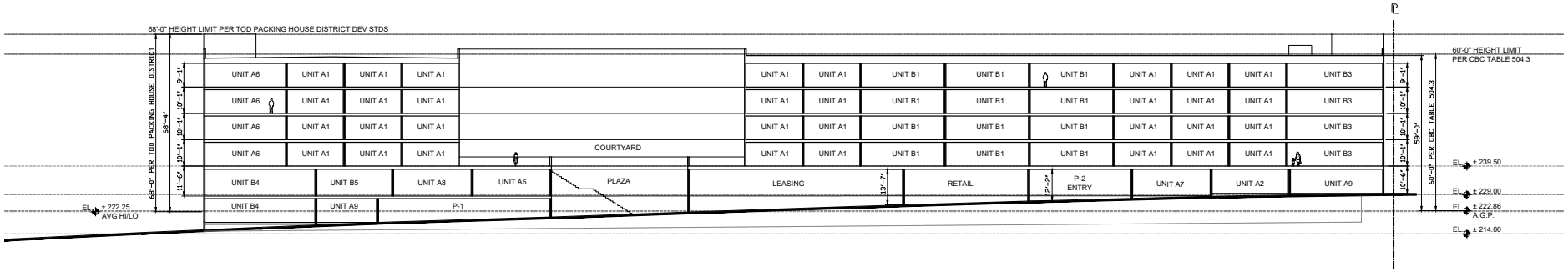
1. Introduction

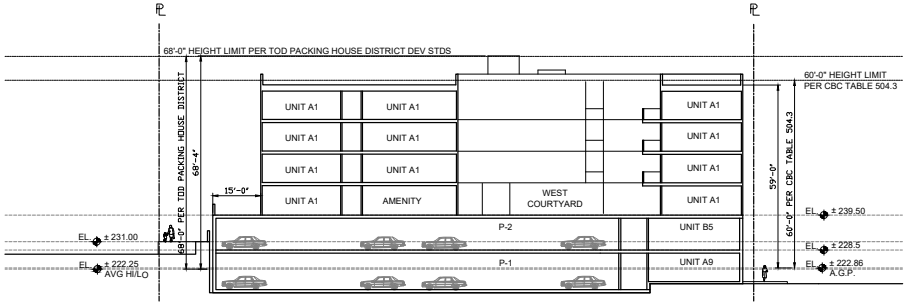
Figure 5 Proposed Project Sections

Figure 5 - Proposed Project Sections

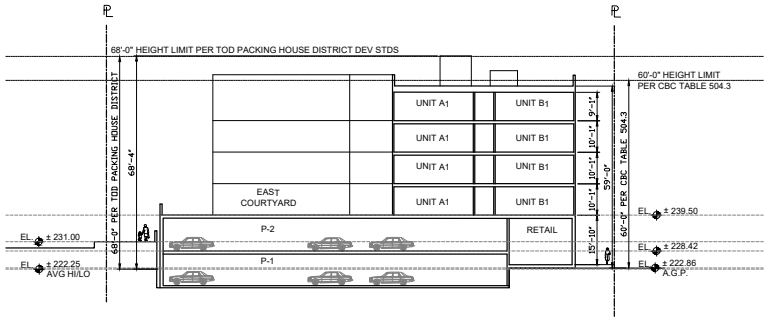
1. Introduction



SECTION A



SECTION B



SECTION C

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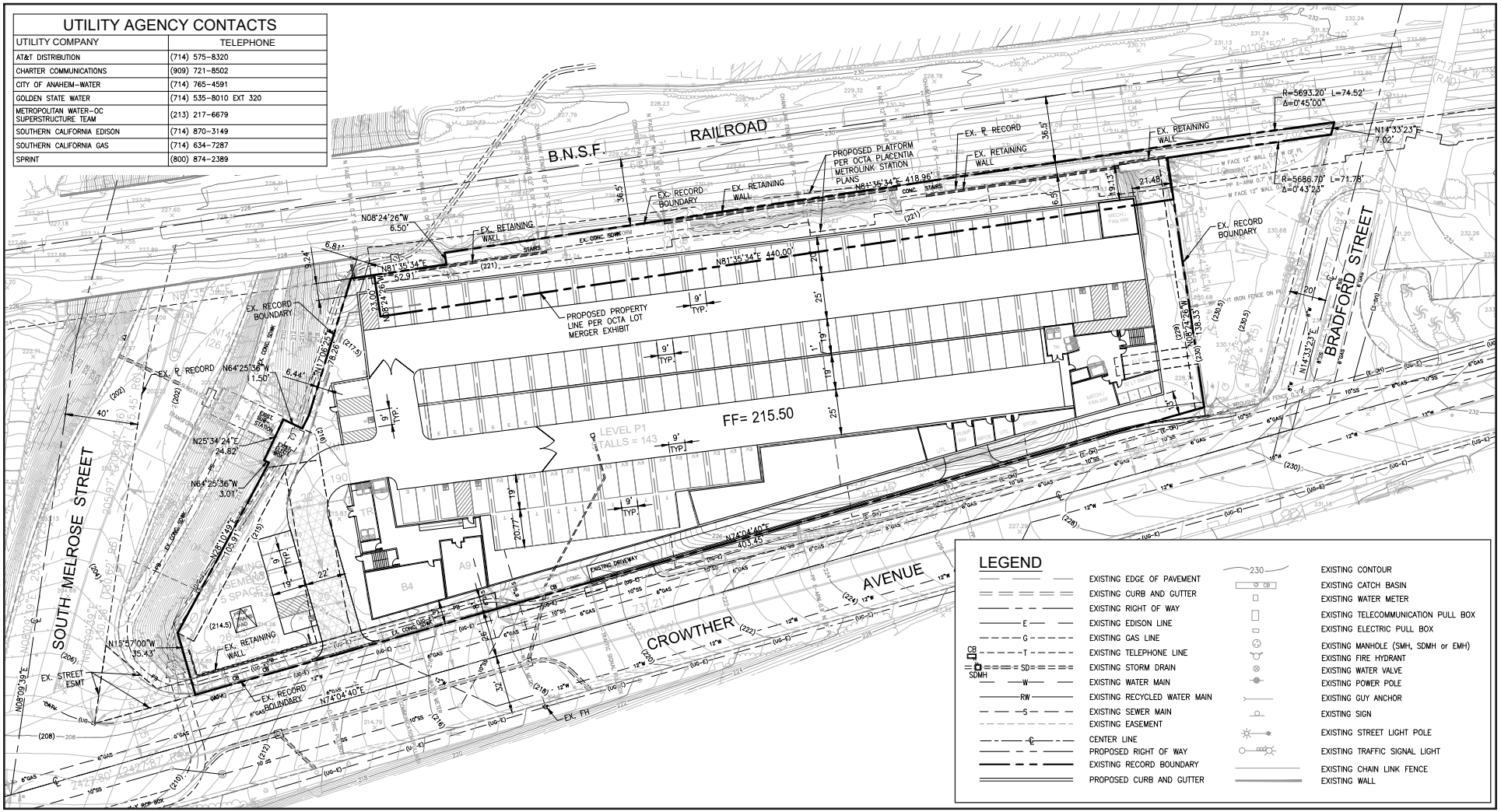
1. Introduction

Figure 6 Basement Parking Level 1

Figure 6 - Basement Parking Level 1

1. Introduction



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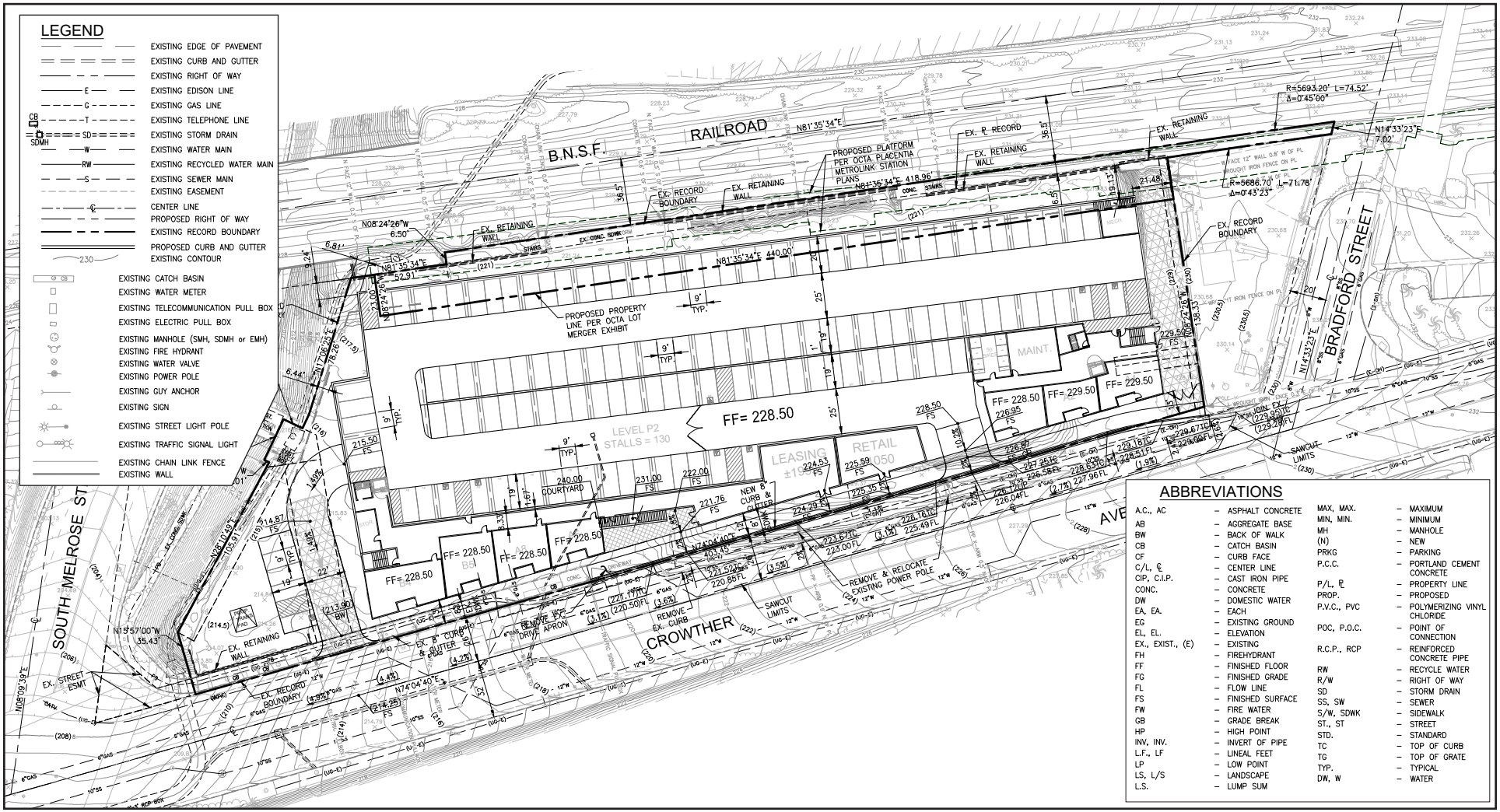
1. Introduction

Figure 7 Parking Level 2

Figure 7 - Parking Level 2

1. Introduction



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2. Environmental Findings

The CEQA Guidelines provide detailed information on when an Addendum can be prepared. This chapter considers the provisions of CEQA Guidelines Sections 15162, 15163, and 15164 and discusses this Addendum to the General Plan Amendment GPA 2017-01 and Zone Change ZC 2017-01.

2.1 ENVIRONMENTAL PROCEDURES

Pursuant to CEQA and the State CEQA Guidelines, the City's review of the Addendum focuses on the potential environmental impacts associated with the Proposed Project that might cause major revisions to the adopted 2017 MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects pursuant to State CEQA Guidelines Section 15162.

Pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, when a negative declaration adopted for a project, no subsequent negative declaration shall be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

(a) Substantial project changes are proposed that will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(b) Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(c) New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified or the negative declaration was adopted shows any of the following:

    (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration.

    (B) Significant effects previously examined will be substantially more severe than identified in the previous EIR.

    (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives.

(D) Mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

If some changes or additions to the previously prepared EIR or negative declaration are necessary, but none of the conditions specified in Section 15162 are present, the lead agency shall prepare an addendum (CEQA Guidelines Section 15164[a]). In accordance with the CEQA Guidelines, since none of the conditions specified in Section 15162 are present, the City has determined that an Addendum to the 2017 MND is the appropriate form of environmental review for the Proposed Project.

This Addendum analyzes the project-specific impacts of the Proposed Project as part of the 2017 Approved Project and any changes to the existing conditions that have occurred since the adoption of the 2017 Adopted MND. It also reviews any new information related to environmental impacts, mitigation measures and examines whether, as a result of any changes or any new information, a negative declaration may be required.

2.2 CEQA GUIDELINES

This section describes the requirements for the preparation of an addendum and demonstrates why the preparation of an addendum to the 2018 MND Addendum is appropriate for the Proposed Project.

2.2.1 CEQA Guidelines, Section 15162: Subsequent EIRs and Negative Declarations

CEQA Guidelines Section 15162(a) states,

> When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

1. **No substantial changes are proposed in the project which will require major revisions of the previous negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.** (14 CCR Section 15162[a][1])

A subsequent negative declaration is only required when "substantial changes" occur to a project or the circumstances surrounding a project, or "new information" about a project implicates "new significant environmental effects" or a "substantial increase in the severity of previously significant effects."

Approval of the Proposed Project would not require major revisions to the 2017 Adopted MND because no new significant environmental effects or substantial increase in the severity of previously identified significant effects would occur. No changes to the 2017 Approved Project are proposed, as the Proposed Project implements the land use designations and development requirements adopted under the 2017 Approved Project. The density, number, and type of units proposed by the Proposed Project are consistent with the 2017 Approved Project as summarized in Table 1.

2. Environmental Findings

The maximum number of units allowed in the TOD would generate approximately 5,000 vehicle trips within the TOD at buildout. Based on the trip generation forecast contained in the Traffic Impact Study of the 2017 Adopted MND, it was estimated that 752 dwelling unit (DU) could be constructed under all residential development scenario and a mix of 564 DU and approximately 30,000 square feet of gross leasable area under 75 percent residential and 25 percent commercial scenario.

In August 2017, a 215 DU project with 72.9 DU/acre density (Placentia at Crowther Project) was approved on a 2.95-acre site located along the south side of East Crowther Avenue at 110 E. Crowther Avenue (339-091-09) and 132 Crowther Avenue (339-091-08), approximately 0.2 mile to the southeast. This project would generate 929 daily trips.

In 2018, a 418 DU project site with 95 DU/acre density (Centerpointe at Placentia Project) was approved on a 4.4-acre site located within the Packing House TOD. This project would generate 2,742 daily trips.

The Proposed Project is comprised of 189 multi-family dwelling units and 1,500 square feet of commercial retail on a 2.13-acre site. The Proposed Project is anticipated to generate 760 daily trips[1]. Therefore, the combined total number of units in the Packing House TOD would be 822 units (i.e., 189 units proposed plus 215 units approved for the Placentia Crowther Project and 418 units for the Centerpointe at Placentia Project), and would generate 4,431 vehicle trips, less than 5,000 vehicle trips allowed in the TOD area by the 2017 Approved Project. Therefore, the Proposed Project would not add new development or physically change the environment such that an increase in previously identified cumulative impacts would occur.

The analysis below, which discusses environmental topic areas listed in Appendix G of the CEQA Guidelines, demonstrates that no substantial changes are proposed and no major revisions of the 2017 Approved Project would be required due to approval of the Proposed Project.

Aesthetics. The Proposed Project, as envisioned in the 2017 Approved Project, proposes residential uses on the project site. The type, density, and scale of development on the Project Site are consistent with the considered development scenario analyzed in the 2017 Adopted MND, and the proposed number of residential units (189 units) would generate 760 average daily vehicle trips, which is within the maximum allowed in the planning area by the 2017 Approved Project of 5,000 vehicle trips (4,431 trips total when combined with the 2018 Centerpointe at Placentia Project and Placentia at Crowther Project). An officially designated state scenic highway, State Route 91, a 4-mile segment from SR 55 east to the east of City of Anaheim's city limit, is approximately 3.3 miles southeast of the Project Site. However, views to the north from this state scenic highway are obstructed due to the retaining wall along the highway and intervening development. Although the new buildings would be visible from the nearby sensitive receptors to the north to some extent, the residences currently have views of the over 12-foot wall that does not provide unique or quality visual character that require protection or preservation. The existing structures have no scenic value and no further scenic value evaluation would be necessary.

As discussed in the 2017 Adopted MND, the Proposed Project would provide high quality, high-density development that can enhance the visual character of the TOD area. The Proposed Project would use various

[1] 760 average daily trips is based on the Traffic Memo, prepared by Fehr & Peers, dated June 22, 2020.

building materials such as stucco, brick veneer, painted concreate, corrugated metal sliding, fiber cement sliding, metal panels, vinyl windows, etc. The Proposed Project would use building materials commonly used in other buildings around the City that are not considered unusual or highly reflective to cause light and glare impacts to motorists on adjacent streets. As seen in Figure 8, *Conceptual Landscape Plan*, the Proposed Project would include a standard concrete sidewalk along Crowther Avenue, in addition to street trees, plant buffers, benches and bike racks. All of which would improve the visual character of the Project Site.

The Proposed Project would create additional nighttime lighting due to exterior and interior lighting. Considering that the 2017 Approved Project envisioned compact pattern of development conducive to walking and bicycling, and providing appropriate level of lighting during nighttime is necessary for safety, security, and comfort of the pedestrians, bicyclists, and other users. In accordance with the City of Placentia Municipal Code Section 23.75.020, the exterior lighting would be arranged so that lights are reflected away from adjoining properties. The Proposed Project would not include any flashing, rotating, or highly intensive lighting sources that could be considered intrusive or harmful to the surrounding uses. It is anticipated that the Project Applicant will prepare a lighting plan that depicts the locations of lighting fixtures, types of fixtures, mounting heights, and aiming directions to be installed, and submitted to the City for review and approval. Therefore, no new impacts or substantially greater impacts than previously analyzed would occur.

Agriculture and Forestry Resources. There are no agricultural or forestry resources on the project site. Therefore, the Proposed Project, like the 2018 Approved Project, would not impact these types of resources. No new impacts or substantially greater impacts than previously analyzed would occur.

Air Quality. The Proposed Project would result in similar construction-related emissions compared to the Approved Project. Operational air quality emissions would be less than what was analyzed for the Approved Project since the Proposed Project and other development within the TOD Area will not reach the 5,000 trip threshold. No new impacts or substantially greater impacts than previously analyzed would occur for the Proposed Project. The 2017 Adopted MND determined that as long as the future trips within the Packing House TOD is limited to 5,000 trips per day, the operational vehicle emissions would not exceed the SCAQMD's threshold. The Proposed Project would not cause the total trips within the TOD area to exceed 5,000 trips; therefore, would not result in new or substantially greater operational air quality impacts than already analyzed under the 2017 Adopted MND.

Therefore, the Proposed Project is consistent with the conclusion of the 2017 Adopted MND, and no new or substantially greater air quality impacts than previously analyzed would occur. As traffic generated by the Proposed Project is within the 5,000 daily trip limit of the 2017 Approved Project and would generate 723 fewer daily trips than analyzed in the 2017 Approved Project (Fehr & Peers, 2020); air quality impacts would be less severe than what was previously analyzed for the Approved Project.

The 2017 Adopted MND indicated that residential uses typically do not generate offensive odors. Although retail uses would be provided, these uses would be required to comply with SCAQMD Rule 402 and would not generate objectionable odors. The Proposed Project would not result in new or substantially greater odor impacts than previously analyzed.

2. Environmental Findings

Biological Resources. The Project Site is within the Packing House TOD and would not modify the boundaries of the 2017 Approved Project. As described for the 2017 Approved Project, the entire TOD area has been previously developed and heavily urbanized with past and current industrial uses. No endangered, rare, threatened, or special status plant or wildlife species designated by the US Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDSW), or California Native Plant Society (CNPS) are known to occur on this site. No known regional wildlife corridors or any other sensitive biological areas as indicated by the USFWS Critical Habitat portal or CDFW BIOS (USFWS 2020a, CDFW 2020). Although there are some ruderal plant species and trees that require removal prior to the Project development, the Proposed Project would be required to comply with the Migratory Bird Treaty Act. If removal of the vegetation, including trees, occurs during nesting season, the Project Applicant is required to conduct nesting bird surveys in accordance with the California Department of Fish and Wildlife requirements. Compliance with the MBTA would ensure that no significant impacts to migratory birds occur. No new impacts or substantially greater impacts than previously analyzed would occur.

Cultural Resources. The Project Site is within the Packing House TOD and would not modify the boundaries of the 2017 Approved Project. The Proposed Project would disturb the same area as the 2018 Approved Project and would not be expected to uncover any additional subsurface cultural resources beyond those contemplated by the 2018 Approved Project. The Project Site is not listed in the National Register, State Landmark, California Register, or Point of Interest as identified by the California Historical Resources, Office of Historical Preservation (OHP 2020). The Project Site is within the boundaries of the Packing House TOD, and as stated for the 2018 Approved Project, the whole of the TOD area has been historically disturbed through grading, compaction and building or infrastructure construction. Therefore, the project area, including the Project Site, can no longer contain any archaeological resources/sites with integrity or contextual value. Furthermore, the Proposed Project would be required to comply with applicable regulations and mitigation identified in the 2017 Adopted MND (see Mitigation Measure V-2), which were determined to reduce potential impacts to tribal resources to a less than significant level. No archaeological or paleontological resources impacts were identified for the 2017 Approved Project, and the Proposed Project would not result in greater impacts than discussed in the 2017 Approved Project as the development would comply with the development density and limits established by the 2017 Approved Project. No new impacts or substantially greater impacts than previously analyzed would occur.

Geology and Soils. The Project Site is within the Packing House TOD, and would not modify the boundaries of the 2017 Approved Project. The Proposed Project would disturb the same area as the 2017 Approved Project and would not be expected to result in greater impacts related to geology and soils beyond those contemplated by the 2017 Approved Project The City of Placentia does not have any active faults located within its boundary and the seismic-related risks can be reduced through required adherence to seismic design codes in the California Building Code. A Geotechnical Investigation was performed for the Proposed Project and preliminary recommendations were identified to ensure that impacts from unstable geologic units or soils do not result in adverse impacts. This geotechnical evaluation is included as Attachment B to the Addendum. The Project Applicant would also be required to comply with the National Pollutant Discharge Elimination Systems (NPDES) permitting regulations, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The permit requirements are included as Attachment D to the Addendum. The

SWPPP would identify appropriate best management practices (BMPs) during grading and construction to ensure that erosion, sedimentation, and discharge of storm water from the Project Site do not result in degradation of storm water runoff or contribute to a violation of water quality standards. The Proposed Project is required to comply with the requirements of the CBC Title 24 California Code of Regulations, and prepare and implement project-specific geotechnical investigation.

The type and scale of development on the Project Site does not differ from that analyzed in the 2017 Approved Project, and impacts would not be significant. The Project Applicant is required to comply with applicable regulations and no new impacts or substantially greater impacts than previously analyzed would occur.

Greenhouse Gas Emissions. As with the Approved Project, the Proposed Project would not increase the severity or result in new greenhouse gas emissions impacts and would not conflict with an applicable plan, policy, or regulation adopted for the purpose reducing GHG emissions.

The 2017 Adopted MND indicated that if construction-related GHG emissions exceed regionally accepted thresholds, mitigation measures will be required to offset such emissions. The Proposed Project would result in similar construction-related emissions compared to the Approved Project. Operational greenhouse gas emissions would be less intensive than what was originally identified as there would be 723 fewer daily trips than what was analyzed under the Approved Project. No new impacts or substantially greater impacts than previously analyzed would occur for the Proposed Project.

Hazards and Hazardous Materials. Implementation of the Proposed Project could result in impacts related to hazards and hazardous materials. However, the Proposed Project is consistent with the land uses anticipated and analyzed by the 2017 Approved Project. The 2017 Adopted MND indicated that during the construction of future structures in the TOD area, there could be a potential for accidental release of petroleum products in sufficient quantity to pose a significant hazard to people or the environment. Therefore, Mitigation Measures VIII-1 and VIII-2 were incorporated so that impacts related to hazardous materials release during construction could be reduced to a less than significant level. In compliance with Mitigation Measures VIII-1 and VIII-2, a Phase I and Phase II Environmental Site Assessment have been prepared for the Proposed Project, which identifies specific remediation actions to ensure that impacts from hazardous materials are reduced to a less than significant level. A summary document of the Phase I and Phase II is included as Attachment C to the Addendum. The following Recognized Environmental Condition (REC) was identified at the Project Site (source).

- ASTM E 1527-13: Based on Krazan's review of previous environmental assessments, historical aerial photographs and Sanborn Fire Insurance Maps, there is evidence that RECs exist in connection with the historical uses of the subject site. A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of volatile organic compounds (VOCs), including benzene and tetrachloroethene (PCE), reported in soil gas samples exceeding the Regional Water Quality Control Board's Environmental Screening Levels for Residential Use for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic compounds, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Krazan recommended that a comprehensive

2. Environmental Findings

> Soil Vapor Survey be conducted at the subject site in order to determine the presence or absence of significant concentrations of VOCs, including Chlorinated VOCs.
>
> The results of the Soil Vapor Survey that was conducted for the Project Site concluded that the cancer risks and non-cancer hazards estimated to result from unmitigated vapor intrusion into onsite buildings are below the regulatory threshold values for residential land use of one-in-a-million (1E-06) cancer risk and 1.0, respectively. Therefore, no significant cancer risks or non-cancer hazards are anticipated to occur as a result of exposure to detected concentrations of VOCs in soil gas at the site

Mitigation Measure VIII-2 requires that any identified residual contamination shall be remediated to a level that will permit residential use prior to approval. The type and scale of development on the Project Site is within the development anticipated and allowed under the 2017 Approved Project, and the Proposed Project, like the 2017 Approved Project, would be required to comply with applicable regulations and mitigation identified in the 2017 Adopted MND (see Mitigation Measures VIII-1 and VIII-2). No new impacts or substantially greater impacts than previously analyzed would occur.

Hydrology and Water Quality. As stated in the 2017 Adopted MND, the Packing House TOD area, including the Project Site, is fully developed. The 2017 Adopted MND indicated that the TOD area is not subject to flooding by a 100-year flood hazard area nor a levee or dam. The 2017 Adopted MND identified three sources of potential violation of water quality standards or waste discharge requirements: 1) from generation of municipal wastewater; 2) from storm water runoff; and 3) potential discharges of pollutants, such as accidental spills. Wastewater from the project area is delivered to Orange County water reclamation facilities that meet waste discharge requirements imposed by the Santa Ana Regional Water Quality Control Board (RWQCB). As with the 2017 Approved Project, water quality from storm water and accidental spills would be maintained through development and implementation of a SWPPP or erosion control plan to control potential sources of water pollution, and a Water Quality Management Plan (WQMP) to control water pollution during operation. The most current General Construction Permit (GCP) and associated local NPDES regulations (Order No. 2009-0009-DWQ and Order No. R8-2009-0030) are described in Attachment D to this Addendum. The required project-specific WQMPs, preliminary and/or final, to be prepared consistent with the prevailing terms and conditions of the City's Local Implementation Plan (LIP), OC DAMP, and Model WQMP at the time of project application, would ensure that hydrology and water quality impacts are less than significant. Moreover, as part of project design features, low impact development and water quality treatment solutions would be prescribed in the project specific WQMP to improve water quality. These requirements would ensure that adequate BMPs would be implemented to ensure that violation of any water quality standards or waste discharge requirements do not occur.

The 2017 Adopted MND indicated that the shift of industrial uses to multi-family residential and commercial uses under the TOD designation would result in increased number of water connections, therefore, increase the groundwater consumption. Therefore, Mitigation Measure IX-1 was incorporated to ensure that increased water demands do not result in significant impacts to groundwater. Mitigation Measure IX-1 require the Project Applicant to fund sufficient water conservation measures if water consumption is forecast to increase by more than 25 percent than current water demand or 5,000 gallons per day per acre. According to the Water and Sewer

Technical Report prepared for the Proposed Project (Attachment G), the total water demands are estimated to be approximately, 21,522 gallons per day (gpd) or 24.11 acre feat per year (AFY). This increase in demand represent 2.5% of the projected increase of 0.8 MGD of total demands through 2040 within the Placentia-Yorba Linda service area as noted in the GSWC 2015 UWMP. The increase is well within the active design capacity of 22 MGD for regional water supplies to be delivered to the City. Therefore, impacts would be less than significant. Additionally, implementation of Mitigation Measure IX-1 would ensure that no significant groundwater impact would occur.

Land Use and Planning. The site plan and proposed land use of the Proposed Project are consistent with those of the land use and density standards identified in the 2017 Approved Project. Refer to the project consistency analysis at the beginning of this document for verification. The proposed number of residential units (189 units), 2,000 square feet of leasing space, and 1,500 square feet of retail space would result in less than the maximum allowed vehicle trips of 5,000. No new impacts or substantially greater impacts than previously analyzed would occur.

Mineral Resources. The Project Site is within the 2017 Approved Project boundaries. No mineral resources were identified in the Packing House TOD area and no impacts to mineral resources were designated in the 2017 Approved Project. Implementation of the Proposed Project would not result in loss of mineral resource and no new impacts or substantially greater impacts than previously analyzed would occur.

Noise. As stated in the 2017 Adopted MND, implementation of the Proposed Project would generate construction-related and operational noise. However, traffic generated by the Proposed Project is within the 5,000 daily trip limit of the 2017 Approved Project and would generate 723 fewer daily trips than analyzed in the 2017 Approved Project (Fehr & Peers, 2020); thereby, generating less traffic noise than previously analyzed. A Title 24 Acoustical Study and Vibration Study were prepared in compliance with the 2017 Adopted MND's Mitigation Measures XII-1 and XII-2, and are included as Attachment E to the Addendum. The noise and vibration studies demonstrate that the Proposed Project would be consistent with the City's noise and vibration standards. Therefore, implementation of the Proposed Project would not result in greater operational noise and vibration impacts compared to the 2017 Approved Project.

As discussed in the 2017 Adopted MND, the Proposed Project would implement Mitigation Measures XII-3 through XII-13 to ensure that noise and vibration impacts during construction are minimized. Therefore, upon adherence to applicable regulations and mitigation identified in the 2017 Adopted MND, impacts would remain less than significant. No new impacts or substantially greater impacts than previously analyzed would occur.

Population and Housing. The 2017 Adopted MND indicated that under a worst-case assumption where the entire 28.2-acre of the TOD area was to be developed with 752 residential units (the maximum number of units that along with existing vehicle trips would result in the 5,000 trip cap), the population increase from the 2017 Approved Project would be 4.5 percent in the City's overall population. And the 2017 Adopted MND found that this increase in population is not considered a substantial direct increase and that this area of the City has sufficient existing infrastructure to serve the future development envisioned for the TOD area. The Proposed Project would develop 189 residential units and 2,000 square feet of leasing space, and 1,500 square feet of retail space, resulting in 760 daily trips, which is consistent with the worst-case assumptions analyzed

for the 2017 Approved Project. Therefore, no new impacts or substantially greater impacts than previously analyzed would occur.

Public Services. The 189 housing units, 2,000 square feet of leasing space and 1,500 square feet of retail space proposed for the Project Site by the Proposed Project would generate demand for police protection, fire protection, school, and library services. However, the 2017 Adopted MND analyzed the public services needs for up to 752 residential units at high density within the TOD area. Because implementation of the Proposed Project would result in a total of 822 units in the TOD area (418 units for the Centerpointe at Placentia Project, 215 units for the approved Placentia at Crowther Project, and 189 units for the Proposed Project), there would be a marginal increase in residents in the area. The Proposed Project would not physically change the environment such that an increase in previously identified impacts would occur.

Mitigation Measure XIV-1 requires preparation of a fiscal impact analysis, or alternatively, payment of a Public Safety Impact Fee by future development projects to ensure that impacts to public services are reduced to a less than significant level. Pursuant to the provisions of CEQA and the State CEQA Guidelines, the City of Placentia is the Lead Agency charged with the responsibility of deciding whether or not to approve the requested action. To allow deletion of the mitigation measure, the City of Placentia, as a 'Lead Agency' under CEQA, must i) state a legitimate reason for deleting the adopted measure, and ii) support that statement with substantial evidence. Since adoption of the 2017 Adopted MND, the City has adopted Ordinance O-2017-09 and O-2017-11 establishing Transit Oriented District development impact fees for new development fees to finance measures that mitigate impacts to parks and recreational facilities, sewer facilities, traffic and transportation infrastructure and streetscape infrastructure in the Transit Oriented Development Area. As a result, Mitigation Measure XIV-1 is no longer necessary and shall be deleted.

Recreation. The Proposed Project proposes development of 189 units, which is within the maximum number of units allowed under the 2017 Approved Project. Therefore, demand for recreational amenities for the Proposed Project was adequately analyzed by the 2017 Adopted MND, and no new impacts would be created with payment of the TOD development impact fee. No new impacts or substantially greater impacts than previously analyzed would occur.

Transportation and Traffic. The 2017 Adopted MND determined that implementation of the 2017 Approved Project is expected to generate a maximum of 5,000 net daily trips, where a factor of 35 percent transit-oriented trips was used to determine the net number of trips to and from the Packing House TOD area. The 2017 Adopted MND analyzed the level of service (LOS) at 15 traffic study intersections under the Existing (2016) Conditions without Project Scenario; Existing (2016) Conditions with Project Scenario; Opening Day (Year 2018) Conditions without Project Scenario; Opening Day (Year 2018) Conditions with Project Scenario; Future Buildout (Year 2035) Conditions without Project Scenario; and Future Buildout (Year 2035) Conditions with Project Scenario. The City of Placentia's criteria for acceptable signalized intersections LOS is D or better, and a significant impact occurs when the signalized intersection operates at LOS E or F. All 15 intersections, at present, are currently operating within the City's "acceptable" criteria. The 2017 Adopted MND concluded that the conditions at several intersections would worsen with the 2017 Approved Project, but no new intersections would be impacted. Therefore, Mitigation Measure XVI-1 was incorporated to provide traffic improvements to impacted intersections. In compliance with Mitigation Measure XVI-1, the Project Applicant is required to

pay appropriate fair share fees, where the actual fees will be re-evaluated and refined. Provided that appropriate fair share fees are paid and traffic improvements implemented, no significant traffic impact would occur. Table 2 shows the trip summary information for the Proposed Project. As shown, the Proposed Project would result in 760 daily trips during. The Placentia at Crowther Project was approved in 2017 and is anticipated to generate 929 daily trips. The Centerpointe at Placentia Project was approved in 2018 and is anticipated to generate 2,742 trips. Therefore, implementation of the Proposed Project, combined with the Placentia at Crowther Project, and the Centerpointe at Placentia Project would result in 4,431 trips, less than 5,000 daily trips permitted under the 2017 Approved Project. Therefore, no new or greater impacts compared to the traffic impacts previously analyzed in the 2017 Adopted MND.

Table 2 Proposed Project Trip Generation Estimates

Land Use	Average Daily Trips
Proposed Project	
Apartments	1,028
Retail Commercial	40
Proposed Project Total (with transit reduction)	760
2017 Placentia at Crowther Project	
Apartments (with transit reduction)	929
2018 Centerpointe at Placentia Project	
Apartments (with transit reduction)	2,742
Proposed Project + 2017 Approved Project + 2018 Approved Project	4,431
Maximum 2017 Approved Project Trips	**5,000**
Net remaining	**569**

As with the 2017 Approved Project, the Proposed Project would implement Mitigation Measures XVI-2 through XVI-11 during construction to ensure that construction traffic impacts are reduced to a less than significant level.

Additionally, with regard to SB 743, In anticipation of the change to VMT, seven North Orange County Cities (Fullerton, La Habra, Brea, Buena Park, Orange, Placentia, and Yorba Linda) formed a collaborative and are currently completing the North Orange County Cities (NOCC) SB 743 Implementation Study to assist with answering important implementation questions about the methodology, thresholds, and mitigation approaches for VMT impact analysis. The City's requirements are in Draft format and have not yet been adopted but were reviewed for application to the Proposed Project.

The Proposed Project is adjacent to the future Metrolink station and is within a ½-mile radius of the station. As such, it qualifies for VMT screening as a Transit Priority Area (TPA). At 88.7 units per acre, the Proposed Project will exceed a FAR of 1.0. As noted above, the project does not exceed the parking required by the City. These facts support the use of TPA screening.

2. Environmental Findings

Because the number of trips and type of development proposed by the Proposed Project are consistent with the overall number and type analyzed by the 2017 Adopted MND, with adherence to Mitigation Measures XVI-1 through XVI-11, no new impacts or substantially greater impacts than previously analyzed would occur.

Utilities and Service Systems. The Proposed Project would generate demand for water, sewer conveyance, wastewater treatment, solid waste disposal, and other services. However, the Proposed Project is consistent with the 2017 Approved Project analyzed under the 2017 Adopted MND. As discussed in the 2017 Adopted MND, wastewater generated from the Packing House TOD, including the Proposed Project, would flow to the regional wastewater reclamation plant operated by Orange County. Residential and commercial wastewater rarely contains constituents that would cause a wastewater treatment plant to exceed RWQCB requirements as established in Waste Discharge Requirements (WDR). No adverse impact from generation of wastewater onsite were forecast to result from the 2017 Approved Project, and no new impacts would result from the Proposed Project.

The 2017 Adopted MND found that the 2017 Approved Project would result in increased water consumption compared to the existing conditions and also generate greater sewer demands. However, it acknowledged that the actual generation volumes would depend on the efficiencies of the fixtures incorporated into the development. Therefore, Mitigation Measure XVII-1 was incorporated to evaluate project-specific water and sewer demands and service capacities, and ensure that specific measures are implemented as conditions of approval. In accordance with Mitigation Measure XVII-1, a Water and Sewer Technical Report was prepared and is included as Attachment G to this Addendum. As part of this technical report, existing and proposed water and sewer calculations were performed to quantify a net change in water demands and sewer flows to compare with the regional water and wastewater system capacities. The City receives water from the Golden State Water Company (GSWC) that provides water to several regions throughout California. The Project area is within the Placentia-Yorba Linda jurisdiction of GSWC, where imported water is purchased from the Municipal Water District of Orange County (MWDOC). The technical report found that the total water demands are estimated to be approximately, 21,522 gallons per day (gpd) or 24.11 acre feat per year (AFY). This increase in demand represent 2.5% of the projected increase of 0.8 MGD of total demands through 2040 within the Placentia-Yorba Linda service area as noted in the GSWC 2015 UWMP. The increase is well within the active design capacity of 22 MGD for regional water supplies to be delivered to the City.

The City of Placentia provides wastewater collection service to the majority of parcels within the 6.6 square mile City limits through approximately 84 miles of gravity sanitary sewer pipelines. The City's wastewater collection system conveys untreated wastewater to Orange County Sanitation District's (OCSD) trunk sewer system via 35 separate connections. Sewer flows to the OCSD Newhope-Placentia Trunk Line and ultimately reaches the OCSD Wastewater Treatment Plant #1 (WWTP1) in Fountain Valley. WWTP1 has a secondary treatment capacity of 182 MGD for average daily flows and 273 MGD for peak wet weather flows. OCSD provides approximately 120-130 MGD of secondary effluent from WWPT1 to the Groundwater Replenishment System for recharge effluent from WWTP1 to the Groundwater Replenishment System for recharge of regional groundwater supplies. Current influent wastewater flows to WWTP1 are approximately

106 MGD. This yields an available capacity of 76 MGD. total sewer flows associated with the proposed Project are 56,700 gpd or 0.06 MGD.

The available wastewater treatment capacity of the WWTP1 is 76 MGD. The proposed increase in sewer flows from the Project is less than 1% of the available capacity. The proposed increase in water demand and sewer flows from redeveloping the Project area will not have a significant impact on regional water supply capacity or wastewater treatment capacity. There is enough water supply capacity as shown above and as stated in the GSWC 2015 UWMP to handle proposed increases in water demands from the Project. There is also sufficient wastewater treatment capacity of the OCSD WWTP1 to handle the proposed increases in sewer flows from the Project. Therefore, no significant regional water or sewer impacts are anticipated. Therefore, impacts related to regional wastewater treatment capacity are less than significant and no new significant impact would occur.

The Project Site is within the boundaries of the 2017 Approved Project, where the TOD area is described as essentially 100 percent impervious and existing drainage system provides adequate service. The 2017 Adopted MND found that although it is unlikely that additional runoff would be generated by the 2017 Approved Project, the future TOD development implement Mitigation Measure XVII-2 to document and verify this assumption. Therefore, no new impacts or substantially greater impacts than previously analyzed would occur.

2. **No substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. (14 CCR Section 15162(a)(2))**

Approval of the Proposed Project would not require any major revisions to the 2017 Adopted MND because no substantial changes have occurred with respect to the circumstances under which the project was undertaken. Existing conditions on Packing House TOD area have not significantly changed. The Proposed Project would not result in any physical changes to the environment that would cause new significant effects or increase the severity of previously identified cumulative impacts.

As discussed in above Section 2.2.1 CEQA Guidelines Analysis, the Proposed Project would not have new significant environmental effects or substantially increase the severity of previously identified significant effects due to changes in circumstances.

3. **No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous Negative Declaration was adopted, shows any of the following:**

    a. **The project will not have one or more significant effects not discussed in the previous negative declaration.** (14 CCR Section 15162(a)(3)(A))

    No new information has been introduced that would increase the severity of the identified cumulative impacts or cause new significant effects not discussed in the 2017 Approved Project. The Proposed Project is consistent with the 2017 Approved Project, and is not considered new information of substantial importance. The Proposed Project would not have significant project or cumulative effects because there

are no new areas of development or other changes to the physical environment outside the original TOD area.

b. Significant effects previously examined will not be substantially more severe than shown in the previous negative declaration. (14 CCR Section 15162(a)(3)(B))

No new information has been introduced that would increase the severity of impacts discussed under the 2017 Approved Project. The Proposed Project does not exceed the vehicle trip cap of 5,000 trips, nor allow new development or other changes to the physical environment that were not previously analyzed.

c. No mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative" (14 CCR Section 15162(a)(3)(C))

Since the adoption of the MND, no new, previously unknown information of substantial importance has come to light that would affect the mitigation measures that were adopted or the alternatives that were considered as a part of the decision-making process for the 2017 Adopted MND.

The Proposed Project would not create new significant effects that were not previously analyzed, nor would the magnitude of impacts exceed those found in the 2017 Adopted MND. No new mitigation measures are proposed, and the Mitigation Monitoring and Reporting Program adopted as a part of the 2017 Adopted MND remains adequate to mitigate impacts of the Proposed Project.

d. No mitigation measures or alternatives which are considerably different from those analyzed in the previous negative declaration would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative. (14 CCR Section 15162(a)(3)(D))

No new mitigation measures are required, and the Mitigation Monitoring and Reporting Program adopted as a part of the 2017 Adopted MND remains adequate to mitigate impacts of the Proposed Project. As substantiated in this document, the Proposed Project does not create new significant impacts that would require the preparation of a subsequent negative declaration, and an addendum to the 2018 MND Addendum would be appropriate to satisfy CEQA.

2.2.2 CEQA Guidelines Section 15164: Addendum to an EIR or Negative Declaration

1. The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. (14 CCR Section 15164(a))

The City of Placentia, lead agency, prepared a mitigated negative declaration in 2017 that was adopted and an addendum to the MND in 2018 (Approved Project) for the Packing House TOD, and an EIR was not certified. This section does not apply to the Proposed Project.

2. **An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.** (14 CCR Section 15164(b))

The Proposed Project is consistent with the 2017 Approved Project, and none of the conditions described in Section 15162 calling for the preparation of a negative declaration have occurred.

3. **An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.** (14 CCR Section 15164(c))

This Addendum is not required to be circulated for public review but will be attached to the 2017 Approved Project.

4. **The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.** (14 CCR Section 15164(d))

The Placentia Planning Commission will consider the Addendum to the 2017 Approved Project prior to approving the Proposed Project.

5. **A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.** (14 CCR Section 15164(e))

As discussed in Section 2.2.1 of this Addendum, the Proposed Project would not meet any of the criteria described under 14 CCR Section 15162. The Proposed Project is being implemented in accordance with the 2017 Approved Project and no new impacts or substantially greater impacts compared to the 2017 Approved Project have occurred. The Proposed Project would not require changes to the 2017 Approved Project and no new mitigation measures have been identified. Therefore, an Addendum to the 2017 Approved Project is appropriate and has been prepared.

2.2.3 References

California Department of Fish and Wildlife (CDFW). 2020. Biogeographic Information and Observation System (BIOS), BIOS Viewer. https://map.dfg.ca.gov/bios/

Fehr & Peers, 2020, Placentia Crowther Avenue Project Traffic Memo.

Fuscoe Engineering. 2020. Preliminary Water Quality Management Plan.

Fuscoe Engineering. 2021. Water and Sewer Technical Report.

2. Environmental Findings

Krazan & Associated, Inc. 2018. Phase I Environmental Site Assessment.

Krazan & Associated, Inc. 2018. Phase II Environmental Site Assessment.

Geocon West, Inc. 2018. Geotechnical Investigation Proposed Multi-Family Residential Development 207-209 West Crowther Avenue, Placentia California.

Office of Historic Preservation, Listed California Historical Resources. http://ohp.parks.ca.gov/ListedResources/

US Fish & Wildlife Service (USFWS). 2020. ECOS Environmental Conservation Online System, U.S. FWS Threatened & Endangered Species Active Critical Habitat Report. Online mapper. https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77

US Fish & Wildlife Service (USFWS). 2017 (last modified October 1, 2020). National Wetlands Inventory, Surface Waters and Wetlands, Wetlands Mapper https://www.fws.gov/wetlands/data/mapper.html

3. Environmental Determination

Based on the evidence in light of the whole record documented in the certified EIR and cited incorporations:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☒ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	*Date*
Printed Name	*For*

3. Environmental Determination

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Attachment A.
Mitigation Monitoring and Reporting Program

Attachments

Attachment A.
Mitigation Monitoring and Reporting Program

Attachments

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CITY OF PLACENTIA
207-208 WEST CROWTHER AVENUE (PACKING HOUSE DISTRICT TOD PROJECT)
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Implementation Schedule	Verification
Air Quality		
III-1 For each future project implemented within the TOD project area, the development shall identify project construction related emissions and specific best available control measures (BACMs) identified in Rule 403 required to ensure that fugitive dust or construction equipment exhaust emissions will not exceed SCAQMD construction thresholds of significance or emission concentrations at the nearest receptors identified by local significance thresholds. The specific BACMs identified shall be made conditions of approval to ensure implementation.	The construction emission report shall be submitted to the City and approved prior to approval of the project. The BACMs identified in the report shall be implemented as project conditions of approval during construction.	The City shall review the report of findings submitted by the applicant and document the measures required (if any) to reduce construction emission to a less than significant level. This report shall be approved by the City and a copy of the approved report shall be retained in the project file. The BACMs to reduced construction emissions shall be implemented during construction and verified by City inspectors.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

CITY OF PLACENTIA
207-208 WEST CROWTHER AVENUE (PACKING HOUSE DISTRICT TOD PROJECT)
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Implementation Schedule	Verification
Air Quality III-2 Only "Low-Volatile Organic Compounds" paints (no more than 100 gram/liter of VOC) and/or High Pressure Low Volume (HPLV) applications consistent with South Coast Air Quality Management District Rule 1113 shall be used.	This measure shall be included as a condition of approval and implemented during construction.	A copy of this condition of approval shall be retained in the project file. The use of Low-Volatile Organic Compounds shall be verified by City inspectors.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Air Quality III-3 Prior to approval of a specific development project within the new TOD project area, as part of the required air quality study, a health risk assessment (HRA) shall be provided to the City indicating what measures will need to be implemented to reduce exposure to any toxics to less than significant impact. Also, as part of the mitigation, the City shall require that a permanent funding source be identified to ensure that the mitigation systems are maintained and do not degrade to the point of being ineffective at controlling exposure to potential toxics to a less than significant exposure level.	This measure shall be submitted to the City and prior to approval of the final site plan.	The City shall review the findings and include the recommendations as part of conditions of approval.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Cultural Resources		
V-2 During ground disturbing activities (including but not limited to pavement removal, pot-holing, grading, excavation, trenching and initial well site disturbance) at least one Native American Monitor will be present at the project site to monitor subsurface areas as they are exposed. The monitors shall compile a monitoring log on a daily basis that will provide descriptions of daily activities, including construction activities, locations, soil characteristics and any cultural materials exposed and identified. The monitors shall photodocument the ground disturbing activities on a daily basis. If any cultural materials are exposed, the monitors shall have the authority to redirect construction activities until the extent and importance of the materials are assessed. Subsequent management of any Native American cultural materials shall be determined through consultation between the City, property owner and the Native American Band supplying the monitor. Any human remains encountered shall be handled through the County Coroner's office and if necessary, in conjunction with the Native American Heritage Commission and Native American Band supplying the monitor.	A Native American Monitor shall be provided during ground disturbing activities beyond artificial fill materials based on the geotechnical report. Where applicable, the monitors shall compile a monitoring log on a daily basis that will provide descriptions of daily activities.	A copy of the monitoring log shall be retained in the project file. Verification of implementation shall be based on field inspections by City inspection personnel.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Hazards and Hazardous Materials		
VIII-1 All spills or leakage of petroleum products or other hazardous materials during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility. This measure will be incorporated into the SWPPP or erosion control plan prepared for site specific development within the project area.	These measures shall be identified in the project Stormwater Pollution Prevention Plan (SWPPP) and implemented during construction.	A copy of the SWPPP shall be retained in the project file. Verification of implementation shall be based on field inspections by City inspection personnel that verify the SWPPP BMPs have been implemented as required in this measure. Field notes documenting verification shall be retained in the project file.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Hazards and Hazardous Materials		
VIII-2 Prior to approval of any project under the TOD designation, a Phase I and/or Phase II Environmental Site Assessment shall be prepared to document the potential for any residual contamination at a site being developed within the TOD area. Any identified residual contamination shall be remediated to a level that will permit residential use prior to approval of any project proposed under the TOD designation.	A copy of the ESA's shall be submitted to the City prior to approval. Proof of remediation to a level that will support the type of use proposed shall be submitted to the City prior to occupancy.	A copy of the ESA's shall be retained in the project file. Verification of implementation shall be based on field inspections by City inspection personnel that verify that any recognized environmental conditions have been remediated as required in this measure. Field notes documenting verification shall be retained in the project file.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Hydrology and Water Quality		
IX-1 Concurrent with individual project applications in the future, the applicant for a project in the TOD area shall submit a review of existing water consumption on the property, and a forecast of future water consumption by the proposed development. If water consumption by the new project is less than currently occurs on the property, no further action is required. If water consumption is forecast to increase by more 25% than current water demand or 5,000 gallons per day per acre, the project applicant shall fund sufficient water conservation measures within the project area (including the proposed project) to offset the increase in demand on the local water purveyor. Specific conservation measures that can by funded include, but are not limited to: use of recycled water for exterior landscaping, ultra low flush toilets; interior water fixtures that reduce water consumption, such as ondemand water heaters; replacement of existing high water demand landscaping with xeric landscaping; installation of smart landscape/irrigation management/control systems (such as drip systems); and use of onsite low water demand landscaping. To verify adequate water demand offset, the City shall consult with the local water purveyor and verify the adequacy of the offset.	A copy of the water use report shall be provided to the City with recommendations on the need for offsets. If required, the recommended water consumption reduction measures shall be installed during construction and implemented during operations/occupancy.	A copy of the approved water use report shall be retained in the project file. If offset measures must be implemented, City inspectors shall verify and document that they are installed and operational.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-3 Future projects that may adversely impact noise sensitive uses shall use noise reducing barriers and other devices to reduce exterior noise levels at the nearest sensitive receptor to 65 CNEL or less during the daytime construction hours. This shall include installation of a temporary construction barrier around the source of construction noise.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that the noise attenuation measures are implemented during construction where required.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-4 No construction activities shall occur during the hours of 7 PM through 7 AM, Monday through Saturday and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists. Stated differently, construction activities shall be limited to 7 AM to 7 PM on weekdays; and no construction activities on Sunday or federal holidays.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-5 Stationary construction equipment that generates noise above the 65 dB threshold at the nearest sensitive receptor shall be placed behind a temporary noise construction barrier while in use.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-6 The project developer shall establish a noise complaint response program and shall respond to any noise complaints received for future specific project by measuring noise levels at the affected receptor site. If the noise level exceeds an CNEL of 60 dBA exterior or an CNEL of 45 dBA interior at the sensitive receptor, the applicant will implement adequate measures (which may include portable sound attenuation walls, use of quieter equipment, shift of construction schedule to avoid the presence of sensitive receptors, etc.) to reduce noise levels to the greatest extent feasible.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-7 Project developer will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by applicant personnel during construction activities.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-8 Equipment not in use for five minutes shall be shut off.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-9 Equipment shall be maintained and operated such that loads are secured from rattling or banging.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-10 Where available, electric-powered equipment shall be used rather than diesel equipment and hydraulic-powered equipment shall be used instead of pneumatic power.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-11 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-12 No radios or other sound equipment shall be used at this site unless required for emergency response by the contractor.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Noise XII-13 Public notice shall be given 10 days prior to initiating construction. This notice shall be provided to all property owners and residents within 300 feet of the project site and shall be provided to property owners/residents at least one week prior to initiating construction. The notice shall identify the dates of construction and the name and phone number of a construction supervisor (contact person) in case of complaints. One contact person shall be assigned to the project. The public notice shall encourage the adjacent residents to contact the supervisor in the case of a complaint. Resident's would be informed if there is a change in the construction schedule. The supervisor shall be available 24/7 throughout construction by mobile phone. If a complaint is received, the contact person shall take all feasible steps to remove or attenuate the sound source causing the complaint.	This measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction noise measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic		
XVI-1 Each future TOD project shall pay fair share fees for the intersection improvement costs at the time of entitlement based on the percentage of trips contributed at each intersection. A high level "order of magnitude" cost estimate is also provided in subsequent mitigation identified in the Traffic Impact Study. These are rough estimate costs for engineering and construction and will need to be refined during future preliminary engineering phase. The mitigation measures should be re-evaluated for any refinement of the Draft General Plan Update and/or additional development of the TOD project over and beyond 5,000 trips. All significantly impacted intersections require mitigation prior to Future Buildout. Mitigation for each intersection and estimated costs are listed below: • Placentia/Crowther Avenue: Upgrade left turn signal phasing for all movements from permissive left turns to protected/permissive left turn phasing. Estimated Cost - $100,000; • Orangethrope Avenue/Placentia Avenue: Provide eastbound/westbound dual left-turn Lanes at Orangethorpe Avenue/Placentia Avenue. Estimated Cost - $450,000; • Orangethorpe Avenue/SR-57 Northbound Ramps: Restripe • Northbound Off-Ramp middle lane as shared LeftTurn/Thru/Right-Turn Lane. Estimated Cost - $50,000; • Orangethorpe Avenue/SR-57 Northbound Ramps: The westbound right turn movement is expected to	Fair share circulation system fees shall be paid when entitlements are issued, or prior to occupancy.	Fees imposed and paid shall be documented in the project file.

increase from 550 vehicles per hour (vph) to 800 vph during the PM period for year 2035. This movement should be closely monitored and may require additional improvements to reduce congestion and queuing. An additional improvement would be to modify the existing median on Orangethorpe Avenue to add an exclusive Westbound Right-Turn Lane. Estimated Cost - $200,000; • Orangethorpe Avenue/Melrose Street: Provide an exclusive southbound right-turn lane without overlap signal phasing and northbound dual left-turn lanes at Orangethorpe Avenue/Melrose Street. Estimated Cost - $100,000; Kraemer Boulevard/Orangethorpe Avenue: Restripe Orangethrope Avenue to provide eastbound dual left-turn lanes. Add additional north/south thru lane (three lanes each) by restriping the northbound and southbound right turn lanes to thru lanes. Consider modifying the north/south leftturn movements from protected-only left-turn phasing to protected- permissive left-turn phasing. Restripe the southbound left-turn approach to provide a positive offset for better sight distance between the north/south left turn movements. Estimated Cost - $100,000.			
	Source	**Responsible Party**	**Status / Date / Initials**
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-2 Truck access for the parcel on the southwest corner of Melrose Street and Crowther Avenue must be maintained to and from this site.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-3 Construction hours should be five days a week, and in accordance with the City of Placentia Municipal Code, limited to the hours of 7 AM and 7 PM on working days (Monday through Friday).	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-4 Construction truck and worker automobile traffic will utilize the proposed driveways along Melrose Street and Crowther Avenue for access to and from the project site.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-5 Trucks transporting materials to and from the project site must utilize the designated truck routes along Placentia Avenue, Crowther Avenue, Melrose Street, and Orangethorpe Avenue.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-6 Trucks entering or exiting the construction site will need to yield to public traffic at all times.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-7 It is unlikely that street traffic will be impacted by on-site construction activities; however, should it be necessary for temporary lane closures and/or detour routes for utility work or other such work in the public right-of-way those temporary traffic control activities are to be conducted in compliance with the requirements and guidelines outlined in the California Manual of Uniform Traffic Control Devices (MUTCD).	When applicable, his measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-8 Construction staging should be conducted on-site and under no circumstances will be allowed on local or residential streets.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-9 Construction work within the public right-of-way needs to be in compliance with City standards and the construction site shall be posted with the name, company and a phone number of a person to call for complaints.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-10 The applicant will be fully responsible for the repair of damages to any public facility due to the hauling or transporting of construction related materials.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-11 Parking for the construction trucks and worker trucks will be on-site, away from the adjacent public roadways and existing active businesses.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Transportation / Traffic XVI-12 The City shall coordinate with OCTA to ensure that one or more bus routes to the future Placentia Metrolink Station will serve the TOD project area.	When applicable, this measure shall be included as a condition of approval and implemented during construction.	City inspectors shall verify and document that construction traffic measures are implemented during construction.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Mitigation Measure	Implementation Schedule	Verification
Utilities and Service Systems XVII-2 Future projects implemented under the TOD district shall submit a detailed evaluation of stormwater drainage from the new project relative to the existing development. If the future project will generate stormwater runoff that exceeds the existing volume or time of accumulation, onsite stormwater detention shall be installed as part of the site development of offset any increase that would exceed the capacity of the existing stormwater collection and transport systems. In no instance shall a project be approved that would cause significant environmental effects on either the existing drainage system, unless the system incremental stormwater increase is detained onsite or the drainage system altered to accommodate any change.	A copy of the stormwater generation report shall be provided to the City with recommendations on the need for offsets. If required, the recommended water consumption reduction measures shall be installed during construction and implemented during operations/occupancy.	A copy of the approved stormwater generation report shall be retained in the project file. If offset measures must be implemented, City inspectors shall verify and document that they are installed and operational.

	Source	Responsible Party	Status / Date / Initials
	Initial Study	City of Placentia	

Attachments

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Attachments

Attachment B.
Geotechnical Report

Attachments

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Attachment B.
Geotechnical Report

Attachments

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GEOTECHNICAL INVESTIGATION

PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT 207-209 WEST CROWTHER AVENUE PLACENTIA, CALIFORNIA

GEOCON
WEST, INC.

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

USA PROPERTIES FUND, INC
ROSEVILLE, CALIFORNIA

PROJECT NO. A9871-88-01

OCTOBER 24, 2018

Project No. A9871-88-01
October 24, 2018

Julie Pellicci
USA Properties Fund, Inc.
3200 Douglas Boulevard, Suite 200
Roseville, California 95661

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
207-209 WEST CROWTHER AVENUE, PLACENTIA, CALIFORNIA

Dear Ms. Pellicci:

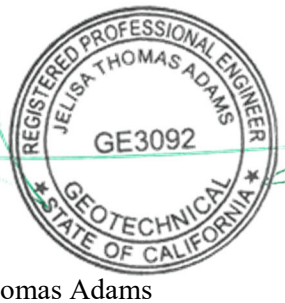
In accordance with your authorization of our proposal dated July 30, 2018, we have prepared this geotechnical investigation report for the proposed multi-family residential development to be located at 207-209 West Crowther Street in Placentia, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed provided the recommendations in this report are followed and implemented during design and construction.

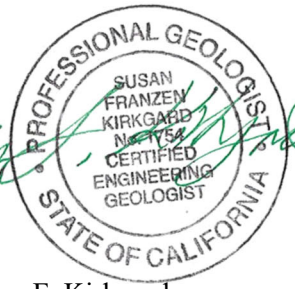
If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.







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- PRIOR GEOTECHNICAL REPORT

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for a proposed multi-family residential development to be located at 207-209 West Crowther Street in Placentia, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction.

The scope of our investigation included a review of prior reports prepared for the site, a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on September 25, 2018, by excavating six 8-inch diameter borings utilizing a hollow-stem auger drilling machine. The borings were excavated to depths between 20½ and 35½ feet below the existing ground surface. The approximate locations of the exploratory borings are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including the boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the List of References section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The subject site is a vacant undeveloped lot located at 207-209 West Crowther Street in the City of Placentia, California. The site is bounded by a railroad easement to the north, by South Bradford Avenue to the east, by West Crowther Avenue to the south, and by South Melrose Street to the west. An approximately 2- to 8-foot-high, ascending slope inclined at a gradient of 2:1 (H:V) is present along the eastern and southern property boundary. The site generally slopes gently to the west and southwest with approximately 5 feet of total relief across the site. Surface water drainage at the site appears to be by sheet flow along the existing ground contours toward the city streets. Vegetation at the site consists of native grass and weeds.

Based on the information provided to us by the Client, it is our understanding that the proposed development will consist of four stories of multi-family residential housing constructed over one podium level consisting of retail space and parking. The development will be underlain by one level of subterranean parking (see Site Plan, Figure 2). It is assumed that the proposed subterranean parking level will extend approximately 12 feet below the existing ground surface, including foundation depths.

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed residential structure will be up to 600 kips and wall loads are estimated to be up to 6 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. PRIOR GEOTECHNICAL REPORT

As a part of the preparation of this report, we reviewed a prior report provided to us by the Client:

Geotechnical Investigation Report, Proposed Metrolink Station Development, City of Placentia, California, prepared by Willdan Geotechnical, dated October 27, 2009.

This prior geotechnical investigation report was performed for a larger size and addressed the proposed development of a Metrolink Station. The prior investigation included the excavation and logging of 8 borings to depths ranging from 16½ to 51½ feet below the ground surface as well as the advancement of 2 Cone Penetrometer Test Soundings (CPTs) to depths of 62 and 70 feet below the ground surface. Of these prior explorations, 4 borings and both CPTs are considered applicable to the subject site. Perched groundwater was observed at depths of 30 and 35 feet below the existing ground surface.

Geocon West, Inc. has reviewed the referenced report by Willdan Geotechnical and the recommendations contained therein are not considered applicable to the currently proposed project. The recommendations presented herein are based on analysis of the subsurface and laboratory data obtained from the prior investigation by Willdan Geotechnical, as well as our own subsurface and laboratory data. Furthermore, we assume responsibility for the utilization of the exploration and laboratory data presented within the geotechnical report by Willdan Geotechnical. A copy of the prior report is provided in Appendix C.

Geocon West, Inc. is the Geotechnical Consultant of Record and will be providing all necessary geotechnical consultation, plan review, design recommendations, inspection and testing services for this project. Where differing, the recommendations presented herein supersede all previous recommendations.

4. GEOLOGIC SETTING

The site is located in the northern portion of the Coastal Plain of Orange County, a deep structural depression containing primarily sedimentary rocks and overlying alluvial deposits that have a maximum thickness of approximately 20,000 feet (California Department of Water Resources [CDWR], 1967). The Coastal Plain is a relatively flat to gently sloping alluviated plain bounded by the Coastal Plain of Los Angeles on the west, the Puente Hills on the north, the Santa Ana Mountains on the east, the San Joaquin Hills on the southeast, and the Pacific Ocean on the south and southwest (CDWR, 1967). The prominent structural features within the Coastal Plain include the central lowland plain, the northwest trending area of low hills and mesas underlain by the Newport-Inglewood fault zone along the coast (Newport Mesa, Huntington Beach Mesa, Bolsa Chica Mesa, and Landing Hill), and the San Joaquin Hills on the southeast (CDWR, 1967).

5. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and Pleistocene age alluvial fan deposits consisting of predominantly gravel, sand, and silt derived from the Puente Hills to the north (CGS 2012). Detailed stratigraphic profiles are provided on the boring logs in Appendix A.

5.1 Artificial Fill

Artificial fill was encountered in our borings to a maximum depth of 4½ feet beneath the existing ground surface. The fill generally consists of silty sand with varying amounts of fine to coarse gravel and is characterized as medium dense, and dry to slightly moist. The artificial fill is likely the result of past grading and/or construction activities at the site. Deeper fill may occur between borings and within other parts of the site that were not directly explored.

5.2 Alluvium

Pleistocene age older alluvium was encountered beneath the fill. The alluvium generally consists of light to dark brown, yellowish brown, or reddish brown sandy silt, sand with silt, silty sand, and well-graded sand. The alluvial soils are fine- to coarse-grained, slightly moist and locally loose or soft but typically medium dense to very dense or firm to hard.

6. GROUNDWATER

Based on a review of the State of California Seismic Hazard Zone Report for the Orange 7.5 Minute Quadrangle, Orange County, California (California Division of Mines and Geology [CDMG], 2001), the historically highest groundwater level in the area is approximately 50 to 60 feet beneath the existing ground surface. Groundwater information presented in this document is generated from data collected in the early 1900's to the late 1990s. Based on current groundwater basin management practices, it is unlikely that groundwater levels will ever exceed the historic high levels.

Groundwater was not encountered in our field explorations excavated to a maximum depth of 35½ feet below the existing ground surface. Perched groundwater was previously encountered at depths of 30 and 35 feet below the ground surface. Based on the depth of perched groundwater observed in the prior borings and the depth of proposed construction, groundwater is neither expected to be encountered during construction, nor have a detrimental effect on the project. However, it is not uncommon for groundwater levels to vary seasonally and it is common for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the *Surface Drainage* section of this report (see Section 8.23).

7. GEOLOGIC HAZARDS

7.1 Surface Fault Rupture

The numerous faults in Southern California include active, potentially active, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey (CGS, formerly known as CDMG) for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018a). By definition, an active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A potentially active fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years), but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards (CGS, 2018b). No active or potentially active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region, and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Whittier Fault Zone located approximately 4.5 miles to the north (Ziony and Jones, 1989). Other nearby active faults are the Chino Fault, the Elsinore Fault, the Newport-Inglewood Fault Zone, and the Palos Verdes Fault (Offshore Segment) located approximately 11.7 miles northeast, 14 miles east, 15 miles southwest, and 23 miles southwest of the site, respectively (Ziony and Jones, 1989). The active San Andreas Fault Zone is located approximately 36 miles northeast of the site (Ziony and Jones, 1989).

7.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

Earthquake (Oldest to Youngest)	Date of Earthquake	Magnitude	Distance to Epicenter (Miles)	Direction to Epicenter
San Jacinto-Hemet area	April 21, 1918	6.8	51	E
Near Redlands	July 23, 1923	6.3	37	ENE
Long Beach	March 10, 1933	6.4	18	SSW
San Fernando	February 9, 1971	6.6	48	NW
Whittier Narrows	October 1, 1987	5.9	18	NW
Sierra Madre	June 28, 1991	5.8	28	NNW
Landers	June 28, 1992	7.3	85	ENE
Big Bear	June 28, 1992	6.4	64	ENE
Northridge	January 17, 1994	6.7	45	WNW
Hector Mine	October 16, 1999	7.1	105	ENE

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

7.3 Seismic Design Criteria

The following table summarizes summarizes site-specific design criteria obtained from the 2016 California Building Code (CBC; Based on the 2015 International Building Code [IBC] and ASCE 7-10), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the computer program *U.S. Seismic Design Maps*, provided by the USGS. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.3.2 of the 2016 CBC and Table 20.3-1 of ASCE 7-10. The values presented below are for the risk-targeted maximum considered earthquake (MCE_R).

2016 CBC SEISMIC DESIGN PARAMETERS

Parameter	Value	2016 CBC Reference
Site Class	D	Table 1613.3.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.757g	Figure 1613.3.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.636g	Figure 1613.3.1(2)
Site Coefficient, F_A	1.0	Table 1613.3.3(1)
Site Coefficient, F_V	1.5	Table 1613.3.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.757g	Section 1613.3.3 (Eqn 16-37)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	0.954g	Section 1613.3.3 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.171g	Section 1613.3.4 (Eqn 16-39)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.636g	Section 1613.3.4 (Eqn 16-40)

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-10.

ASCE 7-10 PEAK GROUND ACCELERATION

Parameter	Value	ASCE 7-10 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.649g	Figure 22-7
Site Coefficient, F_{PGA}	1.0	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.649g	Section 11.8.3 (Eqn 11.8-1)

The Maximum Considered Earthquake Ground Motion (MCE) is the level of ground motion that has a 2 percent chance of exceedance in 50 years, with a statistical return period of 2,475 years. According to the 2016 California Building Code and ASCE 7-10, the MCE is to be utilized for the evaluation of liquefaction, lateral spreading, seismic settlements, and it is our understanding that the intent of the Building code is to maintain "Life Safety" during a MCE event. The Design Earthquake Ground Motion (DE) is the level of ground motion that has a 10 percent chance of exceedance in 50 years, with a statistical return period of 475 years.

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2008 Conterminous U.S. Dynamic Edition. The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.67 magnitude event occurring at a hypocentral distance of 11.27 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, and the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.66 magnitude occurring at a hypocentral distance of 18.59 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

7.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Orange Quadrangle (1998) indicates that the site is not located in an area designated as having a potential for liquefaction. In addition, a review of the Orange County Safety Element (2004) and the City of Placentia Seismic Safety Element (1975) indicates that the site is not located within an area identified as having a potential for liquefaction. Based on the reported depth of the historic high groundwater levels in the area (approximately 50 to 60 feet), and the generally dense and well-consolidated nature of the alluvial soils, it is our opinion that the potential for liquefaction and associated ground deformations beneath the site is very low.

7.5 Slope Stability

The topography at the site is relatively level and the site is not located within an area identified as having a potential for slope instability (County of Orange, 2004; City of Placentia, 1975). Additionally, the site is not located within an area identified as having a potential for earthquake-induced landslides (CDMG, 1998; CGS, 2018b). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

7.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. The Orange County Safety Element (2004) indicates that the site is located within the Prado Dam inundation area. However, this reservoir, as well as others in California, are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design, construction practices, and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum considered earthquake (MCE) for the site. Therefore, the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low.

7.7 Tsunamis, Seiches, and Flooding

The site is not located within a coastal area. Therefore, tsunamis are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismic-induced seiche is considered unlikely.

The site is located within a zone of minimal flooding (Zone X) as defined by the Federal Emergency Management Agency (FEMA, 2018).

7.8 Oil Fields & Methane Potential

Based on a review of the California Division of Oil, Gas and Geothermal Resources (DOGGR) Well Finder Website, the site is not located within the limits of an oilfield and oil or gas wells are not located in the immediate site vicinity (DOGGR, 2018). However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map and undocumented wells could be encountered during construction. Any wells encountered during construction will need to be properly abandoned in accordance with the current requirements of the DOGGR.

Since the site is not located within the boundaries of a known oil field, the potential for the presence of methane or other volatile gases at the site is considered low. However, should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

7.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. The site is not located within an area of known ground subsidence. No large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. There appears to be little or no potential for ground subsidence due to withdrawal of fluids or gases at the site.

8. CONCLUSIONS AND RECOMMENDATIONS

8.1 General

8.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.

8.1.2 Up to 4½ feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the *Grading* section of this report are followed (see Section 8.4). Excavations for the subterranean level are anticipated to penetrate through the existing artificial fill and expose undisturbed alluvial soils throughout the excavation bottom.

8.1.3 Groundwater was not encountered during the current site exploration and the groundwater table is sufficiently deep that it not expected to be encountered during construction. However, local seepage could be encountered during excavation of the subterranean level, especially if conducted during the rainy season.

8.1.4 Based on these considerations, the proposed structure may be supported on conventional foundation system deriving support in the competent alluvium found at and below a depth of 10 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete. Recommendations for the design of a conventional foundation system are provided in Section 8.5.

8.1.5 Excavations on the order of 12 feet in vertical height are anticipated for construction of the subterranean levels, including foundation depths. Due to the depth of the excavation and the proximity to the property lines, city streets and adjacent offsite structures, excavation of the proposed subterranean level will likely require sloping and shoring measures in order to provide a stable excavation. Where shoring is required it is recommended that a soldier pile shoring system be utilized. In addition, where the proposed excavation will be deeper than and adjacent to an offsite structure, the proposed shoring should be designed to resist the surcharge imposed by the adjacent offsite structure. Recommendations for shoring are provided in Section 8.17 of this report.

8.1.6 Due to the nature of the proposed design and intent for a subterranean level, waterproofing of subterranean walls and slabs is suggested. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

8.1.7 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. The design team and contractor should be aware that the depth to undisturbed alluvial soils may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal plans are available.

8.1.8 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 8.22).

8.1.9 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be reevaluated by this office.

8.1.10 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

8.2 Soil and Excavation Characteristics

8.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.

8.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.

8.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 8.16).

8.2.4 The existing site soils encountered during the current and prior field investigation are considered to have a "very low" to "medium" (EI = 3, 53, & 88) expansive potential and are classified as "non-expansive" to "expansive" in accordance with the 2016 California Building Code (CBC) Section 1803.5.3. The recommendations presented in this report assume that foundations and slabs will derive support in materials with a "medium" expansive potential.

8.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

8.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "severely corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B7) and should be considered for design of underground structures. Due to the corrosive potential of the soils, it is recommended that ABS pipes or equivalent be considered in lieu of cast-iron for subdrains and retaining wall drains.

8.3.2 Laboratory tests were performed on representative samples of the site materials to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B7) and indicate that the on-site materials possess "negligible" sulfate exposure to concrete structures as defined by 2016 CBC Section 1904 and ACI 318-11 Sections 4.2 and 4.3.

8.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

8.4 Grading

8.4.1 Grading is anticipated to include excavation of site soils for the subterranean level, foundations, and utility trenches, as well as placement of backfill for walls, ramps, and trenches.

8.4.2 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and alluvial soil encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed.

8.4.3 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.

8.4.4 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

8.4.5 The foundation system for the proposed structure may derive support in the competent undisturbed alluvial soils found at and below a depth of 10 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer.

8.4.6 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned, and properly compacted. If soils are granular and confirmed to be non-expansive by the geotechnical engineer, soils should be moisture conditioned to optimum moisture content. If soils are fine-grained or expansive, soils should be

moisture conditioned to near 2 to 3 percent above optimum moisture content. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density per ASTM D 1557 (latest edition).

8.4.7. Where new paving is to be placed, it is recommended that all existing fill and soft alluvium be excavated and properly compacted for paving support. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned, and compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 8.10).

8.4.8 Foundations for small outlying structures, such as block walls up to 6 feet high, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed alluvial soils, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. The design team and contractor should be aware that the depth to undisturbed alluvial soils may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal plans are available.

8.4.9 Although not anticipated for this project, all imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 30 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B7).

8.4.10 Utility trenches should be properly backfilled in accordance with the requirements of the Green Book (latest edition). The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the

required compaction is obtained. The use of minimum 2-sack slurry as backfill is also acceptable. Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

8.4.11 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

8.5 Foundation Design

8.5.1 The proposed structure may be supported on a conventional spread foundation system deriving support in the competent alluvium found at and below a depth of 10 feet. Foundations should be deepened as necessary to penetrate through soft or unsuitable alluvium at the direction of the Geotechnical Engineer. All foundation excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing steel or concrete.

8.5.2 Continuous footings may be designed for an allowable bearing capacity of 2,500 pounds per square foot (psf), and should be a minimum of 12 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

8.5.3 Isolated spread foundations may be designed for an allowable bearing capacity of 3,000 psf, and should be a minimum of 24 inches in width, 24 inches in depth below the lowest adjacent grade, and 12 inches into the recommended bearing material.

8.5.4 The allowable soil bearing pressure above may be increased by 250 psf and 500 psf for each additional foot of foundation width and depth, respectively, up to a maximum allowable soil bearing pressure of 4,500 psf.

8.5.5 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

8.5.6 If depth increases are utilized for the exterior wall footings, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

8.5.7 Continuous footings should be reinforced with four No. 4 steel reinforcing bars, two placed near the top of the footing and two near the bottom. Reinforcement for spread footings should be designed by the project structural engineer.

8.5.8 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

8.5.9 Due to the expansive potential of the subgrade soils, the moisture content in the slab and foundation subgrade should be maintained at 2 percent above optimum moisture content prior to and at the time of concrete placement.

8.5.10 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

8.5.11 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

8.6 Foundation Settlement

8.6.1 The maximum expected static settlement for a structure supported on a conventional foundation system deriving support in the recommended bearing materials and designed with a maximum bearing pressure of 4,500 psf is estimated to be less than 1 inch and occur below the heaviest loaded structural element. Settlement of the foundation system is expected to occur on initial application of loading. Differential settlement is not expected to exceed ½ inch over a distance of 20 feet.

8.6.2 Once the design and foundation loading configurations for the proposed structures proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

8.7 Miscellaneous Foundations

8.7.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structure may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed alluvial soils, and should be deepened as

necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. The design team and contractor should be aware that the depth to alluvium may be on the order of 4 feet or greater; recommendations for the design and construction of miscellaneous foundations should be reevaluated once formal plans are available.

8.7.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf, and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

8.7.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

8.8 Lateral Design

8.8.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.35 may be used with the dead load forces in the competent alluvial soils or in properly compacted engineered fill.

8.8.2 Passive earth pressure for the sides of foundations and slabs poured against competent alluvial soils or newly placed engineered fill may be computed as an equivalent fluid having a density of 240 pounds per cubic foot (pcf) with a maximum earth pressure of 2,400 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

8.9 Concrete Slabs-on-Grade

8.9.1 Concrete slabs-on-grade subject to vehicle loading should be designed in accordance with the recommendations in the *Pavement Recommendations* section of this report (Section 8.10).

8.9.2 Subsequent to the recommended grading, concrete slabs-on-grade for structures, not subject to vehicle loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.

8.9.3 Slabs-on-grade that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

8.9.4 For seismic design purposes, a coefficient of friction of 0.35 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

8.9.5 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

8.9.6 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

8.10 Preliminary Pavement Recommendations

8.10.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable alluvial materials be excavated and properly recompacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft alluvium in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

8.10.2 The following pavement sections are based on an assumed R-Value of 15. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

8.10.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	4.5
Trash Truck & Fire Lanes	7.0	4.0	13.0

8.10.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction"* (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation"* (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction"* (Green Book).

8.10.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 5 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compaction as determined by ASTM Test Method D 1557 (latest edition).

8.10.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

8.11 Retaining Wall Design

8.11.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 12 feet. In the event that walls higher than 12 feet are planned, Geocon should be contacted for additional recommendations.

8.11.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* sections of this report (see Section 8.5).

8.11.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure) of 30 pcf.

8.11.4 Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Assuming that proper drainage and permanent dewatering is maintained, where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure) of 60 pcf.

8.11.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

8.11.6 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed alluvial soils. If sloping techniques are to be utilized for construction of proposed walls, which would result in a wedge of engineered fill behind the retaining walls, revised earth pressures may be required, especially if the wall backfill does not consist of the existing onsite soils. This should be evaluated once the use of sloping measures is established and once the geotechnical characteristics of the engineered backfill soils can be further evaluated.

8.11.7 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

8.11.8 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z.

8.11.9 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_P is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z, θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z.

8.11.10 In addition to the recommended earth pressure, the upper 10 feet of the subterranean wall adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the walls due to normal street traffic. If the traffic is kept back at least 10 feet from the subterranean walls, the traffic surcharge may be neglected.

8.11.11 Seismic lateral forces should be incorporated into the design as necessary, and recommendations for seismic lateral forces are presented below.

8.12 Dynamic (Seismic) Lateral Forces

8.12.1 The structural engineer should determine the seismic design category for the project in accordance with Section 1613 of the CBC. If the project possesses a seismic design category of D, E, or F, proposed retaining walls in excess of 6 feet in height should be designed with seismic lateral pressure (Section 1803.5.12 of the 2016 CBC).

8.12.2 A seismic load of 10 pcf should be used for design of walls that support more than 6 feet of backfill in accordance with Section 1803.5.12 of the 2016 CBC. The seismic load is applied as an equivalent fluid pressure along the height of the wall and the calculated loads result in a maximum load exerted at the base of the wall and zero at the top of the wall. This seismic load should be applied in addition to the active earth pressure. The earth pressure is based on half of two-thirds of PGA_M calculated from ASCE 7-10 Section 11.8.3.

8.13 Retaining Wall Drainage

8.13.1 Retaining walls should be provided with a drainage system. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

8.13.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a one-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

8.13.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures.

8.13.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

8.14 Elevator Pit Design

8.14.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. Elevator pits may be designed in accordance with the recommendations in the *Foundation Design* and *Retaining Wall Design* section of this report (see Sections 8.5 and 8.11).

8.14.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent foundations and should be designed for each condition as the project progresses.

8.14.3 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 8.13).

8.14.4 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

8.15 Elevator Piston

8.15.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or shoring pile, or the drilled excavation could compromise the existing foundation or pile support, especially if the drilling is performed subsequent to the foundation or pile construction.

8.15.2 Casing may be required if caving is experienced in the drilled excavation. The contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.

8.15.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of 1½-sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

8.16 Temporary Excavations

8.16.1 Excavations up to 12 feet in height are anticipated for excavation and construction of the proposed subterranean levels and foundation system. The excavations are expected to expose alluvial soils, which are suitable for vertical excavations up to 5 feet where loose soils or caving sands are not present or where not surcharged by adjacent traffic or structures.

8.16.2 Vertical excavations greater than 5 feet will require sloping and/or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter, up to a maximum of 12 feet in height. A uniform slope does not have a vertical portion. Where space is limited, shoring measures will be required. *Shoring* data is provided in Section 8.17 of this report.

8.16.3 Where sloped embankments are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

8.17 Shoring – Soldier Pile Design and Installation

8.17.1 The following information on the design and installation of shoring is preliminary. Review of the final shoring plans and specifications should be made by this office prior to bidding or negotiating with a shoring contractor.

8.17.2 One method of shoring would consist of steel soldier piles, placed in drilled holes and backfilled with concrete. The steel soldier piles may also be installed utilizing high frequency vibration. Where maximum excavation heights are less than 12 feet the soldier piles are typically designed as cantilevers. Where excavations exceed 12 feet or are surcharged, soldier piles may require lateral bracing utilizing drilled tie-back anchors or raker braces to maintain an economical steel beam size and prevent excessive deflection. The size of the steel beam, the need for lateral bracing, and the acceptable shoring deflection should be determined by the project shoring engineer.

8.17.3 The design embedment of the shoring pile toes must be maintained during excavation activities. The toes of the perimeter shoring piles should be deepened to take into account any required excavations necessary for grading activities, foundations, and/or adjacent drainage systems.

8.17.4 The proposed soldier piles may also be designed as permanent piles. The required pile depths, dimensions, and spacing should be determined and designed by the project structural and shoring engineers. All piles utilized for shoring can also be incorporated into a permanent retaining wall system (shotcrete wall) and should be designed in accordance with the earth pressure provided in the *Retaining Wall Design* section of this report (see Section 8.11).

8.17.5 Drilled cast-in-place soldier piles should be placed no closer than three diameters on center. The minimum diameter of the piles is 18 inches. Structural concrete should be used for the soldier piles below the excavation; lean-mix concrete may be employed above that level. As an alternative, lean-mix concrete may be used throughout the pile where the reinforcing consists of a wideflange section. The slurry must be of sufficient strength to impart the lateral bearing pressure developed by the wideflange section to the soil. For design purposes, an allowable passive value for the soils below the bottom plane of excavation may be assumed to be 240 psf per foot. Where piles are installed by vibration techniques, the passive pressure may be assumed to mobilize across a width equal to the two times the dimension of the beam flange. The allowable passive value may be doubled for isolated piles, spaced a minimum of three times the pile diameter. To develop the full lateral value, provisions should be implemented to assure firm contact between the soldier piles and the undisturbed alluvium.

8.17.6 Groundwater was not encountered during site exploration, and the groundwater is not expected to be encountered during construction. However, should groundwater or local seepage be encountered during pile installation, the contractor should be prepared. Piles placed below the water level require the use of a tremie to place the concrete into the bottom of the hole. A tremie should consist of a rigid, water-tight tube having a diameter of not less than 6 inches with a hopper at the top. The tube should be equipped with a device that will close the discharge end and prevent water from entering the tube while it is being charged with concrete. The tremie should be supported so as to permit free movement of the discharge end over the entire top surface of the work and to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end should be closed at the start of the work to prevent water entering the tube and should be entirely sealed at all times, except when the concrete is being placed. The tremie tube should be kept full of concrete. The flow should be continuous until the work is completed and the resulting concrete seal should be monolithic and homogeneous. The tip of the tremie tube should always be kept about 5 feet below the surface of the concrete and definite steps and safeguards should be taken to insure that the tip of the tremie tube is never raised above the surface of the concrete.

8.17.7 A special concrete mix should be used for concrete to be placed below water. The design should provide for concrete with an unconfined compressive strength psi (pounds per square inch) of 1,000 psi over the initial job specification. An admixture that reduces the problem of segregation of paste/aggregates and dilution of paste should be included. The slump should be commensurate to any research report for the admixture, provided that it should also be the minimum for a reasonable consistency for placing when water is present.

8.17.8 Casing may be required if caving is experienced, and the contractor should have casing available prior to commencement of pile excavation. When casing is used, extreme care should be employed so that the pile is not pulled apart as the casing is withdrawn. At no time should the distance between the surface of the concrete and the bottom of the casing be less than 5 feet. As an alternative, piles may be vibrated into place; however, there is always a risk that excessive vibrations in sandy soils could induce settlements and distress to adjacent offsite improvements. Continuous observation of the drilling and pouring of the piles by the Geotechnical Engineer (a representative of Geocon West, Inc.), is required.

8.17.9 If a vibratory method of solider pile installation is utilized, predrilling may be performed prior to installation of the steel beams. If predrilling is performed, it is recommended that the bore diameter be at least 2 inches smaller than the largest dimension of the pile to prevent excessive loss in the frictional component of the pile capacity. Predrilling should not be conducted below the proposed excavation bottom.

8.17.10 If a vibratory method is utilized, the owner should be aware of the potential risks associated with vibratory efforts, which typically involve inducing settlement within the vicinity of the pile which could result in a potential for damage to existing improvements in the area.

8.17.11 The level of vibration that results from the installation of the piles should not exceed a threshold where occupants of nearby structures are disturbed, despite higher vibration tolerances that a building may endure without deformation or damage. The main parameter used for vibration assessment is peak particle velocity in units of inch per second (in/sec). The acceptable range of peak particle velocity should be evaluated based on the age and condition of adjacent structures, as well as the tolerance of human response to vibration.

8.17.12 Based on Table 19 of the *Transportation and Construction Induced Vibration Guidance Manual* (Caltrans 2013), a continuous source of vibrations (ex. vibratory pile driving) which generates a maximum peak particle velocity of 0.5 in/sec is considered tolerable for modern industrial/commercial buildings and new residential structures. The Client should be aware that a lower value may be necessary if older or fragile structures are in the immediate vicinity of the site.

8.17.13 Vibrations should be monitored and record with seismographs during pile installation to detect the magnitude of vibration and oscillation experienced by adjacent structures. If the vibrations exceed the acceptable range during installation, the shoring contractor should modify the installation procedure to reduce the values to within the acceptable range. Vibration monitoring is not the responsibility of the Geotechnical Engineer.

8.17.14 Geocon does not practice in the field of vibration monitoring. If construction techniques will be implemented, it is recommended that qualified consultant be retained to provide site specific recommendations for vibration thresholds and monitoring.

8.17.15 The frictional resistance between the soldier piles and retained soil may be used to resist the vertical component of the anchor load. The coefficient of friction may be taken as 0.35 based on uniform contact between the steel beam and lean-mix concrete and retained earth. The portion of soldier piles below the plane of excavation may also be employed to resist the downward loads. The downward capacity may be determined using a frictional resistance of 480 psf per foot.

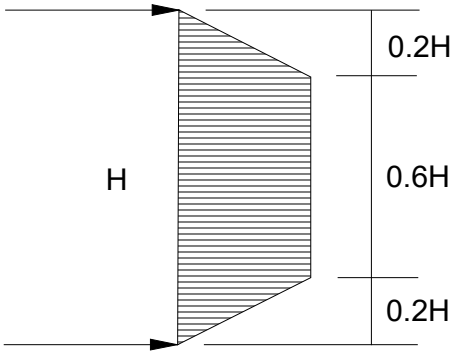
8.17.16 Due to the nature of the site soils, it is expected that continuous lagging between soldier piles will be required. However, it is recommended that the exposed soils be observed by the Geotechnical Engineer (a representative of Geocon West, Inc.), to verify the presence of any competent, cohesive soils and the areas where lagging may be omitted.

8.17.17 The time between lagging excavation and lagging placement should be as short as possible soldier piles should be designed for the full-anticipated pressures. Due to arching in the soils, the pressure on the lagging will be less. It is recommended that the lagging be designed for the full design pressure but be limited to a maximum of 400 psf.

8.17.18 For the design of unbraced shoring, it is recommended that an equivalent fluid pressure be utilized for design. A trapezoidal distribution of lateral earth pressure may be used where shoring will be restrained by bracing or tie backs. The recommended active and trapezoidal pressure are provided in the following table. A diagram depicting the trapezoidal pressure distribution of lateral earth pressure is provided below the table.

HEIGHT OF SHORING (FEET)	EQUIVALENT FLUID PRESSURE (Pounds Per Cubic Foot) (ACTIVE PRESSURE)	EQUIVALENT FLUID PRESSURE Trapezoidal (Where H is the height of the shoring in feet)
Up to 12	25	16H

Trapezoidal Distribution of Pressure



8.17.19 Where a combination of sloped embankment and shoring is utilized, the pressure will be greater and must be determined for each combination. Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic, or adjacent structures and must be determined for each combination.

8.17.20 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z.

8.17.21 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H(z) = \sigma_H(z) cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_p is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z, θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z.

8.17.22 In addition to the recommended earth pressure, the upper 10 feet of the shoring adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least 10 feet from the shoring, the traffic surcharge may be neglected.

8.17.23 It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized that some deflection will occur. It is recommended that the deflection be minimized to prevent damage to existing structures and adjacent improvements. Where public right-of-ways are present or adjacent offsite structures do not surcharge the shoring excavation, the shoring deflection should be limited to less than 1 inch at the top of the shored embankment. Where offsite structures are within the shoring surcharge area it is recommended that the beam deflection be limited to less than ½ inch at the elevation of the adjacent offsite foundation, and no deflection at all if deflections will damage existing structures. The allowable deflection is dependent on many factors, such as the presence of structures and utilities near the top of the embankment, and will be assessed and designed by the project shoring engineer.

8.17.24 Because of the depth of the excavation, some means of monitoring the performance of the shoring system is suggested. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all soldier piles and the lateral movement along the entire lengths of selected soldier piles.

8.17.25 Due to the depth of the depth of the excavation and proximity to adjacent structures, it is suggested that prior to excavation the existing improvements be inspected to document the present condition. For documentation purposes, photographs should be taken of preconstruction distress conditions and level surveys of adjacent grade and pavement should be considered. During excavation activities, the adjacent structures and pavement should be periodically inspected for signs of distress. In the even that distress or settlement is noted, an investigation should be performed and corrective measures taken so that continued or worsened distress or settlement is mitigated. Documentation and monitoring of the offsite structures and improvements is not the responsibility of the geotechnical engineer.

8.18 Temporary Tie-Back Anchors

8.18.1 Temporary tie-back anchors may be used with the solider pile wall system to resist lateral loads. Post-grouted friction anchors are recommended. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn 35 degrees with the vertical through the bottom plane of the excavation. Friction anchors should extend a minimum of 20 feet beyond the potentially active wedge and to greater lengths if necessary to develop the desired capacities. The locations and depths of all offsite utilities should be thoroughly checked and incorporated into the drilling angle design for the tie-back anchors.

8.18.2 The capacities of the anchors should be determined by testing of the initial anchors as outlined in a following section. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. Anchors should be placed at least 6 feet on center to be considered isolated. For preliminary design purposes, it is estimated that drilled friction anchors constructed without utilizing post-grouting techniques will develop average skin frictions as follows:

- 5 feet below the top of the excavation – 900 pounds per square foot

8.18.3 Depending on the techniques utilized, and the experience of the contractor performing the installation, a maximum allowable friction capacity of 2.8 kips per linear foot for post-grouted anchors (for a minimum 20 foot length beyond the active wedge) may be assumed for design purposes. Only the frictional resistance developed beyond the active wedge should be utilized in resisting lateral loads.

8.19 Anchor Installation

8.19.1 Tied-back anchors are typically installed between 20 and 40 degrees below the horizontal; however, occasionally alternative angles are necessary to avoid existing improvements and utilities. The locations and depths of all offsite utilities should be thoroughly checked prior to design and installation of the tie-back anchors. Caving of the anchor shafts, particularly within sand and gravel deposits or seepage zones, should be anticipated during installation and provisions should be implemented in order to minimize such caving. It is suggested that hollow-stem auger drilling equipment be used to install the anchors. The anchor shafts should be filled with concrete by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. In order to minimize the chances of caving, it is recommended that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill should be placed by pumping; the sand may contain a small amount of cement to facilitate pumping.

8.20 Anchor Testing

8.20.1 All of the anchors should be tested to at least 150 percent of design load. The total deflection during this test should not exceed 12 inches. The rate of creep under the 150 percent test load should not exceed 0.1 inch over a 15-minute period in order for the anchor to be approved for the design loading.

8.20.2 At least 10 percent of the anchors should be selected for "quick" 200 percent tests and three additional anchors should be selected for 24-hour 200 percent tests. The purpose of the 200 percent tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. These tests should be performed prior to installation of additional tiebacks. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

8.20.3 The total deflection during the 24-hour 200 percent test should not exceed 12 inches. During the 24-hour tests, the anchor deflection should not exceed 0.75 inches measured after the 200 percent test load is applied.

8.20.4 For the "quick" 200 percent tests, the 200 percent test load should be maintained for 30 minutes. The total deflection of the anchor during the 200 percent quick tests should not exceed 12 inches; the deflection after the 200 percent load has been applied should not exceed 0.25 inch during the 30-minute period.

8.20.5 After a satisfactory test, each anchor should be locked-off at the design load. This should be verified by rechecking the load in the anchor. The load should be within 10 percent of the design load. A representative of this firm should observe the installation and testing of the anchors.

8.21 Internal Bracing

8.21.1 Rakers may be utilized to brace the soldier piles in lieu of tieback anchors. The raker bracing could be supported laterally by temporary concrete footings (deadmen) or by the permanent, interior footings. For design of such temporary footings or deadmen, poured with the bearing surface normal to rakers inclined at 45 degrees, a bearing value of 1,500 psf may be used, provided the shallowest point of the footing is at least 1 foot below the lowest adjacent grade. The structural engineer should review the shoring plans to determine if raker footings conflict with the structural foundation system. The client should be aware that the utilization of rakers could significantly impact the construction schedule due to their intrusion into the construction site and potential interference with equipment.

8.22 Stormwater Infiltration

8.22.1 During the September 25, 2018, site exploration, boring B6 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with gravel. The boring was then filled with water to pre-saturate the soils. On September 26, 2018, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavation. Based on the test results, the average infiltration rate (adjusted percolation rate), for the earth materials encountered, is provided in the following table. The field-measured percolation rate has been adjusted to infiltration rates in accordance with the County of Orange Technical Guidance Document for the Preparation of Conceptual/Preliminary and/or Project Water Quality Management Plans (December 2013). Additional correction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines. Percolation test results are provided on Figure 7.

Boring	Soil Type	Infiltration Depth (ft)	Average Infiltration Rate (in / hour)
B6	Sand with Silt (SW-SM)	20-25½	3.11

8.22.2 The results of the percolation testing indicate that the soils are conductive to infiltration. It is our opinion that the soil zones encountered at the depths and locations as listed in the table above are suitable for infiltration of stormwater.

8.22.3 It is our opinion that the soil zone encountered at the depth and location as listed in the table above are suitable for infiltration of stormwater and will not induce excessive hydro-consolidation, will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

8.22.4 The infiltration system should be located such that the closest distance between an adjacent foundation is at least 10 feet in all directions from the zone of saturation. The zone of saturation may be assumed to project downward from the discharge of the infiltration facility at a gradient of 1:1. Additional property line or foundation setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

8.22.5 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

8.22.6 Due to the preliminary nature of the project at this time, the type of stormwater infiltration system and location of the stormwater infiltration systems has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

8.23 Surface Drainage

8.23.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

8.23.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2016 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within 5 feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

8.23.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. Pavement areas should be fine graded such that water is not allowed to pond.

8.23.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

8.24 Plan Review

8.24.1 Grading, foundation, and shoring plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

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

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

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

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

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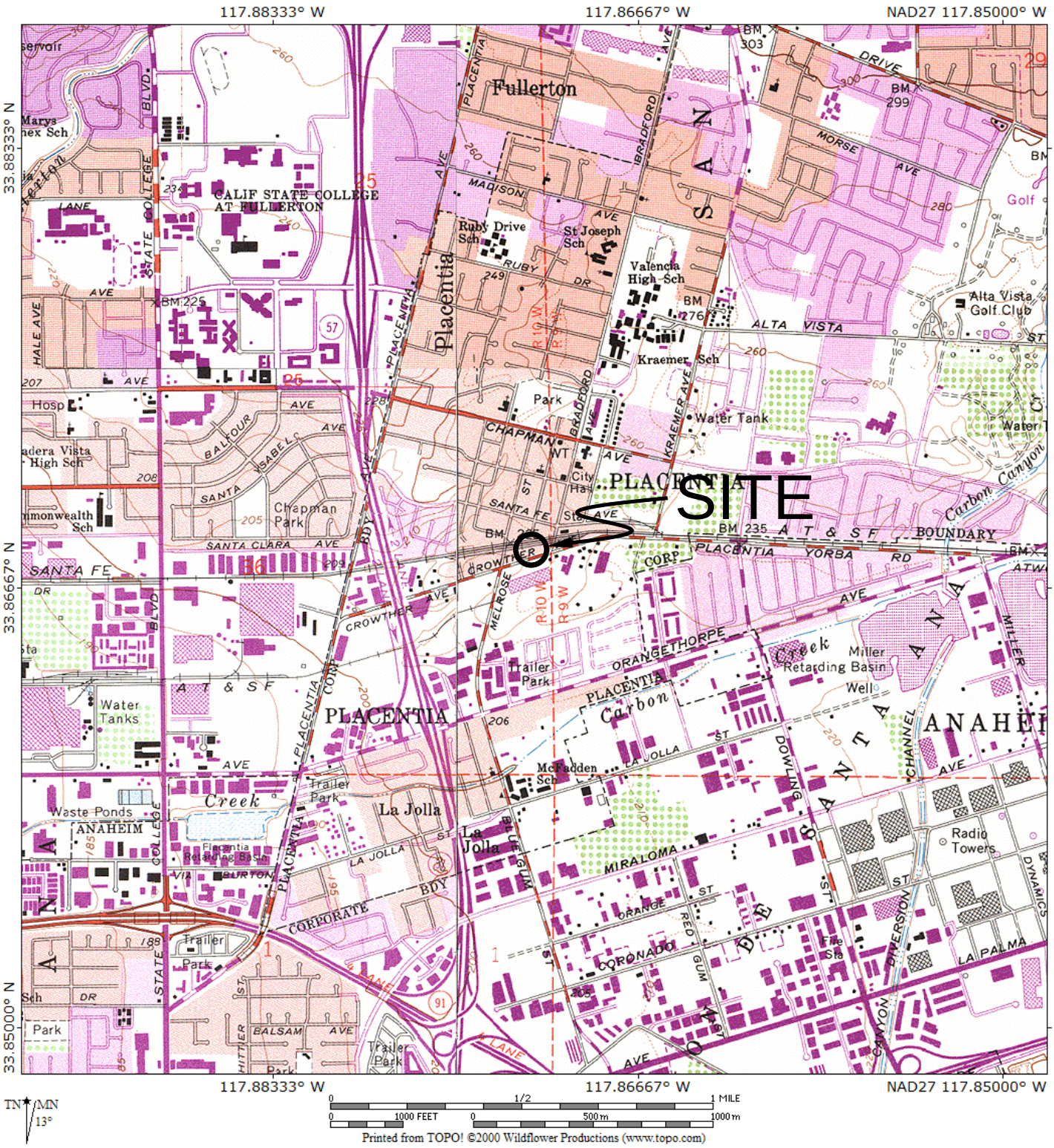

U.S.G.S. TOPOGRAPHIC MAPS, 7.5 MINUTE SERIES QUADRANGLES: ORANGE, ANAHEIM, LA HABRA, AND YORBA LINDA

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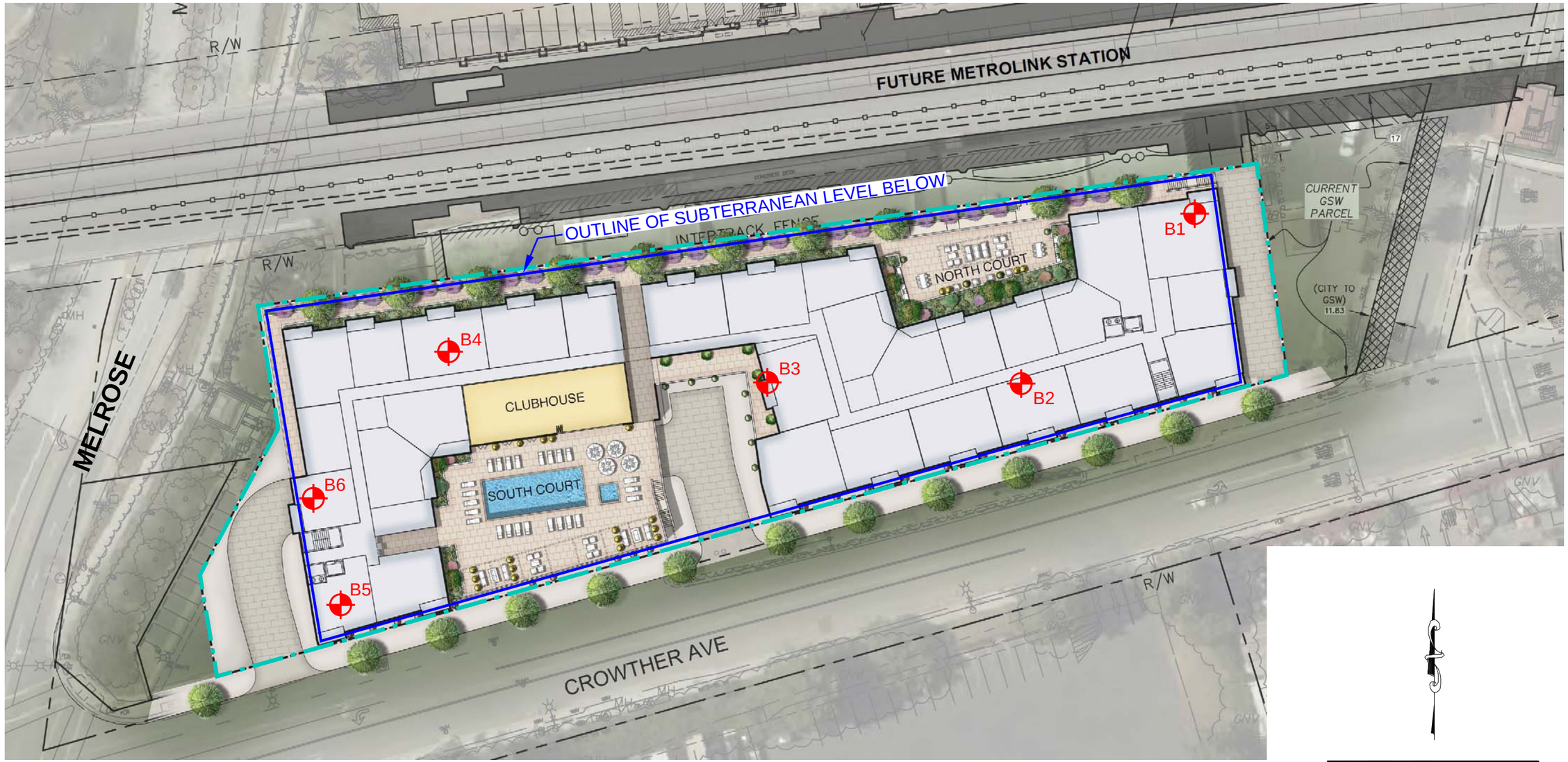
VICINITY MAP

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

DRAFTED BY: JA	CHECKED BY: SFK

OCT. 2018	PROJECT NO. A9871-88-01	FIG. 1



LEGEND

B6 Approximate Location of Boring

Approximate Location of Property Line

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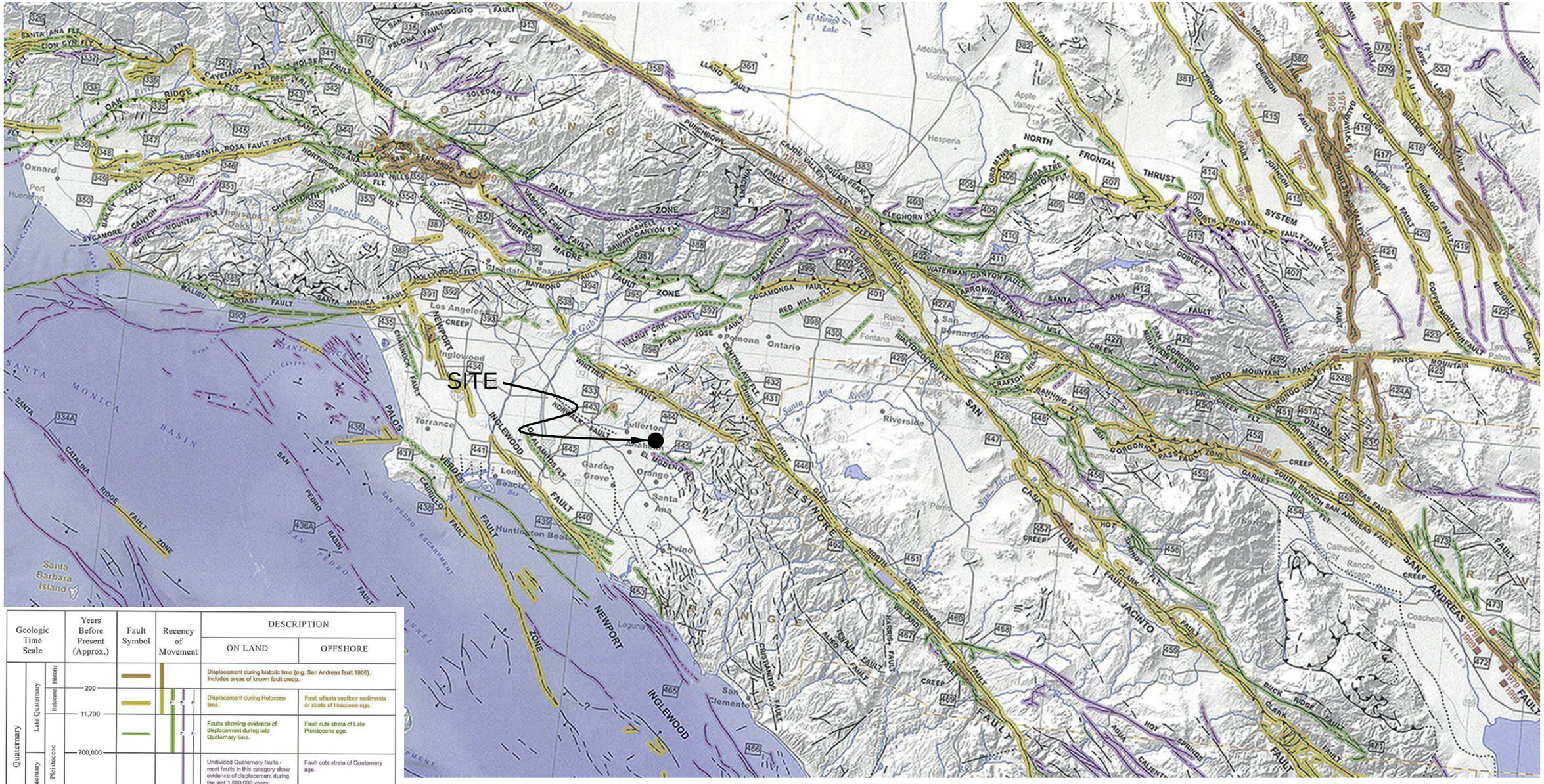
SITE PLAN

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Historic				Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
		Holocene	200			Displacement during Holocene time.	Fault offsets seafloor sediments or strata of Holocene age.
			11,700			Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary	Pleistocene	700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age	Fault cuts strata of Quaternary age.
Pre-Quaternary			1,600,000*			Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.6 Ma criterion.

N

0 12 24 Miles

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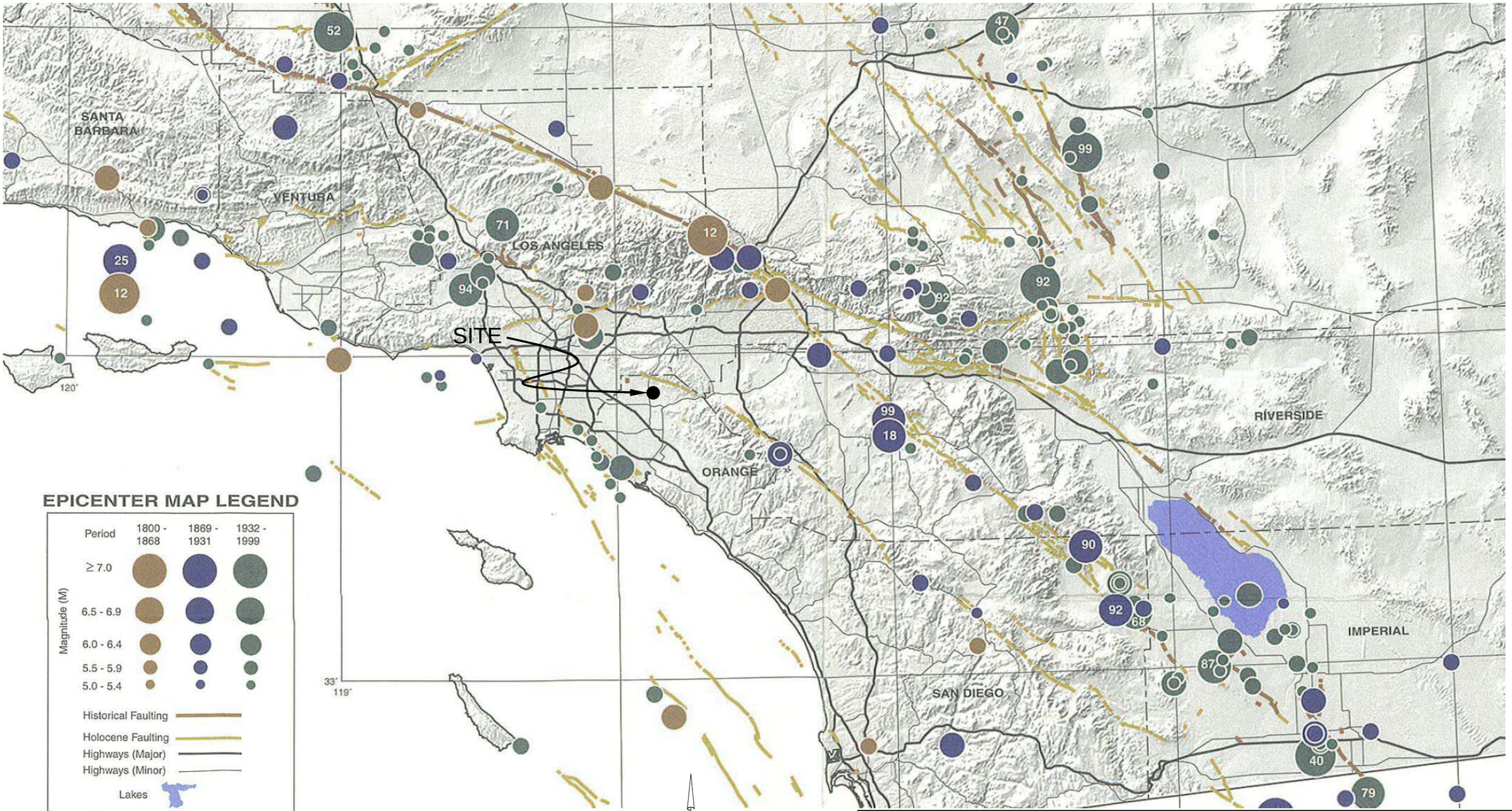
REGIONAL FAULT MAP

207 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. 3



EPICENTER MAP LEGEND

Period	1800 - 1868	1869 - 1931	1932 - 1999
Magnitude (M) ≥ 7.0			
6.5 - 6.9			
6.0 - 6.4			
5.5 - 5.9			
5.0 - 5.4			

Historical Faulting
Holocene Faulting
Highways (Major)
Highways (Minor)
Lakes
65 Last two digits of M ≥ 6.5 earthquake year

Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

0 20 40 Miles

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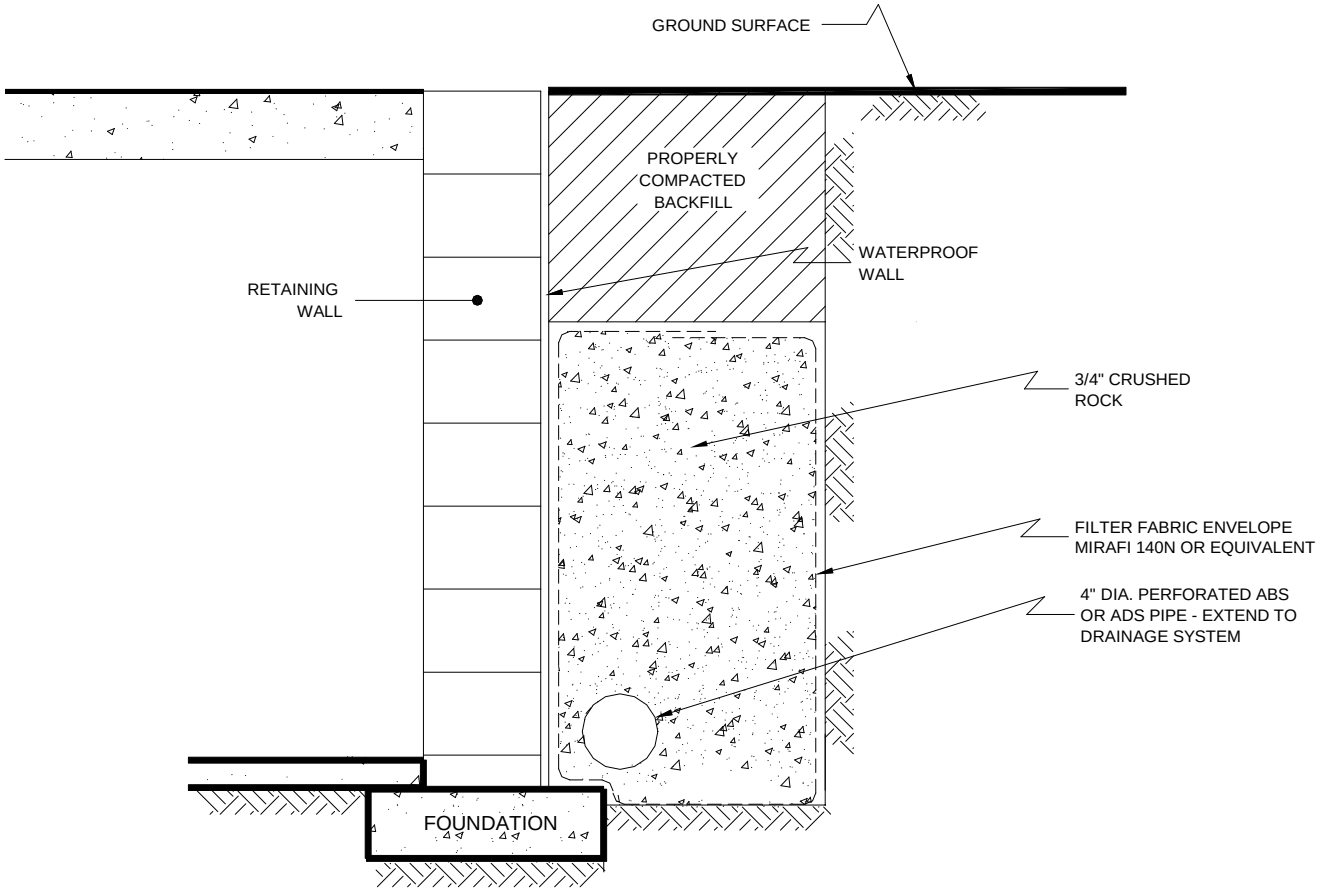
REGIONAL SEISMICITY MAP

207 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. 4



NO SCALE

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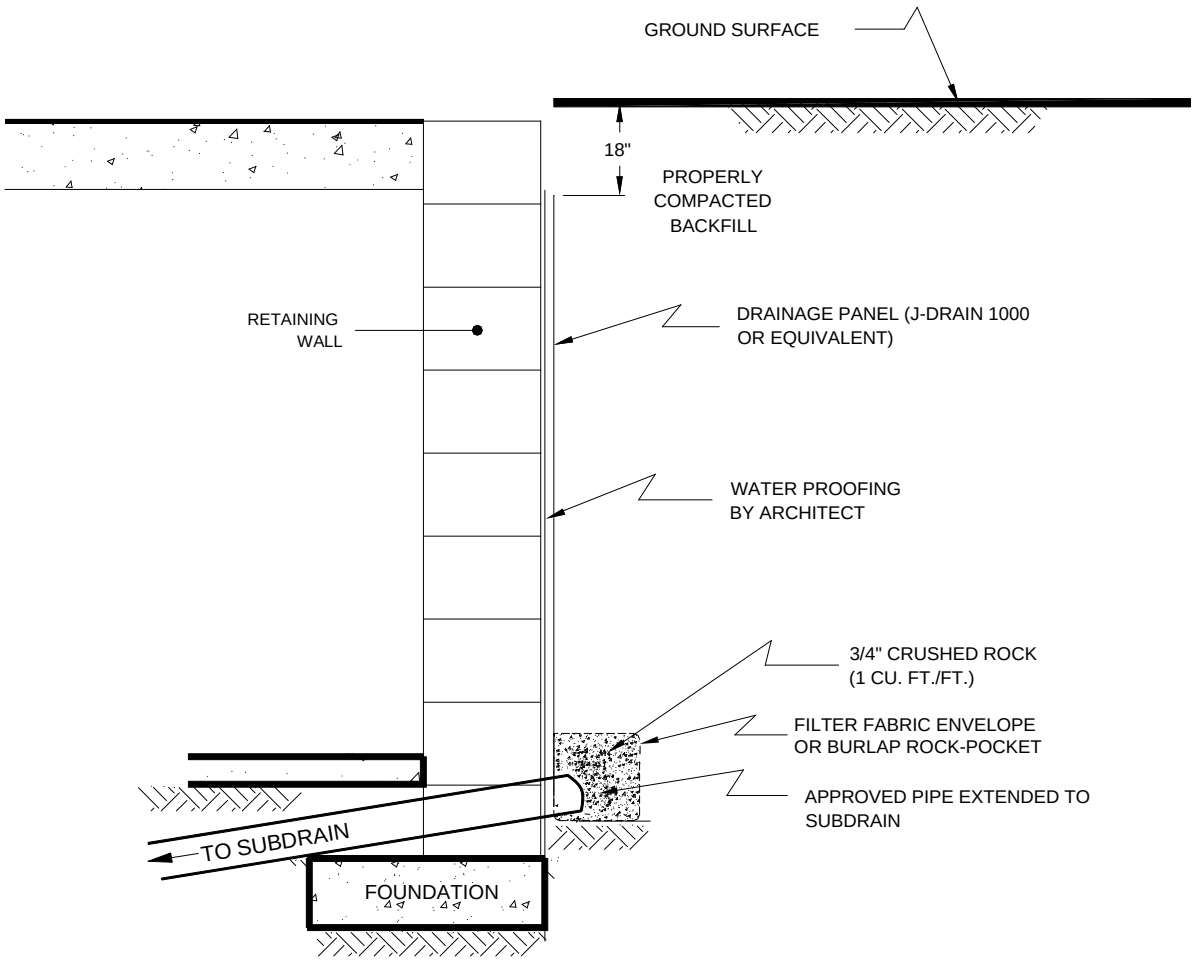
RETAINING WALL DRAIN DETAIL

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. 5



NO SCALE

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RETAINING WALL DRAIN DETAIL

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. 6

PERCOLATION TEST DATA SHEET

Project:	207 W Crowther Ave	Project No:	A9871-88-01	Date:	9/26/2018
Test Hole No:	B6	Tested By:	PZ		
Depth of Test Hole, D_T:	25.5	USCS Soil Classification:	SW-SM		
Test Hole Dimensions (inches)			Length	Width	
Diameter (if round) =	8	Sides (if rectangular) =	---	---	

Sandy Soil Criteria Test*

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Greater than or Equal to 6"? (y/n)
1	8:32	8:57	25	240.0	292.8	52.8	y
2	8:59	9:24	25	240.0	288.0	48.0	y

*If two consecutive measurements show that six inches of water seeps away in less than 25 minutes, the test shall be run for an additional hour with measurements, taken every 10 minutes. Otherwise, pre-soak (fill) overnight. Obtain at least twelve measurements per hole over at least six hours (approximately 30 minute intervals) with a precision of at least 0.25".

Trial No.	Start Time	Stop Time	Δt Time Interval (min)	D_0 Initial Depth to Water (in)	D_f Final Depth to Water (in)	ΔD Change in Water Level (in)	Percolation Rate (min/in)
1	9:28	9:38	10	240.0	255.6	15.6	923
2	9:40	9:50	10	240.0	255.6	15.6	923
3	9:53	10:03	10	240.0	255.6	15.6	923
4	10:07	10:17	10	240.0	255.6	15.6	923
5	10:21	10:31	10	240.0	255.6	15.6	923
6	10:33	10:43	10	240.0	255.6	15.6	923
7							
8							

Infiltration Rate Calculation:

Time Interval, Δt =	10	minutes	Ho =	66.0	inches
Final Depth to Water, Df =	255.6	inches	Hf =	50.4	inches
Test Hole Radius, r =	4	inches	ΔH =	15.6	inches
Initial Depth to Water, Do =	240.0	inches	Havg =	58.2	inches
Total Depth of Test Hole, DT =	306.0	inches			

$$I_t = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Infiltration Rate, It = **3.11** inches/hour

FIGURE 7

APPENDIX A

APPENDIX A

FIELD INVESTIGATION

The site was explored on September 25, 2018, by excavating six 8-inch diameter borings utilizing a hollow-stem auger drilling machine. The borings were excavated to depths between 20½ and 35½ feet below the existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3 inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2⅜-inch diameter brass sampler rings to facilitate soil removal and testing. Standard Penetration Test (SPT) and bulk samples were also obtained. Percolation testing was performed in boring B6.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). The logs of the borings are presented on Figures A1 through A6. The log depicts the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the boring logs were revised based on subsequent laboratory testing. The locations of the borings are shown on Figure 2.

PROJECT NO. A9871-88-01

BORING 1

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand with Gravel, medium dense, dry to slightly moist, light brown, fine- to medium-grained, some coarse-grained, fine to coarse gravel, abundant concrete debris, rebar.			
2								
4								
6	B1@5'				**ALLUVIUM** Sandy Silt, stiff, slightly moist, brown, fine- to medium-grained.	28	112.4	16.4
8	B1@7'			ML	- hard, reddish brown, some coarse-grained	44	115.0	16.7
10	BULK 10-15'				- increase in sand content, stiff	39	121.1	12.2
12	B1@12'				- hard	56	117.2	7.7
14					Sand with Silt, dense, slightly moist, yellowish brown, fine- to coarse-grained.			
16	B1@15'					63	115.1	3.4
18	B1@18'				- very dense, increase in medium- to coarse-grained	50 (5")	120.9	3.2
20	B1@20'				- some fine gravel	50 (5")	121.7	2.8
22	B1@22'			SW-SM		50 (5")	120.2	3.0
24								
26	B1@25'					50 (4")	116.5	3.4
28								

A9871-88-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9871-88-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018** EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30	B1@30'				- abundant fine gravel	50 (6")	113.7	6.3
					Total depth of boring: 30.5 feet. Fill to 4.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9871-88-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 2 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9871-88-01

BORING 2

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, medium dense, dry to slightly moist, light brown, fine- to medium-grained, fine to coarse gravel, some concrete debris.			
2								
4					**ALLUVIUM** Sandy Silt, stiff, slightly moist, brown, fine-grained, some medium-grained.			
6	B2@6'			ML		36	119.4	14.6
8					Sand with Silt, medium dense, slightly moist, yellowish brown, fine- to coarse-grained.			
10	B2@9'					43	114.0	2.6
12	B2@12'				- dense, some fine gravel	79	120.5	3.3
14				SW-SM				
16	B2@15'					80	112.1	3.1
18								
20	B2@20'				- very dense, fine- to medium-grained	50 (6")	116.5	6.9
					Total depth of boring: 20.5 feet. Fill to 4 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9871-88-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9871-88-01

BORING 3

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ARTIFICIAL FILL** Silty Sand, medium dense, dry to slightly moist, light brown, fine-grained, trace fine gravel.			
2	B3@2'			SM	**ALLUVIUM** Silty Sand, very dense, slightly moist, brown, fine- to medium-grained, trace fine gravel.	50 (6")	117.2	7.4
4								
6	B3@5'				Sandy Silt, firm, slightly moist, dark brown, fine-grained.	15	116.4	12.1
8								
10	B3@10'				- stiff, brown	26	118.8	12.2
12	B3@12'			ML		26	112.3	17.3
14								
16	B3@15'					25	112.4	19.0
18	B3@18'				- increase in sand content, fine- to medium-grained, some coarse-grained - hard, yellowish brown	38	98.3	24.2
20	B3@20'					50 (5')	121.9	8.6
22					Sand with Silt, very dense, slightly moist, yellowish brown, fine- to medium-grained.			
24								
26	B3@25'			SP-SM	- fine- to coarse-grained, some fine gravel	50 (5')	119.9	2.3
28								

A9871-88-01 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. A9871-88-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 3** ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018** EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30	B3@30'					50 (6")	110.2	3.4
					Total depth of boring: 30.5 feet. Fill to 1.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9871-88-01 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 2 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. A9871-88-01

BORING 4

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, medium dense, dry to slightly moist, light brown, fine- to medium-grained, trace fine gravel.			
2					**ALLUVIUM**			
4	B4@3'			ML	Sandy Silt, stiff, slightly moist, brown, fine-grained.	24	105.6	18.5
6	B4@6'				Sand, dense, slightly moist, light brown, fine- to coarse-grained, trace fine gravel.	55	117.6	1.6
8								
10	B4@9'					56	112.0	1.8
12	B4@12'			SW	- yellowish brown	67	115.9	3.0
14								
16	B4@15'				- medium dense	50	108.3	3.3
18								
20	B4@20'				- some silt, fine-grained - fine- to coarse-grained	50 (5")	114.7	16.1

Total depth of boring: 20.5 feet.
Fill to 2 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped.
Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.

A9871-88-01 BORING LOGS.GPJ

Figure A4,
Log of Boring 4, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9871-88-01

BORING 5

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, medium dense, dry to slightly moist, light brown, fine- to coarse-grained.			
2								
4				SM	**ALLUVIUM** Silty Sand, loose, slightly moist, brown, fine- to medium-grained.			
	B5@5'					15	115.0	8.4
6					Sandy Silt, hard, slightly moist, brown, fine-grained.			
8								
10	B5@10'					44	119.3	14.9
12	B5@12'			ML	- yellowish brown, increase in sand content	54	115.2	15.1
14								
16	B5@15'				- brown, fine- to medium-grained, some fine gravel	50 (5")	120.4	9.9
18	B5@18'					81	128.5	9.1
20	B5@20'				Sand with Silt, dense, slightly moist, brown, fine- to coarse-grained.	67	115.2	6.6
22								
24				SW-SM	- increase in silt content			
26	B5@25'					50 (3")	122.5	4.7
28								
				ML	Sandy Silt, hard, slightly moist, brown, fine-grained.			

A9871-88-01 BORING LOGS.GPJ

Figure A5,
Log of Boring 5, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

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PROJECT NO. A9871-88-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 5** ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018** EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30	B5@30'			ML		45	101.5	18.4
32								
34								
	B5@35'					59	112.2	18.0
					Total depth of boring: 35.5 feet. Fill to 2.5 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9871-88-01 BORING LOGS.GPJ

Figure A5,
Log of Boring 5, Page 2 of 2

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
◧ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
⊠ ... DISTURBED OR BAG SAMPLE
◹ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

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PROJECT NO. A9871-88-01

BORING 6

ELEV. (MSL.) _____ DATE COMPLETED **09/25/2018**

EQUIPMENT **HOLLOW STEM AUGER** BY: **PZ**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)*	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, medium dense, dry to slightly moist, light brown, fine- to coarse-grained.			
2					**ALLUVIUM** Sandy Silt, soft, slightly moist, brown, fine-grained, trace coarse-grained.			
4								
6	B6@5'			ML		5		
8								
10	B6@10'				- firm	10		
12								
14								
16	B6@15'			SM	Silty Sand, medium dense, slightly moist, brown, fine- to coarse-grained.	13		
18								
20	B6@20'				Sand with Silt, dense, slightly moist, yellowish brown, fine- to coarse-grained.	50		
22				SW-SM	- some fine to coarse gravel			
24								
	B6@24.5				- very dense	50 (5")		
					Total depth of boring: 25.5 feet. Fill to 2 feet. No groundwater encountered. Percolation testing performed. Backfilled with soil cuttings and tamped. Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9871-88-01 BORING LOGS.GPJ

Figure A6,
Log of Boring 6, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

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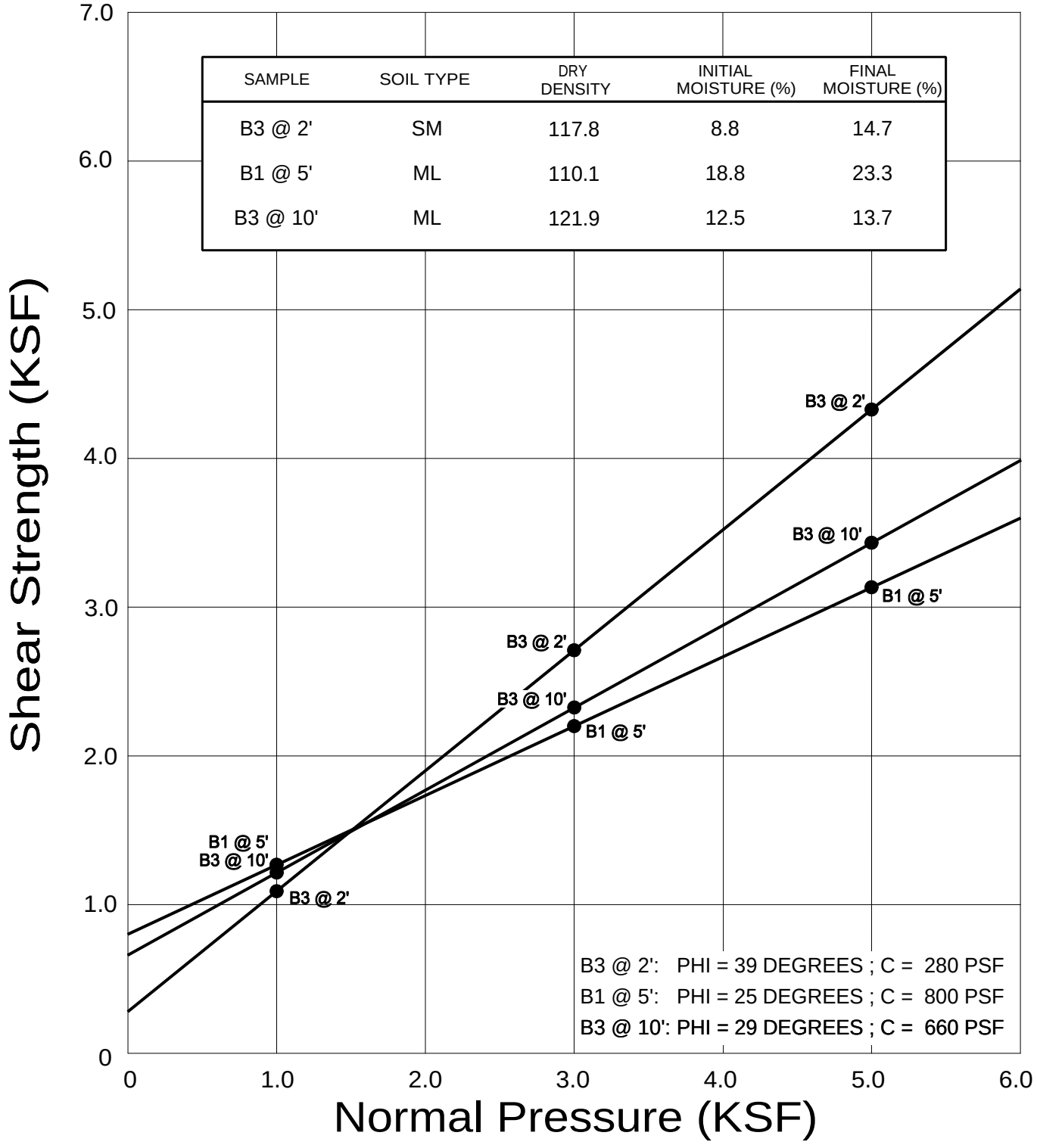
APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the "American Society for Testing and Materials (ASTM)", or other suggested procedures. Selected samples were tested for direct shear strength, consolidation and expansion characteristics, moisture density relationships, in-place dry density and moisture content. The results of the laboratory tests are summarized in Figures B1 through B7. The in-place dry density and moisture content of the samples tested are presented in the boring logs, Appendix A.

SAMPLE	SOIL TYPE	DRY DENSITY	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B3 @ 2'	SM	117.8	8.8	14.7
B1 @ 5'	ML	110.1	18.8	23.3
B3 @ 10'	ML	121.9	12.5	13.7



● Direct Shear, Saturated

GEOCON WEST, INC.

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15520 ROCKFIELD BOULEVARD, SUITE J, IRVINE, CA 92618
PHONE (949) 491-6570

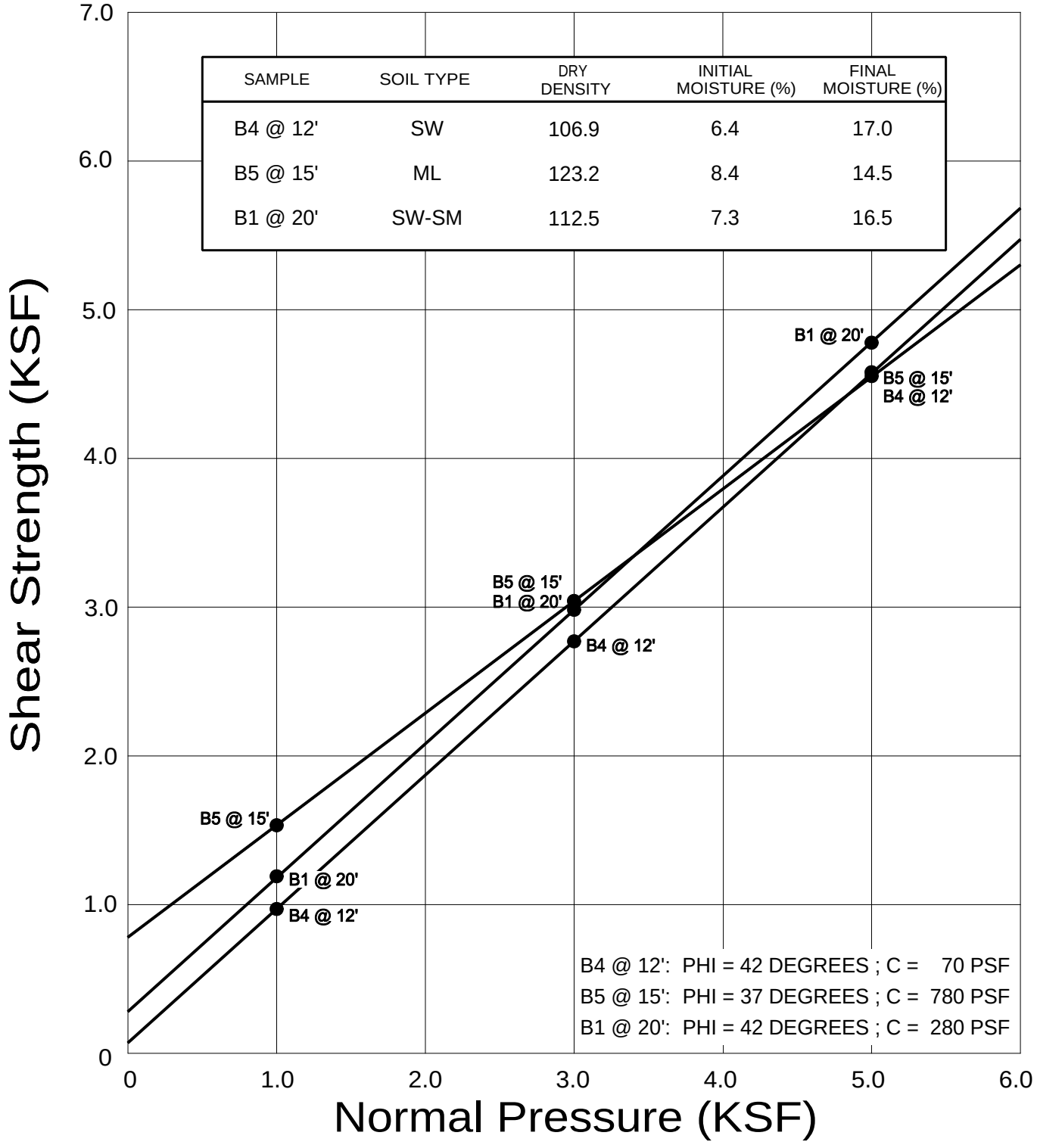
DRAFTED BY: JS | CHECKED BY: JTA

DIRECT SHEAR TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. B1

SAMPLE	SOIL TYPE	DRY DENSITY	INITIAL MOISTURE (%)	FINAL MOISTURE (%)
B4 @ 12'	SW	106.9	6.4	17.0
B5 @ 15'	ML	123.2	8.4	14.5
B1 @ 20'	SW-SM	112.5	7.3	16.5



● Direct Shear, Saturated

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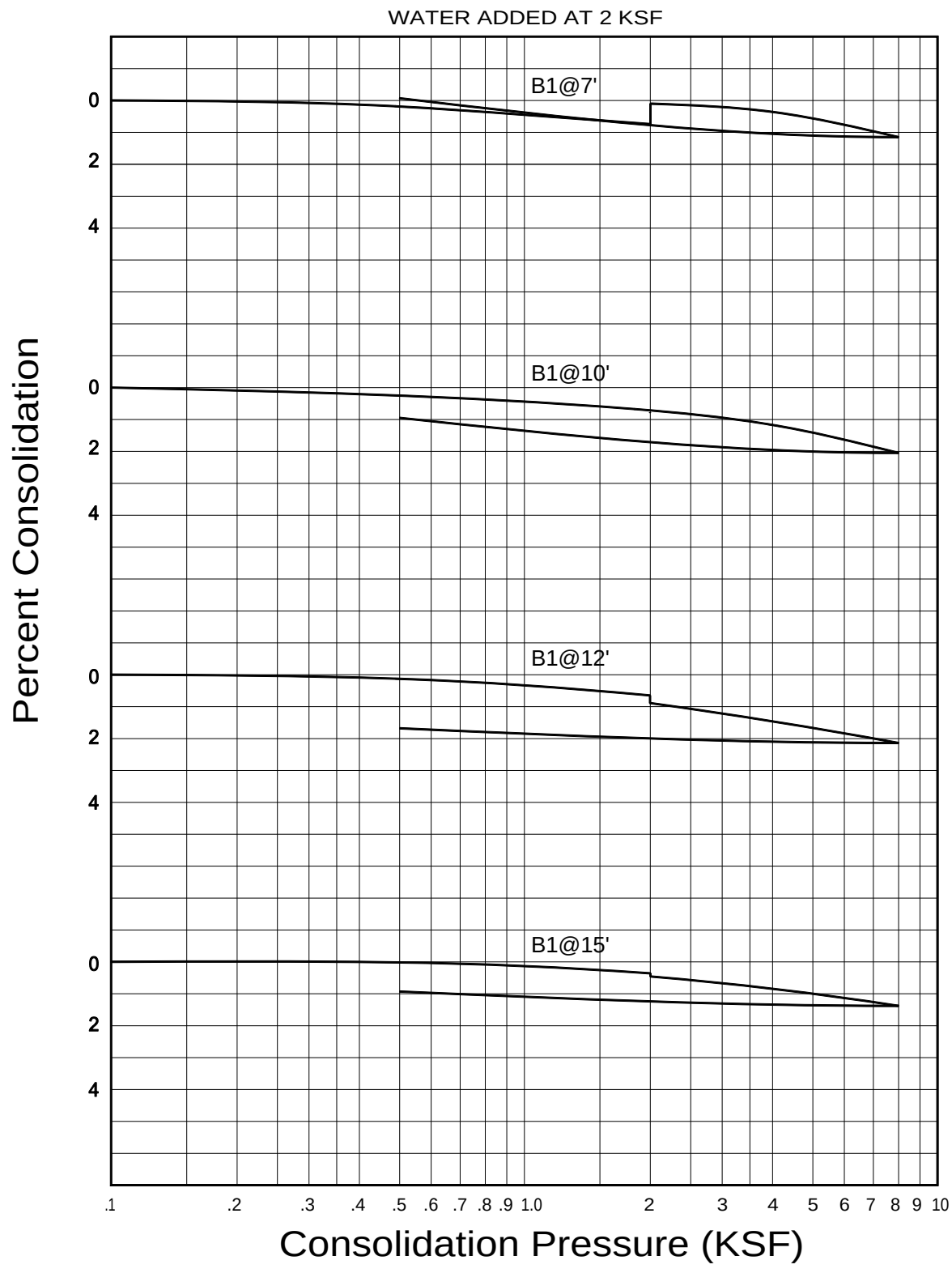
DRAFTED BY: JS	CHECKED BY: JTA

DIRECT SHEAR TEST RESULTS

207 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. B2



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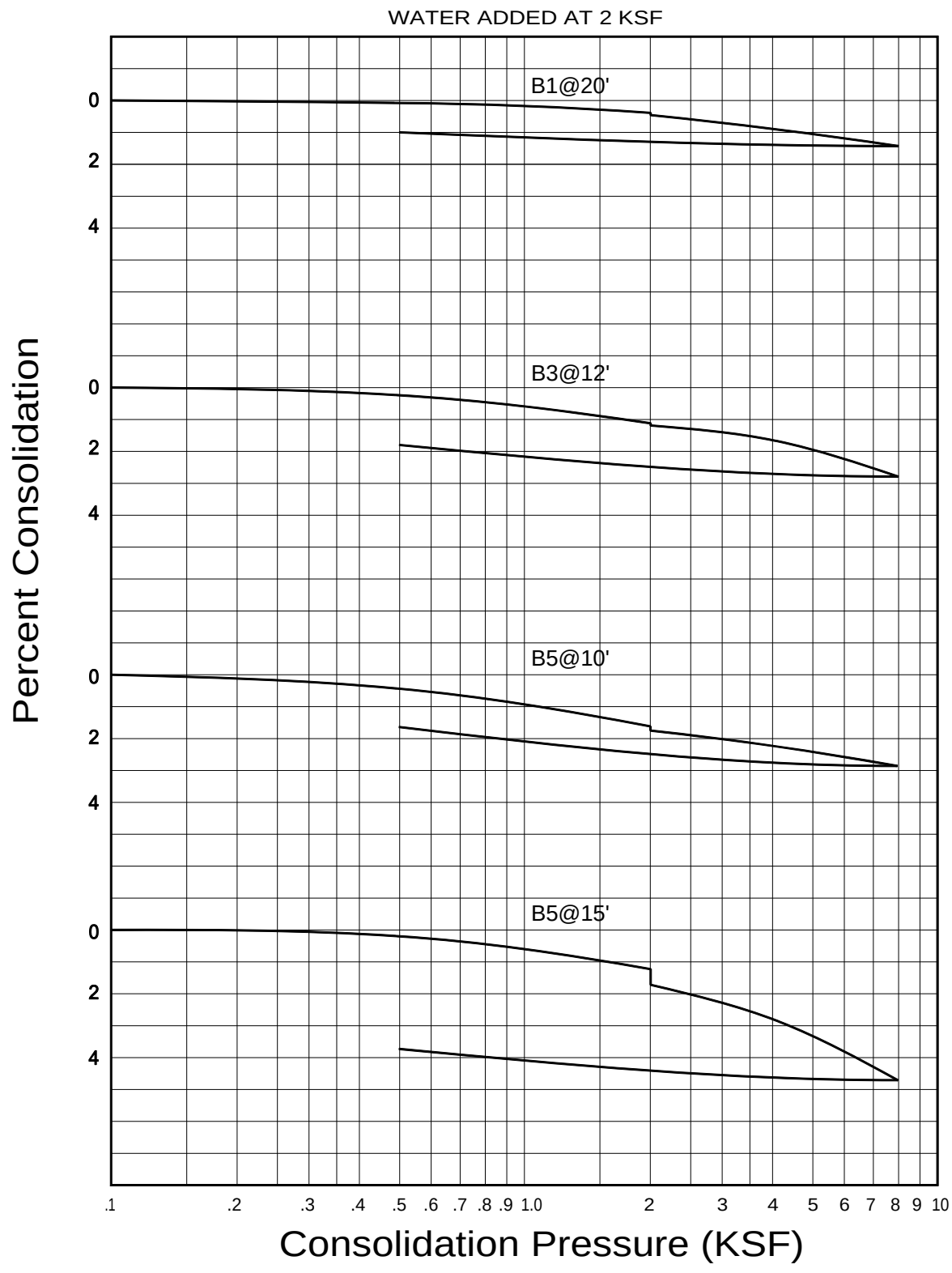
DRAFTED BY: JS	CHECKED BY: JTA

CONSOLIDATION TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. B3



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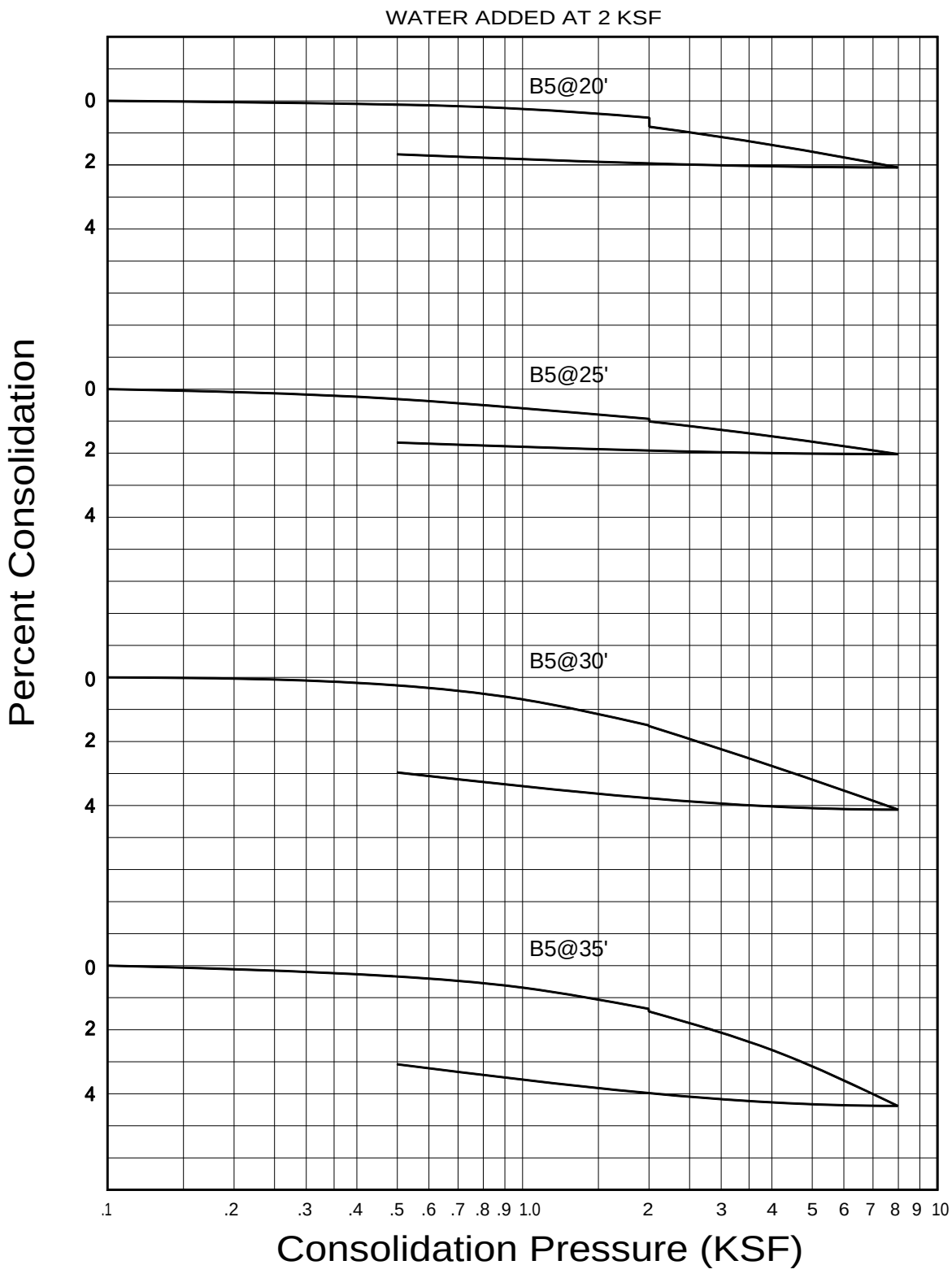
CONSOLIDATION TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. B4



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CONSOLIDATION TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018	PROJECT NO. A9871-88-01	FIG. B5

SUMMARY OF LABORATORY EXPANSION INDEX TEST RESULTS
ASTM D 4829-11

Sample No.	Moisture Content (%)		Dry Density (pcf)	Expansion Index	*UBC Classification	**CBC Classification
	Before	After				
B3 @ 0-5'	8.0	13.5	117.0	3	Very Low	Non-Expansive
B1 @ 10-15'	9.5	20.8	112.0	53	Medium	Expansive

* Reference: 1997 Uniform Building Code, Table 18-I-B.

** Reference: 2016 California Building Code, Section 1803.5.3

SUMMARY OF LABORATORY MAXIMUM DENSITY AND AND OPTIMUM MOISTURE CONTENT TEST RESULTS
ASTM D 1557-12

Sample No.	Soil Description	Maximum Dry Density (pcf)	Optimum Moisture (%)
B3 @ 0-5'	Dark Brown Silty Sand with Gravel	132.6	7.3

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LABORATORY TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. B6

SUMMARY OF LABORATORY POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS CALIFORNIA TEST NO. 643

Sample No.	pH	Resistivity (ohm centimeters)
B1 @ 10-15'	9.15	290 (Severely Corrosive)

SUMMARY OF LABORATORY CHLORIDE CONTENT TEST RESULTS EPA NO. 325.3

Sample No.	Chloride Ion Content (%)
B1 @10-15'	0.254

SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO. 417

Sample No.	Water Soluble Sulfate (% SO_4)	Sulfate Exposure*
B1 @ 10-15'	0.043	S0

* Reference: 2016 California Building Code, Section 1904.3 and ACI 318-11 Section 4.3.

GEOCON WEST, INC.
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CORROSIVITY TEST RESULTS

207-209 WEST CROWTHER AVENUE
PLACENTIA, CALIFORNIA

OCT. 2018 | PROJECT NO. A9871-88-01 | FIG. B7

APPENDIX C

APPENDIX C

PRIOR GEOTECHNICAL REPORT

October 27, 2009

Mr. Kenneth Steele
Willdan Engineering
2401 E. Katella Avenue, Suite 450
Anaheim, CA 92806

Subject: **Geotechnical Investigation Report**
Proposed Metrolink Station Development
City of Placentia, California
Willdan Geotechnical Project No. 17340-2000

Dear Mr. Steele:

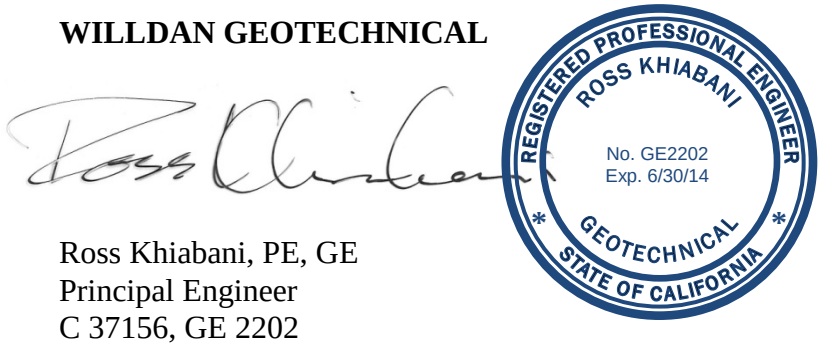
Willdan Geotechnical (Willdan) is pleased to present this geotechnical investigation report for the proposed Metrolink Station Development in the city of Placentia, California. The proposed development includes three new parking lots, construction of a third railroad track within the proposed station limits, and widening of Crowther Avenue between south Melrose Street and south Bradford Avenue.

Based on the results of our investigation, the development is feasible from a geotechnical standpoint. This report presents the results of our investigation and recommendations for the design and construction of the proposed improvements.

We appreciate the opportunity to assist you and look forward to future projects. If you have any questions, please contact us.

Respectfully submitted,

WILLDAN GEOTECHNICAL



Ross Khiabani, PE, GE
Principal Engineer
C 37156, GE 2202

Distribution: (4) Addressee

GEOTECHNICAL INVESTIGATION REPORT
PROPOSED METROLINK STATION DEVELOPMENT
CITY OF PLACENTIA, CALIFORNIA

Prepared for

Willdan Engineering
2401 E. Katella Avenue, Suite 450
Anaheim, CA 92806

Prepared by

Willdan Geotechnical
1515 South Sunkist Street, Suite E
Anaheim, California 92806
Willdan Geotechnical Project No. 17340-2000

October 27, 2009

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Appendix C. Site Seismic Analysis
Appendix D. Liquefaction and Seismically Induced Settlements
Appendix E. Typical Retaining Wall Backfill

1.0 INTRODUCTION

This report presents the results of our geotechnical engineering investigation performed for the proposed Metrolink Station development in Placentia, California, at the site location shown on the Vicinity Map, Figure 1. The approximate locations of the soil borings and Cone Penetrometer Test (CPT) soundings advanced for this investigation are shown on Figure 2, Boring/CPT Location Plan.

This report includes geotechnical conclusions and recommendations with respect to site preparation and earthwork procedures, including for construction of a third railroad track, retaining wall design, utility trench backfill, and pavement design sections for street and parking lot areas.

A boring log key, the boring logs, and the logs of CPT soundings are presented in Appendix A. The geotechnical laboratory test results are in Appendix B. A site seismic analysis is included as Appendix C. Appendix D contains an assessment of site liquefaction potential and estimate of seismically induced settlements. Appendix E presents the parameters for a typical retaining wall backfill.

1.1 PURPOSE AND SCOPE OF SERVICES

This investigation was conducted to explore and evaluate the site soil and groundwater conditions—to depths that will significantly be influenced by the proposed construction—to provide geotechnical engineering recommendations for use in design of: pavement sections for the proposed parking lots and street widening area; retaining structures, including retaining walls as well as below grade utility vaults, if any; concrete slabs-on-grade, and associated earthwork, including backfill for underground utilities. Our scope of services included the following:

- A site reconnaissance by a member of our engineering staff to evaluate the surface conditions at the project site.
- Review of selected published geologic maps, reports and literature pertinent to the site and surrounding area.
- A field investigation consisting of drilling eight (8) borings and advancing two (2) CPT soundings to evaluate subsurface conditions at the site. The borings ranged in depth from approximately 16-½ to 51-½ feet below existing ground surface (bgs). The CPT soundings were advanced to depths of 62 and 70 feet bgs.
- Performance of laboratory tests on representative soil samples obtained from the borings to evaluate the physical properties of the subsurface soils.
- Performance of laboratory tests on one (1) randomly selected sample of soils collected from within the near surface zone to assess corrosivity of the soil as it pertains to soil/cement reactivity and buried metals.

- Evaluation of the potential for liquefaction and seismically induced settlement to occur at the site under the design earthquake scenario.
- Engineering evaluation of the data obtained from the field investigation and laboratory testing program and development of geotechnical recommendations for earthwork including retaining wall backfill, concrete slabs-on-grade and pavement sections.
- Preparation of this report summarizing our investigation and findings, results of geotechnical laboratory testing, and our conclusions and recommendations for the geotechnical aspects of project design and construction.

Environmental assessment services, such as chemical analysis of soil and groundwater for hazardous substances, were not included in our scope of services. Geotechnical services related to soil corrosivity have been limited to screening of one (1) sample selected at random. Thorough corrosivity evaluation with respect to the potential for on-site soils to affect cement (concrete) or buried metal pipe was not included in our scope of services for this project.

1.2 SITE DESCRIPTION

As shown in Figure 1, Site Location Map, the project site is located in the vicinity of the existing Metrolink station and bounded between West Santa Fe Avenue to the North, West Crowther Avenue to the South, South Bradford Avenue to the East, and extends just past South Melrose Street along its western border, approximately 1400 feet east of Route 57, in the City of Placentia, California. The latitude and longitude at the approximate center of the site are 33.8718° N and 117.8786° W, respectively. The site is relatively flat, with paved parking and some vacant areas.

1.3 PROPOSED DEVELOPMENT

We understand that current plans call for the following improvements at the site:

- Three new parking lots. Lot A at the northeast corner of the intersection of West Crowther Avenue and South Melrose Street, bounded to the east by South Bradford Avenue. Lot B at the eastern terminus of Baker Street, west of South Melrose Street. And Lot C at the southeast corner of the intersection of West Santa Fe Avenue and South Melrose Street, bounded on the east by South Main Street (*see* Figure 1, Site Location Map).
- Construction of a third railroad track, roughly paralleling the existing tracks, between South Melrose Street and South Bradford Avenue. The new track will be laid close to the south edge of the existing embankment.
- Widening of West Crowther Avenue between South Melrose Street and South Bradford Avenue. New drainage structures and retaining walls are also planned on the southeasterly bound of the road alignment. However, no details of the retaining wall and drainage structures are available at the time of writing this report.



Scale: *Not to Scale*

FIGURE 1. SITE LOCATION MAP

Proposed Metrolink Station Development
S. Melrose St. @ W. Crowther Ave
Placentia, California

WILLDAN Geotechnical — extending your reach

Drawn By: GA	Date: 19-Oct-09
Approved By:	Project No. 17340-2100

We were not provided with finish grade information, but given that the site has existing improvements, we expect that grading will be limited to relatively minor cuts and fills to remove and/or replace existing underground structures, and to correct site grades to new specifications. We understand that the existing asphalt concrete paving will be demolished, and new asphalt concrete paving will be constructed for the driveway and parking areas. New asphalt concrete will also be placed as part of the widening of West Crowther Avenue. In the event these structural or grading details are inconsistent with the final design, we should be notified so that the potential impacts of the changed conditions can be reviewed and revised recommendations can be prepared if necessary.

2.0 GEOLOGY

2.1 GEOLOGICAL SETTING

The project site lies within the eastern portion of Los Angeles Basin Coastal Plain, at the northern end of the Santa Ana Mountains, and is within the area covered by the USGS Orange 7.5-minute Quadrangle. The east-west trending Coyote Hills lie about one and a half miles to the north and west of the site, and the Anaheim Hills lie about 3 miles to the east.

The alluvial sediments forming the valley floor are divided into older fan deposits and older alluvial deposits. These deposits typically consist of dense to very dense sand and gravel with interbedded sands and silty sands. The oldest geologic units mapped at the project site are Tertiary rocks of the Silverado and Santiago formations. Both theses formations consist of non marine to partly marine beds of sandstone, siltstone, clay and conglomerate. The Santiago Formation is conformably overlain by the undifferentiated Sespe and Vaqueros Formation, which consists of a sequence of friable, easily eroded, interbedded marine and non marine sandstone and conglomerate beds.

Near-surface soils on the site include late Pleistocene (less than 100,000 years old) to Holocene (less than 11,000 years old) floodplain and stream terrace deposits. Quaternary deposits flank the lower slopes of the hills and lie within the relatively flat basin of Santa Ana Valley at the subject project site area. The Holocene age alluvium was likely deposited by the Santa Ana River system—the Santa Ana River is located approximately 1.7 miles to the south-southwest of the project site—and is estimated to extend to depths of up to 300 feet. Theses deposits, encountered in our boring logs, consist of unconsolidated to poorly consolidated, non marine mixtures of sand, silt, clay and gravel.

2.2 REGIONAL AND LOCAL FAULTS

Five major faults are located near the site: the Puente Hills Blind Thrust, the Whittier Fault Zone, the Chino–Central Avenue Fault Zone, the Elsinore Fault (Glen Ivy) and the Newport–Inglewood Fault. The Puente Hills Blind Thrust is located approximately 3.8 miles west of the site and is capable of producing an earthquake of magnitude 6.7. The Whittier Fault and Chino–Central

Avenue Fault are located approximately 4.4 miles to the north-northeast and 11 miles to the northeast of the site, respectively. The Whittier Fault is considered capable of producing an earthquake of magnitude 6.8 and the Chino Central Avenue Fault one of magnitude 6.7. The Elsinore Fault (Glen Ivy) is located approximately 14 miles southeast of the site and is considered capable of producing an earthquake of magnitude 6.8. The Newport-Inglewood Fault (Glen Ivy) is located approximately 15 miles southwest of the site, and is considered capable of producing an earthquake of magnitude 6.9.

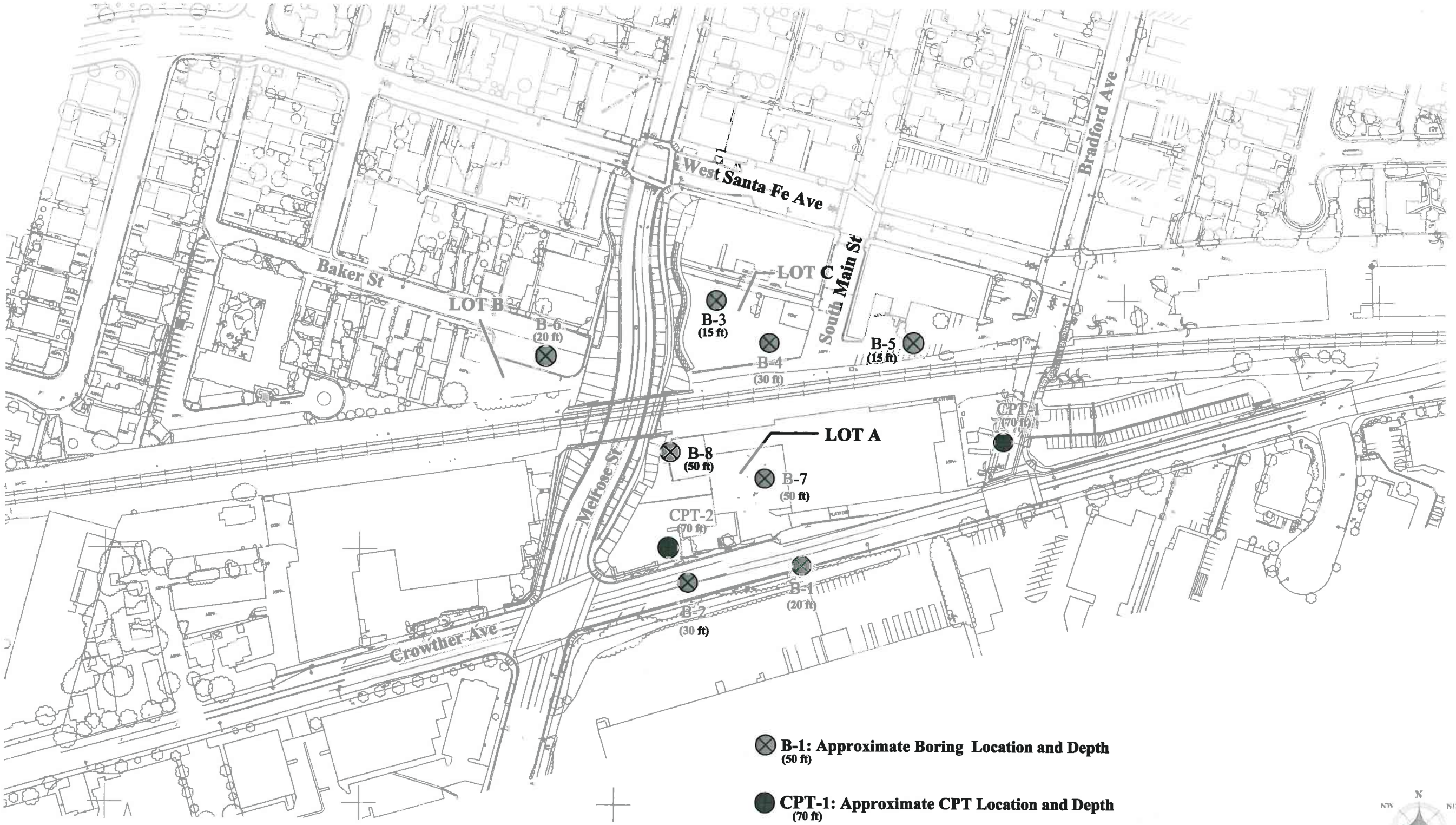
There are no active faults traces in the project vicinity. Accordingly, the project area is not within an Earthquake Fault Hazard Zone requiring special study. The closest such mapped zone is approximately 3 miles to the north-northeast. Although the site is outside of mapped fault hazard zones, the site will likely be subject to strong ground shaking. Therefore, any planned structures should be designed accordingly.

3.0 FIELD AND LABORATORY INVESTIGATIONS

Field exploration for this investigation consisted of drilling and sampling eight (8) soil borings and two (2) Cone Penetration Test (CPT) soundings. Borings were advanced to depths between 16-½ and 51-½ feet bgs. CPT soundings were advanced to depths of 62 and 70 feet bgs. Approximate locations of boring and CPT soundings are shown on Figure 2, Boring/CPT Location Plan. These locations were estimated by our personnel in the field using a measuring wheel and measuring from the limits of existing site features.

Prior to field exploration, a site visit was performed to mark the boring and CPT locations and evaluate access conditions for drilling equipment. Underground Service Alert of Southern California was then notified for clearance of underground utilities in the vicinity of the borings (Ticket Numbers A91980327 and A91980312).

Soil borings were advanced using a truck-mounted B-61 rig equipped with 7-inch diameter hollow-stem augers. Relatively undisturbed, disturbed, and bulk soil samples were collected from each soil boring during drilling. Bulk samples were collected from auger cuttings obtained from within the near-surface soils. At select intervals throughout the boring depths, relatively undisturbed soil samples were collected by driving a three-inch outside diameter Modified California Sampler lined with brass rings, and disturbed samples were collected by driving a 1-⅜–inch inside diameter Standard Penetration split-spoon sampler. The samplers were driven into the underlying soil to a depth of 18 inches, or the interval noted on the boring logs, with a 140-pound hammer falling 30 inches. The number of blows required to drive the sampler was recorded for each 6-inch penetration interval and is shown on the boring logs. Soil samples were retained from possible laboratory testing. The number of blows required to drive the sampler the last 12 inches was used to estimate the in-situ relative density of granular soils and to a lesser degree of accuracy, the consistency of cohesive soils.



Map Not to Scale

Base Drawing Provided by: City of Placentia

Figure 2: Boring/ CPT Location Plan	WILLDAN Geotechnical — extending your reach
Proposed Metrolink Station Development S. Melrose St. @ W. Crowther Ave Placentia, California	Drawn By: SM — Date: 19-Oct-09 Approved By: GA — Project No: 17340-2100

Visual classification of the soils encountered in our exploratory borings was made in general accordance with the Unified Soil Classification System (ASTM D2487). A key for the classification of the soils (USCS classifications) along with the logs of our borings and CPT soundings is included as Appendix A.

Upon completion of drilling, the borings were backfilled with soil cuttings and tamped. Pavement surfaces were repaired using Quick-Set cement. Soil samples collected from the field were delivered to Willdan's laboratory for testing.

Cone Penetration Test soundings were advanced using a 30-ton truck-mounted CPT rig. As the CPT probe was hydraulically pushed into the ground, the soil bearing resistance acting on the probe's conical tip, Qc, and the frictional resistance sensed along the cylindrical probe sleeve were recorded. A filter and pressure transducer assembly mounted behind the tip of the probe was also used to measure the soil's pore fluid pressure. All measurements were monitored continuously with depth, transmitted as electrical signals from the strain-gauged load cells inside the probe to a PC-based data acquisition system mounted inside the rig, and recorded at 50-mm (2-inch) intervals.

The CPT soundings were performed in accordance with ASTM D-5778 method. The recorded resistance values and pore pressures were used to derive the stratigraphy and selected geotechnical parameters of the subsurface materials that the CPT probe passed through.

Graphical logs of the recorded CPT data and interpreted soil behavior type are presented in Appendix A. These logs show the measured penetration resistance values, the inferred soil description ("Soil Behavior Type"), and estimated SPT blow count (*N*-value) as a function of depth.

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. Laboratory testing included determination of in-situ moisture and density, gradation, and shear strength characteristics for soil samples collected from various depths, and determination of maximum dry density, R-Value, expansion potential, and corrosion potential of soils collected from within the shallow subsurface. Laboratory tests were conducted in general accordance with American Society for Testing of Materials (ASTM) Standards or California Test Methods. The in-situ dry density and moisture content test results are shown on the boring logs. The remaining laboratory test results are presented in Appendix B, Laboratory Test Results.

3.1 SOIL PROFILE AND SUBSURFACE CONDITIONS

In all but one of our borings, artificial fill consisting of a mixture of stiff to very stiff, lean clay, and loose to medium dense clayey sand was encountered in the top 6 to 10 feet of the subsurface. This fill does not appear to have been placed as an engineered fill under controlled conditions. No fill was encountered in boring B-8, northwest of the proposed parking lot A. Based on our field observations of the material type, our experience, and laboratory test data, the clayey material present in this surficial fill layer has a medium potential for expansion if saturated.

Native soil materials underlying the fill primarily consist of poorly-graded silty sands with some gravel to a depth of about 30-35 feet bgs, corresponding to an elevation of about 192±1 feet MSL. Stiff, brown, moist to very moist silty clays were encountered below this elevation and continued to the final depth of exploration, 51-½ feet bgs, in borings B-7 and B-8. The logs of the two CPT soundings indicate that this layer of fine-grained materials likely continues well past a depth of 50 feet bgs.

Based on our findings, the subsurface conditions encountered appear typical of those found in the geologic region of the site.

The above is a general description of soil conditions encountered at the site in the borings drilled for this investigation. For a more detailed description of the soil conditions encountered, please refer to the boring logs in Appendix A.

3.2 GROUNDWATER

Per data available from the State of California, Department of Water Resources, the historic high groundwater in the general vicinity of the project site has been more than 50 feet below ground surface (CDMG, 1997). The borings drilled for the current investigation were monitored for visible signs of free groundwater during and immediately after completion of drilling. No groundwater was seen in borings B-1 through B-7. Depth to groundwater was measured at between 30 and 35 feet bgs in the two deepest borings, B-7 and B-8. This groundwater appears to be a perched layer atop the clayey material starting at that depth. Indications of perched groundwater starting at depths between 30 and 35 feet bgs were also seen in the two CPT soundings.

Depth to groundwater can be expected to fluctuate both seasonally and from year to year. Fluctuations in the groundwater level may occur due to variations in precipitation, flow in nearby creeks, irrigation practices at the site and in the surrounding areas, climatic conditions, pumping from wells, and possibly as the result of other factors that were not evident at the time of our investigation. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report. Long-term monitoring in observation wells, sealed from the influence of surface water, is often required to more accurately define the potential range of groundwater conditions on a site.

4.0 SEISMIC DESIGN CONSIDERATIONS

4.1 SITE CHARACTERIZATION – SITE CLASS

The subsurface soil profile at the site can be classified from a seismic standpoint based on the soil conditions encountered in our exploratory borings, and anticipated within the upper 100 feet

of the site based on geologic mapping, as being a relatively stiff soil with undrained shear strength of at least 1,000 pounds per square foot (psf) and SPT N values of 15 to 50 blows per foot. Based on the soils encountered within the upper 50 feet of the subject site and with consideration of the geologic units mapped in the area, it is our opinion that the site soil profile corresponds to Site Class D as per Table 1613A.5.2 of the California Building Code (CBC) 2007.

4.2 GROUND SHAKING

Although ground rupture is not considered to be a major concern at the subject site, the site will likely be subject to moderate to severe seismic shaking during its lifetime. Some degree of structural damage due to stronger seismic shaking should be expected at the site, but the risk can be reduced through adherence to seismic design codes. Using the seismic hazard assessment program developed by the United States Geologic Survey (USGS, 2005), the mean value of the Peak Ground Acceleration (PGA) under the Maximum Considered Earthquake (MCE) for the site was estimated at 0.66g. The design ground motion, taken as two-thirds of the MCE ground motion, is thus 0.44g. Results of the probabilistic seismic hazard deaggregation analysis are presented in Appendix C, Site Seismic Analysis.

4.3 SOIL LIQUEFACTION

Soil liquefaction is a state of temporary soil particle suspension caused by loss of strength due to pore pressure increase resulting from cyclic stress application induced by earthquakes, and the resultant drop in effective stress and soil shear strength. Liquefaction normally occurs in saturated granular soils, such as sands, in which the strength is purely frictional. Soils most susceptible to liquefaction are saturated, loose, uniformly graded, fine-grained sand deposits. However, liquefaction has occurred in soils other than clean sands. Silty sands and sandy silts have also been reported to be susceptible to liquefaction or partial liquefaction. The occurrence of liquefaction is generally limited to soils located within about 50 feet of the ground surface. Primary factors affecting the potential for a soil to undergo liquefaction include:

1) Depth to groundwater;
2) Soil type;
3) Relative density of the soil and initial confining (overburden) pressure;
4) Intensity and duration of ground shaking.

Potential problems associated with soil liquefaction include ground surface settlement, loss of foundation bearing support strength, and lateral spreading. Ground surface settlement due to densification of the liquefied soils can be approximated using procedures developed by Tokimatsu and Seed (1987) and Ishihara and Yoshimine (1992). While confinement of saturated sand layers is required for liquefaction to occur, a phenomenon referred to as sand boils is the primary cause for catastrophic failure of building foundations. Sand boils occur when the sudden compression of groundwater in a layer of saturated, clean, loose sand builds up sufficient pressure to rupture up through the upper soil mantle to the ground surface. When this occurs,

displacement of the liquefied sand results in the sudden loss of support of structures supported by shallow foundations.

The project site has not been mapped as being within a zone susceptible to liquefaction as designated by the State of California. Site-specific liquefaction potential was evaluated using the ground motion parameters discussed in Section 4.2 above, and the data obtained from the CPT soundings conducted for this investigation (*see* Appendix D, Liquefaction Analysis/ Earthquake-Induced Settlement Analyses). Results of our analysis suggest that the layers of silty, sandy materials encountered in CPT-1 from a depth of approximately 43 feet bgs to about 46 feet bgs, and in CPT-2 from a depth of about 33 feet bgs to 35 feet bgs, and again from a depth of about 47 feet bgs to 60 feet bgs, are susceptible to liquefaction if the groundwater level rises to about 30 feet bgs. This is an unlikely scenario given that the historic high level of the water table in the vicinity of the site is deeper than 50 feet. Even if a loss of strength does occur at these depths, the estimated settlements within these layers will be less than one inch (*see* Appendix D), and given the presence of more than 30 feet of relatively dense/stiff material overlying the potentially liquefiable zones, the impact on the planned shallow foundations/improvements at or near the ground surface will be negligible. As such, loss of foundation support due to seismically induced settlements is unlikely.

4.4 SEISMICALLY INDUCED SETTLEMENT OF UNSATURATED SANDS

In addition to the settlement of sand deposits that undergo liquefaction, strong seismic shaking can also cause settlement or compaction of sands above the groundwater as well. Seismic-induced settlement of sands above the groundwater can potentially result in settlement of the ground surface. The estimated settlement under the design seismic scenario of the medium dense to dense sandy layers encountered in the shallow subsurface is negligible at the project site.

4.5 LATERAL SPREADING

Lateral spreading happens when surficial soil moves in a direction parallel to the ground surface due to liquefaction of underlying subsurface soils layers. Lateral spreading usually occurs where the ground surface has a slope less than 6 percent and may result in damage to structures or other improvements due to differential lateral movements (Naeim, 1989). Lateral spreading is not likely to occur at the project site during seismic events.

4.6 GROUND LURCHING

Ground lurching is movement of the ground surface during seismic event, resulting in cracks and ridges developing perpendicular to the slope face. Areas underlain by thick alluvium with loose granular soils or clay soils with high moisture are susceptible to ground lurching. Ground lurching often causes damage to lightly loaded structures such as pavements, walkways, pipelines, and other near-surface improvements located within the failure zone. The shallow subsurface at the project site at Crowther Avenue consists predominately of loose, granular

materials placed as artificial fill. Therefore ground lurching is likely to occur during an earthquake event unless the existing material is removed and replaced, or recompacted in place.

4.7 SEISMIC PARAMETERS – 2007 CALIFORNIA BUILDING CODE

The site class per Table 1613.5.2, of the 2007 California Building Code (2007 CBC) is based upon the site soil conditions. It is our opinion that Site Class D is most consistent with the subject site soil conditions.

For seismic design of the structures based on the seismic provisions of the 2007 CBC, we recommend the parameters in the following Table 1:

TABLE 1
SEISMIC PARAMETERS – 2007 CALIFORNIA BUILDING CODE

Seismic Item	Value	CBC Reference
Site Class	D	Table 1613.5.2
Site Coefficient F_a	1.0	Table 1613.5.3 (1)
S_s	1.50	Figure 1613.5 (3)
S_{MS}	1.50	Section 1613.5.3
S_{DS}	1.00	Section 1613.5.4
Site Coefficient F_v	1.5	Table 1613.5.3 (2)
S_1	0.60	Figure 1613.5 (4)
S_{M1}	0.90	Section 1613.5.3
S_{D1}	0.60	Section 1613.5.4

5.0 CONCLUSION AND RECOMMENDATIONS

Based on the result of our investigation, the construction of the proposed new development is feasible from a geotechnical standpoint. Presented below are recommendations for site grading, and other geotechnical aspect of the project for incorporating in the project plan and specifications.

5.1 SITE GRADING

The anticipated site grading activities will consist of site preparation, excavation and removal, subgrade preparation, backfilling, and other earthwork activities described in the following paragraphs. All site grading activities should be performed in accordance with the local grading codes and the latest edition of the Standard Specifications for Public Works Construction

(Greenbook, 2006), where applicable. The more stringent requirements between the two should prevail.

5.1.1 Subgrade Preparation

Any uncontrolled fills or soils disturbed during site clearing operations in the construction areas should be removed down to undisturbed native soils. The exposed subgrade soils can then be prepared to receive the required engineered fills for the mass grading of the site. Based on our filed investigations, excavation and fill placement of up to 1 foot below existing ground surface will be required during the Metrolink Station development. If unsuitable soft or unsuitable soils are encountered during excavation, additional excavation to remove the unsuitable materials to expose a firm and unyielding surface will be required.

Prior to construction, vegetation, trash, and debris should be cleared and disposed of offsite. During grading, the contractor should take all necessary measures to protect existing utilities within the grading limits. All abandoned utilities encountered should be drained for all content, if any, and properly capped.

Prior to placing fill, the subgrade in all parking and pavement areas should be scarified to a depth of 6 inches, moisture-conditioned to approximately 2 percent above optimum and compacted to at least 90 percent relative compaction. The finish subgrade should be maintained moist at all time prior to placing fill or other improvements.

Moisture conditioning is intended to adjust the soil moisture content through either the addition of water where soil moisture is below the recommended level or by allowing evaporation to occur where elevated soil moisture contents are present. Moisture conditioning operations should include sufficient mixing of the materials to produce a relatively uniform soil mixture and moisture condition. Moisture conditioning should be performed prior to the application of compaction effort.

Once the subgrade and fill soil have been moisture conditioned and compacted, the soil should not be allowed to dry out prior to additional fill placement or concrete placement at finished grade. If it is dried out prior to compaction of the fill or prior to foundation and slab-on-grade construction, reprocessing of the soil is required in order to reestablish the recommended soil moisture content. Even with proper site preparation, there will be some effects of soil moisture change on concrete flatwork.

When the work is interrupted by heavy rains, fill operations shall not be resumed until the Geotechnical Engineer indicates that the moisture content, density and stability of previously placed fill are as specified. All soft or wet subgrade soil encountered during construction should be stabilized prior to the placement of new fill and further construction. If earthwork is performed during or soon after periods of precipitation or in late winter to early spring, the subgrade soils may be near their saturation level. Wet to saturated soils may become unstable or "pump" under dynamic loading such as equipment movement during grading and may not respond to densification techniques. Typical remedial measures included discing and aerating the

soil during dry weather, mixing the soil with dryer materials; removing and replacing the soil with an approved fill material; or mixing the soil with an approved lime or cement product. Our firm should be consulted prior to implementing remedial measures to observe the unstable subgrade conditions and provide appropriate recommendations.

Special Considerations for Subgrade Along Alignment of Proposed Third Track

The existing subgrade (top of existing embankment) along the alignment of the proposed third track should be excavated and replaced in lifts of 6 inches. Each lift shall be moisture-conditioned to approximately 2 percent above optimum and compacted to at least 95 percent relative compaction as per ASTM D1557. The excavated material should be screened to ensure that it contains no material greater than 1 inch in maximum dimension, as required by subsection 3.06, §02300, Earthwork, SCRRA Standard Specifications, 2003. Subsection 3.05, §02300 also requires that any excavation that exposes or potentially could expose an existing underground utility or structure marked as "protect in place," "to remain," or similar, or any unknown utility or structure found and deemed requiring special methods by the Engineer, shall be classified as a structural excavation and backfill for purposes of replacing and compacting fill. Structural backfill should be placed in accordance with §19-3.06, Structure Backfill, of the Caltrans Standard Specifications.

5.1.2 Utility Trench Bedding and Backfill

Bedding materials consisting of sand, gravel, or crushed aggregate should be used to backfill around utility pipes to approximately 1 foot above the top of a pipe. Onsite soils which have a Sand Equivalent (SE) of 30 or greater can also be used as bedding. Prior to placing the pipes, the pipe trench subgrade should be observed by a representative of the project geotechnical engineer. If the exposed subgrade is loose or unstable, the unsuitable subgrade soil must be excavated and replaced with bedding material. Bedding must be placed uniformly on each side of the pipe and mechanically compacted. Flooding or jetting to densify the bedding materials is not allowed due to the clayey nature of onsite soils. The fill should be placed in loose lifts not to exceed 8 inches, moisture-conditioned to 2 to 4 percent above optimum, and mechanically compacted to at least 90 percent relative compaction in accordance with ASTM D1557. Thinner lifts may be necessary to achieve the recommended level of compaction of the backfill due to equipment limitations.

Trenches in pavement areas should be capped with at least 12 inches of compacted, on-site soil similar to that of the adjoining subgrade. The upper 12 inches of trench backfill in areas to be paved should be compacted to at least 95 percent relative compaction. Special care should be taken in the control of utility trench backfilling in the pavement areas. Poor compaction may cause excessive settlement resulting in damage to the pavement structural section.

Where trenches exceed ten feet in depth from design finished grade, the percent relative compaction on cohesive soils may need to be increased to reduce the potential for trench backfill settlement. Should these conditions exist, compaction requirements should be reviewed by the Geotechnical Engineer as a part of the plan review process.

5.1.3 Bulking and Shrinkage

The change in volume of excavated materials upon replacement and recompaction as fill varies according to soil type, density, and location. This volume change is represented as a percentage increase (bulking) or decrease (shrinkage) in volume of fill after removal and recompaction. Based on our laboratory testing data, we estimate the near-surface onsite soil will have average compaction shrinkage on the order of 5 to 10 percent. This estimate does not factor in removal of oversize material or debris, if any.

5.2 LATERAL EARTH PRESSURES AND FRICTION COEFFICIENTS

Anticipated lateral soil pressures and frictional coefficients for the design of the foundations and retaining structures at the site are listed in the following Table 2.

TABLE 2. SUMMARY OF LATERAL LOAD/RESISTANCE FACTORS

Lateral Load/Resistance Conditions	Equivalent Fluid Pressure/Lateral Resistance
Active Pressure (Level backslope)	40 pcf
Active Pressure (3H:1V backslope)	50 pcf
Active Pressure (2H:1V backslope)	70 pcf
At-Rest Pressure	60 pcf
Passive Pressure	415 pcf
Friction Factor (native subgrade or imported granular fill)	0.35

Note: *A total unit weight of 120 pounds per cubic foot (pcf) was used in calculating the earth pressures.*

The values listed in Table 2 do not include pressure due to equipment loads or other surcharge loading behind a retaining wall. If a retaining wall is subjected to surcharge loads, it should be designed for an additional uniform lateral pressure equal to one-half of the anticipated surcharge loads.

Active pressure should be used in computations for a retaining wall which is free to rotate at the top. At-rest pressures should be utilized if the wall is restrained from moving at the top, or in the case of below-grade walls of structures such as utility and/or cable vaults, if any.

The top one foot of the subgrade should be deleted in passive pressure computations for building foundations and buried structures. For computations of total lateral resistance of a buried

structure, the frictional resistance against sliding at the base of the footing can be added to the passive resistance of the vertical face to compute the total lateral resistance.

Retaining wall backfill and typical subdrain details for conditions of native soil, imported sand or crushed rock are provided in Appendix E.

The dynamic lateral earth pressure acting on retaining walls may be considered to be in the shape of an inverted triangle with the resultant acting at two-thirds the height of the wall above the base of the wall. The inverted triangular pressure distribution may be evaluated using an equivalent fluid pressure value of 40 pcf.

The foregoing values of lateral earth pressures and frictional coefficient represent ultimate soils values and a factor of safety consistent with design conditions should be included in their usage. For stability against lateral sliding which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.l5. For stability against lateral sliding which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.

5.3 SOIL CORROSIVITY

Excessive sulfate or chloride in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. Concrete mix design criteria for concrete structures in contact with soils containing sulfate or chloride are addressed in the California Building Code. Soils can also react with buried metals resulting in corrosion.

A sample of the near-surface onsite soils was tested for soluble sulfate and chloride content, and for determination of pH and resistivity. Test results indicate a pH values of 8.4, resistivity of about 2700 ohm-cm, and sulfate and chloride concentrations of 984 and 875 ppm, respectively. Although both soluble sulfates and soluble chlorides were detected, these concentrations are considered insufficient to damage reinforced concrete and no special precautions, such as specific cement type, water-cement ratio or compressive strength, are required in design of the concrete mix to be used for concrete in contact with soils at the project site. Based on the estimated pH and resistivity, the soil is not considered corrosive. Nonetheless, we recommend that all buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron be properly protected against corrosion unless a qualified corrosion engineer can be consulted regarding the corrosion potential at the site.

5.4 SITE DRAINAGE

5.4.1 Surface Drainage

Final site grading should provide surface drainage away from retaining walls, pavements and slabs-on-grade to reduce the percolation of water into the underlying soils. Grades should be

sloped away from the structures a minimum of 4 percent in landscaped areas and 2 percent in paved areas for a horizontal distance of at least five feet. Even with these grades there is a potential that ponding conditions may develop adjacent to any building structures over time. Where positive drainage around buildings cannot be established and maintained as part of the site grading and paving design, area drains should be provided around the structures in landscape areas and possibly within the areas of concrete flatwork where it abuts the structures.

Ideally, pavement areas should be sloped at a minimum of 2 percent and drainage gradients maintained to carry all surface water off the site due to the slightly porous or permeable nature of asphalt concrete. Surface water should not be allowed to pond anywhere on the site during or after construction.

5.4.2 Seepage Control

Where slabs or pavements abut landscaped areas, some method should be used to protect the aggregate base layer and subgrade soils against infiltration of water from the landscaped areas. Although this is a concern at all locations where landscaping abuts a pavement, it is a primary concern where the landscape areas adjoin an inward sloping pavement. If landscape water or surface runoff is allowed to seep into the pavement section, the water will likely migrate through the base section and across the underlying subgrade, possibly reducing the service life of the pavement. Where landscape areas are adjacent to crowned or cross-sloping pavements draining toward the landscape area, the need for a cut-off is considered less important because any water entering the pavement through the pavement surface will be directed by the sloping subgrade to drain out of the pavement section.

Methods of reducing seepage into the pavement sections may include vertical curbs extending at least 3 inches below the base rock/subgrade interface, the use of commercially available continuous impervious root guards or subdrains behind curbs in landscape areas. Deepened curbs should be carefully constructed such that they extend below the base section and are poured neat against undisturbed native soil or compacted fine-grained fill soils. The cut-offs should be continuous, and any utility trenches (irrigation lines, electrical conduit, etc.) that extend through or under the curbs should be sealed with compacted clayey or silty soil or poured in-place concrete.

Care should be taken to prevent over-watering of landscaped areas adjacent to pavements. Weep holes in the curbs around landscape areas may also aid in releasing excess landscape water before it percolates into the subgrade below the adjacent pavement areas or slabs-on-grade. Where landscape areas are adjacent to crowned or cross-sloping pavements draining toward the landscape area, the need for a cut-off is considered less important because any water entering the pavement through the pavement surface will be directed by the sloping subgrade to drain out of the pavement section.

5.5 CONCRETE SLAB-ON GRADE

Concrete slab-on-grade for the new platform area should be constructed on at least 2 feet of compacted subgrade. The slab-on-grade should be at least 5 inches thick and reinforced with No. 3 rebars at 18 inches on center. Concrete slab-on-grade may be designed using a maximum bearing pressure of 1000 psf. Concrete slabs should be underlain by a minimum 2 inches and maximum 4 inches of sand or granular material having a minimum sand equivalency of 30.

Frequent construction or control joints should be provided in all concrete slabs where cracking is objectionable. This can be done by installing contraction joint material as the concrete is placed or by saw cutting the fresh concrete. Contraction or weakened plane joints should extend slightly deeper than one-quarter the slab thickness to be effective. Control joints should be spaced a maximum of 30 times the slab thickness to reduce the potential for unsightly panel cracks as a result of soil displacement and concrete shrinkage. This would result in contraction joints at 10-foot centers for a four-inch thick slab. In the event that control or contraction joints are to be constructed by saw cutting of the slabs, saw cuts should be made by soff-cut sawing within 4 to 12 hours after the initial hardening (not curing) of the concrete, as required by atmospheric conditions. The contractor should be responsible for monitoring of the concrete during initial set or hardening and to determine the optimal timing for cutting of the slabs.

Exterior concrete slabs-on grade may be subjected to periods of drying, and consequently, to edge effects due to the fluctuation in the moisture content of the subgrade soils along the outer edges of the slab. Deepened edge sections (also referred to as down turned curbs) will aid in reducing the potential for the shrinkage and swelling of the underling soils. By deepening the edge section to a minimum of 12 inches below the subgrade soils, there is less potential for soil moisture change below at least the perimeter of the slabs.

The above recommendations, including deepened edge sections and steel reinforcement are intended to help reduce the potential for distress in concrete slab, but may not eliminate such distress completely

5.6 PAVEMENT DESIGN

The subgrade soils along Crowther Avenue and in the Parking Lot A area consist of clayey sands with a soil resistance “R” value (R-value) of 41. Lean Clay with a R-value of less than 5 predominates in the subgrade soils present in the Parking Lot B and C areas.

Flexible pavement consisting of either a composite section comprising Hot Mix Asphalt (HMA) over Class 2 Aggregate Base (AB), or a full-depth Asphalt Concrete (AC) section is recommended. Based on the established standard practice of designing flexible pavements in accordance with State of California Department of Transportation (Caltrans) for projects within California, we have develop pavement sections in accordance with the procedure presented in Caltrans Standard Test Method 301. This pavement design procedure is based on the volume of traffic (Traffic Index) and the R-value of the subgrade soils.

Based on design R-value of 41 and the Caltrans Flexible Pavement Design Method, we determined the required pavement sections for a provided Traffic Index (TI) value of 7 for Crowther Avenue and TI values of 4 and 5 for the parking stalls and driveway areas, respectively, of Parking Lot A. These sections are reported in Tables 3 and 4 below. Table 5 lists the recommended pavement sections for Proposed Lots B and C, using a design R-value of 5 and TI values of 4 and 5 for the parking stalls and driveway areas, respectively.

TABLE 3. RECOMMENDED FLEXIBLE PAVEMENT STRUCTURAL SECTIONS FOR CROWTHER AVENUE (R=41)

Traffic Index	Flexible Pavement Section Thickness (inches)	
	Composite	Full-Depth
7	3.5-inch AC over 8-inch AB or 4.5-inch AC over 6-inch AB	7-inch AC

Note: *AC = Asphalt Concrete; AB = Aggregate Base (Class 2)*

TABLE 4. RECOMMENDED FLEXIBLE PAVEMENT STRUCTURAL SECTIONS FOR PROPOSED LOT A (R=41)

Traffic Index	Flexible Pavement Section Thickness (inches)	
	Composite	Full-Depth
4	2-inch AC over 4-inch AB	4-inch AC
5	2.5-inch AC over 5-inch AB or 3-inch AC over 3-inch AB	4-inch AC

Note: *AC = Asphalt Concrete; AB = Aggregate Base (Class 2)*

TABLE 5. RECOMMENDED FLEXIBLE PAVEMENT STRUCTURAL SECTIONS FOR PROPOSED LOTS B & C (R=5)

Traffic Index	Flexible Pavement Section Thickness (inches)	
	Composite	Full-Depth
4	3-inch AC over 6-inch AB or 4-inch AC over 4-inch AB	6-inch AC
5	3.5-inch AC over 9-inch AB or 4.5-inch AC over 6-inch AB	7-inch AC

Note: *AC = Asphalt Concrete; AB = Aggregate Base (Class 2)*

Portland cement concrete pavement is recommended for regions of the pavement in which heavy truck traffic or intense vehicle stresses are expected. Portland cement concrete pavements are recommended to be a minimum of 6 inches in thickness underlain by a minimum thickness of 4 of crushed aggregate base course to serve as a leveling mat during construction and to improve load transfer across construction joints. As with any concrete slab, it is important to provide for concrete cracking by constructing weakened planes and/or construction joints at frequent intervals.

Prior to placement of aggregate base, the subgrade soils should be processed to a minimum depth of 6 inches, moisture-conditioned, as necessary, and recompacted to a minimum of 90 percent relative compaction in accordance with ASTM D1557.

Aggregate base should conform to Class II Base materials in accordance with Caltrans standards. The aggregate base should be placed in loose lifts and compacted to a minimum of 95 percent relative compaction in accordance with ASTM D1557.

When asphalt pavement meet concrete or existing pavements, the concrete and /or asphalt should be sprayed with emulsion. Proper asphalt compaction next to concrete pavement, curbs, and existing pavement is important to provide a relative impermeable contact between the two materials.

5.7 REVIEW OF CONSTRUCTION PLANS

Recommendations contained in this report are based on preliminary plans. Willdan Geotechnical should review the final construction plans and specifications in order to confirm that the general intent of the recommendations contained in this report have been incorporated in the documents. Recommendations contained in this report may require modification or additional recommendations based on the final design.

5.8 GEOTECHNICAL OBSERVATION AND TESTING

It is recommended that all grading, excavation, and installation of foundations be performed under the observation and testing of Willdan Geotechnical during the following stages of construction:

- Grading operations, including overexcavations and placement of compacted fill
- Observation of foundation excavation
- Preparation of pavement subgrade
- Placement of base and pavement
- Excavations and backfilling for utility trenches
- When any unusual subsurface conditions are encountered

6.0 CLOSURE

This report is intended for the use by Willdan Engineering and its consultants for the design of the proposed developments at the Metrolink Station in the City of Placentia, California, at the location indicated in Figure 1, Site Location Map.

The findings and recommendations contained in this report are based on the results of the field investigation, laboratory tests, and engineering analyses, combined with an extrapolation of subsurface conditions between and beyond the boring locations.

Services performed by Willdan Geotechnical have been conducted in accordance with generally accepted professional geotechnical engineering principles and practices at this time. No other representation, express or implied, and no warranty or guarantee is included or intended.

Geotechnical Engineering is one of the newest divisions of Civil Engineering. This branch of Civil Engineering is constantly improving as new technologies and understanding of earth sciences advance. Although your site was analyzed using appropriate and current techniques and methods, undoubtedly there will be substantial future improvements in this branch of engineering. In addition to advancements in the field of Geotechnical Engineering, physical changes in the site due to site clearing or grading activities, new agency regulations, or possible changes in the proposed structures or development after issuance of this report will result in the need for professional review of this report. Updating or revisions to the recommendations report, and possibly additional study of the site may be required at that time. In light of this, the Owner should be aware that there is a practical limit to the usefulness of this report without critical review. Although the time limit for this review is strictly arbitrary, it is suggested that two years be considered a reasonable time for the usefulness of this report.

7.0 REFERENCES

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APPENDIX A. BORING LOGS AND CPT LOGS

MAJOR DIVISIONS			SYMBOLS		TYPICAL NAMES
COARSE GRAINED SOILS Half is larger than no. 200 sieve	GRAVELS More than half coarse fraction is larger than no. 4 sieve	Clean gravels with little or no fines	GW		Well graded gravels, gravel-sand mixtures
			GP		Poorly graded gravels, gravel-sand mixtures
		Gravels with over 12% fines	GM		Silty gravels, poorly graded gravel-sand-silt mixtures
			GC		Clayey gravels, poorly graded gravel-sand-clay mixtures
	GRAVELS More than half coarse fraction is smaller than no. 4 sieve	Clean sands with little or no fines	SW		Well graded sands, gravelly sands
			SP		Poorly graded sands, gravelly sands
		Sands with over 12% fines	SM		Silty sands, poorly graded sand-silt mixtures
			SC		Clayey sands, poorly graded sand-clay mixtures
FINE GRAINED SOILS Half is smaller than no.	SILTS AND CLAYS Liquid limit less than 50		ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic clays and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50		MH		Inorganic silts, micaceous or diatomaceous fine, sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils

SAND AND GRAVEL	BLOWS/FOOT*
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

SILTS & CLAYS	Pocket Penetrometer (tsf)	BLOWS/FOOT*
VERY SOFT	0 - 1/4	< 2
SOFT	1/4 - 1/2	2 - 4
Medium Stiff	1/2 - 1	5 - 8
STIFF	1 - 2	9- 15
VERY STIFF	2 - 4	16 - 30
HARD	OVER 4	OVER 31

CONSISTENCY

* Applicable only for Standard Penetration Tests (ASTM D-1586)

STANDARD PENETRATION TEST
Split Barrel sampler in accordance with ASTM D 1586-84

DRIVE SAMPLE
2.42" inside diameter, 140# weight, 30" drop (unless otherwise specified on boring log)

NO SAMPLE RECOVERY

BULK SAMPLE
Loose cuttings from exploration

WATER TABLE

TEST TYPE
Results shown in Appendix B

	OTHER
Chemical Analysis	CA
Sieve Analysis	SA
Unconfined Compression	UC
Hydrometer Analysis	HA
Expansion Index	EI
Compaction	Max
% Passing #200 Sieve	W
Pocket Penetrometer	p
Direct Shear	DS
Direct Shear (Remolded)	DS_R
Atterberg Limits	AL
Consolidation	CN
R-Value	R

EXPLORATION LOG KEY

LOG OF BORING B-1

Borehole Location: **See Figure 2**	Approx. Elevation: **229 ft**	Sheet **1** of **1**	
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**	
Drilling Equipment: **B-61**	Total Depth: **21.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0	7.5" Asphalt, 14" Aggregate Base							
225	5	Fill Clayey Sand (SC), loose, brown, moist			S-1	2/2/4	7.3		SA
220	10	Native Poorly Graded Sand with Silt (SP-SM), dense, brown, moist			R-2	12/22/26	4.5	110.0	
215	15	Medium dense to dense, brown, moist			S-3	7/12/13	4.3		
210	20	Very dense, brown, moist			R-4	22/50/(6")	3.6	109.0	
205	25	Total Depth 21.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							
200	30								
195									

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FIGURE A2

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-2

Borehole Location: **See Figure 2**	Approx. Elevation: **223 ft**	Sheet **1** of **1**
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**
Drilling Equipment: **B-61**	Total Depth: **31.5 ft**	Depth to Groundwater: **No GW Encountered**
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**	
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**
Hammer Information: **Weight-140 lbs and Drop-30 Inches**		

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0	7" Asphalt, 7" Aggregate Base							
220		Fill Clayey Sand (SC), very loose, brown , moist , 4 rings recovered			Bulk				R
	5				R-1	2/2/2	5.2	116.0	DS
215		Native Poorly Graded Sand with Silt and Gravel (SP/ SM), medium dense, light brown, moist							
	10				S-2	5/5/7	3.4		
210									
	15	Grades medium dense to dense			R-3	14/18/22	4.4	111.0	
205									
	20	Grades very moist			S-4	6/9/11	8.3		
200									
	25	Dense to very dense, brown, moist			R-5	14/26/39	8.1	116.0	
195									
	30	Lean Clay with Sand (CL), very stiff, brown, very moist to wet			S-6	8/11/14	33		
190		Total Depth 31.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							

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FIGURE A3

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-3

Borehole Location: **See Figure 2**	Approx. Elevation: **231 ft**		Sheet **1** of **1**
Borehole Coordinates:	Date Started: **08/05/09**	Date Finished: **08/05/09**	
Drilling Equipment: **B-61**	Total Depth: **16.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
230	0	Fill Lean Clay with Sand (CL), stiff, olive brown, moist			S-1	5/7/8	7.8		SA
					Bulk				R
	5				R-2	7/7/8	13	92.0	
225		Native Silty Sand (SM)/ Sandy Silt (ML)), loose to medium dense, brown, moist							
	10	Medium dense, brown, moist			S-3	6/6/8	12.6		
220									
	15	Poorly Graded Sand with Silt (SP/ SM), medium dense, brown, moist							
215					R-4	9/12/14	1.4		
		Total Depth 16.5 ft No GW Encountered Backfilled with Native Soil.							
210	20								
	25								
205									
	30								
200									

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FIGURE A4

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-4

Borehole Location: **See Figure 2**	Approx. Elevation: **231 ft**	Sheet **1** of **1**	
Borehole Coordinates:	Date Started: **08/05/09**	Date Finished: **08/05/09**	
Drilling Equipment: **B-61**	Total Depth: **31.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
230	0	Fill Clayey Sand with Gravel (SC), medium dense, brown, moist			R-1	13/30/16	7	107.0	
225	5	Loose to medium dense, brown, moist, No recovery			S-2	3/5/5			
		Native Silty Sand (SM), loose to medium dense, brown, moist							
220	10				R-3	4/4/5	5.5	112.0	
215	15	Lean Clay (CL), very stiff, brown, very moist			S-4	8/10/10	18.2		
		Poorly Graded Sand with Silt (SP/ SM), medium dense to dense, brown, slightly moist							
210	20				R-5	13/16/22	3.1	110.0	
205	25				S-6	6/13/16	2.6		
200	30	Grades very dense			R-7	15/40/43	2.7	121.0	
		Total Depth 31.5 ft No GW Encountered Backfilled with Native Soil.							

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FIGURE A5

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-5

Borehole Location: **See Figure 2**	Approx. Elevation: **235 ft**	Sheet **1** of **1**
Borehole Coordinates:	Date Started: **08/05/09**	Date Finished: **08/05/09**
Drilling Equipment: **B-61**	Total Depth: **16.5 ft** / Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**	
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**
Hammer Information: **Weight-140 lbs and Drop-30 inches**		

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
235	0	3.5" Asphalt, 3" Aggregate Base							
		Fill Lean Clay (CL)/ Poorly Graded Sand with Silt (SP-SM), stiff, dark grayish brown, moist			S-1	15/9/4	9.5		
					Bulk				CA
230	5				R-2	3/6/7	15.12	111.0	SA
225	10	Native Poorly Graded Sand with Silt (SP/ SM), loose, brown, moist			S-3	4/4/5	5.09		
220	15	Grades dense, dry			R-4	14/24/26	0.86	116.0	
		Total Depth 16.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							
215	20								
210	25								
205	30								

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FIGURE A6

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-6

Borehole Location: **See Figure 2**	Approx. Elevation: **227 ft**	Sheet **1** of **1**	
Borehole Coordinates:	Date Started: **08/05/09**	Date Finished: **08/05/09**	
Drilling Equipment: **B-61**	Total Depth: **21.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0		2" Asphalt, 8" Aggregate Base							
225			Fill Lean Clay with Sand(CL), medium stiff, very dark brown, very moist			S-1	2/3/4	18.8		SA
						Bulk				Max, El
	5		Stiff, brown, moist			R-2	5/7/7	17.2	109.0	
220			Native Poorly Graded Sand with Silt (SP/ SM), medium dense, brown, slightly moist							
	10					S-3	4/4/7	1.4		
215										
	15		Grades dense			R-4	15/19/23	2.7	109.0	
210										
	20					S-5	7/13/19	1.4		
205			Total Depth 21.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							
	25									
200										
	30									
195										

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FIGURE A7

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-7

Borehole Location: **See Figure 2**	Approx. Elevation: **224 ft**	Sheet **1** of **2**
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**
Drilling Equipment: **B-61**	Total Depth: **51.5 ft**	Depth to Groundwater: **No GW Encountered**
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**	
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**
Hammer Information: **Weight-140 lbs and Drop-30 inches**		

Elevation (ft)	Depth (ft)	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	0	1.5" Asphalt, 4" Concrete, 4" Aggregate Base							
220	5	Fill Lean Clay (CL)/ Poorly Graded Sand with Clay (SP-SC), medium stiff, dark brown, moist			R-1	7/3/6	12.8	118.0	
					R-2	3/5/8	13.1	116.0	SA
215	10	Native Sandy Silt (ML), stiff. brown, moist			S-3	3/4/5	6.2		
210	15	Poorly Graded Sand with Silt (SP/ SM), loose to medium dense, brown, moist Grades medium dense			S-4	4/7/9	11		
205	20	Grades dense			S-5	12/20/24	4.7		
200	25	Grades very dense			S-6	15/27/36	4.7		
195	30				S-7	4/4/6	28.1		
190		Lean Clay (CL) Perched water appears at 31 feet Stiff, brown, very moist to wet							

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FIGURE A8a

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-7

Borehole Location: **See Figure 2**	Approx. Elevation: **224 ft**	Sheet **2** of **2**	
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**	
Drilling Equipment: **B-61**	Total Depth: **51.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
	35		Lean Clay (CL) Very stiff, brown, **very moist**			S-8	7/7/12	17.5		
185	40		Grades stiff			R-9	5/7/11	24.4	98.0	
180	45		Grades very moist to wet			R-10	8/11/16	12.6	115.0	
175	50					R-11	10/10/12	24.6	99.0	
170	55		Total Depth 51.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							
165	60									
160	65									
155										

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FIGURE A8b

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-8

Borehole Location: **See Figure 2**	Approx. Elevation: **226 ft**	Sheet **1** of **2**	
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**	
Drilling Equipment: **B-61**	Total Depth: **51.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
225	0		4.5" Asphalt, 9" Aggregate Base							
			Native Well Graded Sand with Clay (SW/ SC), medium dense, light yellowish brown, slightly moist			R-1	21/26/21	3.7	110.0	
220	5					S-2	9/10/14	3.9		SA
215	10		Grades very dense			R-3	11/29/60	3.4	115.0	
210	15					S-4	4/14/17	4.1		
205	20		Grades dense			R-5	40/21/29	2.1	110.0	
200	25					S-6	9/18/20	2.4		
195	30		Grades very dense, moist			R-7	20/46/75	6.5	125.0	

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Project Number: 17340-2000

FIGURE A9a

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

LOG OF BORING B-8

Borehole Location: **See Figure 2**	Approx. Elevation: **226 ft**		Sheet **2** of **2**
Borehole Coordinates:	Date Started: **08/04/09**	Date Finished: **08/04/09**	
Drilling Equipment: **B-61**	Total Depth: **51.5 ft**	Depth to Groundwater: **No GW Encountered**	
Drilling Method: **Hollow Stem Auger**	Borehole Diameter: **7 inches**		
Driller: **Whitcomb Drilling Inc.**	Logged By: **SM**	Checked By: **RK**	
Hammer Information: **Weight-140 lbs and Drop-30 inches**			

Elevation (ft)	Depth (ft)	Lithology	Description	Remarks	Sampler	Number	Blows/6"	Moisture Content (%)	Dry Density (pcf)	Additional Tests
190	35		Lean Clay (CL), stiff, brown, very moist. Perched water appears at 35 feet.			S-8	4/4/8	21.7		
185	40		Grades hard			R-9	47/75	19.4	112.0	
180	45		Grades very stiff to hard, very moist to wet			8	8/18/13	36.4		
175	50		Grades very moist			S-11	6/9/10	25		
170	55		Total Depth 51.5 ft No GW Encountered Backfilled with Native Soil and Patched with Quick Cement.							
165	60									
160	65									

WILLDAN Geotechnical

Proposed Metrolink Station Development
Placentia, California

Project Number: 17340-2000

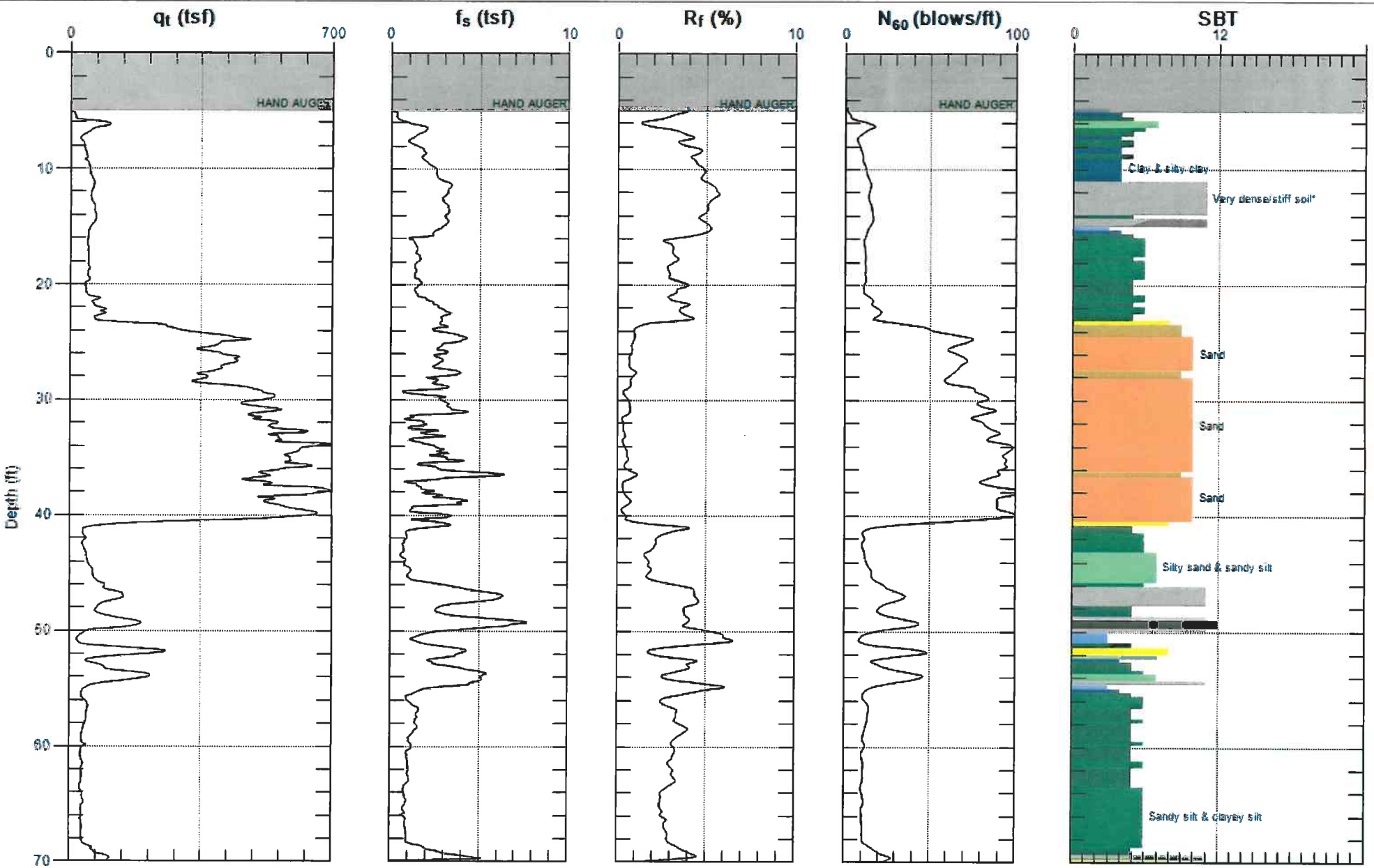
FIGURE A9b

LOG OF BORING 17340-2000 GINT.GPJ ARROYO.GDT 10/20/09

WILLDAN GEOTECHNICAL

Site: METROLINK
Sounding: CPT-01

Engineer: S.MANTEGH
Date: 8/4/2009 08:39



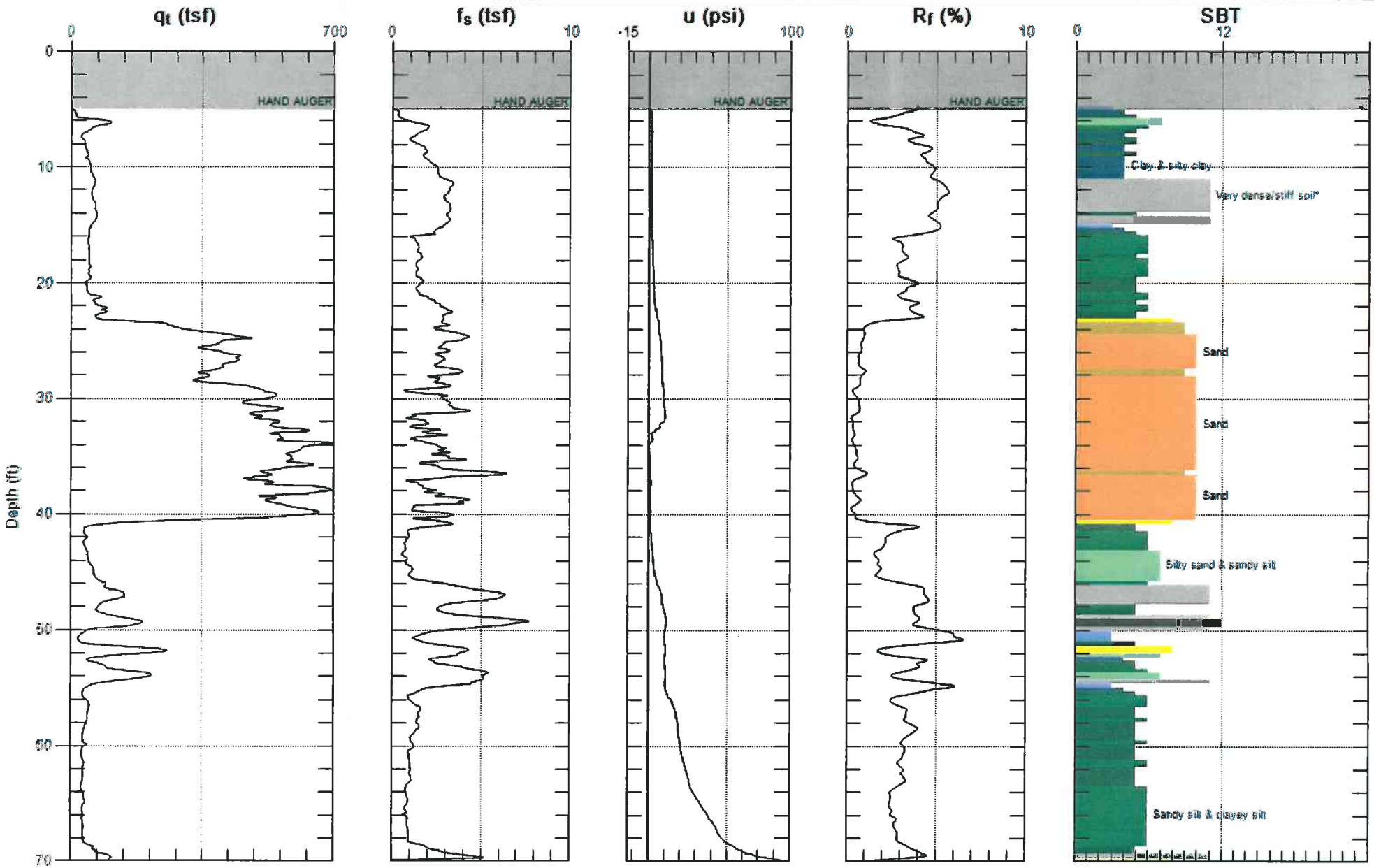
Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

WILLDAN GEOTECHNICAL

Site: METROLINK
Sounding: CPT-01

Engineer: S.MANTEGH
Date: 8/4/2009 08:39



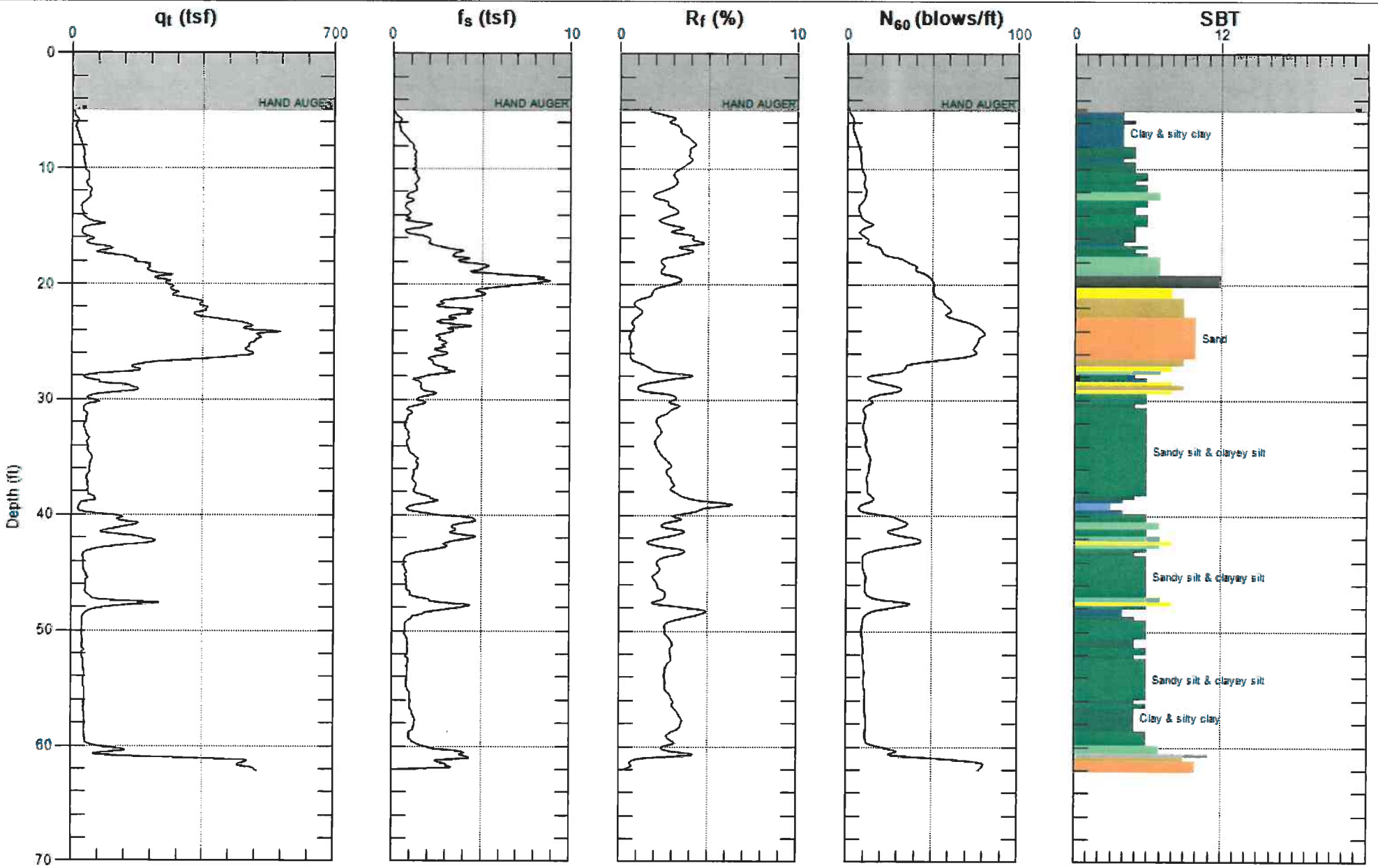
Max. Depth: 70.046 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

WILLDAN GEOTECHNICAL

Site: METROLINK
Sounding: CPT-02

Engineer: S.MANTEGH
Date: 8/4/2009 07:34



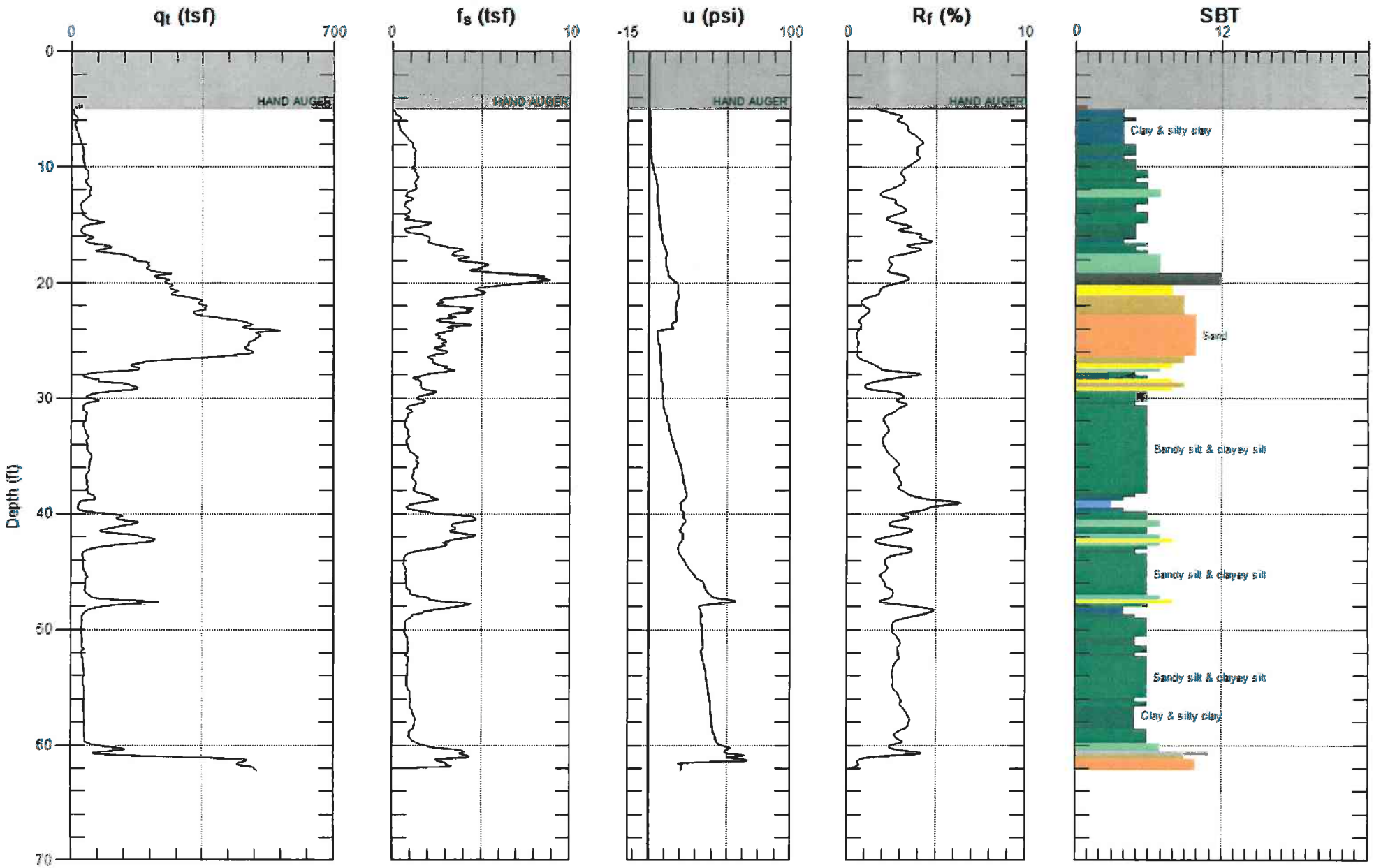
Max. Depth: 62.172 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

WILLDAN GEOTECHNICAL

Site: METROLINK
Sounding: CPT-02

Engineer: S.MANTEGH
Date: 8/4/2009 07:34



Max. Depth: 62.172 (ft)
Avg. Interval: 0.328 (ft)

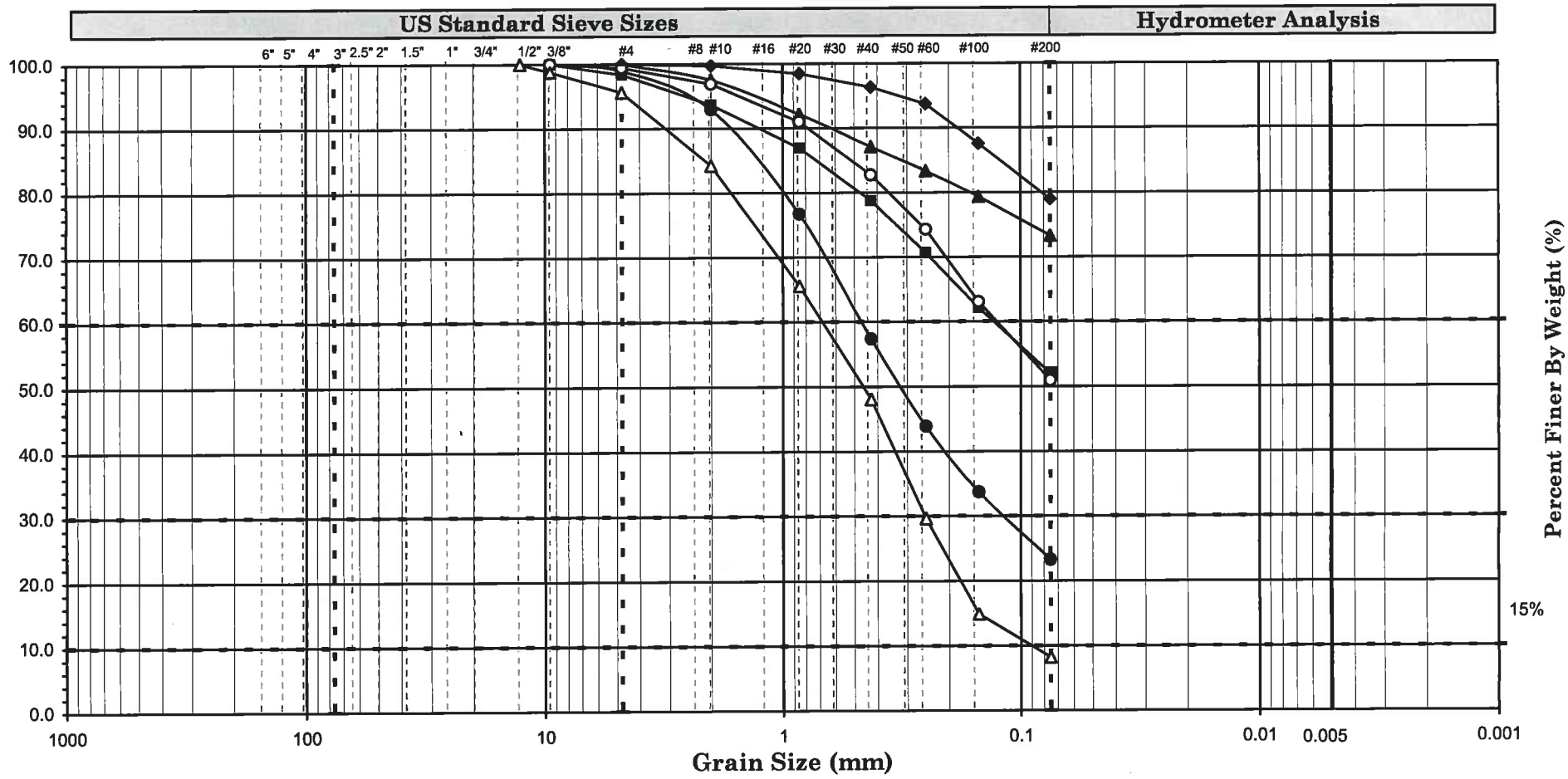
SBT: Soil Behavior Type (Robertson 1990)

APPENDIX B. LABORATORY TEST RESULTS

WILLDAN Geotechnical

Summary of Laboratory Test Results
Proposed Metrolink Station Development, Placentia, California

				Atterberg Limits		Expansion Index	R-Value	Compaction Test		Direct Shear				Corrosivity			
										Peak		Ultimate					
Boring No:	Sample No:	Depth (ft)	Soil Description	Liquid Limit	Plasticity Index			Max Density (pcf)	Opt. Moisture (%)	(C) (psf)	(Ø) (Degree)	(C) (psf)	(Ø) (Degree)	pH	Soluble Sulfates (ppm)	Chloride (ppm)	Resistivity (ohm-cm)
				ASTM D4318		ASTM D4829	CT-301	CT-216		(ASTM D-3080/ CT-236)				(CT-412, 417, 643)			
B-2	Bulk	2 to 7	SC				41										
	R-1	5	SC							350	30.67	110	30.16				
B-3	Bulk	2 to 6	CL				< 5										
B-5	Bulk	2 to 6	Cl/ SP-SM											8.4	984	875	2,700
B-6	Bulk	2 to 7	CL			88		14.5	120								
B-7	S-8	35	CL	34	18												
B-8	R-9	40	CL	31	14												



Cobbles	Gravel		Sand			Silt	Clay
	Coarse	Fine	Coarse	Medium	Fine		

Symbol	Boring Number	Sample Number	Depth (ft)		Depth (m)		Soil Color	Soil Description	U.S.C.S.
●	B - 1	S - 1	5.0	6.0	1.53	1.83	Brown	Clayey Sand	SC
▲	B - 3	S - 1	2.0	3.0	0.61	0.92	Olive Brown	Lean Clay with Sand	CL
■	B - 5	R - 2	5.0	6.0	1.53	1.83	Very Dark Gray	Lean Clay mixed with Poorly-Graded Sand with Silt	CL & SP-SM
◆	B - 6	S - 1	2.0	3.0	0.61	0.92	Very Dark Grayish Brown	Lean Clay or Fat Clay with Sand	CL
○	B - 7	R - 2	5.0	6.0	1.53	1.83	Brown	Lean Clay mixed with Poorly-Graded Sand with Clay	CL & SP-SC
△	B - 8	S - 2	5.0	6.0	1.53	1.83	Light Yellowish Brown	Well-Graded Sand with Clay	SW-SC
□									
Remark									

WILLDAN Geotechnical

Metrolink-Placentia Station

Project No. : 17340-2100

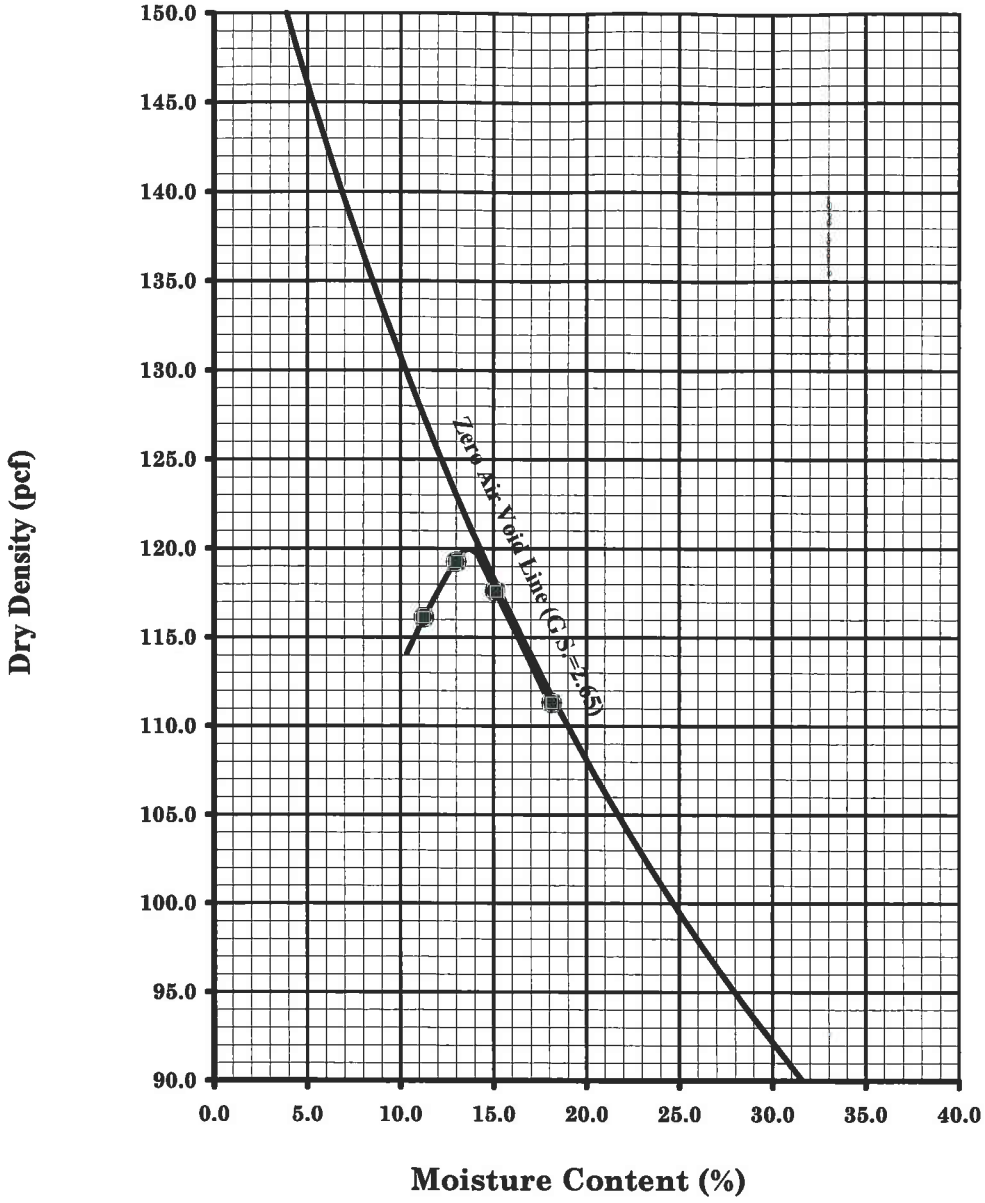
Date : 08/27/09

GRAIN SIZE ANALYSIS

(ASTM D-422-63)

P.F. Chan (10-01-00)

Figure No. : B-1



Symbol	Boring No.	Sample No.	Depth (ft)		Depth (mm)		Soil Description	Method	Opt. Mois. (%)	Maximum Density Dry (pcf) / (kN/m³)		Maximum Density Wet (pcf) / (kN/m³)	
●	B - 6	B - 1	2.0	7.0	0.61	2.14	Dark Grayish Brown, Fat Clay (CH)	A	14.5	120.0	18.9	137.4	21.6
■													
▲													
◆													

Remark :

Metrolink-Placentia Station

WILLDAN Geotechnical

Project No. : 17340-2100

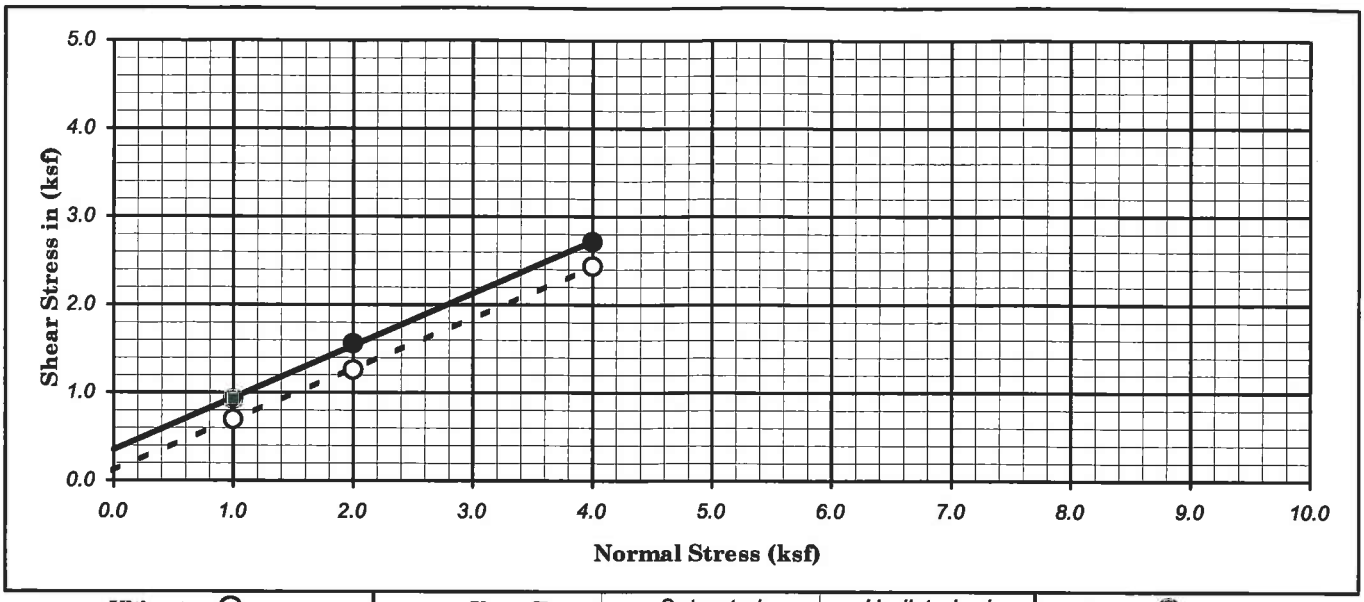
Date : 08/31/09

Plotted by P.F. Chan (10-10-09)

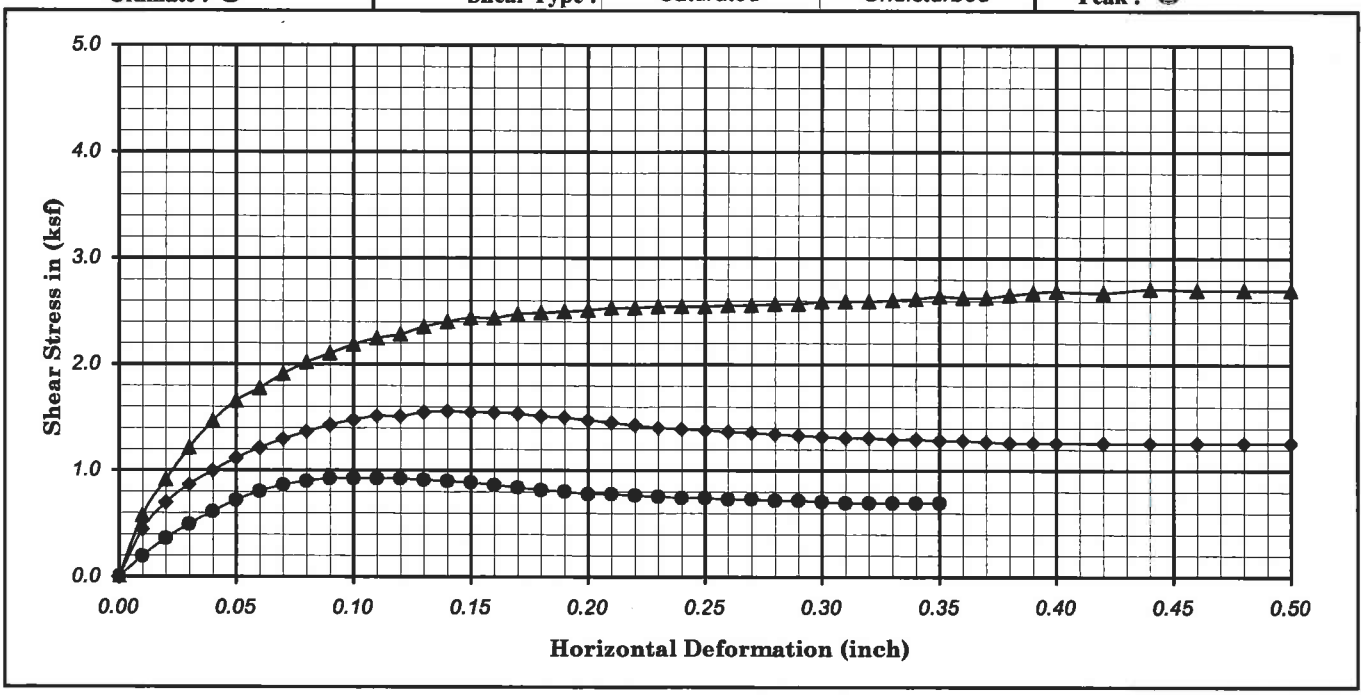
COMPACTION TEST

(ASTM D-1557 / T-180)

Figure No. : B-2



Ultimate : ○	Shear Type :	Saturated	Undisturbed	Peak : ●



Boring No. :	B - 2				**Strength Intercept (C) :**	0.35	(ksf)	**Peak**	0.11	(ksf)	**Ultimate**
Sample No. :	R - 1					16.66	(kPa)		5.17	(kPa)	
Depth (ft/m) :	5.0	6.0	1.53	1.83	**Friction Angle (Ø) :**	30.67	Degree		30.16	Degree	
Description :	Brown, Clayey Sand (SC)								**Shear Rate (inch/min.):**		0.003

SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY (pcf)	DRY DENSITY (kN/m^3)	VOID RATIO	NORMAL STRESS (ksf)	NORMAL STRESS (kPa)	PEAK STRESS (ksf)	PEAK STRESS (kPa)	ULTIMATE STRESS (ksf)	ULTIMATE STRESS (kPa)
●	17.45	116.04	18.26	0.45	1.00	47.88	0.92	44.24	0.70	33.32
◆	15.47	121.75	19.16	0.38	2.00	95.76	1.56	74.69	1.26	60.33
▲	13.43	127.29	20.04	0.32	4.00	191.52	2.71	129.85	2.44	116.64
Remark										

Metrolink-Placentia Station

DIRECT SHEAR TEST

(ASTM D-3080 / T-236)

WILLDAN Geotechnical

Project No. : *17340-2100*

Date : *08/27/09*

PF Chan (10-01-09)

Figure No. : B-3

'R' VALUE CA 301

Project No. :	*17340-2001*	**Project Name : Metrolink Station, Placentia**		
Boring No. :	*B - 2*			
Sample No. :	*B - 1*		**Tested By:** *LD*	
Depth (ft) :	*2.0*	*7.0*	**Date** *08/10/09*	
Depth (m) :	*0.61*	*2.14*		
Description :	*Brown, M.C. Clayey Sand*			

TEST SPECIMEN		A	B	C	**Grain Size Distribution**		
Compactor Air Pressure	psi	**200**	**100**	**300**	Sieve	As Rec'vd. (%Pass.)	As Tested (%Pass.)
Initial Moisture Content	%	**7.1**	**7.1**	**7.1**	3"		
Water Added	ml	**30**	**35**	**25**	2 1/2"		
Moisture at Compaction	%	9.8	10.2	9.3	2"		
Sample & Mold Weight	gms	**3179**	**3187**	**3188**	1 1/2"		
Mold Weight	gms	**2116**	**2095**	**2099**	1"		
Net Sample Weight	gms	1063	1092	1089	3/4"		
Sample Height	in.	**2.44**	**2.454**	**2.488**	1/2"		
Dry Density	pcf	120.2	122.3	121.3	3/8"		
Pressure	lbs	**4875**	**2860**	**6960**	#4		
Exudation Pressure	psi	388	228	554	#8		
Expansion Dial	x 0.0001	**52**	**16**	**71**	#16		
Expansion Pressure	psf	225	69	307	#30		
Ph at 1000lbs	psi	**30**	**48**	**22**	#50		
Ph at 2000lbs	psi	**61**	**105**	**47**	#100		
Displacement	turns	**3.45**	**3.54**	**3.28**	#200		
R' Value		54	27	65	**Sand Equivalent**		
Corrected 'R' Value		**54**	**27**	**65**			

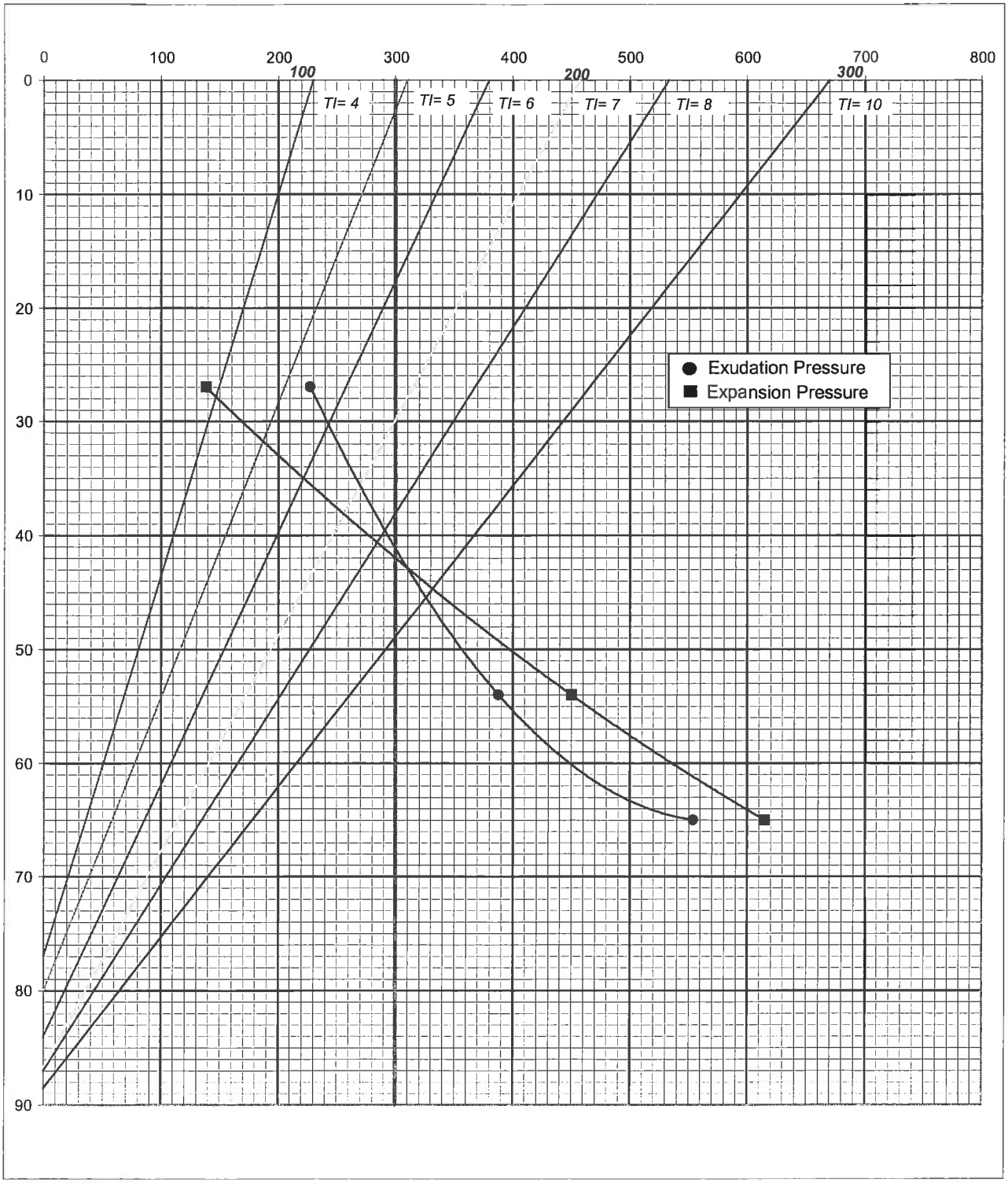
FINAL 'R' VALUE	
By Exudation Pressure (@ 300 psi):	**41**
By Epansion Pressure :	**32**
TI = 5	

'R' VALUE CA 301

Job No. *17340-2001*
Boring No. *B - 2*
Sample No. *B - 1*
Depth (ft) *2.0-7.0*

Exudation Pressure (psi)

Expansion Pressure (psf)



'R' VALUE CA 301

Project No. :	*17340-2001*		**Project Name : Metrolink Station, Placentia**	
Boring No. :	*B - 3*			
Sample No. :	*B - 1*			**Tested By:** *LD*
Depth (ft) :	*2.0*	*6.0*		**Date** *08/10/09*
Depth (m) :	*0.61*	*1.83*		
Description :	*Olive Brown, Lean Clay (CL)*			

TEST SPECIMEN		A	B	C	**Grain Size Distribution**		
Compactor Air Pressure	psi	**50**	**40**		Sieve	As Rec'vd. (%Pass.)	As Tested (%Pass.)
Initial Moisture Content	%	**11.4**	**11.4**		3"		
Water Added	ml	**100**	**125**		2 1/2"		
Moisture at Compaction	%	20.7	23.0		2"		
Sample & Mold Weight	gms	**3121**	**3098**		1 1/2"		
Mold Weight	gms	**2100**	**2112**		1"		
Net Sample Weight	gms	1021	986		3/4"		
Sample Height	in.	**2.55**	**2.502**		1/2"		
Dry Density	pcf	100.5	97.1		3/8"		
Pressure	lbs	**8000**	**5230**		#4		
Exudation Pressure	psi	637	416		#8		
Expansion Dial	x 0.0001		**** Sample Extruded**		#16		
Expansion Pressure	psf				#30		
Ph at 1000lbs	psi				#50		
Ph at 2000lbs	psi				#100		
Displacement	turns				#200		
R' Value					**Sand Equivalent**		
Corrected 'R' Value							

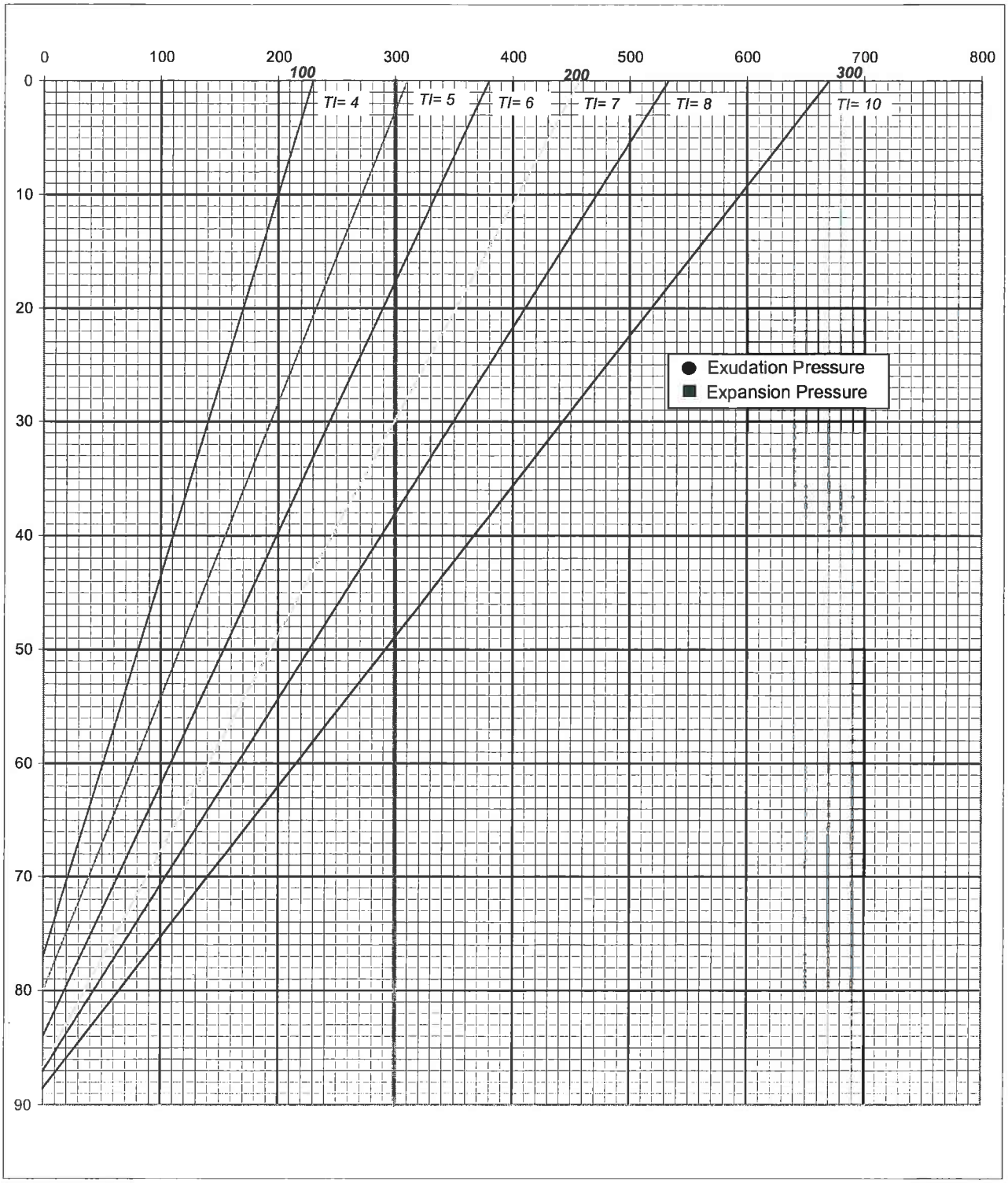
FINAL 'R' VALUE		
By Exudation Pressure (@ 300 psi):		**< 5**
By Epansion Pressure	:	**N/A**
TI =	5	

'R' VALUE CA 301

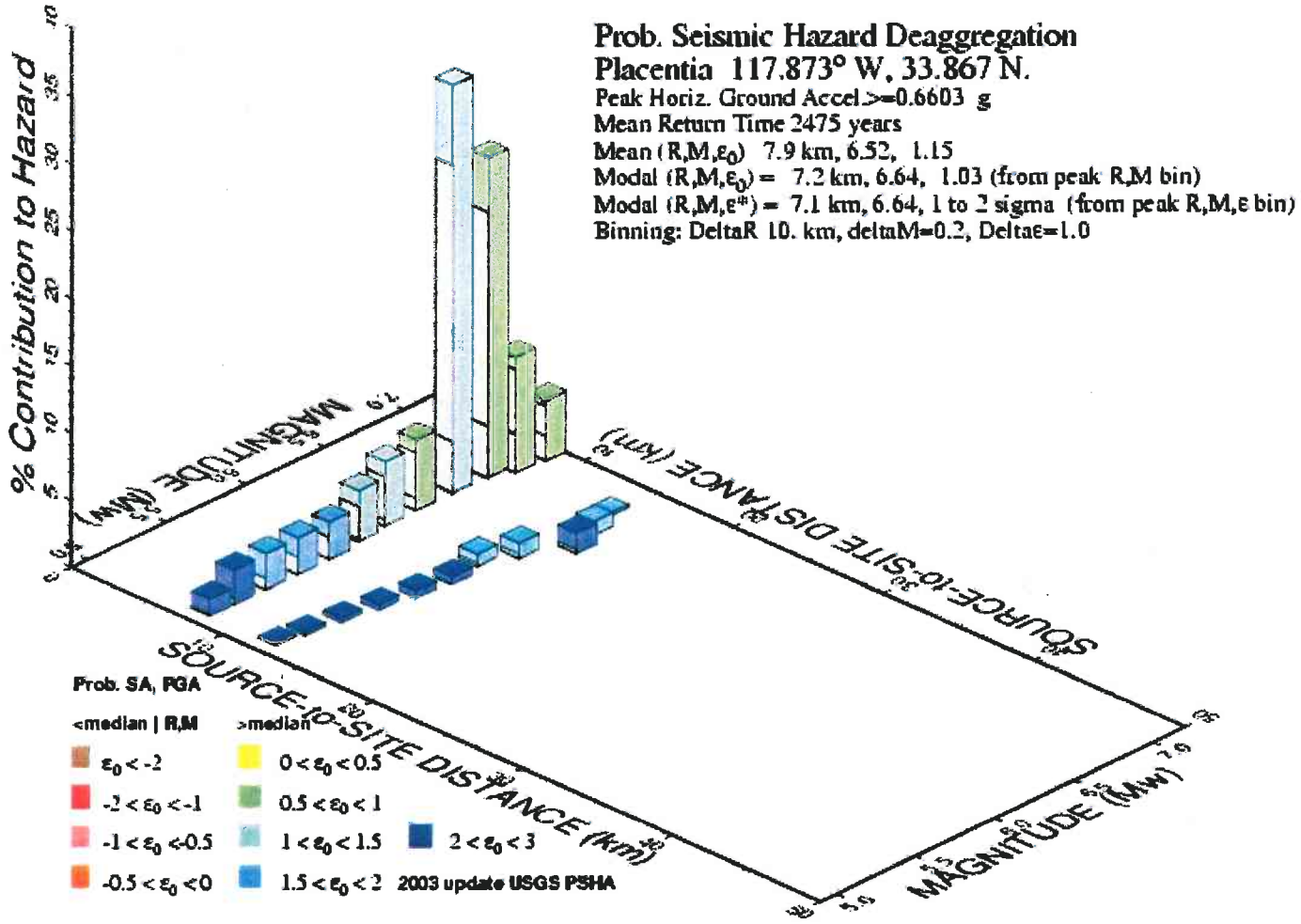
Job No. *17340-2001*
Boring No. *B - 3*
Sample No. *B - 1*
Depth (ft) *2.0 - 6.0*

Exudation Pressure (psi)

Expansion Pressure (psf)



APPENDIX C. SITE SEISMIC ANALYSIS



WILLDAN Geotechnical

Seismic Hazard Deaagregation	
Date: 8/7/2009	Figure : C-1
Willdan Project: 17340-2000	

APPENDIX D. LIQUEFACTION AND SEISMICALLY INDUCED SETTLEMENTS

LIQUEFACTION ANALYSIS REPORT

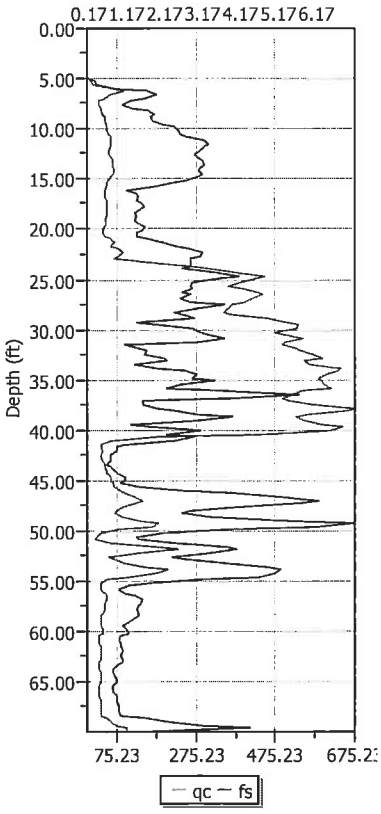
Project title : Metrolink, Placentia

Project subtitle : CPT01(WT=30')

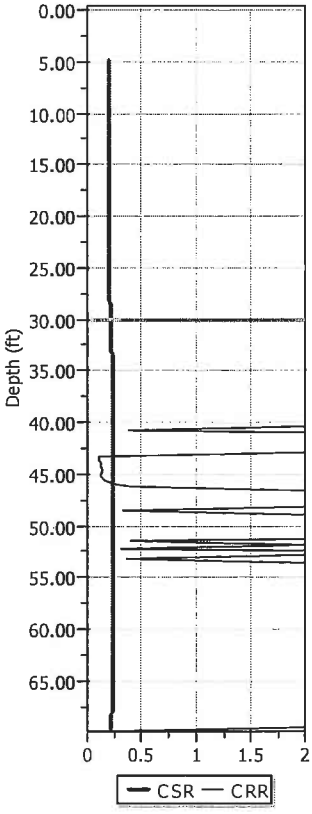
Input parameters and analysis data

In-situ data type:	Cone Penetration Test	Depth to water table:	30.00 ft
Analysis type:	Deterministic	Earthquake magnitude M_w:	6.64
Analysis method:	Robertson (1998)	Peak ground accelaration:	.44 g
Fines correction method:	Robertson (1998)	User defined F.S.:	1.00

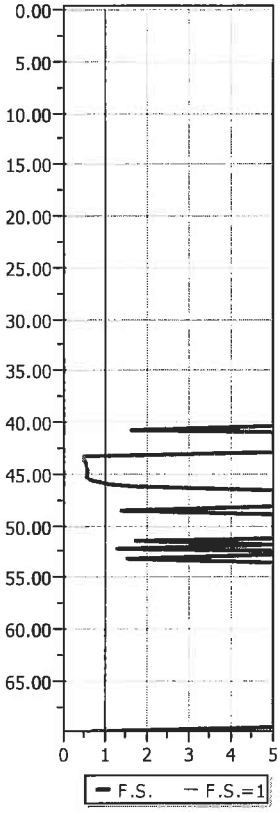
CPT data graph



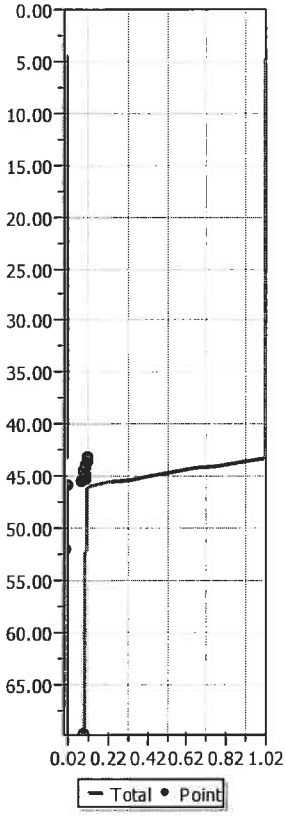
Shear stress ratio



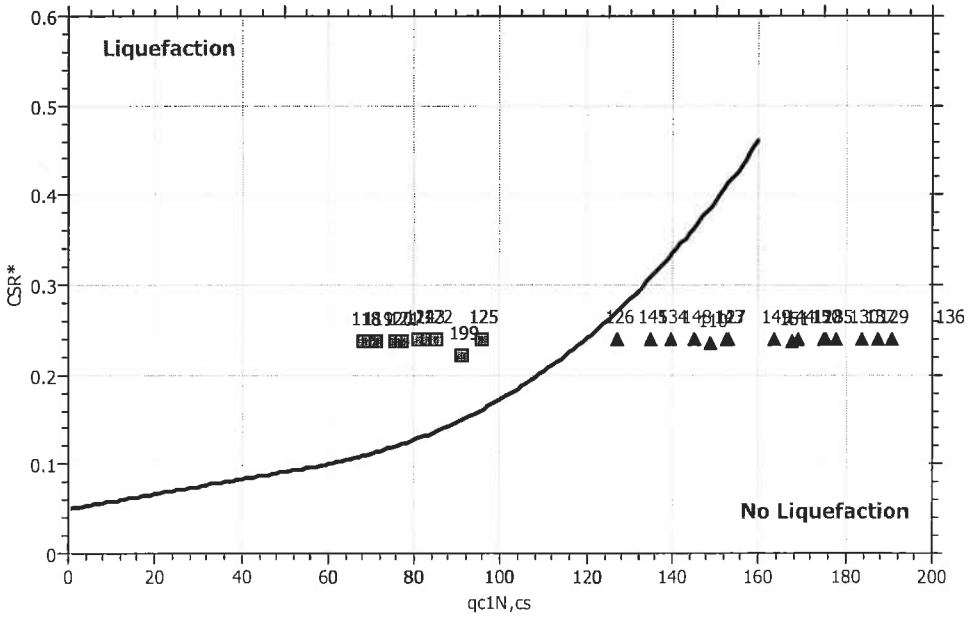
Factor of safety



Settlements (in)



$M_w=7^{1/2}$, sigma'=1 atm base curve



LIQUEFACTION ANALYSIS REPORT

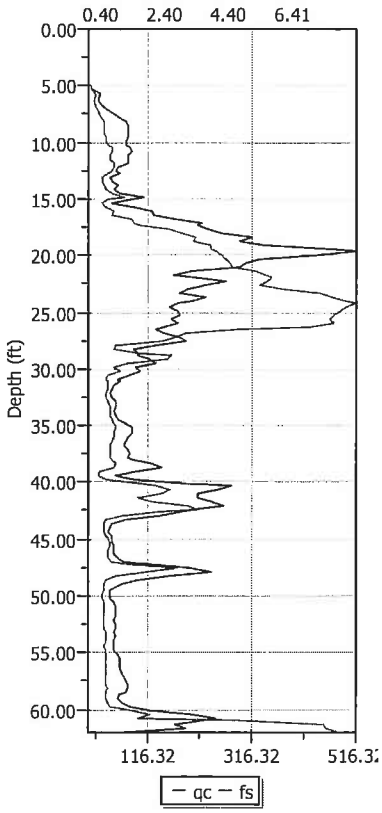
Project title : Metrolink, Placentia

Project subtitle : CPT02(WT=30')

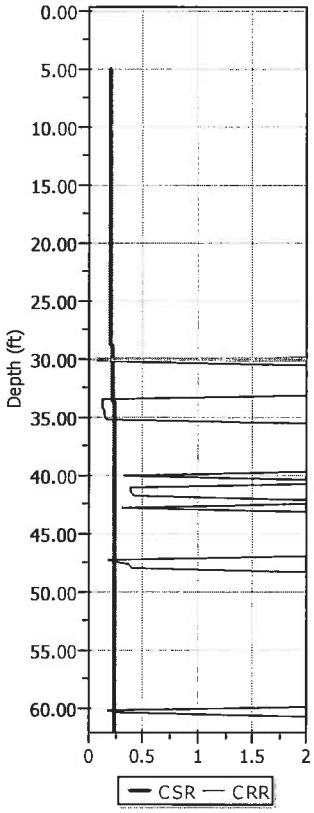
Input parameters and analysis data

In-situ data type:	Cone Penetration Test	Depth to water table:	30.00 ft
Analysis type:	Deterministic	Earthquake magnitude M_w:	6.64
Analysis method:	Robertson (1998)	Peak ground accelaration:	0.44 g
Fines correction method:	Robertson (1998)	User defined F.S.:	1.00

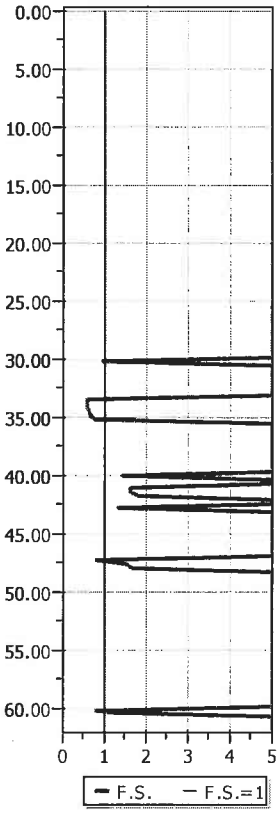
CPT data graph



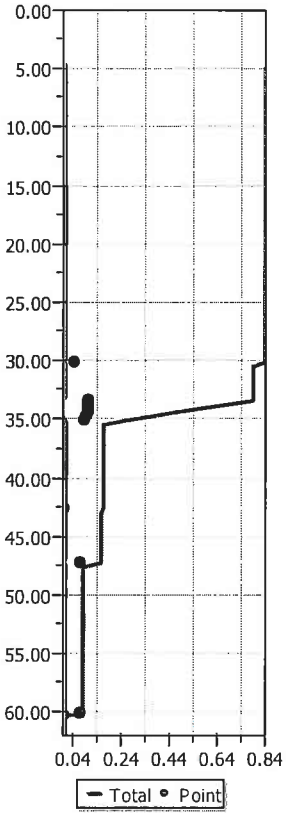
Shear stress ratio



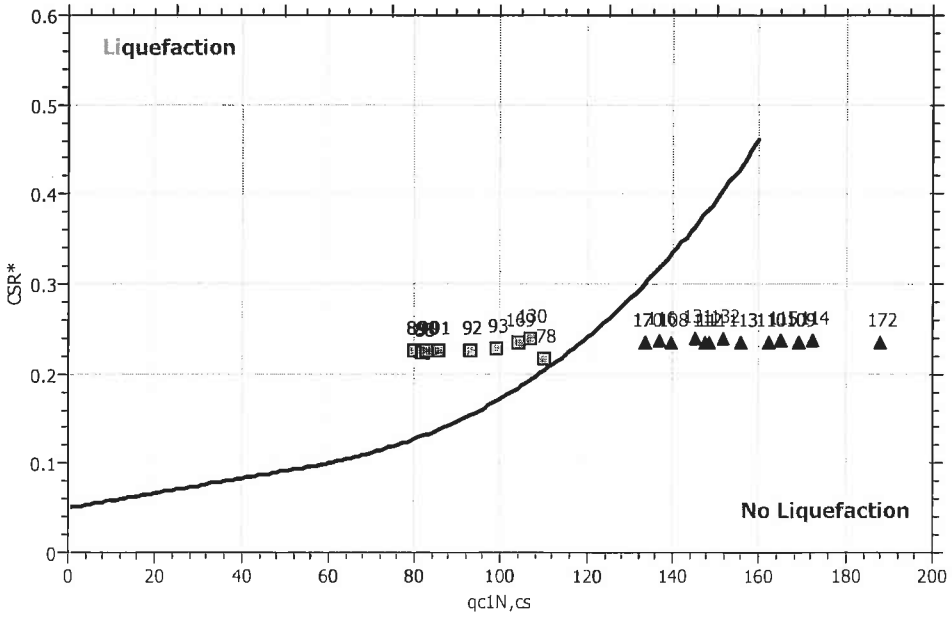
Factor of safety



Settlements (in)

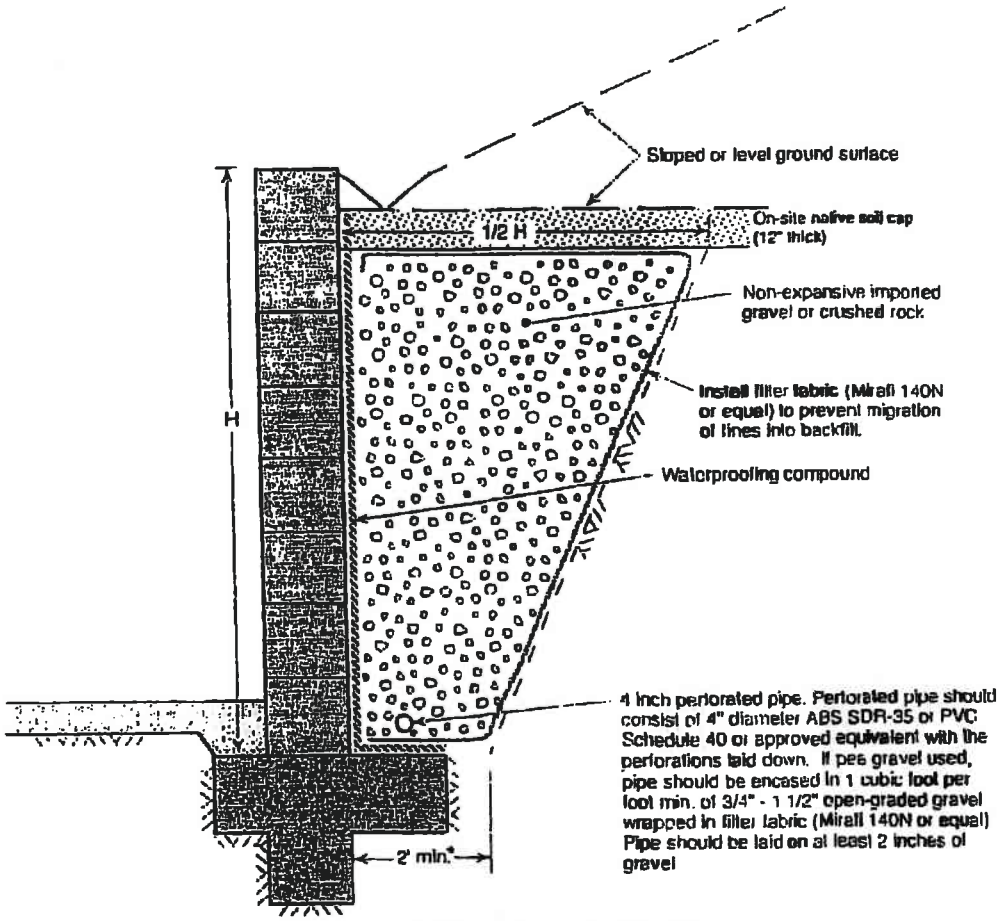


$M_w=7^{1/2}$, sigma'=1 atm base curve



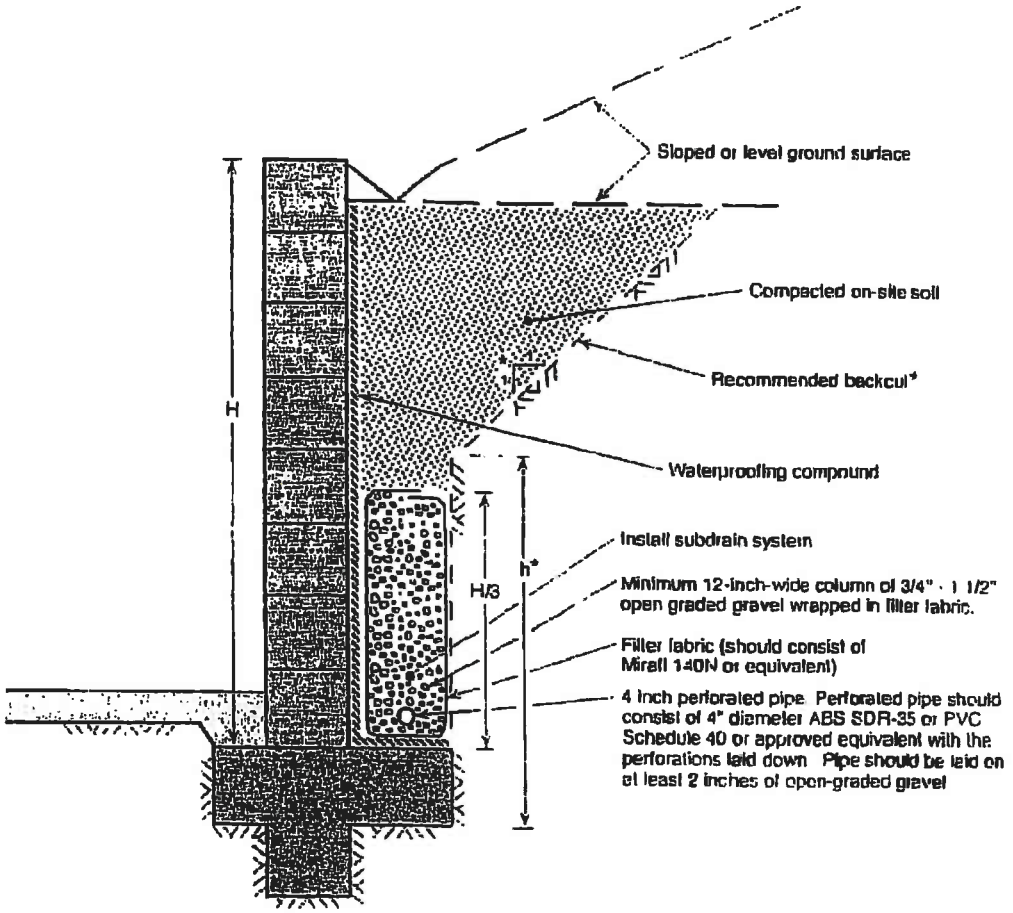
APPENDIX E. TYPICAL RETAINING WALL BACKFILL

IMPORTED GRAVEL OR CRUSHED ROCK BACKFILL



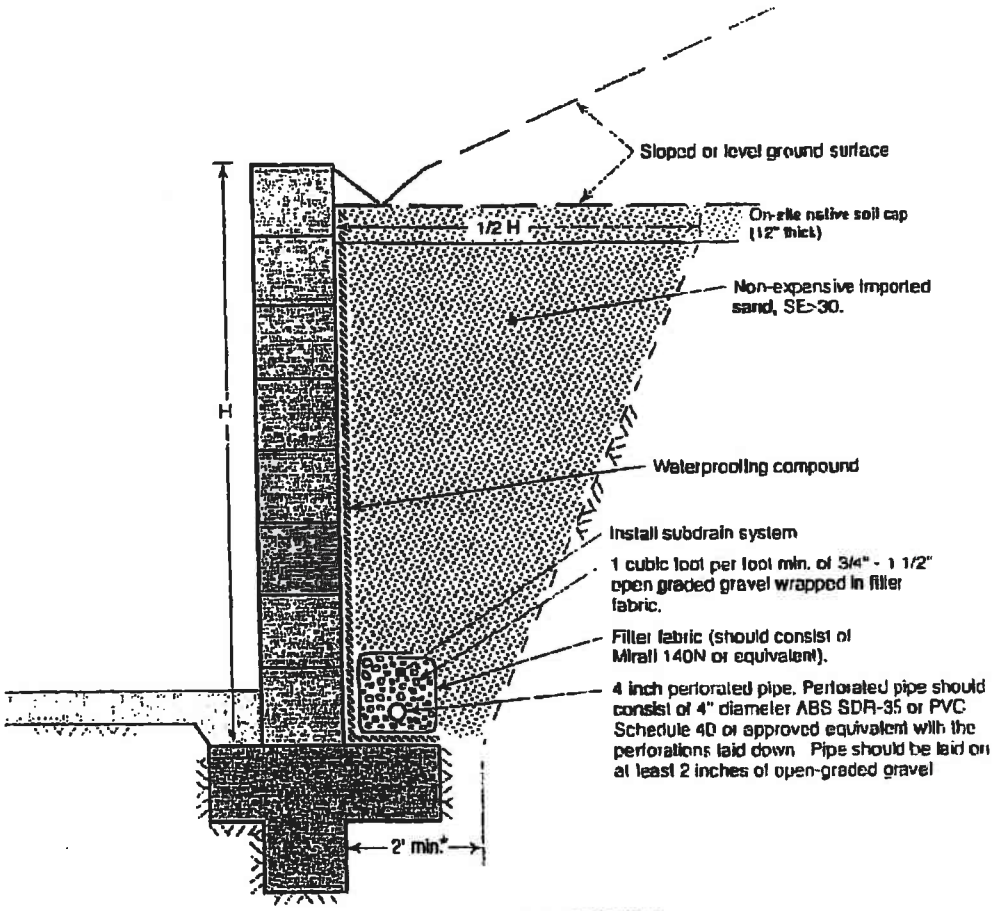
* At base of wall, the non-expansive backfill materials should extend to a min. distance of 2' or to a horizontal distance equal to the heel width of the footing, whichever is greater.

NATIVE SOIL BACKFILL



* Vertical height (h) and slope angle of backcut per soils report. Based on geologic conditions, configuration of backcut may require revisions (i.e. reduced vertical height, revised slope angle, etc.)

IMPORTED SAND BACKFILL



* At base of wall. The non-expansive backfill materials should extend to a min. distance of 2' or to a horizontal distance equal to the heel width of the footing, whichever is greater

Attachments

Attachment C.
Phase I and II Environmental Site Assessment

Attachment C.
Phase I and II Environmental Site Assessment

Attachments

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Krazan & ASSOCIATES, INC.
GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

November 19, 2018 Project No. 024-18062

Ms. Leatha Clark
USA Multifamily Development
3200 Douglas Boulevard, Suite 200
Roseville, California 95661
Ph: (916) 865-3918

RE: Phase II Soil Vapor Survey
207-211 West Crowther Avenue
Orange County APNs 339-402-05, -08 and -11
Placentia, California 92870

Dear Ms. Clark;

Pursuant to your request, Krazan & Associates, Inc. (Krazan) has conducted a Phase II Soil Vapor Survey (SVS) at the referenced property (subject site). Additionally, a Vapor Intrusion Risk Evaluation (VIRE) was conducted based on the results of the SVS. The work was based strictly upon review of the findings and conclusions presented in Krazan's *Phase I Environmental Site Assessment (ESA)* report for the above-referenced subject site property, dated October 1, 2018. The work was conducted in conjunction with a real estate transaction and not by the request of a regulatory agency.

Executive Summary

In summary, of the soil vapor survey sample results, only Tetrachloroethene (PCE) was reported in two of 30 soil vapor samples at concentrations slightly above the Environmental Screening Level (ESL) established by the Regional Water Quality Control Board (RWQCB) for Soil Gas Vapor Intrusion Concerns at residential properties. All other volatile organic compounds (VOCs), including Benzene, were reported below their respective ESLs (refer to Attachment A for a copy of the SVS laboratory results). Based on this data, it appears that impacts to the site from PCE are naturally attenuating and do not pose a significant threat for vapor intrusion into future multifamily residential homes. However, Krazan requested that a VIRE be conducted by Enviro-Tox, Inc., in order to assess whether the presence of volatile organic compounds (VOCs) detected in soil gas under the property are likely to exceed acceptable risk levels. According to the VIRE, the cancer risks and non-cancer hazards estimated to result from unmitigated vapor intrusion into future on-site buildings are below the regulatory threshold values for residential land use of one-in-a-million (1E-06) cancer risk and 1.0, respectively. Therefore, no significant cancer risks or non-cancer hazards are anticipated to occur as a result of exposure to detected concentrations of VOCs in soil gas at the site (refer to Attachment B for a copy of the VIRE).

BACKGROUND

According to the referenced Phase I ESA Report, Krazan identified evidence of recognized environmental conditions (RECs) in conjunction with the subject site as defined by ASTM E 1527-13. Based on Krazan's review of previous assessments, historical aerial photographs and Sanborn Fire Insurance Maps, there was evidence that RECs exist in connection with the historical uses of the subject site.

A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of VOCs, including Benzene and Tetrachloroethene (PCE), reported in soil gas samples above the Regional Water Quality Control Board's Environmental Screening Levels for Residential Use for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated VOCs, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Krazan recommended that a comprehensive Soil Vapor Survey be conducted at the subject site in order to determine the presence or absence of significant concentrations of VOCs, including Chlorinated VOCs.

Upon your approval of Krazan's Proposed SVS, Change Order No. 1, On November 5th and 6th, 2018, Krazan conducted the field work for the SVS for the subject site. The following summarizes the scope of work and purpose of the SVS.

SOIL VAPOR SURVEY SCOPE OF WORK AND PURPOSE

The scope of work included a subsurface SVS. The purpose of the SVS was to collect data regarding the presence or absence regarding VOCs including chlorinated solvents in subsurface soil.

The results of the SVS have been evaluated using Environmental Screening Levels established by the Regional Water Quality Control Board (RWQCB) for Soil Gas Vapor Intrusion Concerns. Additionally, a Vapor Intrusion Risk Evaluation (VIRE) has been conducted based on the presence of significant VOCs in order to determine if indoor air intrusion to future buildings from VOCs is a concern at the subject site.

SOIL VAPOR SCREENING METHODOLOGY

Task 1. Pre-Field Activities

An Underground Service Alert (USA) survey was conducted prior to any subsurface work at the subject site in order to determine the location of identified utilities and underground features such that they could be avoided during the subsurface investigation.

Task 2. Limited Soil Assessment

Using a mobile laboratory/drilling contractor, Krazan advanced a total of fourteen direct-push borings to depths of 5 feet below ground surface (5' bgs) and 10' bgs. These fourteen borings were used to obtain 28 soil gas samples from 5' and 10' bgs (plus two duplicate samples) for a total of 30 samples analyzed for VOCs. A State-certified, on-site mobile analytical laboratory (Optimal Technology, Inc.) analyzed each of the 28 samples plus the two duplicates for VOCs including chlorinated VOCs. Soil gas sampling was conducted according to industry accepted standards including the use of a tracer gas to determine if breakthrough of atmospheric air had occurred during sampling. All soil borings were backfilled with hydrated bentonite upon completion of the investigation and capped with material consistent with the existing surface.

Task 3. Preparation of Summary Report

The preliminary analytical results were available at the time the field investigation was conducted, and the final laboratory results are presented in Attachment A herein with the Vapor Intrusion Risk Evaluation (VIRE) included in Attachment B. The following is a summary report for the findings of the SVS. (Refer to Figure 1, Soil Vapor Survey Site Map for referenced Soil Vapor sample locations.

SOIL VAPOR SURVEY FINDINGS

The SVS for VOCs was conducted at the subject site during November 5th and 6th, 2018. A total of 28 soil gas samples plus two duplicate samples were collected and analyzed. The VOCs reported at

concentrations at or above the laboratory detection limits are summarized in Table 1 and the complete laboratory report is included in Attachment A. The following summarizes the results of the Soil Vapor Survey.

SV1

SV1 was advanced within the southwest corner of the subject site. SV1-5' was reported with a PCE concentration of 0.10 µg/L or (100 µg/m^3). All other VOCs were reported as none detected (ND) at or above the laboratory detection limits. SV1-10' was reported with a PCE concentration of 110 µg/m^3, all other VOCs were reported as ND. This is the general location of the former soil vapor sample collected in 2009 (PS-5 at 5') that was reported with an elevated concentration of Benzene at 48 µg/m^3.

SV2

SV2 was advanced to the northeast of SV1 within the western portion of the subject site. SV2-5' was reported with a PCE concentration of 180 µg/m^3; all other VOCs were reported as ND. SV2-10' was reported as ND for all VOCs.

SV3

SV3 was advanced to the northeast of SV2 within the northwestern portion of the subject site. SV3-5' was reported with a Benzene concentration of 40 µg/m^3; all other VOCs were reported as ND. SV3-10' was reported with a PCE concentration of 150 µg/m^3; all other VOCs were reported as ND.

SV4

SV4 was advanced to the east of SV3 within the northern-central portion of the subject site. SV4-5' was reported with a Benzene concentration of 30 µg/m^3; all other VOCs were reported as ND. SV4-10' was reported with a Benzene concentration of 30 µg/m^3 and with a 1,1-Dichloroethene concentration of 1,210 µg/m^3; all other VOCs were reported as ND.

SV5

SV5 was advanced to the east of SV4 within the northern-central portion of the subject site. SV5-5' was reported as ND for all VOCs. SV5-10' was also reported as ND for all VOCs.

SV6

SV6 was advanced to the east of SV1 within the southwestern portion of the subject site. SV6-5' was reported as ND for all VOCs. SV6-10' was also reported as ND for all VOCs.

SV7

SV7 was advanced to the south of SV4 within the central portion of the subject site. SV7-5' was reported with a 1,1-Dichloroethene concentration of 4,340 µg/m^3; and a 1,1,1-trichloroethane concentration of 3,790 µg/m^3; all other VOCs were reported as ND. SV7-10' was reported with a PCE concentration of 200 µg/m^3; a 1,1-Dichloroethene concentration of 4,860 µg/m^3; and a 1,1,1-trichloroethane concentration of 3,480 µg/m^3; all other VOCs were reported as ND. A duplicate sample was analyzed from SV7-10' and was reported with relatively similar orders of magnitude of concentrations for these same constituents.

SV8

SV8 was advanced to the east of SV7 within the central portion of the subject site. SV8-5' was reported with a 1,1-Dichloroethene concentration of 1,390 µg/m^3; a 1,1,1-trichloroethane concentration of 6,810 µg/m^3; and a PCE concentration of 100 µg/m^3; all other VOCs were reported as ND. A duplicate sample was analyzed from SV8-5' and was reported with relatively similar orders of magnitude of concentrations for these same constituents. SV8-10' was reported with a 1,1-Dichloroethene concentration of 4,470 µg/m^3; and a 1,1,1-trichloroethane concentration of 7,510 µg/m^3; all other VOCs were reported as ND.

SV9

SV9 was advanced to the east of SV8 within the southeastern portion of the subject site. SV9-5' was reported with a 1,1,1-trichloroethane concentration of 2,840 µg/m^3; a PCE concentration of 120 µg/m^3; and a Benzene concentration of 30 µg/m^3; all other VOCs were reported as ND. SV9-10' was reported with a 1,1,1-trichloroethane concentration of 1,840 µg/m^3; all other VOCs were reported as ND.

SV10

SV10 was advanced to the east of SV9 within the southeastern portion of the subject site. This is the general location of the former 2009 PS-3 soil gas sample collected at 10 feet bgs that was reported with an elevated concentration of PCE. SV10-5' was reported with a 1,1,1-trichloroethane concentration of 6,270 µg/m^3; a PCE concentration of 420 µg/m^3; and a 1,1-Dichloroethene concentration of 1,300 µg/m^3; all other VOCs were reported as ND. SV10-10' was reported with a 1,1,1-trichloroethane concentration of 9,900 µg/m^3; a PCE concentration of 390 µg/m^3; and a 1,1-Dichloroethene concentration of 2,600 µg/m^3; all other VOCs were reported as ND.

SV11

SV11 was advanced to the east of SV5 and north of SV9 within the northern-central portion of the subject site. SV11-5' and SV11-10' were reported as ND for all VOCs.

SV12

SV12 was advanced to the east of SV10 within the southeast corner of the subject site. SV12-5' was reported as ND for all VOCs. SV12-10' was reported with a PCE concentration of 100 µg/m^3; all other VOCs were reported as ND.

SV13

SV13 was advanced to the north of SV12 within the northeastern portion of the subject site. SV13-5' was reported as ND for all VOCs. SV13-10' was reported with a PCE concentration of 100 µg/m^3; all other VOCs were reported as ND.

SV14

SV14 was advanced to the east of SV11 and north of SV10 within the northeastern portion of the subject site. SV14-5' and SV14-10' were reported as ND for all VOCs.

TABLE 1

SOIL VAPOR RESULTS

SAMPLE ID		BLANK-1	SV1-5'	SV1-10'	SV2-5'	SV2-10'	SV3-5'	SV3-10'	SV4-5'
COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Tetrachloroethene (PCE)	0.10	ND	**0.10**	**0.11**	**0.18**	ND	ND	**0.15**	ND
Benzene	0.03	ND	ND	ND	ND	ND	**0.04**	ND	**0.03**
SAMPLE ID		**SV4-10'**	**SV5-5'**	**SV5-10'**	**SV6-5'**	**SV6-10'**	**SV7-5'**	**SV7-10'**	**Dup**
COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	**3.79**	**3.48**	**3.32**
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND	**0.20**	**0.18**
1,1-Dichloroethene	1.00	**1.21**	ND	ND	ND	ND	**4.34**	**4.86**	**4.60**
Benzene	0.03	**0.03**	ND	ND	ND	ND	ND	ND	ND
SAMPLE ID		**BLANK-2**	**SV8-5'**	**SV8-5' Dup**	**SV8-10'**	**SV9-5'**	**SV9-10'**	**SV10-5'**	**SV10-10'**
COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
1,1,1-Trichloroethane	1.00	ND	**6.81**	**6.58**	**7.51**	**2.84**	**1.84**	**6.27**	**9.90**
Tetrachloroethene (PCE)	0.10	ND	**0.10**	**0.11**	ND	**0.12**	ND	**0.42**	**0.39**
1,1-Dichloroethene	1.00	ND	**1.39**	**1.17**	**4.47**	ND	ND	**1.30**	**2.60**
Benzene	0.03	ND	ND	ND	ND	**0.03**	ND	ND	ND
SAMPLE ID		**SV11-5'**	**SV11-10'**	**SV12-5'**	**SV12-10'**	**SV13-5'**	**SV13-10'**	**SV14-5'**	**SV14-10'**
COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Tetrachloroethene (PCE)	0.10	ND	ND	ND	**0.10**	ND	**0.10**	ND	ND

CONCLUSIONS

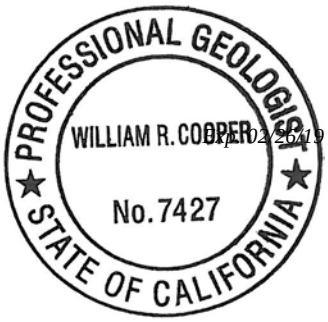
In summary, of the SVS results, only SV10-5' and 10' were reported with an elevated concentrations for PCE at 420 and 390 µg/m^3, respectively; all other reported PCE concentrations are below the ESL established for residential properties for PCE at 240 µg/m^3. The previous Soil Vapor Investigation conducted in 2009 reported a PCE concentration of 750 µg/m^3 within the general location of SV10. Benzene was not reported above the ESL of 48 µg/m^3; and the other reported concentrations of VOCs that included 1,1,1-trichloroethane and 1,1-Dichloroethene do not exceed their respective ESLs of 520,000 µg/m^3 and 37,000 µg/m^3. Based on the data presented in 2009 and data from this current 2018 SVS, it appears that impacts to the site from PCE are naturally attenuating and do not pose a significant threat for vapor intrusion into future multifamily residential homes.

In summary of the Vapor Intrusion Risk Evaluation, the cancer risks and non-cancer hazards estimated to result from unmitigated vapor intrusion into onsite buildings are below the regulatory threshold values for residential land use of one-in-a-million (1E-06) cancer risk and 1.0, respectively. Therefore, no significant cancer risks or non-cancer hazards are anticipated to occur as a result of exposure to detected concentrations of VOCs in soil gas at the site (refer to Attachment B for the complete VIRE report).

CLOSING

We appreciate the opportunity to be of service to you. If you have any questions or if I can be of further assistance please feel free to contact me at 661-837-9200.

Respectfully submitted
KRAZAN & ASSOCIATES, INC.



William R. Cooper, P.G. 7427
Environmental Project Manager

Arthur C. Farkas
Environmental Division Manager

Attachments: Soil Vapor Results (Optimal Technology, Inc.)
Vapor Intrusion Risk Evaluation (Enviro-Tox, Inc.)



= SUBJECT SITE BOUNDARY

= Soil Vapor Sample Point Locations (Samples at 5' and 10' bgs)

SOIL VAPOR INVESTIGATION SITE MAP	**Scale:** 1" ≈ 190'	**Date:** October 2018	Krazan **SITE DEVELOPMENT ENGINEERS** ***Serving the Western United States***
207-211 W. CROWTHER AVENUE APNs 339-402-05, -07, -08 and -09 PLACENTIA, CALIFORNIA	**Drawn By:** BC	**Approved by:** BC	
	Project No. 024-18062	**Figure No.** 1	

Attachment A

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

November 7, 2018

Mr. William Cooper
Krazan & Associates, Inc.
2205 Coy Avenue
Bakersfield, CA 93307

Dear Mr. Cooper:

This letter presents the results of the soil vapor investigation conducted by Optimal Technology (Optimal), for Krazan & Associates, Inc. on November 5-6, 2018. The study was performed at 211 W. Crother Ave., Placentia, California.

Optimal was contracted to perform a soil vapor survey at this site to screen for possible chlorinated solvents and aromatic hydrocarbons. The primary objective of this soil vapor investigation was to determine if soil vapor contamination is present in the subsurface soil.

Gas Sampling Method

Gas sampling was performed by hydraulically pushing soil gas probes to a depth of 5.0-10.0 feet below ground surface (bgs). An electric rotary hammer drill was used to drill a 1.0-inch diameter hole through the overlying surface to allow probe placement when required. The same electric hammer drill was used to push probes in areas of resistance during placement.

At each sampling location, an electric vacuum pump set to draw 0.2 liters per minute (L/min) of soil vapor was attached to the probe and purged prior to sample collection. Vapor samples were obtained in SGE gas-tight syringes by drawing the sample through a luer-lock connection which connects the sampling probe and the vacuum pump. Samples were immediately injected into the gas chromatograph/purge and trap after collection. New tubing was used at each sampling point to prevent cross contamination.

All analyses were performed on a laboratory grade Agilent model 6890N gas chromatograph equipped with an Agilent model 5973N Mass Spectra Detector and Tekmar LSC 3100 Purge and Trap. A Restek column using helium as the carrier gas was used to perform all analysis. All results were collected on a personal computer utilizing Agilent's MS and chromatographic data collection and handling system.

Quality Assurance

5-Point Calibration
The initial five-point calibration consisted of 20, 50, 100, 200 and 500 ul injections of the calibration standard. A calibration factor on each analyte was generated using a best fit line method using the Agilent data system. If the r^2 factor generated from this line was not greater than 0.990, an additional five-point calibration would have been performed. Method reporting limits were calculated to be 0.004-1.0 micrograms per Liter (ug/L) for the individual compounds.

A daily calibration check was performed using a pre-mixed standard supplied by Scotty Analyzed Gases. The standard contained common halogenated solvents and aromatic hydrocarbons (see Table 1). The individual compound concentrations in the standards ranged between 0.025 nanograms per microliter (ng/ul) and 0.25 ng/ul.

TABLE 1

Dichlorodifluoromethane	Carbon Tetrachloride	Chloroethane
Trichlorofluoromethane	1,2-Dichloroethane	Benzene
1,1-Dichloroethene	Trichloroethene	Toluene
Methylene Chloride	1,1,2-Trichloroethane	Ethylbenzene
trans-1,2-Dichloroethene	Tetrachloroethene	m-/p-Xylene
1,1-Dichloroethane	Chloroform	o-Xylene
cis-1,2-Dichloroethene	1,1,1,2-Tetrachloroethane	Vinyl Chloride
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	Freon 113
4-Methyl-2-Pentanone	Cyclohexane	Acetone
Chlorobenzene	2-Butanone	Isobutane

Sample Replicates
A replicate analysis (duplicate) was run to evaluate the reproducibility of the sampling system and instrument. The difference between samples did not vary more than 20%.

Equipment Blanks
Blanks were run at the beginning of each workday and after calibrations. The blanks were collected using an ambient air sample. These blanks checked the septum, syringe, GC column, GC detector and the ambient air. Contamination was not found in any of the blanks analyzed during this investigation. Blank results are given along with the sample results.

Tracer Gas Leak Test
A tracer gas was applied to the soil gas probes at each point of connection in which ambient air could enter the sampling system. These points include the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. Isobutane was used as the tracer gas. No Isobutane was found in any of the samples collected.

Purge Volume
The standard purge volume of three volumes was purged in accordance with the July 2015 DTSC/RWQCB Advisory for Active Soil Gas Investigations.

Shut-in Test
A shut-in test was conducted prior to purging or sampling each location to check for leaks in the above-ground sampling system. The system was evaluated to a minimum measured vacuum of 100 inches of water. The vacuum gauge was calibrated and sensitive enough to indicate a water pressure change of at least 0.5 inches.

Scope of Work

To achieve the objective of this investigation a total of 30 vapor samples were collected from 14 locations at the site. Sampling depths, vacuum readings, purge volume and sampling volumes are given on the analytical results page. All the collected vapor samples were analyzed on-site using Optimal's mobile laboratory.

Subsurface Conditions

Subsurface soil conditions at this site offered sampling flows at 0-40" water vacuum. Depth to groundwater was unknown at the time of the investigation.

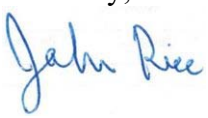
Results

During this vapor investigation, numerous analytes were detected in several samples collected above the listed reporting limit. Please see the complete table of analytical results included with this report.

Disclaimer

All conclusions presented in this letter are based solely on the information collected by the soil vapor survey conducted by Optimal Technology. Soil vapor testing is only a subsurface screening tool and does not represent actual contaminant concentrations in either the soil and/or groundwater. We enjoyed working with you on this project and look forward to future projects. If you have any questions, please contact me at (877) 764-5427.

Sincerely,



John Rice
Project Manager

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

SOIL VAPOR RESULTS

Site Name: 211 W. Crother Ave., Placentia, CA
Analyst: J. Rice **Collector:** J. Rice
Method: Modified EPA 8260B

Lab Name: Optimal Technology
Inst. ID: Agilent 6890N
Detector: Agilent 5973N Mass Spectrometer

Date: 11/5/18

SAMPLE ID	BLANK-1	SV1-5'	SV1-10'	SV2-5'	SV2-10'	SV3-5'	SV3-10'	SV4-5'
Sampling Depth (Ft.)	N/A	5.0	10.0	5.0	10.0	5.0	10.0	5.0
Purge Volume (ml)	N/A	1,500	2,250	1,500	2,250	1,500	2,250	1,500
Vacuum (in. of Water)	N/A	0	0	0	30	0	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	**0.10**	**0.11**	**0.18**	ND	ND	**0.15**	ND
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	ND	ND	ND	ND	ND	**0.04**	ND	**0.03**
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

SOIL VAPOR RESULTS

Site Name: 211 W. Crother Ave., Placentia, CA
Analyst: J. Rice **Collector:** J. Rice
Method: Modified EPA 8260B

Lab Name: Optimal Technology
Inst. ID: Agilent 6890N
Detector: Agilent 5973N Mass Spectrometer

Date: 11/5/18

SAMPLE ID	SV4-10'	SV5-5'	SV5-10'	SV6-5'	SV6-10'	SV7-5'	SV7-10'	SV7-10' Dup
Sampling Depth (Ft.)	10.0	5.0	0.0	5.0	10.0	5.0	10.0	10.0
Purge Volume (ml)	2,250	1,500	2,250	1,500	2,250	1,500	2,250	2,250
Vacuum (in. of Water)	0	0	0	0	0	0	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	**3.79**	**3.48**	**3.32**
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	ND	ND	ND	ND	ND	**0.20**	**0.18**
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	**1.21**	ND	ND	ND	ND	**4.34**	**4.86**	**4.60**
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	**0.03**	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

SOIL VAPOR RESULTS

Site Name: 211 W. Crother Ave., Placentia, CA
Analyst: J. Rice **Collector:** J. Rice
Method: Modified EPA 8260B

Lab Name: Optimal Technology
Inst. ID: Agilent 6890N
Detector: Agilent 5973N Mass Spectrometer

Date: 11/6/18

SAMPLE ID	BLANK-2	SV8-5'	SV8-5' Dup	SV8-10'	SV9-5'	SV9-10'	SV10-5'	SV10-10'
Sampling Depth (Ft.)	N/A	5.0	5.0	10.0	5.0	10.0	5.0	10.0
Purge Volume (ml)	N/A	1,500	1,500	2,250	1,500	2,250	1,500	2,250
Vacuum (in. of Water)	N/A	0	0	0	20	40	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	**6.81**	**6.58**	**7.51**	**2.84**	**1.84**	**6.27**	**9.90**
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	**0.10**	**0.11**	ND	**0.12**	ND	**0.42**	**0.39**
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	ND	**1.39**	**1.17**	**4.47**	ND	ND	**1.30**	**2.60**
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	ND	ND	ND	ND	**0.03**	ND	ND	ND
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

OPTIMAL TECHNOLOGY
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SOIL VAPOR RESULTS

Site Name: 211 W. Crother Ave., Placentia, CA
Analyst: J. Rice **Collector:** J. Rice
Method: Modified EPA 8260B

Lab Name: Optimal Technology
Inst. ID: Agilent 6890N
Detector: Agilent 5973N Mass Spectrometer

Date: 11/6/18

SAMPLE ID	SV11-5'	SV11-10'	SV12-5'	SV12-10'	SV13-5'	SV13-10'	SV14-5'	SV14-10'
Sampling Depth (Ft.)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Purge Volume (ml)	1,500	2,250	1,500	2,250	1,500	2,250	1,500	2,250
Vacuum (in. of Water)	0	0	0	0	0	0	0	0
Injection Volume (ul)	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Dilution Factor	1	1	1	1	1	1	1	1

COMPOUND	REP. LIMIT	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)	CONC (ug/L)
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	0.50	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.80	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	0.06	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.08	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene (PCE)	0.10	ND	ND	ND	**0.10**	ND	**0.10**	ND	ND
1,1,1,2-Tetrachloroethane	0.18	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl Chloride	0.004	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Cyclohexane	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	0.03	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	0.50	ND	ND	ND	ND	ND	ND	ND	ND
m/p-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene	1.00	ND	ND	ND	ND	ND	ND	ND	ND
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND	ND	ND	ND

Note: ND = Below Listed Reporting Limit

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

CHAIN OF CUSTODY FORM

Site Name/Number		PO# / Project Ref#	
Site Address	**211 W. Crother Ave., Placentia, CA**		
Company Name			
Contact Person(s):		Phone#	Email:
Comments:			

				TESTS REQUIRED (please mark with an "X")			
Sample Identification	Sampling Device	Date Collected	Time Collected	**Soil Gas Mod 8260B**	**Soil Gas Mod 8021B**	**Soil Gas Mod 8015**	**Notes**
BLANK-1	Syringe	11/5/18	9:30 AM	x			
SV1-5'	Syringe	11/5/18	9:50 AM	x			
SV1-10'	Syringe	11/5/18	10:11 AM	x			
SV2-5'	Syringe	11/5/18	10:31 AM	x			
SV2-10'	Syringe	11/5/18	10:50 AM	x			
SV3-5'	Syringe	11/5/18	11:13 AM	x			
SV3-10'	Syringe	11/5/18	11:44 AM	x			
SV4-5'	Syringe	11/5/18	12:02 PM	x			
SV4-10'	Syringe	11/5/18	12:22 PM	x			
SV5-5'	Syringe	11/5/18	12:43 PM	x			
SV5-10'	Syringe	11/5/18	1:02 PM	x			
SV6-5'	Syringe	11/5/18	1:29 PM	x			
SV6-10'	Syringe	11/5/18	1:52 PM	x			
SV7-5'	Syringe	11/5/18	2:13 PM	x			
SV7-10'	Syringe	11/5/18	2:47 PM	x			
SV7-10' Dup	Syringe	11/5/18	2:47 PM	x			

Collected & Tested by: John Rice

OPTIMAL TECHNOLOGY
Specializing in Environmental Field Services

CHAIN OF CUSTODY FORM

Site Name/Number		PO# / Project Ref#	
Site Address	**211 W. Crother Ave., Placentia, CA**		
Company Name			
Contact Person(s):		Phone#	Email:
Comments:			

				TESTS REQUIRED (please mark with an "X")			
Sample Identification	Sampling Device	Date Collected	Time Collected	**Soil Gas Mod 8260B**	**Soil Gas Mod 8021B**	**Soil Gas Mod 8015**	**Notes**
BLANK-2	Syringe	11/6/18	7:10 AM	x			
SV8-5'	Syringe	11/6/18	7:47 AM	x			
SV8-5' Dup	Syringe	11/6/18	8:05 AM	x			
SV8-10'	Syringe	11/6/18	8:11 AM	x			
SV9-5'	Syringe	11/6/18	8:40 AM	x			
SV9-10'	Syringe	11/6/18	9:02 AM	x			
SV10-5'	Syringe	11/6/18	9:30 AM	x			
SV10-10'	Syringe	11/6/18	9:54 AM	x			
SV11-5'	Syringe	11/6/18	10:15 AM	x			
SV11-10'	Syringe	11/6/18	10:40 AM	x			
SV12-5'	Syringe	11/6/18	10:58 AM	x			
SV12-10'	Syringe	11/6/18	11:20 AM	x			
SV13-5'	Syringe	11/6/18	11:42 AM	x			
SV13-10'	Syringe	11/6/18	12:02 PM	x			
SV14-5'	Syringe	11/6/18	12:30 PM	x			
SV14-10'	Syringe	11/6/18	1:05 PM	x			

Collected & Tested by: John Rice

Attachment B

ENVIRO-TOX services, inc.

Technical Memorandum

Date: November 16, 2018

To: Mr. William Cooper, PG
Krazan & Associates, Inc.
2205 Coy Avenue
Bakersfield, California 93307

cc:

From: Heriberto Robles, Ph.D., D.A.B.T.

Subject: ***Vapor Intrusion Risk Evaluation***
Proposed Residential Development at
211 West Crowther Avenue
Placentia, California

At the request of Krazan & Associates, Inc. (Krazan), Enviro-Tox Services Inc. (ETSI) conducted a Vapor Intrusion Risk Evaluation (VIRE) for the proposed multi-family residential development located at 211 West Crowther Avenue in Placentia, California. The purpose of the VIRE was to assess whether the presence of volatile organic compounds (VOCs) detected in soil gas under the property are likely to exceed levels considered acceptable to California health and environmental protection agencies. The risk evaluation was based on soil gas analytical data collected at the property by Krazan on November 5-6, 2018. Soil gas analytical data collected at depths of 5 and 10 feet below ground surface (bgs) are summarized in Tables 1 and 2, respectively. Copies of the soil gas analytical laboratory reports are included in Attachment A.

According to the results of the VIRE, the cancer risks and non-cancer hazards estimated to result from unmitigated vapor intrusion into onsite buildings are below the regulatory threshold values for residential land use of one-in-a-million (1E-06) cancer risk and 1.0, respectively. No significant cancer risks or non-cancer hazards are anticipated to occur as a result of exposures to detected concentrations of VOCs in soil gas at the site.

The conclusions and recommendations presented in this report are professional opinions based solely upon the data described in this report. They are intended exclusively for the purpose outlined herein and the Subject Property's location and project indicated. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of users other than Krazan. Any use or reuse of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Given that the scope of services for this investigation was limited, and that conditions may vary between the points explored, it is possible that currently unrecognized subsurface contamination might be present at the subject property. Should site use or conditions change, the information and conclusions in this report may no longer apply. Opinions relating to environmental and public health conditions are based on limited data and actual conditions may vary from those encountered at the

times and locations where data were obtained. No express or implied representation or warranty is included or intended in this report except that the work was performed within the limits prescribed by the Client with the customary thoroughness and competence of professionals working in the same area on similar projects.

Vapor Intrusion Risk Evaluation Methodology

Risk characterization involves estimating the magnitude of the potential adverse health effects that could occur as a result of chronic, long-term exposure to chemicals identified in soil gas at the site. The risk characterization is based on the results of the dose-response (toxicity) and exposure assessment.

It is known that chemicals may migrate through environmental media from their source to a point where human receptors may be exposed. Therefore, it was necessary to determine if the detected VOCs – given their residual concentrations, locations, soil physical characteristics, weather conditions, etc. – could potentially migrate up to the surface (where human receptors may be exposed).

Screening-level models were used to predict indoor air concentrations that may result from the chemical vapors potentially released from soil gas under the site. The estimated vapor flux and indoor air concentrations were then used to estimate potential health risks that may result from onsite exposures. For purposes of this evaluation, it was assumed that the land use would be residential. The only exposure pathway that was considered to be complete was the volatilization of VOCs from soil gas and the subsequent emission to indoor air.

In this evaluation, maximum detected chemical concentrations were considered to be representative of chemical concentrations present in soil gas under the Site. Soil gas analytical data collected at a depth of five feet bgs is summarized in Table 1. Soil gas analytical data collected at a depth of 10 feet bgs is summarized in Table 2.

The potential migration of VOC vapors into indoor air was estimated using the Johnson and Ettinger (J&E) model (1991), modified to incorporate DTSC toxicity values (SG-SCREEN, DTSC Version 2.0-last modified December 2014). Copies of the J&E models used in the evaluation are included in Attachment B. The estimated VOC flux and ambient concentrations were then used to estimate potential health risks and hazards that may result from site exposure to estimated VOC concentrations in indoor air. The J&E model is based on the following assumptions:

- Chemical-containing soil gas occurs at defined and constant depths of 5 or 10 feet bgs.
- The gas-phase chemical migrates vertically through soil pore space up to the ground surface by steady-state diffusion.
- The soil between the chemical sources and the ground surface is assumed to be homogeneous.
- Vapor diffusion is described by a single chemical-specific effective diffusion coefficient.
- No retardation of the soil vapor occurs as the chemical migrates from soil gas sources up to the ground surface.

- Vapor migrates through cracks in the building foundation and mixes instantaneously with indoor air resulting in an ambient indoor air concentration.

The method assumes that the source chemical concentrations do not decrease over time (i.e.; no mass depletion) and the depth to the top of the chemical sources remain constant, which results in an overestimate of long-term exposure effects.

The J&E model was run using default soil physical parameters as recommended by the DTSC (2011). Soils at the site have been described as sandy silty soils (Geocon West, 2018). Default soil physical parameters for sandy loam soils were obtained from the J&E VLOOKUP table.

The J&E model assumes that the concentrations in indoor air are proportional to the flux throughout the soil column, and that a gas infiltrating into the building through the foundation floor is uniformly and instantaneously mixed within the air space above the lowest occupied floor of the building. Because this model ignores a number of possible attenuating factors, it is likely that it over-predicts the chemical flux to indoor air. However, because of its simplicity, this approach provides a simple method to estimate the likely maximum rate at which chemicals would be transported to the surface soils and into a building. Copies of the J&E models used are included in Attachment B.

The indoor air chemical concentrations estimated to result from the volatilization of VOCs could be considered to represent a "worst-case" estimate. In the calculations it was assumed that single chemical compounds are volatilizing, traveling alone through the vadose zone and escaping to ambient air. In reality, all chemicals detected at the site and its immediate vicinity are competing with each other for available soil-pore space. It is well known that chemical volatilization and migration is limited by the vapor saturation in the vadose zone.

Toxicity Values

The toxicity assessment characterizes the relationship between the magnitude of exposure to a COPC and the nature and magnitude of adverse health effects that may result from such exposure. For purposes of calculating exposure criteria to be used in risk assessments, adverse health effects are classified into two broad categories – carcinogens, and non-carcinogens. Toxicity values/exposure criteria are generally developed based on the threshold approach for non-carcinogenic effects and the non-threshold approach for carcinogenic effects. Toxicity values may be based on epidemiological studies, short-term human studies, and sub-chronic or chronic animal data.

A reference concentration (RfC) is an exposure concentration in air that is not expected to cause adverse health effects over a lifetime of daily exposure in the most sensitive population. All RfCs used in this evaluation to estimate non-carcinogenic chronic health hazards are presented in Table 3.

Health risks for exposures to carcinogens are defined in terms of probabilities. The probabilities quantify the likelihood of a carcinogenic response in an individual that receives a given dose of a particular compound. These probabilities are calculated based on the potential exposure concentration and the inhalation unit risk (IUR) for a chemical.

The IUR, which is expressed in units of inverse micrograms per cubic meter $(ug/m^3)^{-1}$, is the 95% UCL of the probability of carcinogenic response per unit daily exposure to a given chemical concentration over a lifetime. The IUR multiplied by the lifetime exposure concentration of the

chemical provides an estimate of the 95% UCL of the theoretical cancer risk for the specific chemical. The IURs used in this evaluation to estimate carcinogenic dose-assessment risks are presented in Table 3.

Risk Characterization

This section discusses the methods used to quantify the exposure concentration (EC) for potential receptors at the site. The estimated ECs for each VOC were used to estimate the potential for carcinogenic health risks and non-carcinogenic adverse health effects. The potential inhalation exposures were calculated using the following equation (USEPA 2009):

$$EC = \frac{CA \bullet ET \bullet EF \bullet ED}{AT}$$

Where:

EC	=	Exposure concentration, ug/m^3
CA	=	Chemical concentration in air, ug/m^3
ET	=	Exposure time, hours/day
EF	=	Exposure frequency, days/year
ED	=	Exposure duration, years
AT	=	Averaging time, hours (used the equivalent of 70 years for carcinogens and same value as ED for non-carcinogens).

Inhalation intake factors were combined with estimated indoor air chemical concentrations (CA) to obtain the exposure concentration for hypothetical onsite residents. Exposure parameters used to characterize hypothetical onsite residents are presented in Table 4.

Non-Carcinogenic Health Hazard Evaluation

The evaluation of non-carcinogenic health hazards began with a calculation of the hazard quotient or HQ for each chemical. The HQ is defined as the ratio of the exposure concentration (EC) to the reference concentration (RfC). The HQ can be expressed according to the following equation:

$$HQ = \frac{EC}{RfC}$$

Where:

HQ	=	Hazard quotient, unitless
EC	=	Exposure concentration, ug/m^3
RfC	=	Reference concentration, ug/m^3

The estimated HQs are compared to an acceptable hazard level. Implicit in the HQ is the assumption of a threshold level of exposure below which no adverse effects are expected to occur. For example,

if the HQ exceeds unity (because site-specific exposure exceeds the RfC), then the potential for non-cancer adverse effects may exist. In general, the greater the value above 1.0, the greater the potential hazard. In contrast, HQs of less than 1.0 indicate that no adverse health effects are expected to occur from exposure to chemicals at the site.

According to the USEPA (1989), if the HQ for a combination of chemicals is less than unity (1.0), there is no concern for potential chronic adverse health effects from the chemical exposures. The HQ estimated for VOCs detected at a depth of 5 feet bgs was estimated to be 0.09 (Table 5). The HQ estimated for VOCs detected at a depth of 10 feet bgs was estimated to be 0.06 (Table 6). Both estimated HQ values are below 1.0.

Cancer Risk Estimates

Cancer risks were estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen (i.e., incremental or excess individual lifetime cancer risk; USEPA, 1989). Cancer risks were calculated in accordance with DTSC (2015) and USEPA (1989) guidelines.

$$Risk = EC \bullet IUR$$

Where:

Risk	=	Upper bound incremental lifetime carcinogenic risk, unitless
EC	=	Exposure concentration, ug/m^3
IUR	=	Inhalation unit risk, $(ug/m^3)^{-1}$

The excess cancer risk was compared to the risk level considered acceptable by federal and state regulatory agencies. The target cancer risk level identified by the DTSC in the PEA Guidance Manual is 1 in a million (1.0E-06). However, the USEPA has established acceptable incremental cancer risk levels to be within the risk range of 1 in 10,000 (1.0E-04) and 1.0E-06; risks greater than 1.0E-04 are generally considered unacceptable. Cal-EPA has defined a risk of 1 in 100,000 (1.0E-05) as the "no significant level" for carcinogens under California's Safe Water and Toxic Enforcement Act (Proposition 65). Further, most California air districts use the 1.0E-05 risk level as the notification trigger level under California's AB2588 Toxic Hot Spots Program.

Using the maximum detected VOC concentrations, the cancer risk from residential exposure to VOCs detected at a depth of 5 feet bgs was estimated to be 1E-06 (Table 5). The cancer risk from residential exposure to VOCs detected at a depth of 10 feet bgs was estimated to be 6E-07 (Table 6). These estimated cancer risks are lower than the maximum acceptable risk level of one-in-a-million (1E-06) mandated by California's DTSC (2015).

Conclusions and Recommendations

Results of the VIRE indicate that the potential VOC sources under the site may produce vapors that could impact ambient air. Results of the VIRE also indicate that the probability of developing cancer as a result of exposures to indoor air at the onsite buildings are below one-in-a-million. These estimated cancer risks are well below the known cancer risk for the U.S. population and are considered acceptable by California health and environmental protection agencies. Similarly, the

estimated Hazard Indices are well below the hazard quotient of 1.0, which is considered acceptable to the California Environmental Protection Agency. In other words, no significant cancer risks or health hazards are anticipated to occur as a result of exposures to chemicals detected in soil gas under the site.

It should be noted that the VIRE was based on conservative (health-protective) assumptions, estimates, models, and parameters. Therefore, the results are not absolute estimates of health risks at the Site but are health-protective estimates.

The conclusions and recommendations presented in this report are professional opinions based solely upon the data described in this report. They are intended exclusively for the purpose outlined herein and the property's location and project indicated. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of users other than Krazan. Any use or reuse of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Given that the scope of services for this investigation was limited, and that conditions may vary between the points explored, it is possible that currently unrecognized subsurface contamination might be present at the subject property. Should site use or conditions change, the information and conclusions in this report may no longer apply. Opinions relating to environmental and public health conditions are based on limited data and actual conditions may vary from those encountered at the times and locations where data were obtained. No express or implied representation or warranty is included or intended in this report except that the work was performed within the limits prescribed by the Client with the customary thoroughness and competence of professionals working in the same area on similar projects.

Attachments

Table 1. Soil Gas Analytical Results for Samples Collected at a Depth of 5 Feet Below Ground Surface

Table 2. Soil Gas Analytical Results for Samples Collected at a Depth of 10 Feet Below Ground Surface

Table 3. Toxicity Criteria for Chemicals of Potential Concern

Table 4. Exposure Parameters for Onsite Receptors

Table 5. Estimated Cumulative Risks and Health Hazards for VOCs Detected at a Depth of 5 Feet Below Ground Surface

Table 6. Estimated Cumulative Risks and Health Hazards for VOCs Detected at a Depth of 10 Feet Below Ground Surface

Attachment A – Optimal Technology Analytical Report

Attachment B – Johnson and Ettinger Models (SG-SCREEN, DTSC Version 2.0-Last Modified

December 2014).

References

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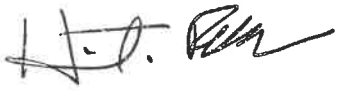
This memorandum was prepared by:

Enviro-Tox Services, Inc.



Heriberto Robles, Ph. D., D.A.B.T.
Principal Toxicologist

TABLES

Table 1
Soil Gas Analytical Results for Samples Collected at a Depth of 5 Feet Below Ground Surface
211 W. Crother Avenue
Placentia, California

SAMPLE ID	1,1-Dichloroethylene (ug/L)	1,1,1-Trichloroethane (ug/L)	Benzene (ug/L)	Tetrachloroethylene (ug/L)
SV1-5'	ND	ND	ND	0.1
SV2-5'	ND	ND	ND	0.18
SV3-5'	ND	ND	0.04	ND
SV4-5'	ND	ND	0.03	ND
SV5-5'	ND	ND	ND	ND
SV6-5'	ND	ND	ND	ND
SV7-5'	4.34	3.79	ND	ND
SV8-5'	1.39	6.81	ND	0.11
SV9-5'	ND	2.84	0.03	0.12
SV10-5'	1.3	6.27	ND	0.42
SV11-5'	ND	ND	ND	ND
SV12-5'	ND	ND	ND	ND
SV13-5'	ND	ND	ND	ND
SV14-5'	ND	ND	ND	ND
Maximum Detected Concentration	**4.34**	**6.81**	**0.04**	**0.42**

Notes:
Only detected analytes are presented.
ug/L = Micrograms per liter

Table 2
Soil Gas Analytical Results for Samples Collected at a Depth of 10 Feet Below Ground Surface
211 W. Crother Avenue
Placentia, California

SAMPLE ID	1,1-Dichloroethylene (ug/L)	1,1,1-Trichloroethane (ug/L)	Benzene (ug/L)	Tetrachloroethylene (ug/L)
SV1-10'	ND	ND	ND	0.11
SV2-10'	ND	ND	ND	ND
SV3-10'	ND	ND	ND	0.15
SV4-10'	1.21	ND	0.03	ND
SV5-10'	ND	ND	ND	ND
SV6-10'	ND	ND	ND	ND
SV7-10'	4.86	3.48	ND	0.2
SV8-10'	4.47	7.51	ND	ND
SV9-10'	ND	1.84	ND	ND
SV10-10'	2.6	9.9	ND	0.39
SV11-10'	ND	ND	ND	ND
SV12-10'	ND	ND	ND	0.1
SV13-10'	ND	ND	ND	0.1
SV14-10'	ND	ND	ND	ND
Maximum Detected Concentration	**4.86**	**9.9**	**0.03**	**0.39**

Notes:
Only detected analytes are presented.
ug/L = Micrograms per liter

Table 3
Toxicity Criteria of Chemicals of Potential Concern
211 W. Crother Avenue
Placentia, California

Chemical	Chronic Inhalation Reference Concentration (RfC) (mg/m^3)		Inhalation Unit Risk ($(ug/m^3)^{-1}$)	
VOCs				
1,1-Dichloroethylene	7.0E-02	c	0.0E+00	c
1,1,1-Trichloroethane	1.0E+00	c	0.0E+00	c
Benzene	3.0E-03	c	2.9E-05	c
Tetrachloroethylene	4.0E-02	c	6.1E-06	c

Notes:
c = Cal/EPA Cancer Potency Database 2018

Table 4
Exposure Parameters for Onsite Receptors
For VOCs Detected at a Depth of 5 Feet Below Ground Surface
211 W. Crother Avenue
Placentia, California

Exposure/Site Specific Parameters	Units	Exposure Parameters		
		Adult Resident	Child Resident	Source
Chemical Concentration in Air (CA)		--	--	chemical-specific
Exposure Frequency (EF)	days/year	350	350	HERD 2014
Exposure Duration (ED)	years	20	6	HERD 2014
Exposure Time (ET)	hr/day	24	24	HERD 2014
Averaging Time for Noncarcinogens (AT_n)	hours	175,200	52,560	USEPA 2009
Averaging Time for Carcinogens (AT_c)	hours	613,200	613,200	USEPA 2009

Table 5
Estimated Cumulative Risks and Hazards
For VOCs Detected at a Depth of 5 Feet Below Ground Surface
211 W. Crother Avenue
Placentia, California

COPC	Residential Exposure Scenario		
	Estimated Indoor Air Conc. (ug/m^3)	Cancer Risk	Hazard Quotient
VOCs			
1,1-Dichloroethylene	4.6E+00	0.E+00	6.E-02
1,1,1-Trichloroethane	6.1E+00	0.E+00	6.E-03
Benzene	4.3E-02	4.E-07	1.E-02
Tetrachloroethylene	3.2E-01	7.E-07	8.E-03
TOTAL RISKS and HAZARDS		1.E-06	9.E-02

Notes:
" * " compound not a COPC; " -- " Not Applicable
Includes Outdor Inhalation of VOCs.
EPC: Exposure Point Concentration in milligrams per cubic meter of air.

Table 6
Estimated Cumulative Risks and Hazards
For VOCs Detected at a Depth of 10 Feet Below Ground Surface
211 W. Crother Avenue
Placentia, California

COPC	Residential Exposure Scenario		
	Estimated Indoor Air Conc. (ug/m^3)	Cancer Risk	Hazard Quotient
VOCs			
1,1-Dichloroethylene	3.2E+00	0.E+00	4.E-02
1,1,1-Trichloroethane	5.2E+00	0.E+00	5.E-03
Benzene	2.0E-02	2.E-07	6.E-03
Tetrachloroethylene	1.7E-01	4.E-07	4.E-03
TOTAL RISKS and HAZARDS		6.E-07	6.E-02

Notes:
"*" compound not a COPC; "--" Not Applicable
Includes Outdor Inhalation of VOCs.
EPC: Exposure Point Concentration in milligrams per cubic meter of air.

ATTACHMENT B

Johnson and Ettinger Model (SG-SCREEN, DTSC Version 2.0-Last Modified December 2014)

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
75354	4.34E+03			1,1-Dichloroethylene
71556	6.81E+03			1,1,1-Trichloroethane
71432	4.00E+01			Benzene
127184	4.20E+02			Tetrachloroethylene

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk (unitless)	Noncancer Hazard (unitless)
4.34E+03	1.1E-03	4.6E+00	NA	6.3E-02
6.81E+03	8.9E-04	6.1E+00	NA	5.8E-03
4.00E+01	1.1E-03	4.3E-02	4.5E-07	1.4E-02
4.20E+02	7.6E-04	3.2E-01	6.9E-07	7.6E-03

MORE

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152.4	24	SL		

5

MORE

Lookup Soil Parameters

ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.62	0.387	0.103	5

MORE

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH ($hour^{-1}$)	ENTER Ceiling Height CH (cm)
EWoc Residential	70	26	26	350	24 (NEW)	0.5 (NEW)	244 (= 8.0 feet)

END

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Unit risk factor, URF $(\mu g/m^3)^{-1}$
75354	1,1-Dichloroethylene	8.63E-02	1.10E-05	2.61E-02	25	6,247	304.80	576.10	0.0E+00
71556	1,1,1-Trichloroethane	6.48E-02	9.60E-06	1.72E-02	25	7,136	347.20	545.00	0.0E+00
71432	Benzene	8.95E-02	1.03E-05	5.55E-03	25	7,342	353.20	562.20	2.9E-05
127184	Tetrachloroethylene	5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	6.1E-06

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)	Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^V (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)
75354	1,1-Dichloroethylene	7.0E-02	96.90	137.4	0.284	0.184	6.07E-09	0.901	5.47E-09
71556	1,1,1-Trichloroethane	1.0E+00	133.00	137.4	0.284	0.184	6.07E-09	0.901	5.47E-09
71432	Benzene	3.0E-03	78.10	137.4	0.284	0.184	6.07E-09	0.901	5.47E-09
127184	Tetrachloroethylene	4.0E-02	166.00	137.4	0.284	0.184	6.07E-09	0.901	5.47E-09

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm\text{-}m^3/mol$)
75354	1,1-Dichloroethylene	4,000	4.34E+03	3.39E+04	1.00E+06	5.00E-03	15	6,299	2.52E-02
71556	1,1,1-Trichloroethane	4,000	6.81E+03	3.39E+04	1.00E+06	5.00E-03	15	7,732	1.65E-02
71432	Benzene	4,000	4.00E+01	3.39E+04	1.00E+06	5.00E-03	15	7,977	5.30E-03
127184	Tetrachloroethylene	4,000	4.20E+02	3.39E+04	1.00E+06	5.00E-03	15	9,410	1.68E-02

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_v (cm^2/s)	Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)
75354	1,1-Dichloroethylene	1.03E+00	1.80E-04	8.71E-03	137.4	15	4.34E+03	1.25	8.33E+01	8.71E-03
71556	1,1,1-Trichloroethane	6.75E-01	1.80E-04	6.54E-03	137.4	15	6.81E+03	1.25	8.33E+01	6.54E-03
71432	Benzene	2.18E-01	1.80E-04	9.04E-03	137.4	15	4.00E+01	1.25	8.33E+01	9.04E-03
127184	Tetrachloroethylene	6.88E-01	1.80E-04	5.10E-03	137.4	15	4.20E+02	1.25	8.33E+01	5.10E-03

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
75354	1,1-Dichloroethylene	5.00E+03	2.03E+08	**1.06E-03**	4.61E+00	NA	7.0E-02	**NA**	**6.3E-02**
71556	1,1,1-Trichloroethane	5.00E+03	1.16E+11	**8.94E-04**	6.09E+00	NA	1.0E+00	**NA**	**5.8E-03**
71432	Benzene	5.00E+03	1.03E+08	**1.08E-03**	4.34E-02	2.9E-05	3.0E-03	**4.5E-07**	**1.4E-02**
127184	Tetrachloroethylene	5.00E+03	1.58E+14	**7.58E-04**	3.18E-01	6.1E-06	4.0E-02	**6.9E-07**	**7.6E-03**
							TOTAL	1.1E-06	9.1E-02

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 5 Feet Below Ground Surface

USEPA SG-SCREEN
Version 2.0, 04/2003

DTSC Modification
December 2014

Department of Toxic Substances Control
Vapor Intrusion Screening Model - Soil Gas

DATA ENTRY SHEET

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
75354	4.86E+03			1,1-Dichloroethylene
71556	9.90E+03			1,1,1-Trichloroethane
71432	3.00E+01			Benzene
127184	3.90E+02			Tetrachloroethylene

Results Summary

Soil Gas Conc. ($\mu g/m^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu g/m^3$)	Cancer Risk (unitless)	Noncancer Hazard (unitless)
4.86E+03	6.5E-04	3.2E+00	NA	4.3E-02
9.90E+03	5.2E-04	5.2E+00	NA	5.0E-03
3.00E+01	6.7E-04	2.0E-02	2.1E-07	6.4E-03
3.90E+02	4.3E-04	1.7E-01	3.6E-07	4.0E-03

MORE

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	304.8	24	SL		

10

MORE

Lookup Soil Parameters

ENTER Vadose zone SCS soil type	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
S	1.62	0.387	0.103	5

MORE

Lookup Receptor Parameters

	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH ($hour^{-1}$)	ENTER Ceiling Height CH (cm)
EW	Residential	70	26	26	350	24 (NEW)	0.5 (NEW)	244 (= 8.0 feet)

END

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Henry's law constant at reference temperature, H ($atm\text{-}m^3/mol$)	Henry's law constant reference temperature, T_R (^oC)	Enthalpy of vaporization at the normal boiling point, $\Delta H_{v,b}$ (cal/mol)	Normal boiling point, T_B (^oK)	Critical temperature, T_C (^oK)	Unit risk factor, URF $(\mu g/m^3)^{-1}$
75354	1,1-Dichloroethylene	8.63E-02	1.10E-05	2.61E-02	25	6,247	304.80	576.10	0.0E+00
71556	1,1,1-Trichloroethane	6.48E-02	9.60E-06	1.72E-02	25	7,136	347.20	545.00	0.0E+00
71432	Benzene	8.95E-02	1.03E-05	5.55E-03	25	7,342	353.20	562.20	2.9E-05
127184	Tetrachloroethylene	5.05E-02	9.46E-06	1.77E-02	25	8,288	394.40	620.20	6.1E-06

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Reference conc., RfC (mg/m^3)	Molecular weight, MW (g/mol)	Source-building separation, L_T (cm)	Vadose zone soil air-filled porosity, θ_a^v (cm^3/cm^3)	Vadose zone effective total fluid saturation, S_{te} (cm^3/cm^3)	Vadose zone soil intrinsic permeability, k_i (cm^2)	Vadose zone soil relative air permeability, k_{rg} (cm^2)	Vadose zone soil effective vapor permeability, k_v (cm^2)
75354	1,1-Dichloroethylene	7.0E-02	96.90	289.8	0.284	0.184	6.07E-09	0.901	5.47E-09
71556	1,1,1-Trichloroethane	1.0E+00	133.00	289.8	0.284	0.184	6.07E-09	0.901	5.47E-09
71432	Benzene	3.0E-03	78.10	289.8	0.284	0.184	6.07E-09	0.901	5.47E-09
127184	Tetrachloroethylene	4.0E-02	166.00	289.8	0.284	0.184	6.07E-09	0.901	5.47E-09

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Floor-wall seam perimeter, X_{crack} (cm)	Soil gas conc. ($\mu g/m^3$)	Bldg. ventilation rate, $Q_{building}$ (cm^3/s)	Area of enclosed space below grade, A_B (cm^2)	Crack-to-total area ratio, η (unitless)	Crack depth below grade, Z_{crack} (cm)	Enthalpy of vaporization at ave. soil temperature, $\Delta H_{v,TS}$ (cal/mol)	Henry's law constant at ave. soil temperature, H_{TS} ($atm\text{-}m^3/mol$)
75354	1,1-Dichloroethylene	4,000	4.86E+03	3.39E+04	1.00E+06	5.00E-03	15	6,299	2.52E-02
71556	1,1,1-Trichloroethane	4,000	9.90E+03	3.39E+04	1.00E+06	5.00E-03	15	7,732	1.65E-02
71432	Benzene	4,000	3.00E+01	3.39E+04	1.00E+06	5.00E-03	15	7,977	5.30E-03
127184	Tetrachloroethylene	4,000	3.90E+02	3.39E+04	1.00E+06	5.00E-03	15	9,410	1.68E-02

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Henry's law constant at ave. soil temperature, H'_{TS} (unitless)	Vapor viscosity at ave. soil temperature, μ_{TS} (g/cm-s)	Vadose zone effective diffusion coefficient, D^{eff}_{V} (cm^2/s)	Diffusion path length, L_d (cm)	Convection path length, L_p (cm)	Source vapor conc., C_{source} ($\mu g/m^3$)	Crack radius, r_{crack} (cm)	Average vapor flow rate into bldg., Q_{soil} (cm^3/s)	Crack effective diffusion coefficient, D^{crack} (cm^2/s)
75354	1,1-Dichloroethylene	1.03E+00	1.80E-04	8.71E-03	289.8	15	4.86E+03	1.25	8.33E+01	8.71E-03
71556	1,1,1-Trichloroethane	6.75E-01	1.80E-04	6.54E-03	289.8	15	9.90E+03	1.25	8.33E+01	6.54E-03
71432	Benzene	2.18E-01	1.80E-04	9.04E-03	289.8	15	3.00E+01	1.25	8.33E+01	9.04E-03
127184	Tetrachloroethylene	6.88E-01	1.80E-04	5.10E-03	289.8	15	3.90E+02	1.25	8.33E+01	5.10E-03

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

CHEMICAL PROPERTIES SHEET

CAS	Chemical	Area of crack, A_{crack} (cm^2)	Exponent of equivalent foundation Peclet number, exp(Pe^f) (unitless)	Infinite source indoor attenuation coefficient, α (unitless)	Infinite source bldg. conc., $C_{building}$ ($\mu g/m^3$)	Unit risk factor, URF $(\mu g/m^3)^{-1}$	Reference conc., RfC (mg/m^3)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
75354	1,1-Dichloroethylene	5.00E+03	2.03E+08	**6.52E-04**	3.17E+00	NA	7.0E-02	**NA**	**4.3E-02**
71556	1,1,1-Trichloroethane	5.00E+03	1.16E+11	**5.24E-04**	5.19E+00	NA	1.0E+00	**NA**	**5.0E-03**
71432	Benzene	5.00E+03	1.03E+08	**6.70E-04**	2.01E-02	2.9E-05	3.0E-03	**2.1E-07**	**6.4E-03**
127184	Tetrachloroethylene	5.00E+03	1.58E+14	**4.29E-04**	1.67E-01	6.1E-06	4.0E-02	**3.6E-07**	**4.0E-03**
							TOTAL	5.7E-07	5.9E-02

Land Use: Residential

Exposure Scenario: For VOCs Detected at a Depth of 10 Feet Below Ground Surface

Soil Properties Lookup Table

SCS Soil Type	K_s (cm/h)	α_1 (1/cm)	N (unitless)	M (unitless)	n (cm³/cm³)	θ_r (cm³/cm³)	Mean Grain Diameter (cm)	Bulk Density (g/cm³)	θ_w (cm³/cm³)	SCS Soil Name
C	0.61	0.01496	1.253	0.2019	0.459	0.098	0.0092	1.43	0.215	Clay
CL	0.34	0.01581	1.416	0.2938	0.442	0.079	0.016	1.48	0.168	Clay Loam
L	0.50	0.01112	1.472	0.3207	0.399	0.061	0.020	1.59	0.148	Loam
LS	4.38	0.03475	1.746	0.4273	0.390	0.049	0.040	1.62	0.076	Loamy Sand
S	26.78	0.03524	3.177	0.6852	0.375	0.053	0.044	1.66	0.054	Sand
SC	0.47	0.03342	1.208	0.1722	0.385	0.117	0.025	1.63	0.197	Sandy Clay
SCL	0.55	0.02109	1.330	0.2481	0.384	0.063	0.029	1.63	0.146	Sandy Clay Loam
SI	1.82	0.00658	1.679	0.4044	0.489	0.050	0.0046	1.35	0.167	Silt
SIC	0.40	0.01622	1.321	0.2430	0.481	0.111	0.0039	1.38	0.216	Silty Clay
SICL	0.46	0.00839	1.521	0.3425	0.482	0.090	0.0056	1.37	0.198	Silty Clay Loam
SIL	0.76	0.00506	1.663	0.3987	0.439	0.065	0.011	1.49	0.180	Silt Loam
SL	1.60	0.02667	1.449	0.3099	0.387	0.039	0.030	1.62	0.103	Sandy Loam

NEW => Receptor Lookup Table (added by HERO)

Receptor Type	AT_C (yrs)	AT_{NC} (yrs)	ED (yrs)	EF (days/yr)	ET (hrs/day)	ACH (1/hour)
Residential	70	26	26	350	24	0.5
Commercial	70	25	25	250	8	1
User-Defined						

Notes on Toxicity Criteria (see cell comments for individual chemical toxicity values)
1. Chemical name (blue) = Carcinogens with IUR
2. Values are from USEPA IRIS database except as indicated.
3. **Bold** = Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) toxicity value
4. IUR or RfC (red) = revised values (March 2014 update of December 2011 values)
5. X denotes route extrapolation from oral toxicity criteria.
(Values posted by USEPA or OEHHA as inhalation criteria, including cancer slope factors, are not [illegible])

Chemical Properties Lookup Table (K_{oc}, D_a, D_w, S, H', H values updated per USEPA November 2013 RSL Table)

NEW => 11 Additional Chemicals (CAS No. in red)

DTSC-Recommended Toxicity Criteria Values Used to Calculate Risk and Hazard (last updated March 2014) (0.0E+00 = no value available)

CAS No.	Chemical	Organic carbon partition coefficient, K_{oc} (cm³/g)	Diffusivity in air, D_a (cm²/s)	Diffusivity in water, D_w (cm²/s)	Pure component water solubility, S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature, H (atm-m³/mol)	Henry's law constant reference temperature, T_R (°C)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Inhalation Unit Risk IUR (µg/m³)⁻¹	Reference conc., RfC (mg/m³)	Molecular weight, MW (g/mol)	Extrapolated from oral toxicity value: IUR (X)	Extrapolated from oral toxicity value: RfC (X)	Comment Flag (y)
56235	Carbon tetrachloride	4.39E+01	5.71E-02	9.79E-06	7.93E+02	1.13E+00	2.76E-02	25	349.9	556.6	7,127	4.2E-05	1.0E-01	1.54E+02			
57749	Chlordane	3.38E+04	3.44E-02	4.02E-06	5.60E-02	1.99E-03	4.85E-05	25	624.2	885.7	14,000	3.4E-04	7.0E-04	4.10E+02			
58899	gamma-HCH (Lindane)	2.81E+03	4.33E-02	5.06E-06	7.30E+00	2.10E-04	5.14E-06	25	596.6	839.4	15,000	3.1E-04	1.1E-03	2.91E+02		X	
60297	Ethyl ether	9.70E+00	8.52E-02	9.36E-06	6.04E+04	5.03E-02	1.23E-03	25	307.5	466.7	6,338	0.0E+00	7.0E-01	7.41E+01		X	
60571	Dieldrin	2.01E+04	2.33E-02	6.01E-06	1.95E-01	4.09E-04	1.00E-05	25	613.3	842.3	17,000	4.6E-03	1.8E-04	3.81E+02		X	
67641	Acetone	2.36E+00	1.06E-01	1.15E-05	1.00E+06	1.43E-03	3.50E-05	25	329.2	508.1	6,955	0.0E+00	3.1E+01	5.81E+01			
67663	Chloroform	3.18E+01	7.69E-02	1.09E-05	7.95E+03	1.50E-01	3.67E-03	25	334.3	536.4	6,988	[illegible]	[illegible]	1.19E+02			
67721	Hexachloroethane	1.97E+02	3.21E-02	8.89E-06	5.00E+01	1.59E-01	3.89E-03	25	458.0	695.0	9,510	1.1E-05	[illegible]	2.37E+02			
71432	Benzene	1.46E+02	8.95E-02	1.03E-05	1.79E+03	2.27E-01	5.55E-03	25	353.2	562.2	7,342	2.9E-05	3.0E-03	7.81E+01			y
71556	1,1,1-Trichloroethane	4.39E+01	6.48E-02	9.60E-06	1.29E+03	7.03E-01	1.72E-02	25	347.2	545.0	7,136	0.0E+00	1.0E+00	1.33E+02			
72435	Methoxychlor	2.69E+04	2.21E-02	5.59E-06	1.00E-01	8.30E-06	2.03E-07	25	651.0	848.5	16,000	0.0E+00	1.8E-02	3.46E+02		X	
72559	DDE	1.18E+05	4.08E-02	4.76E-06	4.00E-02	1.70E-03	4.16E-05	25	636.4	860.4	15,000	9.7E-05	0.0E+00	3.18E+02	X		
74839	Methyl bromide (bromomethane)	1.32E+01	1.00E-01	1.35E-05	1.52E+04	3.00E-01	7.34E-03	25	276.7	467.0	5,714	0.0E+00	5.0E-03	9.49E+01			
74873	Methyl chloride (chloromethane)	1.32E+01	1.24E-01	1.36E-05	5.32E+03	3.61E-01	8.82E-03	25	249.0	416.3	5,115	0.0E+00	9.0E-02	5.05E+01			y
74908	Hydrogen cyanide	3.80E+00	1.66E-01	1.68E-05	1.00E+06	5.44E-03	1.33E-04	25	299.0	456.7	6,676	0.0E+00	8.0E-04	2.70E+01			
74953	Methylene bromide (dibromomethane)	2.17E+01	5.51E-02	1.19E-05	1.19E+04	3.36E-02	8.22E-04	25	370.0	583.0	7,868	0.0E+00	4.0E-03	1.74E+02			
75003	Chloroethane (ethyl chloride)	2.17E+01	1.04E-01	1.16E-05	6.71E+03	4.54E-01	1.11E-02	25	285.3	460.4	5,879	1.3E-06	1.0E+01	6.45E+01	X		y
75014	Vinyl chloride (chloroethene)	2.17E+01	1.07E-01	1.20E-05	8.80E+03	1.14E+00	2.78E-02	25	259.3	432.0	5,250	7.8E-05	1.0E-01	6.25E+01			
75058	Acetonitrile	4.67E+00	1.34E-01	1.41E-05	1.00E+06	1.41E-03	3.45E-05	25	354.6	545.5	7,110	0.0E+00	6.0E-02	4.11E+01			
75070	Acetaldehyde	1.00E+00	1.28E-01	1.35E-05	1.00E+06	2.73E-03	6.67E-05	25	293.1	466.0	6,157	2.7E-06	9.0E-03	4.41E+01			
75092	Methylene chloride (dichloromethane)	2.17E+01	9.99E-02	1.25E-05	1.30E+04	1.33E-01	3.25E-03	25	313.0	510.0	6,706	1.0E-06	4.0E-01	8.49E+01			
75150	Carbon disulfide	2.17E+01	1.06E-01	1.30E-05	2.16E+03	5.89E-01	1.44E-02	25	319.0	552.0	6,391	0.0E+00	7.0E-01	7.61E+01			
75218	Ethylene oxide	3.24E+00	1.34E-01	1.45E-05	1.00E+06	6.05E-03	1.48E-04	25	283.6	469.0	6,104	8.8E-05	3.0E-02	4.41E+01			
75252	Bromoform	3.18E+01	3.57E-02	1.04E-05	3.10E+03	2.19E-02	5.35E-04	25	422.4	696.0	9,479	1.1E-06	7.0E-02	2.53E+02		X	
75274	Bromodichloromethane	3.18E+01	5.63E-02	1.07E-05	3.03E+03	8.67E-02	2.12E-03	25	363.2	585.9	7,800	3.7E-05	7.0E-02	1.64E+02	X	X	
75296	2-Chloropropane	9.14E+00	8.88E-02	1.01E-05	3.73E+03	5.93E-01	1.45E-02	25	308.7	485.0	6,286	0.0E+00	1.0E-01	7.85E+01			y
75343	1,1-Dichloroethane	3.18E+01	8.36E-02	1.06E-05	5.04E+03	2.30E-01	5.62E-03	25	330.6	523.0	6,895	1.6E-06	8.0E-01	9.90E+01	X	X	
75354	1,1-Dichloroethylene	3.18E+01	8.63E-02	1.10E-05	2.42E+03	1.07E+00	2.61E-02	25	304.8	576.1	6,247	0.0E+00	7.0E-02	9.69E+01			
75456	Chlorodifluoromethane	3.18E+01	1.03E-01	1.33E-05	2.77E+03	1.66E+00	4.06E-02	25	232.4	369.3	4,836	0.0E+00	5.0E+01	8.65E+01			
75694	Trichlorofluoromethane	4.39E+01	6.54E-02	1.00E-05	1.10E+03	3.97E+00	9.70E-02	25	296.7	471.0	5,999	0.0E+00	1.2E+00	1.37E+02			
75718	Dichlorodifluoromethane	4.39E+01	7.60E-02	1.08E-05	2.80E+02	1.40E+01	3.43E-01	25	243.2	385.0	9,421	0.0E+00	[illegible]	1.21E+02			
76131	1,1,2-Trichloro-1,2,2-trifluoroethane	1.97E+02	3.76E-02	8.59E-06	1.70E+02	2.15E+01	5.26E-01	25	320.7	487.3	6,463	0.0E+00	5.0E+00	1.87E+02			
76448	Heptachlor	4.13E+04	2.23E-02	5.70E-06	1.80E-01	1.20E-02	2.94E-04	25	603.7	846.3	13,000	1.2E-03	1.8E-03	3.73E+02		X	
77474	Hexachlorocyclopentadiene	1.40E+03	2.72E-02	7.22E-06	1.80E+00	1.10E+00	2.70E-02	25	512.2	746.0	10,931	0.0E+00	2.0E-04	2.73E+02			
78831	Isobutanol	2.92E+00	8.97E-02	1.00E-05	8.50E+04	4.00E-04	9.78E-06	25	381.0	547.8	10,936	0.0E+00	1.1E+00	7.41E+01		X	
78875	1,2-Dichloropropane	6.07E+01	7.33E-02	9.73E-06	2.80E+03	1.16E-01	2.82E-03	25	369.5	572.0	7,590	1.0E-05	4.0E-03	1.13E+02	X		
78933	Methylethylketone (2-butanone)	4.51E+00	9.14E-02	1.02E-05	2.23E+05	2.33E-03	5.69E-05	25	352.5	536.8	7,481	0.0E+00	5.0E+00	7.21E+01			
79005	1,1,2-Trichloroethane	6.07E+01	6.69E-02	1.00E-05	4.59E+03	3.37E-02	8.24E-04	25	386.2	602.0	8,322	1.6E-05	2.0E-04	1.33E+02			
79016	Trichloroethylene	6.07E+01	6.87E-02	1.02E-05	1.28E+03	4.03E-01	9.85E-03	25	360.4	544.2	7,505	4.1E-06	2.0E-03	1.31E+02			y
79209	Methyl acetate	3.06E+00	9.58E-02	1.10E-05	2.43E+05	4.70E-03	1.15E-04	25	329.8	506.7	7,260	0.0E+00	3.5E+00	7.41E+01		X	
79345	1,1,2,2-Tetrachloroethane	9.49E+01	4.89E-02	9.29E-06	2.83E+03	1.50E-02	3.67E-04	25	419.6	661.2	8,996	5.8E-05	7.0E-02	1.68E+02		X	
79469	2-Nitropropane	3.08E+01	8.47E-02	1.02E-05	1.70E+04	4.87E-03	1.19E-04	25	393.2	594.0	8,383	2.7E-03	2.0E-02	8.91E+01			
80626	Methylmethacrylate	9.14E+00	7.50E-02	9.21E-06	1.50E+04	1.30E-02	3.19E-04	25	373.5	567.0	8,975	0.0E+00	7.0E-01	1.00E+02			
83329	Acenaphthene	5.03E+03	5.06E-02	8.33E-06	3.90E+00	7.52E-03	1.84E-04	25	550.5	803.2	12,155	0.0E+00	2.1E-01	1.54E+02		X	
86737	Fluorene	9.16E+03	4.40E-02	7.89E-06	1.69E+00	3.93E-03	9.62E-05	25	570.4	870.0	12,666	0.0E+00	1.4E-01	1.66E+02		X	
87683	Hexachloro-1,3-butadiene	8.45E+02	2.67E-02	7.03E-06	3.20E+00	4.21E-01	1.03E-02	25	486.2	738.0	10,206	2.2E-05	3.5E-03	2.61E+02		X	
88722	o-Nitrotoluene	3.71E+02	5.88E-02	8.67E-06	6.50E+02	5.11E-04	1.25E-05	25	495.0	720.0	12,239	6.3E-05	3.2E-03	1.37E+02	X	X	y
91203	Naphthalene	1.54E+03	6.05E-02	8.38E-06	3.10E+01	1.80E-02	4.40E-04	25	491.1	748.4	10,373	3.4E-05	3.0E-03	1.28E+02			
91576	2-Methylnaphthalene	2.48E+03	5.24E-02	7.78E-06	2.46E+01	2.11E-02	5.18E-04	25	514.3	761.0	12,600	0.0E+00	1.4E-02	1.42E+02		X	
92524	Biphenyl	5.13E+03	4.71E-02	7.56E-06	6.94E+00	1.26E-02	3.08E-04	25	529.1	789.0	10,890	0.0E+00	4.0E-04	1.54E+02			y
95476	o-Xylene	3.83E+02	6.89E-02	8.53E-06	1.78E+02	2.12E-01	5.18E-03	25	417.6	630.3	8,661	0.0E+00	1.0E-01	1.06E+02			
95501	1,2-Dichlorobenzene	3.83E+02	5.82E-02	8.92E-06	1.56E+02	7.85E-02	1.92E-03	25	453.6	705.0	9,700	0.0E+00	2.0E-01	1.47E+02			

VLOOKUP TABLES

NEW => 11 Additional Chemicals (CAS No. in red)		Chemical Properties Lookup Table (K_{oc}, D_a, D_w, S, H', H values updated per USEPA November 2013 RSL Table)									DTSC-Recommended Toxicity Criteria Values Used to Calculate Risk and Hazard (last updated March 2014) (0.0E+00 = no value available)			Extrapolated from oral toxicity value		Comment Flag
CAS No.	Chemical	Organic carbon partition coefficient, K_{oc} (cm^3/g)	Diffusivity in air, D_a (cm^2/s)	Diffusivity in water, D_w (cm^2/s)	Pure component water solubility, S (mg/L)	Henry's law constant H' (unitless)	Henry's law constant at reference temperature, H ($atm-m^3/mol$)	Henry's law constant reference temperature, T_R (°C)	Normal boiling point, T_B (°K)	Critical temperature, T_C (°K)	Enthalpy of vaporization at the normal boiling point, $DH_{v,b}$ (cal/mol)	Inhalation Unit Risk IUR ($\mu g/m^3)^{-1}$	Reference conc. RfC (mg/m^3)	Molecular weight MW (g/mol)	IUR (X)	RfC (X)	
95578	2-Chlorophenol	3.07E+02	6.61E-02	9.46E-06	1.13E+04	4.58E-04	1.12E-05	25	447.5	676.0	9,572	0.0E+00	1.8E-02	1.28E+02		X	
95636	1,2,4-Trimethylbenzene	6.14E+02	6.07E-02	7.92E-06	5.70E+01	2.52E-01	6.16E-03	25	442.3	649.2	9,369	0.0E+00	6.0E-02	1.20E+02			
96128	1,2-Dibromo-3-chloropropane	1.16E+02	3.21E-02	8.90E-06	1.23E+03	6.01E-03	1.47E-04	25	469.0	703.5	9,960	6.3E-03	2.0E-04	2.36E+02			
96184	1,2,3-Trichloropropane	1.16E+02	5.75E-02	9.24E-06	1.75E+03	1.40E-02	3.43E-04	25	430.0	652.0	9,171	8.9E-03	3.0E-04	1.47E+02	X		y
96333	Methyl acrylate	5.84E+00	8.50E-02	1.02E-05	4.94E+04	9.14E-03	1.99E-04	25	353.7	536.0	7,749	0.0E+00	2.0E-02	8.61E+01			
97632	Ethylmethacrylate	1.67E+01	6.93E-02	8.36E-06	5.40E+03	2.34E-02	5.73E-04	25	389.0	571.0	10,957	0.0E+00	3.0E-01	1.14E+02			
98066	tert-Butylbenzene	1.00E+03	5.30E-02	7.37E-06	2.95E+01	5.40E-01	1.32E-02	25	442.1	1220.0	8,980	0.0E+00	4.0E-01	1.34E+02			
98828	Cumene	6.98E+02	6.03E-02	7.66E-06	6.13E+01	4.70E-01	1.15E-02	25	425.6	631.1	10,335	0.0E+00	4.0E-01	1.20E+02			y
98862	Acetophenone	5.19E+01	6.52E-02	8.72E-06	6.13E+03	4.25E-04	1.04E-05	25	475.0	709.5	11,732	0.0E+00	3.5E-01	1.20E+02		X	
98953	Nitrobenzene	2.26E+02	6.81E-02	9.45E-06	2.09E+03	9.81E-04	2.40E-05	25	484.0	719.0	10,568	4.0E-05	9.0E-03	1.23E+02			
100414	Ethylbenzene	4.46E+02	6.85E-02	8.46E-06	1.69E+02	3.22E-01	7.88E-03	25	409.3	617.2	8,501	2.5E-06	1.0E+00	1.06E+02			
100425	Styrene	4.46E+02	7.11E-02	8.78E-06	3.10E+02	1.12E-01	2.75E-03	25	418.3	636.0	8,737	0.0E+00	9.0E-01	1.04E+02			
100447	Benzylchloride	4.46E+02	6.34E-02	8.81E-06	5.25E+02	1.68E-02	4.12E-04	25	452.0	686.0	8,773	4.9E-05	1.0E-03	1.27E+02	X		
100527	Benzaldehyde	1.11E+01	7.44E-02	9.46E-06	6.95E+03	1.09E-03	2.67E-05	25	452.0	695.0	11,558	0.0E+00	3.5E-01	1.06E+02		X	
103651	n-Propylbenzene	8.13E+02	6.02E-02	7.83E-06	5.22E+01	4.29E-01	1.05E-02	25	432.2	630.0	9,123	0.0E+00	1.0E+00	1.20E+02			
104518	n-Butylbenzene	1.48E+03	5.28E-02	7.33E-06	1.18E+01	6.50E-01	1.59E-02	25	456.5	660.5	9,280	0.0E+00	1.8E-01	1.34E+02		X	
106423	p-Xylene	3.75E+02	6.82E-02	8.42E-06	1.62E+02	2.82E-01	6.90E-03	25	411.5	616.2	8,525	0.0E+00	1.0E-01	1.06E+02			
106467	1,4-Dichlorobenzene	3.75E+02	5.50E-02	8.68E-06	8.13E+01	9.65E-02	2.41E-03	25	447.2	684.8	9,271	1.1E-05	8.0E-01	1.47E+02			
106898	Epichlorohydrin	9.91E+00	8.88E-02	1.11E-05	6.59E+04	1.24E-03	3.04E-05	25	390.0	600.0	10	2.3E-06	1.0E-03	9.25E+01			
106934	1,2-Dibromoethane (ethylene dibromide)	3.96E+01	4.30E-02	1.04E-05	3.91E+03	2.66E-02	6.50E-04	25	404.8	583.0	8,310	6.0E-04	8.0E-04	1.88E+02			
106990	1,3-Butadiene	3.96E+01	1.00E-01	1.03E-05	7.35E+02	3.01E+00	7.36E-02	25	268.6	425.0	6,370	1.7E-04	2.0E-03	5.41E+01			
107028	Acrolein	1.00E+00	1.12E-01	1.22E-05	2.12E+05	4.99E-03	1.22E-04	25	325.6	506.0	6,731	0.0E+00	2.0E-05	5.61E+01			
107062	1,2-Dichloroethane	3.96E+01	6.57E-02	1.10E-05	8.60E+03	4.82E-02	1.18E-03	25	356.7	561.0	7,643	2.6E-05	7.0E-03	9.90E+01			
107131	Acrylonitrile	8.51E+00	1.14E-01	1.23E-05	7.45E+04	5.64E-03	1.38E-04	25	350.3	519.0	7,786	2.9E-04	2.0E-03	5.31E+01			
108054	Vinyl acetate	5.68E+00	8.49E-02	1.00E-05	2.00E+04	2.69E-02	6.57E-04	25	345.7	519.1	7,600	0.0E+00	2.0E-01	8.61E+01			
108101	Methylisobutylketone (4-methyl-2-pentar	1.26E+01	6.98E-02	8.35E-06	1.90E+04	5.64E-03	1.38E-04	25	389.5	571.0	8,243	0.0E+00	3.0E+00	1.00E+02			y
108203	Diisopropyl ether (DIPE)	2.26E+01	6.54E-02	7.76E-06	8.80E+03	7.76E-05	2.56E-03	25	341.5	499.8	6,950	0.0E+00	7.0E-01	1.02E+02			
108383	m-Xylene	3.75E+02	6.84E-02	8.44E-06	1.61E+02	2.94E-01	7.18E-03	25	412.3	617.1	8,523	0.0E+00	1.0E-01	1.06E+02			
108601	bis(2-Chloroisopropyl)ether	8.29E+01	3.99E-02	7.36E-06	1.70E+03	3.03E-03	7.42E-05	25	460.0	690.0	9,695	1.0E-05	1.4E-01	1.71E+02	X		
108678	1,3,5-Trimethylbenzene	6.02E+02	6.02E-02	7.84E-06	4.82E+01	3.59E-01	8.77E-03	25	437.9	637.3	9,321	0.0E+00	6.0E-02	1.20E+02		X	
108872	Methylcyclohexane	7.85E+01	7.35E-02	8.52E-06	1.40E+01	4.22E+00	1.03E-01	25	373.9	572.2	7,474	0.0E+00	3.0E-01	9.82E+01			y
108883	Toluene	2.34E+02	7.79E-02	9.20E-06	5.26E+02	2.71E-01	6.64E-03	25	383.8	591.8	7,930	0.0E+00	3.0E-01	9.21E+01			
108907	Chlorobenzene	2.34E+02	7.21E-02	9.48E-06	4.58E+02	1.27E-01	3.11E-03	25	404.9	632.4	8,410	0.0E+00	5.0E-02	1.13E+02			
109660	Pentane, n-	7.22E+01	8.21E-02	8.80E-06	3.80E+01	5.11E+01	1.25E+00	25	309.0	469.7	6,155	0.0E+00	1.0E+00	7.22E+01			
109693	1-Chlorobutane	7.22E+01	7.84E-02	8.33E-06	1.10E+03	6.83E-01	1.67E-02	25	351.6	542.0	7,263	0.0E+00	1.4E-01	9.26E+01		X	
109999	Tetrahydrofuran	1.08E+01	8.54E-02	1.08E-05	1.00E+06	2.88E-03	7.05E-05	25	339.0	541.0	7,074	0.0E+00	2.0E+00	7.21E+01		X	y
110009	Furan	8.00E+01	1.03E-01	1.17E-05	1.00E+04	2.21E-01	5.40E-03	25	304.6	490.2	6,477	0.0E+00	3.5E-03	6.81E+01		X	y
110543	Hexane	1.32E+02	7.31E-02	8.17E-06	9.50E+00	7.96E+01	1.80E+00	25	341.7	506.0	6,895	0.0E+00	7.0E-01	8.62E+01			
110827	Cyclohexane	1.46E+02	8.09E-02	9.41E-06	5.69E+01	6.13E+00	1.50E-01	25	353.7	553.4	7,154	0.0E+00	6.0E+00	8.43E+01			
111444	Bis(2-chloroethyl)ether	3.22E+01	5.87E-02	8.71E-06	1.72E+04	6.95E-04	1.70E-05	25	451.2	659.8	10,803	7.1E-04	0.0E+00	1.43E+02			
115297	Endosulfan	6.76E+03	2.25E-02	6.78E-06	3.25E-01	2.66E-03	6.50E-05	25	674.4	942.9	14,000	0.0E+00	2.1E-02	4.07E+02		X	
118741	Hexachlorobenzene	6.20E+03	2.90E-02	7.85E-06	6.20E-03	6.95E-02	1.70E-03	25	582.6	826.0	14,447	5.1E-04	2.8E-03	2.85E+02		X	
120821	1,2,4-Trichlorobenzene	1.36E+03	3.95E-02	8.40E-06	4.30E+01	5.81E-02	1.42E-03	25	486.2	725.0	10,471	0.0E+00	2.0E-03	1.81E+02			
123739	Crotonaldehyde (2-butenal)	1.79E+00	8.56E-02	1.08E-05	1.50E+05	7.93E-04	1.94E-05	25	375.2	586.0	9	5.4E-04	0.0E+00	7.01E+01	X		
123911	1,4-Dioxane	2.63E+00	8.74E-02	1.05E-05	1.00E+06	1.96E-04	4.80E-06	25	374.3	587.2	8,164	7.7E-06	3.0E-02	8.81E+01			
124481	Dibromochloromethane	3.18E+01	3.65E-02	1.05E-05	2.70E+03	3.26E-02	7.83E-04	25	416.1	676.2	9,900	2.7E-05	7.0E-02	2.08E+02		X	
126987	Methacrylonitrile	1.31E+01	8.64E-02	1.08E-05	2.54E+04	1.01E-02	2.47E-04	25	363.3	554.0	7,600	0.0E+00	3.0E-02	6.71E+01			
126998	2-Chloro-1,3-butadiene (chloroprene)	6.07E+01	8.42E-02	1.00E-05	8.37E+02	2.26E+00	5.51E-02	25	332.4	526.0	8,075	3.0E-04	2.0E-02	8.85E+01			
127184	Tetrachloroethylene	9.49E+01	5.05E-02	9.46E-06	2.06E+02	7.24E-01	1.77E-02	25	394.4	620.2	8,288	5.1E-06	4.0E-02	1.66E+02			
129000	Pyrene	5.43E+04	2.78E-02	7.25E-06	1.35E-01	4.87E-04	1.19E-05	25	668.0	936.0	14,370	0.0E+00	1.1E-01	2.02E+02		X	
132649	Dibenzofuran	8.16E+03	4.11E-02	7.39E-06	3.10E+00	8.71E-03	2.13E-04	25	569.0	824.0	66,400	0.0E+00	3.5E-02	1.68E+02		X	
135988	sec-Butylbenzene	1.33E+03	5.29E-02	7.34E-06	1.76E+01	7.20E-01	1.76E-02	25	446.5	679.0	88,720	0.0E+00	4.0E-01	1.34E+02			
141786	Ethylacetate	5.58E+00	9.23E-02	9.70E-06	8.00E+04	5.46E-03	1.34E-04	25	350.3	523.3	7,634	0.0E+00	7.0E-02	8.81E+01			
142289	1,3-Dichloropropene	7.22E+01	7.39E-02	9.82E-06	2.75E+03	3.98E-02	9.76E-04	25	393.9	590.9	8,103	0.0E+00	7.0E-02	1.13E+02		X	
156592	cis-1,2-Dichloroethylene	3.96E+01	8.84E-02	1.13E-05	5.41E+03	1.67E-01	4.08E-03	25	333.7	544.0	7,192	0.0E+00	8.0E-03	9.63E+01		X	
156605	trans-1,2-Dichloroethylene	3.96E+01	8.76E-02	1.12E-05	4.52E+03	1.67E-01	4.08E-03	25	320.9	516.5	6,717	0.0E+00	8.0E-02	9.69E+01			
205992	Benzo(b)fluoranthene	5.99E+05	4.76E-02	5.56E-06	1.50E-03	2.69E-05	6.57E-07	25	715.9	969.3	17,000	1.1E-04	0.0E+00	2.52E+02			
218019	Chrysene	1.81E+05	2.81E-02	6.75E-06	2.00E-03	2.14E-04	5.23E-06	25	714.2	979.0	16,455	1.1E-05	0.0E+00	2.28E+02			
309002	Aldrin	6.20E+04	3.72E-02	4.35E-06	1.70E-02	1.80E-03	4.40E-05	25	693.0	936.4	15,000	4.9E-03	1.1E-04	3.65E+02		X	
319846	alpha-HCH (alpha-BHC)	2.81E+03	4.39E-02	5.09E-06	2.00E+00	2.10E-04	5.14E-06	25	598.6	839.4	15,000	1.8E-03	0.0E+00	2.91E+02			
541731	1,3-Dichlorobenzene	3.79E+02	5.56E-02	8.80E-06	1.19E+02	8.85E-02	2.17E-03	25	446.0	684.0	9,230	0.0E+00	1.1E-01	1.47E+02		X	y
542756	1,3-Dichloropropene	7.22E+01	7.83E-02	1.01E-05	2.80E+03	1.45E-01	3.55E-03	25	381.2	587.4	7,900	1.6E-05	2.0E-02	1.11E+02			
542881	bis(Chloromethyl)ether	9.70E+00	7.53E-02	1.04E-05	2.20E+04	1.78E-01	4.36E-03	25	379.0	566.5	7,910	6.2E-02	0.0E+00	1.15E+02			y
630206	1,1,1,2-Tetrachloroethane	8.60E+01	4.82E-02	9.10E-06	1.07E+03	1.02E-01	2.50E-03	25	403.5	624.0	9,768	7.4E-06	1.1E-01	1.68E+02		X	
924163	N-Nitroso-di-n-butylamine	9.15E+02	6.49E-02	7.59E-06	1.27E+03	5.40E-04	1.32E-05	25	389.0	583.5	11,200	1.6E-03	0.0E+00	1.30E+02			
1634044	MTBE (methyl-tert-butyl ether)	1.16E+01	7.53E-02	8.59E-06	5.10E+04	2.40E-02	5.87E-04	25	328.3	497.1	6,678	2.6E-07	3.0E+00	8.82E+01			
7439976	Mercury (elemental)	5.20E+01	3.07E-02	6.30E-06	6.00E-02	4.67E-01	1.14E-02	25	629.9	1750.0	14,127	0.0E+00	3.0E-05	2.01E+02			
123456789	TBD	5.20E+01	3.07E-02	6.30E-06	6.00E-02	4.67E-01	1.14E-02	25	629.9	1,750.0	14,127	0.0E+00	1.8E+02	2.01E+02			

Krazan & ASSOCIATES, INC.

GEOTECHNICAL ENGINEERING • ENVIRONMENTAL ENGINEERING
CONSTRUCTION TESTING & INSPECTION

October 1, 2018 Project No. 024-18062

Ms. Leatha Clark
USA Multifamily Development
3200 Douglas Boulevard, Suite 200
Roseville, California 95661

RE: Phase I Environmental Site Assessment
207-211 West Crowther Avenue
Orange County APNs 339-402-05, -07, -08, and -11
Placentia, California 92870

Dear Ms. Clark;

Krazan & Associates, Inc., (Krazan) completed a Phase I Environmental Site Assessment at the referenced site summarized in a report dated October 1, 2018. We appreciate the opportunity to serve your environmental due diligence needs. During the course of this assessment, Krazan identified evidence of recognized environmental conditions (RECs) in conjunction with the subject site as defined by ASTM E 1527-13.

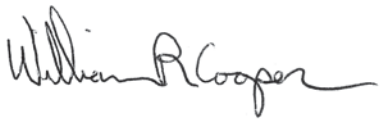
RECs

- Based on Krazan's review of previous environmental assessments, historical aerial photographs and Sanborn Fire Insurance Maps, there is evidence that RECs exist in connection with the historical uses of the subject site. A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of volatile organic compounds (VOCs), including benzene and tetrachloroethene (PCE), reported in soil gas samples exceeding the Regional Water Quality Control Board's Environmental Screening Levels for Residential Use for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic compounds, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Consequently, the current condition of the subject site subsurface is unknown.

  Krazan recommends that a comprehensive Soil Vapor Survey be conducted at the subject site in order to determine the presence or absence of significant concentrations of VOCs, including chlorinated VOCs.

If you have any questions regarding the information presented in this report, please call me at (661) 837-9200.

Respectfully Submitted,
KRAZAN & ASSOCIATES, INC.



William R. Cooper, P.G. 7427
Environmental Professional

WRC/mlt

PHASE I ENVIRONMENTAL SITE ASSESSMENT
207-211 W. CROWTHER AVENUE
ORANGE COUNTY APNS 339-402-05, -07, -08, AND -11
PLACENTIA, CALIFORNIA

Pursuant to ASTM E 1527-13

Project No. 024-18062
October 1, 2018

Prepared for:
Ms. Leatha Clark
USA Multifamily Development
3200 Douglas Boulevard, Suite 200
Roseville, California 95661
Ph: (916) 865-3918

Prepared by:
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2205 Coy Avenue
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Krazan & ASSOCIATES, INC.
SITE DEVELOPMENT ENGINEERS

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October 1, 2018 Project No. 024-18062

PHASE I ENVIRONMENTAL SITE ASSESSMENT
207-211 W. CROWTHER AVENUE
ORANGE COUNTY APNS 339-402-05, -07, -08, AND -11
PLACENTIA, CALIFORNIA

1.0 EXECUTIVE SUMMARY

Krazan & Associates, Inc. (Krazan) has conducted a Phase I Environmental Site Assessment (ESA) of the property located at 207-211 W. Crowther Avenue in Placentia, California, Orange County APNs 339-402-05, -07, -08, and -11 (subject site). It is incumbent upon the user to read this Phase I ESA report in its entirety. If not otherwise defined within the text of this report, please refer to the Glossary of Terms Section following the References Section for definitions of terms and acronyms utilized within this Phase I ESA report. Krazan conducted the Phase I ESA of the subject site in conformance with the American Society for Testing and Materials (ASTM) E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.* This Phase I ESA constitutes all appropriate inquiry (AAI) designed to identify recognized environmental conditions (RECs) in connection with the previous ownership and uses of the subject site as defined by ASTM E 1527-13.

ASTM E 1527-13 Section 1.1.1 *Recognized Environmental Conditions* – In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

During the course of this assessment, Krazan identified evidence of recognized environmental conditions (RECs) in conjunction with the subject site as defined by ASTM E 1527-13.

RECs

- Based on Krazan's review of previous environmental assessments, historical aerial photographs and Sanborn Fire Insurance Maps, there is evidence that RECs exist in connection with the historical uses of the subject site. A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of volatile organic compounds (VOCs), including benzene and tetrachloroethene (PCE), reported in soil gas samples exceeding the Regional Water Quality Control Board's Environmental Screening Levels for Residential Use for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic compounds, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Consequently, the current condition of the subject site subsurface is unknown.

  Krazan recommends that a comprehensive Soil Vapor Survey be conducted at the subject site in order to determine the presence or absence of significant concentrations of VOCs, including chlorinated VOCs.

During the course of this assessment, Krazan identified no evidence of controlled RECs (CRECs) or historical RECs (HRECs) in conjunction with the subject site as defined by ASTM E 1527-13

2.0 PURPOSE AND SCOPE OF ASSESSMENT

2.1 Purpose

According to ASTM E 1527-13, the purpose of this practice is to define good commercial and customary practice in the United States of America for conducting an *environmental site assessment* of a parcel of *commercial real estate* with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) and *petroleum products.* As such, this practice is intended to permit a *user* to satisfy one of the requirements to qualify for the *innocent landowner, contiguous property owner,* or *bona fide prospective purchaser* limitation on CERCLA liability (hereinafter, the *landowner liability protections,* or *LLPs*): that is, the practice that constitutes *all appropriate inquiries* into the previous ownership and uses of the *property* consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35)(B).

2.2 Scope of Work

The Phase I ESA includes the following scope of work: a) a site reconnaissance of existing on-site conditions and observations of adjacent property uses, b) a review of user-provided documents c) a review of historical aerial photographs, a review of pertinent building permit records, city directories, historical Sanborn Fire Insurance Maps (SFIMs), and interview(s) with person(s) knowledgeable of the previous and current ownership and uses of the subject site, d) a review of local regulatory agency records, and e) a review of local, state, and federal regulatory agency lists compiled by Environmental

Data Resources, Inc. (EDR). The scope of work for this Phase I ESA conforms to ASTM E 1527-13. Krazan was provided written authorization to conduct the Phase I ESA by Ms. Leatha Clark with USA Multifamily Development on September 11, 2018.

3.0 SITE DESCRIPTION

The subject site is located at 207-211 W. Crowther Avenue, in Placentia, California. The subject site comprises approximately 2.36 acres and is currently vacant land.

General property information and property use are summarized in the following Table I. Refer to Figures No. 1 – 4 following the Reference Section.

TABLE I
Subject Site Information Summary

Current Owner:	City of Placentia
Assessor's Parcel Numbers:	339-402-05, -07, -08, and -11
Addresses:	207-211 W. Crowther Avenue
Historical Addresses:	402-420 Melrose Street
General Location:	Northeast corner of Melrose Street and Crowther Avenue
Acreage:	Approximately 2.36 acres
No. of Buildings	None
Existing Use:	None
Original Construction Date:	Circa 1917
Proposed Use:	Multi-family residential
Topographic Map:	U.S. Geological Survey, 7.5 minute Orange, California topographic quadrangle map, dated 1972. A portion of Section 36, Township 03 South, Range 10 West, San Bernardino Baseline and Meridian.
Latitude/Longitude:	33.8680/ - 117.8728
Topography:	Relatively flat, approximately 220 feet above mean sea level
Approximate Depth to Groundwater:	130 feet below ground surface – Orange County Water District (OCWD)
Regional Groundwater Flow Direction:	West- OCWD

3.1 Geology and Hydrogeology

The subject site is located within the Coastal plain, bound to the north by the Santa Ana Mountains and to the south by the Newport-Inglewood Structural Zone. The southwest margin of the central plain is the northwest-trending line of low hills and mesas (underlain by the Newport-Inglewood zone of deformation) that extends from the mouth of the Santa Ana River to Beverly Hills. The rocks of the Central Block consist of approximately 35,000 feet of marine and non-marine clastic sedimentary rocks of Late Cretaceous through Holocene age and interbedded volcanic rocks of middle Miocene age. The

near surface soils consist of a thin to thick bedded silty clays and clayey silts. The groundwater in the area is reported to be first encountered at a depth of approximately 130 feet bgs and groundwater flow direction in the area of the subject site is generally towards the west.

4.0 SITE RECONNAISSANCE

A site reconnaissance, which included a visual observation of the subject site and surrounding properties, was conducted by Mr. William Cooper, Krazan's environmental professional on September 25, 2018. Mr. Cooper was unaccompanied during the site reconnaissance. The objective of the site reconnaissance is to obtain information indicating the likelihood of identifying recognized environmental conditions, including hazardous substances and petroleum products, in connection with the property (including soils, surface waters, and groundwater).

4.1 Observations

The following Table II summarizes conditions encountered during our site reconnaissance. A discussion of visual observations follows Table II. Refer to the Site Map (Figure No. 3) and color photographs following the text for the locations of items discussed in this section of the report.

TABLE II
Summary of Site Reconnaissance

Feature	Observed	Not Observed
Structures (existing)		X
Evidence of Past Uses (foundations, debris)		X
Hazardous Substances and/or Petroleum Products		X
Aboveground Storage Tanks (ASTs)		X
Underground Storage Tanks (USTs) or Evidence of USTs		X
Evidence of Underground Pipelines		X
Strong, Pungent, or Noxious Odors		X
Pools of Liquid Likely to be Hazardous Materials or Petroleum Products		X
Drums		X
Unidentified Substance Containers		X
Potential Polychlorinated Biphenyl (PCB)-Containing Equipment		X
Subsurface Hydraulic Equipment		X
Elevators with Hydraulic Equipment		X
Heating/Ventilation/Air conditioning (HVAC)		X
Stains or Corrosion on Floors, Walls, or Ceilings		X
Floor Drains and Sumps		X
Wash Racks and Oil/Water Clarifiers		X
Storm Drains		X
Pits, Ponds, Lagoons, Stormwater Basins		X
Stained Soil and/or Pavement		X

TABLE II (continued)
Summary of Site Reconnaissance

Feature	Observed	Not Observed
Soil Mound	X	
Stressed Vegetation		X
Railroad tracks/spurs		X
Waste or Wastewater discharges to Surface		X
Wells (irrigation, domestic, dry, oil wells, monitoring wells)		X
Septic Systems		X

The subject site comprises approximately 2.36 acres of vacant land with the associated Orange County APNs of 339-402-05, -07, -08, and -11. Refer to Figure No. 3 for locations of the following referenced on-site features:

- The subject site is comprised of vacant land that is rough-graded level and appears to be slightly below grade. A soil mound is present along the southern side of the subject site that appears likely to be the result of grading of the subject site after demolition of previous buildings. A concrete retaining wall is present along the north side of the subject site and a Metrolink Commuter Rail Line is adjacent along the north side. Some concrete rubble that appears to be associated with the retaining wall is present within the northern part of the subject site. The eastern-adjacent property is a municipal water pump station. W. Crowther Avenue is located adjacent to the south and overhead power lines are located along the north side of W. Crowther Avenue. A water main pipeline with an electrical room and pad-mounted transformer are located adjacent to the west boundary within a landscaped area. S. Melrose Street is located adjacent to west of the landscaped area and the water main easement. Traffic lights are present at the northeast corner of S. Melrose Street and W. Crowther Avenue. At the time of the site reconnaissance, a geotechnical investigation was being conducted at the subject site; and,

- During the September 25, 2018 site reconnaissance, exposed surface soils did not exhibit obvious signs of discoloration. No hazardous materials or hazardous wastes were observed at the subject site. No obvious evidence of underground storage tanks (USTs) was observed and no aboveground storage tanks were noted within the area observed. No indications of former structures, such as foundations, were observed on the subject site.

4.2 Utilities

Based on Krazan's research, utilities were previously provided to the subject site; however, no utilities are currently provided to the subject site. Based on Krazan's research, the following companies / municipalities summarized in the following Table III currently provide utility services to the area of subject site:

TABLE III
Municipal Service / Utility Providers

Service / Utility	Provider	Connection Date
Electricity	Southern California Edison	N/A
Natural Gas	The Gas Company	N/A
Potable Water	Yorba Linda Water District/ Golden State Water	N/A

TABLE III (continued)
Municipal Service / Utility Providers

Service / Utility	Provider	Connection Date
Sanitary Sewer	City of Placentia	N/A
Solid Waste Removal	City of Placentia	N/A

Water Wells/Potable Water Source

The water purveyor for the subject site is the Yorba Linda Water District). YLWD's water quality monitoring is an on-going program with water samples obtained on a regular basis. It is the responsibility of the YLWD to provide customers with potable water in compliance with the California State Maximum Contaminant Levels (MCLs) for primary drinking water constituents in water supplied to the public. According to YLWD's *2017 Consumer Confidence Report*, posted on YLWD's website, water provided by YLWD is in compliance with the Federal and State Maximum Contaminant Levels (MCLs) for primary drinking water.

Sewer Service

The municipal sewer service provider for the subject site is the City of Placentia (COP). Based on the residential use of the subject site, no environmental issues are anticipated in association with the disposal of domestic sewage via the city sewer system.

4.3 Adjacent Streets and Property Usage

The following Table IV summarizes the current adjacent roads and adjacent property uses observed during the site reconnaissance.

TABLE IV
Adjacent Streets and Property Use

Direction	Adjacent Street	Adjacent Property Use
North	None	Rail Line
East	None	Commercial
South	West Crowther Avenue	Commercial
West	Melrose Street	Commercial

Based on the uses of the properties located immediately adjacent to the site, it is unlikely that significant quantities of hazardous materials are used at the adjacent properties.

4.4 ASTM Non-Scope Considerations

According to ASTM E 1527-13, there may be environmental issues or conditions at the subject site that are outside the scope of the Phase I ESA practice (non-scope considerations). Some substances may be present at the subject site in quantities and under conditions that may lead to contamination of the subject

site or of nearby properties but are not included in CERCLA's definition of hazardous substances (42 U.S.C. §9601[14]). ASTM non-scope considerations are discussed below.

Asbestos-Containing Materials

Asbestos is a group of naturally occurring mineral fibers that have been used commonly in a variety of building construction materials for insulation and as a fire-retardant. Because of its fiber strength and heat resistant properties, asbestos has been used for a wide range of manufactured goods, mostly in building materials, vehicle brakes, and heat-resistant fabrics, packaging, gaskets, and coatings. When asbestos-containing materials (ACMs) are damaged or disturbed by repair, remodeling, or demolition activities, microscopic asbestos fibers may become airborne and can be inhaled into the lungs, where they can cause significant health problems. No structures are located on the subject site; therefore ACBM's do not appear to represent an environmental concern at this time.

Lead-Based Paint

Although lead-based paint (LBP) was banned in 1978, many building constructed prior to 1978 have paint that contains lead. Lead from paint, chips, and dust can pose serious health hazards if not addressed properly. No structures are located on the subject site; therefore LBP does not appear to represent an environmental concern at this time.

Mold and Moisture Intrusion

A class of fungi, molds have been found to cause a variety of health problems in humans, including allergic, toxicological, and infectious responses. Molds are decomposers of organic materials, and thrive in humid environments, and produce spores to reproduce, just as plants produce seeds. When mold spores land on a damp spot indoors, they may begin growing and digesting whatever they are growing on in order to survive. When excessive moisture or water accumulates indoors, mold growth will often occur, particularly if the moisture problem remains undiscovered or unaddressed. As such, interior areas of buildings characterized by poor ventilation and high humidity are the most common locations of mold growth. Building materials including drywall, wallpaper, baseboards, wood framing, insulation and carpeting often play host to such growth. Moisture control is the key to mold control. Molds need both food and water to survive; since molds can digest most things, water is the factor that limits mold growth. No structures are located on the subject site; therefore mold and moisture intrusion do not appear to represent an environmental concern at this time.

Radon

Radon is a radioactive gas that is found in certain geologic environments and is formed by the natural breakdown of radium, which is found in the earth's crust. A radon survey was not included within the scope of this investigation; however, the State of California Department of Health Services (CDHS) maintains a statewide database of radon results in designated geographic areas. Radon detection devices are placed in homes throughout the study region to determine geographic regions with elevated radon concentrations. The U.S. EPA has set the safety standard for radon gas in homes to be 4.0 pico Curies per liter (pCi/L).

The US EPA has prepared a map to assist National, State and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones. Zone 1, being those areas with the average predicted indoor radon concentration in residential dwellings exceeds the EPA Action Limit of 4.0 pCi/L; Zone 2, where average predicted radon levels are between 2.0 and 4.0 pCi/L; and Zone 3 where average predicted radon levels are below 2.0 pCi/L. It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the EPA recommends site specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures. Review of the EPA Map of Radon Zones places the Property in Zone 2, where average predicted radon levels are between 2.0 and 4.0 pCi/L. Therefore, the available data suggests that the potential for radon to adversely impact the subject site appears to be low.

Environmental Non-Compliance Issue

No material non-compliance issue was identified in connection with the subject site in the process of preparing this report.

Activity and Use Limitations

No activity and use limitations were identified in connection with the subject site in the process of preparing this report.

Wetlands

As defined by the U.S. EPA and the Department of Army, Corps of Engineers, wetlands are "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Jurisdictional wetlands are regulated under Section 404 of the Clean Water Act (1972, 1977, and 1987, and also the 1985 and 1990 Farm Bills), and are important for

protection of aquatic waterfowl and species, water purification, and flood control. According to current Corps of Engineers information, three basic criteria are currently used to define wetlands:

- Wetland hydrology - areas exhibiting surface or near-surface saturation or inundation at some point in time (greater than 12.5 percent of growing season defined on basis of frost-free days) during an average rainfall year;

- Hydrophilic vegetation - frequency of occurrence of wetland indicator plants (plant life growing in water, soil, or substrate that is periodically deficient in oxygen as a result of excessive water content); and,

- Hydric soil - landscape patterns identified by saturation, flooding, or ponding long enough during the growing season (generally seven days) which develop characteristic color changes in the upper part of the soil as a result of anaerobic conditions.

Based on Krazan's September 25, 2018 reconnaissance of the subject site, evidence was not apparent to suggest that the site contained a wetland. Furthermore, according to the U. S. Fish & Wildlife Service (USFWS) National Wetlands Inventory available via the USFWS Internet website, the subject site does not contain a designated wetland. Therefore, at this time, regulations pertaining to wetlands do not appear to impact the subject site.

5.0 USER-PROVIDED INFORMATION

A review of user-provided information was conducted in order to help identify pertinent information regarding potential environmental impacts associated with the subject site.

5.1 Environmental Lien Search

On September 20, 2018, an Environmental Lien/Activity and Use Limitations (EL/AUL) Report was prepared by EDR for the subject site. The EDR EL/AUL Report provides results from a search of available land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls. The subject site EL/AUL Report was reviewed to identify potential environmental liens, activity and use limitations (AULs), which may have been filed against the subject site or exist in connection with the subject site as indicated by the subject site EL/AUL Report. Krazan's review of the EL/AUL Report indicated no liens or AULs were found for the subject site according to the scope of work and limitations. Please refer to Appendix A in the Table of Contents for a copy of the EDR EL/AUL Report.

5.2 Title Report

On September 17, 2018, a Preliminary Title Report (PTR) dated July 11, 2018, prepared for the subject site by First American Title Insurance Company, was provided to Krazan by Ms. Leatha Clark with USA Properties., Krazan's the Phase I ESA user. The subject site PTR was reviewed to identify potential deed restrictions, environmental liens or activity and use limitations (AULs) which may have occurred on or exist in connection with the subject site. Krazan's review of the PTR indicated no deed restrictions, environmental liens or AULs for the subject site. However, as quoted from the subject site PTR, "It is important to note that this Preliminary Title Report is not a written representation as to the condition of title and may not list all liens, defects and encumbrances affecting title to the land." Please refer to Appendix B in the Table of Contents for a copy of the Title Report.

5.3 Phase I Environmental Site Assessment User Questionnaire

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *user* must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiry* is not complete. The user is asked to provide information or knowledge of the following:

1. Environmental cleanup liens that are filed or recorded against the site.
2. Site activity and use limitations that are in place or that have been filed or recorded in a registry.
3. Specialized knowledge or experience of the person seeking to qualify for the LLPs.
4. Relationship of the purchase price to the fair market value of the *property* if it were not contaminated.
5. Commonly known or *reasonably ascertainable* information about the *property*.
6. The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation.
7. The reason for preparation of this Phase I ESA.

On September 14, 2018, a completed Phase I ESA User Questionnaire was received from Ms. Leatha Clark, a representative of the user of this Phase I ESA. Please refer to Appendix C in the Table of Contents for a copy of the User Questionnaire.

According to the questionnaire responses, Ms. Clark, to the best of her knowledge as the user of this Phase I ESA, was not aware of any environmental cleanup liens and activity or land use limitations which

have been filed or recorded against the subject site. Ms. Clark has no specialized knowledge or experience related to the subject site or nearby properties. Ms. Clark indicated that previous assessments conducted in 2009 by Converse Consultants identified historical uses on the property to include the Placentia Canning Company, a gas station, storage, office buildings, lithographic and printing shops, and an auto canopy. Ms. Clark further referenced a subsurface investigation conducted in 2009 by Converse that found TPH, acetone, arsenic, lead, benzene and PCE at various concentration levels in soil samples at the site. Ms. Clark additionally indicated that a fuel oil underground storage tank (UST) was removed from the eastern part of the site in December 2004 and additional soil was removed in January 2005 and the Orange County Health Care Agency closed the case. Ms. Clark indicated that she is not aware of spills or chemical releases that have taken place on the site but that the subsurface investigation indicated several soil contaminants. Ms. Clark further indicated that the purchase price of the subject site reasonably reflects fair market value and that the reason for preparation of this Phase I ESA is related to a proposed residential development.

6.0 SITE USAGE SURVEY

The property usage survey included assessing property history, and reviewing local, state, and federal regulatory agency records.

6.1 Site History

A review historical aerial photographs, City of Placentia Building Department (CPBD) records, reasonably ascertainable Haines Criss-Cross Directories (HCCDs) Sanborn Fire Insurance Maps (SFIMs), and previous environmental assessments was utilized to assess the history of the subject site.

Previous Environmental Assessments

Previous environmental assessment reports for the subject site were provided to Krazan for review by USA Multifamily Development, the user of the Phase I ESA. These reports include an *Initial Site Assessment* (ISA) conducted by Converse Consultants (Converse), dated February 25, 2009, and a *Subsurface Investigation Report* conducted by Converse and dated February 24, 2009. The Converse ISA was conducted for the western portion of the subject site only. Please refer to Appendix D in the Table of Contents for a copy of the Previous Investigations (2009).

In summary, for the purposes of their report, Converse identified the following historical subject site and eastern-adjacent site, (current subject site) uses as Recognized Environmental Conditions (RECs):

historical gas station; historical canning operations; possible printing operations; and historical citrus packing facility. Converse concluded that the former gas station closure status for USTs and condition of underlying soil could not be determined due to the lack of documents pertaining to the historical gas station. Converse further concluded that the historical canning operations represent an REC due to possible use of metals, solvents and pesticides; and the historical printing and lithographic shops represent RECs based on the possible uses of dyes and solvents. Converse further concluded that the east-adjacent (current subject site) property is an REC based on the use as a citrus packing facility based on uses of pesticides. Based on these findings and conclusions, Converse conducted a Phase II Subsurface Investigation for the subject site. In summary the Phase II Subsurface Investigation was conducted to investigate areas of concern including: Clarifier; Former USTs; Lithographic and Printing uses; Automotive/oil and Gas uses; and Pesticide and Fertilizers uses. The investigation included advancing 11 borings at areas of concern across the subject site. Borings were advanced to 15 and 20 feet below ground surface (bgs) with samples collected at 5-foot intervals. A total of 39 soil samples and 18 soil vapor samples were collected and analyzed for constituents of concern including: Total Petroleum Hydrocarbons (TPH); Volatile Organic Compounds (VOCs) Semi-VOCs (SVOCs); Organochlorine Pesticides; and Title 22 Metals.

The following summarizes the Phase II Subsurface Investigation soil sample analysis:

TPH in the gasoline, diesel and oil range was reported as none detected (ND) at or above the method detection limit (MDL) with the exception of one sample (PS-2@5 feet bgs) reported with a trace concentration of 18.5 milligrams per kilogram (mg/kg) for TPH, which is well below the California Regional Water Quality Control Board (CRWQCB) Maximum Soil Screening Level (MSSL) of 80 mg/kg for gasoline-range hydrocarbons. VOCs were reported as ND except for one sample (PS-2@15 feet bgs) which was reported with trace concentrations of acetone (0.040 mg/kg); Isopropylbenzene (0.112 mg/kg); and n-propylbenzene (0.062 mg/kg). The MSSL for Acetone is 61,000 mg/kg and there are no screening levels established for Isopropylbenzene and n-propylbenzene. SVOCs were reported as ND in all soil samples analyzed. Metals detected in the soil samples included arsenic, barium, total chromium, cobalt, copper, lead nickel, vanadium, and zinc. These metal were reported at what appear to be typical background concentrations that do not exceed screening levels, except for arsenic which was reported at concentrations that ranged from 1.24 to 8.2 mg/kg. The screening level for arsenic is 0.39 mg/kg; however, the Department of Toxic Substances Control (DTSC) has established a background screening level in California of 12 mg/kg. Therefore, no metals were reported at concentrations that appear to pose a significant concern for human health or the environment. Organochlorine Pesticides were reported as ND.

The following summarizes the Phase II Subsurface Investigation for the Soil Vapor:

Thirteen VOCs were reported in the 18 soil vapor samples analyzed. These VOCs were reported at trace concentrations below San Francisco Bay RWQCB Tier 1 Environmental Screening Levels, February 2016 (ESLs) for residential land use, except for two soil vapor samples (PS-3@10' and PS-5@5'). PS-3@10' was reported with a Tetrachloroethene (PCE) concentration of 750 micrograms per cubic meter ($\mu g/m^3$). The established ESL for residential land use for PCE is 240 $\mu g/m^3$. PS-5@5' was reported with a Benzene concentration of 48 $\mu g/m^3$.The ESL for benzene for residential use is 48 $\mu g/m^3$. Other reported concentrations of PCE were reported from PS-3@5' at a concentration of 130 $\mu g/m^3$, and boring PS-2@ 5' bgs at a concentration of 80 $\mu g/m^3$ for PCE, which are both below the residential ESL for PCE.

Aerial Photograph and SFIM Review Interpretation

Historical aerial photographs (APs), dated 1938, 1948, 1952, 1963, 1972, 1977, 1989, 1995, 2005, 2009, 2012, and 2016 and Sanborn Fire Insurance Maps (SFIMs) dated 1917, 1922 and 1933 were reviewed during Krazan's Phase I ESA of the subject site to assess property history. These photographs and maps were obtained from EDR. The aerial photograph and SFIM summary is provided in the following Table V. Please refer to Appendix E in the Table of Contents for a copy of the Historical Aerial Photographs and Appendix F for a copy of the Sanborn Fire Insurance Maps.

TABLE V
Summary of Aerial Photograph and Map Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1917 SFIM	Commercial	The western side of the subject site is developed with the Placentia Canning Company with steam power and gasoline use. Large buildings include a *Can and Paper Box Warehouse and Shipping* within the northwest portion; and a *Canning Building with Storage* within the western-central portion. A small *auto garage* is depicted in the southwest portion of the subject site, and a building occupied by *two steam boilers and iron chimneys* is located within the eastern part of the western side. A building identified as *Jap Tenants* is located within the central part of the subject site along with a small *Fertilizer Storage* building. The *Placentia Orange Growers Association Packing House* is depicted within the eastern part of the subject site. The *Atchison Topeka and Santa Fe Railroad* is adjacent to the north and *West Crowther Avenue* is located to the south. *Melrose Street* is adjacent to the east.
1922 SFIM	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to the 1917 SFIM except the *Auto Garage* is not depicted within the southwest corner and two dwelling are located within the easternmost portion of the subject site.

TABLE V (continued)
Summary of Aerial Photograph and Map Review

Year/Scale	Site Use	Site and Adjacent Property Observation
1933 SFIM	Commercial	The subject site is depicted with a *Storage building* along the northern boundary with an address of *402 South Melrose Street*. An *Auto Canopy* is adjacent to the south and a *Gas and Oil Station* is depicted at the southwest corner of the subject site with an address of *420 South Melrose Street*. The central area of the subject site remains developed with the Pacific Orange Packing Building. The dwelling within the easternmost portion has been removed and is now developed with an Ice House/Ice Storage and Cold Storage building. The *Atchison Topeka and Santa Fe Railroad* is adjacent to the north and *West Crowther Avenue* is located to the south. The west adjacent property is *Melrose Street*.
1938 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to the 1933 SFIM.
1948 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to the 1938 AP except for the addition of two buildings within the western portion of the subject site and the removal of the ice house/ice storage and cold storage buildings from the eastern part of the subject site and the addition of smaller buildings in this area.
1952 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to the 1948 AP.
1963 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to the 1952 AP.
1972 AP 1" = 500'	Commercial	The subject site is developed with the three structures within the western part of the subject site, the packing house within the central part and several adjoining buildings within the easternmost portion of the subject site. Conditions on the adjacent properties appear relatively similar to the 1963 AP.
1977 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to conditions observed in the 1972 AP.
1989 AP 1" = 500	Commercial	The subject site remains developed with the three structures observed in the 1972 and 1977 APs within the western side of the subject site with the addition of a structure in the central area. Conditions on central and eastern portions remain similar to the 1977 AP. The adjacent properties appear relatively similar to the conditions in the 1977 AP.
1995 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to conditions observed in the 1989 AP.
2005 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to conditions observed in the 1995 AP except the western-adjacent property is landscaped.
2009 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to conditions observed in the 2005 AP.
2012 AP 1" = 500'	Commercial	Conditions on the subject site and adjacent properties appear relatively similar to conditions observed in the 2009 AP.

TABLE V (continued)
Summary of Aerial Photograph and Map Review

Year/Scale	Site Use	Site and Adjacent Property Observation
2016 AP 1" = 500'	Vacant Land	The subject site is vacant land; and landscaped area is present to the west. Adjacent properties are commercially developed to the west, south and east. The railroad remains adjacent to the north with Crowther Avenue to the south and Melrose Street to the west.

City of Placentia Building Department Records

On September 17, 2018, Krazan contacted the City of Placentia Building Department (CPBD) for information regarding building permits for the subject site addresses of 207-211 W. Crowther Avenue and historical addresses of 402 and 420 South Melrose Street.

According to information on file with CPBD, permits for 209 W. Crowther Avenue include the following: June 11, 1967 permit for plumbing; December 1970 demolition permit (details are not legible); December 5, 1971 building permit for two offices (Superior Health); December 5, 1973 permit to alter (Superior Health); May 7, 1977 permit for a sign (Superior Health); November 3, 1980 permit for a sign; September 2, 1987 permit for heating system (209A West Crowther Ave.); March 5, 2004 Electrical permit for underground. Permits for 211 W. Crowther Avenue include the following: April 14, 1964 permit for plumbing; May 21, 1965 permit for plumbing; November 12, 1965 electrical permit; November 19, 1965 miscellaneous permit (Placentia Orange Exchange); January 26, 1966 plumbing permit and building permit for new 800 sq. ft. carport (Placentia Material Orange); November 13, 1967 alteration permit for 228 sq. ft office; September 18, 1973 alteration permit for stairway; June 24, 1975 citation letter issued for substandard building conditions and improper residential use; January 20, 1978 plumbing permit and alteration and repairs (four buildings 207-211 West Crowther Avenue); December 12, 1983 repair permit for 1,500 sq. ft. office; October 7, 1997 roofing replacement; March 5, 2004 electrical permit to convert overhead to underground.

City Directories

Krazan contracted with EDR to provide a review of available city directories for the subject site addresses of 209, 211 West Crowther Avenue and the historical addresses of 402 and 420 Melrose Street utilizing approximately five-year intervals. According to the City Directory Report, the subject site address of 209 W. Crowther Avenue is identified as Lithographic Specialty and Thompson City Delivery in 1987, Unlimited System Service in 1997 and Tetras Construction Corp from 1997 through 2008. 211 W. Crowther Avenue is listed as Print N Graphic Factory in 1997, Pac Pests in 2003 and Pacific Shrimp in 2008. Historical addresses were not listed.

6.2 Interviews and Questionnaires

Interviews and questionnaires are designed to provide pertinent information regarding potential environmental impacts associated with the subject site.

Subject Site Owner – On September 12, 2018, an owner questionnaire was submitted to the City of Placentia with a request for completion and return to Krazan via email. As of the date of this report the completed questionnaire has not been returned to Krazan. The lack of an interview with an owner/occupant constitutes a data gap. However, taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment.

Previous Subject Site Owner Interview

An interview with a previous owner/occupant of the subject site was not reasonably ascertainable. The lack of an interview with a previous owner/occupant constitutes a data gap. However, taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment.

6.3 Agricultural Chemicals

Review of historical aerial photographs indicates that the subject site was not significantly utilized for agricultural purposes from at least 1917 to present. Therefore, chemicals historically applied to agricultural crops does not appear to represent an environmental concern.

6.4 Regulatory Agency Interface

A review of regulatory agency records was conducted to help determine if hazardous materials have been handled, stored, or generated on the subject site and/or the adjacent properties and businesses. Regulatory records are reviewed based on the following criteria: 1) properties with known soils and/or groundwater releases considered to represent the potential for impact to the subject site that are located within 1,760 feet of the subject site for constituents of concern impacts or 528 feet of the subject site for petroleum hydrocarbon impacts; 2) properties that are adjacent or in proximity to the subject site included within the EDR regulatory database report or noted during the site reconnaissance to possibly handle, store, or generate hazardous materials. Applicable property records are discussed below.

Orange County Health Care Agency

The Orange County Health Care Agency (OCHCA) is the lead regulatory agency or Certified Unified Program Agency (CUPA) for hazardous materials handling facilities in Orange County. On September 14, 2018, Krazan submitted a records request for the subject site to OCHCA. As of the date of this report Krazan has not received notification of records for the subject site. According to Converse, no records were found with OCHCA for the subject site addresses during the previously reviewed 2009 ISA conducted by Converse.

Orange County Fire Authority

The Orange County Fire Authority (OCFA) has jurisdiction for the fire protection for the subject site and the immediate vicinity. On September 17, 2018, Krazan requested records for the subject site via email to OCFA regarding potential records of hazardous materials storage, aboveground storage tanks, and hazardous material incidents/spills for the subject site. As of the date of this report, OCFA has not responded to Krazan's request for records. However, records provided to Converse during their 2009 ISA conducted for the subject site addresses of 209 and 211 West Crowther Avenue were reviewed and are discussed below.

209 West Crowther Avenue — subject site
Market Network/Unlimited Systems Services/
Nosat Disposals/Tetras General
According to OCFA records, Market Network was noted as a business office with no hazardous materials as of October 18, 1994 and was last inspected on December 4, 1995. Unlimited System Services was inspected on August 31, 1999 and was noted as a vacant property with no hazardous materials. Nosat Disposals was noted as a specialty shop with on hazardous materials last inspected on August 11, 2000. Tetras General Constructions is noted as a business office with no hazardous materials inspected as early as August 26, 1996 and last inspected on December 7, 2005.

211 West Crowther Avenue — subject site
Print N Graphic/Pacific Shrimp
According to OCFA records, Print N Graphic was noted as a business office with no hazardous materials and was last inspected on August 31, 1999. Pacific Shrimp was noted as a restaurant with no hazardous materials and was last inspected on September 26, 2007.

State of California Regional Water Quality Control Board - Geotracker

Krazan's review of the State of California Regional Water Quality Control Board (RWQCB) Geotracker database available via the RWQCB Internet Website indicated that no LUST sites, land disposal sites, or military sites are listed for the subject site or adjacent properties. Additionally, no permitted UST sites were determined to be located on or adjacent to the subject site.

State of California Department of Toxic Substances Control - Envirostor

Krazan's review of the State of California Department of Toxic Substances Control (DTSC) Envirostor database available via the DTSC's Internet Website indicated that no State response sites, voluntary cleanup sites, school cleanup sites, or military or school evaluation sites are listed for the subject site, the adjacent properties, or properties located within 500 feet of the subject site. Additionally, no Federal Superfund – National Priorities List (NPL) sites were determined to be located within a one-mile radius of the subject site.

California Department of Conservation, Division of Oil, Gas and Geothermal Resources - DOMS

Krazan's review of the State of California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Online Mapping System (DOMS) indicated that there are no oil wells located on or adjacent to the subject site.

Local Area Tribal Records

No Indian reservations, USTs on Indian land, or LUSTs on Indian land were reported on the subject site, adjacent properties, or vicinity properties in the EDR-provided database report.

6.5 Regulatory Agency Lists Review

Several agencies have published documents that list businesses or properties which have handled hazardous materials or waste or may have experienced site contamination. The lists consulted in the course of our assessment were compiled by EDR and Krazan and represent reasonably ascertainable current listings. Krazan did not verify the locations and distances of every property listed by EDR. Krazan verified the location and distances of the properties Krazan deemed as having the potential to adversely impact the subject site. The actual location of the listed properties may differ from the EDR listing. Refer to the following Table VI for a summary of the listed properties located within the specified ASTM Search Radii. The actual distances of the listed properties (which are summarized in the table below) are based on observations during Krazan's site reconnaissance. No EDR-listed unmapped (non geocoded) sites were determined to be located on or adjacent to the subject site. Please refer to Appendix G in the Table of Contents for a copy of the EDR - Regulatory Database Report.

TABLE VI
Summary of Findings

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		1	0	0	NR	NR	1
Federal RCRA generators list								
RCRA-LQG	0.250		0	2	NR	NR	NR	2
RCRA-SQG	0.250		7	6	NR	NR	NR	13
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	1	NR	1
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		1	0	2	15	NR	18
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		5	6	17	NR	NR	28

TABLE VI (continued)
Summary of Findings

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		2	0	3	NR	NR	5
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	5	NR	NR	NR	6
AST	0.250		1	0	NR	NR	NR	1
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	1	1	NR	NR	2
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		0	0	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	3	NR	NR	NR	3
HIST UST	0.250		1	2	NR	NR	NR	3
CA FID UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0

TABLE VI (continued)
Summary of Findings

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DEED	0.500		0	0	1	NR	NR	1
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
Orange Co. Industrial Site	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		0	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0

TABLE VI (continued)
Summary of Findings

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		4	NR	NR	NR	NR	4
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		3	1	7	NR	NR	11
HWP	1.000		1	0	0	0	NR	1
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001	1	0	NR	NR	NR	NR	1
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	1	0	NR	1
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
PROJECT	0.001		0	NR	NR	NR	NR	0
SAMPLING POINT	0.001		0	NR	NR	NR	NR	0
UIC GEO	0.001		0	NR	NR	NR	NR	0
PROD WATER PONDS	0.001		0	NR	NR	NR	NR	0
CERS	0.001		0	NR	NR	NR	NR	0
MILITARY PRIV SITES	0.001		0	NR	NR	NR	NR	0
OTHER OIL GAS	0.001		0	NR	NR	NR	NR	0
CIWQS	0.001	1	0	NR	NR	NR	NR	1
WELL STIM PROJ	0.001		0	NR	NR	NR	NR	0
NON-CASE INFO	0.001		0	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		1	NR	NR	NR	NR	1
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		2	29	27	32	16	0	106

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

The subject site was listed in the EDR regulatory database report and is discussed below.

Packing House — subject site
207-209 Crowther Avenue
Placentia, California
According to EDR, this former subject site facility is listed as being permitted with the National Pollutant Discharge Elimination System (NPDES) and the California Integrated Water Quality System (CIWQS). This facility is no longer in operation at the subject site and the facility has been demolished; therefore, the listed permits apparently related to demolition of the former on-site structures are no longer active as of 7/18/2017.

Dwayne Wright — subject site
207 W. Crowther Avenue
Placentia, California
According to EDR, this former subject site facility is listed in the HAZNET database maintained by CAL EPA, DTSC for the year 2003. The waste category for manifested and disposed wastes is *Liquids with halogenated organic compounds*, and the disposal method is listed as *Transfer Station* with an annual total of 0.22 tons of waste. This facility is no longer in operation at the subject site and the building has been demolished.

Gerald Jones — subject site
207 W. Crowther Avenue
Placentia, California
According to EDR, this former subject site facility is listed in the HAZNET database maintained by CAL EPA, DTSC for the year 2004. The waste category for manifested and disposed wastes is *Tank bottom waste*, and the disposal method is listed as *Recycler* with an annual total of 0.2 tons of waste. This facility is no longer in operation at the subject site and the building has been demolished.

City of Placentia — subject site
207 W. Crowther Avenue #211
Placentia, California
According to EDR, this former subject site facility is listed in the HAZNET database maintained CAL EPA, DTSC for the year 2014. The waste category for manifested and disposed wastes is *Asbestos containing wastes*, and the disposal method is listed as *Landfill or surface impoundment* with an total of 25.3 tons of waste disposed as a result of the demolition of the facility building. This facility is no longer in operation at the subject site and the building has been demolished.

Southwest Import Rebuilders Inc. — subject site
207 W. Crowther Avenue
Placentia, California
According to EDR, this former subject site facility is listed in the HAZNET database maintained by CAL EPA, DTSC for the year 2001. The waste category for manifested and disposed wastes is *unspecified solvent mixture* and the disposal method is listed as *Recycler* with an annual total of 0.12 tons of waste. This facility is no longer in operation at the subject site and the building has been demolished.

The following facilities were listed by EDR adjacent to the subject site and are discussed below.

Microdot Division/Kaynar Tech Inc. adjacent to the south
190 W. Crowther Avenue
Placentia, California
According to EDR, this facility is listed in the Cleanup Program Sites (CPS), Spills, Leaks, Investigation Cleanups (SLICs) databases maintained by State Water Resources Control Board (SWRCB) for the years 1987-1996. The facility is also listed in the DTSC Envirostor database for permitted sites; the U.S. EPA Treatment, Storage and Disposal database (RCRA-TSDF); the RCRA nonGen/Lo Longer Regulated database. Various Compliance evaluations have been conducted and violations are noted; however, no documented releases or investigations for releases are referenced. The substance of concern is listed as *PCE, Solvents*. The last documented compliance evaluation conducted by the EPA for this facility indicates compliance was achieved on 8/23/1999.

Excalibur Extrusions, Inc. adjacent to the southeast
110 W. Crowther Avenue
Placentia, California
According to EDR, this facility is listed in the Leaking Underground Storage Tank (LUST) database maintained by the Resources Water Quality Board (RWQCB). The substance released is reported to be trichloroethane and other chlorinated hydrocarbons that impacted soil only. The investigation began 6/9/1992 and was closed with no further actions required by OCHCA on 11/13/1992.

Hazardous Materials Migration in Soils and/or Groundwater

The remaining properties within the specified search radius of the subject site which appeared on local, state, or federally published lists of sites that use or have had releases of hazardous materials or petroleum products are of sufficient distance and/or situated hydraulically cross- or downgradient from the subject site such that impact to the subject site via groundwater migration is unlikely. In general, potentially hazardous materials or petroleum products released from facilities located approximately hydraulically upgradient within the subject site vicinity, or in a hydraulically cross-gradient direction in proximity to the site, may have a reasonable potential of migrating to the subject site via groundwater flow. This opinion is based on the assumption that non-vaporous hazardous materials generally do not migrate large distances laterally within the soil, but rather tend to migrate with groundwater in the general direction of groundwater flow. However, the potential for migration of volatile hazardous materials may include movement within soils, groundwater flow or potentially omni-directionally if present in a vaporous state.

Hazardous Materials Migration in Vapor

Hazardous materials or petroleum product vapors which may have the potential to migrate into the subsurface of the subject site may be caused by the release of vapors from contaminated soil or groundwater either on or in the vicinity of the subject site from current or historical uses of the subject site and/or adjacent or vicinity properties. Current or past land uses such as gasoline stations (using

petroleum hydrocarbons), dry cleaning establishments (using chlorinated volatile organic compounds), former manufactured gas plant sites (using volatile and semi-volatile organic compounds), and former industrial sites such as those that had vapor degreasing or other parts-cleaning operations (using chlorinated volatile organic compounds) are of particular concern. Constituent of concern vapors are capable of migrating great distances omni-directionally along subsurface conduits such as pipelines, utility lines, sewer and stormwater lines, and building foundations.

During the Converse Subsurface Investigation conducted in 2009, the subject site was reported with concentrations of the volatile organic compounds (VOCs), including benzene and PCE reported in soil gas samples above the Residential Use ESLs for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic compounds, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Based on these findings, a vapor encroachment of VOCs cannot be ruled out.

7.0 DISCUSSION OF FINDINGS

Historical Uses

Based on Krazan's review of previous assessments, historical aerial photographs and SFIMs, there is evidence that RECs exist in connection with the historical uses of the subject site. A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of VOCs including benzene and PCE reported in soil gas samples above the Residential Use ESLs for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic compounds and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil.

Current Uses

Based on Krazan's site reconnaissance and contacts with local regulatory agencies, there is no evidence that RECs exist in connection with the current uses of the subject site.

Adjacent or Vicinity Property Uses

Based on Krazan's field observations, review of the EDR database report, and review of local regulatory agency records, RECs related to potential vapor encroachment conditions from adjacent property releases cannot be ruled out.

7.1 Evaluation of Data Gaps/Data Failure

In accordance with ASTM E 1527-13 guidance, data gaps represent a lack of or inability to obtain information required by this practice despite good faith efforts by the environmental professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice. Data failure represents the failure to achieve the historical research objectives of this practice even after reviewing the standard historical sources that are available and likely to be useful.

Data failure is one type of data gap. The following is a summary of data gaps encountered in the process of preparing this report including an observation as to the presumed significance of that data gap to the conclusions of this assessment.

- Absence of Interviews with Current and Previous Property Owner/Occupants (Section 6.1)

  A Phase I ESA interview with the current and previous owner/occupants of the subject site was not reasonably ascertainable. Consequently, information regarding the history and historical uses of the subject site obtained from an interview of a current and/or previous owner and/or occupant constitutes a data gap. Taken in consideration with the available information obtained in the course of preparing this report in conjunction with professional experience, there is no evidence to suggest that this data gap might alter the conclusions of this assessment. However, the contents of an interview with a current and/or previous property owner/occupant are unknown.

8.0 CONCLUSIONS/OPINIONS

We have conducted a Phase I ESA of the subject site in conformance with the scope and limitations of the ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* guidance documents. Any deviations from this practice were previously described in this report. During the course of this assessment, Krazan identified evidence of recognized environmental conditions (RECs) in conjunction with the subject site as defined by ASTM E 1527-13.

RECs

- Based on Krazan's review of previous environmental assessments, historical aerial photographs and Sanborn Fire Insurance Maps, there is evidence that RECs exist in connection with the historical uses of the subject site. A Subsurface Investigation conducted in 2009 for the subject site reported concentrations of volatile organic compounds (VOCs), including benzene and tetrachloroethene (PCE), reported in soil gas samples exceeding the Regional Water Quality Control Board's Environmental Screening Levels for Residential Use for these compounds. Additionally, the southern-adjacent property has documented uses of chlorinated volatile organic

compounds, and the southeastern-adjacent property is documented with a release of chlorinated VOCs to soil. Consequently, the current condition of the subject site subsurface is unknown.

Krazan recommends that a comprehensive Soil Vapor Survey be conducted at the subject site in order to determine the presence or absence of significant concentrations of VOCs, including chlorinated VOCs.

9.0 RELIANCE

This report was prepared solely for use by Client and should not be provided to any other person or entity without Krazan & Associates' prior written consent. No party other than Client may rely on this report without Krazan & Associates' express prior written consent. Reliance rights for third parties will only be in effect once requested by Client and authorized by Krazan & Associates with authorization granted by way of a Reliance Letter. The Reliance Letter will require that the relying party(ies) agree to be bound to the terms and conditions of the agreement between Client and Krazan & Associates as if originally issued to the relying party(ies), or as so stipulated in the Reliance Letter.

10.0 LIMITATIONS

The site reconnaissance and research of the subject site has been limited in scope. This type of assessment is undertaken with the calculated risk that the presence, full nature, and extent of contamination would not be revealed by visual observation alone. Although a thorough site reconnaissance was conducted in accordance with ASTM E 1527-13, and employing a professional standard of care, no warranty is given, either expressed or implied, that hazardous material contamination or buried structures, which would not have been disclosed through this investigation, do not exist at the subject site. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used.

The findings presented in this report were based upon field observations during a single property visit, review of available data, and discussions with local regulatory and advisory agencies. Observations describe only the conditions present at the time of this investigation. The data reviewed and observations

made are limited to accessible areas and currently available records searched. Krazan cannot guarantee the completeness or accuracy of the regulatory agency records reviewed. Additionally, in evaluating the property, Krazan has relied in good faith upon representations and information provided by individuals noted in the report with respect to present operations and existing property conditions, and the historic uses of the property. It must also be understood that changing circumstances in the property usage, proposed property usage, subject site zoning, and changes in the environmental status of the other nearby properties can alter the validity of conclusions and information contained in this report. Therefore, the data obtained are clear and accurate only to the degree implied by the sources and methods used. This report is provided for the exclusive use of the client noted on the cover page and shall be subject to the terms and conditions in the applicable contract between the client and Krazan. Any third party use of this report, including use by Client's lender, shall also be subject to the terms and conditions governing the work in the contract between the client and Krazan. The unauthorized use of, reliance on, or release of the information contained in this report without the express written consent of Krazan is strictly prohibited and will be without risk or liability to Krazan.

Conclusions and recommendations contained in this report are based on the evaluation of information made available during the course of this assessment. It is not warranted that such data cannot be superseded by future environmental, legal, geotechnical or technical developments. Consequently, given the possibility for unanticipated hazardous conditions to exist on a subject site which may not have been discovered, this Phase I ESA is not intended as the basis for a buyer or developer of real property to waive their rights of recovery based upon environmental unknowns. Parties that choose to waive rights of recovery prior to site development do so at their own risk.

Parties who seek to rely upon Phase I Environmental Site Assessment reports dated more than 180 days prior to the date of reliance do so at their own risk. This limitation in reliance is based on the potential for physical changes at the site, changes in circumstances, technological and professional advances, and guidance related to the continued viability of Environmental Site Assessment reports, user's responsibilities, and requirements for updating of components of the inquiry.

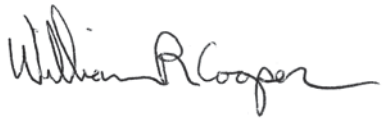
11.0 QUALIFICATIONS

This Phase I ESA was conducted under the supervision or responsible charge of Krazan's undersigned environmental professional. The work was conducted in accordance with ASTM E 1527-13 *for a Phase I Environmental Site Assessment,* and generally accepted industry standards for environmental due

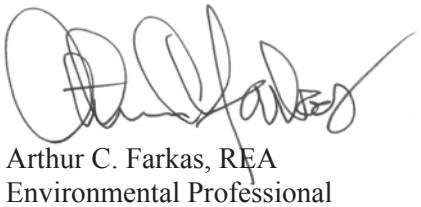
diligence in place at the time of the preparation of this report, and Krazan's quality-control policies. We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in 40 CFR 312.10. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property.

If you have any questions or if we can be of further assistance, please do not hesitate to contact our office at (661) 837-9200.

Respectfully submitted,
KRAZAN & ASSOCIATES, INC.



William R. Cooper, P.G. No 7427
Environmental Professional



Arthur C. Farkas, REA
Environmental Professional

WRC/ACF/mlt

REFERENCES

Aerial photographs were obtained from EDR.

American Society for Testing and Materials (ASTM), *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process*, ASTM Designations: E 1527-13 and E 1527-13.

ASTM, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions,* ASTM Designation E 2600-10.

California Department of Conservation, Department of Oil and Gas (DOGGR), Online Mapping System (DOMS).

Environmental Data Resources (EDR) Regulatory Database Report and Certified Sanborn Fire Insurance Maps (SFIM).

Orange County Health Care Agency (OCHCA).

Orange County Fire Authority (OCFA).

State of California Department of Toxic Substances Control, Envirostor Website: http://www.envirostor.dtsc.ca.gov/public

State of California Regional Water Quality Control Board, Geotracker Website: http://geotracker.swrcb.ca.gov

U.S. Environmental Protection Agency (EPA).

U.S. Fish & Wildlife Service National Wetland Inventory *Wetlands Mapper:* http://www.fws.gov/wetlands/Data/Mapper.html

U.S. Geological Survey, 7.5 minute Orange, California topographic quadrangle map, dated 1972.

GLOSSARY OF TERMS

Subject Site: The real property being investigated under this Phase I ESA.

Adjacent Properties: Properties which are contiguous with the subject site, or would be contiguous except for a street, road, or other public thoroughfare.

Subject Site Vicinity: Properties located within a 500-foot radius of the subject site.

Environmental Professional: A person meeting the education, training, and experience requirements as set forth in 40 CFR §312.10(b). The EP may be an independent contractor or an employee of the user.

User: The party seeking to use Practice E 1527 to complete an environmental site assessment of the subject site. A user may include, without limitation, a potential purchaser of the subject site, a potential tenant of the subject site, an owner of the subject site, a lender, or a property manager.

Recognized Environmental Condition (REC): In defining a standard of good commercial and customary practice for conducting an environmental site assessment of a parcel of property, the goal of the processes established by this practice is to identify recognized environmental conditions. The term recognized environmental conditions means the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not recognized environmental conditions.

Controlled Recognized Environmental Condition (CREC): A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). For example, if a leaking underground storage tank has been cleaned up to a commercial use standard, but does not meet unrestricted residential cleanup criteria, this would be considered a CREC. The "control" is represented by the restriction that the property use remain commercial. A condition considered by the environmental professional to be a CREC shall be listed in the findings section of the Phase I ESA report and as an REC in the conclusions section. A condition identified as a CREC does not imply that the environmental professional has evaluated or confirmed the adequacy, implementation, or continued effectiveness of the required control that has been, or is intended to be, implemented.

Historical Recognized Environmental Condition (HREC): A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release an HREC, the environmental professional must determine whether the past release is an REC at the time the Phase I ESA is conducted (for example, if there has been change in the regulatory criteria). If the EP considers the past release to be an REC at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as an REC.

GLOSSARY OF TERMS (continued)

Potential Area of Concern (PAOC): A term adopted to provide an alternative designation to the REC and HREC for a range of environmental issues related to current subject site uses, historical subject site uses, or from adjacent and/or vicinity property uses. The PAOC is utilized to emphasize full disclosure and provide the User with conclusions and recommendations related to potential environmental issues in connection with the subject site based on Krazan's professional experience in cases where official documentation or other evidence may be absent in order to identify an REC or HREC, thereby aiding the User's considerations of environmental due diligence risk tolerance.

Migrate/migration: For the purposes of this practice, "migrate" and "migration" refer to the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface. Vapor migration in the subsurface is described in ASTM E 2600-10 guidance; however, nothing in the E 1527-13 practice should be construed to require application of the E 2600-10 standard to achieve compliance with AAI.

De minimis condition: A condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Condition determined to be *de minimis conditions* are not RECS or CRECs.

Data Gap: A lack of or inability to obtain information required by this practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by this practice, including, but not limited to the site reconnaissance and interviews.

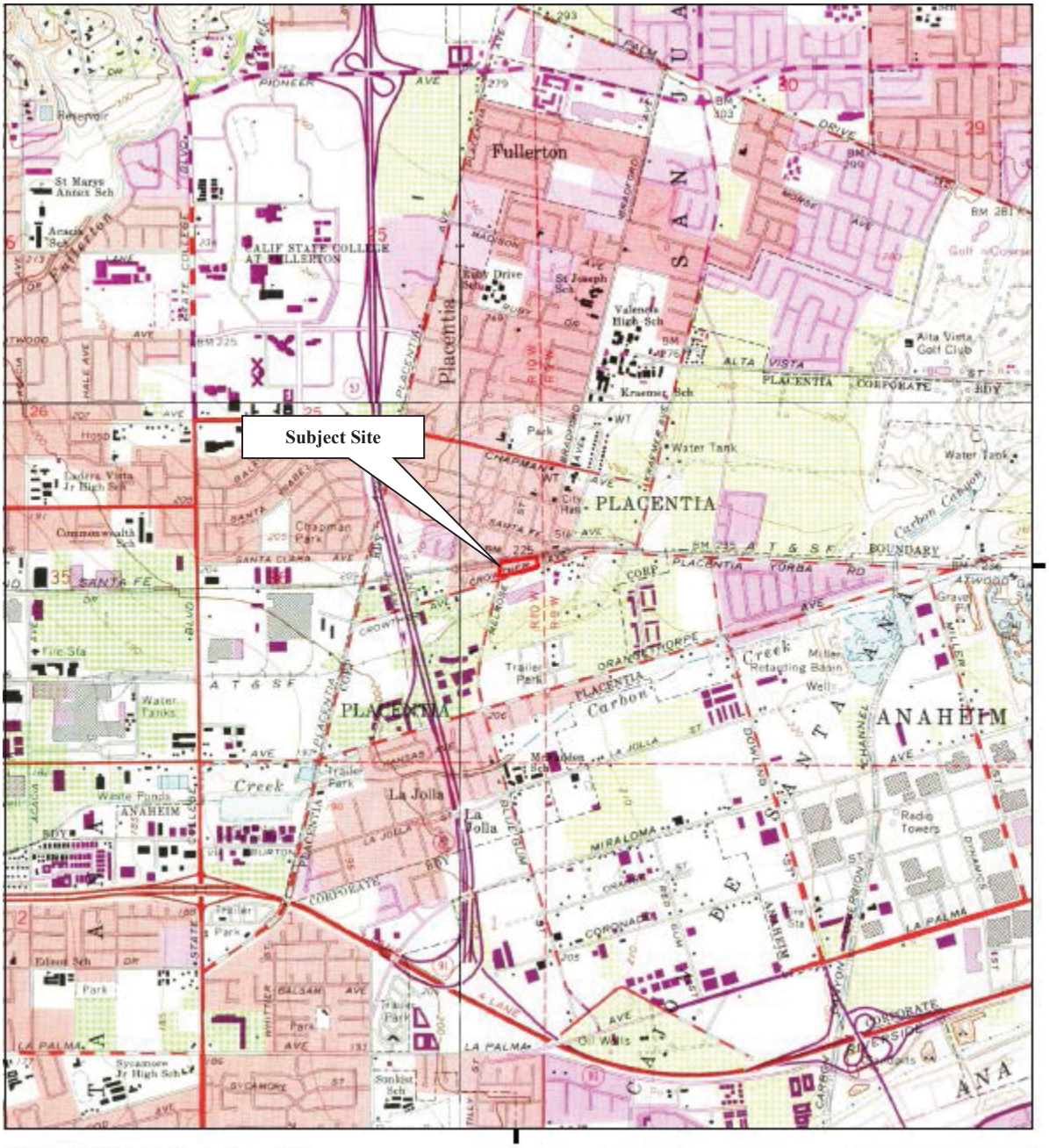
Data Failure: A failure to achieve the historical research objectives even after reviewing the standard historical sources that are reasonably ascertainable and likely to be useful. Data failure is one type of data gap.

GLOSSARY OF TERMS (continued)

AAI	All Appropriate Inquiries
AC	Asphalt Concrete
ACM	Asbestos-Containing Materials
AOC	Area of Concern
APN	Assessor's Parcel Number
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
AS	Air Sparging
AUL	Activity & Use Limitations
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
COCs	Constituents of Concern
DEULs	Declaration of Environmental Use Restrictions
DOGGR	Division of Oil, Gas & Geothermal Resources (CA)
DTSC	Department of Toxic Substances Control (CA)
EC	Engineering Control
EDR	Environmental Data Resources
EP	Environmental Professional
EPA	United States Environmental Protection Agency
ERP	Emergency Response Plan
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
FOIA	Freedom of Information Act
GPR	Ground Penetrating Radar
HCCD	Haines Criss-Cross Directory
HFIM	Historical Fire Insurance Map
HMBP	Hazardous Materials Business Plan
HREC	Historical Recognized Environmental Condition
HVAC	Heating, Ventilation, Air Conditioning
IC	Institutional Control
LBP	Lead-Based Paint
LLP	Landowner Liability Protection
LQG	Large Quantity Generator
LUC	Land Use Control
LUST	Leaking Underground Storage Tank
MCL	Maximum Contaminant Level
µg/L	Micrograms Per Liter
mg/kg	Milligrams Per Kilogram
mg/L	Milligrams Per Liter
MSDS	Material Safety Data Sheet
MTBE	Methyl Tertiary Butyl Ether
MFR	Multi-Family Residential
ND	Nondetectable
NFA	No Further Action (letter)
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
O&M	Operations & Maintenance Plan
PAOC	Potential Area of Concern
PCB	Polychlorinated Biphenyl
PCC	Portland Cement Concrete
PCE	Perchloroethylene
PEC	Potential Environmental Concern (TS)
PGD	Polk Guide Directory
PG&E	Pacific Gas & Electric
PHCs	Petroleum Hydrocarbon Constituents
PID	Photoionization Detector
ppb	Parts Per Billion
ppm	Parts Per Million
PRG	Preliminary Remediation Goal
PRP	Potentially Responsible Party
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RP	Responsible Party
RWQCB	Regional Water Quality Control Board (CA)
SBA	Small Business Administration
SFR	Single-Family Residential
SPCC	Spill Prevention Control and Countermeasure Plan
SQG	Small Quantity Generator
SCE	Southern California Edison
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compound
SWRCB	State Water Resources Control Board
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TPH-D	Total Petroleum Hydrocarbons as Diesel
TPH-G	Total Petroleum Hydrocarbons as Gasoline
TPH-MO	Total Petroleum Hydrocarbons as Motor Oil
TS	Transaction Screen
USGS	United States Geological Survey
USFWS	United States Fish & Wildlife Service
UST	Underground Storage Tank
VEC	Vapor Encroachment Condition
VES	Vapor Encroachment Screening
VOCs	Volatile Organic Compounds



VICINITY MAP	Scale: NTS	Date: September 2018	Krazan SITE DEVELOPMENT ENGINEERS *Serving the Western United States*
207-211 W. CROWTHER AVENUE **APNs 339-402-05, -07, -08 and -09** **PLACENTIA, CALIFORNIA**	**Drawn By:** BC	**Approved by:** BC	
	Project No. 024-18062	**Figure No.** 1	



This report includes information from the following map sheet(s).

7.5-MINUTE SERIES
USGS TOPOGRAPHIC MAP
ORANGE, CA.
DATED 1972,

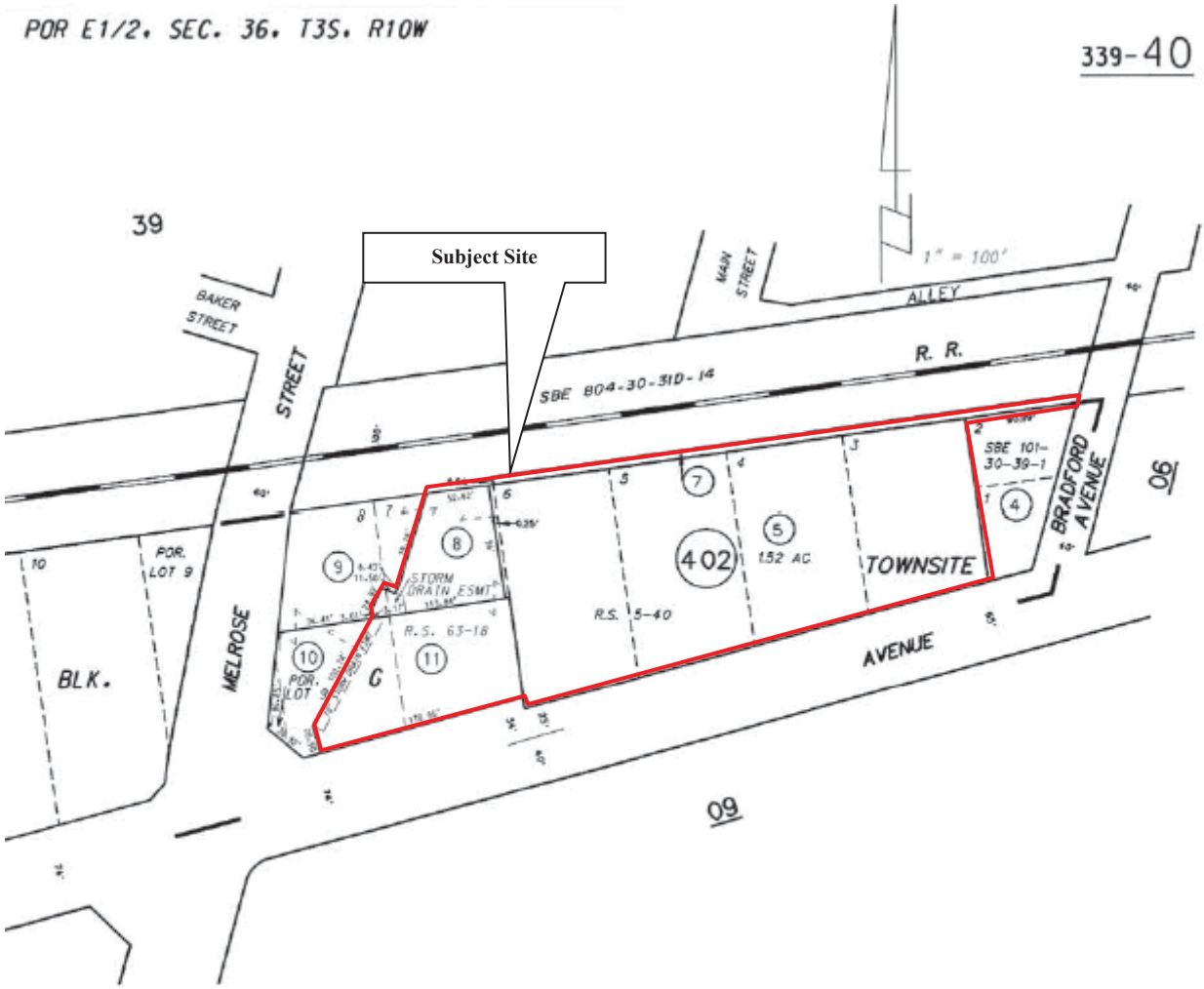
TOPOGRAPHIC MAP	Scale: See Map	Date: September 2018	Krazan
207-211 W. CROWTHER AVENUE APNs 339-402-05, -07, -08 and -09 PLACENTIA, CALIFORNIA	**Drawn By:** BC	**Approved by:** BC	**SITE DEVELOPMENT ENGINEERS** ***Serving the Western United States***
	Project No. 024-18062	**Figure No.** 2	



= SUBJECT SITE BOUNDARY

= 2009 Subsurface Investigation Soil Vapor Sample Point (With Elevated Concentrations of VOCs)

SITE MAP	Scale: 1" ≈ 190'	Date: September 2018	Krazan
207-211 W. CROWTHER AVENUE APNs 339-402-05, -07, -08 and -09 PLACENTIA, CALIFORNIA	Drawn By: BC	Approved by: BC	SITE DEVELOPMENT ENGINEERS *Serving the Western United States*
	Project No. 024-18062	Figure No. 3	



ASSESSOR'S PARCEL MAP	Scale: NTS	Date: September 2018	Krazan
207-211 W. CROWTHER AVENUE **APNs 339-402-05, -07, -08 and -09** **PLACENTIA, CALIFORNIA**	**Drawn By:** BC	**Approved by:** BC	**SITE DEVELOPMENT ENGINEERS** ***Serving the Western United States***
	Project No. 024-18062	**Figure No.** 4	



Photo 1: Western-facing view of the southwest portion of the subject site. An electrical box, pad-mounted transformer and a water main easement are located adjacent in the background.



Photo 2: Northwestern-facing view of the northwestern portion of the subject site. A retaining wall is pictured along the northern side of the subject site.



Photo 3: Northern-facing view of the retaining wall along the northern side of the subject site.



Photo 4: Northeastern-facing view of the northern-central portion of the subject site. Some refuse concrete rubble is pictured in the background.



Photo 5: Eastern-facing view of the central part of the subject site. A large soil mound is present along the central-southern boundary.



Photo 6: Southeastern-facing view of the central-southern part of the subject site. A large soil mound is present along the central-southern boundary.



Photo 7: Eastern-facing view of the southwestern portion of the subject site.



Photo 8: Northern-facing view along the western boundary of the subject site. The water main easement is located offsite (left background).



Photo 9: Eastern-facing view along the northern side of the subject site.



Photo 10: Southeastern-facing view of the central area of the subject site. W. Crowther Avenue is pictured in the background.



Photo 11: Northeastern-facing view of the retaining wall located along the northern side of the subject site.



Photo 12: View of the soil mound located along the southern side of the subject site.



Photo 13: Southern-facing view of the southeast corner of the subject site.



Photo 14: Eastern-facing view of the eastern side of the subject site. The Golden State Water Company pump station is pictured in the background.



Photo 15: Western-facing view along the northern boundary of the subject site. A drill crew is pictured conducting a geophysical investigation.



Photo 16: Eastern-facing view of the narrow northeastern portion of the subject site. (APN: 339-402-07)

Appendix A



ENVIRONMENTAL LIEN AND AUL REPORT

Order # 024-18062-1
AFX Reference # 79-83776-47

207 W CROWTHER AVE.
PLACENTIA, CA 92870

Completed 09/20/2018
Effective 09/12/2008

AFX RESEARCH, LLC

A Quarter-Century of Title Document Research Expertise

999 Monterey St. Suite 380, San Luis Obispo, CA 93401

(877) 848-5337 / www.afxllc.com

SOURCES SEARCHED

Source 1:	ORANGE COUNTY RECORDER'S OFFICE
Source 2:	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Source 3:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TARGET PROPERTY

Current Owner(s):	CITY OF PLACENTIA		
Street Address:	207 W CROWTHER AVE.		
City, State Zip Code:	PLACENTIA, CA 92870		
APN/Parcel/PIN:	339-402-05	County:	ORANGE
Legal Description:	PLACENTIA TOWNSITE BLK G LOT 3 AND BLK G LOTS 4-6 INC AND BLK G POR OF LOT 7 TR 563		

PROPERTY OWNERSHIP

GRANT DEED

Date Recorded:	06/18/2009	Instrument:	2009000319798
Dated:	05/15/2009		
Grantor(s):	GAJ PROPERTIES, LLC & PLACENTIA MUTUAL PROP., LLC, SUCCESSOR BY MERGER TO PLACENCIA MUTUAL PROPERTIES		
Grantee(s):	CITY OF PLACENTIA		
Notes:	APN: 339-402-05, 339-402-07, 339-402-08, 339-402-11		

ENVIRONMENTAL LIENS

NO ENVIRONMENTAL LIENS WERE FOUND FOR SUBJECT PROPERTY.

ACTIVITY AND USE LIMITATIONS (AUL)

NO AUL WERE FOUND FOR SUBJECT PROPERTY.

LEASES AND MISCELLANEOUS INSTRUMENTS

NO LEASES OR MISCELLANEOUS INSTRUMENTS FOUND FOR SUBJECT PROPERTY.

THANK YOU FOR YOUR ORDER

For questions, please contact our office at 1-877-848-5337.

Order # 024-18062-1

AFX Reference # 79-83776-47

Our Environmental Lien and AUL report provides a summary of recorded information on a specific property from the time the current owner purchased the property, to present time. The report is intended to assist in the search for environmental liens filed in land title records. The report will verify property ownership and provide information on recorded environmental liens and/or Activity and Use Limitations that have been recorded from the time the current owner purchased the property, forward.

Our professional network of trained researchers follow established industry protocols and use client-supplied property information to complete this Environmental Lien and AUL report. The research is conducted at all appropriate government offices based on the location of the subject property. This would include city, county, state, federal and tribal offices as needed. The report includes:

- Current deed information (i.e. grantor, grantee, recording dates)
- Legal Description
- Environmental Lien information
- Activity and Use Limitation information
- Copies of any Environmental Liens and/or documents referencing AULs that are listed within our summary report

-Disclaimer-

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ENVIRONMENTAL LIEN AND AUL REPORT

Order # 024-18062-2
AFX Reference # 79-83783-47

CROWTHER AVE.
PLACENTIA, CA 92870

Completed 09/20/2018
Effective 09/12/2008

AFX RESEARCH, LLC

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999 Monterey St. Suite 380, San Luis Obispo, CA 93401

(877) 848-5337 / www.afxllc.com

ENVIRONMENTAL LIEN AND AUL REPORT (pg. 2)

Order # 024-18062-2 | Reference # 79-83783-47 | Completed 09/20/2018 | Effective: 09/12/2008

SOURCES SEARCHED

Source 1:	ORANGE COUNTY RECORDER'S OFFICE
Source 2:	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Source 3:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TARGET PROPERTY

Current Owner(s):	CITY OF PLACENTIA		
Street Address:	W CROWTHER AVE.		
City, State Zip Code:	PLACENTIA, CA 92870		
APN/Parcel/PIN:	339-402-07	County:	ORANGE
Legal Description:	PLACENTIA TOWNSITE BLK G LOT 3 AND BLK G LOTS 4-6 INC AND BLK G POR OF LOT 7 TR 563		

PROPERTY OWNERSHIP

GRANT DEED

Date Recorded:	06/18/2009	Instrument:	2009000319798
Dated:	05/15/2009		
Grantor(s):	GAJ PROPERTIES, LLC & PLACENTIA MUTUAL PROP., LLC, SUCCESSOR BY MERGER TO PLACENCIA MUTUAL PROPERTIES		
Grantee(s):	CITY OF PLACENTIA		
Notes:	APN: 339-402-05, 339-402-07, 339-402-08, 339-402-11		

ENVIRONMENTAL LIENS

NO ENVIRONMENTAL LIENS WERE FOUND FOR SUBJECT PROPERTY.

ACTIVITY AND USE LIMITATIONS (AUL)

NO AUL WERE FOUND FOR SUBJECT PROPERTY.

LEASES AND MISCELLANEOUS INSTRUMENTS

NO LEASES OR MISCELLANEOUS INSTRUMENTS FOUND FOR SUBJECT PROPERTY.

THANK YOU FOR YOUR ORDER

For questions, please contact our office at 1-877-848-5337.

Order # 024-18062-2

AFX Reference # 79-83783-47

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ENVIRONMENTAL LIEN AND AUL REPORT

Order # 024-18062-3
AFX Reference # 79-83784-47

CROWTHER AVE.
PLACENTIA, CA 92870

Completed 09/20/2018
Effective 09/12/2008

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999 Monterey St. Suite 380, San Luis Obispo, CA 93401

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ENVIRONMENTAL LIEN AND AUL REPORT (pg. 2)

Order # 024-18062-3 | Reference # 79-83784-47 | Completed 09/20/2018 | Effective: 09/12/2008

SOURCES SEARCHED

Source 1:	ORANGE COUNTY RECORDER'S OFFICE
Source 2:	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Source 3:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TARGET PROPERTY

Current Owner(s):	CITY OF PLACENTIA
Street Address:	W CROWTHER AVE.
City, State Zip Code:	PLACENTIA, CA 92870
APN/Parcel/PIN:	339-402-08 County: ORANGE
Legal Description:	PLACENTIA TOWNSITE BLK G LOT 3 AND BLK G LOTS 4-6 INC AND BLK G POR OF LOT 7 TR 563

PROPERTY OWNERSHIP

GRANT DEED

Date Recorded:	06/18/2009 Instrument: 2009000319798
Dated:	05/15/2009
Grantor(s):	GAJ PROPERTIES, LLC & PLACENTIA MUTUAL PROP., LLC, SUCCESSOR BY MERGER TO PLACENCIA MUTUAL PROPERTIES
Grantee(s):	CITY OF PLACENTIA
Notes:	APN: 339-402-05, 339-402-07, 339-402-08, 339-402-11

ENVIRONMENTAL LIENS

NO ENVIRONMENTAL LIENS WERE FOUND FOR SUBJECT PROPERTY.

ACTIVITY AND USE LIMITATIONS (AUL)

NO AUL WERE FOUND FOR SUBJECT PROPERTY.

LEASES AND MISCELLANEOUS INSTRUMENTS

NO LEASES OR MISCELLANEOUS INSTRUMENTS FOUND FOR SUBJECT PROPERTY.

THANK YOU FOR YOUR ORDER

For questions, please contact our office at 1-877-848-5337.

Order # 024-18062-3

AFX Reference # 79-83784-47

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ENVIRONMENTAL LIEN AND AUL REPORT

Order # 024-18062-4
AFX Reference # 79-83785-47

211 W CROWTHER AVE.
PLACENTIA, CA 92870

Completed 09/20/2018
Effective 09/12/2008

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ENVIRONMENTAL LIEN AND AUL REPORT (pg. 2)

SOURCES SEARCHED

Source 1:	ORANGE COUNTY RECORDER'S OFFICE
Source 2:	CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Source 3:	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

TARGET PROPERTY

Current Owner(s):	CITY OF PLACENTIA		
Street Address:	211 W CROWTHER AVE.		
City, State Zip Code:	PLACENTIA, CA 92870		
APN/Parcel/PIN:	339-402-11	County:	ORANGE
Legal Description:	PLACENTIA TOWNSITE BLK G LOT 3 AND BLK G LOTS 4-6 INC AND BLK G POR OF LOT 7 TR 563		

PROPERTY OWNERSHIP

GRANT DEED

Date Recorded:	06/18/2009	Instrument:	2009000319798
Dated:	05/15/2009		
Grantor(s):	GAJ PROPERTIES, LLC & PLACENTIA MUTUAL PROP., LLC, SUCCESSOR BY MERGER TO PLACENCIA MUTUAL PROPERTIES		
Grantee(s):	CITY OF PLACENTIA		
Notes:	APN: 339-402-05, 339-402-07, 339-402-08, 339-402-11		

ENVIRONMENTAL LIENS

NO ENVIRONMENTAL LIENS WERE FOUND FOR SUBJECT PROPERTY.

ACTIVITY AND USE LIMITATIONS (AUL)

NO AUL WERE FOUND FOR SUBJECT PROPERTY.

LEASES AND MISCELLANEOUS INSTRUMENTS

NO LEASES OR MISCELLANEOUS INSTRUMENTS FOUND FOR SUBJECT PROPERTY.

THANK YOU FOR YOUR ORDER

For questions, please contact our office at 1-877-848-5337.

Order # 024-18062-4

AFX Reference # 79-83785-47

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Appendix B



First American Title Insurance Company
National Commercial Services
4380 La Jolla Village Drive, Suite 110
San Diego, CA 92122

July 11, 2018

Jatin Malhotra
USA Properties Fund, Inc.
3200 Douglas Blvd Ste 200
Roseville , CA 95661
Phone: (916)724-3892

Customer Reference:	Crowther Avenue, Placentia
Title Officer:	Vince Tocco/ Linda Slavik
Phone:	(858)410-3886
Email:	lslavik@firstam.com
Order Number:	NCS-915130-SD
Property:	207, 211 West Crowther Avenue, Placentia, CA

Attached please find the following item(s):

Commitment

Thank you for your confidence and support. We at First American Title Insurance Company maintain the fundamental principle:

Customer First!

First American Title Insurance Company

INFORMATION

The Title Insurance Commitment is a legal contract between you and the company. It is issued to show the basis on which we will issue a Title Insurance Policy to you. The Policy will insure you against certain risks to the land title, subject to the limitations shown in the policy.

The Company will give you a sample of the Policy form, if you ask.

The Commitment is based on the land title as of the Commitment Date. Any changes in the land title or the transaction may affect the Commitment and the Policy.

The Commitment is subject to its Requirements, Exceptions and Conditions.

This information is not part of the title insurance commitment.

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		Page
Agreement to Issue Policy		3
Schedule A		
1.	Commitment Date	4
2.	Policies to be Issued, Amounts and Proposed Insured	4
3.	Interest in the Land and Owner	4
4.	Description of the Land	4
Schedule B-1 - Requirements		
Schedule B-2 - Exceptions		
Conditions		

YOU SHOULD READ THE COMMITMENT VERY CAREFULLY.
If you have any questions about the Commitment,
please contact the issuing office.

COMMITMENT FOR TITLE INSURANCE

Issued by

First American Title Insurance Company

Agreement to Issue Policy

We agree to issue a policy to you according to the terms of this Commitment.

When we show the policy amount and your name as the proposed insured in Schedule A, this Commitment becomes effective as of the Commitment Date shown in Schedule A.

If the Requirements shown in this Commitment have not been met within six months after the Commitment Date, our obligation under this Commitment will end. Also, our obligation under this Commitment will end when the Policy is issued and then our obligation to you will be under the Policy.

Our obligation under this Commitment is limited by the following:

The Provisions in Schedule A.

The Requirements in Schedule B-1.

The Exceptions in Schedule B-2.

The Conditions.

This Commitment is not valid without Schedule A and Sections 1 and 2 of Schedule B.

SCHEDULE A

1. Commitment Date: June 29, 2018 at 7:30 A.M.

2. Policy or Policies to be issued: Amount

   (A) ALTA Owner's Policy $TBD
   ALTA Standard Owner Policy
   Proposed Insured:

   USA Properties Fund Inc. and/or assignee

3. (A) The estate or interest in the land described in this Commitment is:

   Fee Simple

   (B) Title to said estate or interest at the date hereof is vested in:

   City of Placentia, a municipal corporation

4. The land referred to in this Commitment is situated in the City of Placentia, County of Orange, State of California, and is described as follows:

   PARCEL A:

   PARCEL 1 AS SHOWN ON EXHIBIT A ATTACHED TO LOT LINE ADJUSTMENT ATTACHED TO A GRANT DEED RECORDED FEBRUARY 27, 1984 AS INSTRUMENT NO. 84-080654 OF OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA.

   LOTS 3, 4, 5 AND 6 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, ALONG WITH THAT PORTION OF THE NORTHERLY 96 FEET OF THAT PORTION OF LOT 7 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY DESCRIBED AS FOLLOWS:

   BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 7, THENCE SOUTH 8° 58' 00" EAST, ALONG THE EASTERLY LINE OF SAID LOT 96.00 FEET; THENCE SOUTH 81° 02' 00" WEST 0.25 FEET; THENCE NORTH 8° 58' 00" WEST 96.00 FEET; THENCE NORTH 81° 02' 00" EAST 0.25 FEET TO THE POINT OF BEGINNING.

   SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 5, PAGE 40 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

   APN: 339-402-05

   PARCEL B:

   A PORTION OF LOT 2 OF BLOCK C OF MAP OF THE KRAEMER TRACT, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12, PAGE 87 OF MISCELLANEOUS RECORDS, RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY) RECORDED MARCH 4, 1910 IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM ALL MINERALS CONTAINED IN THE ABOVE DESCRIBED LAND, INCLUDING, WITHOUT LIMITING THE GENERALITY THEREOF, OIL, GAS AND OTHER HYDROCARBON SUBSTANCES, AS WELL AS METALLIC OR OTHER SOLID MINERALS, PROVIDED THAT THE HOLDER THEREOF SHALL NOT HAVE THE RIGHT TO GO UPON OR USE THE SURFACE OF SAID LAND, OR ANY PART THEREOF, FOR THE PURPOSE OF DRILLING FOR, MINING, OR OTHERWISE REMOVING, ANY OF SAID MINERALS. HOLDER MAY, HOWEVER, AND RESERVED THE RIGHT TO, REMOVE ANY OF SAID MINERALS FROM SAID LAND BY MEANS OF WELLS, SHAFTS, TUNNELS, OR OTHER MEANS OF ACCESS TO SAID MINERALS WHICH MAY BE CONSTRUCTED, DRILLED OR DUG FROM OTHER LAND, PROVIDED THAT THE EXERCISE OF SUCH RIGHTS SHALL IN NO WAY INTERFERE WITH OR IMPAIR THE USE OF THE SURFACE OF THE LAND OR ANY IMPROVEMENTS THEREON, AS RESERVED BY THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, A DELAWARE CORPORATION, IN THE DEED RECORDED DECEMBER 18, 1991 AS INSTRUMENT NO. 91-694364 AND RE-RECORDED JANUARY 27, 1992 AS INSTRUMENT NO. 92-048039, BOTH OF OFFICIAL RECORDS.

APN: 339-402-07

PARCEL C:

THAT PORTION OF LOTS 7 AND 8 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

THAT PORTION OF LAND BEGINNING AT THE CENTERLINE INTERSECTION OF MELROSE AVENUE AND CROWTHER AVENUE AS SHOWN ON SAID RECORD OF SURVEY; THENCE ALONG THE CENTERLINE OF MELROSE AVENUE NORTH 07° 33' 46" EAST 175.88 FEET; THENCE SOUTH 82°26'14" EAST 40.00 FEET TO THE EXISTING EASTERLY RIGHT-OF-WAY LINE OF MELROSE AVENUE; THENCE NORTH 81° 02' 00" EAST 76.41 FEET TO THE TRUE POINT OF BEGINNING AND DESIGNATED AS T.P.O.B. ON EXHIBIT B ATTACHED HERETO, AND BY THIS REFERENCE MADE A PART THEREOF; THENCE NORTH 27° 37' 16" EAST 3.17 FEET; THENCE NORTH 64° 59' 09" WEST 3.01 FEET; THENCE NORTH 25° 00' 51" EAST 24.82 FEET; THENCE SOUTH 64° 59' 09" EAST 11.50 FEET; THENCE NORTH 25° 00' 51" EAST 8.43 FEET; THENCE NORTH 16° 32' 52" EAST 78.26 FEET TO THE SOUTHERLY BNSF RIGHT-OF-WAY LINE; THENCE ALONG SAID SOUTHERLY BNSF RIGHT-OF-WAY LINE NORTH 81° 02' 00" EAST 52.62 FEET; THENCE SOUTH 08° 58' 00" EAST 96.00 FEET; THENCE SOUTH 81° 02' 00" WEST 113.84 FEET TO THE TRUE POINT OF BEGINNING.

SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 63, PAGE 18 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 339-402-08

PARCEL D:

LOTS 7 AND 8 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM THAT PORTION CONVEYED TO PLACENTIA ORANGE GROWERS'

ASSOCIATION, A CALIFORNIA CORPORATION RECORDED DECEMBER 26, 1982 IN BOOK 6370, PAGE 257 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THOSE PORTIONS CONVEYED TO THE CITY OF PLACENTIA, A MUNICIPAL CORPORATION, BY THAT CERTAIN DEED RECORDED DECEMBER 2, 2003 AS INSTRUMENT NO. 2003001439515 OF OFFICIAL RECORDS.

SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 63, PAGE 18 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 339-402-11

SCHEDULE B

SECTION ONE

REQUIREMENTS

The following requirements must be met:

(A) Pay the agreed amounts for the interest in the land and/or the mortgage to be insured.

(B) Pay us the premiums, fees and charges for the policy.

(C) Documents satisfactory to us creating the interest in the land and/or the mortgage to be insured must be signed, delivered and recorded.

(D) You must tell us in writing the name of anyone not referred to in this Commitment who will get an interest in the land or who will make a loan on the land. We may then make additional requirements or exceptions.

(E) Releases(s) or Reconveyance(s) of Item(s): None

(F) Other: None

(G) You must give us the following information:
1. Any off record leases, surveys, etc.
2. Statement(s) of Identity, all parties.
3. Other: None

The following additional requirements, as indicated by "X", must be met:

[X] (H) Provide information regarding any off-record matters, which may include, but are not limited to: leases, recent works of improvement, or commitment statements in effect under the Environmental Responsibility Acceptance Act, Civil Code Section 850, et seq.

The Company's Owner's Affidavit form(as provided by company) must be completed and submitted prior to close in order to satisfy this requirement. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[] (I) An ALTA/NSPS survey of recent date, which complies with the current minimum standard detail requirements for ALTA/NSPS land title surveys, must be submitted to the Company for review. This Commitment will then be subject to such further exceptions and/or requirements as may be deemed necessary.

[] (J) The following LLC documentation is required:
(i) a copy of the Articles of Organization
(ii) a copy of the Operating Agreement, if applicable
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Company Consent to the current transaction

[] (K) The following partnership documentation is required **:**
(i) a copy of the partnership agreement, including all applicable amendments thereto
(ii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iii) express Partnership Consent to the current transaction

[] (L) The following corporation documentation is required:
(i) a copy of the Articles of Incorporation
(ii) a copy of the Bylaws, including all applicable Amendments thereto
(iii) a Certificate of Good Standing and/or other evidence of current Authority to Conduct Business within the State
(iv) express Corporate Resolution consenting to the current transaction

[] (M) Based upon the Company's review of that certain partnership/operating agreement dated **Not disclosed** for the proposed insured herein, the following requirements must be met:

Any further amendments to said agreement must be submitted to the Company, together with an affidavit from one of the general partners or members stating that it is a true copy, that said partnership or limited liability company is in full force and effect, and that there have been no further amendments to the agreement. This Commitment will then be subject to such further requirements as may be deemed necessary.

[] (N) A copy of the complete lease, as referenced in Schedule A, #3 herein, together with any amendments and/or assignments thereto, must be submitted to the Company for review, along with an affidavit executed by the present lessee stating that it is a true copy, that the lease is in full force and effect, and that there have been no further amendments to the lease. This Commitment will then be subject to such further requirements as may be deemed necessary.

[X] (O) Approval from the Company's Underwriting Department must be obtained for issuance of the policy contemplated herein and any endorsements requested thereunder. This Commitment will then be subject to such further requirements as may be required to obtain such approval.

[] (P) Potential additional requirements, if ALTA Extended coverage is contemplated hereunder, and work on the land has commenced prior to close, some or all of the following requirements, and any other requirements which may be deemed necessary, may need to be met:

[] (Q) The Company's "Indemnity Agreement I" must be executed by the appropriate parties.

[] (R) Financial statements from the appropriate parties must be submitted to the Company for review.

[] (S) A copy of the construction contract must be submitted to the Company for review.

[] (T) An inspection of the land must be performed by the Company for verification of the phase of construction.

[] (U) The Company's "Mechanic's Lien Risk Addendum" form must be completed by a Company employee, based upon information furnished by the appropriate parties involved.

SCHEDULE B

SECTION TWO

EXCEPTIONS

Any policy we issue will have the following exceptions unless they are taken care of to our satisfaction. The printed exceptions and exclusions from the coverage of the policy or policies are set forth in Exhibit A attached. Copies of the policy forms should be read. They are available from the office which issued this Commitment.

1. General and special taxes and assessments for the fiscal year 2018-2019, a lien not yet due or payable.

2. General and special taxes and assessments for the fiscal year 2017-2018 are exempt. If the exempt status is terminated an additional tax may be levied. A.P. No.: 339-402-05, 339-402-07 and 339-402-08.

3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.

4. Water rights, claims or title to water, whether or not shown by the public records.

5. Easements, Covenants and Conditions contained in the deed from Richard Melrose and Mary Melrose, husband and wife, as Grantor, to Placentia Warehouse Association, a corporation, as Grantee, recorded December 23, 1910 as Book 195, Page 22 of Deeds. Reference being made to the document for full particulars.

   (Affects Lots 4 and 5 of Parcel A)

6. Easements, Covenants and Conditions contained in the deed from Richard Melrose and Mary Melrose, husband and wife, as Grantor, to Placentia Warehouse Association, a corporation, as Grantee, recorded February 24, 1911 as Book 195, Page 356 of Deeds. Reference being made to the document for full particulars.

   (Affects Lots 3 and 6 of Parcel A)

7. An easement for road and incidental purposes, recorded January 6, 1916 in Book 280 of Deeds, Page 159.
   In Favor of: Orange County
   Affects: Parcels A and D

8. A waiver of any claims for damages by reason of the location, construction, landscaping or maintenance of a contiguous freeway, highway, roadway or transit facility as contained in the document recorded January 6, 1916 as Book 280, Page 159 of Deeds.

   (Affects Parcels A and D)

9. Easements, Covenants and Conditions contained in the deed from A. S. Bradford, Trustee, as Grantor, to Camillo Marzo, as Grantee, recorded April 27, 1917 as Book 301, Page 159 of Deeds. Reference being made to the document for full particulars.

   (Affects Parcels C and D)

10. The effect of a map purporting to show the land and other property, filed February 14, 1935 in Book 5, Page 40 of Record of Surveys.

(Affects Parcel A)

11. An easement for public utilities and incidental purposes, recorded August 30, 1950 as Book 2064, Page 346 of Official Records.
In Favor of: Southern California Edison Company
Affects: Lot 3 of Parcel A

12. An easement for public utilities and incidental purposes, recorded December 1, 1954 in Book 2884, Page 7 of Official Records.
In Favor of: Southern California Edison Company
Affects: Lot 3 of Parcel A

13. An easement for public utilities and incidental purposes, recordedMay 18, 1955 in Book 3071, Page 263 of Official Records.
In Favor of: Southern California Edison Company
Affects: Lot 3 of Parcel A

The location of the easement cannot be determined from record information.

14. The effect of a map purporting to show the land and other property, filed March 25, 1963 in Book 63, Page 18 of Record of Surveys.

(Affects Parcels C and D)

15. The fact that the land lies within the boundaries of the Placentia Redevelopment Project Area, as disclosed by the document recorded July 20, 1983 as Instrument No. 83-312045 of Official Records.

16. An easement for public roadway and utility purposes and incidental purposes, recorded June 26, 1985 as Instrument No. 1985-234338 of Official Records.
In Favor of: The City of Placentia, a municipal corporation
Affects: Parcel D

17. An easement for public roadway and utility purposes and incidental purposes, recorded July 30, 1985 as Instrument No. 1985-280339 of Official Records.
In Favor of: The City of Placentia, a municipal corporation
Affects: Parcel D

Document re-recorded October 7, 1985 as Instrument No. 85-383017 of Official Records.

18. An easement for storm drain or drains, and ingress/egress access easement and incidental purposes, recorded December 2, 2003 as Instrument No. 2003001439516 of Official Records.
In Favor of: The City of Placentia
Affects: Parcel D

19. An easement for storm drain or drains, and ingress/egress access easement and incidental purposes, recorded December 2, 2003 as Instrument No. 2003001439517 of Official Records.
In Favor of: City of Placentia
Affects: Parcel C

20. The terms, provisions and easement(s) contained in the document entitled "Easement Agreement" recorded June 18, 2009 as Instrument No. 2009000319799 of Official Records.

21. Any facts, rights, interests or claims which would be disclosed by a correct ALTA/NSPS survey.

22. Rights of parties in possession.

INFORMATIONAL NOTES

ALERT - CA Senate Bill 2 imposes an additional fee of $75 up to $225 at the time of recording on certain transactions effective January 1, 2018. Please contact your First American Title representative for more information on how this may affect your closing.

1. Taxes for proration purposes only for the fiscal year 2017-2018.

First Installment:	$165.50, PAID
Second Installment:	$165.50, PAID
Tax Rate Area:	09-031
APN:	339-402-11

2. According to the latest available equalized assessment roll in the office of the county tax assessor, there is located on the land a(n) Commercial Structure known as 207, 211 West Crowther Avenue, Placentia, California.

3. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

   None

4. This preliminary report/commitment was prepared based upon an application for a policy of title insurance that identified land by street address or assessor's parcel number only. It is the responsibility of the applicant to determine whether the land referred to herein is in fact the land that is to be described in the policy or policies to be issued.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

*****To obtain wire instructions for deposit of funds to your escrow file please contact your Escrow Officer.******

CONDITIONS

1. **DEFINITIONS**
(a)"Mortgage" means mortgage, deed of trust or other security instrument.
(b)"Public Records" means title records that give constructive notice of matters affecting the title according to the state law where the land is located.

2. **LATER DEFECTS**
The Exceptions in Schedule B - Section Two may be amended to show any defects, liens or encumbrances that appear for the first time in the public records or are created or attached between the Commitment Date and the date on which all of the Requirements (a) and (c) of Schedule B - Section One are met. We shall have no liability to you because of this amendment.

3. **EXISTING DEFECTS**
If any defects, liens or encumbrances existing at Commitment Date are not shown in Schedule B, we may amend Schedule B to show them. If we do amend Schedule B to show these defects, liens or encumbrances, we shall be liable to you according to Paragraph 4 below unless you knew of this information and did not tell us about it in writing.

4. **LIMITATION OF OUR LIABILITY**
Our only obligation is to issue to you the Policy referred to in this Commitment, when you have met its Requirements. If we have any liability to you for any loss you incur because of an error in this Commitment, our liability will be limited to your actual loss caused by your relying on this Commitment when you acted in good faith to:

comply with the Requirements shown in Schedule B - Section One
or
eliminate with our written consent any Exceptions shown in Schedule B - Section Two.

We shall not be liable for more than the Policy Amount shown in Schedule A of this Commitment and our liability is subject to the terms of the Policy form to be issued to you.

5. **CLAIMS MUST BE BASED ON THIS COMMITMENT**
Any claim, whether or not based on negligence, which you may have against us concerning the title to the land must be based on this commitment and is subject to its terms.



Privacy Information

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our subsidiaries we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information that you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its Fair Information Values.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's Fair Information Values. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

Information Obtained Through Our Web Site

First American Financial Corporation is sensitive to privacy issues on the Internet. We believe it is important you know how we treat the information about you we receive on the Internet.
In general, you can visit First American or its affiliates' Web sites on the World Wide Web without telling us who you are or revealing any information about yourself. Our Web servers collect the domain names, not the e-mail addresses, of visitors. This information is aggregated to measure the number of visits, average time spent on the site, pages viewed and similar information. First American uses this information to measure the use of our site and to develop ideas to improve the content of our site.
There are times, however, when we may need information from you, such as your name and email address. When information is needed, we will use our best efforts to let you know at the time of collection how we will use the personal information. Usually, the personal information we collect is used only by us to respond to your inquiry, process an order or allow you to access specific account/profile information. If you choose to share any personal information with us, we will only use it in accordance with the policies outlined above.

Business Relationships

First American Financial Corporation's site and its affiliates' sites may contain links to other Web sites. While we try to link only to sites that share our high standards and respect for privacy, we are not responsible for the content or the privacy practices employed by other sites.

Cookies

Some of First American's Web sites may make use of "cookie" technology to measure site activity and to customize information to your personal tastes. A cookie is an element of data that a Web site can send to your browser, which may then store the cookie on your hard drive.
FirstAm.com uses stored cookies. The goal of this technology is to better serve you when visiting our site, save you time when you are here and to provide you with a more meaningful and productive Web site experience.

Fair Information Values

Fairness We consider consumer expectations about their privacy in all our businesses. We only offer products and services that assure a favorable balance between consumer benefits and consumer privacy.
Public Record We believe that an open public record creates significant value for society, enhances consumer choice and creates consumer opportunity. We actively support an open public record and emphasize its importance and contribution to our economy.
Use We believe we should behave responsibly when we use information about a consumer in our business. We will obey the laws governing the collection, use and dissemination of data.
Accuracy We will take reasonable steps to help assure the accuracy of the data we collect, use and disseminate. Where possible, we will take reasonable steps to correct inaccurate information. When, as with the public record, we cannot correct inaccurate information, we will take all reasonable steps to assist consumers in identifying the source of the erroneous data so that the consumer can secure the required corrections.
Education We endeavor to educate the users of our products and services, our employees and others in our industry about the importance of consumer privacy. We will instruct our employees on our fair information values and on the responsible collection and use of data. We will encourage others in our industry to collect and use information in a responsible manner.
Security We will maintain appropriate facilities and systems to protect against unauthorized access to and corruption of the data we maintain.

EXHIBIT A
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (BY POLICY TYPE)

1. CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE POLICY - 1990
SCHEDULE B

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records. Proceedings by a public agency which may result in taxes or assessments, or notice of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of the land or which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the public records.

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by their policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

2. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions of area of the land, or the effect of any violation of any such law, ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant; (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder; (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy; or (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.

3. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY FORM B - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 2 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

4. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
SCHEDULE OF EXCLUSIONS FROM COVERAGE

1. Any law, ordinance or governmental regulation (including but not limited to building and zoning ordinances) restricting or regulating or prohibiting the occupancy, use or enjoyment of the land, or regulating the character, dimensions or location of any improvement now or hereafter erected on the land, or prohibiting a separation in ownership or a reduction in the dimensions or area of the land, or the effect of any violation of any such law ordinance or governmental regulation.
2. Rights of eminent domain or governmental rights of police power unless notice of the exercise of such rights appears in the public records at Date of Policy.
3. Defects, liens, encumbrances, adverse claims, or other matters (a) created, suffered, assumed or agreed to by the insured claimant, (b) not known to the Company and not shown by the public records but known to the insured claimant either at Date of Policy or at the date such claimant acquired an estate or interest insured by this policy or acquired the insured mortgage and not disclosed in writing by the insured claimant to the Company prior to the date such insured claimant became an insured hereunder, (c) resulting in no loss or damage to the insured claimant; (d) attaching or created subsequent to Date of Policy (except to the extent insurance is afforded herein as to any statutory lien for labor or material or to the extent insurance is afforded herein as to assessments for street improvements under construction or completed at Date of Policy).
4. Unenforceability of the lien of the insured mortgage because of failure of the insured at Date of Policy or of any subsequent owner of the indebtedness to comply with applicable "doing business" laws of the state in which the land is situated.

5. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1970
WITH REGIONAL EXCEPTIONS

When the American Land Title Association Lenders Policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy, the exclusions set forth in paragraph 4 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage by reason of the matters shown in parts one and two following:
Part One

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

6. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992
WITH A.L.T.A. ENDORSEMENT FORM 1 COVERAGE
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy;
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
   (c) resulting in no loss or damage to the insured claimant;
   (d) attaching or created subsequent to Date of Policy (except to the extent that this policy insures the priority of the lien of the insured mortgage over any statutory lien for services, labor or material or the extent insurance is afforded herein as to assessments for street improvements under construction or completed at date of policy); or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage.

4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable "doing business" laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any statutory lien for services, labor or materials (or the claim of priority of any statutory lien for services, labor or materials over the lien of the insured mortgage) arising from an improvement or work related to the land which is contracted for and commenced subsequent to Date of Policy and is not financed in whole or in part by proceeds of the indebtedness secured by the insured mortgage which at Date of Policy the insured has advanced or is obligated to advance.
7. Any claim, which arises out of the transaction creating the interest of the mortgagee insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the interest of the insured mortgagee being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the subordination of the interest of the insured mortgagee as a result of the application of the doctrine of equitable subordination; or
(iii) the transaction creating the interest of the insured mortgagee being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

7. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 1992 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 6 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

8. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
(b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims, or other matters:
(a) created, suffered, assumed or agreed to by the insured claimant;
(b) not known to the Company, not recorded in the public records at Date of Policy, but known to the insured claimant and not disclosed in writing to the Company by the insured claimant prior to the date the insured claimant became an insured under this policy;
(c) resulting in no loss or damage to the insured claimant;
(d) attaching or created subsequent to Date of Policy; or
(e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the estate or interest insured by this policy.
4. Any claim, which arises out of the transaction vesting in the insured the estate or interest insured by this policy, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that is based on:
(i) the transaction creating the estate or interest insured by this policy being deemed a fraudulent conveyance or fraudulent transfer; or
(ii) the transaction creating the estate or interest insured by this policy being deemed a preferential transfer except where the preferential transfer results from the failure:
(a) to timely record the instrument of transfer; or
(b) of such recordation to impart notice to a purchaser for value or a judgment or lien creditor.

9. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 1992 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 8 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:
Part One:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records.
2. Any facts, rights, interests, or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.
3. Easements, claims of easement or encumbrances which are not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by public records.
5. Unpatented mining claims; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
6. Any lien, or right to a lien, for services, labor or material theretofore or hereafter furnished, imposed by law and not shown by the public records.

ALTA RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)
EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
   (a) and use
   (b) improvements on the land
   (c) and division
   (d) environmental protection
   This exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date.
   This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
   (a) a notice of exercising the right appears in the public records on the Policy Date
   (b) the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
3. Title Risks:
   (a) that are created, allowed, or agreed to by you
   (b) that are known to you, but not to us, on the Policy Date -- unless they appeared in the public records
   (c) that result in no loss to you
   (d) that first affect your title after the Policy Date -- this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
   (a) to any land outside the area specifically described and referred to in Item 3 of Schedule A OR
   (b) in streets, alleys, or waterways that touch your land
   This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

11. EAGLE PROTECTION OWNER'S POLICY

CLTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998
ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE - 1998

Covered Risks 14 (Subdivision Law Violation). 15 (Building Permit). 16 (Zoning) and 18 (Encroachment of boundary walls or fences) are subject to Deductible Amounts and Maximum Dollar Limits of Liability

EXCLUSIONS

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes ordinances, laws and regulations concerning:
   a. building b. zoning
   c. land use d. improvements on the land
   e. land division f. environmental protection
   This exclusion does not apply to violations or the enforcement of these matters if notice of the violation or enforcement appears in the Public Records at the Policy Date.
   This exclusion does not limit the coverage described in Covered Risk 14, 15, 16, 17 or 24.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not apply to violations of building codes if notice of the violation appears in the Public Records at the Policy Date.
3. The right to take the Land by condemning it, unless:
   a. a notice of exercising the right appears in the Public Records at the Policy Date; or
   b. the taking happened before the Policy Date and is binding on You if You bought the Land without Knowing of the taking.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they appear in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they appear in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.d, 22, 23, 24 or 25.

5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any Land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.
   This exclusion does not limit the coverage described in Covered Risk 11 or 18.

12. THIRD GENERATION EAGLE LOAN POLICY AMERICAN LAND TITLE ASSOCIATION EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (1/01/08)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to (i) the occupancy, use, or enjoyment of the Land; (ii) the character, dimensions, or location of any improvement erected on the Land; (iii) the subdivision of land; or(iv) environmental protection; or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
   (b)Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
   (e) resulting in loss or damage which would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury, or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.

13. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006
EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;
   or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
   (a) a fraudulent conveyance or fraudulent transfer, or

(b) a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.

7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

14. AMERICAN LAND TITLE ASSOCIATION LOAN POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 13 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

15. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
   (i) the occupancy, use, or enjoyment of the Land;
   (ii) the character, dimensions, or location of any improvement erected on the Land;
   (iii) the subdivision of land; or
   (iv) environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
   (b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   (c) resulting in no loss or damage to the Insured Claimant;
   (d) attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risks 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

16. AMERICAN LAND TITLE ASSOCIATION OWNER'S POLICY - 2006 WITH REGIONAL EXCEPTIONS

When the American Land Title Association policy is used as a Standard Coverage Policy and not as an Extended Coverage Policy the exclusions set forth in paragraph 15 above are used and the following exceptions to coverage appear in the policy.

SCHEDULE B

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.

2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

RECORDING REQUESTED BY
North American Title Company

AND WHEN RECORDED MAIL DOCUMENT AND TAX STATEMENT TO:
City of Placentia
Attn: Finance Dept., City of Placentia
401 E. Chapman Avenue
Placentia, Ca. 92870

Recorded In Official Records, Orange County
Tom Daly, Clerk-Recorder

NO FEE

2009000319798 10:15am 06/18/09

105 59 G02 8

0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

Space Above This Line for Recorder's Use Only

A.P. No. 339-402-5

GRANT DEED

File No.: 7006683

The Undersigned Grantor(s) Declare(s): DOCUMENTARY TRANSFER TAX NONE/FREE RECORDING REQUESTED, ESSENTIAL TO
[x] computed on the consideration or full value of property conveyed, OR ACQUISITION BY THE CITY OF PLACENTIA, CA.
[ ] computed on the consideration or full value less value of liens and/or encumbrances remaining at time of sale, SEE GOVT. CODE 6103
[ ] unincorporated area; [x] City of **Placentia**, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **GAJ Properties, LLC, a California Limited Liability Company and Placentia Mutual Prop., LLC, successor by merger to Placentia Mutual Properties, a Limited Partnership**

hereby GRANTS to **City of Placentia, a Municipal Corporation**

the following described property in the City of **Placentia**, County of **Orange**, State of **California**:

Legal description attached hereto and made a part hereof as exhibits "A" and "B"

Dated: **05/15/2009**

Mail Tax Statements To: **SAME AS ABOVE**

GAJ Properties, LLC, a California Limited Liability Company

Gerald A. Jones
By:

Marilyn L. Jones
By:

Karen L. Lovato
By:

Placentia Mutual Prop., LLC, successor by merger to Placentia Mutual Properties, a Limited Partnership

Gerald A. Jones
By:

Marilyn L. Jones
By:

Karen L. Lovato
By:

STATE OF California)SS
COUNTY OF Orange)

On May 21, 2009, before me, Yuriy Barminov, Notary Public, personally appeared Gerald Allen Jones, Marilyn Louise Jones and Karen Lee Lovato, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is~~/are subscribed to the within instrument and acknowledged to me that ~~he/she~~/they executed the same in ~~his/her~~/their authorized capacity(ies) and that by ~~his/her~~/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

I Certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct

WITNESS my hand and official seal.

YURIY BARMINOV
COMMISSION # 1821452
Notary Public - California
LOS ANGELES COUNTY
My Comm. Expires Nov. 2, 2012

Signature

My Commission Expires: Nov 2, 2012

This area for official notarial seal

GOVERNMENT CODE
[27361-7]

I certify under the penalty of perjury that the notary acknowledgement on the document to which this statement is attached reads as follows:

Name of notary: Yuriy Barmina

Date commission expires: 11-2-12

Commission #: 1821452

County where bond is filed: Los Angeles

Manufacture/Vendor #: CNPI

Place of execution: Orange

Date: 6/18/09

Signature: _____

North American Title Company

Print Name: Perla Gutierrez

EXHIBIT "A"

Real property in the City of Plencia, County of Orange, State of California, described as follows:

PARCEL ONE:

LOTS 3, 4, 5 AND 6 IN BLOCK G OF THE TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6 PAGE 38, OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

SAID LAND IS SHOWN ON MAP FILED IN BOOK 5 PAGE 40 OF RECORDS OF SURVEYS, IN THE OFFICE OF SAID COUNTY RECORDER.

PARCEL TWO:

THAT PORTION OF LOT 7 IN BLOCK G OF THE TOWNSITE OF PLACENTIA AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF ORANGE COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 7, THENCE SOUTH 8° 58' 0" EAST, ALONG THE EASTERLY LINE OF SAID LOT 96.00 FEET; THENCE SOUTH 81° 2' 0" WEST 0.25 FEET; THENCE NORTH 8° 58' 0" WEST 96.00 FEET; THENCE NORTH 81° 58' 0" EAST 0.25 FEET TO THE POINT OF BEGINNING.

PARCEL THREE:

A PARCEL OF LAND LYING IN LOT 2 OF BLOCK C OF THE KRAEMER TRACT AS SAID TRACT IS SHOWN ON MAP RECORDED IN BOOK 12, PAGE 87 OF MISCELLANEOUS RECORDS OF LOS ANGELES COUNTY, CALIFORNIA DESCRIBED AS FOLLOWS:

THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY) RECORDED IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6, BLOCK G OF THE TOWNSITE OF PLACENTIA AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38, MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

APN: 339-402-5 and 339-402-7

EXHIBIT "B"

Real property in the City of Placentia, County of Orange, State of California, described as follows:

PARCEL 1:

THAT PORTION OF LAND BEGINNING AT THE CENTERLINE INTERSECTION OF MELROSE AVENUE AND CROWTHER AVENUE AS SHOWN ON SAID RECORD OF SURVEY; THENCE ALONG THE CENTERLINE OF MELROSE AVENUE N 07° 33' 46" E, 175.88 FEET; THENCE S 82° 26' 14" E, 40.00 FEET TO THE EASTERLY RIGHT-OF-WAY LINE OF MELROSE AVENUE; THENCE N 81° 02' 00" E, 76.41 FEET, TO THE TRUE POINT OF BEGINNING AND DESIGNATED AS T.P.O.B. ON EXHIBIT B ATTACHED HERETO AND BY THIS REFERENCE MADE A PART THEREOF; THENCE N 27° 37' 16" E, 3.17 FEET; THENCE N 64° 59' 09" W, 3.01 FEET; THENCE N 25° 00' 51" E, 24.82 FEET; THENCE S 64° 59' 09" E, 11.50 FEET; THENCE N 25° 00' 51" E, 8.43 FEET; THENCE N 16° 32' 52" E, 78.26 FEET TO THE SOUTHERLY BNSF RIGHT-OF-WAY LINE; THENCE ALONG SAID SOUTHERLY BNSF RIGHT-OF-WAY LINE N 81° 02' 00" E, 52.62 FEET; THENCE S 08° 58' 00" E, 96.00 FEET; THENCE S 81° 02' 00" W, 113.84 FEET TO THE TRUE POINT OF BEGINNING.

APN: 339-402-08

PARCEL 2:

LOTS 7 AND 8 IN BLOCK G, TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6 PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM THAT PORTION OF SAID LOTS 8 AND 9 DESCRIBED IN A DEED TO PLACENTIA ORANGE GROWERS ASSOCIATION, RECORDED IN BOOK 6370 PAGE 257 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF PLACENTIA, A MUNICIPAL CORPORATION, BY THAT CERTAIN DEED RECORDED DECEMBER 2, 2003 AS INSTRUMENT NO. 200300149515 OF OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA.

APN 339-402-11

APN: 339-402-08 and 339-402-11

This is to certify that the interest in real property conveyed by this instrument to the City of Placentia, a Municipal Corporation, is hereby accepted by the undersigned officer on behalf of the City of Placentia pursuant to authority conferred by the City of Placentia's City Council on May 5, 2009, and the grantee consents to recordation thereof by its duly authorized officer.

Dated: May 29, 2009

By: _____

Troy L. Butzlaff, ICMA-CM
City Administrator, City of Placentia

CERTIFICATE OF ACKNOWLEDGEMENT OF NOTARY PUBLIC

STATE OF CALIFORNIA,)
COUNTY OF Orange)

On May 29, 2009 before me, Angela Robles, (here insert name and title of the officer), personally appeared Troy L. Butzlaff, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

ANGELA ROBLES
Commission # 1838774
Notary Public - California
Orange County
My Comm. Expires Feb 27, 2013

GOVERNMENT CODE
[27361-7]

I certify under the penalty of perjury that the notary acknowledgement on the document to which this statement is attached reads as follows:

Name of notary: Angela Robles

Date commission expires: Feb 27, 2013

Commission #: 1838774

County where bond is filed: Orange

Manufacture/Vendor #: NNN

Place of execution: Orange

Date: 6/18/09

Signature:

North American Title Company

Print Name: Perla Gutierrez

Order No.
Escrow No.
RECORDING REQUESTED BY

83-474856

84-C80654

$4.00
C7

RECORDED IN OFFICIAL RECORDS
OF ORANGE COUNTY CALIFORNIA

•225 PM OCT 27 '83

Lee A Branch COUNTY RECORDER

SURVEY MON. FUND FEE $10.00

$8.00
C8

PAID
DOC TRANSFER TAX
LEE A BRANCH
ORANGE CO RECORDER

WHEN RECORDED MAIL TO.
GERALD A. JONES
Post Office Box 337
16771 Bayview Drive
Sunset Beach, CA 90742

MAIL TAX STATEMENTS TO:

SPACE ABOVE THIS LINE FOR RECORDER'S USE

DOCUMENTARY TRANSFER TAX $ .55
..... Computed on the consideration or value of property conveyed; OR
..... Computed on the consideration or value less liens or encumbrances remaining at time of sale.
Marilyn K. Jones
Signature of Declarant or Agent determining tax – Firm Name

GRANT DEED

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

RAYBOLEE INVESTMENT COMPANY, A PARTNERSHIP

hereby GRANT(S) to GERALD A. JONES and MARILYN L. JONES, Husband and Wife, as Joint Tenants

the real property in the City of Placentia
County of Orange, State of California, described as

Beginning at the Northeast corner of Lot 7 in Block G of the townsite of Placentia, County of Orange, State of California, as per map recorded in Book 6, Page 38 of Miscellaneous Maps, in the office of the County Recorder of said County: thence South 8 degrees 58 minutes 0 seconds East, along the easterly line of said lot 96.00 feet; thence South 81 degrees 2 minutes 0 seconds West 0.25 feet; thence North 8 degrees 58 minutes 0 seconds West 96.00 feet; thence North 81 degrees 02 minutes 0 seconds, East 0.25 to the point of beginning.

DOCUMENT BEING RE-RECORDED TO ATTACH LOT LINE ADJUSTMENT

RECORDED IN OFFICIAL RECORDS
OF ORANGE COUNTY CALIFORNIA

•150 PM FEB 27 '84

Lee A Branch COUNTY RECORDER

Dated 9-14-83

STATE OF CALIFORNIA
COUNTY OF Los Angeles } ss.

On September 14, 1983
before me, the undersigned, a Notary Public in and for said State, personally appeared
Lee M. Warner
known to me to be the person whose name is
subscribed to the within instrument and acknowledged that he executed the same.
WITNESS my hand and official seal.
Signature

RAYBOLEE INVESTMENT COMPANY

By: Lee M. Warner

OFFICIAL SEAL
ERIN COLLIN
NOTARY PUBLIC — CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY
My Commission Expires June 8, 1987

(This area for official notarial seal)

MAIL TAX STATEMENTS AS DIRECTED ABOVE

1002 (10/69)

84-080654

101 East Chapman Ave.
Placentia, Ca. 92670

CITY OF PLACENTIA
Planning Department

(714) 993-8124

APPLICATION FOR

LOT LINE ADJUSTMENT LL 83 - 01

RECORD OWNERS:	PARCEL 1	PARCEL 2
NAME:	Gerald A. Jones	Raybolee Investment Co.
ADDRESS:	16771 Bayview Dr. Sunset Beach, Calif. 90742	108 N. Anita Ave. Los Angeles, Calif. 90049
DAYTIME PHONE:	(213)592-1636	(213) ~~552-0300~~ 450-7100

	PARCEL 3	PARCEL 4
NAME:		
ADDRESS:		
DAYTIME PHONE:		

(I/We) hereby certify that 1) (I am/we are) the record owner(s) of all parcels proposed for adjustment by this application, 2) (I/we) have knowledge of and consent to the filing of this application, and 3) the information submitted in connection with this application is true and correct.

Gerald A Jones
Signature(s) of owner(s) of Parcel 1

x Raybolee Investment Co
Signature(s) of owner(s) of Parcel 2

Signature(s) of owner(s) of Parcel 3

Signature(s) of owner(s) of Parcel 4

CONTACT PERSON: Gerald A. Jones

ADDRESS: 16771 Bayview Dr. Sunset Beach, Calif. 90742

DAYTIME PHONE: (213)592-1636

OFFICE USE ONLY

Date Received:	Land Use Element Designation: Industrial Park	Zoning: M	Date Approved: 2/8/84
CEQA Status: Categorically Exempt: Class 5	AP Numbers: 399-402-03	399-402-01	Date Recorded:

City of Placentia
Joyce R. Rosenthal
Signature: Dir. Development Services

City of Placentia
John M Garcia
Signature: City Engineer

EXHIBIT A
LOT LINE ADJUSTMENT NO. LL -
(LEGAL DESCRIPTIONS) 84-080654

OWNERS	EXISTING PARCELS AP NUMBER	PROPOSED PARCELS REFERENCE NUMBER
Gerald A. Jones	399-402-03	Parcel 1
Raybolee Investment Co.	399-402-01	Parcel 2

PARCEL 1:

Lots 3,4,5, and 6 in Block G of the townsite of Placentia, in the city of Placentia, County of Orange, State of California as per map recorded in book 6 page 38 Miscellaneous Maps, in the office of the County Recorder of said county, along with that portion of the northerly 96 feet of that portion of Lot 7 in Block G of the townsite of Placentia as per map recorded in book 6 page 38 of Miscellaneous Maps, in the office of the County Recorder of said county described as follows:

Beginning at the Northeast corner of Lot 7 in Block G of the townsite of Placentia, County of Orange, State of California, as per map recorded in book 6 page 38 of Miscellaneous Maps, in the office of the County Recorder of said county: thence south 8 degrees 58 minutes 0 seconds east, along the easterly line of said lot 96.00 feet; thence south 81 degrees 2 minutes 0 seconds west 0.25 feet; thence north 8 degrees 58 minutes 0 seconds west 96.00 feet; thence north 81 degrees 02 minutes 0 seconds, east 0.25 to the point of beginning.

PARCEL 2:

The northerly 96 feet of that portion of Lots 7 and 8, in Block G of the townsite of Placentia, as per map recorded in book 6 page 38 of Miscellaneous Maps in the office of the County Recorder of said county, described as follows: beginning at the northeasterly corner of said Lot 7; then westerly along the northerly line of said Lot 7 and 8 to the easterly line of a strip so conveyed to Orange County by A.S. Bradford, Trustee, by deed recorded April 22, 1914, in book 251 page 211 of deeds; thence southwesterly along the easterly line of said strip so conveyed to Orange County to a point on the southerly line of Lot 9 in said Block G; thence easterly along the southerly line of said Lots 7,8 and 9 to the southeast corner of Lot 7; thence northerly 191.08 feet to the point of beginning.

EXCEPTING THEREFROM the following described parcel of land:

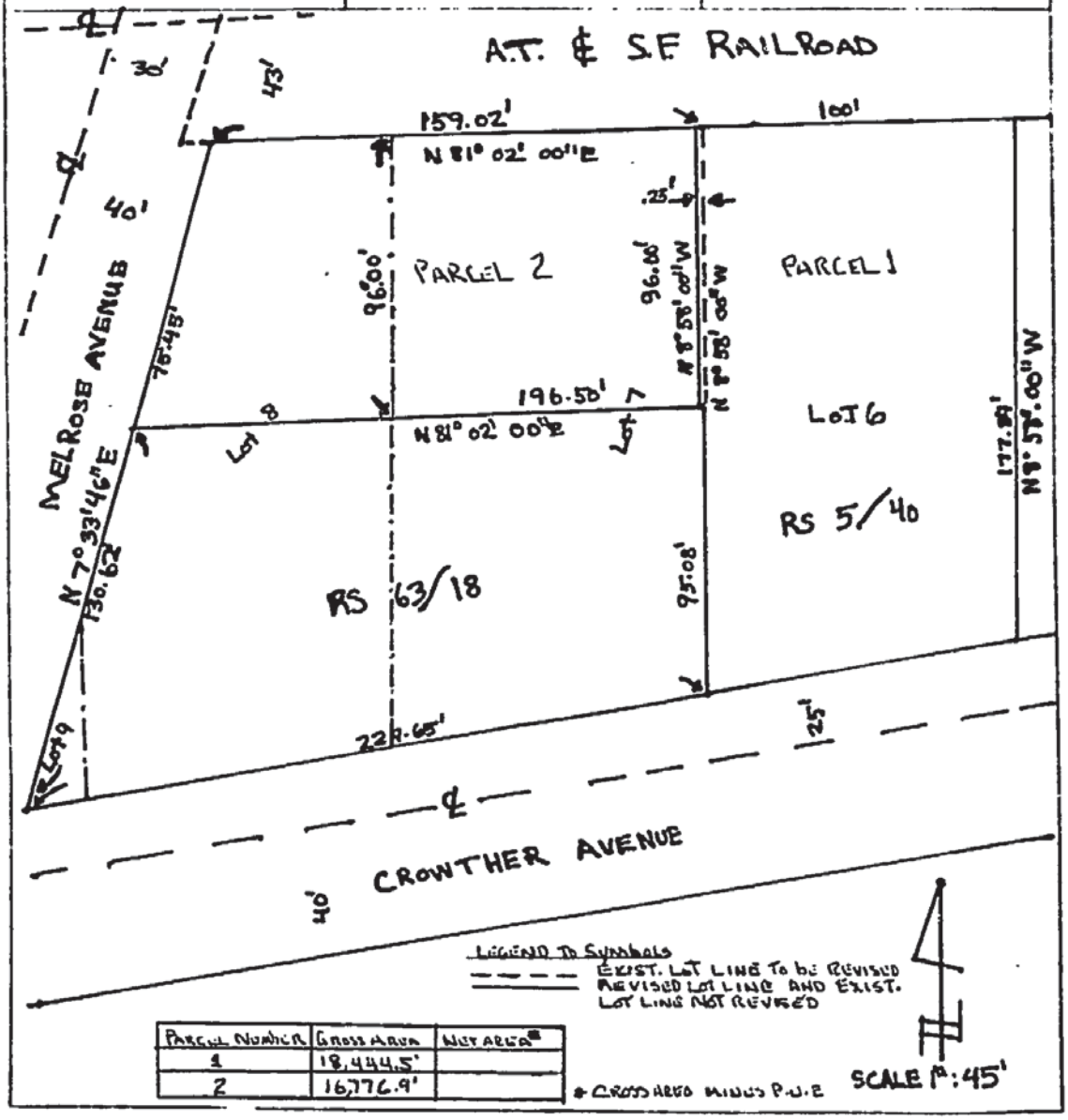
Beginning at the Northeast corner of Lot 7 in Block G of the townsite of Placentia, County of Orange, State of California, as per map recorded in book 6 page 38 of Miscellaneous Maps, in the office of the County Recorder of said county: thence south 8 degrees 58 minutes 0 seconds east along the easterly line of said lot 96.00 feet; thence south 81 degrees 2 minutes 0 seconds west 0.25 feet; thence north 8 degrees 58 minutes 0 seconds west 96.00 feet; thence north 81 degrees 02 minutes 0 seconds, east 0.25 to the point of beginning.

EXHIBIT B

LOT LINE ADJUSTMENT NO. L 84-080654

(MAP)

OWNERS	EXISTING PARCELS AP NUMBER	PROPOSED PARCELS REFERENCE NUMBER
Gerald A. Jones	339-402-03	Parcel 1
Baybolee Investment	339-402-01	Parcel 2



PARCEL NUMBER	GROSS AREA	NET AREA*
1	18,444.5'	
2	16,776.9'	

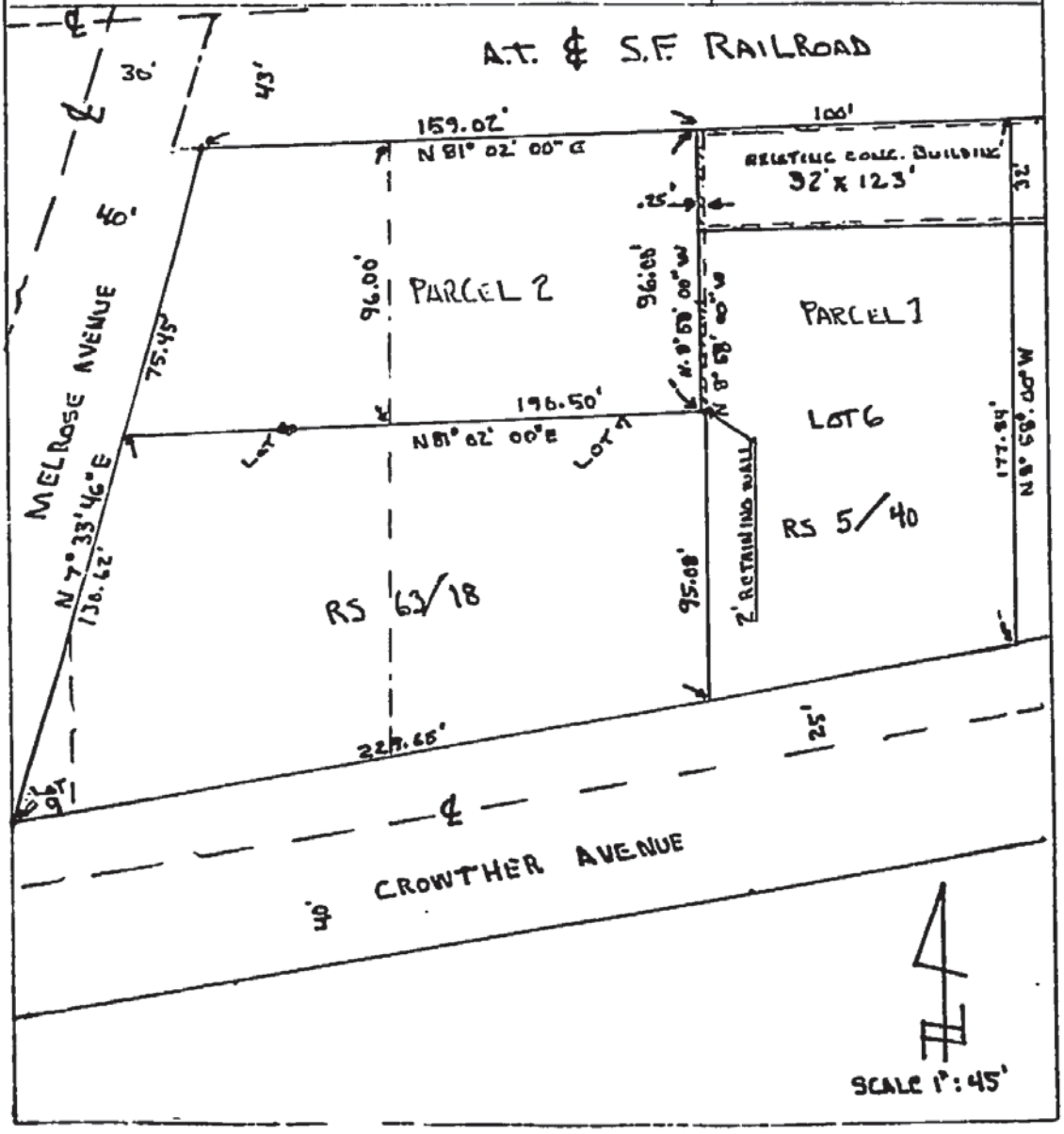
* GROSS AREA MINUS P.U.E

SCALE 1" = 45'

SITE PLAN - 84-000654

LOT LINE ADJUSTMENT NO. LL

OWNERS	EXISTING PARCELS AP NUMBER	PROPOSED PARCELS REFERENCE NUMBER
GERALD A. JONES	339-402-03	Parcel 1
Rayholee Investment Co.	339-402-01	Parcel 2



6-38

PLAT OF TOWNSITE OF PLACENTIA

ORANGE COUNTY, CALIFORNIA

LOCATED IN THE EAST HALF OF SECTION 36, TOWNSHIP 3 SOUTH, RANGE 10 WEST S.B.M. AND IN THE WEST HALF OF SECTION 31, TOWNSHIP 3 SOUTH, RANGE 9 WEST, S.B.M., BEING A SUBDIVISION OF LOTS 2 AND 3 BLOCK "C" KRAEMER TRACT, [illegible] IN BOOK 6, PAGE 81, LOS ANGELES COUNTY RECORDS

SCALE 1"=200'

R. W. CLARK, SURVEYOR

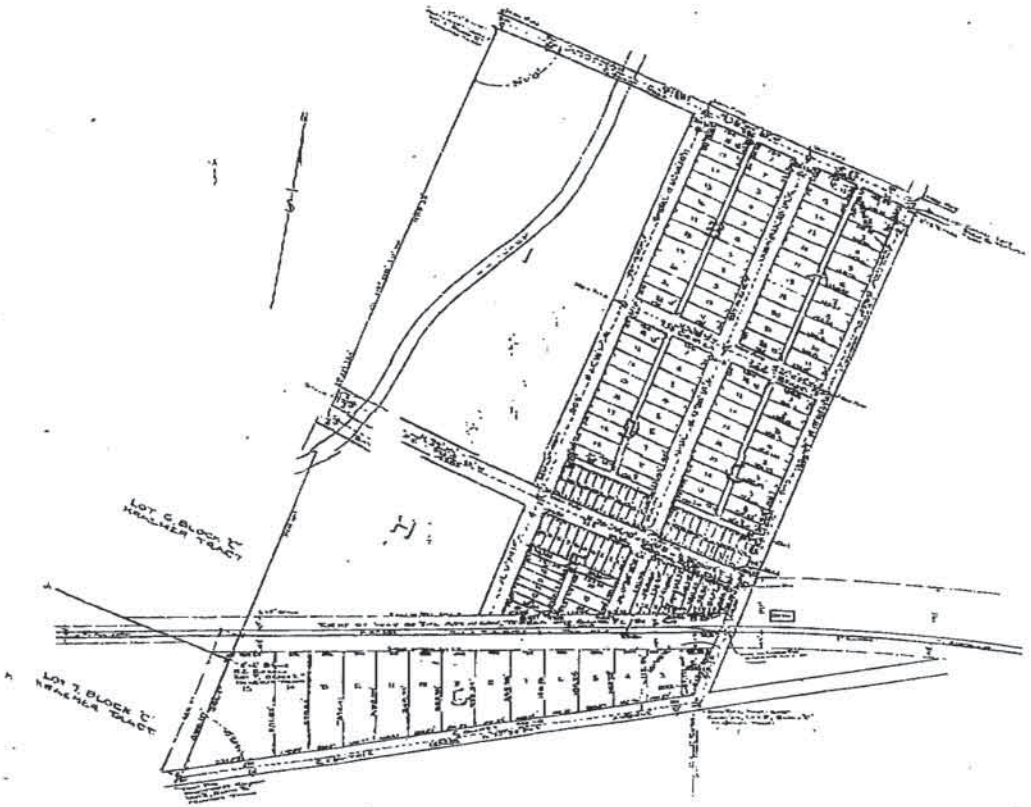
THIS MAP NOT TO SCALE

I certify that I have surveyed, subdivided, and plotted the townsite of Placentia as shown by this plat, and that this plat correctly represents said subdivision according to my survey.

R. W. Clark
Surveyor

I hereby approve this map for careful examination

Chas. K. Schrock
County Surveyor



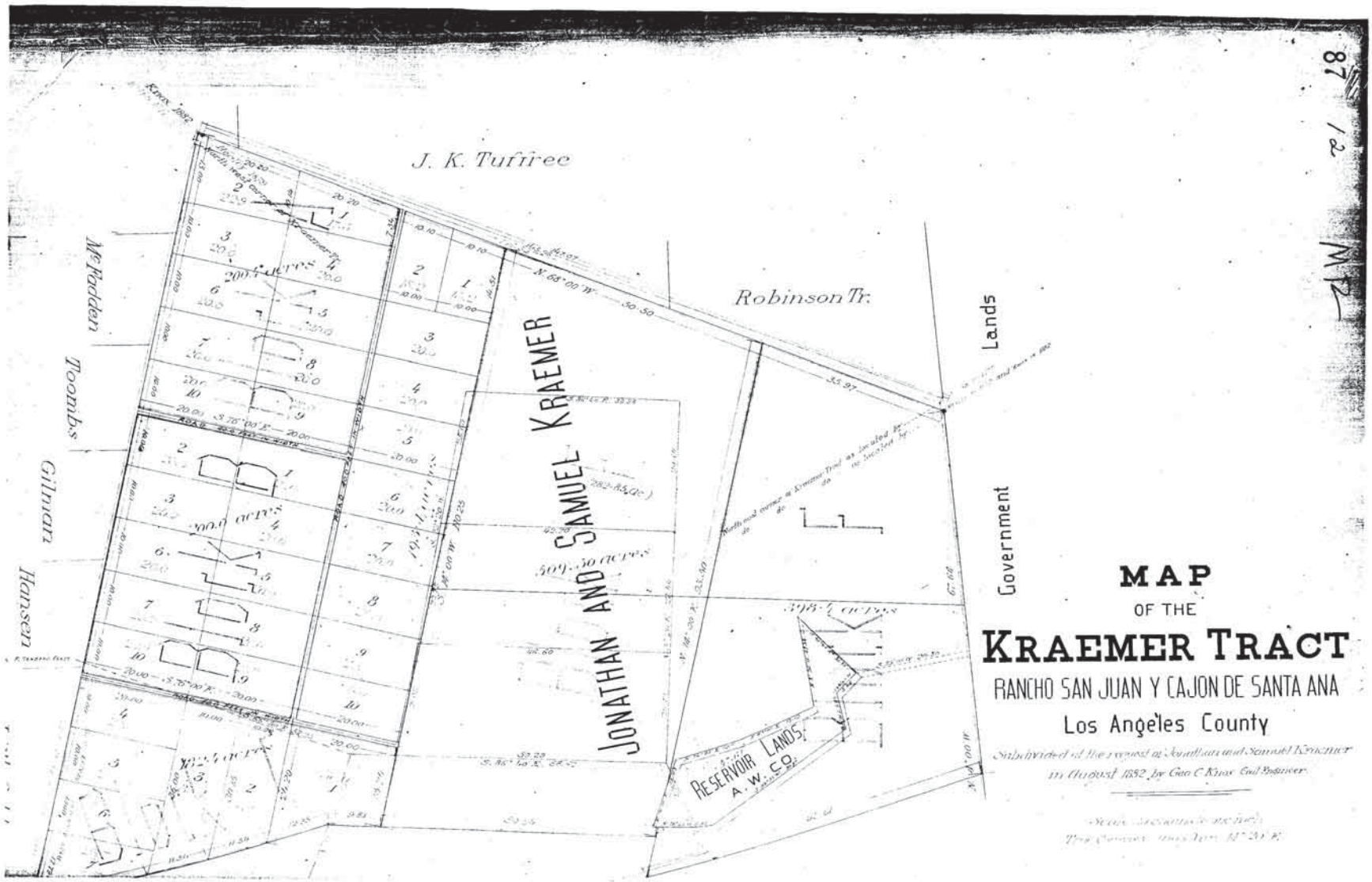
3723

Feb. 16, 1935

RECORD OF SURVEY
OF
S ½ OF LOT 7, BLOCK "D" KRAEMER TRACT
AS SHOWN ON A MAP RECORDED IN BK. 12, PGS. 87 & 88, MISC. RECORDS OF LOS ANGELES Co., CALIF.
OWNERS:- VALENCIA HIGH SCHOOL DIST., CLARENCE E. & MARIE T. HAIBER JT. TEN.
SCALE:- 1" = 100' DEC. 1934
GEO. L. BATES, L.S.

NOTES:-
Bearings are based on those used in Tract No 708
All axles set have welded copper bands marked "L.S. 485"
Acreage is computed to the ℄ of Bradford Ave. and to the West line of Kraemer Ave.
Valencia High School District owns the West ½ of the South ½ of Lot 7, Block "D".
Clarence E. & Marie T. Haiber, Joint Tenants, own the South 5 Acres of the East ½ of Lot 7, Block "D".
The bearing of Bradford Ave. shown on a map of Tract No 548 and No 675 is N 14° E.

Fd. bolt
Fd. ¾ harrow tooth S.W. Cor. Lot 7.
Fd. ½" pipe 30.04' E. & 0.71' N of cor.
Set axle.
N.W. Cor. Lot 7.
Old 4x4 post N.E. cor. lot 7
Valencia High School Dist. W. ½ of S ½, Lot 7, Block 'D'. 5 Ac.
Clarence E. & Marie T. Haiber, Jt. Ten. S. 5 Acres of E ½, Lot 7, Block 'D' 5 Ac.
S.E. cor. lot 7 Fd. cem. mon. out, replaced same
Fd. axle. Fd. cem. mon.
Fd. 4x4 R/W Set by C.D.B.
Fd. cem. mon. at S.E. cor. of A.U.W. Co. water gate.
Fd. 4x4 P.K. Set axle.
Fd. 4x4 P.K. Set axle.
Fd. 4x4 P.K. Set axle


MAP
OF THE
KRAEMER TRACT
RANCHO SAN JUAN Y CAJON DE SANTA ANA
Los Angeles County
Subdivided at the request of Jonathan and Samuel Kraemer
in August 1882 by Geo C Knox Civil Engineer
J. K. Tuffree
Robinson Tr.
Government Lands
JONATHAN AND SAMUEL KRAEMER
RESERVOIR LANDS
A. W. CO.
McFadden
Toombs
Gilman
Hansen
200.0 acres
509.50 acres
398.4 acres
87 12 MR

92444.

Contract Secy's No. 4445
Santa Fe Route,
West of Albuquerque.

BARGAIN AND SALE DEED

THIS INDENTURE, Made this Sixth day of December in the year of our Lord nineteen hundred and nine

Between RICHARD MELROSE and MARY MELROSE, his wife, the parties of the first part, and SANTA FE LAND IMPROVEMENT COMPANY, a California corporation, the party of the second part,

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of Ten Dollars, gold coin of the United States of America, to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, do by these presents, grant, bargain and sell, convey and confirm unto the said part_ of the second part, and to its assigns forever, all that certain lot piece or parcel of land situate, lying and being in the ____ in the County of Orange, State of California, and bounded and particularly described as follows, to-wit:

A strip of land 100 feet wide extending across Lots 2 and 3 of Block C of the Kraemer Tract, as per map of said tract recorded in Book 12, Page 87 of Records of Los Angeles County, lying between lines parallel with and distant respectively 57 feet at right angles northerly and 43 feet at right angles southerly from the center line of location of the proposed railway from Richfield to Fullerton, said center line being more particularly described as follows:

Commencing at a point in the easterly line of said Lot 2 at or near Engineer's Station 99 plus 10.1 of said located line and distant northerly along said easterly line 200 feet, more or less, from the northerly line of the public road which runs along the south line of said Lots 2 and 3; thence westerly, on a curve concave to the south, with a radius of 5729.7 feet, a distance of 89.9 feet; thence on a tangent South 81 degrees, 02 minutes West, a distance of 1547.0 feet, more

or 1[illegible], to a point in the west line of said Lot 3, at or near Engineer's Station 113 plus 47, said point being distant northerly along said west line 69.5 feet from the northeast corner of Lot 7, said Block C; containing an area of 3.[illegible] acres, more or less.

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

To Have and to Hold, all and singular the said premises, together with the appurtenances, unto the said party of the second part, and to its assigns forever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, Sealed and Delivered in the Presence of - - - -

Richard Melrose (Seal)
Mary Melrose (Seal)

State of California,)
0 ss.
County of Orange)

On this 6th day of December in the year nineteen hundred and nine, before me F. C. Spencer, a Notary Public in and for said County, residing therein, duly commissioned and sworn, personally appeared Richard Melrose and Mary Melrose, husband and wife, known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

WITNESS my hand and official seal.

((SEAL))

F. C. Spencer, Notary Public
in and for said County of Orange, State of California.

Form approved.
E. W. Camp,
Solicitor
3/1/10 R

Description approved
H. C. Phillips,
3/1/10 Chf. Engr.

A full, true and correct copy of the original recorded at request of Grantee, Mar. 4, 1910, at 7 Min. past 9 A. M.

Geo. E. Peters, County Recorder,
May G. Brynton Deputy.

- - - - o o O o o - - - -

91-694364

RECORDED AT REQUEST OF

Recorded at the request of
COMMONWEALTH LAND TITLE CO.

8:00 A.M. DEC 1 8 1991

Official Records
Orange County, California
Lee A. Branch Recorder

Titles	$
@$ 5.-	5.-
2 Add.	$
Pg@$ 3.-	6.-
Lien Ntc	$
@$	
Other	
Total Rec. Fees	$ 11.-
D.T.T.	$ 27.50
PCOR	$
SMF	$
RDE-4	

WHEN RECORDED MAIL TO

Mr. and Mrs. Gerald A. Jones
P.O. Box 337
Sunset Beach, CA 90742

DOCUMENTARY TRANSFER TAX $ 27.50
X COMPUTED ON FULL VALUE OF PROPERTY CONVEYED,
____ OR COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES REMAINING AT TIME OF SALE.
The Undersigned Grantor Declares
Signature of Declarant or Agent determining tax. Firm Name

MAIL TAX STATEMENTS TO

Same as above

S-1813
1374D
AM-11004308

GRANT DEED

GRANT DEED, made this 4th day of November, 1991.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, a Delaware corporation, hereinafter called "Santa Fe", hereby GRANTS to Gerald A. Jones and Marilyn L. Jones, a husband and wife as joint tenants, the following described real property:

See Exhibit "A" attached hereto and made a part hereof.

Santa Fe expressly reserves and excepts all minerals contained in the above-described land, including, without limiting the generality thereof, oil, gas and other hydrocarbon substances, as well as metallic or other solid minerals, provided that Santa Fe shall not have the right to go upon or use the surface of said land, or any part thereof, for the purpose of drilling for, mining, or otherwise removing, any of said minerals. Santa Fe may, however, and hereby reserves the right to, remove any of said minerals from said land by means of wells, shafts, tunnels, or other means of access to said minerals which may be constructed, drilled or dug from other land, provided that the exercise of such rights by Santa Fe shall in no way interfere with or impair the use of the surface of the land hereby conveyed or of any improvements thereon.

SUBJECT to the lien of current taxes not delinquent and to rights and rights of way, easements, covenants, conditions, restrictions and reservations of record.

IN WITNESS WHEREOF, Santa Fe has caused these presents to be signed in its name by Catellus Management Corporation, its attorney-in-fact and by its Vice President, its corporate seal affixed, and attested by its Assistant Secretary, this 25TH day of NOVEMBER, 1991.

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY
BY: CATELLUS MANAGEMENT CORPORATION
ITS ATTORNEY-IN-FACT

By _____
William C. Matheson

ATTEST

By _____
Its Assistant Secretary

STATE OF CALIFORNIA)
) ss.
COUNTY OF Orange)

On this 25TH day of NOVEMBER, in the year one thousand nine hundred and ninety one, before me, personally appeared William C. Matheson, personally known to me (or proved to me on the basis of satisfactory evidence) to be the Vice President, and known to me to be the Assistant Secretary of Catellus Management Corporation and known to me (or proved to me on the basis of satisfactory evidence) to be the persons who executed the within instrument on behalf of said Catellus Management Corporation, the corporation that executed and whose name is subscribed to the within instrument as the attorney-in-fact of The Atchison, Topeka and Santa Fe Railway Company, and acknowledged to me that they subscribed the name of The Atchison, Topeka and Santa Fe Railway Company thereto as principal and the name Catellus Management Corporation as attorney-in-fact for said The Atchison, Topeka and Santa Fe Railway Company, and that said Catellus Management Corporation executed the same as such attorney-in-fact.

WITNESS my hand and official seal.

OFFICIAL NOTARY SEAL
DIANE ANDERSON
Notary Public — California
ORANGE COUNTY
My Comm. Expires AUG 02,1994

Diane Anderson
Notary Public

SANTA FE APPROVAL COPY

11004308
10/29/91

EXHIBIT "A"

A PARCEL OF LAND IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, LYING IN LOT 2 OF BLOCK C OF THE KRAEMER TRACT AS SAID TRACT IS SHOWN ON MAP RECORDED IN BOOK 12, PAGE 87, OF MISCELLANEOUS RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

> THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY) RECORDED IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6, BLOCK G OF THE TOWNSITE OF PLACENTIA AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38, MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

SAID PARCEL OF LAND CONTAINS AN AREA OF 0.07 OF AN ACRE, MORE OR LESS.

11004308.278

APPROVED AS TO DESCRIPTION

92-048039

RECORDED IN OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA

-2:10 PM JAN 27 '92

Lee A. Branch RECORDER

1	Titles	$
@$ 5-		5-
3	Add.	$
Pg@$ 3-		9-
	Lien Nt	$
@$		
Other		$
Total Rec. Fees		$ 14-
D.T.T.		$
PCOR		$
SMF		$
RDE-5		

LOOK

91-694364

1	Titles	$
@$ 5-		5-
2	Add.	$
Pg@$ 3-		6-
	Lien Nt	$
@$		
Other		$
Total Rec. Fees		$ 11-
D.T.T.		$ 27.50
PCOR		$
SMF		$
RDE-4		

RE RECORDED AT REQUEST OF

Recorded at the request of COMMONWEALTH LAND TITLE CO.

8:00 A.M. DEC 18 1991

Official Records Orange County, California

Lee A. Branch Recorder

WHEN RE RECORDED MAIL TO

Mr. and Mrs. Gerald A. Jones
P.O. Box 337
Sunset Beach, CA 90742

DOCUMENTARY TRANSFER TAX $ 27.50

X COMPUTED ON FULL VALUE OF PROPERTY CONVEYED,

____ OR COMPUTED ON FULL VALUE LESS LIENS AND ENCUMBRANCES REMAINING AT TIME OF SALE.

The undersigned Grantor Declares

Signature of Declarant or Agent determining tax. Firm Name

MAIL TAX STATEMENTS TO

Same as above

680556-J

S-1813
1374D
AM-11004308

GRANT DEED

GRANT DEED, made this 4th day of November, 1991.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, **THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY**, a Delaware corporation, hereinafter called "Santa Fe", hereby **GRANTS** to **Gerald A. Jones and Marilyn L. Jones**, a husband and wife as joint tenants, the following described real property:

See Exhibit "A" attached hereto and made a part hereof.
SEE EXHIBIT "B" ATTACHED HERETO AND MADE A PART OF

Santa Fe expressly reserves and excepts all minerals contained in the above-described land, including, without limiting the generality thereof, oil, gas and other hydrocarbon substances, as well as metallic or other solid minerals, provided that Santa Fe shall not have the right to go upon or use the surface of said land, or any part thereof, for the purpose of drilling for, mining, or otherwise removing, any of said minerals. Santa Fe may, however, and hereby reserves the right to, remove any of said minerals from said land by means of wells, shafts, tunnels, or other means of access to said minerals which may be constructed, drilled or dug from other land, provided that the exercise of such rights by Santa Fe shall in no way interfere with or impair the use of the surface of the land hereby conveyed or of any improvements thereon.

SUBJECT to the lien of current taxes not delinquent and to rights and rights of way, easements, covenants, conditions, restrictions and reservations of record.

MAIL TAX STATEMENTS AS DIRECTED ABOVE

IN WITNESS WHEREOF, Santa Fe has caused these presents to be signed in its name by Catellus Management Corporation, its attorney-in-fact and by its Vice President, its corporate seal affixed and attested by its Assistant Secretary, this 25TH day of NOVEMBER, 1991.

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY
BY: CATELLUS MANAGEMENT CORPORATION
ITS ATTORNEY-IN-FACT

By _____
William C. Matheson

ATTEST

By _____
Its Assistant Secretary

STATE OF CALIFORNIA)
) ss.
COUNTY OF Orange)

On this 25TH day of NOVEMBER, in the year one thousand nine hundred and ninety one, before me, personally appeared William C. Matheson, personally known to me (or proved to me on the basis of satisfactory evidence) to be the Vice President, and known to me to be the Assistant Secretary of Catellus Management Corporation and known to me (or proved to me on the basis of satisfactory evidence) to be the persons who executed the within instrument on behalf of said Catellus Management Corporation, the corporation that executed and whose name is subscribed to the within instrument as the attorney-in-fact of The Atchison, Topeka and Santa Fe Railway Company, and acknowledged to me that they subscribed the name of The Atchison, Topeka and Santa Fe Railway Company thereto as principal and the name Catellus Management Corporation as attorney-in-fact for said The Atchison, Topeka and Santa Fe Railway Company, and that said Catellus Management Corporation executed the same as such attorney-in-fact.

WITNESS my hand and official seal.

OFFICIAL NOTARY SEAL
DIANE ANDERSON
Notary Public — California
ORANGE COUNTY
My Comm. Expires AUG 02,1994

Diane Anderson
Notary Public

SANTA FE APPROVAL COPY

11004308
10/29/91

EXHIBIT "A"

A PARCEL OF LAND IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, LYING IN LOT 2 OF BLOCK C OF THE KRAEMER TRACT AS SAID TRACT IS SHOWN ON MAP RECORDED IN BOOK 12, PAGE 87, OF MISCELLANEOUS RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

> THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY) RECORDED IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6, BLOCK G OF THE TOWNSITE OF PLACENTIA AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38, MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

SAID PARCEL OF LAND CONTAINS AN AREA OF 0.07 OF AN ACRE, MORE OR LESS.

11004308.278

APPROVED AS TO DESCRIPTION

Mayor
JOHN O. TYNES

City Administrator
ROBERT D'AMATO

The People are the City

EXHIBIT B

Councilmembers
CAROL DOWNEY
NORMAN Z. ECKENRODE
MARIA MORENO
ARTHUR G. NEWTON

401 East Chapman Avenue - Placentia, California 92670

January 21, 1992

Mr. Gerald A. Jones
Placentia Mutual Properties
P.O. Box 337
Sunset Beach, CA. 90742

Re: A.T. & S.F. Railway Company Parcel

Dear Gerry,

The transaction with the Railway Company has been reviewed and based on the materials submitted, (sketch, legal description, copy of recorded Grant Deed) we have concluded that no further action is required.

Therefore, a Certificate of Compliance is not necessary and the transaction is considered "approved".

If you have any questions, please do not hesitate to contact me at (714) 993-8124.

Sincerely,

Joyce R. Rosenthal

Joyce R. Rosenthal
Director, Development Services

JRR/cms
ltr.10
cc: City Engineer

RECORD OF SURVEY

ORANGE COUNTY, CALIFORNIA

20580
MAR 25 1963
THIS MAP RECORDED THIS ..... DAY OF .....
AT 2:42 P.M. IN BOOK 63 PAGE 18
OF RECORDS OF SURVEYS, COUNTY OF ORANGE, CALIFORNIA.
AT REQUEST OF COUNTY SURVEYOR
MARY McFARLAND, County Recorder
$5.00

THIS MAP HAS BEEN EXAMINED FOR CONFORMANCE WITH THE REQUIREMENTS OF CHAPTER 15, DIVISION 3, OF THE BUSINESS AND PROFESSIONS CODE THIS 25TH DAY OF March, 1963.

A.S. KOCH
COUNTY SURVEYOR

BY: Robert K. Wise
DEPUTY COUNTY SURVEYOR

THIS MAP CORRECTLY REPRESENTS SURVEYS MADE UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF CHAPTER 15, DIVISION 3, OF THE BUSINESS AND PROFESSIONS CODE AT THE REQUEST OF PLACENTIA MUTUAL ORANGE ASS'N.

Stephen W. Bradford
LICENSED LAND SURVEYOR NO. 2477

RST 1711

IN THE CITY OF PLACENTIA
ORANGE COUNTY, CALIFORNIA

OWNER: PLACENTIA MUTUAL ORANGE ASS'N.

DESCRIPTION: LOT 7, AND PORTIONS OF LOTS 8 AND 9 OF BLOCK 9 OF THE TOWNSITE OF PLACENTIA, MM 6-38, RECORDS OF ORANGE COUNTY, CALIFORNIA.

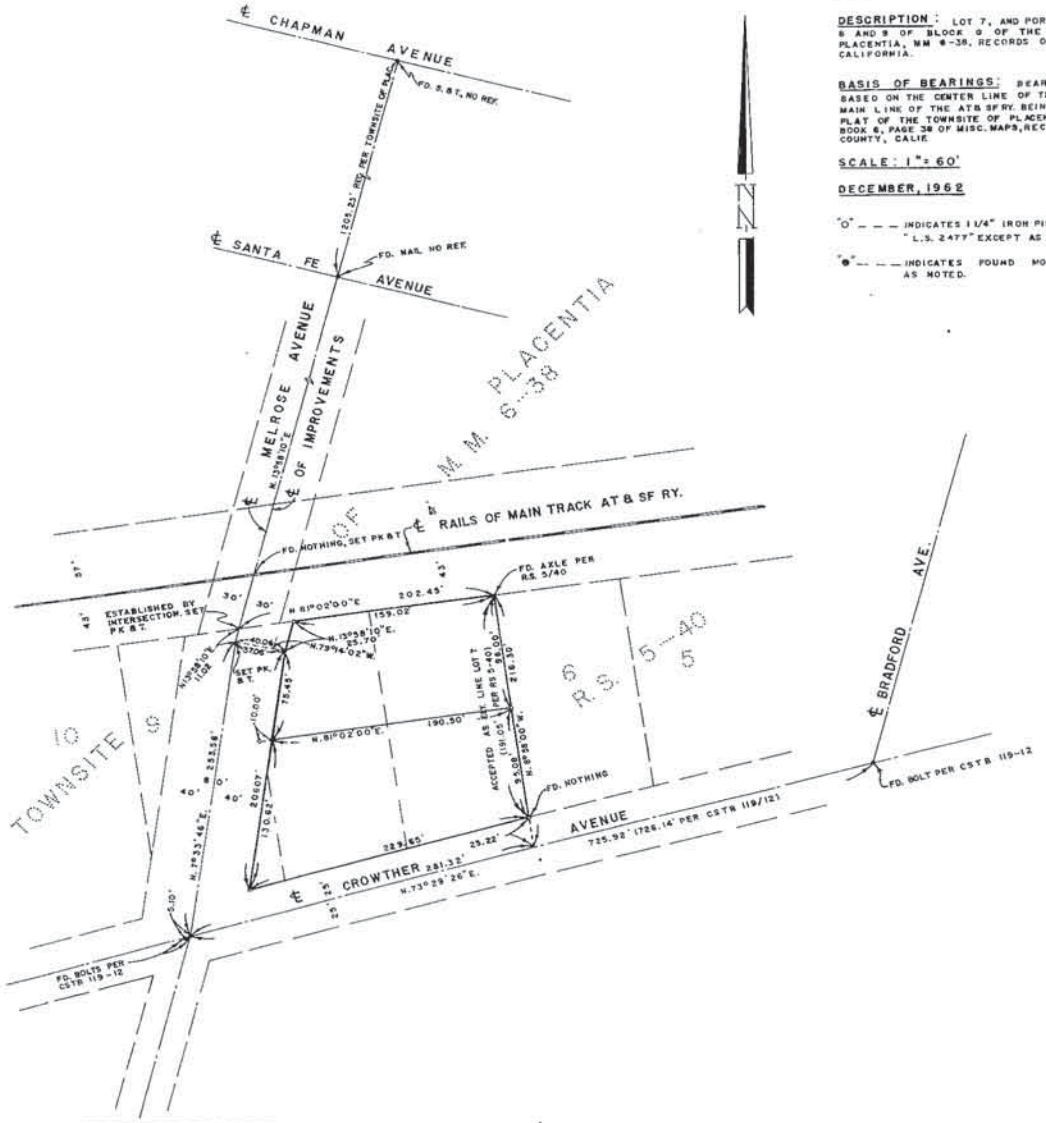
BASIS OF BEARINGS: BEARINGS HEREON ARE BASED ON THE CENTER LINE OF THE RAILS OF THE MAIN LINE OF THE AT & SF RY. BEING N. 81°02'E. PER PLAT OF THE TOWNSITE OF PLACENTIA RECORDED IN BOOK 6, PAGE 38 OF MISC. MAPS, RECORDS OF ORANGE COUNTY, CALIF.

SCALE: 1" = 60'

DECEMBER, 1962

"O" - - - INDICATES 1 1/4" IRON PIPE SET, TAGGED "L.S. 2477" EXCEPT AS NOTED

"●" - - - INDICATES FOUND MONUMENTS, AS NOTED.



73/378&43

DEC. 26 1962 | 17611 | 10

BOOK 6370 PAGE 257

RECORDING REQUESTED BY
Orange County Title Company

WHEN RECORDED MAIL TO
Placentia Orange Growers' Assn.
P.O. Box I
Placentia, California

17611

$2.00

RECORDED AT REQUEST OF ORANGE COUNTY TITLE CO. IN OFFICIAL RECORDS OF ORANGE COUNTY, CALIF.
8 AM DEC 26 1962
RUBY McFARLAND, County Recorder

I.R.S. $17.05

PLACE INTERNAL REVENUE STAMPS HERE

CO. 1962 LED

CORPORATION GRANT DEED

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

PLACENTIA MUTUAL ORANGE ASSOCIATION, a California corporation,

a corporation organized under the laws of the State of California, does hereby GRANT to PLACENTIA ORANGE GROWERS' ASSOCIATION, a California corporation,

the real property in the County of Orange, State of California, described as: Lot 7 & pt Lots 8 & 9 Blk G

The Northerly 96 feet of that real property described as follows:

Beginning at the Northeasterly corner of Lot 7 in Block G of the Townsite of Placentia, as shown on a Map recorded in Book 6, page 38 of Miscellaneous Maps, records of Orange County, California; thence Westerly along the Northerly line of Lots 7 and 8 in said Block G to the Easterly line of a strip conveyed to Orange County by A. S. Bradford, Trustee, by deed recorded in Book 251, page 211 of Deeds, records of Orange County, California; thence Southwesterly along the Easterly line of said strip so conveyed to Orange County to a point on the Southerly line of Lot 9 in Block G, distant 63.25 feet from the Southwesterly corner of said Lot 9; thence Easterly along the Southerly line of said Lots 7, 8 and 9 to the Southeast corner of said Lot 7; thence Northerly 196.15 feet to the point of beginning, being all of Lot 7 and a portion of Lots 8 and 9 in said Block G.

SUBJECT to second installment of taxes for fiscal year 1962-1963. P.D. 20

SUBJECT ALSO to covenants, conditions, restrictions, reservations and rights of way of record.

IN WITNESS WHEREOF, said corporation has caused its corporate name and seal to be affixed hereto and this instrument to be executed by its President and Secretary thereunto duly authorized.

Dated November 26, 1962

PLACENTIA MUTUAL ORANGE ASSOCIATION

By [signature] President

By [signature] Secretary

STATE OF CALIFORNIA
COUNTY OF ORANGE } ss.

(Seal)

On DECEMBER 10 1962 before me, the undersigned, a Notary Public in and for said County and State, personally appeared Ans. Travis known to me to be the President, and Robert Dowling known to me to be the Secretary of the corporation that executed the within instrument, and known to me to be the persons who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its board of directors.

WITNESS my hand and official seal.

[signature]
Notary Public in and for said County and State.
MY COMMISSION EXPIRES OCT. 24, 1963

Order No. 866559-60-HRB

Escrow or Loan No.

FORM 1160-P

RECORDING REQUESTED BY:
CHICAGO TITLE
AND WHEN RECORDED, MAIL TO:

CITY OF PLACENTIA,
A MUNICIPAL CORPORATION
401 EAST CHAPMAN AVE.
PLACENTIA, CA. 92670

Recorded in Official Records, County of Orange
Tom Daly, Clerk-Recorder
NO FEE
2003001439515 10:43am 12/02/03
113 32 G02 5
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00

3380366 7-M07SC

GRANT DEED

ASSESSOR'S PARCEL NO.: 339-402-02
ESCROW NO.:

FREE GOVERNMENT RECORDING PURSUANT TO GOVERNMENT CODE SEC. 6103 AND EXEMPT FROM TAX PURSUANT TO REVENUE AND TAX CODE SEC. 11922

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

PLACENTIA MUTUAL PROP., LLC

hereby GRANT(S) to CITY OF PLACENTIA, A MUNICIPAL CORPORATION that real property described as Parcels "A" and "B" situated in the City of Placentia, County of Orange, State of California, as more particularly described in Exhibit "A" attached hereto with accompanying maps attached as Exhibits "B" and "C".

Dated October 15, 2003

PLACENTIA MUTUAL PROPERTIES, LLC

Gerald A Jones
GERALD A. JONES

Marilyn L Jones
MARILYN L. JONES

Karen L Lovato
KAREN L. LOVATO

State of California }
County of Orange }

On Oct. 15, 2003 before me, Marie Michel Macias, Notary Public

Personally appeared GERALD A. JONES, MARILYN L. JONES AND KAREN LOVATO. ~~Personally known to me~~ (or provided to me on the basis of satisfactory evidence) to be the person(s) whose name(s) ~~is~~/are subscribed to the within instrument and acknowledged to me that ~~he/she~~/they executed the same in ~~his/her~~/their authorized capacity(ies), and that by ~~his/her~~/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.

MARIE MICHEL MACIAS
Commission # 1339923
Notary Public - California
Orange County
My Comm. Expires Feb 13, 2006

WITNESS my hand and official seal

Marie Michel Macias
Signature

(This area for official notary seal)

EXHIBIT A
LEGAL DESCRIPTION
339-402-02

Parcel A

That portion of land, in the City of Placentia, County of Orange, State of California as per Record of Survey filed in Book 63, Page 18, of Records of Survey, in the office of the County Recorder of said county described as follows:

Beginning at the centerline intersection of Melrose Avenue and Crowther Avenue as shown on said Record of Survey; thence along the centerline of Melrose Avenue N07°33'46"E, 175.88 feet; thence S82°26'14"E, 40.00 feet to the existing easterly right-of-way line of Melrose Avenue as shown on said map and the True Point of Beginning designated as T.P.O.B. on Exhibit B, attached hereto and by this reference made a part thereof; thence N81°02'00"E, 76.41 feet; thence S27°37'16"W, 102.74 feet; thence S16°30'34"E, 26.50 feet to the existing northerly line of Crowther Avenue; thence along said northerly right-of-way line S73°29'26"W, 19.55 feet; thence N49°28'24"W, 36.92 feet; thence N07°33'46"E, 86.85 feet to the True Point of Beginning.

Parcel B

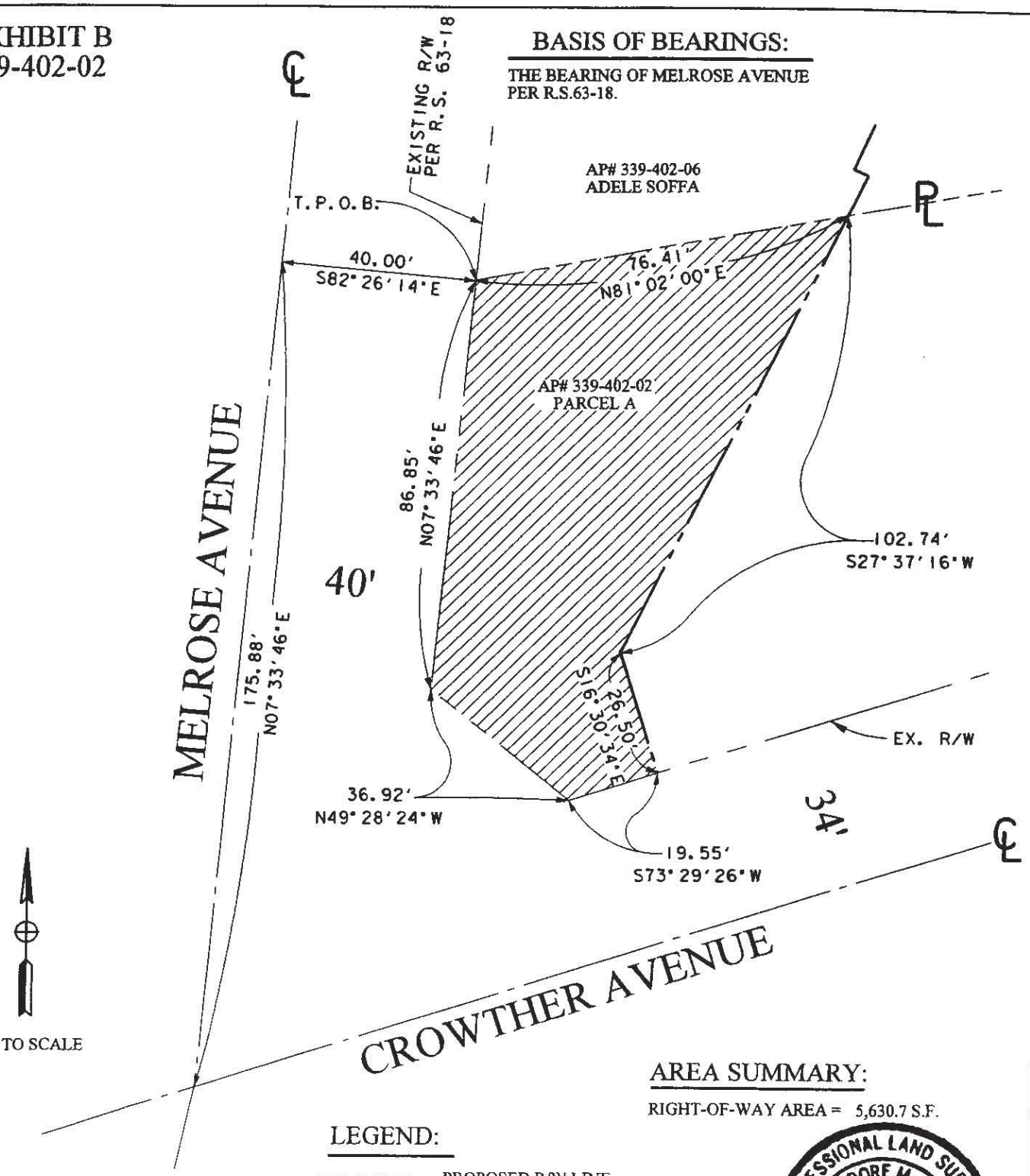
That portion of vacated Melrose Street (otherwise referred to as Melrose Avenue per the Record of Survey filed in Book 63, Page 18, of Records of Survey, in the office of the County Recorder, County of Orange, State of California), described as Parcel 2 in a Resolution of the City Council of the City of Placentia, (Abandonment No. 85-02), a certified copy of which recorded September 16, 1985, as Instrument No. 85-351175, of Official Records of said County, as shown on Exhibit C, attached hereto and by this reference made a part thereof; which lies Southerly of the Southwesterly prolongation of that line shown as bearing N81°02'00"E and a distance of 190.50 feet as per said Record of Survey.



EXHIBIT B
339-402-02

BASIS OF BEARINGS:

THE BEARING OF MELROSE AVENUE PER R.S.63-18.



NOT TO SCALE

AREA SUMMARY:

RIGHT-OF-WAY AREA = 5,630.7 S.F.

LEGEND:

- PROPOSED R/W LINE
- EX. R/W LINE
- PARCEL LINE
- PARCEL A

PROFESSIONAL LAND SURVEYOR
THEODORE M. KRULL
Exp. 12-31-04
No. 5848
STATE OF CALIFORNIA

APPROVED BY: _____ DATE _____

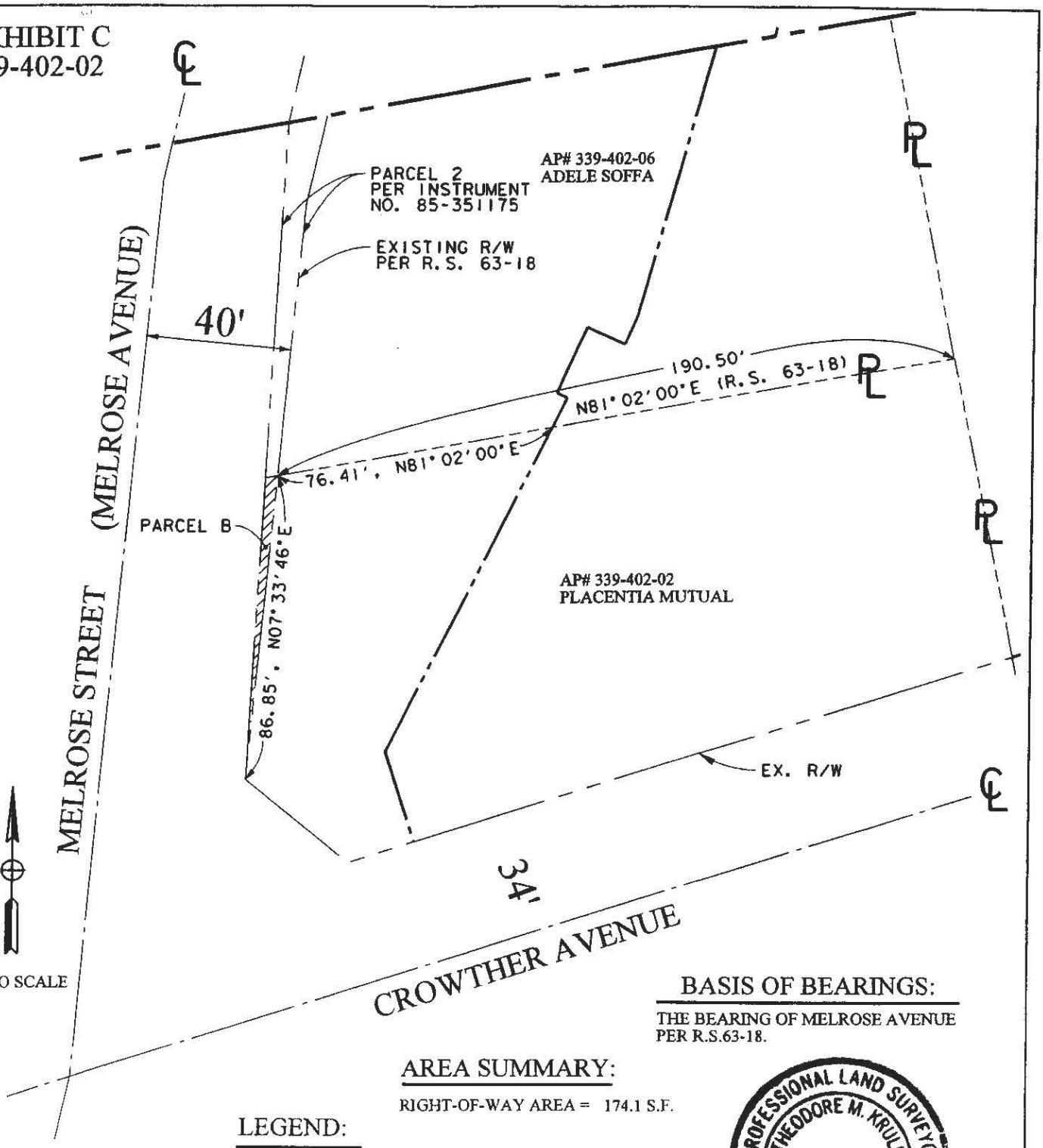
KFM ENGINEERING, INC.
26672 TOWNE CENTRE DRIVE, #300
FOOTHILL RANCH, CA. 92610

GRANT DEED
CITY OF PLACENTIA

T.M. Krull 10/22/03
SIGNATURE DATE

DRAWN: DJ	CHKD: RK	DIS. MAP	R/W NO.
DATE: 06/03	DATE: 06/03		

EXHIBIT C
339-402-02



NOT TO SCALE

BASIS OF BEARINGS:

THE BEARING OF MELROSE AVENUE PER R.S.63-18.

AREA SUMMARY:

RIGHT-OF-WAY AREA = 174.1 S.F.

LEGEND:

- PROPOSED R/W LINE
- EX. R/W LINE
- PARCEL LINE
- PARCEL B

PROFESSIONAL LAND SURVEYOR
THEODORE M. KRULL
Exp. 12-31-04
No. 5848
STATE OF CALIFORNIA

APPROVED BY:

_____ DATE

KFM ENGINEERING, INC.
26672 TOWNE CENTRE DRIVE, #300
FOOTHILL RANCH, CA. 92610

GRANT DEED
CITY OF PLACENTIA

T. M. Krull — SIGNATURE
10/24/03 — DATE

DRAWN: DJ	CHKD: RK	DIS. MAP	R/W NO.
DATE: 06/03	DATE: 06/03		

CITY OF PLACENTIA

CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in real property conveyed to the City of Placentia by the Agreement for Acquisition of Real Property dated July 15, 2003 by and between the City of Placentia, a Municipal Corporation and Placentia Mutual Properties, LLC, is hereby accepted by the undersigned officer or agent on behalf of the City of Placentia pursuant to authority conferred by Resolution No. 82-R-183 of the Placentia City Council adopted on November 16, 1982.

Grantee consents to recordation thereof by its duly authorized officer.

DATED: December 1, 2003 BY: Marie Michel Macias

(Authorization recorded December 1, 1982 with Orange County Recorder, Document 82-421123)

A full, true and correct copy of the original recorded at request of Grantee, Dec. 23, 1910 at 40 Min. past 1 P. M.

Geo. E. Peters, County Recorder.

Justina Whitney Deputy.

----oo0oo----

104029.

THIS INDENTURE, Made the 25th day of November in the year of our Lord one thousand nine hundred and ten

Between RICHARD MELROSE and MARY MELROSE, husband and wife, the parties of the first part, and PLACENTIA WAREHOUSE ASSOCIATION, a corporation, the party of the second part:

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of Ten Dollars, lawful money of the United States of America, to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, do by these presents grant, bargain, sell, convey and confirm unto the said party of the second part, and to its successors and assigns forever, all those certain lots, pieces, or parcels of land situate, lying and being in the County of Orange, State of California, bounded and particularly described as follows, to-wit:

Lots Four and Five in Block "G", in the Townsite of Placentia, as shown on a map of said Townsite recorded in Book Six (6) of Miscellaneous Maps, page 38, Records of said County of Orange. This deed is made upon and subject to the following covenants, conditions and restrictions, to-wit:

3. The parties of the first part hereby reserve unto themselves and their grantors who may from time to time be or become owners of Lot One (1) in Block G of said Townsite, the right to take from the premises herein conveyed any and all underground waters, whether percolating or others, by means of wells now or hereafter dug or drilled on said Lot one (1) in said Block G. All waters on said premises herein conveyed being hereby made appurtenant to said Lot One (1) in said Block G, and reserved for the use and benefit of said last mentioned lot.

4. Water may be taken from said granted premises for use thereon only; and this conveyance is made upon the express condition that if any well or other excavation shall be made upon the said granted premises for the purpose of obtaining water for any other purpose, or if any underground water whatever shall be raised or taken from said premises by means of wells, or excavations now made or drilled on said premises and used for any other purpose, then and in either or any such case all the estate hereby conveyed shall be forthwith forfeited and said premises shall revert to said grantors, their heirs, executors or assigns.

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

To Have and to Hold, all and singular the said premises, together with the appurtenances, unto the said party of the second part, and to its successors and assigns forever, subject to the covenants, conditions and restrictions aforesaid.

In Witness Whereof, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Richard Melrose (Seal)

Mary Melrose (Seal)

State of California,)
) ss.
County of Orange,)

On this 26th day of November, in the year of our Lord one thousand nine hundred and ten, before me, Homer G. Ames, A Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appe

Richard Melrose and Mary Melrose, husband and wife, known to me to be the persons described in, and whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

((SEAL))

Homer C. Ames, Notary Public
in and for said Orange County, Cal.

A full, true and correct copy of the original recorded at request of Grantee, Dec. 23, 1910, at 57 Min. past 1 P. M.

Geo. E. Peters, County Recorder.
Justine Watson Deputy.

----oo0oo----

104050.

IN THE SUPERIOR COURT OF THE COUNTY OF ORANGE,
STATE OF CALIFORNIA.

IN THE MATTER OF THE TERMINATION OF THE HOMESTEAD INTEREST OF HENRY WATSON, Deceased. } DECREE DECLARING HOMESTEAD TERMINATED.

Now comes Harry W. Bortz, Lillie M. Bortz and Vicenta Kier, the petitioners herein, by Williams & Rutan, their attorneys, and prove to the satisfaction of the Court that they filed their petition herein on the 9th day of December, 1910, asking for an order declaring the homestead of Henry Watson, deceased, terminated, and vested in the survivor and her successors in interest. That, thereupon, the Court, by order, prescribed notice to be given of the pendency and hearing thereof, and that, in compliance with said order, notice of the pendency and hearing of said petition was duly given by the Clerk of this Court, and the time of notice prescribed having elapsed and no person having appeared to contest or oppose said petition, the Court, after hearing the evidence, finds that the allegations of said petition are true and that the prayer thereof ought to be granted;

IT IS, THEREFORE, ADJUDGED, DETERMINED AND DECREED BY THE COURT: That the said Henry Watson died on the 31st day of March, 1899, in the County of Orange, State of California, a resident of said County and State at the time of his death. That, at the time of his death, Mary Watson was the wife of said Henry Watson, deceased. That, upon the death of said Henry Watson, all his right, title, interest and estate in the property hereinafter described became vested in the said Mary Watson, as surviving wife of said deceased, the said land constituting a homestead duly selected and recorded in the lifetime of said deceased by said Henry Watson, and being the separate property of said deceased and said homestead having been created by the declaration of the said Henry Watson. That said homestead is fully terminated, and that Harry W. Bortz and Lillie M. Bortz have succeeded to all the interest in the following described property formerly held by the said Henry Watson, now deceased, and his surviving wife, Mary Watson, to-wit:

In that certain real property situated in the County of Orange, State of California, more particularly described as Lots Twenty (20) and Twenty-one (21), in Franklin's Addition to Olive Heights, as per map thereof of record in Book 18, page 71, of Miscellaneous Records of Los Angeles County, California; each owning an undivided one-half interest therein.

That Vicenta Kier, whose name prior to marriage was Vicenta Neumann, succeeded by mesne conveyances to all interests of said Henry Watson, deceased, and his said surviving wife, Mary Watson, in and to all that certain real property situated in the County of Orange, State of California, more particularly described as Lot Fourteen (14), in Franklin's Addition to Olive Heights, as per map thereof of record in Book 18, page 71, of Miscellaneous Records of Los Angeles County,

BEST COPY From County

2244.

FRANK SCHROTT, and JOSEPH SCHROTT [illegible] them in hand paid, the receipt of which [illegible] all that real property situated in the [illegible] described as follows:

The North-west quarter (NW¼) of the [illegible] Three (3) South, Range ten (10) West, [illegible] ing therefrom for roads, railroads and [illegible] and each side of the Township and Section [illegible] and each side of the quarter Section lines, [illegible] natural streams of water, if any, [illegible] serving the right of way for and to construct [illegible] to irrigate or drain the adjacent land.

To Have and to Hold to the said grantee his heirs or assigns forever.

Witness our hands this 7th day of February 1911.

Frank Schrott
Joseph Schrott

State of California,)
) ss.
County of Los Angeles.)

On this 7th day of February 1911, before me, Wallace Gregg, a Notary Public in and for said County, personally appeared Frank Schrott, and Joseph Schrott, single men, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged that they executed the same.

Witness my hand and Official Seal.

((SEAL))

Wallace Gregg, Notary Public in and for the County of Los Angeles, State of California.

A full, true and correct copy of the original recorded at request of Grantee, Feb. 24, 1911, at 9 Min. past 9 A. M.

Geo. E. Peters, County Recorder.
Justine Whitney Deputy.

----o.o O o o----

2248.

THIS INDENTURE, Made the 4th day of February in the year of our Lord one thousand nine hundred and eleven

Between RICHARD MELROSE and MARY MELROSE, husband and wife, of Orange County, California, the parties of the first part, and PLACENTIA WAREHOUSE ASSOCIATION, a corporation, the party of the second part;

WITNESSETH: That the said parties of the first part, for and in consideration of the sum of Ten Dollars, lawful money of the United States of America, to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, do by these presents grant, bargain, sell, convey and confirm unto the said party of the second part, and to its successors and assigns forever, all those certain lots, pieces, or parcels of land situate, lying and being in the County of Orange, State of California, bounded and particularly described as follows, to-wit:

Lots Three (3) and Six (6) in Block "G", in the Townsite of Placentia, as shown on a map of [illegible] Townsite recorded in Book Six (6) of Miscellaneous Maps, page 38, Records of said County of [illegible] deed is made upon and subject to the following covenants, conditions and restric-

[illegible] parties of the first part [illegible] reserve unto themselves and their grantors [illegible]

from time to time be or become owners of [illegible]
take from the premises herein conveyed by [illegible]
others, by means of wells now or hereafter [illegible]
All waters on said premises hereby reserved [illegible]
said Block G, and reserved for the use and benefit of [illegible]

2. Water may be taken from said granted premises [illegible]
is made upon the express condition that if any well [illegible]
said granted premises for the purpose of obtaining water for use thereon
ground water whatever shall be raised or taken from said premises by means of wells
tions dug, made or drilled on said premises and used for any other purpose, then
any such case all the estate hereby conveyed shall be forthwith forfeited and shall
revert to said grantors, their heirs, executors or assigns.

Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in any wise appurtaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

To Have and to Hold, all and singular the said premises, together with the appurtenances unto the said party of the second part, and to its successors and assigns forever, subject to the covenants, conditions and restrictions aforesaid.

In Witness Whereof, the said parties of the first part have hereunto set their hands and seals the day and year first above written.

Richard Melrose (Seal)

Mary Melrose (Seal)

State of California,)
) ss.
County of Orange,)

On this 4th day of February, in the year of our Lord one thousand nine hundred and eleven, before me, Homer G. Ames, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared Richard Melrose and Mary Melrose, husband and wife, known to me to be the persons described in, and whose names are subscribed to the within instrument, and they acknowledged to me that they executed the same.

In Witness Whereof, I have hereunto set my hand and affixed my official Seal, the day and year in this certificate first above written.

((SEAL))

Homer G. Ames, Notary Public
in and for said Orange County, Cal.

A full, true and correct copy of the original recorded at request of Grantee, Feb. 24, 1911, at 52 Min. past 9 A. M.

Geo. E. Peters, County Recorder.
Justine Whitney Deputy.

- - - - o o O o o - - - -

2252.

IN THE SUPERIOR COURT OF THE COUNTY OF ORANGE,
STATE OF CALIFORNIA.

IN THE MATTER OF THE ESTATE OF
J. B. LOCKETT,
Deceased.

DECREE OF SETTLEMENT OF ACCOUNTS AND DISTRIBUTION.

W. B. Lockett, the administrator of the estate of J. B. Lockett, deceased, having on the 7th day of February, 1911, rendered and filed herein a full account and report of his administration of said estate, which account was for a final settlement, and having with said account filed a petition for the final distribution of said estate; and said account and petition this day



A full, true and correct copy of the original, recorded at the [illegible] [illegible], at 40 min past 11 A. M.

Justine Whitney County [illegible]
Hattie Powers Deputy

- - - o O o - - -

[illegible].

CROWTHER AVENUE PLACENTIA

DEED OF RIGHT OF WAY

STATE OF CALIFORNIA, }
COUNTY OF ORANGE, } ss.

WHEREAS, it is the intention of the Highway Commission to improve the road [illegible] Placentia Avenue, to Placentia, and commonly known as the Crowther Avenue, Placentia [illegible] road is more particularly described as follows, to wit:

A strip of land 50 feet wide, being 25 feet on either side of the following [illegible] center line;

Beginning at the southwest corner of Lot 7, Block C, Kraemer's Tract, as [illegible] in Book 12, page 87 of Miscellaneous Maps, Records of Los Angeles County, Cali[illegible] North 73° 15' 40" East 3101.27 feet to the southeast corner of Lot 2, of said [illegible] point being also on the produced center line of Bradford Avenue, thence North [illegible] [illegible].32 feet to a stone marking the northwest corner of Block G, of said Kraemer [illegible]

NOW, THEREFORE in consideration of the location and establishment of said [illegible] described, and of the benefits to accrue to us and each of us, by such location, [illegible] [illegible] owners occupants, and claimants of land required for road purposes on the li[illegible] [illegible]going designated route, hereby signify our approval of the location of said road [illegible] [illegible] consent thereto; and do hereby grant and dedicate the lands belonging to us, [illegible] so far as the same may be required for such road, to said Orange County, [illegible] for the use of such road; and we hereby waive all claim for damages for and on [illegible] same.

The grantors hereto reserve the right to use that portion of their several tracts [illegible] at a greater distance than 20 feet from the above described center line, for the [illegible] tenance of such trees and other permanent improvements as are now situated on such [illegible] period of fifteen years from the date hereof.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 21 day of July [illegible]

Samuel Kraemer	(Seal)	Witness to all signatures
T. Anderson	(Seal)	R. J. McFadden (Seal)
O. H. Schumacher	(Seal)	
C. E. Schumacher	(Seal)	
J. A. Goetz	(Seal)	
Fred Cline	(Seal)	
Peter Alleo	(Seal)	
A. S. Bradford Trustee	(Seal)	
PLACENTIA ORANGE GROWERS ASSN.		
A. Pierotti Pres.		
Abe Pritchard Secy	(Seal)	
A. J. Edwards	(Seal)	
Joannis Alleo	(Seal)	

BEST COPY

280-159 Deed

A full, true and correct copy of the original, recorded at the request of Grantee Jan 6 1916, at 40 min past 11 A. M.

Justine Whitney County Recorder

Hattie Lawrence Deputy

---oOo---

16489.

CROWTHER AVENUE PLACENTIA

DEED OF RIGHT OF WAY

STATE OF CALIFORNIA, }
COUNTY OF ORANGE, } ss.

WHEREAS, it is the intention of the Highway Commission to improve the road leading from Placentia Avenue, to Placentia, and commonly known as the Crowther Avenue, Placentia, which road is more particularly described as follows, to wit:

A strip of land 50 feet wide, being 25 feet on either side of the following described center line;

Beginning at the southwest corner of Lot 7, Block C, Kraemer's Tract, as per map recorded in Book 12, page 87 of Miscellaneous Maps, Records of Los Angeles County, California; thence North 73° 15' 40" East 3101.27 feet to the southeast corner of Lot 2, of said Block C, said point being also on the produced center line of Bradford Avenue, thence North 73° 14' 10" East 794.32 feet to a stone marking the northwest corner of Block C, of said Kraemer Tract.

NOW, THEREFORE in consideration of the location and establishment of said road as above described, and of the benefits to accrue to us and each of us, by such location, we the undersigned owners occupants, and claimants of land required for road purposes on the line of the foregoing designated route, hereby signify our approval of the location of said road, and do hereby consent thereto; and do hereby grant and dedicate the lands belonging to us, and each of us so far as the same may be required for such road, to said Orange County, to that purpose and for the use of such road; and we hereby waive all claim for damages for and on account of the same.

The grantors hereto reserve the right to use that portion of their several tracts of land at a greater distance than 20 feet from the above described center line, for the care and maintenance of such trees and other permanent improvements as are now situated on such land for a period of fifteen years from the date hereof.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 21 day of July 1915.

Samuel Kraemer (Seal)
T. Anderson (Seal)
O. H. Schumacher (Seal)
C. E. Schumacher (Seal)
C. A. Goetz (Seal)
Fred Cline (Seal)
Peter Allec (Seal)
A. S. Bradford Trustee (Seal)
PLACENTIA ORANGE GROWERS ASSN.
A. Pierotti Pres.
Abe Pritchard Secy (Seal)
A. J. Edwards (Seal)
Joannis Allec (Seal)

Witness to all signatures
R. J. McFadden (Seal)

State of California, }
County of Orange, } ss.

On this 5th day of Jan in the year of our Lord one thousand nine hundred and sixteen, before me, S. H. Finley a Notary Public in and for said County of Orange, State of California, residing therein, duly commissioned and sworn, personally appeared R. J. McFadden, known to me to be the person whose name is subscribed to the within instrument, as a witness thereto, who being duly sworn, deposed and said: That he resided in Orange County, California; that he was present and saw A. Pieretti known to him to be the President of the Placentia Orange Growers Assn. and Abe Pritchard, known to him to be the Secretary of the Placentia Orange Growers Assn, described in and who executed the said within instrument, on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same, sign, seal and deliver the same; and that the said A. Pieretti, as President and Abe Pritchard as Secretary of the Placentia Orange Growers Assn, acknowledged in the presence of said affiant, that they executed the same, and that he the said affiant, thereupon at their request, subscribed his name as a witness thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

((SEAL)) S. H. Finley Notary Public
in and for Orange County, State of California.

State of California, }
County of Orange, } ss.

On this 5th day of Jan, in the year of our Lord one thousand nine hundred and sixteen before me S. H. Finley a Notary Public in and for said County of Orange, State of California, residing therein, duly commissioned and sworn, personally appeared R. J. McFadden, known to me to be the person whose name is subscribed to the within instrument, as a witness thereto, who being duly sworn, deposed and said; That he resided in Orange County, California; that he was present and saw, Samuel Kraemer, T. Anderson, O. H. Schumacher, C. E. Schumacher, J. A. Goetz, Fred Cline, Peter Alleo, A. S. Bradford Trustee, A. J. Edwards, and Joannis Alleo, personally known to him to be the same persons described in and who executed the said within instrument, as the parties thereto, sign, seal and deliver the same; and that the said Samuel Kraemer, T. Anderson, O. H. Schumacher C. E. Schumacher, J. A. Goetz, Peter Alleo, Fred Cline, A. S. Bradford, Trustee, A. J. Edwards, and Joannis Alleo, duly acknowledged in the presence of the said affiant, that they executed the same, and that he, the said affiant thereupon at their request subscribed his name as a witness thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

((SEAL)) S. H. Finley Notary Public
in and for Orange County, State of California.

A full, true and correct copy of the original, recorded at the request of Grantee Jan 6 1916, at 41 min past 11 A. M.

Justine Whitney County Recorder
Deputy

- - - o O o - - -

15996.

THIS INDENTURE, Made the 15th
Between LEO M. RAPPAPORT, Tru
part, and H. A. LANG, of Oneida Coun

WITNESSETH: That the said pa
of One Dollar, Dollars, in money of
said party of the second part, the r
ed and forever quitclaimed, and by t
unto the said party of the second pa
piece or parcel of land, situate, ly
and bounded and particularly describ

Lot 23 of the Fairview Additio
corded in Book 7, page 48 of Miscell

TOGETHER with all and singular
belonging, or in anywise appertaining
dues, rents, issues and profits there
property, possession, claim and deman
party of the first part of, in or to
the appurtenances.

TO HAVE AND TO HOLD, all and s
unto the said party of the second par

IN WITNESS WHEREOF, the said p
the day and year first above written.

Signed, Sealed and Delivered
in the presence of Albrecht R. C. K
Gertrude Flowers

State of Indiana, }
County of Marion, } ss. Before m
above Co
ally appeared Leo M. Rappaport, Trus
the within instrument, and acknowledg

((SEAL))

A full, true and correct copy
1916, at 8 min past 9 A. M.

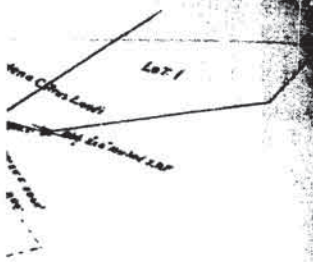
16661.

(Co

COLLINS COMMERCIAL COMPANY, a
tue of the laws of the State of Calif
City of Los Angeles, County of Los An

For and in Consideration of th
knowledged does hereby

Grant to HELLMAN COMMERCIAL TR
described as follows, to-wit:



A full, true and correct copy of the original, recorded at the [illegible] [illegible], at 40 min past 11 A. M.

Justine Whitney County [illegible]

Hattie Powers Deputy

- - - o O o - - -

[illegible].

CROWTHER AVENUE PLACENTIA

DEED OF RIGHT OF WAY

STATE OF CALIFORNIA, }
COUNTY OF ORANGE, } ss.

WHEREAS, it is the intention of the Highway Commission to improve the road [illegible] Placentia Avenue, to Placentia, and commonly known as the Crowther Avenue, Placentia [illegible] road is more particularly described as follows, to wit:

A strip of land 50 feet wide, being 25 feet on either side of the following [illegible] center line;

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NOW, THEREFORE in consideration of the location and establishment of said [illegible] described, and of the benefits to accrue to us and each of us, by such location, [illegible] owners occupants, and claimants of land required for road purposes on the li[illegible] [illegible]going designated route, hereby signify our approval of the location of said road [illegible] consent thereto; and do hereby grant and dedicate the lands belonging to us, [illegible] so far as the same may be required for such road, to said Orange County, [illegible] for the use of such road; and we hereby waive all claim for damages for and on [illegible] same.

The grantors hereto reserve the right to use that portion of their several tracts [illegible] at a greater distance than 20 feet from the above described center line, for the [illegible] tenance of such trees and other permanent improvements as are now situated on such [illegible] period of fifteen years from the date hereof.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 21 day of July [illegible]

Samuel Kraemer	(Seal)	Witness to all signatures
T. Anderson	(Seal)	R. J. McFadden (Seal)
O. H. Schumacher	(Seal)	
C. E. Schumacher	(Seal)	
J. A. Goetz	(Seal)	
Fred Cline	(Seal)	
Peter Allec	(Seal)	
A. S. Bradford Trustee	(Seal)	
PLACENTIA ORANGE GROWERS ASSN.		
A. Pierotti Pres.		
Abe Pritchard Secy	(Seal)	
A. J. Edwards	(Seal)	
Joannis Allec	(Seal)	

BEST COPY

280-159 Deed

A full, true and correct copy of the original, recorded at the request of Grantee Jan 6 1916, at 40 min past 11 A. M.

Justine Whitney County Recorder

Hattie C. Lawrence Deputy

---oOo---

16489.

CROWTHER AVENUE PLACENTIA

DEED OF RIGHT OF WAY

STATE OF CALIFORNIA, }
COUNTY OF ORANGE, } ss.

WHEREAS, it is the intention of the Highway Commission to improve the raod leading from Placentia Avenue, to Placentia, and commonly known as the Crowther Avenue, Placentia, which road is more particularly described as follows, to wit:

A strip of land 50 feet wide, being 25 feet on either side of the following described center line;

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NOW, THEREFORE in consideration of the location and establishment of said road as above described, and of the benefits to accrue to us and each of us, by such location, we the undersigned owners occupants, and claimants of land required for road purposes on the line of the foregoing designated route, hereby signify our approval of the location of said road, and do hereby consent thereto; and do hereby grant and dedicate the lands belonging to us, and each of us so far as the same may be required for such road, to said Orange County, to that purpose and for the use of such road; and do hereby waive all claim for damages for and on account of the same.

The grantors hereto reserve the right to use that portion of their several tracts of land at a greater distance than 20 feet from the above described center line, for the care and maintenance of such trees and other permanent improvements as are now situated on such land for a period of fifteen years from the date hereof.

IN WITNESS WHEREOF, we have hereunto set our hands and seal this 21 day of July 1915.

Samuel Kraemer (Seal)
T. Anderson (Seal)
C. H. Schumacher (Seal)
C. E. Schumacher (Seal)
C. A. Goetz (Seal)
Fred Cline (Seal)
Peter Allec (Seal)
A. S. Bradford Trustee (Seal)
PLACENTIA ORANGE GROWERS ASSN.
A. Pierotti Pres.
Abe Pritchard Secy (Seal)
A. J. Edwards (Seal)
Joannis Allec (Seal)

Witness to all signatures
R. J. McFadden (Seal)

State of California, }
County of Orange, } ss.

On this 5th day of Jan in the year of our Lord one thousand nine hundred and sixteen, before me, S. H. Finley a Notary Public in and for said County of Orange, State of California, residing therein, duly commissioned and sworn, personally appeared R. J. McFadden, known to me to be the person whose name is subscribed to the within instrument, as a witness thereto, who being duly sworn, deposed and said: That he resided in Orange County, California; that he was present and saw A. Pieretti known to him to be the President of the Placentia Orange Growers Assn. and Abe Pritchard, known to him to be the Secretary of the Placentia Orange Growers Assn, described in and who executed the said within instrument, on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same, sign, seal and deliver the same; and that the said A. Pieretti, as President and Abe Pritchard as Secretary of the Placentia Orange Growers Assn, acknowledged in the presence of said affiant, that they executed the same, and that he the said affiant, thereupon at their request, subscribed his name as a witness thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

((SEAL))

S. H. Finley Notary Public
in and for Orange County, State of California.

State of California, }
County of Orange, } ss.

On this 5th day of Jan, in the year of our Lord one thousand nine hundred and sixteen before me S. H. Finley a Notary Public in and for said County of Orange, State of California, residing therein, duly commissioned and sworn, personally appeared R. J. McFadden, known to me to be the person whose name is subscribed to the within instrument, as a witness thereto, who being duly sworn, deposed and said; That he resided in Orange County, California; that he was present and saw, Samuel Kraemer, T. Anderson, O. H. Schumacher, C. E. Schumacher, J. A. Coetz, Fred Cline, Peter Allec, A. S. Bradford Trustee, A. J. Edwards, and Joannis Allec, personally known to him to be the same persons described in and who executed the said within instrument, as the parties thereto, sign, seal and deliver the same; and that the said Samuel Kraemer, T. Anderson, O. H. Schumacher C. E. Schumacher, J. A. Coetz, Peter Allec, Fred Cline, A. S. Bradford, Trustee, A. J. Edwards, and Joannis Allec, duly acknowledged in the presence of the said affiant, that they executed the same, and that he, the said affiant thereupon at their request subscribed his name as a witness thereto.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

((SEAL))

S. H. Finley Notary Public
in and for Orange County, State of California.

A full, true and correct copy of the original, recorded at the request of Grantee Jan 6 1916, at 41 min past 11 A. M.

Justine Whitney County Recorder
Deputy

---oOo---

1916.

THIS INDENTURE, Made the 15th

Between LEO M. RAPPAPORT, Tru

part, and H. A. LANG, of Oneida Coun

WITNESSETH: That the said pa

of One Dollar, Dollars, in money of

said party of the second part, the r

ed and forever quitclaimed, and by t

unto the said party of the second pa

piece or parcel of land, situate, ly

and bounded and particularly describe

Lot 23 of the Fairview Additio

corded in Book 7, page 48 of Miscella

TOGETHER with all and singular

belonging, or in anywise appertaining

dues, rents, issues and profits there

property, possession, claim and deman

party of the first part of, in or to

the appurtenances.

TO HAVE AND TO HOLD, all and s

unto the said party of the second par

IN WITNESS WHEREOF, the said p

the day and year first above written.

Signed, Sealed and Delivered

in the presence of Albrecht R. C. K

Gertrude Flowers

State of Indiana, }
County of Marion, } ss.

Before m

above Co

ally appeared Leo M. Rappaport, Trust

the within instrument, and acknowledg

((SEAL))

A full, true and correct copy

1916, at 8 min past 9 A. M.

16661.

(Co

COLLINS COMMERCIAL COMPANY, a

tue of the laws of the State of Calif

City of Los Angeles, County of Los An

For and in Consideration of th

knowledged does hereby

Grant to HELLMAN COMMERCIAL TR

described as follows, to-wit:

and for said County and State, residing therein duly commissioned and sworn, personally appeared Harry Woodington known to me to be one of the persons described in and whose name is subscribed to the annexed instrument, and he acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

((SEAL)) F. O. Daniel Notary Public
in and for said Orange County, Cal.

A full, true and correct copy of the original, recorded at the request of Grantee Apr 27 1917, at 14 min past 3 P. M.

Justine Whitney County Recorder
Ruth [illegible] Deputy

- - - o O o - - -

37945.

THIS INDENTURE, Made the 6th day of April, in the year of our Lord one thousand nine hundred and seventeen

Between A. S. BRADFORD, Trustee of the town of Placentia, County of Orange, State of California, the party of the first part, and CAMILLO MARZO of the city and county of San Francisco, State of California, the party of the second part.

WITNESSETH: That the said part_ of the first part, for and in consideration of the sum of Ten (10) Dollars lawful money of the United States of America, to him in hand paid by the said part_ of the second part, the receipt whereof is hereby acknowledged, does by these presents grant, bargain, sell, convey and confirm unto the said party of the second part, and to his heirs and assigns forever, all th_ certain lot, piece or parcel of land situate, lying and being in the Townsite of Placentia, County of Orange, State of California, bounded and particularly described as follows, to-wit:

Beginning at the Northeasterly corner of Lot Seven (7) in Block "G" of the "Townsite of Placentia" as per map thereof recorded in Book 6, page 38 of Miscellaneous Maps, Records of Orange County, California, thence Westerly, along the Northerly line of Lots Seven (7) and eight (8) in said Block "G" to the Easterly line of a strip conveyed to the County of Orange, by A.S. Bradford, trustee, by deed recorded in book 251 page 211 of Deeds, Records of Orange County, California, thence Southwesterly, along the Easterly line of said strip so conveyed to the county of Orange, to a point on the Southerly line of Lot Nine (9) in said block "G" distant 63.25 feet from the Southwesterly corner of said lot Nine (9) thence East along the Southerly line of said Lots 7, 8 and 9 to the Southeast corner of said Lot Seven, thence Northerly 196.15 feet to point of beginning, being all of Seven and a portion of Lots eight and nine in said Block "G".

Reserving therefrom the Southerly 5 feet asconveyed to the county of Orange for road purposes by deed recorded in Book 280, page 59 of deeds, records of said Orange County.

The party of the first part hereby reserves unto himself and his grantors who may from time to time be or become owners of Lot one (1) in Block "G" of said townsite, the right, to take from the premises herein conveyed any and all underground water, whether percolating or others, by means of wells now or hereinafter dug or drilled on said Lot One (1) in said Block "G". All waters on said premises herein conveyed being hereby made appurtenant to said Lot One (1) in said Block "G" and reserved for the use and benefit of said last mentioned lot. Water may be taken from said granted premises for use thereon only, and this conveyance is made on

Attachments

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Attachments

Attachment D.
Preliminary Water Quality Management Plan

Attachments

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Attachment D.
Water Quality Management Plan

Attachments

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Preliminary Water Quality Management Plan (PWQMP)

Project Name:

Crowther Avenue TOD

Prepared for:

USA PROPERTIES FUND, INC.

3200 Douglas Blvd., Suite 200
CA 95661

Telephone: 916.773.6060

Prepared by:

Fuscoe Engineering, Inc.
2850 Inland Empire Blvd., Suite B Ontario, CA 91764
909.581.0676

Engineer: Steve Ellis, RCE No. 047255

Project Owner's Certification			
Planning Application No. (If applicable)	Pending	Grading Permit No.	Pending
Tract/Parcel Map and Lot(s) No.		Building Permit No.	Pending
Address of Project Site and APN: (If no address, specify Tract/Parcel Map and Lot Numbers)			207-209 W. Crowther 339-402-05;08;11

Prepared on:

This Water Quality Management Plan (WQMP) has been prepared for USA Properties Fund by Fuscoe Engineering, Inc. The WQMP is intended to comply with the requirements of the County of Orange NPDES Stormwater Program requiring the preparation of the plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan , including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Owner: The City of Placentia			
Title			
Company	The City of Placentia		
Address	401 E. Chapman Avenue, Placentia, CA 92870		
Email			
Telephone #	916.773.6060		
I understand my responsibility to implement the provisions of this WQMP including the ongoing operation and maintenance of the best management practices (BMPs) described herein.			
Owner Signature		Date	

Preparer (Engineer): Moyenuddin Sirajee			
Title	Senior Engineer	PE Registration #	63867
Company	Fuscoe Engineering, Inc.		
Address	2850 Inland Empire Blvd., Suite B, Ontario, CA 91764		
Email	Msirajee@fuscoe.com		
Telephone #	909-581-0676		
I hereby certify that this Water Quality Management Plan is in compliance with, and meets the requirements set forth in, Order No. R8-2009-0030/NPDES No. CAS618030, of the Santa Ana Regional Water Quality Control Board**.**			
Preparer Signature		Date	
Place Stamp Here			

Contents

Page No.

Section I Discretionary Permit(s) and Water Quality Conditions..... 3
Section II Project Description..... 4
Section III Site Description 10
Section IV Best Management Practices (BMPs) 12
Section V Inspection/Maintenance Responsibility for BMPs..... 24
Section VI BMP Exhibit (Site Plan) 26
Section VII Educational Materials 27

Attachments

Attachment 1 . ..... Existing Site, Historic Site, WQMP Exhibit
Attachment 2..... Hydrology Information
Attachment 3..... Project Watershed Exhibit
Attachment 4..... SUSCEPTIBILITY MAP SAN GABRIEL-COYOTE CREEK
Attachment 5..... BMP Detail/Project Grading and Drainage Plan

Maintenance Covenant for WQMP

Section I Permit(s) and Water Quality Conditions of Approval or Issuance

Provide discretionary or grading/building permit information and water quality conditions of approval, or permit issuance, applied to the project. If conditions are unknown, please request applicable conditions from staff. *Refer to Section 2.1 in the Technical Guidance Document (TGD) available on the OC Planning website (ocplanning.net).*

Project Information			
Permit/Application No. (If applicable)	Pending	Grading or Building Permit No. (If applicable)	Pending
Address of Project Site (or Tract Map and Lot Number if no address) and APN	207-209 W. Crowther 339-402-05;08;11		
Water Quality Conditions of Approval or Issuance			
Water Quality Conditions of Approval or Issuance applied to this project. (Please list verbatim.)	Pending - to be provided in Final WQMP		
Conceptual WQMP			
Was a Conceptual Water Quality Management Plan previously approved for this project?	No conceptual WQMP was approved		

Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	Receiving water- Carbon Creek: No pollutants. Coyote Creek: Pollutants - Indicator Bacteria/Pathogens, Nutrients, Toxicity, Pesticides. San Gabriel River: Pollutants - Indicator Bacteria/Pathogens. No TMDLS, expected to be established by 2029

Section II Project Description

II.1 Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the TGD for information that must be included in the project description.*

Description of Proposed Project				
Development Category (From Model WQMP, Table 7.11-2; or -3):	Significant redevelopment project with replacement of more than 50 percent of impervious surface.			
Project Area (ft^2): 88,055	Number of Dwelling Units: 189		SIC Code: 1522	
Project Area	Pervious		Impervious	
	Area (acres or sq ft)	Percentage	Area (acres or sq ft)	Percentage
Pre-Project Conditions (Historical-Year 2014)	2,477 sq ft	3%	85,578	97%
Post-Project Conditions	18,102 sq ft	20%	69,953	80%

Drainage Patterns/Connections	In current condition project drains from east to west and drains into Crowther Avenue to the south. The runoff is then captured by two Catch Basin Curb Inlets on Crowther Avenue, which then drain into an existing 30-inch City storm drain system. There is a Grate Inlet located approximately at the middle of the site which is connected to a back of Catch Basin Curb Inlet on Crowther Avenue which then connects an existing 30-inch storm drain on the same street. By careful observation of the current topo map, this Grate Inlet captures very small percentage of runoff from the site.
Narrative Project Description: (Use as much space as necessary.)	The proposed development is located on the north of W. Crowther Avenue between South Melrose Street and Bradford Street in the City of Placentia. Currently the site is a vacant property, which was formally developed with industrial uses. The industrial facility was demolished back in 2015 and since then it remains vacant. The proposed development would be a Transit Oriented multi story Podium type Apartment complex with retail store at the front. The parking for the development will be on the first and second floor. Landscaping will be provided at the front, east and west side of the building. Project runoff will be collected through onsite storm drain system and will discharge into the City maintained storm drain system located on the Crowther Avenue. Underground Infiltration Chamber will be installed to mitigate project Water Quality objectives. The project lies within the HCOC "Susceptibility Map" thus the Hydromodification analysis is needed for the proposed development. We mentioned earlier that the site was previously used as industrial facility and it is the intent of the developer to use the past imperviousness of the site as the basis of determining the pre-project runoff volume calculation and compare that with post-project runoff volume, based on proposed imperviousness, and determine the project Hydromodification mitigation. It is determined from pre 2015 site picture that the pre-development site had approximately 97 percent imperviousness and the proposed development will have approximately 80 percent imperviousness. Thus we can safely conclude that the post-development runoff volume will be less than that of pre-project runoff volume. Therefore no Hydromodification mitigation measure will be needed for the proposed development.

II.2 Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the TGD for guidance.*

Pollutants of Concern			
Pollutant	Check One for each: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	E☑	N☐	Driveways, Rooftops, Sidewalks, Paved areas. (No receiving water body is impacted)
Nutrients	E☑	N☐	Fertilizers, Food waste
Heavy Metals	E☑	N☐	Brake Pad, Tire tread, Fuels
Pathogens (Bacteria/Virus)	E☑	N☐	Wild Bird, Pet waste, Garbage
Pesticides	E☑	N☐	Landscaped areas. (No receiving water body is impacted)
Oil and Grease	E☑	N☐	Leaking Vehicles, Parking areas. (No receiving water body is impacted)
Toxic Organic Compounds	E☐	N☑	
Trash and Debris	E☑	N☐	Poorly maintained trash container and parking areas. (No receiving water body is impacted)

II.3 Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are potentially susceptible to hydromodification impacts. *Refer to Section 2.2.3.1 in the Technical Guidance Document (TGD) for North Orange County or Section 2.2.3.2 for South Orange County.*

☐ No – Show map

☐ ✓Yes – Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the Technical Guidance Document (TGD).*

The project lies within the "San Gabriel-Coyote Susceptibility Analysis" Map. However, as mentioned in Section II.I, the Post-development runoff volume for the 2-yr, 24-hr storm will be less than the pre-development runoff volume for the 2-yr, 24-hr storm. Thus no HCOC existed.

II.4 Post Development Drainage Characteristics

Describe post development drainage characteristics. *Refer to Section 2.2.4 in the TGD.*

The project storm drain system will be connected to the existing City storm drain system on Crowther Avenue. It then drains into Carbon Creek and then in to Coyote Creek near Los Alamitos High School site. Then drain to San Gabriel river at Orange/Los Angeles County line then to Pacific Ocean. No change in drainage pattern.

II.5 Property Ownership/Management

Describe property ownership/management. *Refer to Section 2.2.5 in the TGD.*

The City of Placentia is and will remain the property owner. USA Properties will be developing and leasing the property. The infrastructure will be owned and maintained by USA Properties Fund, Inc. (this name will change once we establish and LLC for the project).

Section III Site Description

III.1 Physical Setting

Fill out table with relevant information. *Refer to Section 2.3.1 in the TGD.*

Name of Planned Community/Planning Area (if applicable)	
Location/Address	The project located at the northeast corner of Crowther Avenue and Melrose Street in Placentia, California.
	207-209 W. Crowther Parcel No.'s are 339-402-05; 08;11
General Plan Land Use Designation	TOD
Zoning	TOD
Acreage of Project Site	2.02 acres
Predominant Soil Type	Type C

III.2 Site Characteristics

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.2 in the Technical Guidance Document (TGD).*

Site Characteristics	
Precipitation Zone	Design capture Storm Depth = 0.90 inches
Topography	The site topography has mild slope from east to west and north to south with some 2:1 side slope at east and portion of south edge of the property boundary. The overall elevation drops ranges from 15-ft to 20-ft east to west and approximately 3-ft to 7-ft north to south.
Drainage Patterns/Connections	Site runoffs drain into Crowther Avenue through natural drainage ditches on site. It then drains into existing City maintained underground storm drain system on Crowther Avenue.
Soil Type, Geology, and Infiltration Properties	The site soil mainly comprises of artificial fill consisting stiff to very stiff lean clay and loose to dense clayey sand. It is hydrologically Type-C soil as shown in NRCS soil survey map.
Hydrogeologic (Groundwater) Conditions	Ground water lies at 30 to 35 feet below ground surface. No know contamination.
Geotechnical Conditions (relevant to infiltration)	Pending Infiltration testing
Off-Site Drainage	No offsite drainage will be encounter.
Utility and Infrastructure Information	An existing City maintained storm drain system lies within the west side of the project boundary.

III.3 Watershed Description

Fill out table with relevant information and include information regarding BMP sizing, suitability, and feasibility, as applicable. *Refer to Section 2.3.3 in the TGD.*

Receiving Waters	Carbon Creek is the nearest receiving water body for this project site.
303(d) Listed Impairments	No Impairments exist for the receiving water body
Applicable TMDLs	No TMDLs
Pollutants of Concern for the Project	Suspended Solid, Nutrients, Heavy Metal, Pathogens, Pesticides, Oil & Grease, Trash & Debris.
Environmentally Sensitive and Special Biological Significant Areas	No ESA or SBSA existed.

Section IV Best Management Practices (BMPs)

IV. 1 Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. The local Permittee planning or NPDES staff should be consulted regarding the existence of an approved WIHMP or equivalent.
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Determine applicable LID performance criteria. *Refer to Section 7.II-2.4.3 of the Model WQMP.*
- Determine applicable treatment control BMP performance criteria. *Refer to Section 7.II-*3.2.2 *of the Model WQMP.*
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II-2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	YES☐	NO☑
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.		

Project Performance Criteria (continued)	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	If a hydrologic condition of concern (HCOC) exists, priority projects shall implement onsite or regional hydromodification controls such that: ▪ Post-development runoff volume for the two-year frequency storm does not exceed that of the predevelopment condition by more than five percent, and ▪ Time of concentration of post-development runoff for the two-year storm event is not less than that for the predevelopment condition by more than five percent. Where the Project WQMP documents that excess runoff volume from the two-year runoff event cannot feasibly be retained and where in-stream controls cannot be used to otherwise mitigate HCOCs, the project shall implement on-site or regional hydromodification controls to: ▪ Retain the excess volume from the two-year runoff event to the MEP, and Implement on-site or regional hydromodification controls such that the post-development runoff two-year peak flow rate is no greater than 110 percent of the predevelopment runoff two-year peak flow rate.
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	Infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile, 24-hour storm event (Design Capture Volume). LID BMPs must be designed to retain, on-site, (infiltrate, harvest and use, or evapotranspire) storm water runoff up to 80 percent average annual capture efficiency.
List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	If it is not feasible to meet LID performance criteria through retention and/or biotreatment provided on-site or at a sub-regional/regional scale, then treatment control BMPs shall be provided on-site or offsite prior to discharge to waters of the US. Sizing of treatment control BMP(s) shall be based on either the unmet volume after claiming applicable water quality credits, if appropriate.
Calculate LID design storm capture volume for Project.	DCV = C × d × A × 43560 sf/ac × 1/12 in/ft Where: DCV = design storm capture volume, cu-ft C = runoff coefficient = (0.75 × imp + 0.15) Imp = impervious fraction of drainage area (ranges from 0 to 1) d = storm depth (inches) A = tributary area (acres) Imp = 0.80 d = 0.90 inches A = 2.02 acres ***DCV*** *= (0.75 x* 0.8 *+0.15) x* 0.9 *inches x* 2.02 *ac x 43560 sf/ac x 1/12 in/ft* = 4950 cft

IV.2. SITE DESIGN AND DRAINAGE PLAN

Describe site design and drainage plan including

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP plot plan.
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction).

Refer to Section 2.4.2 in the TGD.

Minimize Impervious Area

Site design to incorporate landscaping and pervious areas where feasible.

Maximize Natural Infiltration Capacity

This site mainly consistes of type-C soil with low infiltration capacity. Thus the location of the constructed element will not have any significent impact on soil permeability. Project will utilize infiltration BMPs and will be placed on undisturbed ground. Thus natural infiltration capacity will be maintained as practically as posible.

Preserve Existing Drainage Patterns and Time of Concentration

General discharge location after construction will remain as it was before construction. As the post-development project imperviousness will be reduced, there would be very little chance of changing the TOC.

Disconnect Impervious Areas

Eighty percent of the surface of the proposed development will be impervious. The use of the site is such that "Disconnect impervious areas" not practically feasible.

Protect Existing Vegetation and Sensitive Areas, and Revegetate Disturbed Areas

No existing vegetation onsite to protect. There are no natural areas to conserve.

Xeriscape Landscaping

Native and/or drought-tolerant landscaping will be provided around the perimeter and west of the site. Efficient irrigation, use of mulches and appropriate maintenance will be utilized.

IV.3 LID BMP SELECTION AND PROJECT CONFORMANCE ANALYSIS

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the TGD for selecting LID BMPs and Section 2.4.3 in the TGD for conducting conformance analysis with project performance criteria.*

IV.3.1 Hydrologic Source Controls (HSCs)

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	☐
Impervious area dispersion (e.g. roof top disconnection)	☐
Street trees (canopy interception)	☐
Residential rain barrels (not actively managed)	☐
Green roofs/Brown roofs	☐
Blue roofs	☐
Impervious area reduction (e.g. permeable pavers, site design)	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐

IV.3.2 Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met state why BMPs cannot be met

Name	Included?
Bioretention without underdrains	☐
Rain gardens	☐
Porous landscaping	☐
Infiltration planters	☐
Retention swales	☐
Infiltration trenches	☐
Infiltration basins	☐
Drywells	☐
Subsurface infiltration galleries	✓
French drains	☐
Permeable asphalt	☐
Permeable concrete	☐
Permeable concrete pavers	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration BMPs. If not document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

IV.3.3 Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration, rainwater harvesting BMPs. N/A

Name	Included?
All HSCs; *See Section IV.3.1*	☐
Surface-based infiltration BMPs	☐
Biotreatment BMPs	☐
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with evapotranspiration, rainwater harvesting BMPs in combination with infiltration BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

IV.3.4 Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, and/or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs. Include sections for selection, suitability, sizing, and infeasibility, as applicable. N/A

Name	Included?
Bioretention with underdrains	☐
Stormwater planter boxes with underdrains	☐
Rain gardens with underdrains	☐
Constructed wetlands	☐
Vegetated swales	☐
Vegetated filter strips	☐
Proprietary vegetated biotreatment systems	☐
Wet extended detention basin	☐
Dry extended detention basins	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Storm Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

IV.3.5 Hydromodification Control BMPs

Describe hydromodification control BMPs. See Section 5 TGD. Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval. **No HCOC**

Hydromodification Control BMPs	
BMP Name	**BMP Description**

IV.3.6 Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. *Refer to Section 7.II-2.4.3.2 of the Model WQMP*. N/A

Regional/Sub-Regional LID BMPs

IV.3.7 Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable. N/A

Treatment Control BMPs	
BMP Name	**BMP Description**
N/A	

IV.3.8 Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
N1	Education for Property Owners, Tenants and Occupants	✓	☐	
N2	Activity Restrictions	✓	☐	
N3	Common Area Landscape Management	✓	☐	
N4	BMP Maintenance	✓	☐	
N5	Title 22 CCR Compliance (How development will comply)	☐	✓	Hazardous materials will not be stored on-site. The Owner shall restrict all activities that are not in complince with the hazardous waste section of Title 22.
N6	Local Industrial Permit Compliance	☐	✓	Not an industrial development
N7	Spill Contingency Plan	☐	✓	No use or storage of large amount of spillable material onsite.
N8	Underground Storage Tank Compliance	☐	✓	No underground storage tanks are proposed.
N9	Hazardous Materials Disclosure	☐	✓	Hazardous materials will not be stored on-site.

	Compliance			
N10	Uniform Fire Code Implementation	✓	☐	Compliance with Article 80 of the Uniform Fire Code enforced by the local fire protection agency will be upheld.
N11	Common Area Litter Control	✓	☐	The Owner will be responsible for performing trash pickup and sweeping of littered common areas on a weekly basis or whenever necessary. Responsibilities will also include noting of improper disposal materials by the public and reporting such violations for investigation.
N12	Employee Training	✓	☐	The Owner will implement employee training program for all new employees in the proper maintenance of landscaped areas, onsite BMPs, and all current and proposed drainage structures.
N13	Housekeeping of Loading Docks	☐	✓	Loading Docks are not proposed for this project.
N14	Common Area Catch Basin Inspection	✓	☐	The Owner will ensure that 100% of the on-site catch basins and storm drains are inspected, cleaned and maintained on an annual basis. Drainage facilities include catch basins (storm drain inlets) and underground storm drain pipes. Records should be kept to document the annual maintenance.
N15	Street Sweeping Private Streets and Parking Lots	✓	☐	The Owner shall be responsible for sweeping all on-site driving aisles and uncover parking area within the project on a quarterly basis.
N16	Retail Gasoline Outlets	☐	✓	The project is not a retail Gasoline Outlet

IV.3.9 Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if Structural source controls were not used.

Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	✓	☐	
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☐	✓	No materials will be stored outdoor.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	✓	☐	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	✓	☐	

S5	Protect slopes and channels and provide energy dissipation	☐	✓	No slope anticipated onsite
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	☐	✓	N/A
S6	Dock areas	☐	✓	No Loading Docks was proposed
S7	Maintenance bays	☐	✓	No Maintenance bays were proposed
S8	Vehicle wash areas	☐	✓	No vehicle wash area was proposed.
S9	Outdoor processing areas	☐	✓	Not proposed
S10	Equipment wash areas	☐	✓	Not proposed
S11	Fueling areas	☐	✓	Not Proposed
S12	Hillside landscaping	☐	✓	Not applicable
S13	Wash water control for food preparation areas	☐	✓	Not proposed
S14	Community car wash racks	☐	✓	No community car was rack was proposed

IV.4 ALTERNATIVE COMPLIANCE PLAN (IF APPLICABLE) N/A

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

IV.4.1 Water Quality Credits. N/A

Determine if water quality credits are applicable for the project. *Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the TGD for calculation methods for applying water quality credits.*

Description of Proposed Project		
Project Types that Qualify for Water Quality Credits (Select all that apply)		
☐✓Redevelopment projects that reduce the overall impervious footprint of the project site.	☐Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.	☐ ✓Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).
☐ ✓Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).	☐ ✓Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned	☐ Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).

☐Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	☐ Developments in a city center area.	☐ Developments in historic districts or historic preservation areas.	☐ Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	☐✓In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.
Calculation of Water Quality Credits (if applicable)				

IV.4.2 Alternative Compliance Plan Information N/A

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

Section V Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP.*

BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**

Section VI BMP Exhibit (Site Plan)

VI.1 SITE PLAN

Include a BMP Exhibit (Site Plan), at a size no less than 24" by 36," which includes the following minimum information:

- Insert in the title block (lower right hand corner) of BMP Exhibit: the WQMP Number (assigned by staff) and the grading/building or Planning Application permit numbers
- Project location (address, tract/lot number(s), etc.)
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Delineate the area being treated by each structural BMP
- GIS coordinates for LID and Treatment Control BMPs
- Drainage connections
- BMP details
- Preparer name and stamp

Please do not include any areas outside of the project area or any information not related to drainage or water quality. The approved BMP Exhibit (Site Plan) shall be submitted as a plan sheet on all grading and building plan sets submitted for plan check review and approval. The BMP Exhibit shall be at the same size as the rest of the plan sheets in the submittal and shall have an approval stamp and signature prior to plan check submittal.

VI.2 Submittal and Recordation of Water Quality Management Plan

Following approval of the Final Project-Specific WQMP, three copies of the approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be submitted. In addition, these documents shall be submitted in a PDF format.

Each approved WQMP (including BMP Exhibit, Operations and Maintenance (O&M) Plan, and Appendices) shall be recorded in the Orange County Clerk-Recorder's Office, prior to close-out of grading and/or building permit. Educational Materials are not required to be included.

Section VII Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the copy submitted to the Permittee, only attach the educational materials specifically applicable to the project. Other materials specific to the project may be included as well and must be attached.

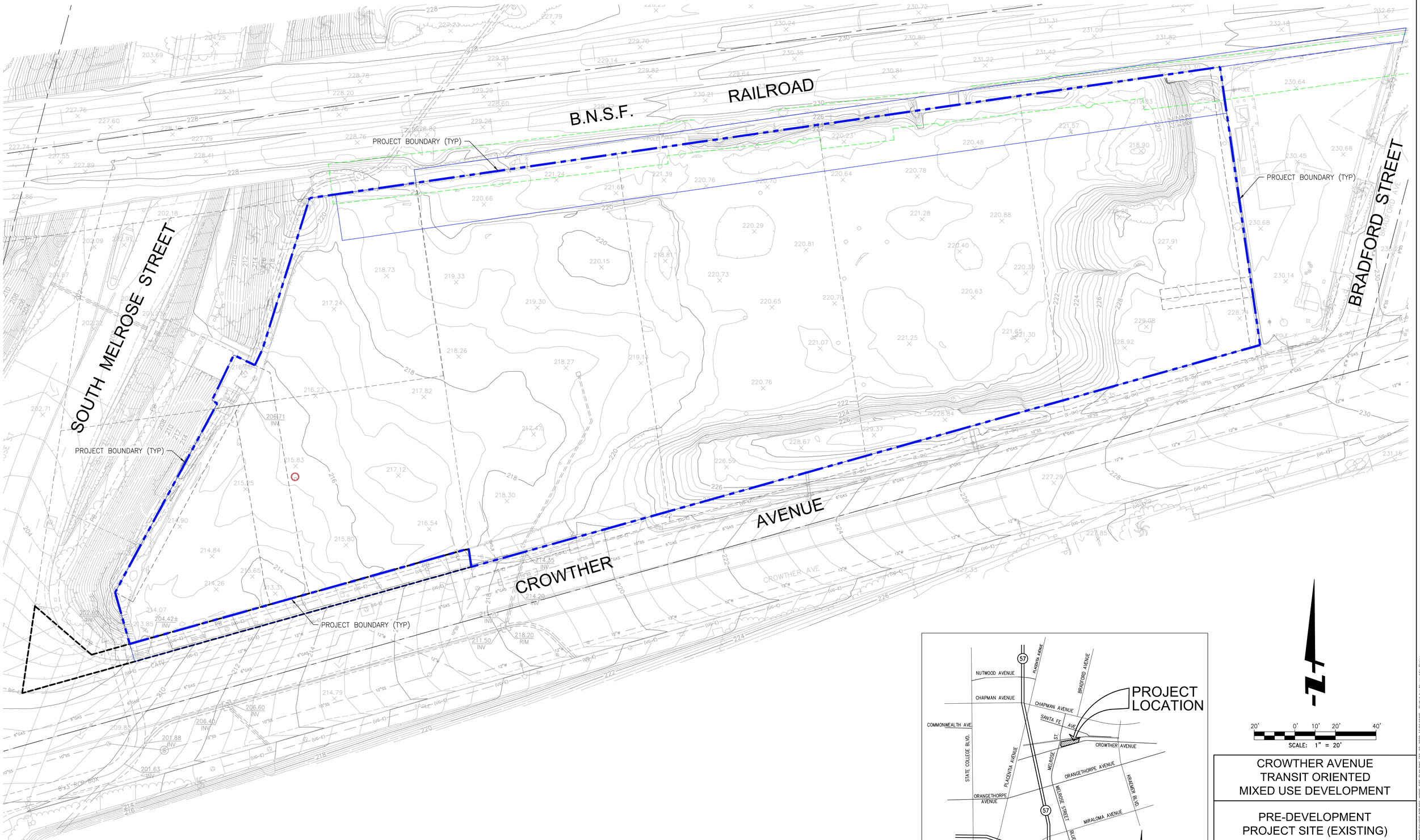
Education Materials			
Residential Material (http://www.ocwatersheds.com)	**Check If Applicable**	**Business Material (http://www.ocwatersheds.com)**	**Check If Applicable**
The Ocean Begins at Your Front Door	☐	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	☐	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	☐	Proper Maintenance Practices for Your Business	☐
Household Tips	☐	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	☐		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	☐		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	☐		☐
Tips for Horse Care	☐		☐
Tips for Landscaping and Gardening	☐		☐
Tips for Pet Care	☐		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	☐		☐

Attachment 1:

Existing Site,

Historic Site,

WQMP Exhibit



CROWTHER AVENUE
TRANSIT ORIENTED
MIXED USE DEVELOPMENT

PRE-DEVELOPMENT
PROJECT SITE (EXISTING)

FUSCOE ENGINEERING
2850 Inland Empire Blvd., Suite B
Ontario, California 91764
tel 909.581.0676 ◦ fax 909.581.0696
www.fuscoe.com

JOB NO. 878-002

DRAWN BY: MAS

SHEET 1 of 1



LEGEND

PROJECT BOUNDARY	TOTAL AREA = 88,055 sq ft
PERVIOUS AREA (Y-2014)	PERVIOUS AREA = 2,477 sq ft
IMPERVIOUS AREA (Y-2014T)	IMPERVIOUS AREA = 85,578 sq ft

VICINITY MAP
NOT TO SCALE

20' 0' 10' 20' 40'
SCALE: 1" = 20'

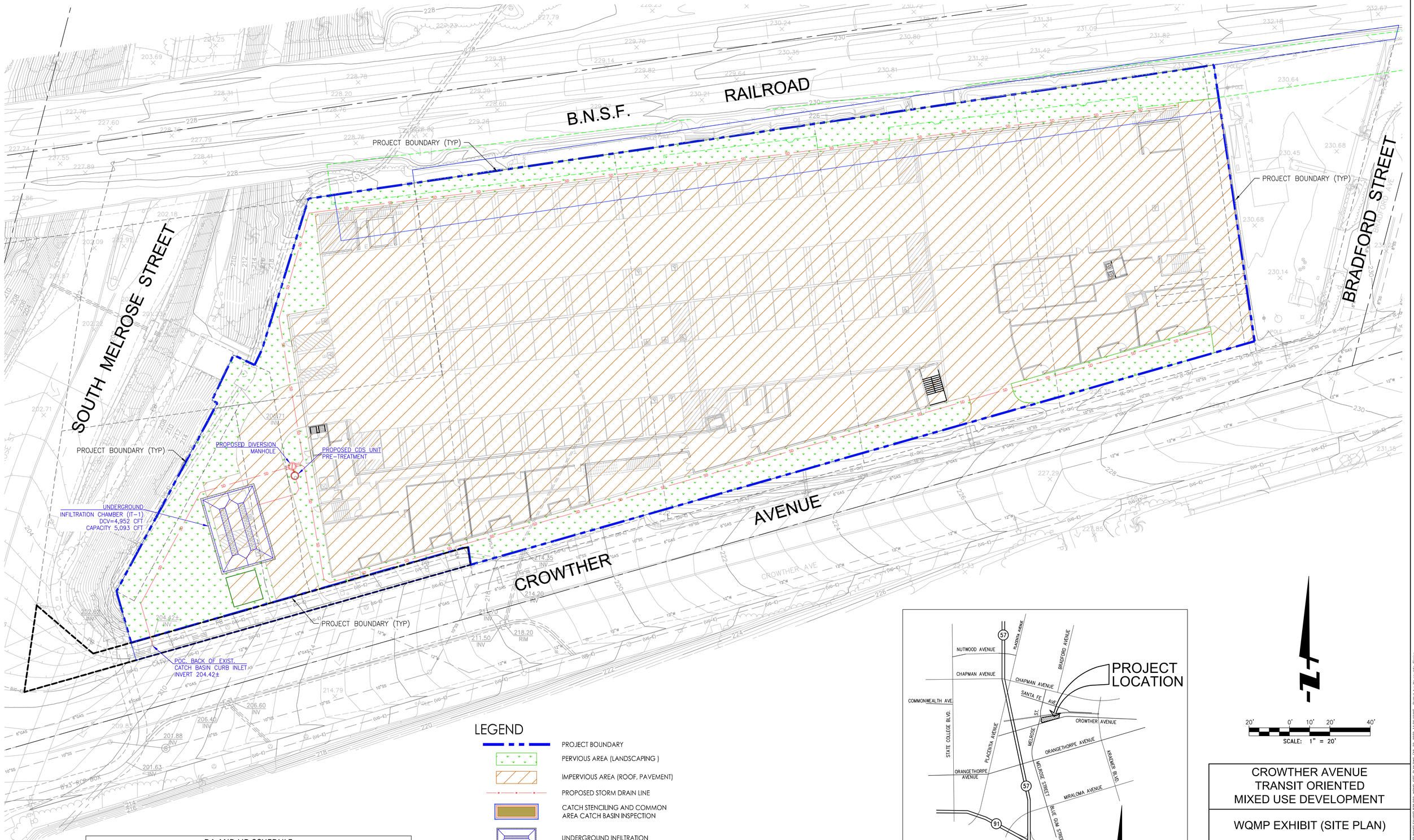
CROWTHER AVENUE TRANSIT ORIENTED MIXED USE DEVELOPMENT

PRE-DEVELOPMENT PROJECT SITE (HISTORIC Y-2014)

FUSCOE ENGINEERING
2850 Inland Empire Blvd., Suite B
Ontario, California 91764
tel 909.581.0676 • fax 909.581.0696
www.fuscoe.com

JOB NO. 878-002
DRAWN BY: MAS
SHEET 1 of 1

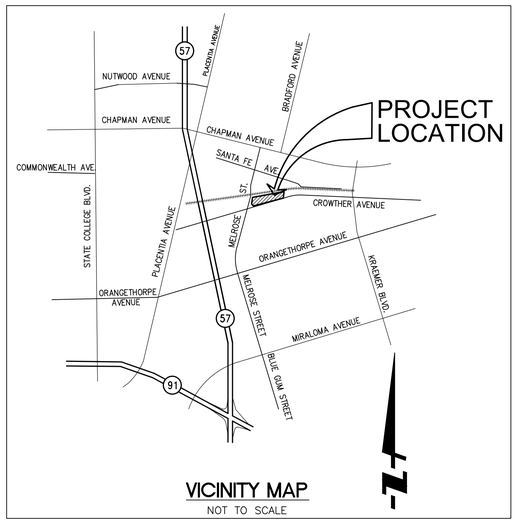
C:\PROJECTS\878-002\1_SUPPORT FILES\PROPOSED\PLANS\CONSULTANT\878-002 HDP_SITE PLAN.DWG (10-29-2020 10:55:51 AM) Plotted by: Mayrosalin Simpe



LEGEND

- PROJECT BOUNDARY
- PERVIOUS AREA (LANDSCAPING)
- IMPERVIOUS AREA (ROOF, PAVEMENT)
- PROPOSED STORM DRAIN LINE
- CATCH STENCILING AND COMMON AREA CATCH BASIN INSPECTION
- UNDERGROUND INFILTRATION CHAMBER
- CDS UNIT (PRE-TREATMENT)
- DCV FLOW CONTROL STRUCTURE

DA AND LID SCHEDULE								
DA ID	AREA (SF)	IMPERVIOUS AREA (SF)	PERVIOUS AREA (SF)	DCV (CFT)	TREATMENT FLOW (CFS)	LID ID	DESCRIPTION	PRO. V ret. (CFT)
DA-1	88,055	69,953	18,102	4,952	1.3	IT-1	INFILTRATION TRENCH	5,093
TOTAL AREA	88,055	69,953	18,102	4,952				5,093



VICINITY MAP
NOT TO SCALE

20' 0' 10' 20' 40'
SCALE: 1" = 20'

CROWTHER AVENUE
TRANSIT ORIENTED
MIXED USE DEVELOPMENT

WQMP EXHIBIT (SITE PLAN)

FUSCOE ENGINEERING
2850 Inland Empire Blvd., Suite B
Ontario, California 91764
tel 909.581.0676 ◦ fax 909.581.0696
www.fuscoe.com

JOB NO. 878-002
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SHEET 1 of 1

Attachment 2:

Hydrology Information

(Q2 – Two-year frequency storm evaluation)

CROWTHER AVENUE TOD

Q2 – Two Year frequency storm evaluation:

Q2 Pre-Development (Historic 2014 Site condition) Runoff Volume = 0.3191 ac-ft

Q2 Post-Development Runoff Volume = 0.2643 ac-ft

Net reduction of Runoff Volume = 0.3191-0.2643 = 0.0548 ac-ft

No HCOC existed for this development

(Unit Hydrograph Volume calculation data attached)

U n i t H y d r o g r a p h A n a l y s i s

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Study date 10/29/20 File Name 878002UHPRE.out

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Orange County Unit Hydrograph Hydrology Method
Manual Date(s) - October 1986, November 1996

Program License Serial Number 6049

PLACENTIA PODIUM DEVELOPMENT
2-YEAR STORM HISTORIC PRE-DEVELOPMENT
878002UHPRE
FUSCOE ENGINEERING

Storm Event Year = 2

Antecedent Moisture Condition = 1

English (in-lb) Input Units Used

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	Area (Ac.)	Area Fraction	Soil Group	Fp (In/Hr)	Ap (dec.)	Fm (In/Hr)
86.0	0.0	0.00	C	0.250	1.000	0.250
69.0	2.0	1.00	C	0.250	0.030	0.007

Area-averaged adjusted loss rate Fm (In/Hr) = 0.007

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
0.00	0.000	86.0	71.6	3.97	0.147
0.06	0.030	69.0	49.8	10.08	0.000
1.96	0.970	98.0	98.0	0.20	0.890

Area-averaged catchment yield fraction, Y = 0.863
Area-averaged low loss fraction, Yb = 0.137

++
User entry of time of concentration = 0.094 (hours)
Watershed area = 2.02(Ac.)
Catchment Lag time = 0.075 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 110.8156
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.007(In/Hr)
Average low loss rate fraction (Yb) = 0.137 (decimal)
VALLEY DEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.190(In)

Computed peak 30-minute rainfall = 0.400(In)
Specified peak 1-hour rainfall = 0.530(In)
Computed peak 3-hour rainfall = 0.890(In)
Specified peak 6-hour rainfall = 1.220(In)
Specified peak 24-hour rainfall = 2.050(In)

Rainfall depth area reduction factors:
Using a total area of 2.02(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.190(In)
30-minute factor = 1.000 Adjusted rainfall = 0.400(In)
1-hour factor = 1.000 Adjusted rainfall = 0.530(In)
3-hour factor = 1.000 Adjusted rainfall = 0.890(In)
6-hour factor = 1.000 Adjusted rainfall = 1.220(In)
24-hour factor = 1.000 Adjusted rainfall = 2.050(In)

U n i t H y d r o g r a p h

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 24.43 (CFS))	
1	20.805	5.083
2	85.060	15.697
3	98.725	3.338
4	100.000	0.312

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.1900	0.1900
2	0.2534	0.0634
3	0.2999	0.0465
4	0.3380	0.0381
5	0.3708	0.0328
6	0.4000	0.0292
7	0.4258	0.0258
8	0.4495	0.0237
9	0.4715	0.0220
10	0.4921	0.0206
11	0.5116	0.0194
12	0.5299	0.0184
13	0.5503	0.0204
14	0.5699	0.0196
15	0.5888	0.0189
16	0.6070	0.0182
17	0.6246	0.0176
18	0.6417	0.0171
19	0.6583	0.0166
20	0.6744	0.0161
21	0.6901	0.0157
22	0.7054	0.0153
23	0.7204	0.0150
24	0.7350	0.0146
25	0.7493	0.0143
26	0.7633	0.0140
27	0.7770	0.0137
28	0.7905	0.0134
29	0.8037	0.0132
30	0.8166	0.0130
31	0.8294	0.0127

32	0.8419	0.0125
33	0.8542	0.0123
34	0.8663	0.0121
35	0.8782	0.0119
36	0.8900	0.0118
37	0.9012	0.0112
38	0.9122	0.0110
39	0.9230	0.0108
40	0.9337	0.0107
41	0.9442	0.0105
42	0.9547	0.0104
43	0.9649	0.0103
44	0.9751	0.0101
45	0.9851	0.0100
46	0.9950	0.0099
47	1.0048	0.0098
48	1.0145	0.0097
49	1.0240	0.0096
50	1.0335	0.0095
51	1.0428	0.0094
52	1.0521	0.0093
53	1.0612	0.0092
54	1.0703	0.0091
55	1.0793	0.0090
56	1.0882	0.0089
57	1.0970	0.0088
58	1.1057	0.0087
59	1.1143	0.0086
60	1.1229	0.0086
61	1.1313	0.0085
62	1.1397	0.0084
63	1.1481	0.0083
64	1.1563	0.0083
65	1.1645	0.0082
66	1.1726	0.0081
67	1.1807	0.0081
68	1.1887	0.0080
69	1.1966	0.0079
70	1.2045	0.0079
71	1.2123	0.0078
72	1.2200	0.0077
73	1.2263	0.0063
74	1.2326	0.0063
75	1.2388	0.0062
76	1.2449	0.0062
77	1.2510	0.0061
78	1.2571	0.0061
79	1.2631	0.0060
80	1.2691	0.0060
81	1.2750	0.0059
82	1.2809	0.0059
83	1.2867	0.0058
84	1.2925	0.0058
85	1.2982	0.0057
86	1.3039	0.0057
87	1.3096	0.0057
88	1.3152	0.0056
89	1.3208	0.0056
90	1.3263	0.0055
91	1.3318	0.0055
92	1.3372	0.0055
93	1.3427	0.0054
94	1.3481	0.0054

95	1.3534	0.0054
96	1.3587	0.0053
97	1.3640	0.0053
98	1.3693	0.0052
99	1.3745	0.0052
100	1.3796	0.0052
101	1.3848	0.0051
102	1.3899	0.0051
103	1.3950	0.0051
104	1.4001	0.0051
105	1.4051	0.0050
106	1.4101	0.0050
107	1.4150	0.0050
108	1.4200	0.0049
109	1.4249	0.0049
110	1.4298	0.0049
111	1.4346	0.0049
112	1.4394	0.0048
113	1.4442	0.0048
114	1.4490	0.0048
115	1.4538	0.0047
116	1.4585	0.0047
117	1.4632	0.0047
118	1.4678	0.0047
119	1.4725	0.0046
120	1.4771	0.0046
121	1.4817	0.0046
122	1.4863	0.0046
123	1.4908	0.0045
124	1.4953	0.0045
125	1.4999	0.0045
126	1.5043	0.0045
127	1.5088	0.0045
128	1.5132	0.0044
129	1.5176	0.0044
130	1.5220	0.0044
131	1.5264	0.0044
132	1.5308	0.0044
133	1.5351	0.0043
134	1.5394	0.0043
135	1.5437	0.0043
136	1.5480	0.0043
137	1.5522	0.0043
138	1.5565	0.0042
139	1.5607	0.0042
140	1.5649	0.0042
141	1.5690	0.0042
142	1.5732	0.0042
143	1.5773	0.0041
144	1.5814	0.0041
145	1.5856	0.0041
146	1.5896	0.0041
147	1.5937	0.0041
148	1.5978	0.0041
149	1.6018	0.0040
150	1.6058	0.0040
151	1.6098	0.0040
152	1.6138	0.0040
153	1.6178	0.0040
154	1.6217	0.0040
155	1.6256	0.0039
156	1.6296	0.0039
157	1.6335	0.0039

158	1.6373	0.0039
159	1.6412	0.0039
160	1.6451	0.0039
161	1.6489	0.0038
162	1.6527	0.0038
163	1.6566	0.0038
164	1.6604	0.0038
165	1.6641	0.0038
166	1.6679	0.0038
167	1.6717	0.0038
168	1.6754	0.0037
169	1.6791	0.0037
170	1.6828	0.0037
171	1.6865	0.0037
172	1.6902	0.0037
173	1.6939	0.0037
174	1.6976	0.0037
175	1.7012	0.0036
176	1.7048	0.0036
177	1.7085	0.0036
178	1.7121	0.0036
179	1.7157	0.0036
180	1.7192	0.0036
181	1.7228	0.0036
182	1.7264	0.0036
183	1.7299	0.0035
184	1.7334	0.0035
185	1.7370	0.0035
186	1.7405	0.0035
187	1.7440	0.0035
188	1.7475	0.0035
189	1.7509	0.0035
190	1.7544	0.0035
191	1.7578	0.0035
192	1.7613	0.0034
193	1.7647	0.0034
194	1.7681	0.0034
195	1.7715	0.0034
196	1.7749	0.0034
197	1.7783	0.0034
198	1.7817	0.0034
199	1.7851	0.0034
200	1.7884	0.0034
201	1.7917	0.0033
202	1.7951	0.0033
203	1.7984	0.0033
204	1.8017	0.0033
205	1.8050	0.0033
206	1.8083	0.0033
207	1.8116	0.0033
208	1.8149	0.0033
209	1.8181	0.0033
210	1.8214	0.0033
211	1.8246	0.0032
212	1.8278	0.0032
213	1.8311	0.0032
214	1.8343	0.0032
215	1.8375	0.0032
216	1.8407	0.0032
217	1.8439	0.0032
218	1.8470	0.0032
219	1.8502	0.0032
220	1.8534	0.0032

221	1.8565	0.0031
222	1.8597	0.0031
223	1.8628	0.0031
224	1.8659	0.0031
225	1.8690	0.0031
226	1.8721	0.0031
227	1.8752	0.0031
228	1.8783	0.0031
229	1.8814	0.0031
230	1.8845	0.0031
231	1.8875	0.0031
232	1.8906	0.0031
233	1.8936	0.0030
234	1.8967	0.0030
235	1.8997	0.0030
236	1.9027	0.0030
237	1.9057	0.0030
238	1.9087	0.0030
239	1.9117	0.0030
240	1.9147	0.0030
241	1.9177	0.0030
242	1.9207	0.0030
243	1.9237	0.0030
244	1.9266	0.0030
245	1.9296	0.0030
246	1.9325	0.0029
247	1.9355	0.0029
248	1.9384	0.0029
249	1.9413	0.0029
250	1.9442	0.0029
251	1.9471	0.0029
252	1.9500	0.0029
253	1.9529	0.0029
254	1.9558	0.0029
255	1.9587	0.0029
256	1.9616	0.0029
257	1.9644	0.0029
258	1.9673	0.0029
259	1.9701	0.0029
260	1.9730	0.0028
261	1.9758	0.0028
262	1.9787	0.0028
263	1.9815	0.0028
264	1.9843	0.0028
265	1.9871	0.0028
266	1.9899	0.0028
267	1.9927	0.0028
268	1.9955	0.0028
269	1.9983	0.0028
270	2.0011	0.0028
271	2.0038	0.0028
272	2.0066	0.0028
273	2.0094	0.0028
274	2.0121	0.0028
275	2.0149	0.0027
276	2.0176	0.0027
277	2.0203	0.0027
278	2.0231	0.0027
279	2.0258	0.0027
280	2.0285	0.0027
281	2.0312	0.0027
282	2.0339	0.0027
283	2.0366	0.0027

284	2.0393	0.0027
285	2.0420	0.0027
286	2.0447	0.0027
287	2.0473	0.0027
288	2.0500	0.0027

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0027	0.0004	0.0023
2	0.0027	0.0004	0.0023
3	0.0027	0.0004	0.0023
4	0.0027	0.0004	0.0023
5	0.0027	0.0004	0.0023
6	0.0027	0.0004	0.0023
7	0.0027	0.0004	0.0023
8	0.0027	0.0004	0.0024
9	0.0027	0.0004	0.0024
10	0.0027	0.0004	0.0024
11	0.0028	0.0004	0.0024
12	0.0028	0.0004	0.0024
13	0.0028	0.0004	0.0024
14	0.0028	0.0004	0.0024
15	0.0028	0.0004	0.0024
16	0.0028	0.0004	0.0024
17	0.0028	0.0004	0.0024
18	0.0028	0.0004	0.0024
19	0.0028	0.0004	0.0024
20	0.0028	0.0004	0.0025
21	0.0029	0.0004	0.0025
22	0.0029	0.0004	0.0025
23	0.0029	0.0004	0.0025
24	0.0029	0.0004	0.0025
25	0.0029	0.0004	0.0025
26	0.0029	0.0004	0.0025
27	0.0029	0.0004	0.0025
28	0.0029	0.0004	0.0025
29	0.0029	0.0004	0.0025
30	0.0030	0.0004	0.0025
31	0.0030	0.0004	0.0026
32	0.0030	0.0004	0.0026
33	0.0030	0.0004	0.0026
34	0.0030	0.0004	0.0026
35	0.0030	0.0004	0.0026
36	0.0030	0.0004	0.0026
37	0.0030	0.0004	0.0026
38	0.0030	0.0004	0.0026
39	0.0031	0.0004	0.0026
40	0.0031	0.0004	0.0027
41	0.0031	0.0004	0.0027
42	0.0031	0.0004	0.0027
43	0.0031	0.0004	0.0027
44	0.0031	0.0004	0.0027
45	0.0031	0.0004	0.0027
46	0.0031	0.0004	0.0027
47	0.0032	0.0004	0.0027
48	0.0032	0.0004	0.0027
49	0.0032	0.0004	0.0028
50	0.0032	0.0004	0.0028
51	0.0032	0.0004	0.0028
52	0.0032	0.0004	0.0028
53	0.0033	0.0004	0.0028

54	0.0033	0.0004	0.0028
55	0.0033	0.0004	0.0028
56	0.0033	0.0005	0.0028
57	0.0033	0.0005	0.0029
58	0.0033	0.0005	0.0029
59	0.0033	0.0005	0.0029
60	0.0034	0.0005	0.0029
61	0.0034	0.0005	0.0029
62	0.0034	0.0005	0.0029
63	0.0034	0.0005	0.0029
64	0.0034	0.0005	0.0029
65	0.0034	0.0005	0.0030
66	0.0035	0.0005	0.0030
67	0.0035	0.0005	0.0030
68	0.0035	0.0005	0.0030
69	0.0035	0.0005	0.0030
70	0.0035	0.0005	0.0030
71	0.0035	0.0005	0.0031
72	0.0036	0.0005	0.0031
73	0.0036	0.0005	0.0031
74	0.0036	0.0005	0.0031
75	0.0036	0.0005	0.0031
76	0.0036	0.0005	0.0031
77	0.0037	0.0005	0.0032
78	0.0037	0.0005	0.0032
79	0.0037	0.0005	0.0032
80	0.0037	0.0005	0.0032
81	0.0037	0.0005	0.0032
82	0.0038	0.0005	0.0032
83	0.0038	0.0005	0.0033
84	0.0038	0.0005	0.0033
85	0.0038	0.0005	0.0033
86	0.0038	0.0005	0.0033
87	0.0039	0.0005	0.0033
88	0.0039	0.0005	0.0034
89	0.0039	0.0005	0.0034
90	0.0039	0.0005	0.0034
91	0.0040	0.0005	0.0034
92	0.0040	0.0005	0.0034
93	0.0040	0.0006	0.0035
94	0.0040	0.0006	0.0035
95	0.0041	0.0006	0.0035
96	0.0041	0.0006	0.0035
97	0.0041	0.0006	0.0036
98	0.0041	0.0006	0.0036
99	0.0042	0.0006	0.0036
100	0.0042	0.0006	0.0036
101	0.0042	0.0006	0.0037
102	0.0043	0.0006	0.0037
103	0.0043	0.0006	0.0037
104	0.0043	0.0006	0.0037
105	0.0044	0.0006	0.0038
106	0.0044	0.0006	0.0038
107	0.0044	0.0006	0.0038
108	0.0044	0.0006	0.0038
109	0.0045	0.0006	0.0039
110	0.0045	0.0006	0.0039
111	0.0045	0.0006	0.0039
112	0.0046	0.0006	0.0039
113	0.0046	0.0006	0.0040
114	0.0046	0.0006	0.0040
115	0.0047	0.0006	0.0041
116	0.0047	0.0006	0.0041

117	0.0048	0.0006	0.0041
118	0.0048	0.0006	0.0042
119	0.0049	0.0006	0.0042
120	0.0049	0.0006	0.0043
121	0.0049	0.0006	0.0043
122	0.0050	0.0006	0.0043
123	0.0050	0.0006	0.0044
124	0.0051	0.0006	0.0044
125	0.0051	0.0006	0.0045
126	0.0051	0.0006	0.0045
127	0.0052	0.0006	0.0046
128	0.0052	0.0006	0.0046
129	0.0053	0.0006	0.0047
130	0.0054	0.0006	0.0047
131	0.0054	0.0006	0.0048
132	0.0055	0.0006	0.0048
133	0.0055	0.0006	0.0049
134	0.0056	0.0006	0.0050
135	0.0057	0.0006	0.0050
136	0.0057	0.0006	0.0051
137	0.0058	0.0006	0.0052
138	0.0058	0.0006	0.0052
139	0.0059	0.0006	0.0053
140	0.0060	0.0006	0.0053
141	0.0061	0.0006	0.0054
142	0.0061	0.0006	0.0055
143	0.0062	0.0006	0.0056
144	0.0063	0.0006	0.0056
145	0.0077	0.0006	0.0071
146	0.0078	0.0006	0.0072
147	0.0079	0.0006	0.0073
148	0.0080	0.0006	0.0074
149	0.0081	0.0006	0.0075
150	0.0082	0.0006	0.0076
151	0.0083	0.0006	0.0077
152	0.0084	0.0006	0.0078
153	0.0086	0.0006	0.0079
154	0.0086	0.0006	0.0080
155	0.0088	0.0006	0.0082
156	0.0089	0.0006	0.0083
157	0.0091	0.0006	0.0084
158	0.0092	0.0006	0.0085
159	0.0094	0.0006	0.0087
160	0.0095	0.0006	0.0088
161	0.0097	0.0006	0.0090
162	0.0098	0.0006	0.0092
163	0.0100	0.0006	0.0094
164	0.0101	0.0006	0.0095
165	0.0104	0.0006	0.0098
166	0.0105	0.0006	0.0099
167	0.0108	0.0006	0.0102
168	0.0110	0.0006	0.0104
169	0.0118	0.0006	0.0111
170	0.0119	0.0006	0.0113
171	0.0123	0.0006	0.0117
172	0.0125	0.0006	0.0119
173	0.0130	0.0006	0.0123
174	0.0132	0.0006	0.0126
175	0.0137	0.0006	0.0131
176	0.0140	0.0006	0.0134
177	0.0146	0.0006	0.0140
178	0.0150	0.0006	0.0143
179	0.0157	0.0006	0.0151

180	0.0161	0.0006	0.0155
181	0.0171	0.0006	0.0165
182	0.0176	0.0006	0.0170
183	0.0189	0.0006	0.0182
184	0.0196	0.0006	0.0190
185	0.0184	0.0006	0.0178
186	0.0194	0.0006	0.0188
187	0.0220	0.0006	0.0214
188	0.0237	0.0006	0.0231
189	0.0292	0.0006	0.0286
190	0.0328	0.0006	0.0322
191	0.0465	0.0006	0.0459
192	0.0634	0.0006	0.0628
193	0.1900	0.0006	0.1894
194	0.0381	0.0006	0.0374
195	0.0258	0.0006	0.0252
196	0.0206	0.0006	0.0200
197	0.0204	0.0006	0.0198
198	0.0182	0.0006	0.0176
199	0.0166	0.0006	0.0160
200	0.0153	0.0006	0.0147
201	0.0143	0.0006	0.0137
202	0.0134	0.0006	0.0128
203	0.0127	0.0006	0.0121
204	0.0121	0.0006	0.0115
205	0.0112	0.0006	0.0105
206	0.0107	0.0006	0.0101
207	0.0103	0.0006	0.0097
208	0.0099	0.0006	0.0093
209	0.0096	0.0006	0.0089
210	0.0093	0.0006	0.0086
211	0.0090	0.0006	0.0083
212	0.0087	0.0006	0.0081
213	0.0085	0.0006	0.0079
214	0.0083	0.0006	0.0076
215	0.0081	0.0006	0.0074
216	0.0079	0.0006	0.0072
217	0.0063	0.0006	0.0057
218	0.0062	0.0006	0.0055
219	0.0060	0.0006	0.0054
220	0.0059	0.0006	0.0052
221	0.0057	0.0006	0.0051
222	0.0056	0.0006	0.0050
223	0.0055	0.0006	0.0049
224	0.0054	0.0006	0.0048
225	0.0053	0.0006	0.0047
226	0.0052	0.0006	0.0046
227	0.0051	0.0006	0.0045
228	0.0050	0.0006	0.0044
229	0.0049	0.0006	0.0043
230	0.0048	0.0006	0.0042
231	0.0047	0.0006	0.0041
232	0.0047	0.0006	0.0040
233	0.0046	0.0006	0.0040
234	0.0045	0.0006	0.0039
235	0.0045	0.0006	0.0038
236	0.0044	0.0006	0.0038
237	0.0043	0.0006	0.0037
238	0.0043	0.0006	0.0037
239	0.0042	0.0006	0.0036
240	0.0042	0.0006	0.0036
241	0.0041	0.0006	0.0035
242	0.0041	0.0006	0.0035

```
      243              0.0040           0.0005              0.0035
      244              0.0040           0.0005              0.0034
      245              0.0039           0.0005              0.0034
      246              0.0039           0.0005              0.0033
      247              0.0038           0.0005              0.0033
      248              0.0038           0.0005              0.0033
      249              0.0037           0.0005              0.0032
      250              0.0037           0.0005              0.0032
      251              0.0036           0.0005              0.0031
      252              0.0036           0.0005              0.0031
      253              0.0036           0.0005              0.0031
      254              0.0035           0.0005              0.0030
      255              0.0035           0.0005              0.0030
      256              0.0035           0.0005              0.0030
      257              0.0034           0.0005              0.0030
      258              0.0034           0.0005              0.0029
      259              0.0034           0.0005              0.0029
      260              0.0033           0.0005              0.0029
      261              0.0033           0.0005              0.0028
      262              0.0033           0.0004              0.0028
      263              0.0032           0.0004              0.0028
      264              0.0032           0.0004              0.0028
      265              0.0032           0.0004              0.0027
      266              0.0032           0.0004              0.0027
      267              0.0031           0.0004              0.0027
      268              0.0031           0.0004              0.0027
      269              0.0031           0.0004              0.0027
      270              0.0031           0.0004              0.0026
      271              0.0030           0.0004              0.0026
      272              0.0030           0.0004              0.0026
      273              0.0030           0.0004              0.0026
      274              0.0030           0.0004              0.0026
      275              0.0029           0.0004              0.0025
      276              0.0029           0.0004              0.0025
      277              0.0029           0.0004              0.0025
      278              0.0029           0.0004              0.0025
      279              0.0029           0.0004              0.0025
      280              0.0028           0.0004              0.0024
      281              0.0028           0.0004              0.0024
      282              0.0028           0.0004              0.0024
      283              0.0028           0.0004              0.0024
      284              0.0028           0.0004              0.0024
      285              0.0027           0.0004              0.0024
      286              0.0027           0.0004              0.0023
      287              0.0027           0.0004              0.0023
      288              0.0027           0.0004              0.0023
      ---------------------------------------------------------------------
      ---------------------------------------------------------------------
      Total soil rain loss =      0.15(In)
      Total effective rainfall =      1.90(In)
      Peak flow rate in flood hydrograph =      3.39(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                  Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
---------------------------------------------------------------------
  0+ 5       0.0001      0.01  Q         |         |         |         |
  0+10       0.0004      0.05  Q         |         |         |         |
```

0+15	0.0008	0.06	Q	|	|	|	|
0+20	0.0012	0.06	Q	|	|	|	|
0+25	0.0016	0.06	Q	|	|	|	|
0+30	0.0020	0.06	Q	|	|	|	|
0+35	0.0024	0.06	Q	|	|	|	|
0+40	0.0028	0.06	Q	|	|	|	|
0+45	0.0032	0.06	Q	|	|	|	|
0+50	0.0035	0.06	Q	|	|	|	|
0+55	0.0039	0.06	Q	|	|	|	|
1+ 0	0.0043	0.06	Q	|	|	|	|
1+ 5	0.0048	0.06	Q	|	|	|	|
1+10	0.0052	0.06	Q	|	|	|	|
1+15	0.0056	0.06	Q	|	|	|	|
1+20	0.0060	0.06	Q	|	|	|	|
1+25	0.0064	0.06	Q	|	|	|	|
1+30	0.0068	0.06	Q	|	|	|	|
1+35	0.0072	0.06	Q	|	|	|	|
1+40	0.0076	0.06	Q	|	|	|	|
1+45	0.0080	0.06	QV	|	|	|	|
1+50	0.0084	0.06	QV	|	|	|	|
1+55	0.0088	0.06	QV	|	|	|	|
2+ 0	0.0093	0.06	QV	|	|	|	|
2+ 5	0.0097	0.06	QV	|	|	|	|
2+10	0.0101	0.06	QV	|	|	|	|
2+15	0.0105	0.06	QV	|	|	|	|
2+20	0.0110	0.06	QV	|	|	|	|
2+25	0.0114	0.06	QV	|	|	|	|
2+30	0.0118	0.06	QV	|	|	|	|
2+35	0.0122	0.06	QV	|	|	|	|
2+40	0.0127	0.06	QV	|	|	|	|
2+45	0.0131	0.06	QV	|	|	|	|
2+50	0.0135	0.06	QV	|	|	|	|
2+55	0.0140	0.06	QV	|	|	|	|
3+ 0	0.0144	0.06	QV	|	|	|	|
3+ 5	0.0148	0.06	QV	|	|	|	|
3+10	0.0153	0.06	QV	|	|	|	|
3+15	0.0157	0.06	QV	|	|	|	|
3+20	0.0162	0.06	Q V	|	|	|	|
3+25	0.0166	0.06	Q V	|	|	|	|
3+30	0.0171	0.07	Q V	|	|	|	|
3+35	0.0175	0.07	Q V	|	|	|	|
3+40	0.0180	0.07	Q V	|	|	|	|
3+45	0.0184	0.07	Q V	|	|	|	|
3+50	0.0189	0.07	Q V	|	|	|	|
3+55	0.0193	0.07	Q V	|	|	|	|
4+ 0	0.0198	0.07	Q V	|	|	|	|
4+ 5	0.0203	0.07	Q V	|	|	|	|
4+10	0.0207	0.07	Q V	|	|	|	|
4+15	0.0212	0.07	Q V	|	|	|	|
4+20	0.0217	0.07	Q V	|	|	|	|
4+25	0.0221	0.07	Q V	|	|	|	|
4+30	0.0226	0.07	Q V	|	|	|	|
4+35	0.0231	0.07	Q V	|	|	|	|
4+40	0.0235	0.07	Q V	|	|	|	|
4+45	0.0240	0.07	Q V	|	|	|	|
4+50	0.0245	0.07	Q V	|	|	|	|
4+55	0.0250	0.07	Q V	|	|	|	|
5+ 0	0.0255	0.07	Q V	|	|	|	|
5+ 5	0.0260	0.07	Q V	|	|	|	|
5+10	0.0265	0.07	Q V	|	|	|	|
5+15	0.0269	0.07	Q V	|	|	|	|
5+20	0.0274	0.07	Q V	|	|	|	|
5+25	0.0279	0.07	Q V	|	|	|	|

5+30	0.0284	0.07	Q	V				
5+35	0.0289	0.07	Q	V				
5+40	0.0294	0.07	Q	V				
5+45	0.0299	0.07	Q	V				
5+50	0.0305	0.07	Q	V				
5+55	0.0310	0.07	Q	V				
6+ 0	0.0315	0.07	Q	V				
6+ 5	0.0320	0.08	Q	V				
6+10	0.0325	0.08	Q	V				
6+15	0.0330	0.08	Q	V				
6+20	0.0336	0.08	Q	V				
6+25	0.0341	0.08	Q	V				
6+30	0.0346	0.08	Q	V				
6+35	0.0352	0.08	Q	V				
6+40	0.0357	0.08	Q	V				
6+45	0.0362	0.08	Q	V				
6+50	0.0368	0.08	Q	V				
6+55	0.0373	0.08	Q	V				
7+ 0	0.0379	0.08	Q	V				
7+ 5	0.0384	0.08	Q	V				
7+10	0.0390	0.08	Q	V				
7+15	0.0395	0.08	Q	V				
7+20	0.0401	0.08	Q	V				
7+25	0.0407	0.08	Q	V				
7+30	0.0412	0.08	Q	V				
7+35	0.0418	0.08	Q	V				
7+40	0.0424	0.08	Q	V				
7+45	0.0430	0.08	Q	V				
7+50	0.0435	0.08	Q	V				
7+55	0.0441	0.09	Q	V				
8+ 0	0.0447	0.09	Q	V				
8+ 5	0.0453	0.09	Q	V				
8+10	0.0459	0.09	Q	V				
8+15	0.0465	0.09	Q	V				
8+20	0.0471	0.09	Q	V				
8+25	0.0477	0.09	Q	V				
8+30	0.0483	0.09	Q	V				
8+35	0.0490	0.09	Q	V				
8+40	0.0496	0.09	Q	V				
8+45	0.0502	0.09	Q	V				
8+50	0.0508	0.09	Q	V				
8+55	0.0515	0.09	Q	V				
9+ 0	0.0521	0.09	Q	V				
9+ 5	0.0528	0.09	Q	V				
9+10	0.0534	0.09	Q	V				
9+15	0.0541	0.10	Q	V				
9+20	0.0547	0.10	Q	V				
9+25	0.0554	0.10	Q	V				
9+30	0.0561	0.10	Q	V				
9+35	0.0567	0.10	Q	V				
9+40	0.0574	0.10	Q	V				
9+45	0.0581	0.10	Q	V				
9+50	0.0588	0.10	Q	V				
9+55	0.0595	0.10	Q	V				
10+ 0	0.0602	0.10	Q	V				
10+ 5	0.0609	0.10	Q	V				
10+10	0.0617	0.11	Q	V				
10+15	0.0624	0.11	Q	V				
10+20	0.0631	0.11	Q	V				
10+25	0.0639	0.11	Q	V				
10+30	0.0646	0.11	Q	V				
10+35	0.0654	0.11	Q	V				
10+40	0.0662	0.11	Q	V				

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10+45       0.0670      0.11  Q       V |          |          |          |
10+50       0.0677      0.11  Q       V |          |          |          |
10+55       0.0685      0.12  Q       V |          |          |          |
11+ 0       0.0693      0.12  Q       V |          |          |          |
11+ 5       0.0702      0.12  Q       V |          |          |          |
11+10       0.0710      0.12  Q       V |          |          |          |
11+15       0.0718      0.12  Q        V|          |          |          |
11+20       0.0727      0.12  Q        V|          |          |          |
11+25       0.0735      0.12  Q        V|          |          |          |
11+30       0.0744      0.13  Q        V|          |          |          |
11+35       0.0753      0.13  Q        V|          |          |          |
11+40       0.0762      0.13  Q        V|          |          |          |
11+45       0.0771      0.13  Q        V|          |          |          |
11+50       0.0780      0.13  Q        V|          |          |          |
11+55       0.0789      0.13  Q        V|          |          |          |
12+ 0       0.0798      0.14  Q         V          |          |          |
12+ 5       0.0808      0.14  Q         V          |          |          |
12+10       0.0820      0.17  Q         V          |          |          |
12+15       0.0832      0.18  Q         V          |          |          |
12+20       0.0844      0.18  Q         V          |          |          |
12+25       0.0857      0.18  Q         V          |          |          |
12+30       0.0869      0.18  Q         V          |          |          |
12+35       0.0882      0.19  Q         |V         |          |          |
12+40       0.0895      0.19  Q         |V         |          |          |
12+45       0.0908      0.19  Q         |V         |          |          |
12+50       0.0921      0.19  Q         |V         |          |          |
12+55       0.0935      0.20  Q         |V         |          |          |
13+ 0       0.0949      0.20  Q         |V         |          |          |
13+ 5       0.0963      0.20  Q         | V        |          |          |
13+10       0.0977      0.21  Q         | V        |          |          |
13+15       0.0991      0.21  Q         | V        |          |          |
13+20       0.1006      0.21  Q         | V        |          |          |
13+25       0.1021      0.22  Q         | V        |          |          |
13+30       0.1036      0.22  Q         | V        |          |          |
13+35       0.1051      0.22  Q         |  V       |          |          |
13+40       0.1067      0.23  Q         |  V       |          |          |
13+45       0.1083      0.23  Q         |  V       |          |          |
13+50       0.1100      0.24  Q         |  V       |          |          |
13+55       0.1117      0.24  Q         |  V       |          |          |
14+ 0       0.1134      0.25  Q         |   V      |          |          |
14+ 5       0.1151      0.26  |Q        |   V      |          |          |
14+10       0.1170      0.27  |Q        |   V      |          |          |
14+15       0.1189      0.28  |Q        |   V      |          |          |
14+20       0.1209      0.29  |Q        |    V     |          |          |
14+25       0.1229      0.29  |Q        |    V     |          |          |
14+30       0.1250      0.30  |Q        |    V     |          |          |
14+35       0.1271      0.31  |Q        |    V     |          |          |
14+40       0.1293      0.32  |Q        |     V    |          |          |
14+45       0.1315      0.33  |Q        |     V    |          |          |
14+50       0.1339      0.34  |Q        |     V    |          |          |
14+55       0.1363      0.35  |Q        |      V   |          |          |
15+ 0       0.1389      0.37  |Q        |      V   |          |          |
15+ 5       0.1415      0.38  |Q        |      V   |          |          |
15+10       0.1442      0.40  |Q        |       V  |          |          |
15+15       0.1471      0.42  |Q        |       V  |          |          |
15+20       0.1502      0.44  |Q        |       V  |          |          |
15+25       0.1533      0.45  |Q        |        V |          |          |
15+30       0.1564      0.44  |Q        |        V |          |          |
15+35       0.1596      0.47  |Q        |         V          |          |
15+40       0.1632      0.52  | Q       |         V          |          |
15+45       0.1672      0.58  | Q       |         V          |          |
15+50       0.1720      0.70  | Q       |         |V         |          |
15+55       0.1778      0.84  |  Q      |         | V        |          |
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16+ 0       0.1858      1.16  |   Q     |         |  V      |         |
16+ 5       0.2003      2.11  |       Q |         |    V    |         |
16+10       0.2236      3.39  |         |  Q      |       V |         |
16+15       0.2330      1.37  |    Q    |         |        V|         |
16+20       0.2377      0.68  | Q       |         |        V|         |
16+25       0.2412      0.51  | Q       |         |         V         |
16+30       0.2445      0.47  |Q        |         |         V         |
16+35       0.2475      0.43  |Q        |         |         |V        |
16+40       0.2502      0.39  |Q        |         |         |V        |
16+45       0.2526      0.36  |Q        |         |         |V        |
16+50       0.2549      0.33  |Q        |         |         |V        |
16+55       0.2571      0.31  |Q        |         |         | V       |
17+ 0       0.2591      0.30  |Q        |         |         | V       |
17+ 5       0.2610      0.28  |Q        |         |         | V       |
17+10       0.2628      0.26  |Q        |         |         | V       |
17+15       0.2645      0.25  Q         |         |         |  V      |
17+20       0.2661      0.24  Q         |         |         |  V      |
17+25       0.2677      0.23  Q         |         |         |  V      |
17+30       0.2692      0.22  Q         |         |         |  V      |
17+35       0.2706      0.21  Q         |         |         |  V      |
17+40       0.2720      0.20  Q         |         |         |   V     |
17+45       0.2734      0.20  Q         |         |         |   V     |
17+50       0.2747      0.19  Q         |         |         |   V     |
17+55       0.2760      0.19  Q         |         |         |   V     |
18+ 0       0.2773      0.18  Q         |         |         |   V     |
18+ 5       0.2784      0.17  Q         |         |         |   V     |
18+10       0.2794      0.14  Q         |         |         |    V    |
18+15       0.2804      0.14  Q         |         |         |    V    |
18+20       0.2813      0.13  Q         |         |         |    V    |
18+25       0.2821      0.13  Q         |         |         |    V    |
18+30       0.2830      0.12  Q         |         |         |    V    |
18+35       0.2838      0.12  Q         |         |         |    V    |
18+40       0.2847      0.12  Q         |         |         |    V    |
18+45       0.2855      0.12  Q         |         |         |    V    |
18+50       0.2862      0.11  Q         |         |         |    V    |
18+55       0.2870      0.11  Q         |         |         |    V    |
19+ 0       0.2878      0.11  Q         |         |         |     V   |
19+ 5       0.2885      0.11  Q         |         |         |     V   |
19+10       0.2892      0.10  Q         |         |         |     V   |
19+15       0.2899      0.10  Q         |         |         |     V   |
19+20       0.2906      0.10  Q         |         |         |     V   |
19+25       0.2913      0.10  Q         |         |         |     V   |
19+30       0.2920      0.10  Q         |         |         |     V   |
19+35       0.2926      0.10  Q         |         |         |     V   |
19+40       0.2933      0.09  Q         |         |         |     V   |
19+45       0.2939      0.09  Q         |         |         |     V   |
19+50       0.2945      0.09  Q         |         |         |     V   |
19+55       0.2951      0.09  Q         |         |         |     V   |
20+ 0       0.2958      0.09  Q         |         |         |      V  |
20+ 5       0.2964      0.09  Q         |         |         |      V  |
20+10       0.2970      0.09  Q         |         |         |      V  |
20+15       0.2975      0.09  Q         |         |         |      V  |
20+20       0.2981      0.08  Q         |         |         |      V  |
20+25       0.2987      0.08  Q         |         |         |      V  |
20+30       0.2993      0.08  Q         |         |         |      V  |
20+35       0.2998      0.08  Q         |         |         |      V  |
20+40       0.3004      0.08  Q         |         |         |      V  |
20+45       0.3009      0.08  Q         |         |         |      V  |
20+50       0.3015      0.08  Q         |         |         |      V  |
20+55       0.3020      0.08  Q         |         |         |      V  |
21+ 0       0.3025      0.08  Q         |         |         |      V  |
21+ 5       0.3031      0.08  Q         |         |         |      V  |
21+10       0.3036      0.08  Q         |         |         |       V |
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```
   21+15       0.3041      0.07  Q          |          |          |        V |
   21+20       0.3046      0.07  Q          |          |          |        V |
   21+25       0.3051      0.07  Q          |          |          |        V |
   21+30       0.3056      0.07  Q          |          |          |        V |
   21+35       0.3061      0.07  Q          |          |          |        V |
   21+40       0.3066      0.07  Q          |          |          |        V |
   21+45       0.3071      0.07  Q          |          |          |        V |
   21+50       0.3075      0.07  Q          |          |          |        V |
   21+55       0.3080      0.07  Q          |          |          |        V |
   22+ 0       0.3085      0.07  Q          |          |          |        V |
   22+ 5       0.3089      0.07  Q          |          |          |        V |
   22+10       0.3094      0.07  Q          |          |          |        V |
   22+15       0.3099      0.07  Q          |          |          |        V |
   22+20       0.3103      0.07  Q          |          |          |        V |
   22+25       0.3108      0.07  Q          |          |          |        V |
   22+30       0.3112      0.06  Q          |          |          |         V|
   22+35       0.3117      0.06  Q          |          |          |         V|
   22+40       0.3121      0.06  Q          |          |          |         V|
   22+45       0.3125      0.06  Q          |          |          |         V|
   22+50       0.3130      0.06  Q          |          |          |         V|
   22+55       0.3134      0.06  Q          |          |          |         V|
   23+ 0       0.3138      0.06  Q          |          |          |         V|
   23+ 5       0.3143      0.06  Q          |          |          |         V|
   23+10       0.3147      0.06  Q          |          |          |         V|
   23+15       0.3151      0.06  Q          |          |          |         V|
   23+20       0.3155      0.06  Q          |          |          |         V|
   23+25       0.3159      0.06  Q          |          |          |         V|
   23+30       0.3163      0.06  Q          |          |          |         V|
   23+35       0.3167      0.06  Q          |          |          |         V|
   23+40       0.3171      0.06  Q          |          |          |         V|
   23+45       0.3175      0.06  Q          |          |          |         V|
   23+50       0.3179      0.06  Q          |          |          |         V|
   23+55       0.3183      0.06  Q          |          |          |         V|
   24+ 0       0.3187      0.06  Q          |          |          |         V|
   24+ 5       0.3190      0.04  Q          |          |          |         V|
   24+10       0.3191      0.01  Q          |          |          |         V|
   24+15       0.3191      0.00  Q          |          |          |         V|
-------------------------------------------------------------------------
```

U n i t H y d r o g r a p h A n a l y s i s

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Study date 10/27/20 File Name 878002UHPOST.out

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Orange County Unit Hydrograph Hydrology Method
Manual Date(s) - October 1986, November 1996

Program License Serial Number 6049

PLACENTIA PODIUM DEVELOPMENT
2-YEAR STORM POST DEVELOPMENT
878002UHPOST
FUSCOE ENGINEERING

Storm Event Year = 2

Antecedent Moisture Condition = 1

English (in-lb) Input Units Used

++

******** Area-averaged max loss rate, Fm ********

SCS curve No.(AMCII)	Area (Ac.)	Area Fraction	Soil Group	Fp (In/Hr)	Ap (dec.)	Fm (In/Hr)
69.0	2.0	1.00	C	0.250	0.200	0.050

Area-averaged adjusted loss rate Fm (In/Hr) = 0.050

********* Area-Averaged low loss rate fraction, Yb **********

Area (Ac.)	Area Fract	SCS CN (AMC2)	SCS CN (AMC1)	S	Pervious Yield Fr
0.40	0.200	69.0	49.8	10.08	0.000
1.62	0.800	98.0	98.0	0.20	0.890

Area-averaged catchment yield fraction, Y = 0.712
Area-averaged low loss fraction, Yb = 0.288

++
User entry of time of concentration = 0.100 (hours)
Watershed area = 2.02(Ac.)
Catchment Lag time = 0.080 hours
Unit interval = 5.000 minutes
Unit interval percentage of lag time = 104.3754
Hydrograph baseflow = 0.00(CFS)
Average maximum watershed loss rate(Fm) = 0.050(In/Hr)
Average low loss rate fraction (Yb) = 0.288 (decimal)
VALLEY DEVELOPED S-Graph Selected
Computed peak 5-minute rainfall = 0.190(In)
Computed peak 30-minute rainfall = 0.400(In)
Specified peak 1-hour rainfall = 0.530(In)
Computed peak 3-hour rainfall = 0.890(In)

Specified peak 6-hour rainfall = 1.220(In)
Specified peak 24-hour rainfall = 2.050(In)

Rainfall depth area reduction factors:
Using a total area of 2.02(Ac.) (Ref: fig. E-4)

5-minute factor = 1.000 Adjusted rainfall = 0.190(In)
30-minute factor = 1.000 Adjusted rainfall = 0.400(In)
1-hour factor = 1.000 Adjusted rainfall = 0.530(In)
3-hour factor = 1.000 Adjusted rainfall = 0.890(In)
6-hour factor = 1.000 Adjusted rainfall = 1.220(In)
24-hour factor = 1.000 Adjusted rainfall = 2.050(In)

U n i t H y d r o g r a p h

Interval Number	'S' Graph Mean values	Unit Hydrograph ((CFS))
	(K = 24.43 (CFS))	
1	18.631	4.551
2	81.867	15.448
3	98.277	4.009
4	100.000	0.421

Peak Unit Number	Adjusted mass rainfall (In)	Unit rainfall (In)
1	0.1900	0.1900
2	0.2534	0.0634
3	0.2999	0.0465
4	0.3380	0.0381
5	0.3708	0.0328
6	0.4000	0.0292
7	0.4258	0.0258
8	0.4495	0.0237
9	0.4715	0.0220
10	0.4921	0.0206
11	0.5116	0.0194
12	0.5299	0.0184
13	0.5503	0.0204
14	0.5699	0.0196
15	0.5888	0.0189
16	0.6070	0.0182
17	0.6246	0.0176
18	0.6417	0.0171
19	0.6583	0.0166
20	0.6744	0.0161
21	0.6901	0.0157
22	0.7054	0.0153
23	0.7204	0.0150
24	0.7350	0.0146
25	0.7493	0.0143
26	0.7633	0.0140
27	0.7770	0.0137
28	0.7905	0.0134
29	0.8037	0.0132
30	0.8166	0.0130
31	0.8294	0.0127
32	0.8419	0.0125
33	0.8542	0.0123
34	0.8663	0.0121

35	0.8782	0.0119
36	0.8900	0.0118
37	0.9012	0.0112
38	0.9122	0.0110
39	0.9230	0.0108
40	0.9337	0.0107
41	0.9442	0.0105
42	0.9547	0.0104
43	0.9649	0.0103
44	0.9751	0.0101
45	0.9851	0.0100
46	0.9950	0.0099
47	1.0048	0.0098
48	1.0145	0.0097
49	1.0240	0.0096
50	1.0335	0.0095
51	1.0428	0.0094
52	1.0521	0.0093
53	1.0612	0.0092
54	1.0703	0.0091
55	1.0793	0.0090
56	1.0882	0.0089
57	1.0970	0.0088
58	1.1057	0.0087
59	1.1143	0.0086
60	1.1229	0.0086
61	1.1313	0.0085
62	1.1397	0.0084
63	1.1481	0.0083
64	1.1563	0.0083
65	1.1645	0.0082
66	1.1726	0.0081
67	1.1807	0.0081
68	1.1887	0.0080
69	1.1966	0.0079
70	1.2045	0.0079
71	1.2123	0.0078
72	1.2200	0.0077
73	1.2263	0.0063
74	1.2326	0.0063
75	1.2388	0.0062
76	1.2449	0.0062
77	1.2510	0.0061
78	1.2571	0.0061
79	1.2631	0.0060
80	1.2691	0.0060
81	1.2750	0.0059
82	1.2809	0.0059
83	1.2867	0.0058
84	1.2925	0.0058
85	1.2982	0.0057
86	1.3039	0.0057
87	1.3096	0.0057
88	1.3152	0.0056
89	1.3208	0.0056
90	1.3263	0.0055
91	1.3318	0.0055
92	1.3372	0.0055
93	1.3427	0.0054
94	1.3481	0.0054
95	1.3534	0.0054
96	1.3587	0.0053
97	1.3640	0.0053

98	1.3693	0.0052
99	1.3745	0.0052
100	1.3796	0.0052
101	1.3848	0.0051
102	1.3899	0.0051
103	1.3950	0.0051
104	1.4001	0.0051
105	1.4051	0.0050
106	1.4101	0.0050
107	1.4150	0.0050
108	1.4200	0.0049
109	1.4249	0.0049
110	1.4298	0.0049
111	1.4346	0.0049
112	1.4394	0.0048
113	1.4442	0.0048
114	1.4490	0.0048
115	1.4538	0.0047
116	1.4585	0.0047
117	1.4632	0.0047
118	1.4678	0.0047
119	1.4725	0.0046
120	1.4771	0.0046
121	1.4817	0.0046
122	1.4863	0.0046
123	1.4908	0.0045
124	1.4953	0.0045
125	1.4999	0.0045
126	1.5043	0.0045
127	1.5088	0.0045
128	1.5132	0.0044
129	1.5176	0.0044
130	1.5220	0.0044
131	1.5264	0.0044
132	1.5308	0.0044
133	1.5351	0.0043
134	1.5394	0.0043
135	1.5437	0.0043
136	1.5480	0.0043
137	1.5522	0.0043
138	1.5565	0.0042
139	1.5607	0.0042
140	1.5649	0.0042
141	1.5690	0.0042
142	1.5732	0.0042
143	1.5773	0.0041
144	1.5814	0.0041
145	1.5856	0.0041
146	1.5896	0.0041
147	1.5937	0.0041
148	1.5978	0.0041
149	1.6018	0.0040
150	1.6058	0.0040
151	1.6098	0.0040
152	1.6138	0.0040
153	1.6178	0.0040
154	1.6217	0.0040
155	1.6256	0.0039
156	1.6296	0.0039
157	1.6335	0.0039
158	1.6373	0.0039
159	1.6412	0.0039
160	1.6451	0.0039

161	1.6489	0.0038
162	1.6527	0.0038
163	1.6566	0.0038
164	1.6604	0.0038
165	1.6641	0.0038
166	1.6679	0.0038
167	1.6717	0.0038
168	1.6754	0.0037
169	1.6791	0.0037
170	1.6828	0.0037
171	1.6865	0.0037
172	1.6902	0.0037
173	1.6939	0.0037
174	1.6976	0.0037
175	1.7012	0.0036
176	1.7048	0.0036
177	1.7085	0.0036
178	1.7121	0.0036
179	1.7157	0.0036
180	1.7192	0.0036
181	1.7228	0.0036
182	1.7264	0.0036
183	1.7299	0.0035
184	1.7334	0.0035
185	1.7370	0.0035
186	1.7405	0.0035
187	1.7440	0.0035
188	1.7475	0.0035
189	1.7509	0.0035
190	1.7544	0.0035
191	1.7578	0.0035
192	1.7613	0.0034
193	1.7647	0.0034
194	1.7681	0.0034
195	1.7715	0.0034
196	1.7749	0.0034
197	1.7783	0.0034
198	1.7817	0.0034
199	1.7851	0.0034
200	1.7884	0.0034
201	1.7917	0.0033
202	1.7951	0.0033
203	1.7984	0.0033
204	1.8017	0.0033
205	1.8050	0.0033
206	1.8083	0.0033
207	1.8116	0.0033
208	1.8149	0.0033
209	1.8181	0.0033
210	1.8214	0.0033
211	1.8246	0.0032
212	1.8278	0.0032
213	1.8311	0.0032
214	1.8343	0.0032
215	1.8375	0.0032
216	1.8407	0.0032
217	1.8439	0.0032
218	1.8470	0.0032
219	1.8502	0.0032
220	1.8534	0.0032
221	1.8565	0.0031
222	1.8597	0.0031
223	1.8628	0.0031

224	1.8659	0.0031
225	1.8690	0.0031
226	1.8721	0.0031
227	1.8752	0.0031
228	1.8783	0.0031
229	1.8814	0.0031
230	1.8845	0.0031
231	1.8875	0.0031
232	1.8906	0.0031
233	1.8936	0.0030
234	1.8967	0.0030
235	1.8997	0.0030
236	1.9027	0.0030
237	1.9057	0.0030
238	1.9087	0.0030
239	1.9117	0.0030
240	1.9147	0.0030
241	1.9177	0.0030
242	1.9207	0.0030
243	1.9237	0.0030
244	1.9266	0.0030
245	1.9296	0.0030
246	1.9325	0.0029
247	1.9355	0.0029
248	1.9384	0.0029
249	1.9413	0.0029
250	1.9442	0.0029
251	1.9471	0.0029
252	1.9500	0.0029
253	1.9529	0.0029
254	1.9558	0.0029
255	1.9587	0.0029
256	1.9616	0.0029
257	1.9644	0.0029
258	1.9673	0.0029
259	1.9701	0.0029
260	1.9730	0.0028
261	1.9758	0.0028
262	1.9787	0.0028
263	1.9815	0.0028
264	1.9843	0.0028
265	1.9871	0.0028
266	1.9899	0.0028
267	1.9927	0.0028
268	1.9955	0.0028
269	1.9983	0.0028
270	2.0011	0.0028
271	2.0038	0.0028
272	2.0066	0.0028
273	2.0094	0.0028
274	2.0121	0.0028
275	2.0149	0.0027
276	2.0176	0.0027
277	2.0203	0.0027
278	2.0231	0.0027
279	2.0258	0.0027
280	2.0285	0.0027
281	2.0312	0.0027
282	2.0339	0.0027
283	2.0366	0.0027
284	2.0393	0.0027
285	2.0420	0.0027
286	2.0447	0.0027

287	2.0473	0.0027	
288	2.0500	0.0027	

Unit Period (number)	Unit Rainfall (In)	Unit Soil-Loss (In)	Effective Rainfall (In)
1	0.0027	0.0008	0.0019
2	0.0027	0.0008	0.0019
3	0.0027	0.0008	0.0019
4	0.0027	0.0008	0.0019
5	0.0027	0.0008	0.0019
6	0.0027	0.0008	0.0019
7	0.0027	0.0008	0.0019
8	0.0027	0.0008	0.0019
9	0.0027	0.0008	0.0020
10	0.0027	0.0008	0.0020
11	0.0028	0.0008	0.0020
12	0.0028	0.0008	0.0020
13	0.0028	0.0008	0.0020
14	0.0028	0.0008	0.0020
15	0.0028	0.0008	0.0020
16	0.0028	0.0008	0.0020
17	0.0028	0.0008	0.0020
18	0.0028	0.0008	0.0020
19	0.0028	0.0008	0.0020
20	0.0028	0.0008	0.0020
21	0.0029	0.0008	0.0020
22	0.0029	0.0008	0.0020
23	0.0029	0.0008	0.0020
24	0.0029	0.0008	0.0021
25	0.0029	0.0008	0.0021
26	0.0029	0.0008	0.0021
27	0.0029	0.0008	0.0021
28	0.0029	0.0008	0.0021
29	0.0029	0.0008	0.0021
30	0.0030	0.0009	0.0021
31	0.0030	0.0009	0.0021
32	0.0030	0.0009	0.0021
33	0.0030	0.0009	0.0021
34	0.0030	0.0009	0.0021
35	0.0030	0.0009	0.0021
36	0.0030	0.0009	0.0022
37	0.0030	0.0009	0.0022
38	0.0030	0.0009	0.0022
39	0.0031	0.0009	0.0022
40	0.0031	0.0009	0.0022
41	0.0031	0.0009	0.0022
42	0.0031	0.0009	0.0022
43	0.0031	0.0009	0.0022
44	0.0031	0.0009	0.0022
45	0.0031	0.0009	0.0022
46	0.0031	0.0009	0.0022
47	0.0032	0.0009	0.0023
48	0.0032	0.0009	0.0023
49	0.0032	0.0009	0.0023
50	0.0032	0.0009	0.0023
51	0.0032	0.0009	0.0023
52	0.0032	0.0009	0.0023
53	0.0033	0.0009	0.0023
54	0.0033	0.0009	0.0023
55	0.0033	0.0009	0.0023
56	0.0033	0.0009	0.0023

57	0.0033	0.0010	0.0024
58	0.0033	0.0010	0.0024
59	0.0033	0.0010	0.0024
60	0.0034	0.0010	0.0024
61	0.0034	0.0010	0.0024
62	0.0034	0.0010	0.0024
63	0.0034	0.0010	0.0024
64	0.0034	0.0010	0.0024
65	0.0034	0.0010	0.0024
66	0.0035	0.0010	0.0025
67	0.0035	0.0010	0.0025
68	0.0035	0.0010	0.0025
69	0.0035	0.0010	0.0025
70	0.0035	0.0010	0.0025
71	0.0035	0.0010	0.0025
72	0.0036	0.0010	0.0025
73	0.0036	0.0010	0.0025
74	0.0036	0.0010	0.0026
75	0.0036	0.0010	0.0026
76	0.0036	0.0010	0.0026
77	0.0037	0.0011	0.0026
78	0.0037	0.0011	0.0026
79	0.0037	0.0011	0.0026
80	0.0037	0.0011	0.0026
81	0.0037	0.0011	0.0027
82	0.0038	0.0011	0.0027
83	0.0038	0.0011	0.0027
84	0.0038	0.0011	0.0027
85	0.0038	0.0011	0.0027
86	0.0038	0.0011	0.0027
87	0.0039	0.0011	0.0028
88	0.0039	0.0011	0.0028
89	0.0039	0.0011	0.0028
90	0.0039	0.0011	0.0028
91	0.0040	0.0011	0.0028
92	0.0040	0.0011	0.0028
93	0.0040	0.0012	0.0029
94	0.0040	0.0012	0.0029
95	0.0041	0.0012	0.0029
96	0.0041	0.0012	0.0029
97	0.0041	0.0012	0.0029
98	0.0041	0.0012	0.0029
99	0.0042	0.0012	0.0030
100	0.0042	0.0012	0.0030
101	0.0042	0.0012	0.0030
102	0.0043	0.0012	0.0030
103	0.0043	0.0012	0.0031
104	0.0043	0.0012	0.0031
105	0.0044	0.0013	0.0031
106	0.0044	0.0013	0.0031
107	0.0044	0.0013	0.0031
108	0.0044	0.0013	0.0032
109	0.0045	0.0013	0.0032
110	0.0045	0.0013	0.0032
111	0.0045	0.0013	0.0032
112	0.0046	0.0013	0.0033
113	0.0046	0.0013	0.0033
114	0.0046	0.0013	0.0033
115	0.0047	0.0014	0.0033
116	0.0047	0.0014	0.0034
117	0.0048	0.0014	0.0034
118	0.0048	0.0014	0.0034
119	0.0049	0.0014	0.0035

120	0.0049	0.0014	0.0035
121	0.0049	0.0014	0.0035
122	0.0050	0.0014	0.0035
123	0.0050	0.0014	0.0036
124	0.0051	0.0015	0.0036
125	0.0051	0.0015	0.0036
126	0.0051	0.0015	0.0037
127	0.0052	0.0015	0.0037
128	0.0052	0.0015	0.0037
129	0.0053	0.0015	0.0038
130	0.0054	0.0015	0.0038
131	0.0054	0.0016	0.0039
132	0.0055	0.0016	0.0039
133	0.0055	0.0016	0.0039
134	0.0056	0.0016	0.0040
135	0.0057	0.0016	0.0040
136	0.0057	0.0016	0.0041
137	0.0058	0.0017	0.0041
138	0.0058	0.0017	0.0041
139	0.0059	0.0017	0.0042
140	0.0060	0.0017	0.0042
141	0.0061	0.0017	0.0043
142	0.0061	0.0018	0.0043
143	0.0062	0.0018	0.0044
144	0.0063	0.0018	0.0045
145	0.0077	0.0022	0.0055
146	0.0078	0.0022	0.0056
147	0.0079	0.0023	0.0056
148	0.0080	0.0023	0.0057
149	0.0081	0.0023	0.0058
150	0.0082	0.0024	0.0058
151	0.0083	0.0024	0.0059
152	0.0084	0.0024	0.0060
153	0.0086	0.0025	0.0061
154	0.0086	0.0025	0.0061
155	0.0088	0.0025	0.0063
156	0.0089	0.0026	0.0063
157	0.0091	0.0026	0.0065
158	0.0092	0.0026	0.0065
159	0.0094	0.0027	0.0067
160	0.0095	0.0027	0.0067
161	0.0097	0.0028	0.0069
162	0.0098	0.0028	0.0070
163	0.0100	0.0029	0.0071
164	0.0101	0.0029	0.0072
165	0.0104	0.0030	0.0074
166	0.0105	0.0030	0.0075
167	0.0108	0.0031	0.0077
168	0.0110	0.0032	0.0078
169	0.0118	0.0034	0.0084
170	0.0119	0.0034	0.0085
171	0.0123	0.0035	0.0088
172	0.0125	0.0036	0.0089
173	0.0130	0.0037	0.0092
174	0.0132	0.0038	0.0094
175	0.0137	0.0040	0.0098
176	0.0140	0.0040	0.0100
177	0.0146	0.0042	0.0104
178	0.0150	0.0042	0.0108
179	0.0157	0.0042	0.0115
180	0.0161	0.0042	0.0120
181	0.0171	0.0042	0.0129
182	0.0176	0.0042	0.0134

183	0.0189	0.0042	0.0147
184	0.0196	0.0042	0.0154
185	0.0184	0.0042	0.0142
186	0.0194	0.0042	0.0152
187	0.0220	0.0042	0.0179
188	0.0237	0.0042	0.0196
189	0.0292	0.0042	0.0250
190	0.0328	0.0042	0.0287
191	0.0465	0.0042	0.0423
192	0.0634	0.0042	0.0592
193	0.1900	0.0042	0.1858
194	0.0381	0.0042	0.0339
195	0.0258	0.0042	0.0217
196	0.0206	0.0042	0.0164
197	0.0204	0.0042	0.0162
198	0.0182	0.0042	0.0140
199	0.0166	0.0042	0.0124
200	0.0153	0.0042	0.0112
201	0.0143	0.0041	0.0102
202	0.0134	0.0039	0.0096
203	0.0127	0.0037	0.0091
204	0.0121	0.0035	0.0086
205	0.0112	0.0032	0.0079
206	0.0107	0.0031	0.0076
207	0.0103	0.0030	0.0073
208	0.0099	0.0029	0.0070
209	0.0096	0.0028	0.0068
210	0.0093	0.0027	0.0066
211	0.0090	0.0026	0.0064
212	0.0087	0.0025	0.0062
213	0.0085	0.0024	0.0060
214	0.0083	0.0024	0.0059
215	0.0081	0.0023	0.0057
216	0.0079	0.0023	0.0056
217	0.0063	0.0018	0.0045
218	0.0062	0.0018	0.0044
219	0.0060	0.0017	0.0043
220	0.0059	0.0017	0.0042
221	0.0057	0.0017	0.0041
222	0.0056	0.0016	0.0040
223	0.0055	0.0016	0.0039
224	0.0054	0.0016	0.0038
225	0.0053	0.0015	0.0038
226	0.0052	0.0015	0.0037
227	0.0051	0.0015	0.0036
228	0.0050	0.0014	0.0036
229	0.0049	0.0014	0.0035
230	0.0048	0.0014	0.0034
231	0.0047	0.0014	0.0034
232	0.0047	0.0013	0.0033
233	0.0046	0.0013	0.0033
234	0.0045	0.0013	0.0032
235	0.0045	0.0013	0.0032
236	0.0044	0.0013	0.0031
237	0.0043	0.0012	0.0031
238	0.0043	0.0012	0.0030
239	0.0042	0.0012	0.0030
240	0.0042	0.0012	0.0030
241	0.0041	0.0012	0.0029
242	0.0041	0.0012	0.0029
243	0.0040	0.0012	0.0028
244	0.0040	0.0011	0.0028
245	0.0039	0.0011	0.0028

246	0.0039	0.0011	0.0027
247	0.0038	0.0011	0.0027
248	0.0038	0.0011	0.0027
249	0.0037	0.0011	0.0027
250	0.0037	0.0011	0.0026
251	0.0036	0.0011	0.0026
252	0.0036	0.0010	0.0026
253	0.0036	0.0010	0.0025
254	0.0035	0.0010	0.0025
255	0.0035	0.0010	0.0025
256	0.0035	0.0010	0.0025
257	0.0034	0.0010	0.0024
258	0.0034	0.0010	0.0024
259	0.0034	0.0010	0.0024
260	0.0033	0.0010	0.0024
261	0.0033	0.0010	0.0023
262	0.0033	0.0009	0.0023
263	0.0032	0.0009	0.0023
264	0.0032	0.0009	0.0023
265	0.0032	0.0009	0.0023
266	0.0032	0.0009	0.0022
267	0.0031	0.0009	0.0022
268	0.0031	0.0009	0.0022
269	0.0031	0.0009	0.0022
270	0.0031	0.0009	0.0022
271	0.0030	0.0009	0.0022
272	0.0030	0.0009	0.0021
273	0.0030	0.0009	0.0021
274	0.0030	0.0009	0.0021
275	0.0029	0.0008	0.0021
276	0.0029	0.0008	0.0021
277	0.0029	0.0008	0.0021
278	0.0029	0.0008	0.0020
279	0.0029	0.0008	0.0020
280	0.0028	0.0008	0.0020
281	0.0028	0.0008	0.0020
282	0.0028	0.0008	0.0020
283	0.0028	0.0008	0.0020
284	0.0028	0.0008	0.0020
285	0.0027	0.0008	0.0019
286	0.0027	0.0008	0.0019
287	0.0027	0.0008	0.0019
288	0.0027	0.0008	0.0019

Total soil rain loss = 0.48(In)
Total effective rainfall = 1.57(In)
Peak flow rate in flood hydrograph = 3.28(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0001	0.01	Q	|	|	|	|
0+10	0.0003	0.04	Q	|	|	|	|
0+15	0.0006	0.05	Q	|	|	|	|
0+20	0.0010	0.05	Q	|	|	|	|
0+25	0.0013	0.05	Q	|	|	|	|

0+30	0.0016	0.05	Q	|	|	|	|
0+35	0.0019	0.05	Q	|	|	|	|
0+40	0.0023	0.05	Q	|	|	|	|
0+45	0.0026	0.05	Q	|	|	|	|
0+50	0.0029	0.05	Q	|	|	|	|
0+55	0.0032	0.05	Q	|	|	|	|
1+ 0	0.0036	0.05	Q	|	|	|	|
1+ 5	0.0039	0.05	Q	|	|	|	|
1+10	0.0042	0.05	Q	|	|	|	|
1+15	0.0046	0.05	Q	|	|	|	|
1+20	0.0049	0.05	Q	|	|	|	|
1+25	0.0052	0.05	Q	|	|	|	|
1+30	0.0056	0.05	Q	|	|	|	|
1+35	0.0059	0.05	Q	|	|	|	|
1+40	0.0063	0.05	Q	|	|	|	|
1+45	0.0066	0.05	Q	|	|	|	|
1+50	0.0069	0.05	QV	|	|	|	|
1+55	0.0073	0.05	QV	|	|	|	|
2+ 0	0.0076	0.05	QV	|	|	|	|
2+ 5	0.0080	0.05	QV	|	|	|	|
2+10	0.0083	0.05	QV	|	|	|	|
2+15	0.0087	0.05	QV	|	|	|	|
2+20	0.0090	0.05	QV	|	|	|	|
2+25	0.0094	0.05	QV	|	|	|	|
2+30	0.0097	0.05	QV	|	|	|	|
2+35	0.0101	0.05	QV	|	|	|	|
2+40	0.0104	0.05	QV	|	|	|	|
2+45	0.0108	0.05	QV	|	|	|	|
2+50	0.0111	0.05	QV	|	|	|	|
2+55	0.0115	0.05	QV	|	|	|	|
3+ 0	0.0119	0.05	QV	|	|	|	|
3+ 5	0.0122	0.05	QV	|	|	|	|
3+10	0.0126	0.05	QV	|	|	|	|
3+15	0.0130	0.05	QV	|	|	|	|
3+20	0.0133	0.05	Q V	|	|	|	|
3+25	0.0137	0.05	Q V	|	|	|	|
3+30	0.0141	0.05	Q V	|	|	|	|
3+35	0.0144	0.05	Q V	|	|	|	|
3+40	0.0148	0.05	Q V	|	|	|	|
3+45	0.0152	0.05	Q V	|	|	|	|
3+50	0.0155	0.05	Q V	|	|	|	|
3+55	0.0159	0.05	Q V	|	|	|	|
4+ 0	0.0163	0.06	Q V	|	|	|	|
4+ 5	0.0167	0.06	Q V	|	|	|	|
4+10	0.0171	0.06	Q V	|	|	|	|
4+15	0.0175	0.06	Q V	|	|	|	|
4+20	0.0178	0.06	Q V	|	|	|	|
4+25	0.0182	0.06	Q V	|	|	|	|
4+30	0.0186	0.06	Q V	|	|	|	|
4+35	0.0190	0.06	Q V	|	|	|	|
4+40	0.0194	0.06	Q V	|	|	|	|
4+45	0.0198	0.06	Q V	|	|	|	|
4+50	0.0202	0.06	Q V	|	|	|	|
4+55	0.0206	0.06	Q V	|	|	|	|
5+ 0	0.0210	0.06	Q V	|	|	|	|
5+ 5	0.0214	0.06	Q V	|	|	|	|
5+10	0.0218	0.06	Q V	|	|	|	|
5+15	0.0222	0.06	Q V	|	|	|	|
5+20	0.0226	0.06	Q V	|	|	|	|
5+25	0.0230	0.06	Q V	|	|	|	|
5+30	0.0234	0.06	Q V	|	|	|	|
5+35	0.0238	0.06	Q V	|	|	|	|
5+40	0.0243	0.06	Q V	|	|	|	|

5+45	0.0247	0.06	Q	V				
5+50	0.0251	0.06	Q	V				
5+55	0.0255	0.06	Q	V				
6+ 0	0.0259	0.06	Q	V				
6+ 5	0.0264	0.06	Q	V				
6+10	0.0268	0.06	Q	V				
6+15	0.0272	0.06	Q	V				
6+20	0.0277	0.06	Q	V				
6+25	0.0281	0.06	Q	V				
6+30	0.0285	0.06	Q	V				
6+35	0.0290	0.06	Q	V				
6+40	0.0294	0.06	Q	V				
6+45	0.0299	0.06	Q	V				
6+50	0.0303	0.06	Q	V				
6+55	0.0308	0.07	Q	V				
7+ 0	0.0312	0.07	Q	V				
7+ 5	0.0317	0.07	Q	V				
7+10	0.0321	0.07	Q	V				
7+15	0.0326	0.07	Q	V				
7+20	0.0330	0.07	Q	V				
7+25	0.0335	0.07	Q	V				
7+30	0.0340	0.07	Q	V				
7+35	0.0345	0.07	Q	V				
7+40	0.0349	0.07	Q	V				
7+45	0.0354	0.07	Q	V				
7+50	0.0359	0.07	Q	V				
7+55	0.0364	0.07	Q	V				
8+ 0	0.0369	0.07	Q	V				
8+ 5	0.0373	0.07	Q	V				
8+10	0.0378	0.07	Q	V				
8+15	0.0383	0.07	Q	V				
8+20	0.0388	0.07	Q	V				
8+25	0.0393	0.07	Q	V				
8+30	0.0398	0.07	Q	V				
8+35	0.0404	0.07	Q	V				
8+40	0.0409	0.07	Q	V				
8+45	0.0414	0.08	Q	V				
8+50	0.0419	0.08	Q	V				
8+55	0.0424	0.08	Q	V				
9+ 0	0.0430	0.08	Q	V				
9+ 5	0.0435	0.08	Q	V				
9+10	0.0440	0.08	Q	V				
9+15	0.0446	0.08	Q	V				
9+20	0.0451	0.08	Q	V				
9+25	0.0457	0.08	Q	V				
9+30	0.0462	0.08	Q	V				
9+35	0.0468	0.08	Q	V				
9+40	0.0473	0.08	Q	V				
9+45	0.0479	0.08	Q	V				
9+50	0.0485	0.08	Q	V				
9+55	0.0490	0.08	Q	V				
10+ 0	0.0496	0.08	Q	V				
10+ 5	0.0502	0.08	Q	V				
10+10	0.0508	0.09	Q	V				
10+15	0.0514	0.09	Q	V				
10+20	0.0520	0.09	Q	V				
10+25	0.0526	0.09	Q	V				
10+30	0.0532	0.09	Q	V				
10+35	0.0538	0.09	Q	V				
10+40	0.0544	0.09	Q	V				
10+45	0.0551	0.09	Q	V				
10+50	0.0557	0.09	Q	V				
10+55	0.0564	0.09	Q	V				

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11+ 0       0.0570      0.09  Q       V |         |          |          |
11+ 5       0.0577      0.10  Q       V |         |          |          |
11+10       0.0583      0.10  Q       V |         |          |          |
11+15       0.0590      0.10  Q       V |         |          |          |
11+20       0.0597      0.10  Q        V|         |          |          |
11+25       0.0603      0.10  Q        V|         |          |          |
11+30       0.0610      0.10  Q        V|         |          |          |
11+35       0.0617      0.10  Q        V|         |          |          |
11+40       0.0624      0.10  Q        V|         |          |          |
11+45       0.0632      0.10  Q        V|         |          |          |
11+50       0.0639      0.11  Q        V|         |          |          |
11+55       0.0646      0.11  Q        V|         |          |          |
12+ 0       0.0654      0.11  Q        V|         |          |          |
12+ 5       0.0661      0.11  Q         V         |          |          |
12+10       0.0670      0.13  Q         V         |          |          |
12+15       0.0680      0.14  Q         V         |          |          |
12+20       0.0689      0.14  Q         V         |          |          |
12+25       0.0699      0.14  Q         V         |          |          |
12+30       0.0708      0.14  Q         V         |          |          |
12+35       0.0718      0.14  Q         V         |          |          |
12+40       0.0728      0.14  Q         |V        |          |          |
12+45       0.0738      0.15  Q         |V        |          |          |
12+50       0.0749      0.15  Q         |V        |          |          |
12+55       0.0759      0.15  Q         |V        |          |          |
13+ 0       0.0769      0.15  Q         |V        |          |          |
13+ 5       0.0780      0.15  Q         |V        |          |          |
13+10       0.0791      0.16  Q         |V        |          |          |
13+15       0.0802      0.16  Q         | V       |          |          |
13+20       0.0813      0.16  Q         | V       |          |          |
13+25       0.0824      0.16  Q         | V       |          |          |
13+30       0.0836      0.17  Q         | V       |          |          |
13+35       0.0848      0.17  Q         | V       |          |          |
13+40       0.0860      0.17  Q         |  V      |          |          |
13+45       0.0872      0.18  Q         |  V      |          |          |
13+50       0.0884      0.18  Q         |  V      |          |          |
13+55       0.0897      0.18  Q         |  V      |          |          |
14+ 0       0.0910      0.19  Q         |  V      |          |          |
14+ 5       0.0923      0.19  Q         |  V      |          |          |
14+10       0.0937      0.20  Q         |   V     |          |          |
14+15       0.0951      0.21  Q         |   V     |          |          |
14+20       0.0966      0.21  Q         |   V     |          |          |
14+25       0.0981      0.22  Q         |   V     |          |          |
14+30       0.0997      0.22  Q         |    V    |          |          |
14+35       0.1013      0.23  Q         |    V    |          |          |
14+40       0.1029      0.24  Q         |    V    |          |          |
14+45       0.1046      0.24  Q         |    V    |          |          |
14+50       0.1063      0.25  |Q        |     V   |          |          |
14+55       0.1082      0.27  |Q        |     V   |          |          |
15+ 0       0.1101      0.28  |Q        |     V   |          |          |
15+ 5       0.1121      0.29  |Q        |     V   |          |          |
15+10       0.1143      0.31  |Q        |      V  |          |          |
15+15       0.1166      0.33  |Q        |      V  |          |          |
15+20       0.1190      0.36  |Q        |       V |          |          |
15+25       0.1215      0.37  |Q        |       V |          |          |
15+30       0.1240      0.36  |Q        |       V |          |          |
15+35       0.1266      0.38  |Q        |        V|          |          |
15+40       0.1296      0.43  |Q        |        V|          |          |
15+45       0.1330      0.49  |Q        |         V          |          |
15+50       0.1372      0.60  | Q       |         V          |          |
15+55       0.1423      0.74  | Q       |         |V         |          |
16+ 0       0.1495      1.05  |   Q     |         | V        |          |
16+ 5       0.1629      1.94  |      Q  |         |   V      |          |
16+10       0.1855      3.28  |         |  Q      |       V  |          |
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16+15       0.1951      1.39  |    Q    |         |        V|         |
16+20       0.1994      0.62  | Q       |         |         V         |
16+25       0.2023      0.43  |Q        |         |         V         |
16+30       0.2050      0.39  |Q        |         |         |V        |
16+35       0.2074      0.35  |Q        |         |         |V        |
16+40       0.2095      0.31  |Q        |         |         |V        |
16+45       0.2114      0.27  |Q        |         |         |V        |
16+50       0.2131      0.25  |Q        |         |         | V       |
16+55       0.2147      0.23  Q         |         |         | V       |
17+ 0       0.2162      0.22  Q         |         |         | V       |
17+ 5       0.2177      0.21  Q         |         |         | V       |
17+10       0.2190      0.20  Q         |         |         |  V      |
17+15       0.2203      0.19  Q         |         |         |  V      |
17+20       0.2215      0.18  Q         |         |         |  V      |
17+25       0.2227      0.17  Q         |         |         |  V      |
17+30       0.2239      0.17  Q         |         |         |  V      |
17+35       0.2250      0.16  Q         |         |         |   V     |
17+40       0.2261      0.16  Q         |         |         |   V     |
17+45       0.2271      0.15  Q         |         |         |   V     |
17+50       0.2281      0.15  Q         |         |         |   V     |
17+55       0.2291      0.14  Q         |         |         |   V     |
18+ 0       0.2301      0.14  Q         |         |         |   V     |
18+ 5       0.2310      0.13  Q         |         |         |   V     |
18+10       0.2318      0.11  Q         |         |         |    V    |
18+15       0.2325      0.11  Q         |         |         |    V    |
18+20       0.2332      0.10  Q         |         |         |    V    |
18+25       0.2339      0.10  Q         |         |         |    V    |
18+30       0.2346      0.10  Q         |         |         |    V    |
18+35       0.2353      0.10  Q         |         |         |    V    |
18+40       0.2360      0.10  Q         |         |         |    V    |
18+45       0.2366      0.09  Q         |         |         |    V    |
18+50       0.2372      0.09  Q         |         |         |    V    |
18+55       0.2379      0.09  Q         |         |         |    V    |
19+ 0       0.2385      0.09  Q         |         |         |     V   |
19+ 5       0.2391      0.09  Q         |         |         |     V   |
19+10       0.2397      0.09  Q         |         |         |     V   |
19+15       0.2402      0.08  Q         |         |         |     V   |
19+20       0.2408      0.08  Q         |         |         |     V   |
19+25       0.2414      0.08  Q         |         |         |     V   |
19+30       0.2419      0.08  Q         |         |         |     V   |
19+35       0.2425      0.08  Q         |         |         |     V   |
19+40       0.2430      0.08  Q         |         |         |     V   |
19+45       0.2435      0.08  Q         |         |         |     V   |
19+50       0.2440      0.08  Q         |         |         |     V   |
19+55       0.2445      0.07  Q         |         |         |      V  |
20+ 0       0.2450      0.07  Q         |         |         |      V  |
20+ 5       0.2455      0.07  Q         |         |         |      V  |
20+10       0.2460      0.07  Q         |         |         |      V  |
20+15       0.2465      0.07  Q         |         |         |      V  |
20+20       0.2470      0.07  Q         |         |         |      V  |
20+25       0.2475      0.07  Q         |         |         |      V  |
20+30       0.2479      0.07  Q         |         |         |      V  |
20+35       0.2484      0.07  Q         |         |         |      V  |
20+40       0.2489      0.07  Q         |         |         |      V  |
20+45       0.2493      0.07  Q         |         |         |      V  |
20+50       0.2498      0.06  Q         |         |         |      V  |
20+55       0.2502      0.06  Q         |         |         |      V  |
21+ 0       0.2506      0.06  Q         |         |         |      V  |
21+ 5       0.2511      0.06  Q         |         |         |      V  |
21+10       0.2515      0.06  Q         |         |         |       V |
21+15       0.2519      0.06  Q         |         |         |       V |
21+20       0.2523      0.06  Q         |         |         |       V |
21+25       0.2528      0.06  Q         |         |         |       V |
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   21+30       0.2532      0.06  Q          |          |          |        V |
   21+35       0.2536      0.06  Q          |          |          |        V |
   21+40       0.2540      0.06  Q          |          |          |        V |
   21+45       0.2544      0.06  Q          |          |          |        V |
   21+50       0.2548      0.06  Q          |          |          |        V |
   21+55       0.2552      0.06  Q          |          |          |        V |
   22+ 0       0.2555      0.06  Q          |          |          |        V |
   22+ 5       0.2559      0.06  Q          |          |          |        V |
   22+10       0.2563      0.06  Q          |          |          |        V |
   22+15       0.2567      0.05  Q          |          |          |        V |
   22+20       0.2571      0.05  Q          |          |          |        V |
   22+25       0.2574      0.05  Q          |          |          |        V |
   22+30       0.2578      0.05  Q          |          |          |         V|
   22+35       0.2582      0.05  Q          |          |          |         V|
   22+40       0.2585      0.05  Q          |          |          |         V|
   22+45       0.2589      0.05  Q          |          |          |         V|
   22+50       0.2593      0.05  Q          |          |          |         V|
   22+55       0.2596      0.05  Q          |          |          |         V|
   23+ 0       0.2600      0.05  Q          |          |          |         V|
   23+ 5       0.2603      0.05  Q          |          |          |         V|
   23+10       0.2607      0.05  Q          |          |          |         V|
   23+15       0.2610      0.05  Q          |          |          |         V|
   23+20       0.2613      0.05  Q          |          |          |         V|
   23+25       0.2617      0.05  Q          |          |          |         V|
   23+30       0.2620      0.05  Q          |          |          |         V|
   23+35       0.2624      0.05  Q          |          |          |         V|
   23+40       0.2627      0.05  Q          |          |          |         V|
   23+45       0.2630      0.05  Q          |          |          |         V|
   23+50       0.2633      0.05  Q          |          |          |         V|
   23+55       0.2637      0.05  Q          |          |          |         V|
   24+ 0       0.2640      0.05  Q          |          |          |         V|
   24+ 5       0.2643      0.04  Q          |          |          |         V|
   24+10       0.2643      0.01  Q          |          |          |         V|
   24+15       0.2643      0.00  Q          |          |          |         V|
-------------------------------------------------------------------------
```

Attachment 3:

Project Watershed

Susceptibility

Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

- Earth (Unstable)
- Earth (Stabilized)
- Stabilized

Tidel Influence

- <= Mean High Water Line (4.28')

Water Body

- Basin
- Lake
- Reservoir

Other Lands

- Airport/Military

Los Angeles County

Channel in Retarding Basin

Anaheim Bay-Huntington Harbor Watershed

Santa River Watershed

Newport Bay-Newport Coastal Streams Watershed

SITE

Humble Reservoir
Orange County
Valencia Reservoir
Fullerton Reservoir
Loftus Diversion Channel
Desilting Basin
Brea Creek Reservoir
Fullerton Reservoir
Fullerton Reservoir
Hillcrest Park Reservoir
Fullerton Airport
Miller Retarding Basin
La Jolla Recharge Basin
Placentia Retarding Basin
Kraemer Basin
Raymond Retarding Basin
Gilbert Retarding Basin
Crescent Retarding Basin
Cypress Retarding Basin
Rossmoor Retarding Basin
Los Alamitos Retarding Basin
Los Alamitos Naval Air Station
Seal Beach Naval Weapons Station

0 8,000 16,000 Feet

TITLE: SUSCEPTIBILITY ANALYIS SAN GABRIEL-COYOTE CREEK

ORANGE COUNTY WATERSHED MASTER PLANNING

JOB: ORANGE CO. CA

SCALE	DESIGNED	DRAWING	CHECKED	DATE	JOB NO.
1" = 8000'	TH	TH	BMP	04/30/10	9526-E

PACE Advanced Water Engineering

1

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Attachment 4:

SUSCEPTIBILITY MAP SAN GABRIEL-COYOTE CREEK

Susceptibility

Potential Areas of Erosion, Habitat, & Physical Structure Susceptibility

Channel Type

- Earth (Unstable)
- Earth (Stabilized)
- Stabilized

Tidel Influence

- <= Mean High Water Line (4.28')

Water Body

- Basin
- Lake
- Reservoir

Other Lands

- Airport/Military

Los Angeles County

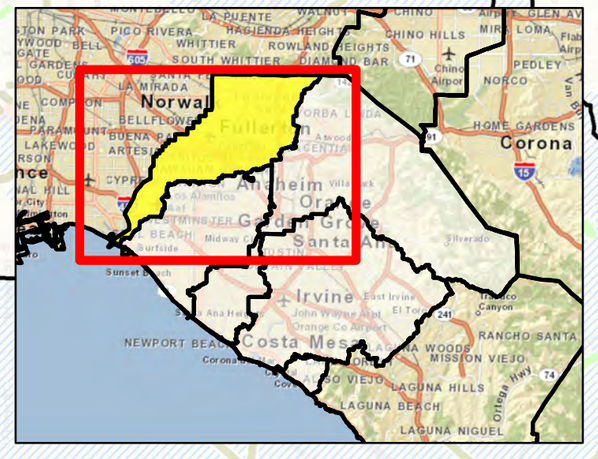
Channel in Retarding Basin

Humble Reservoir
Orange County
Valencia Reservoir
Brea Creek Reservoir
Fullerton Reservoir
Loftus Diversion Channel
Desilting Basin
Fullerton Reservoir
Fullerton Reservoir
Hillcrest Park Reservoir
Fullerton Airport
Buena Park
Fullerton
Placentia Retarding Basin
La Jolla Recharge Basin
Miller Retarding Basin
Kraemer Basin
Raymond Retarding Basin
Gilbert Retarding Basin
Crescent Retarding Basin
Anaheim
Cypress Retarding Basin
Rossmoor Retarding Basin
Los Alamitos Naval Air Station
Los Alamitos Retarding Basin
Seal Beach Naval Weapons Station
Seal Beach
Pacific Ocean

Santa River Watershed

Anaheim Bay-Huntington Harbor Watershed

Newport Bay-Newport Coastal Streams Watershed



0 8,000 16,000 Feet

TITLE: SUSCEPTIBILITY ANALYIS SAN GABRIEL-COYOTE CREEK

JOB: ORANGE COUNTY WATERSHED MASTER PLANNING ORANGE CO. CA

SCALE	1" = 8000'
DESIGNED	TH
DRAWING	TH
CHECKED	BMP
DATE	04/30/10
JOB NO.	9526-E

PACE Advanced Water Engineering

1

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Attachment 5:

BMP Detail/Project Grading and Drainage Plan

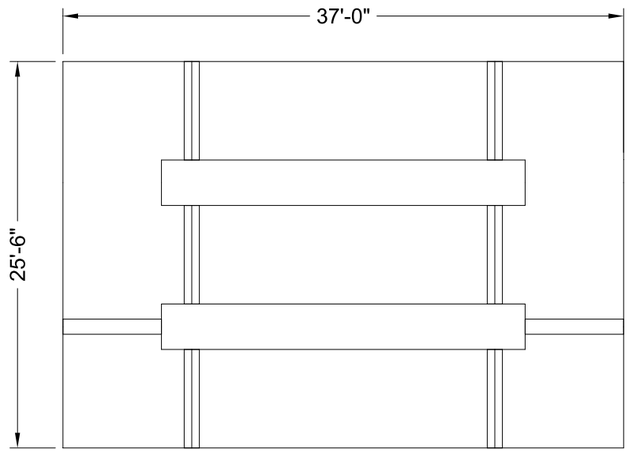
PROJECT SUMMARY

CALCULATION DETAILS
- LOADING = HS20 & HS25
- APPROX. LINEAR FOOTAGE = 123 lf.

STORAGE SUMMARY
- STORAGE VOLUME REQUIRED = 5,000 cf.
- PIPE STORAGE VOLUME = 4,082 cf.
- BACKFILL STORAGE VOLUME = 1,011 cf.
- TOTAL STORAGE PROVIDED = 5,093 cf.

PIPE DETAILS
- DIAMETER = 78 IN.
- CORRUGATION = 5x1
- GAGE = 16
- COATING = ALT2
- WALL TYPE = Perforated
- BARRELL SPACING = 36 IN.

BACKFILL DETAILS
- WIDTH AT ENDS = 12 IN.
- ABOVE PIPE = 0 IN.
- WIDTH AT SIDES = 12 IN.
- BELOW PIPE = 0 IN.



ASSEMBLY
SCALE: 1" = 10'

NOTE:
THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN, QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.

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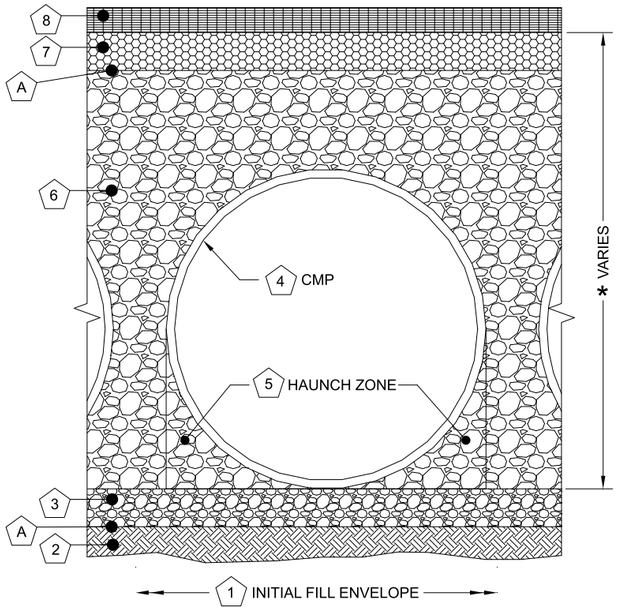
MARK	DATE	REVISION DESCRIPTION	BY

CONTECH® ENGINEERED SOLUTIONS LLC
www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH® CMP DETENTION SYSTEMS
CONTECH **DYODS** DRAWING

DYO3599 Placentia Detention
78" CMP Detention - 5000 cf.
Placentia, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
2368	3599	10/28/2020
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D1		



Infiltration Systems - CMP Infiltration & CMP Perforated Drainage Pipe			
Material Location	Description	Material Designation	Designation
8 Rigid or Flexible Pavement (if applicable)			
7 Road Base (if applicable			
A Geotextile Layer	Non-Woven Geotextile	CONTECH C-40 or C-45	Engineer Decision for consideration to prevent soil migration into varying soil types. Wrap the trench only.
6 Backfill	Infiltration pipe systems have a pipe perforation sized of 3/8" diameter. An open graded, free draining stone, with a particle size of ½" – 2 ½" diameter is recommended.	AASHTO M 145-A-1 or AASHTO M 43 - 3, 4	Material shall be worked into the pipe haunches by means of shovel-slicing, rodding, air-tamper, vibratory rod, or other effective methods. Compaction of all placed fill material is necessary and shall be considered adequate when no further yielding of the material is observed under the compactor, or under foot, and the Project Engineer or his representative is satisfied with the level of compaction"
3 Bedding Stone	Well graded granular bedding material w/maximum particle size of 3"	AASHTO M43 - 3,357,4,467, 5, 56, 57	For soil aggregates larger than 3/8" a dedicated bedding layer is not required for CMP. Pipe may be placed on the trench bottom comprised of native suitable well graded & granular material. For Arch pipes it is recommended to be shaped to a relatively flat bottom or fine-grade the foundation to a slight v-shape. Soil aggregates less than 3/8" and unsuitable material should be over-excavated and re-placed with a 4"-6" layer of well graded & granular stone per the material designation.
A Geotextile Layer	None	None	Contech does not recommend geotextiles be placed under the invert of Infilitration systems due to the propensity for geotextiles to clog over time.
* Note: The listed AASHTO designations are for gradation only. The stone must also be angular and clean.			

1 MINIMUM WIDTH DEPENDS ON SITE CONDITIONS AND ENGINEERING JUDGEMENT.

FOUNDATION/BEDDING PREPARATION

2 PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER.

5 HAUNCH ZONE MATERIAL SHALL BE PLACED AND UNIFORMLY COMPACTED WITHOUT SOFT SPOTS.

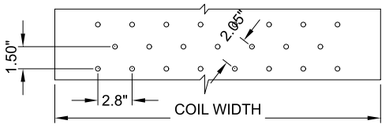
BACKFILL

MATERIAL SHALL BE PLACED IN 8"-10" MAXIMUM LIFTS. INADEQUATE COMPACTION CAN LEAD TO EXCESSIVE DEFLECTIONS WITHIN THE SYSTEM AND SETTLEMENT OF THE SOILS OVER THE SYSTEM. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO-LIFT DIFFERENTIAL BETWEEN THE SIDES OF ANY PIPE IN THE SYSTEM AT ALL TIMES DURING THE BACKFILL PROCESS. BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON ANY PIPES IN THE SYSTEM.

EQUIPMENT USED TO PLACE AND COMPACT THE BACKFILL SHALL BE OF A SIZE AND TYPE SO AS NOT TO DISTORT, DAMAGE, OR DISPLACE THE PIPE. ATTENTION MUST BE GIVEN TO PROVIDING ADEQUATE MINIMUM COVER FOR SUCH EQUIPMENT. MAINTAIN BALANCED LOADING ON ALL PIPES IN THE SYSTEM DURING ALL SUCH OPERATIONS.

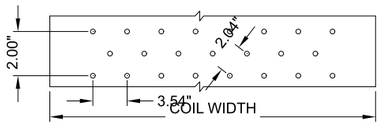
OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.

2 2/3" x 1/2" CORRUGATION - STEEL AND ALUMINUM CMP EDGE SPACING EQUAL ON BOTH SIDES



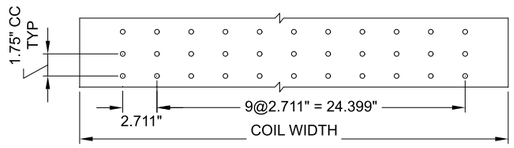
OPEN AREA = 3.76 SQ IN/SQ FT

3" x 1" CORRUGATION - STEEL AND ALUMINUM CMP (COIL PROVIDED FROM CONTECH LANTANA, FL PLANT)



OPEN AREA = 4.16 SQ IN/SQ FT

5" x 1" CORRUGATION - STEEL ONLY
EDGE SPACING EQUAL ON BOTH SIDES



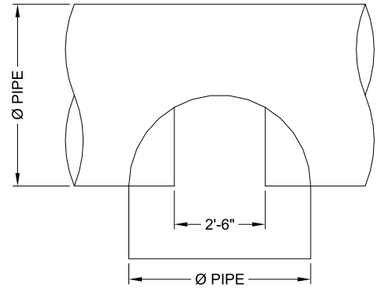
OPEN AREA = 3.33 SQ IN/SQ FT

NOTES:

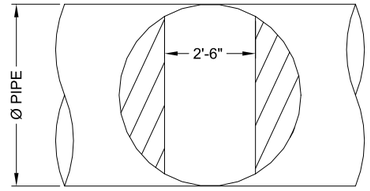
1. PERFORATIONS MEET AASHTO AND ASTM SPECIFICATIONS.
2. PERFORATION OPEN AREA PER SQUARE FOOT OF PIPE IS BASED ON THE NOMINAL DIAMETER AND LENGTH OF PIPE.
3. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
4. ALL HOLES Ø3/8".

TYPICAL PERFORATION DETAIL

SCALE: N.T.S.



PLAN

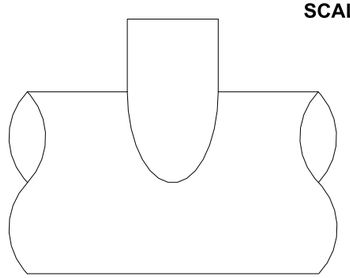


FRONT

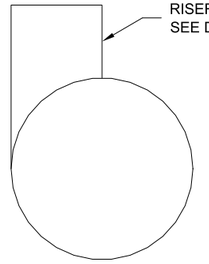
NOTE:
MANWAY DETAIL APPLICABLE FOR CMP SYSTEMS WITH DIAMETERS 48" AND LARGER. MANWAYS MAY BE REQUIRED ON SMALLER SYSTEMS DEPENDING ON ACTUAL SITE SPECIFIC CONDITIONS.

TYPICAL MANWAY DETAIL

SCALE: N.T.S.



ELEVATION

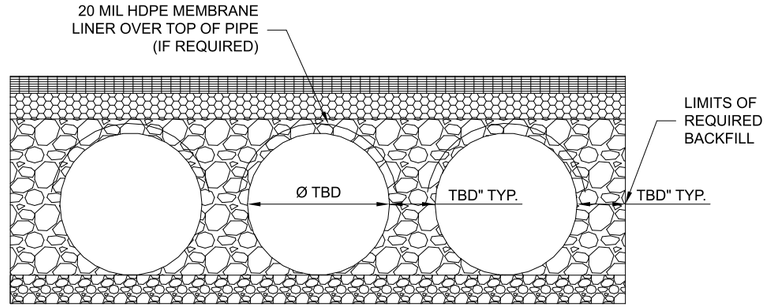


END

NOTE:
LADDERS ARE OPTIONAL AND ARE NOT REQUIRED FOR ALL SYSTEMS.

TYPICAL RISER DETAIL

SCALE: N.T.S.



TYPICAL SECTION VIEW

LINER OVER ROWS
SCALE: N.T.S.

NOTE: IF SALTING AGENTS FOR SNOW AND ICE REMOVAL ARE USED ON OR NEAR THE PROJECT, AN HDPE MEMBRANE LINER IS RECOMMENDED WITH THE SYSTEM. THE IMPERMEABLE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM A CHANGE IN THE SURROUNDING ENVIRONMENT OVER A PERIOD OF TIME. PLEASE REFER TO THE CORRUGATED METAL PIPE DETENTION DESIGN GUIDE FOR ADDITIONAL INFORMATION.

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800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS

CONTECH
DYODS
DRAWING

DYO3599 Placentia Detention
78" CMP Detention - 5000 cf.
Placentia, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
2368	3599	10/28/2020
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D2		

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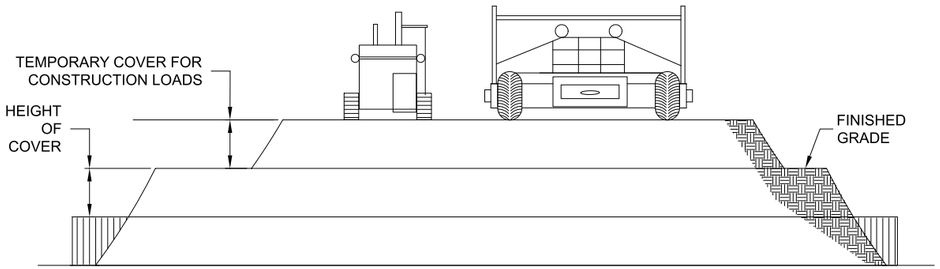

CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM:

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL
THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-274 OR ASTM A-92.

THE GALVANIZED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-218 OR ASTM A-929.

THE POLYMER COATED STEEL COILS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-246 OR ASTM A-742.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSPA GUIDELINES.

PIPE
THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW:

ALUMINIZED TYPE 2: AASHTO M-36 OR ASTM A-760

GALVANIZED: AASHTO M-36 OR ASTM A-760

APPLICABLE POLYMER COATED: AASHTO M-245 OR ASTM A-762

ALUMINUM: AASHTO M-196 OR ASTM B-745

APPLICABLE
HANDLING AND ASSEMBLY
SHALL BE IN ACCORDANCE WITH NCSP'S (NATIONAL CORRUGATED STEEL PIPE ASSOCIATION) FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.
REQUIREMENTS
INSTALLATION
SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II DIVISION II OR ASTM A-798 (FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL) OR ASTM B-788 (FOR ALUMINUM PIPE) AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

NOTE:
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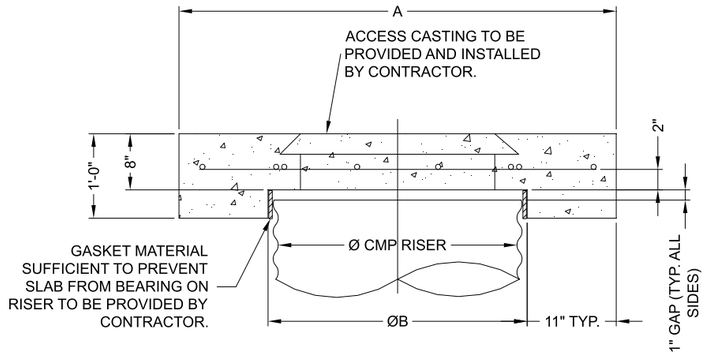
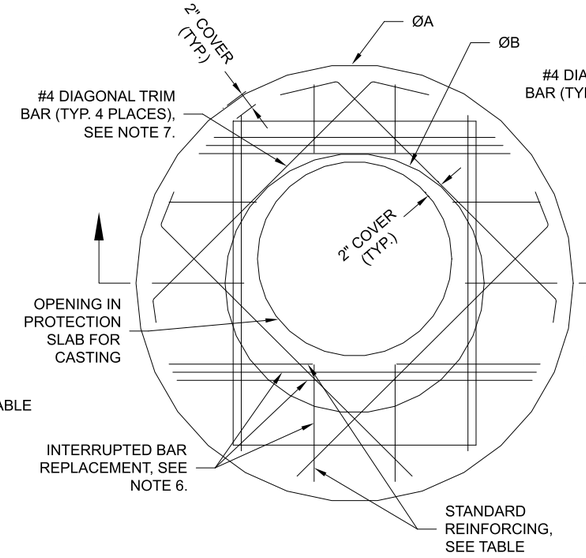


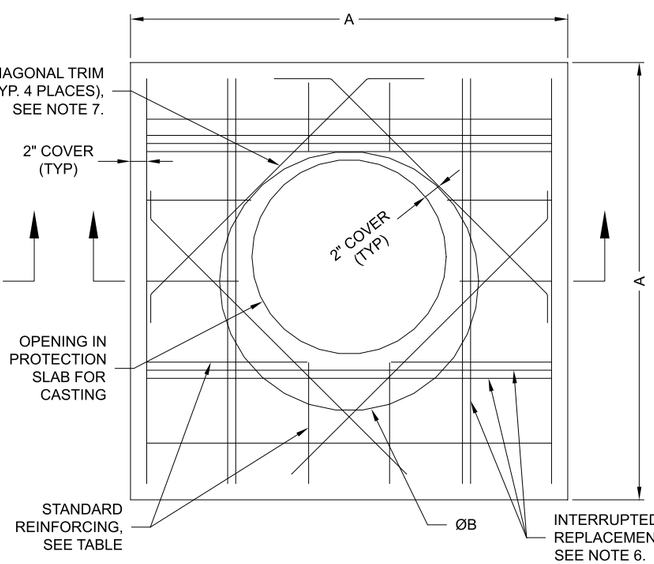
SECTION VIEW

REINFORCING TABLE				
Ø CMP RISER	A	Ø B	REINFORCING	**BEARING PRESSURE (PSF)
24"	Ø 4' 4'X4'	26"	#5 @ 12" OCEW #5 @ 12" OCEW	2,410 1,780
30"	Ø 4'-6" 4'-6" X 4'-6"	32"	#5 @ 12" OCEW #5 @ 12" OCEW	2,120 1,530
36"	Ø 5' 5' X 5'	38"	#5 @ 10" OCEW #5 @ 10" OCEW	1,890 1,350
42"	Ø 5'-6" 5'-6" X 5'-6"	44"	#5 @ 10" OCEW #5 @ 9" OCEW	1,720 1,210
48"	Ø 6' 6' X 6'	50"	#5 @ 9" OCEW #5 @ 8" OCEW	1,600 1,100

** ASSUMED SOIL BEARING CAPACITY



ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 3,500 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERING, BINGHAMTON, NY.

MANHOLE CAP DETAIL

SCALE: N.T.S.

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www.ContechES.com
9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH **DYODS** DRAWING

DYO3599 Placentia Detention
78" CMP Detention - 5000 cf.
Placentia, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
2368	3599	10/28/2020
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D3		

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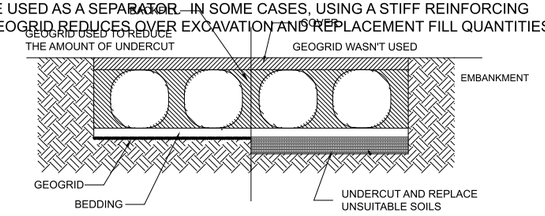
CMP DETENTION INSTALLATION GUIDE

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG-TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

FOUNDATION

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEOGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

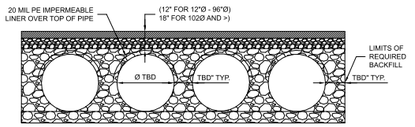


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

GEOMEMBRANE BARRIER

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICING AGENTS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

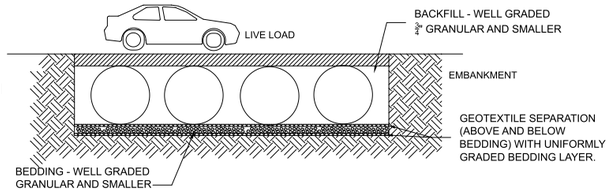
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF ANY ADDITIONAL PROTECTIVE MEASURES ARE REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



IN-SITU TRENCH WALL

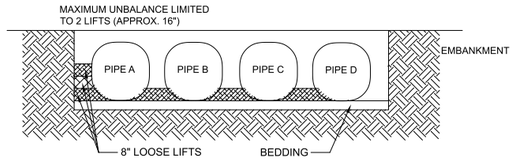
IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE SHEDS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



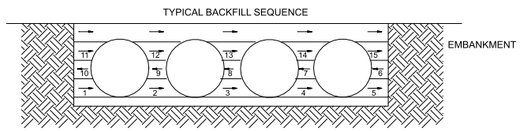
BACKFILL PLACEMENT

MATERIAL SHALL BE WORKED INTO THE PIPE HAUNCHES BY MEANS OF SHOVEL-SLICING, RODDING, AIR TAMPER, VIBRATORY ROD, OR OTHER EFFECTIVE METHODS.

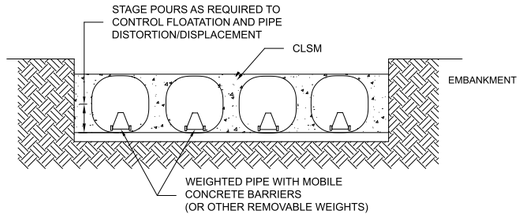


IF AASHTO T99 PROCEDURES ARE DETERMINED INFEASIBLE BY THE GEOTECHNICAL ENGINEER OF RECORD, COMPACTION IS CONSIDERED ADEQUATE WHEN NO FURTHER YIELDING OF THE MATERIAL IS OBSERVED UNDER THE COMPACTOR, OR UNDER FOOT, AND THE GEOTECHNICAL ENGINEER OF RECORD (OR REPRESENTATIVE THEREOF) IS SATISFIED WITH THE LEVEL OF COMPACTION.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHES OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 8- TO 10-FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



WHEN FLOWABLE FILL IS USED, YOU MUST PREVENT PIPE FLOATATION. TYPICALLY, SMALL LIFTS ARE PLACED BETWEEN THE PIPES AND THEN ALLOWED TO SET-UP PRIOR TO THE PLACEMENT OF THE NEXT LIFT. THE ALLOWABLE THICKNESS OF THE CLSM LIFT IS A FUNCTION OF A PROPER BALANCE BETWEEN THE UPLIFT FORCE OF THE CLSM, THE OPPOSING WEIGHT OF THE PIPE, AND THE EFFECT OF OTHER RESTRAINING MEASURES. THE PIPE CAN CARRY LIMITED FLUID PRESSURE WITHOUT PIPE DISTORTION OR DISPLACEMENT, WHICH ALSO AFFECTS THE CLSM LIFT THICKNESS. YOUR LOCAL CONTECH SALES ENGINEER CAN HELP DETERMINE THE PROPER LIFT THICKNESS.

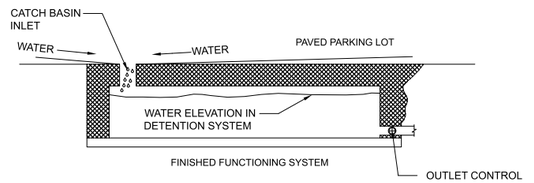


CONSTRUCTION LOADING

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

ADDITIONAL CONSIDERATIONS

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW-GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION; POTENTIALLY CAUSING FLOATATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY DIVERSION MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.



CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE

UNDERGROUND STORMWATER DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

INSPECTION

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, QUARTERLY INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEPEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS, IN CLIMATES WHERE SANDING AND/OR SALTING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATIONS OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM

MAINTENANCE

CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DE-ICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.

MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIEST WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.

THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.

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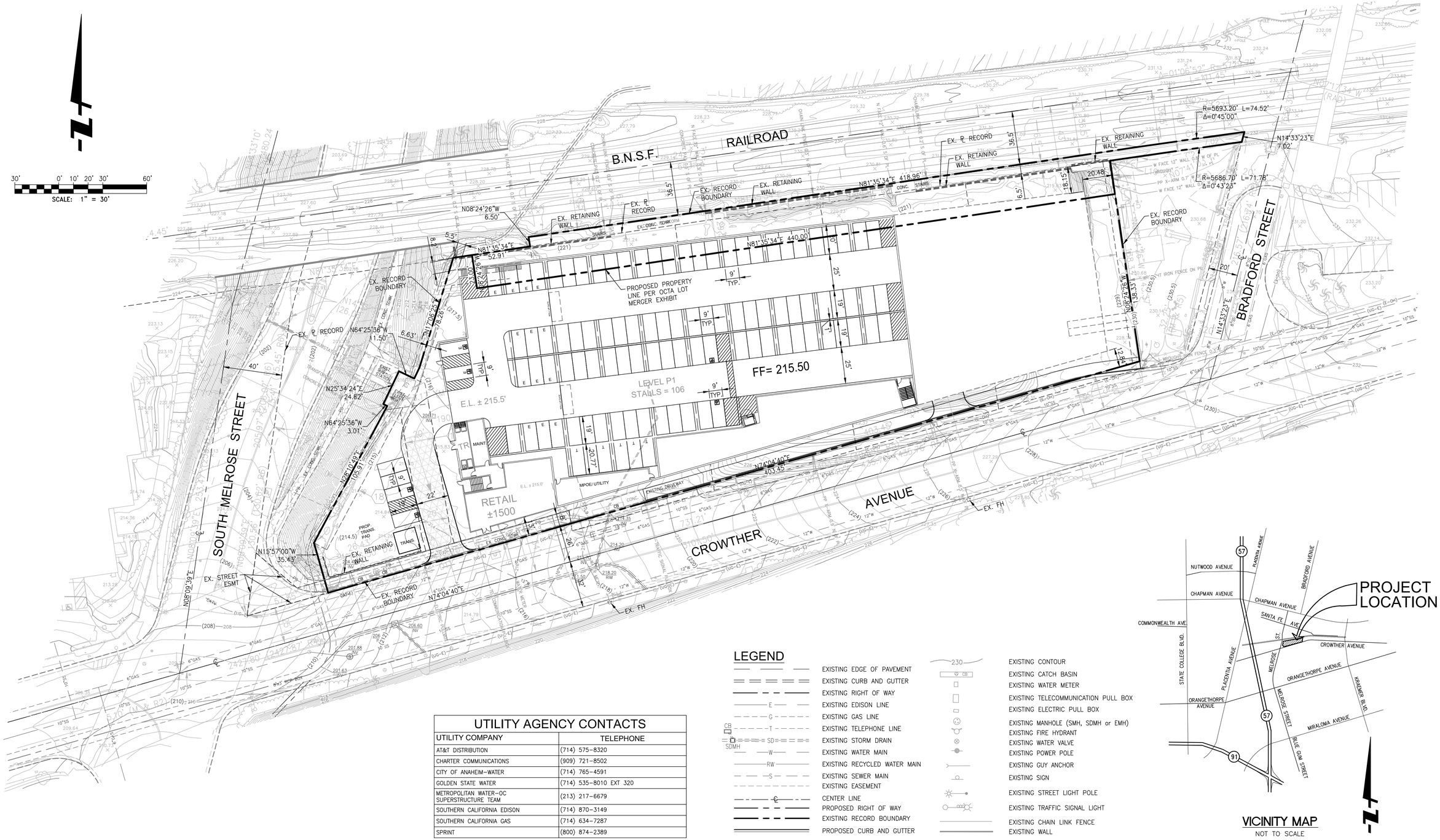
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CMP DETENTION SYSTEMS

CONTECH **DYODS** DRAWING

DYO3599 Placentia Detention
78" CMP Detention - 5000 cf.
Placentia, CA
DETENTION SYSTEM

PROJECT No.:	SEQ. No.:	DATE:
2368	3599	10/28/2020
DESIGNED: DYO	DRAWN: DYO	
CHECKED: DYO	APPROVED: DYO	
SHEET NO.: D4		



LEGEND

EXISTING EDGE OF PAVEMENT	EXISTING CONTOUR
EXISTING CURB AND GUTTER	EXISTING CATCH BASIN
EXISTING RIGHT OF WAY	EXISTING WATER METER
EXISTING EDISON LINE	EXISTING TELECOMMUNICATION PULL BOX
EXISTING GAS LINE	EXISTING ELECTRIC PULL BOX
EXISTING TELEPHONE LINE	EXISTING MANHOLE (SMH, SDMH or EMH)
EXISTING STORM DRAIN	EXISTING FIRE HYDRANT
EXISTING WATER MAIN	EXISTING WATER VALVE
EXISTING RECYCLED WATER MAIN	EXISTING POWER POLE
EXISTING SEWER MAIN	EXISTING GUY ANCHOR
EXISTING EASEMENT	EXISTING SIGN
CENTER LINE	EXISTING STREET LIGHT POLE
PROPOSED RIGHT OF WAY	EXISTING TRAFFIC SIGNAL LIGHT
EXISTING RECORD BOUNDARY	EXISTING CHAIN LINK FENCE
PROPOSED CURB AND GUTTER	EXISTING WALL

UTILITY AGENCY CONTACTS

UTILITY COMPANY	TELEPHONE
AT&T DISTRIBUTION	(714) 575-8320
CHARTER COMMUNICATIONS	(909) 721-8502
CITY OF ANAHEIM-WATER	(714) 765-4591
GOLDEN STATE WATER	(714) 535-8010 EXT 320
METROPOLITAN WATER-OC SUPERSTRUCTURE TEAM	(213) 217-6679
SOUTHERN CALIFORNIA EDISON	(714) 870-3149
SOUTHERN CALIFORNIA GAS	(714) 634-7287
SPRINT	(800) 874-2389

VICINITY MAP
NOT TO SCALE

CITY OF PLACENTIA

CONSTRAINTS MAP
BASEMENT PARKING LEVEL P1
CROWTHER AVENUE TOD USA PROPERTIES FUND

MULTIFAMILY HOUSING

DAHLIN

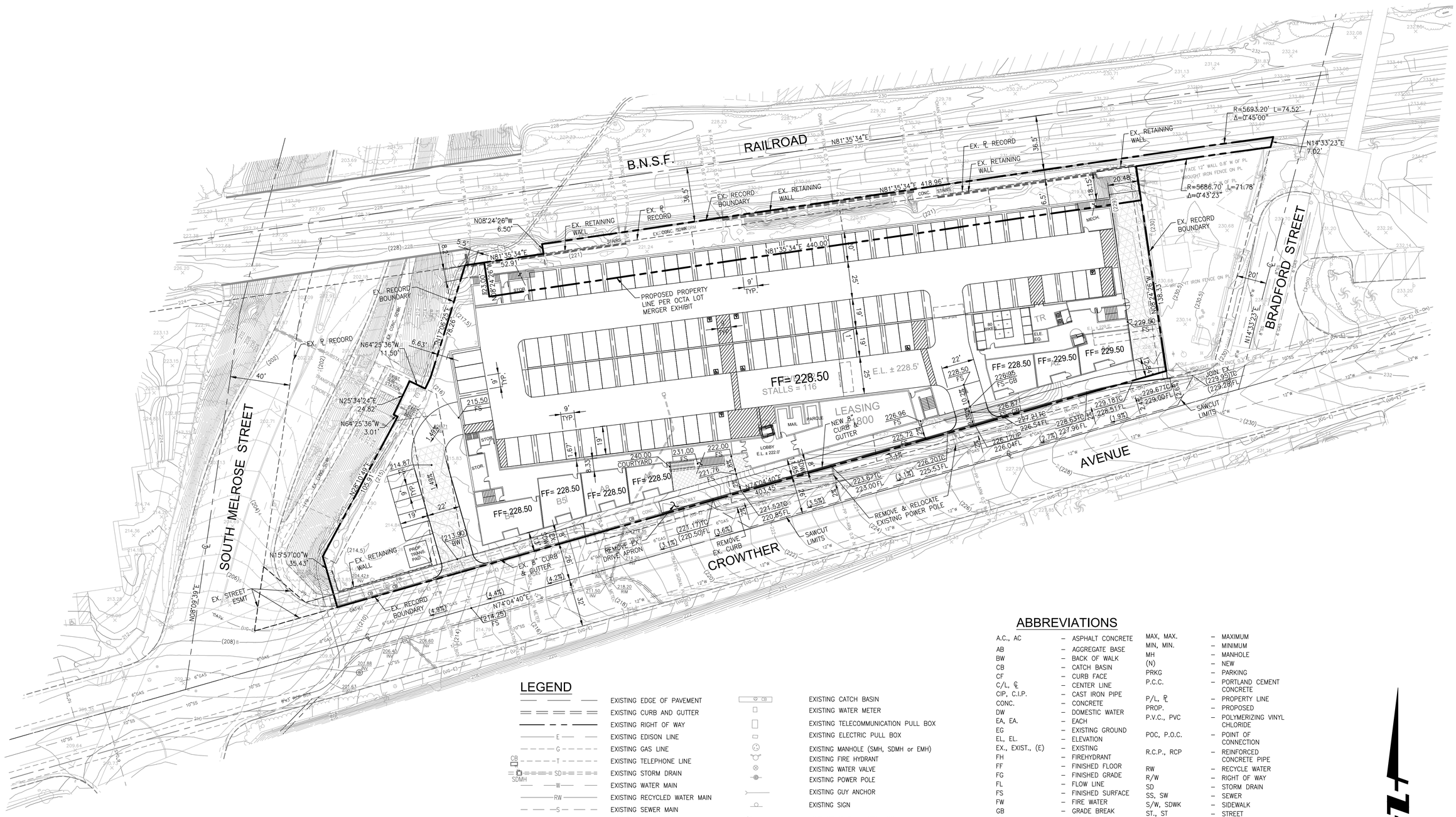
DATE	02-21-2020
JOB NO.	1236-008

18818 Teller Avenue
Suite 260
Irvine, CA 92612
949-250-4680

NORTH

SHT 1 OF 2

F:\PROJECTS\878\002\PLANS\ENTITLEMENTS\CONCEPTUAL GRADING PLAN\0878-002-CG01CM.DWG (10-27-20 4:08:17PM) Plotted by: Hector Delaseyes



LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- EXISTING RIGHT OF WAY
- EXISTING EDISON LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING STORM DRAIN
- EXISTING WATER MAIN
- EXISTING RECYCLED WATER MAIN
- EXISTING SEWER MAIN
- EXISTING EASEMENT
- CENTER LINE
- PROPOSED RIGHT OF WAY
- EXISTING RECORD BOUNDARY
- PROPOSED CURB AND GUTTER
- EXISTING CONTOUR
- EXISTING CATCH BASIN
- EXISTING WATER METER
- EXISTING TELECOMMUNICATION PULL BOX
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- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING SIGN
- EXISTING STREET LIGHT POLE
- EXISTING TRAFFIC SIGNAL LIGHT
- EXISTING CHAIN LINK FENCE
- EXISTING WALL

ABBREVIATIONS

A.C., AC	– ASPHALT CONCRETE	MAX, MAX.	– MAXIMUM
AB	– AGGREGATE BASE	MIN, MIN.	– MINIMUM
BW	– BACK OF WALK	MH	– MANHOLE
CB	– CATCH BASIN	(N)	– NEW
CF	– CURB FACE	PRKG	– PARKING
C/L, ℄	– CENTER LINE	P.C.C.	– PORTLAND CEMENT CONCRETE
CIP, C.I.P.	– CAST IRON PIPE	P/L, ℙ	– PROPERTY LINE
CONC.	– CONCRETE	PROP.	– PROPOSED
DW	– DOMESTIC WATER	P.V.C., PVC	– POLYMERIZING VINYL CHLORIDE
EA, EA.	– EACH	POC, P.O.C.	– POINT OF CONNECTION
EG	– EXISTING GROUND	R.C.P., RCP	– REINFORCED CONCRETE PIPE
EL, EL.	– ELEVATION	RW	– RECYCLE WATER
EX., EXIST., (E)	– EXISTING	R/W	– RIGHT OF WAY
FH	– FIREHYDRANT	SD	– STORM DRAIN
FF	– FINISHED FLOOR	SS, SW	– SEWER
FG	– FINISHED GRADE	S/W, SDWK	– SIDEWALK
FL	– FLOW LINE	ST., ST	– STREET
FS	– FINISHED SURFACE	STD.	– STANDARD
FW	– FIRE WATER	TC	– TOP OF CURB
GB	– GRADE BREAK	TG	– TOP OF GRATE
HP	– HIGH POINT	TYP.	– TYPICAL
INV, INV.	– INVERT OF PIPE	DW, W	– WATER
L.F., LF	– LINEAL FEET		
LP	– LOW POINT		
LS, L/S	– LANDSCAPE		
L.S.	– LUMP SUM		

CITY OF PLACENTIA

CONCEPTUAL GRADING PLAN
1ST FLOOR - UPPER PARKING LEVEL P2
CROWTHER AVENUE TOD USA PROPERTIES FUND

MULTIFAMILY HOUSING

DAHLIN

18818 Teller Avenue
Suite 260
Irvine, CA 92612
949-250-4680

DATE	02-21-2020
JOB NO.	1236-008

NORTH

SHT 2 OF 2

F:\PROJECTS\8787\002\PLANS\ENTITLEMENTS\CONCEPTUAL GRADING PLAN\8787-002-CGD2GC.DWG (10-27-20 4:08:19PM) Plotted by: Hector Delosreyes

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CITY OF PLACENTIA
PUBLIC WORKS DEPARTMENT
401 E. CHAPMAN AVENUE
PLACENTIA, CA 92870

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MAINTENANCE COVENANT FOR WATER QUALITY MANAGEMENT PLAN (WQMP)

REGARDING ON-SITE BMP MAINTENANCE

Pursuant to MS4 Ordinance of the City of Placentia relating to the control of pollutants carried by stormwater runoff, structural and/ or treatment control Best Management Practices (BMPs) have been installed on the following property:

LEGAL DESCRIPTION

ASSESSOR'S PARCEL NO. _____ _____ _____

SITE ADDRESS: _____

REFERENCE

P.C. NO.: _____

I (we)_____, hereby certify that I (we) am (are) the legal owner(s) of
(Legal Name of Property Owner(s))

Property indicated above, and as such owners for the mutual benefit of future purchasers, their heirs, successors, and assigns, do hereby fix the following protective conditions to which their property, or portions thereof, shall be held, sold and/ or conveyed.

That owner(s) shall maintain the drainage devices such as paved swales, bench drains, inlets, catch basins, down drains, pipes, and water quality devices (BMPs) on the property indicated above and as shown on the plans permitted by the City of Placentia Department of Public Works and as outlined in the attached "OPERATION AND MAINTENANCE PLAN", in a good and functional condition to safeguard the property owners an adjoining properties form damage and pollution.

That owner(s) shall conduct maintenance inspection of all Structural or Treatment Control BMPs on the property at least once a year and retain proof of the inspection. Said maintenance inspection shall verify the legibility of all required stencils and signs and shall repaint and label as necessary.

That owner(s) shall provide printed educational materials with any sale of the property that provide information on what storm water management facilities are present, the type(s) and location(s) of maintenance signs that are required, and how the necessary maintenance can be performed.

Owner(s):

By:_____ Date: _____

By:_____ _____

Date: (PLEASE ATTACH NOTARY)

Attachments

Attachment E.
Noise and Vibration Studies

Attachments

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Attachment E.
Noise and Vibration Studies

Attachments

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DATE	March 3, 2021
TO	USA Multifamily Development
ADDRESS	3200 Douglas Boulevard, Suite 200 Roseville, CA 95661
CONTACT	Leatha Clark, AICP
FROM	Josh Carman INCE-USA, Senior Associate Izzy Garcia INCE-USA, Associate
SUBJECT	Title 24 Acoustical Analysis for 207–209 West Crowther Avenue Development (Packing House District TOD) Project
PROJECT NUMBER	USAP-01

This technical memorandum has been prepared to recommend conditions of approval for the 207 – 209 West Crowther Avenue Development (Packing House District TOD) Project ("Proposed Project") to ensure that it is designed by the Applicant and conditioned by the City of Placentia (City) to mitigate all exterior and interior noise in accordance with the City's noise standards. This acoustical analysis also describes and quantifies the noise sources affecting the shared courtyards. Private balconies of the proposed residential units (which are six feet deep or less) are not considered common recreation areas and are exempted from the City's General Plan Noise Element standards.

Based on the impacts of these noise sources, this analysis specifies the wall/enclosure heights and locations that will ensure that the exterior noise levels for the outdoor use areas remain below the City's 65 dBA CNEL exterior noise standard for residential uses. In addition, this acoustical analysis reviews detailed architectural plans provided by USA Properties Fund, dated November 16, 2020, and makes recommendations for sound-rated windows and doors to ensure that habitable rooms of the residential units will meet the City's and State's interior noise standard of 45 dBA CNEL. Fundamentals of noise and acoustics, ambient noise data, traffic noise modeling data, rail noise modeling data, and transmission loss (TL) calculation worksheets are included in Attachment A.

Regulatory Setting

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The California Building Standards Commission establishes the publication date of the CBC, and the most recent building standard adopted by the legislature and used throughout the state is the 2019 version, often with local, more restrictive amendments based on local geographic, topographic, or climatic conditions. The CBC codifies the State of California's noise insulation standards for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared when new buildings with habitable rooms are near major transportation noises and where noise sources create an exterior noise level of 60 dBA CNEL/L_{dn} or higher. Acoustical studies that accompany building plans must demonstrate that the design of the structure will limit interior noise in habitable rooms to 45 dBA CNEL/L_{dn}.

The noise element of the City's general plan limits interior dwelling units to 45 dBA CNEL and exterior outdoor common use areas to 65 dBA CNEL (conditionally acceptable) for residential uses.

Environmental Setting

The Proposed Project is a mixed-use residential project consisting of up to 189 multifamily dwelling units in a five-story building over subterranean parking. The total building height would be 68' 6" and would include amenity uses and commercial space in addition to the proposed apartments. Two outdoor courtyards are proposed on the third floor.

The primary source of noise for the Project Site is from vehicular traffic on Crowther Avenue and Melrose Street, which are adjacent to the project site. The Project Site is located at approximately the same elevation as Crowther Avenue and is on an embankment elevated above Melrose Street. An active rail line is adjacent to the Project Site's northern boundary. The rail line services BNSF freight trains, Amtrak Southwest Chief trains, and the Metrolink 91/Perris line commuter trains.

Methodology

PlaceWorks conducted ambient noise measurements, as described below, across the Project Site. This acoustical analysis relies on detailed project features provided by USA Properties Fund, including the site and grading plans, building footprint and elevations, and the architectural plans for the Proposed Project. To assess long-term noise impacts to the Proposed Project at the affected common outdoor use areas and building façades, future traffic noise was estimated with a traffic noise model from the Federal Highway Administration (FHWA), using building and roadway lane coordinates, elevations, and terrain features.

Specifically, the traffic noise evaluation utilizes the FHWA's Traffic Noise Model (TNM 2.5) and is based on the traffic volume parameters for Future Buildout 2035 With Packing House TOD Project conditions obtained from the Packing House District Transit-Oriented Development Project Initial Study (City of Placentia 2017) and the Centerpointe Placentia Noise Impact Analysis (Urban Crossroads 2018).

The contribution of future rail noise is estimated using future train types, speeds, and distance to the Project Site input to the Federal Transit Administration (FTA) CREATE model and future noise contours in the Westgate Metrolink Station EIR (City of Placentia 2007). The future train noise modeling scenario assumes that the number of Metrolink and Amtrak trains would remain the same as under existing conditions, that is, 11 Metrolink and 2 Amtrak per day, and that there would be 36 freight trains per day (a 16 percent increase above existing conditions of 31 trains per day based on the BNSF 2014 San Bernardino Case Study). It is assumed that all the freight and Amtrak traffic would be along the middle rail (MT02), and that the Metrolink station south track would be used for loading and unloading of passengers. It is also assumed that the westbound Metrolink traffic would use the northernmost track (MT01).

Where necessary, noise reduction measures are recommended to meet the City's 65 dBA CNEL exterior noise standard for outdoor use areas and the City and State's 45 dBA CNEL interior noise standard for habitable rooms. This study does not review inter-dwelling sound isolation.

Ambient Noise Measurements

To determine existing noise levels at various locations in the project area, PlaceWorks conducted ambient noise monitoring in the project vicinity. The noise monitoring included 8 short-term (ST) and 1 long-term (LT) measurement. A PlaceWorks noise specialist conducted the noise measurements (15 minutes) on- and off-site. Short-term measurements were conducted during an afternoon period (12:30 pm–5:00 pm), Sunday, December 13. The long-term (24-hour) measurement was conducted along Melrose Street, north of

Crowther, on Saturday December 12, through Sunday, December 13, 2020. The data collected from the short-term measurements contains one-third octave band frequency data.

The traffic from Crowther Avenue and Melrose Street was the primary influence on the noise measurements, with occasional aircraft overflights. Though the site was adjacent to operational railroad tracks to the north, the short-term measurements did not include train pass-by noise because the meter was paused during such events; train noise was measured separately as to isolate that noise source. During short-term measurements, conditions included mostly clear skies, temperatures of 63 degrees Fahrenheit (°F), and average wind speeds of up to 3 miles per hour. All sound level meters were equipped with a windscreen during measurements.

All sound level meters used for noise monitoring (Larson Davis model LxT) satisfy the American National Standards Institute (ANSI) standard for Type 1 instrumentation. The sound level meters were set to "slow" response and "A" weighting (dBA). The meters were calibrated prior to and after the monitoring period. All measurements were at least five feet above the ground and then again at 16 feet above the ground and away from reflective surfaces. The following section describes the noise measurements and locations, which are shown on Figure 1, *Approximate Noise Monitoring Locations*.

- Long-Term Location 1 (LT-1) was along South Melrose Street, south of Crowther Avenue, approximately 45 feet east of the nearest northbound travel lane centerline. A 24-hour noise measurement was conducted, beginning at the 4:00 pm hour on Saturday, December 12, 2020. The noise environment at this site is characterized primarily by traffic from Melrose Street and Crowther Avenue. Freight trains were observed to pass approximately twice per hour while on-site for five hours. Hourly average noise levels ranged from 50 to 70 dBA L_{eq}.

- Short-Term Location 1A (ST-1A) was near the northwest boundary of the Project Site, facing the railroad tracks at a height of 5 feet. A 15-minute noise measurement began at 1:09 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Melrose Street and Crowther Avenue, in addition to rail traffic (freight and Metrolink trains). Traffic noise levels generally ranged from 54 to 62 dBA with traffic and 46 dBA with no pass-by traffic.

- Short-Term Location 1B (ST-1B) was near the western boundary of the Project Site at a height of 16 feet. A 15-minute noise measurement began at 4:26 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 60 to 65dBA.

- Short-Term Location 2A (ST-2A) was near the eastern boundary of the Project Site at a height of 5 feet. A 15-minute noise measurement began at 1:46 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 54 to 68 dBA.

- Short-Term Location 2B (ST-2B) was near the eastern boundary of the Project Site at a height of 16 feet. A 15-minute noise measurement began at 3:35 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 58 to 70 dBA.

- Short-Term Location 3A (ST-3A) was near the southwest boundary of the Project Site at a height of 5 feet. A 15-minute noise measurement began at 2:09 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 57 to 70 dBA.

» **Short-Term Location 3B (ST-3B)** was near the southwest boundary of the Project Site at a height of 16 feet. A 15-minute noise measurement began at 4:05 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 55 to 70 dBA.

» **Short-Term Location 4A (ST-4A)** was near the western boundary of the Project Site at a height of 5 feet. A 15-minute noise measurement began at 2:27 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 50 to 69 dBA.

» **Short-Term Location 4B (ST-4B)** was near the western boundary of the Project Site at a height of 16 feet. A 15-minute noise measurement began at 2:55 pm on Sunday, December 13, 2020. The noise environment is characterized primarily by traffic from Crowther Avenue and rail traffic. Traffic noise levels generally ranged from 54 to 66 dBA.

During train pass-bys, maximum noise levels at the Project Site ranged from approximately 72 to 90 dBA. Ambient noise levels from periodic train pass-by events were observed separately from the 15-minute noise measurements described above and summarized in Table 2.

AMBIENT NOISE RESULTS

During the ambient noise survey, the noise level at the long-term location along Melrose Street resulted in 69 dBA CNEL within 45 feet of the nearest northbound trave lane centerline. The long-term and short-term noise measurement results are summarized in Table 1 and Table 2. A summary of the daily trend during long-term noise measurements is provided in Attachment A.

Table 1 Long-Term Noise Measurement Levels (dBA)

Monitoring Location	Description	CNEL	Lowest $L_{eq, 1\text{-}hr}$	Highest $L_{eq, 1\text{-}hr}$
LT-1	Melrose Street – North of Crowther Ave	69	50	70

Table 2 Short-Term Noise Measurement Levels (dBA)

Monitoring Site	L_{eq}	L_{max}	L_{min}	L_2	L_8	L_{25}	L_{50}
ST-1A 1:09 pm	54.2	69.0	44.0	63.1	56.6	53.2	50.9
ST-1B 4:26 pm	61.4	81.8	56.1	64.0	61.9	60.4	59.6
ST-2A 1:46 pm	54.1	67.7	47.3	59.2	57.1	54.7	52.7
ST-2B 3:35 pm	59.3	71.0	56.0	62.4	60.6	59.7	58.9
ST-3A 2:09 pm	61.0	80.8	48.7	67.2	64.6	60.3	56.4
ST-3B 4:05 pm	61.7	72.3	54.5	68.7	65.4	61.9	59.1
ST-4A 2:27 pm	60.1	79.7	45.8	69.2	60.0	57.0	54.1
ST-4B 2:55 pm	59.3	66.3	52.3	64.2	62.6	60.4	58.3

Figure 1 - Approximate Noise Monitoring Locations



Project Boundary

ST-XA Short-Term Noise Measurement Locations - 5ft above ground (4)

ST-XB Short-Term Noise Measurement Locations - 16ft above ground (4)

LT-X Long-Term Noise Measurement Locations (1)

0 100
Scale (Feet)

Source: Nearmap, 2020

Exterior Noise

The following presents the results of the acoustical analysis to evaluate exterior noise levels at the proposed outdoor use areas to determine the specific locations and heights of the necessary noise barriers (e.g. courtyard wall enclosures) to meet the City's 65 dBA CNEL exterior noise standard for residential uses. (Note that private balconies along the southern elevation of the Project Site are not subject to the City's exterior noise requirements.)

COMMON RECREATIONAL AREAS

To reduce exterior noise levels at the two third-floor courtyards to 65 dBA CNEL or less, the construction of a 5-foot-high enclosure (as measured from the finished floor of the courtyard) is recommended for the west courtyard facing Crowther Avenue (see Figure 3). In addition, the construction of an 8-foot-high enclosure is recommended for the east courtyard facing the railroad and future Westgate Metrolink Station (see Figure 3). Materials for the enclosures may include plexiglass, 1/4-inch-thick glass, or a combination of these transparent barrier types on top of solid masonry, or stucco veneer over wood framing or foam core.

Interior Noise

CEILING/ROOF

Standard construction techniques (roofing, truss and joints, insulation and gypsum board) are suitable to provide the necessary noise reduction.

VENTILATION

The Project Site is exposed to noise levels exceeding 60 dBA CNEL and will require some form of forced-air mechanical ventilation, so that windows may be left closed by occupants. As mentioned above, the recommendations in this report are based on a closed-windows condition. This can be achieved passively with z-ducts, fresh air ducts, or approved equal.

EXTERIOR WALL

The architectural floor plans for the Proposed Project were reviewed to calculate the noise reduction for habitable rooms for the proposed residential buildings. The noise insulation provided by the building is a function of the transmission loss provided by the walls, windows, and doors facing the exterior noise sources and by the absorption provided by the materials in the interior of the building. These recommended values are based on a closed-windows condition. The noise-reduction calculations are based on the building configurations shown on the architectural plans provided by USA Properties Fund. Exterior walls shall be required to meet a Sound Transmission Class (STC) rating of at least 46. One method to achieve this would be standard exterior walls with 6-inch studs, R-13 insulation or thicker, a minimum 7/8-inch exterior surface stucco plaster, and interior finish with 5/8-inch drywall.

WINDOWS AND EXTERIOR BALCONY DOORS

The interior noise level is the difference between the predicted exterior noise level at the building façade and the noise reduction of the structure. To assess interior noise levels, exterior noise levels were estimated at the proposed dwelling façades. Figures 2 through 6 show the recommended STC-rated windows and sliding glass doors, respectively (balconies are proposed along the south elevation only), needed to meet the City and State's requirement of 45 dBA CNEL interior noise level. Window test data should be obtained from the manufacturer and verified before final design. Glazing for all sound-rated windows should be of unequal thickness, where possible, to reduce the possibility of resonance. Unless specified, all windows shall be rated

STC 26 (assumed to be standard dual pane windows required per Title 24 energy standards) and all sliding glass doors STC 29 or higher. All entry doors should be insulated against weather and sound with nonporous seals.

Several construction methods are recommended to improve interior noise reduction, including: (1) use permanently nonhardening sealant around perimeter of window frames; (2) select window assemblies with effective nonporous gaskets or weatherstripping to minimize air infiltration and sound leakage; (3) provide airtight construction at all exterior walls with acoustical or other nonhardening sealant at floor plates; (4) use door jamb and head gasketing and door bottom gasketing at entry doors to seal the solid core doors against weather and sound; and (5) caulk entry door thresholds as they are placed.

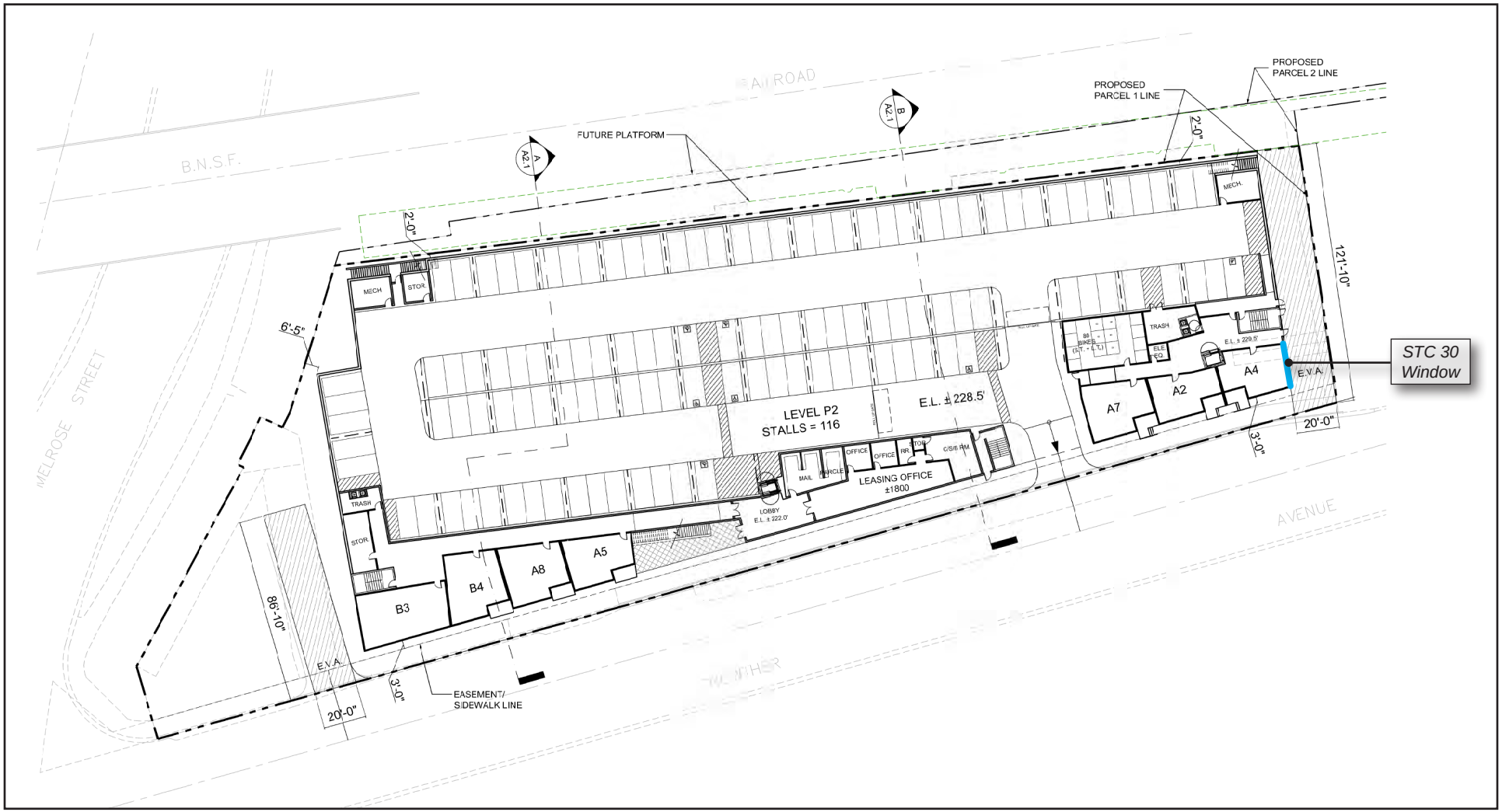
With implementation of the building improvements described above, interior noise levels would remain below the City and State's interior noise level standard of 45 dBA CNEL for residential uses.

Summary of Recommended Conditions of Approval

Prior to issuance of Building Permits, plans shall depict implementation of the following noise attenuation features:

1. All barriers described herein shall be continuous from bottom to top, with no cracks or gaps, and have a minimum surface density of four pounds per square foot.
2. As shown in Figure 3 of the Acoustical Study (Title 24 Acoustical Analysis for 207–209 West Crowther Avenue Development (Packing House District TOD) Project), construct a 5-foot-high enclosure (as measured from the finished floor of the courtyard) along the west courtyard facing Crowther Avenue. In addition, construct of an 8-foot-high enclosure along for the east courtyard facing the railroad and future Westgate Metrolink Station. Materials for the enclosures may include plexiglass, 1/4-inch-thick glass, or a combination of these transparent barrier types on top of solid masonry, or stucco veneer over wood framing or foam core.
3. Provide mechanical ventilation so that windows may be left closed by occupants. This can be achieved passively with z-ducts, fresh air ducts or approved equal.
4. Exterior walls shall meet a Sound Transmission Class (STC) rating of at least 46.
5. Windows and sliding glass doors shall meet the STC ratings shown in Figures 2 through 6 of the Acoustical Study (Title 24 Acoustical Analysis for 207–209 West Crowther Avenue Development (Packing House District TOD) Project) to meet the CBC Title 24 interior noise limit of 45 dBA CNEL. Unless specified, all windows shall be rated STC 26 (assumed to be standard dual pane windows required per Title 24 energy standards) and all sliding glass doors STC 29 or higher.
6. All entry doors shall be insulated against weather and sound with nonporous seals. Caulk entry door thresholds as they are placed.
7. Use permanently nonhardening sealant around perimeter of window frame.
8. Window assemblies shall be constructed with effective nonporous gaskets or weatherstripping to minimize air infiltration and sound leakage.
9. Provide airtight construction at all exterior walls with acoustical or other nonhardening sealant at floor plates.
10. Use door jamb and head gasketing and door bottom gasketing at entry doors to seal the solid core doors against weather and sound.

Figure 2 - Minimum Recommended Window Ratings - 2nd Floor



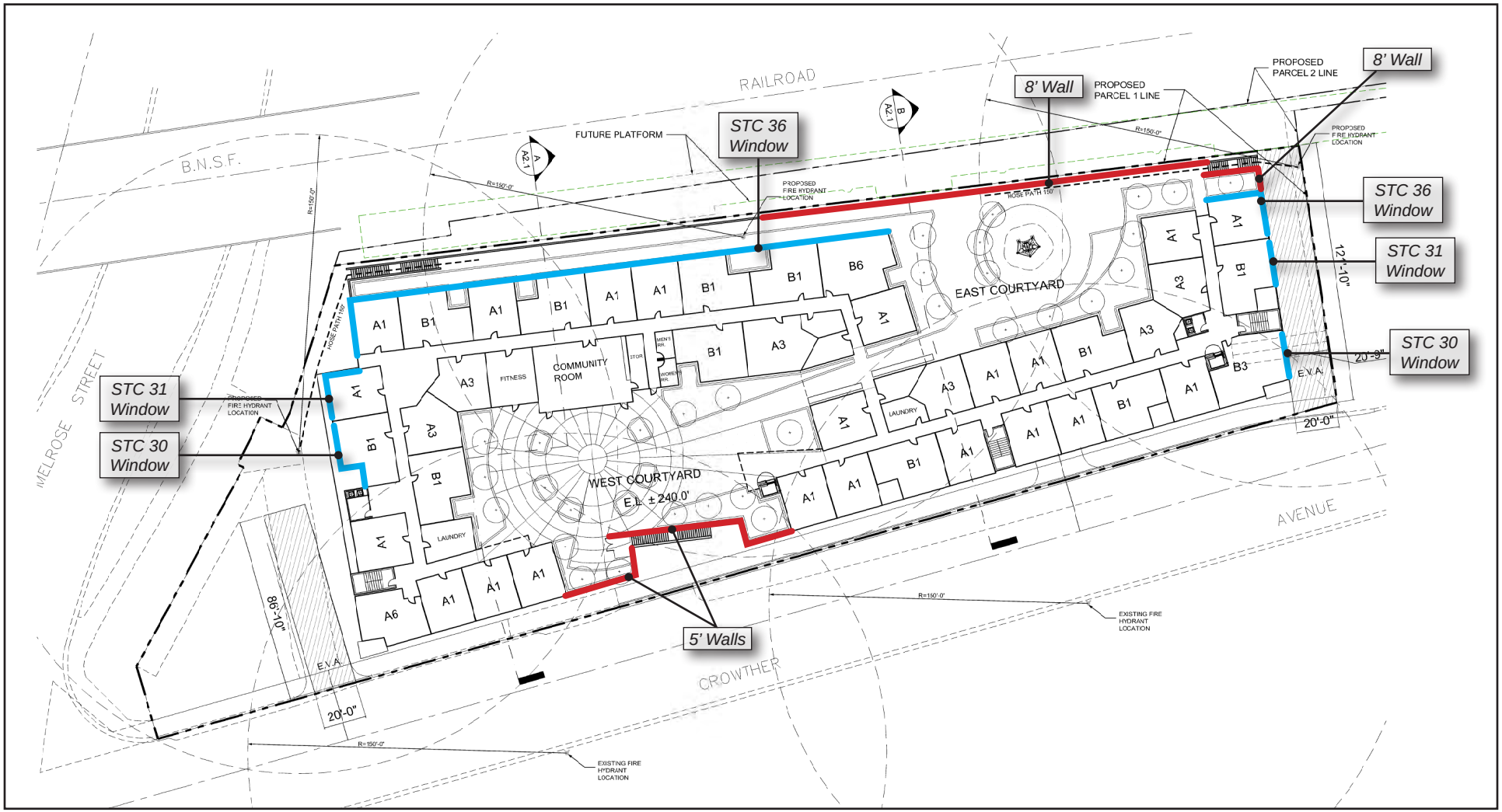
Project Boundary

STC Sound Transmission Class

0 70
Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Figure 3a - Minimum Recommended Window Ratings and Wall Heights - 3rd Floor - Parapet Barrier Option



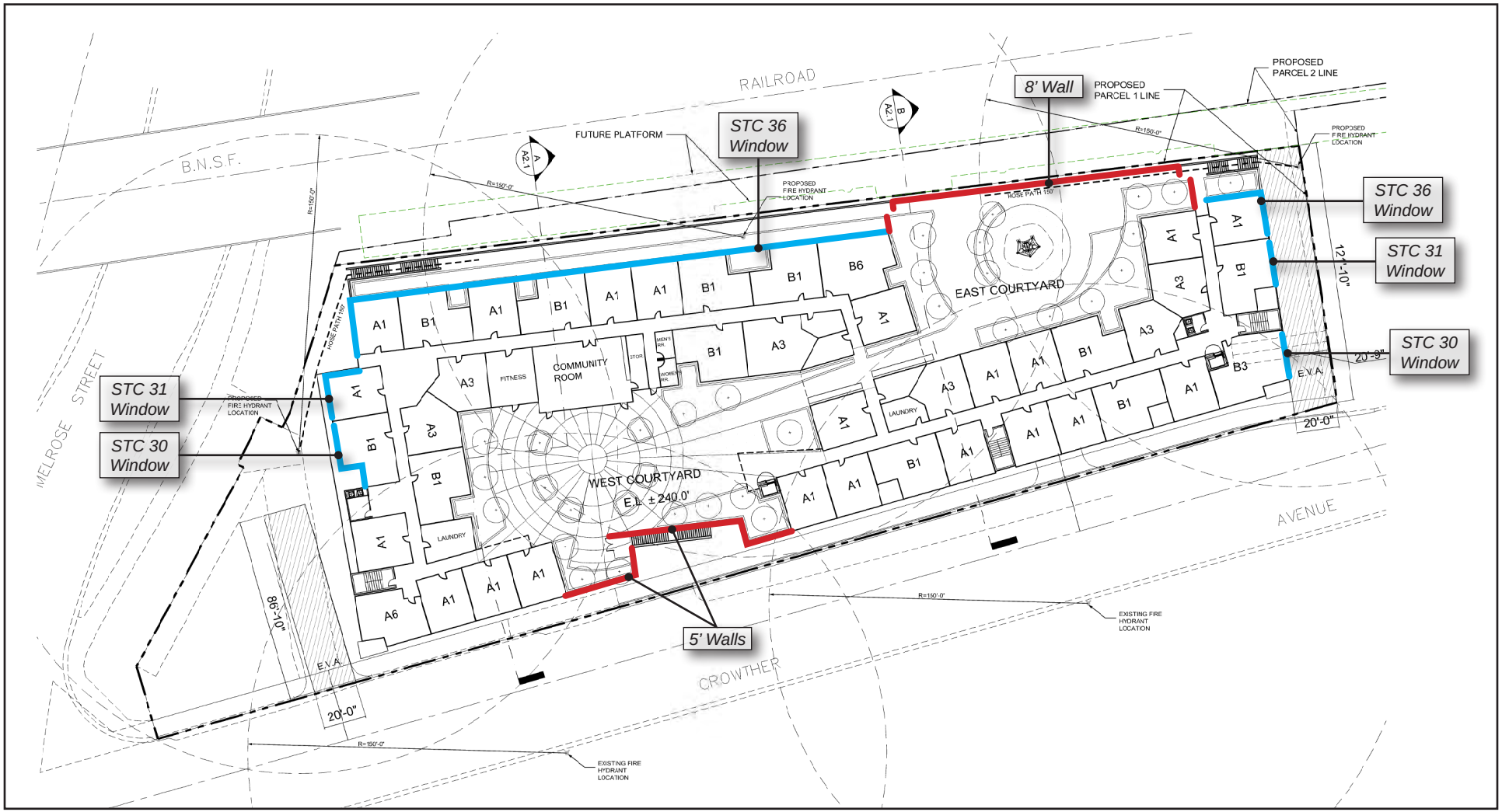
Project Boundary

STC Sound Transmission Class

0 70
Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Figure 3b - Minimum Recommended Window Ratings and Wall Heights - 3rd Floor - Staggered Walkway Barrier Option



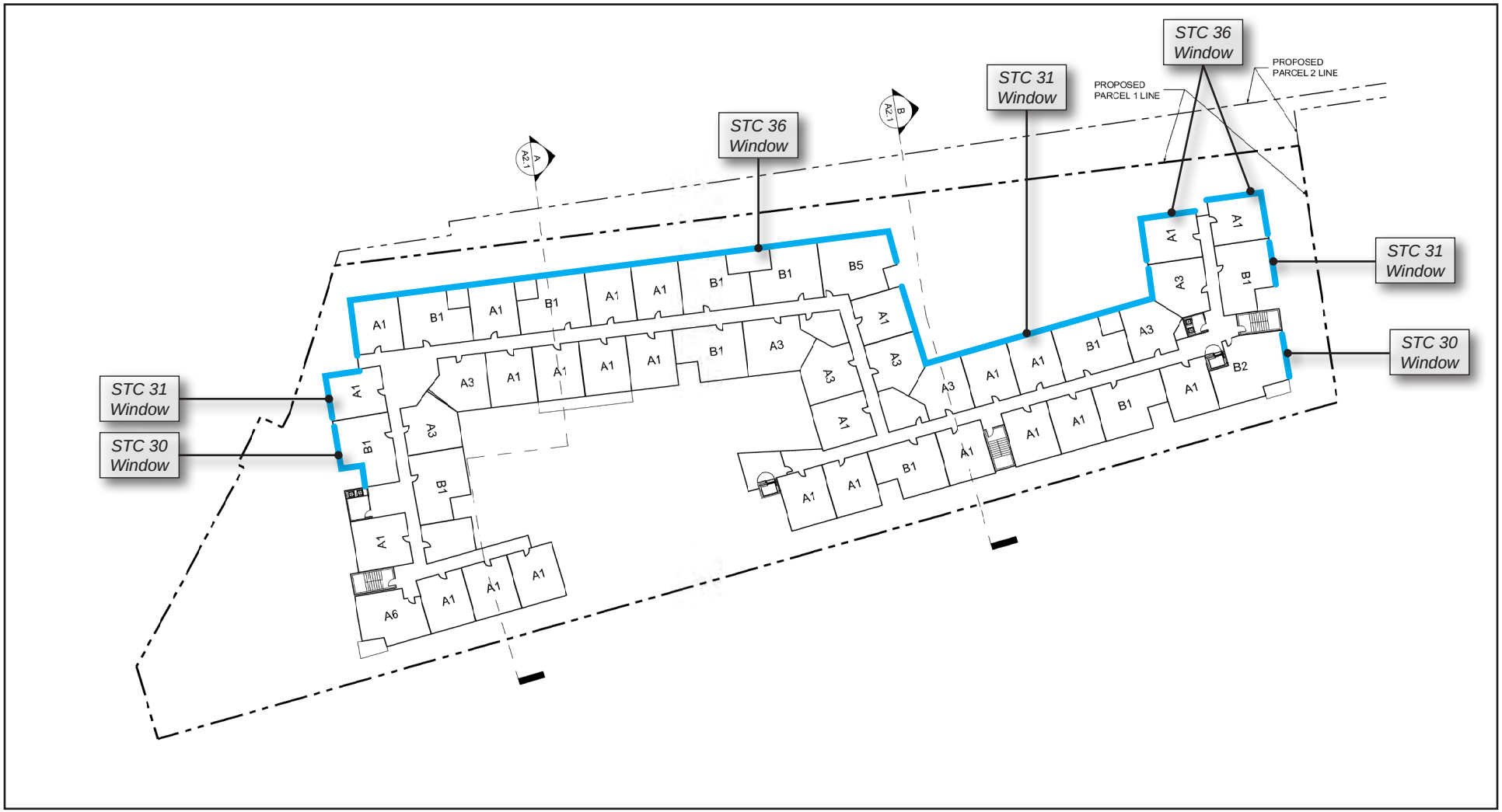
Project Boundary

STC Sound Transmission Class

0 70
Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Figure 4 - Minimum Recommended Window Ratings - 4th Floor



Project Boundary

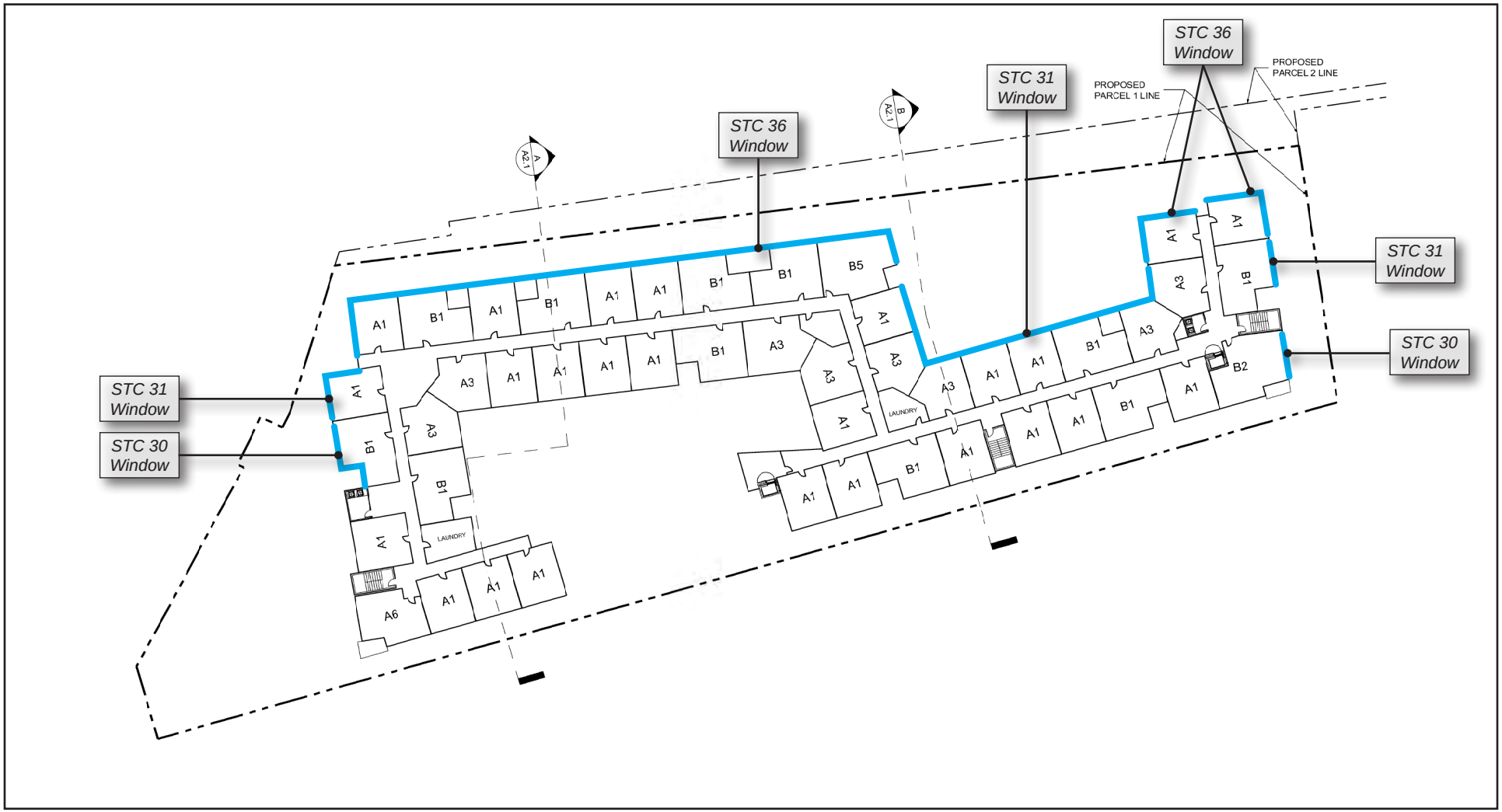
STC Sound Transmission Class

0 70

Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Figure 5 - Minimum Recommended Window Ratings - 5th Floor



Project Boundary

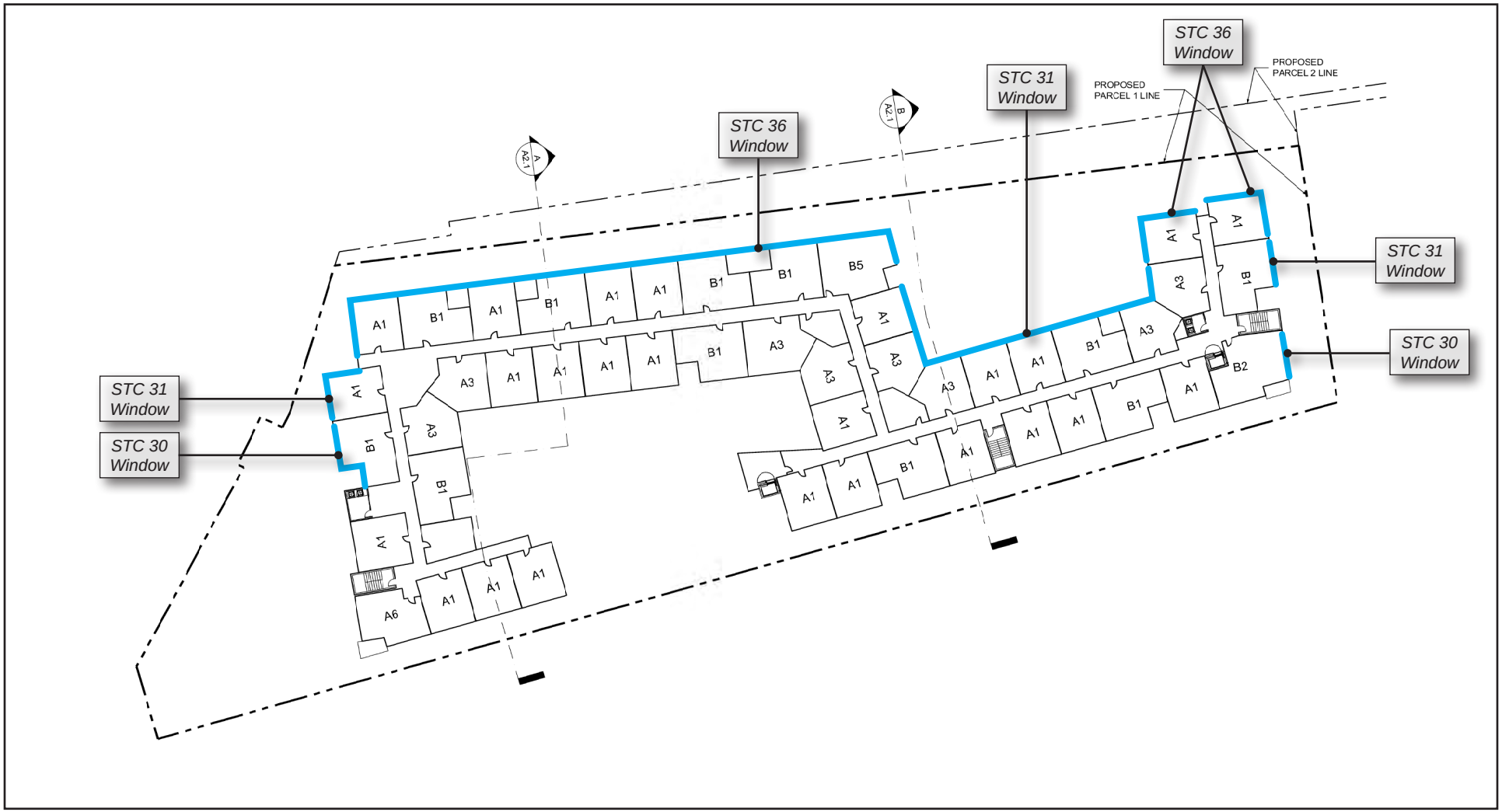
STC Sound Transmission Class

0 70

Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Figure 6 - Minimum Recommended Window Ratings - 6th Floor



Project Boundary

STC Sound Transmission Class

0 70

Scale (Feet)

Source: USA Properties Fund, 2020, PlaceWorks, 2021

Attachment A

January 25, 2021

Fundamentals of Noise

NOISE

Noise is most often defined as unwanted sound; whether it is loud, unpleasant, unexpected, or otherwise undesirable. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Noise Descriptors

The following are brief definitions of terminology used in this chapter:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Maximum Sound Level (L_{max})**. The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

- **STC.** Sound transmission class.

Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dB are detectable under quiet, controlled conditions, and changes of less than 1 dB are usually not discernible (even under ideal conditions). A 3 dB change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dB is readily discernible to most people in an exterior environment, and a 10 dB change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies, David A. and Colin H. Hansen. 2009. *Engineering Noise Control: Theory and Practice*. 4th ed. New York: Spon Press.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 79 dBA, and at 200 feet it would be 73 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dB for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2 shows typical noise levels from familiar sources.

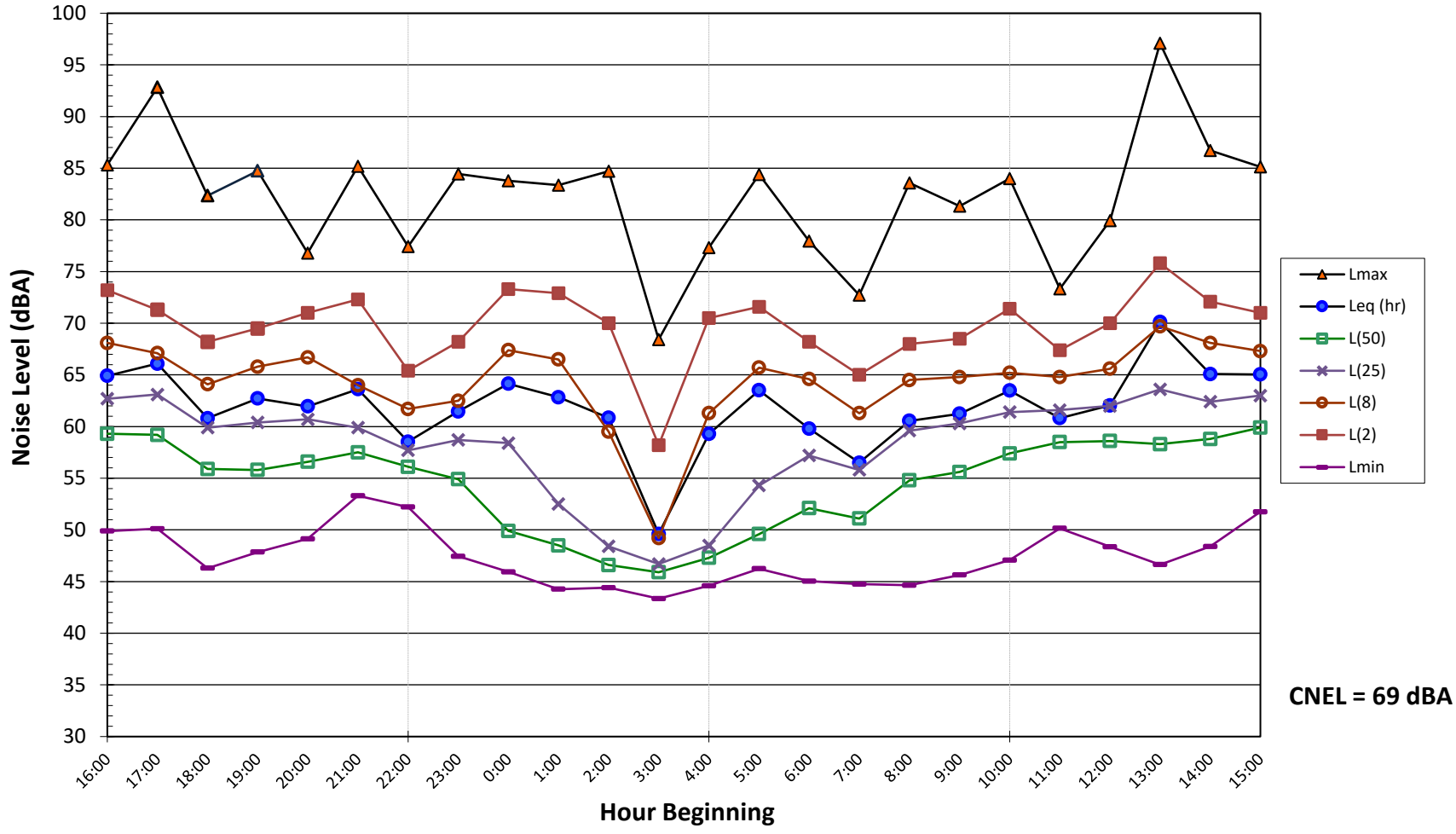
Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2013, September. Technical Noise Supplement ("TeNS").

AMBIENT NOISE MONITORING RESULTS

Noise Levels at LT-1
Melrose St. north of Crowther Ave., Placentia, CA
Saturday, December 12 through Sunday, December 13, 2020



CNEL = 69 dBA

TRAFFIC NOISE MODELING

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: ROADWAYS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 2nd Floor

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

Roadway Name	Width	Points Name	No.	Coordinates (pavement) X	Y	Z	Flow Control Control Device	Speed Constraint	Percent Vehicles Affected	Segment Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Crowther EB	12.0	point1	1	6,068,301.0	2,262,965.5	207.00				Average	
		point2	2	6,068,775.5	2,263,119.2	207.00				Average	
		point3	3	6,069,368.0	2,263,269.0	226.00				Average	
		point4	4	6,069,865.0	2,263,409.5	237.00					
Crowther WB	12.0	point5	5	6,069,859.5	2,263,427.8	237.00				Average	
		point6	6	6,069,361.0	2,263,289.8	226.00				Average	
		point7	7	6,068,777.0	2,263,138.8	207.00				Average	
		point8	8	6,068,297.5	2,262,983.8	207.00					
Melrose1 NB	24.0	point9	9	6,068,610.5	2,262,688.0	223.00				Average	
		point10	10	6,068,708.5	2,263,059.0	210.00					
Melrose2 NB	24.0	point11	11	6,068,735.5	2,263,166.0	207.00				Average	
		point12	12	6,068,752.5	2,263,234.8	203.00				Average	
		point13	13	6,068,773.5	2,263,280.2	202.00				Average	
		point14	14	6,068,816.5	2,263,379.2	207.00				Average	
		point15	15	6,068,842.5	2,263,507.0	207.00				Average	
		point16	16	6,068,837.5	2,263,614.0	215.00				Average	
		point17	17	6,068,833.5	2,263,697.2	223.00				Average	
		point18	18	6,068,855.5	2,263,779.2	224.00					
Melrose 2 SB	24.0	point19	19	6,068,829.5	2,263,785.8	224.00				Average	
		point20	20	6,068,811.5	2,263,699.8	223.00				Average	
		point21	21	6,068,810.0	2,263,614.0	215.00				Average	
		point22	22	6,068,811.5	2,263,505.8	207.00				Average	
		point23	23	6,068,764.5	2,263,369.0	207.00				Average	
		point24	24	6,068,733.0	2,263,292.0	202.00				Average	
		point25	25	6,068,715.0	2,263,229.5	203.00				Average	

		point26	26	6,068,695.5	2,263,150.0	207.00					
Melrose1 SB	24.0	point27	27	6,068,665.5	2,263,042.8	210.00				Average	
		point28	28	6,068,575.5	2,262,688.5	223.00					
Santa Fe EB	12.0	point29	29	6,068,885.5	2,263,792.2	228.00				Average	
		point30	30	6,069,453.0	2,263,636.0	233.00					
Santa Fe WB	12.0	point31	31	6,069,458.5	2,263,659.5	233.00				Average	
		point32	32	6,068,893.5	2,263,817.0	228.00					

PlaceWorks **25 January 2021**
JDC **TNM 2.5**

INPUT: TRAFFIC FOR Lden
PROJECT/CONTRACT: **207 - 209 Crowther**
RUN: **Future 2nd Floor**

Roadway	Points																							
Name	Name	No.	Segment																					
			ADT	Autos				MTrucks				HTrucks				Buses				Motorcycles				
				%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S	%D	%E	%N	S	
			veh/24hrs	%	%	%	mph	%	%	%	mph	%	%	%	mph	%	%	%	mph	%	%	%	mph	
Crowther EB	point1	1	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point2	2	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point3	3	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point4	4																						
Crowther WB	point5	5	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point6	6	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point7	7	10000	97	97	97	40	2	2	2	40	1	1	1	40	0	0	0	0	0	0	0	0	
	point8	8																						
Melrose1 NB	point9	9	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point10	10																						
Melrose2 NB	point11	11	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point12	12	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point13	13	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point14	14	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point15	15	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point16	16	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point17	17	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point18	18																						
Melrose 2 SB	point19	19	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point20	20	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point21	21	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point22	22	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point23	23	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point24	24	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point25	25	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point26	26																						
Melrose1 SB	point27	27	4990	97	97	97	30	2	2	2	30	1	1	1	30	0	0	0	0	0	0	0	0	
	point28	28																						
Santa Fe EB	point29	29	50	92	92	92	25	4	4	4	25	4	4	4	25	0	0	0	0	0	0	0	0	
	point30	30																						

Santa Fe WB	point31	31	50	92	92	92	25	4	4	4	25	4	4	4	25	0	0	0	0	0	0	0	0
	point32	32																					

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 2nd Floor

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing Lden	Impact Criteria Lden	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receiver1	1	1	6,068,894.5	2,263,197.2	213.00	19.00	0.00	66	10.0	8.0	Y
Receiver2	2	1	6,068,987.0	2,263,222.2	215.00	19.00	0.00	66	10.0	8.0	Y
Receiver4	4	1	6,069,094.5	2,263,254.2	224.00	9.00	0.00	66	10.0	8.0	Y
Receiver5	5	1	6,069,324.0	2,263,318.0	227.00	5.00	0.00	66	10.0	8.0	Y
Receiver6	6	1	6,069,317.5	2,263,366.8	228.00	5.00	0.00	66	10.0	8.0	Y
Receiver7	7	1	6,069,313.5	2,263,408.5	229.00	5.00	0.00	66	10.0	8.0	Y
Receiver8	8	1	6,069,259.0	2,263,397.2	228.00	5.00	0.00	66	10.0	8.0	Y
Receiver9	9	1	6,069,141.0	2,263,387.5	226.00	5.00	0.00	66	10.0	8.0	Y
Receiver10	10	1	6,068,894.5	2,263,357.0	215.00	19.00	0.00	66	10.0	8.0	Y
Receiver11	11	1	6,068,879.5	2,263,324.2	214.00	19.00	0.00	66	10.0	8.0	Y

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 2nd Floor

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per Unit Area	$ per Unit Vol.	Top Width	Run:Rise	$ per Unit Length			X	Y	Z	at Point	Seg Ht Increment	Perturbs #Up	Perturbs #Dn	On Struct?	Important Reflections?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Bldg1	W	0.00	99.99	0.00				0.00	point1	1	6,068,982.0	2,263,246.2	214.00	68.00	0.00	0	0		
									point2	2	6,068,987.0	2,263,227.5	215.00	68.00	0.00	0	0		
									point3	3	6,068,896.5	2,263,201.5	213.00	68.00	0.00	0	0		
									point4	4	6,068,883.5	2,263,321.0	214.00	68.00	0.00	0	0		
									point5	5	6,068,902.5	2,263,324.8	214.00	68.00	0.00	0	0		
									point6	6	6,068,898.5	2,263,354.8	215.00	68.00	0.00	0	0		
									point7	7	6,069,140.0	2,263,383.0	226.00	68.00	0.00	0	0		
									point8	8	6,069,151.5	2,263,345.5	226.00	68.00	0.00	0	0		
									point9	9	6,069,098.0	2,263,325.8	224.00	68.00	0.00	0	0		
									point10	10	6,068,941.0	2,263,305.8	214.00	68.00	0.00	0	0		
									point11	11	6,068,948.5	2,263,237.5	213.00	68.00	0.00	0	0		
									point12	12	6,068,982.0	2,263,246.2	214.00	68.00					
Bldg2	W	0.00	99.99	0.00				0.00	point13	13	6,069,095.5	2,263,258.8	223.00	68.00	0.00	0	0		
									point14	14	6,069,319.5	2,263,322.5	227.00	68.00	0.00	0	0		
									point15	15	6,069,310.5	2,263,404.8	228.00	68.00	0.00	0	0		
									point16	16	6,069,262.5	2,263,394.2	228.00	68.00	0.00	0	0		
									point17	17	6,069,262.0	2,263,359.5	227.00	68.00	0.00	0	0		
									point18	18	6,069,103.0	2,263,309.5	225.00	68.00	0.00	0	0		
									point19	19	6,069,110.0	2,263,283.5	225.00	68.00	0.00	0	0		
									point20	20	6,069,087.0	2,263,275.8	224.00	68.00	0.00	0	0		
									point21	21	6,069,095.5	2,263,258.8	223.00	68.00					

PlaceWorks			25 January 2021	
JDC			TNM 2.5	
INPUT: TERRAIN LINES				
PROJECT/CONTRACT:	207 - 209 Crowther			
RUN:	Future 2nd Floor			
Terrain Line	Points			
Name	No.	Coordinates (ground)		
		X	Y	Z
		ft	ft	ft
Terrain Line1	1	6,068,794.5	2,263,164.5	208.00
	2	6,068,789.5	2,263,189.0	208.00
	3	6,068,889.0	2,263,381.2	217.00

PlaceWorks
JDC

25 January 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 2nd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	73.0	66	73.0	10	Snd Lvl	73.0	0.0	8	-8.0
Receiver2	2	1	0.0	72.8	66	72.8	10	Snd Lvl	72.8	0.0	8	-8.0
Receiver4	4	1	0.0	72.7	66	72.7	10	Snd Lvl	72.7	0.0	8	-8.0
Receiver5	5	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
Receiver6	6	1	0.0	63.3	66	63.3	10	----	63.3	0.0	8	-8.0
Receiver7	7	1	0.0	60.5	66	60.5	10	----	60.5	0.0	8	-8.0
Receiver8	8	1	0.0	45.6	66	45.6	10	----	45.6	0.0	8	-8.0
Receiver9	9	1	0.0	48.8	66	48.8	10	----	48.8	0.0	8	-8.0
Receiver10	10	1	0.0	63.8	66	63.8	10	----	63.8	0.0	8	-8.0
Receiver11	11	1	0.0	65.3	66	65.3	10	----	65.3	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	10	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 3rd Floor

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing Lden	Impact Criteria Lden	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receiver1	1	1	6,068,894.5	2,263,197.2	213.00	29.00	0.00	66	10.0	8.0	Y
Receiver2	2	1	6,068,987.0	2,263,222.2	215.00	29.00	0.00	66	10.0	8.0	Y
Receiver3 - West CY	3	1	6,069,009.0	2,263,285.5	215.00	19.00	0.00	66	10.0	8.0	Y
Receiver4	4	1	6,069,094.5	2,263,254.2	224.00	19.00	0.00	66	10.0	8.0	Y
Receiver5	5	1	6,069,324.0	2,263,318.0	227.00	15.00	0.00	66	10.0	8.0	Y
Receiver6	6	1	6,069,317.5	2,263,366.8	228.00	15.00	0.00	66	10.0	8.0	Y
Receiver7	7	1	6,069,313.5	2,263,408.5	229.00	15.00	0.00	66	10.0	8.0	Y
Receiver8	8	1	6,069,259.0	2,263,397.2	228.00	15.00	0.00	66	10.0	8.0	Y
Receiver9	9	1	6,069,141.0	2,263,387.5	226.00	15.00	0.00	66	10.0	8.0	Y
Receiver10	10	1	6,068,894.5	2,263,357.0	215.00	29.00	0.00	66	10.0	8.0	Y
Receiver11	11	1	6,068,879.5	2,263,324.2	214.00	29.00	0.00	66	10.0	8.0	Y
Receiver12 - East CY	12	1	6,069,205.5	2,263,372.2	227.00	15.00	0.00	66	10.0	8.0	Y

PlaceWorks
JDC

25 January 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 3rd Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	72.7	66	72.7	10	Snd Lvl	72.7	0.0	8	-8.0
Receiver2	2	1	0.0	72.5	66	72.5	10	Snd Lvl	72.5	0.0	8	-8.0
Receiver3 - West CY	3	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
Receiver4	4	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
Receiver5	5	1	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	8	-8.0
Receiver6	6	1	0.0	66.4	66	66.4	10	Snd Lvl	66.4	0.0	8	-8.0
Receiver7	7	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
Receiver8	8	1	0.0	48.2	66	48.2	10	----	48.2	0.0	8	-8.0
Receiver9	9	1	0.0	51.8	66	51.8	10	----	51.8	0.0	8	-8.0
Receiver10	10	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
Receiver11	11	1	0.0	65.2	66	65.2	10	----	65.2	0.0	8	-8.0
Receiver12 - East CY	12	1	0.0	48.4	66	48.4	10	----	48.4	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	12	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 4th Floor

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing Lden	Impact Criteria Lden	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receiver1	1	1	6,068,894.5	2,263,197.2	213.00	39.00	0.00	66	10.0	8.0	Y
Receiver2	2	1	6,068,987.0	2,263,222.2	215.00	39.00	0.00	66	10.0	8.0	Y
Receiver4	4	1	6,069,094.5	2,263,254.2	224.00	29.00	0.00	66	10.0	8.0	Y
Receiver5	5	1	6,069,324.0	2,263,318.0	227.00	25.00	0.00	66	10.0	8.0	Y
Receiver6	6	1	6,069,317.5	2,263,366.8	228.00	25.00	0.00	66	10.0	8.0	Y
Receiver7	7	1	6,069,313.5	2,263,408.5	229.00	25.00	0.00	66	10.0	8.0	Y
Receiver8	8	1	6,069,259.0	2,263,397.2	228.00	25.00	0.00	66	10.0	8.0	Y
Receiver9	9	1	6,069,141.0	2,263,387.5	226.00	25.00	0.00	66	10.0	8.0	Y
Receiver10	10	1	6,068,894.5	2,263,357.0	215.00	39.00	0.00	66	10.0	8.0	Y
Receiver11	11	1	6,068,879.5	2,263,324.2	214.00	39.00	0.00	66	10.0	8.0	Y

PlaceWorks
JDC
25 January 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 4th Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0
Receiver2	2	1	0.0	72.2	66	72.2	10	Snd Lvl	72.2	0.0	8	-8.0
Receiver4	4	1	0.0	71.9	66	71.9	10	Snd Lvl	71.9	0.0	8	-8.0
Receiver5	5	1	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	8	-8.0
Receiver6	6	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
Receiver7	7	1	0.0	64.5	66	64.5	10	----	64.5	0.0	8	-8.0
Receiver8	8	1	0.0	50.2	66	50.2	10	----	50.2	0.0	8	-8.0
Receiver9	9	1	0.0	52.8	66	52.8	10	----	52.8	0.0	8	-8.0
Receiver10	10	1	0.0	63.7	66	63.7	10	----	63.7	0.0	8	-8.0
Receiver11	11	1	0.0	65.0	66	65.0	10	----	65.0	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	10	0.0	0.0	0.0
All Impacted	5	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 5th Floor

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing Lden	Impact Criteria Lden	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receiver1	1	1	6,068,894.5	2,263,197.2	213.00	49.00	0.00	66	10.0	8.0	Y
Receiver2	2	1	6,068,987.0	2,263,222.2	215.00	49.00	0.00	66	10.0	8.0	Y
Receiver4	4	1	6,069,094.5	2,263,254.2	224.00	39.00	0.00	66	10.0	8.0	Y
Receiver5	5	1	6,069,324.0	2,263,318.0	227.00	35.00	0.00	66	10.0	8.0	Y
Receiver6	6	1	6,069,317.5	2,263,366.8	228.00	35.00	0.00	66	10.0	8.0	Y
Receiver7	7	1	6,069,313.5	2,263,408.5	229.00	35.00	0.00	66	10.0	8.0	Y
Receiver8	8	1	6,069,259.0	2,263,397.2	228.00	35.00	0.00	66	10.0	8.0	Y
Receiver9	9	1	6,069,141.0	2,263,387.5	226.00	35.00	0.00	66	10.0	8.0	Y
Receiver10	10	1	6,068,894.5	2,263,357.0	215.00	49.00	0.00	66	10.0	8.0	Y
Receiver11	11	1	6,068,879.5	2,263,324.2	214.00	49.00	0.00	66	10.0	8.0	Y

PlaceWorks
JDC
25 January 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 5th Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	72.5	66	72.5	10	Snd Lvl	72.5	0.0	8	-8.0
Receiver2	2	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0
Receiver4	4	1	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	8	-8.0
Receiver5	5	1	0.0	71.5	66	71.5	10	Snd Lvl	71.5	0.0	8	-8.0
Receiver6	6	1	0.0	65.9	66	65.9	10	----	65.9	0.0	8	-8.0
Receiver7	7	1	0.0	64.3	66	64.3	10	----	64.3	0.0	8	-8.0
Receiver8	8	1	0.0	50.4	66	50.4	10	----	50.4	0.0	8	-8.0
Receiver9	9	1	0.0	53.0	66	53.0	10	----	53.0	0.0	8	-8.0
Receiver10	10	1	0.0	63.6	66	63.6	10	----	63.6	0.0	8	-8.0
Receiver11	11	1	0.0	64.9	66	64.9	10	----	64.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	10	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

PlaceWorks 25 January 2021
JDC TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 6th Floor

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing Lden	Impact Criteria Lden	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
Receiver1	1	1	6,068,894.5	2,263,197.2	213.00	59.00	0.00	66	10.0	8.0	Y
Receiver2	2	1	6,068,987.0	2,263,222.2	215.00	59.00	0.00	66	10.0	8.0	Y
Receiver4	4	1	6,069,094.5	2,263,254.2	224.00	49.00	0.00	66	10.0	8.0	Y
Receiver5	5	1	6,069,324.0	2,263,318.0	227.00	45.00	0.00	66	10.0	8.0	Y
Receiver6	6	1	6,069,317.5	2,263,366.8	228.00	45.00	0.00	66	10.0	8.0	Y
Receiver7	7	1	6,069,313.5	2,263,408.5	229.00	45.00	0.00	66	10.0	8.0	Y
Receiver8	8	1	6,069,259.0	2,263,397.2	228.00	45.00	0.00	66	10.0	8.0	Y
Receiver9	9	1	6,069,141.0	2,263,387.5	226.00	45.00	0.00	66	10.0	8.0	Y
Receiver10	10	1	6,068,894.5	2,263,357.0	215.00	59.00	0.00	66	10.0	8.0	Y
Receiver11	11	1	6,068,879.5	2,263,324.2	214.00	59.00	0.00	66	10.0	8.0	Y

PlaceWorks
JDC
25 January 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 207 - 209 Crowther
RUN: Future 6th Floor
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

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

Receiver Name	No.	#DUs	Existing Lden	No Barrier Lden Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated Lden	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	72.6	66	72.6	10	Snd Lvl	72.6	0.0	8	-8.0
Receiver2	2	1	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	8	-8.0
Receiver4	4	1	0.0	71.6	66	71.6	10	Snd Lvl	71.6	0.0	8	-8.0
Receiver5	5	1	0.0	71.3	66	71.3	10	Snd Lvl	71.3	0.0	8	-8.0
Receiver6	6	1	0.0	65.7	66	65.7	10	----	65.7	0.0	8	-8.0
Receiver7	7	1	0.0	64.1	66	64.1	10	----	64.1	0.0	8	-8.0
Receiver8	8	1	0.0	50.6	66	50.6	10	----	50.6	0.0	8	-8.0
Receiver9	9	1	0.0	53.1	66	53.1	10	----	53.1	0.0	8	-8.0
Receiver10	10	1	0.0	63.5	66	63.5	10	----	63.5	0.0	8	-8.0
Receiver11	11	1	0.0	64.8	66	64.8	10	----	64.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	10	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

RAIL NOISE MODELING

Noise Model Based on Federal Transit Adminstration General Transit Noise Assessment
Developed for Chicago Create Project
Copyright 2006, HMMH Inc.
Case: Placentia Future Conditions

RESULTS			
Noise Source	**Ldn (dB)**	**Leq - daytime (dB)**	**Leq - nighttime (dB)**
All Sources	79	70	73
Source 1	76	66	70
Source 2	76	67	70
Source 3	54	45	47
Source 4	53	45	47
Source 5	61	55	54
Source 6	47	41	40
Source 7	57	50	51
Source 8	43	36	37

Enter noise receiver land use category below.

LAND USE CATEGORY	
Noise receiver land use category (1, 2 or 3)	2

Enter data for up to 8 noise sources below - see reference list for source numbers.

NOISE SOURCE PARAMETERS																
Parameter	**Source 1**		**Source 2**		**Source 3**		**Source 4**		**Source 5**		**Source 6**		**Source 7**		**Source 8**	
Source Num.	Freight Locomotive	9	Freight Cars	10	Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3	Commuter Diesel Locomotive	2	Commuter Rail Cars	3
Distance (source to receiver)	distance (ft)	65	distance (ft)	65	distance (ft)	65	distance (ft)	65	distance (ft)	45	distance (ft)	45	distance (ft)	80	distance (ft)	80
Daytime Hours	speed (mph)	35	speed (mph)	35	speed (mph)	60	speed (mph)	60	speed (mph)	10	speed (mph)	10	speed (mph)	10	speed (mph)	10
(7 AM - 10 PM)	trains/hour	1	trains/hour	1	trains/hour	0.07	trains/hour	0.07	trains/hour	0.27	trains/hour	0.27	trains/hour	0.2	trains/hour	0.2
	locos/train	5	length of cars (ft) / train	6500	locos/train	2	cars/train	10	locos/train	1	cars/train	6	locos/train	1	cars/train	6
Nighttime Hours	speed (mph)	35	speed (mph)	35	speed (mph)	60	speed (mph)	60	speed (mph)	10	speed (mph)	10	speed (mph)	10	speed (mph)	10
(10 PM - 7 AM)	trains/hour	2.33	trains/hour	2.33	trains/hour	0.11	trains/hour	0.11	trains/hour	0.22	trains/hour	0.22	trains/hour	0.22	trains/hour	0.22
	locos/train	5	length of cars (ft) / train	6500	locos/train	2	cars/train	10	locos/train	1	cars/train	6	locos/train	1	cars/train	6
Wheel Flats?		0.00%	% of cars w/ wheel flats	0.00%			% of cars w/ wheel flats				% of cars w/ wheel flats				% of cars w/ wheel flats	
Jointed Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Embedded Track?	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Aerial Structure?	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Barrier Present?	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n	Y/N	n
Intervening Rows of of Buildings	number of rows	0	number of rows	0	number of rows	0	number of rows	0	number of rows	0	number of rows	0	number of rows	0	number of rows	0

Figure 5.3-4 - Cumulative Noise Levels, LDN = dBA, with Project, Conceptual Development under Westgate Specific Plan and with potential BNSF horn



operation is assumed to be 120 freight trains per day, with no grade crossings but with brief periods of horn blowing both east and west of the station platform in the area indicated in Figure 5.3-4. Potential freight rail horn noise attributable to this project to the east and west of the platform raises the overall LDN noise level in that area less than one dBA. Please see Appendix 5.3 for measurements, assumptions and calculations.

Table 5.3-4 Total LDN = dBA Rail Noise Levels at 100 feet

Type	yr 2008	yr 2025
BNSF	76	78
Metrolink	55	57
TOTAL	*76*	*78*

The results depicted in Table 5.3-3 show the total effect of adding decibels from dissimilar noise sources. Decibels are logarithmic units and are not added arithmetically. If there is one source producing a sound level of 65dB and a second 65dB sound source is added, the result is not 130dB, but rather a total sound level of 68dB. Therefore, when the BNSF logarithmic value of 76 dBA is added to project related Metrolink value of 55 dBA, the result is a fraction of a decibel above 76 dBA, imperceptible to the average listener.

Therefore, the added, project-related future rail traffic noise from Metrolink operations will be less than one decibel LDN above cumulative rail traffic, and will not be of significant noise impact above the existing and future noise levels with no project.

Cumulative Impacts

Cumulative impacts are addressed in the 2025 Scenario presented previously. No additional analysis is required.

Project Design Features

As stated previously, Metrolink and other rail carriers are implementing a number of measures intended to reduce noise from train traffic.

TRANSMISSION LOSS CALCULATIONS

73 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**74**	**69**	**68**	**64**	**62**	**63**	**63**	**64**	**66**	**66**	**64**	**62**	**60**	**57**	**55**	**51**	**78**	**73.0**	**73.0**
Total Area=	55																		
Window Area =	6	0.11																	
Door Area =	12	0.22																	
Equivalent Wall Area =	37	0.67	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Window (Dbl Glaze) -STC 26	18	21	21	23	25	26	27	27	27	25	23	26	28	27	27	30			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
STC 29 Sliding Glass Door	19	21	12	17	19	24	26	29	32	33	32	37	39	37	37	29			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**21.6**	**24.7**	**18.3**	**23.0**	**25.1**	**29.3**	**31.0**	**32.8**	**34.2**	**33.1**	**31.5**	**34.7**	**36.7**	**35.6**	**35.6**	**34.1**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	52.5	44.0	49.4	40.9	36.8	33.4	32.4	30.7	31.7	32.5	32.7	27.6	23.3	21.4	19.4	16.6	**55**	**43.8**	**43.8**
																	Reduction =	**29.2**	

74 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**75**	**70**	**69**	**65**	**63**	**64**	**64**	**65**	**67**	**67**	**65**	**63**	**61**	**58**	**56**	**52**	**79**	**74.0**	**74.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Window (Dbl Glaze) -STC 26	18	21	21	23	25	26	27	27	27	25	23	26	28	27	27	30			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**22.1**	**25.8**	**27.5**	**29.3**	**31.4**	**32.2**	**33.3**	**33.3**	**33.3**	**31.4**	**29.5**	**32.4**	**34.4**	**33.5**	**33.4**	**36.5**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	53.1	43.9	41.3	35.6	31.5	31.4	31.2	31.3	33.6	35.3	35.7	30.9	26.6	24.6	22.5	15.2	**54**	**43.5**	**43.5**
																	Reduction =	**30.5**	

75 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**76**	**71**	**70**	**66**	**64**	**65**	**65**	**66**	**68**	**68**	**66**	**64**	**62**	**59**	**57**	**53**	**80**	**75.0**	**75.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Window (Dbl Glaze) -STC 26	18	21	21	23	25	26	27	27	27	25	23	26	28	27	27	30			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**22.1**	**25.8**	**27.5**	**29.3**	**31.4**	**32.2**	**33.3**	**33.3**	**33.3**	**31.4**	**29.5**	**32.4**	**34.4**	**33.5**	**33.4**	**36.5**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	54.1	44.9	42.3	36.6	32.5	32.4	32.2	32.3	34.6	36.3	36.7	31.9	27.6	25.6	23.5	16.2	**55**	**44.5**	**44.5**
																	Reduction =	**30.5**	

76 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**77**	**72**	**71**	**67**	**65**	**66**	**66**	**67**	**69**	**69**	**67**	**65**	**63**	**60**	**58**	**54**	**81**	**76.0**	**76.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Sgl. Hung 1/8DblS-1/2AS-1/8DblS -STC 30	17	22	18	19	19	25	28	31	34	35	35	35	35	32	32	29			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**21.5**	**26.4**	**24.5**	**25.5**	**25.6**	**31.3**	**34.2**	**36.8**	**39.4**	**39.7**	**40.0**	**40.4**	**40.8**	**38.1**	**38.1**	**35.5**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	55.7	45.3	46.2	41.5	39.3	34.3	32.2	29.7	29.6	28.9	27.2	24.9	22.3	21.9	19.9	18.1	**57**	**43.7**	**43.7**
																	Reduction =	**32.3**	

77 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**78**	**73**	**72**	**68**	**66**	**67**	**67**	**68**	**70**	**70**	**68**	**66**	**64**	**61**	**59**	**55**	**82**	**77.0**	**77.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Sgl. Hung 1/8DblS-1/2AS-1/8DblS -STC 30	17	22	18	19	19	25	28	31	34	35	35	35	35	32	32	29			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**21.5**	**26.4**	**24.5**	**25.5**	**25.6**	**31.3**	**34.2**	**36.8**	**39.4**	**39.7**	**40.0**	**40.4**	**40.8**	**38.1**	**38.1**	**35.5**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	56.7	46.3	47.2	42.5	40.3	35.3	33.2	30.7	30.6	29.9	28.2	25.9	23.3	22.9	20.9	19.1	**58**	**44.7**	**44.7**
																	Reduction =	**32.3**	

78 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**79**	**74**	**73**	**69**	**67**	**68**	**68**	**69**	**71**	**71**	**69**	**67**	**65**	**62**	**60**	**56**	**83**	**78.0**	**78.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
1/8-1/2AS-1/8 -STC 31	24	20	23	19	19	24	29	34	37	40	42	43	45	46	44	35			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**24.4**	**25.1**	**29.4**	**25.5**	**25.6**	**30.4**	**35.1**	**39.2**	**41.5**	**42.3**	**43.5**	**44.9**	**46.7**	**46.7**	**45.8**	**41.2**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	54.8	48.6	43.4	43.5	41.3	37.3	33.3	29.4	29.5	28.4	25.7	22.4	18.4	15.3	14.2	14.4	**56**	**43.8**	**43.8**
																	Reduction =	**34.2**	

79 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**80**	**75**	**74**	**70**	**68**	**69**	**69**	**70**	**72**	**72**	**70**	**68**	**66**	**63**	**61**	**57**	**84**	**79.0**	**79.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
1/8-1/2AS-1/8 -STC 31	24	20	23	19	19	24	29	34	37	40	42	43	45	46	44	35			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**24.4**	**25.1**	**29.4**	**25.5**	**25.6**	**30.4**	**35.1**	**39.2**	**41.5**	**42.3**	**43.5**	**44.9**	**46.7**	**46.7**	**45.8**	**41.2**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	55.8	49.6	44.4	44.5	42.3	38.3	34.3	30.4	30.5	29.4	26.7	23.4	19.4	16.3	15.2	15.4	**57**	**44.8**	**44.8**
																	Reduction =	**34.2**	

80 CNEL

A-weighting Corrections	*-16.1*	*-13.4*	*-10.9*	*-8.6*	*-6.6*	*-4.8*	*-3.2*	*-1.9*	*-0.8*	*0*	*0.6*	*1*	*1.2*	*1.3*	*1.2*	*1*			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn Source Spectrum	**81**	**76**	**75**	**71**	**69**	**70**	**70**	**71**	**73**	**73**	**71**	**69**	**67**	**64**	**62**	**58**	**85**	**80.0**	**80.0**
Total Area=	55																		
Window Area =	12	0.22																	
Door Area =	0	0.00																	
Equivalent Wall Area =	43	0.78	1.00																
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*			
Casement (7/32Lam-5/16AS-3/16mono) -STC 36	21	22	26	26	29	30	33	34	37	38	39	41	39	36	38	42			
Stucco ext 1 lyr. Int insulated wood stud wall STC 46	25	30	42	41	44	43	45	45	46	45	46	48	50	50	50	55			
Derate for Field Construction	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-3	-3	-4	-4			
Actual TL	**25**	**29**	**41**	**40**	**43**	**42**	**44**	**44**	**44**	**43**	**44**	**46**	**47**	**47**	**46**	**51**			
Composite TL =	**23.5**	**26.4**	**32.2**	**32.1**	**35.0**	**35.7**	**38.5**	**39.2**	**41.5**	**41.4**	**42.3**	**44.1**	**43.8**	**41.5**	**42.8**	**47.0**			
	125	*160*	*200*	*250*	*315*	*400*	*500*	*630*	*800*	*1000*	*1250*	*1600*	*2000*	*2500*	*3150*	*4000*	**Flat**	**A-wht**	**CNEL**
Ldn INTERIOR LEVEL	57.7	49.3	42.6	38.9	33.8	33.9	32.0	31.4	31.5	31.2	28.8	25.2	23.3	22.5	19.1	10.7	**59**	**44.5**	**44.5**
																	Reduction =	**35.5**	

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CALIFORNIA
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WI# 21-014

February 15, 2021
Revised 3/2/21

Leatha Clark, AICP
Project Manager, Development
USA Multifamily Development
3200 Douglas Boulevard, Suite 200
Roseville, CA 95661

Subject: Train Vibration Survey, 207-209 W. Crowther Avenue TOD

Dear Leatha,

The following presents our preliminary assessment of ground-borne noise and vibration from train operations for Crowther Avenue TOD, located at 207-209 W. Crowther Avenue, Placentia, CA.

The assessment is based on our correspondence to date, experience with similar projects, and preliminary review of the following information.

- Crowther Avenue Entitlement – Development Plan Review Submittal, November 16, 2020
- Placentia Metrolink Site Plan
- The Initial Study for The General Plan Amendment (GPA) 2017-01 and Zone Change (ZC) 2017-01 to Establish the Packing House District Transit-Oriented Development Project
- Correspondence from Josh Carman at Placeworks
- Geotechnical Investigation for the Proposed Multi-Family Residential Development 207-209 West Crowther Avenue Placentia, California, prepared by Geocon, October 24, 2018
- Placentia Metrolink_Plans ALL(100%) 2017 08 22

We performed a vibration survey at the site to quantify existing train vibration exposure. This report presents the results of the measurements and provides conceptual design strategies for vibration control for ownership to assess feasibility and pursue "order of magnitude" vibration isolation costs.

1 Project Understanding

The project is a transit-oriented development (TOD) project including 6-stories of residential apartments with parking and retail podium. The site is currently adjacent to the Burlington Northern Santa Fe (BNSF) railroad right-of-way. A reconfiguration will enable a future Metrolink Station with future platforms planned directly adjacent to the building.

USA Properties Fund (USA) is developing the project which resides within the Packing House District Transit-Oriented Development Project. Placeworks is providing environmental consulting and airborne noise control design services and has identified the potential for future train operations to exceed applicable vibration criteria without mitigation based on a general level assessment.

With regard to overall project schedule, we understand that USA is planning on starting construction on the residential portion in September 2022 and that approximately 21 months will be required to complete. USA has been coordinating with Orange County Transportation Authority (OCTA) and their engineering firm Wildan that is responsible for the Metrolink Station plans. The construction schedule for the Metrolink station may slip somewhat due to negotiations with BNSF and OCTA and also the effects of COVID on OCTA's ridership and budget. At this time, the expectation is that the USA development construction will precede the Metrolink Station construction, but it is possible that may change.

At this stage, only conceptual architectural plans have been developed which are contained in the entitlement submittal referenced above. Structural design concepts have yet to be developed.

2 Vibration Criteria

The Mitigated Negative Declaration Assessment for the TOD District prepared by Tom Dodson & Associates includes vibration mitigation measure XII-2, which establishes 72 VdB relative to 1micro-inch/second as the applicable vibration threshold for future projects.

> *XII-2: The City shall require a vibration study for each future specific project that will identify whether noise attenuation features (such as dual-paned windows, spread footings, or other vibration features) must be installed to meet the 72 VdB vibration threshold recommended for the volume of train traffic. This vibration study shall be submitted with the project design and vibration attenuation features shall be incorporated and identified on design plans submitted to the City for review and approval. Specific measures shall be implemented that demonstrate compliance with the 72 VdB threshold, or a follow-on CEQA environmental document must be prepared for a project that cannot meet the standards.*

The basis for the threshold as cited in the Mitigated Negative Declaration (MND) Assessment is the FTA Guidance Manual "Transit Noise and Vibration Impact Assessment," May 2006.[1]

The FTA vibration threshold of 72 VdB applies to interior floor vibration in the vertical direction as measured inside residences. For context, 65 VdB is the level that approaches the threshold of perception for most people. Thus, 72 VdB is perceptible.

Another aspect to consider is the potential for ground-borne noise produced by the vibration during train passbys. Ground-borne noise occurs when vibration causes building surfaces to vibrate and re-radiate sound in the audible frequency range causing low frequency sound, e.g., "rumble". The MND is silent on the issue of ground-borne noise and no ground-borne noise criteria are provided. Airborne noise from train passbys will typically dominate the interior noise environment and dominate ground-borne noise where the receiver is along the railway side of the development with windows overlooking the tracks. Ground-borne noise might be more noticeable in apartments with windows that are not exposed to airborne noise from the trains. For consideration, the FTA ground-borne noise impact threshold is 35 dBA for residential use.

[1] The FTA Guidance Manual was updated in 2018. The passby vibration thresholds are the same as published in 2006.

3 Vibration Survey

A survey was performed at the site on Sunday, January 31, 2021 to characterize passby vibration from freight and commuter trains. Short-term attended ground vibration measurements were made simultaneously at four locations as shown in Figure 1.

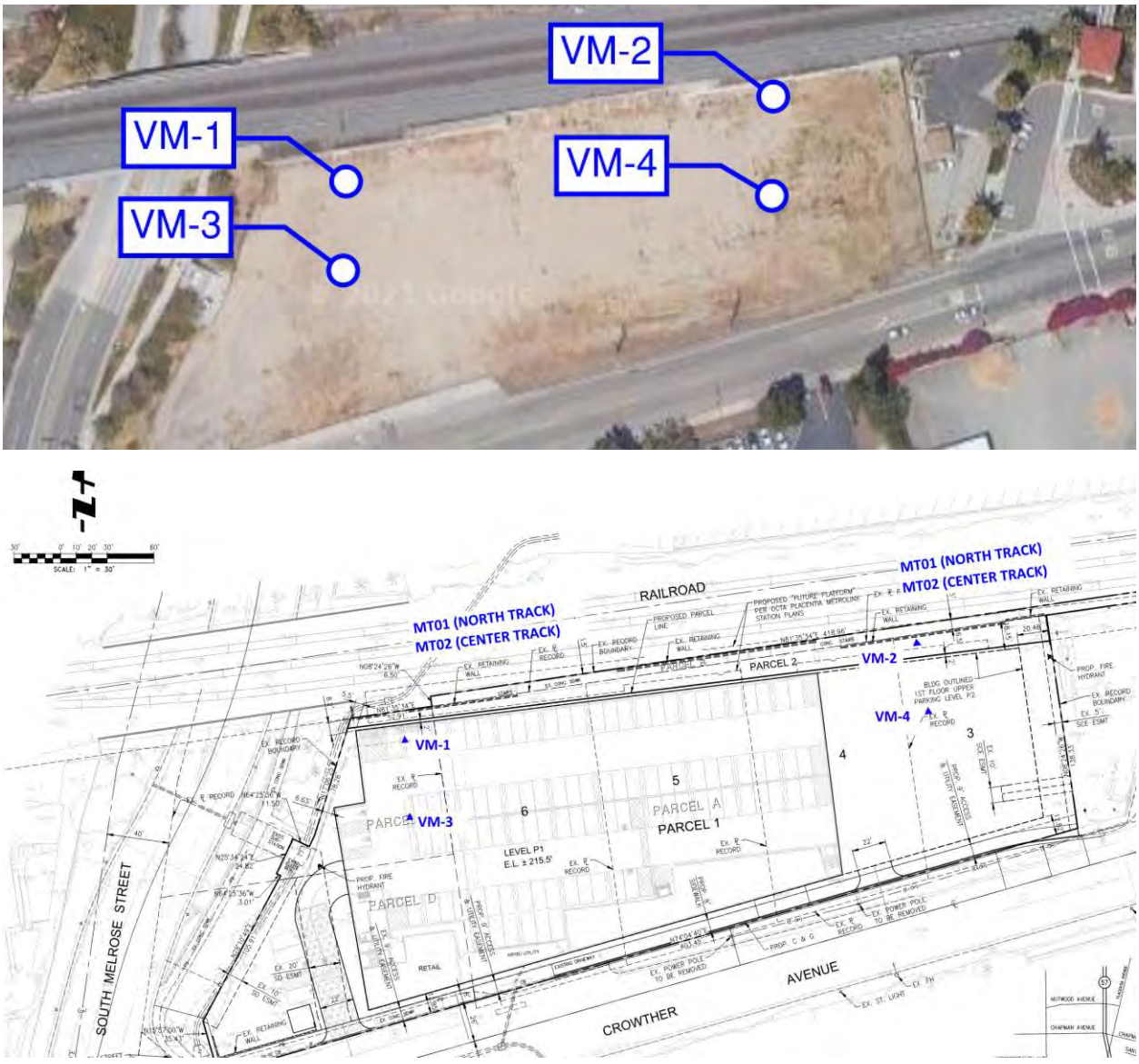

Figure 1: Short-Term Vibration Measurement Locations on January 31, 2021 (Not to Scale)

VM-1 and VM-3 were toward the western end of the property. VM-2 and VM-4 were toward the eastern end. The perpendicular distances to the active track centerlines are shown in Table 1. During the measurement period, eastbound trains (freight and commuter) operated on the northern track (MT01). Westbound trains (freight and commuter) were on the center track. There is also a southernmost shoofly track which was not in use during the measurement. We understand this track

will be reconfigured to serve as the Metrolink station track as further discussed in Section 4 Preliminary Assessment.

Table 1: Measurement Positions and Distance to Active Tracks During Measurement Survey

Measurement Position	Distance to MT01 (north track, EB trains)	Distance to MT02 (center track, WB trains)	Mounting Condition
VM-1	71 ft	55 ft	Ground stake
VM-2	51 ft	36 ft	Existing retaining wall foundation
VM-3	121 ft	91 ft	Ground stake
VM-4	96 ft	82 ft	Ground stake

Accelerometers were mounted on ground stakes at all locations except VM-2, where the accelerometer was mounted on a concrete foundation at the base of the retaining wall that abuts the railway. Engineering wax was used to adhere accelerometers to each measurement surface. Refer to Appendix A for photos. Measurements were performed using 1000pc/g Endevco Type 7701 accelerometers, WIA charge amplifiers with conversion gain of 1 V per 1000pc, and Norsonic 140 analyzers configured for low frequency response. All instrumentation were calibrated before and after the measurement session with a NIST-traceable PCB handheld vibration shaker.

Table 2 summarizes all of the measured events in terms of train type, track, train speed, duration, and time of day. Between 8:30 am and 4:00 pm a total of 15 train passbys occurred. In the westbound direction on track MT02, there were two Metrolink trains, five loaded freight trains, and two unloaded freight trains. In the eastbound direction on track MT01, there was one Metrolink train and five loaded freight trains. No Amtrak trains passed during the survey.

Table 2: Train Events Documented during Vibration Survey

ID	Train	Direction	Track	Approx. Speed – mph	Approx. Duration	Time
1	Metrolink, 6car	WB	Center	53	10 sec	8:33 am
2	Freight	WB	Center	20	2-3 min	8:49 am
3	Metrolink	WB	Center	54	10-15 sec	9:43 am
4	Freight	EB	North	20-40	2 min	10:04 am
5	Freight	WB	Center	20-42	2 min	10:15 am
6	Freight (unloaded)	WB	Center	20-30	2 min	10:29 am
7	Freight (unloaded)	WB	Center	20-35	2 min	11:35 am
8	Freight	WB	Center	20-25	2 min	12:18 pm
9	Freight	EB	North	35-40	2 min	12:51 pm
10	Freight	EB	North	30-35	2 min	1:01 pm
11	Freight	WB	Center	30-35	3 min	1:43 pm
12	Freight	EB	North	30-35	2 min	1:56 pm
13	Freight	WB	Center	25-30	2 min	2:01 pm
14	Freight	EB	North	30-35	2 min	2:21 pm

15	Metrolink	EB	North	52-56	10-15 sec	4:00 pm
Notes: Train speeds were measured with a handheld speed radar, "Traffic Advisor Pocket Radar."						

Vibration data were post-processed to quantify passby vibration in terms of 1/3 octave band root-mean-square (RMS) velocity for each location and train type. Detailed charts are shown in Appendix B which presents all of the individual passbys measured at each location.

Summary charts of the vibration data are shown in Figure 2 through Figure 4.

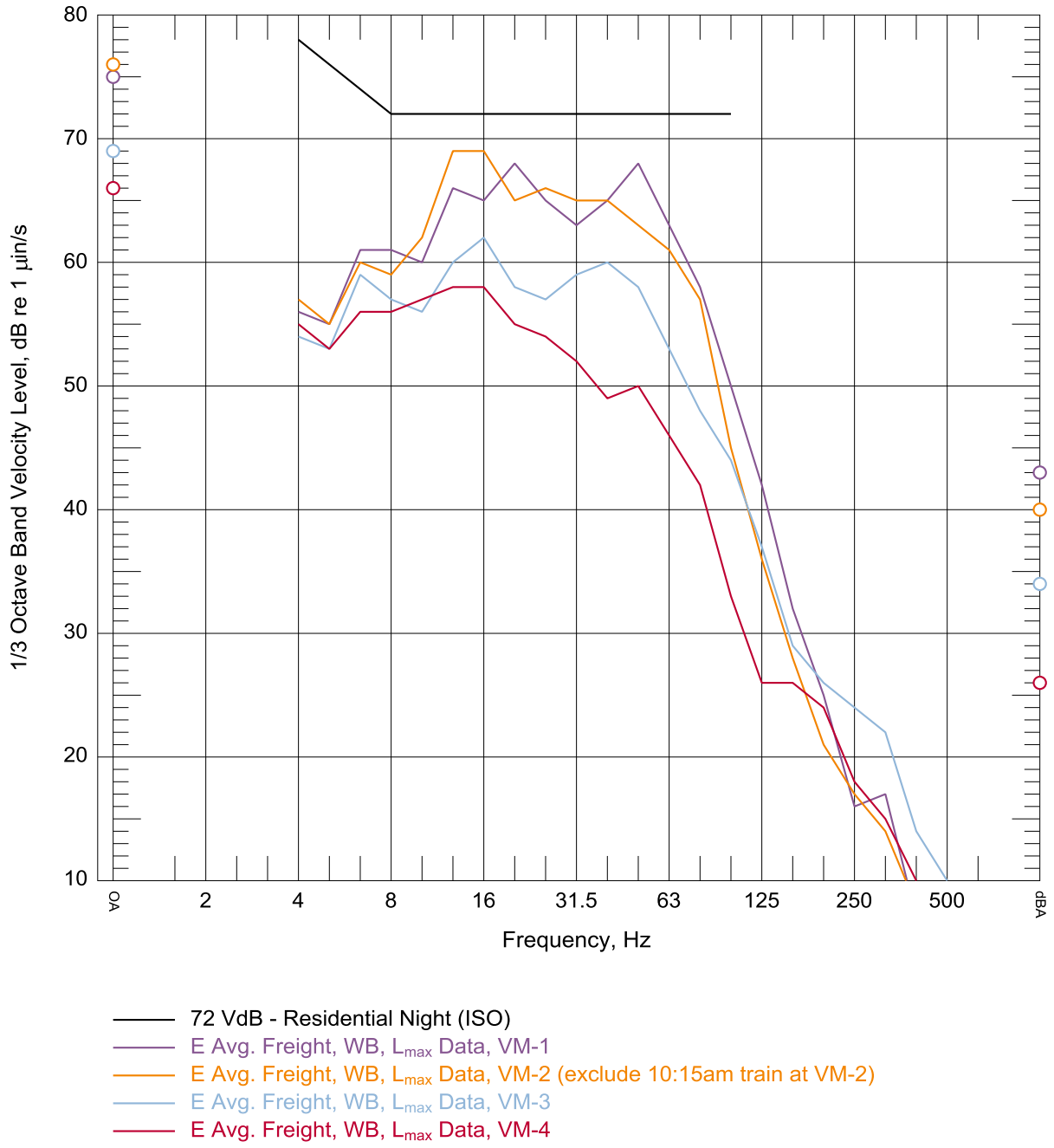

Figure 2: Freight Westbound, Energy Mean of Train Passby Data, All Locations

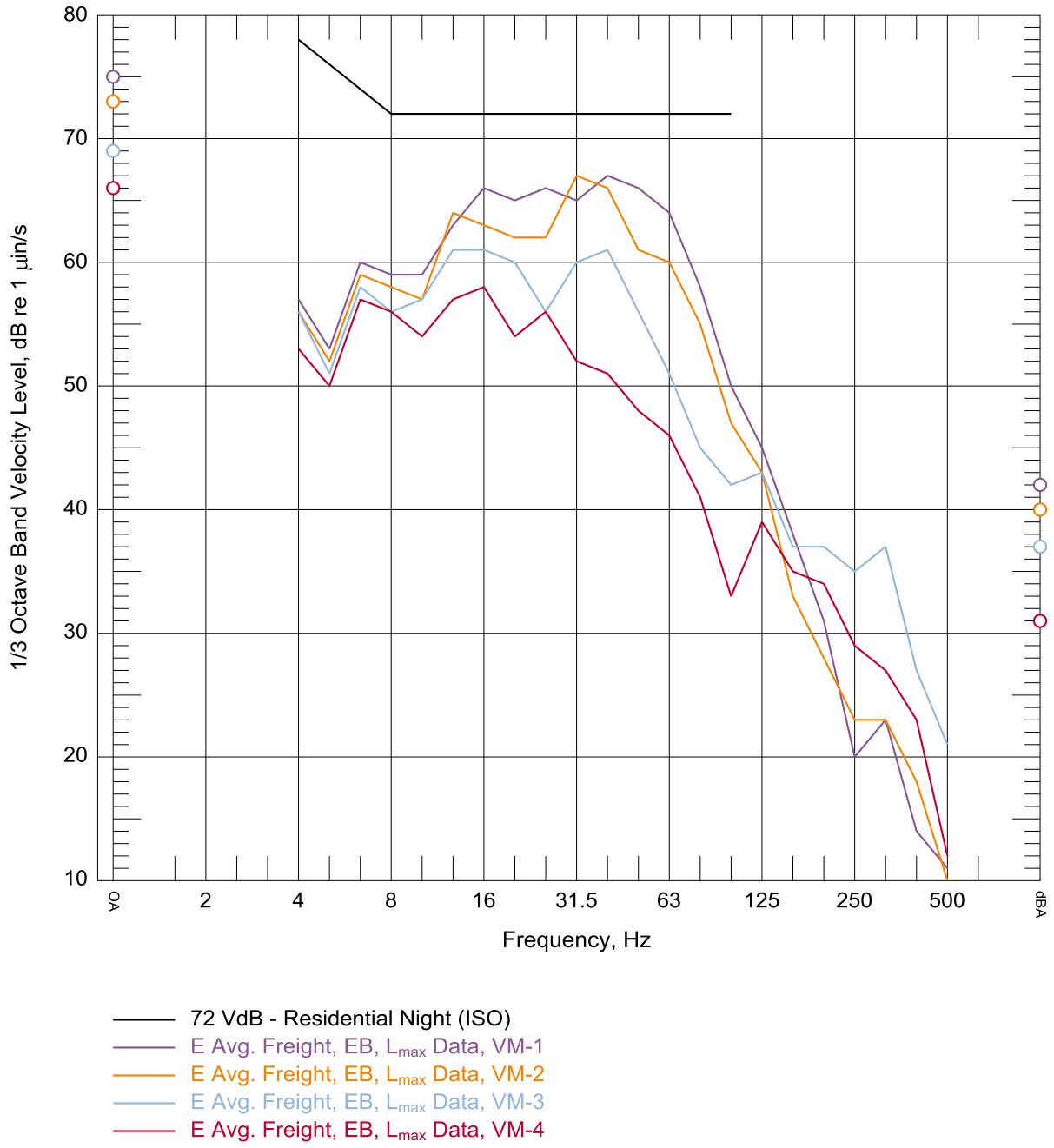

Figure 3: Freight, Eastbound, Energy Mean of Train Passby Data, All Locations

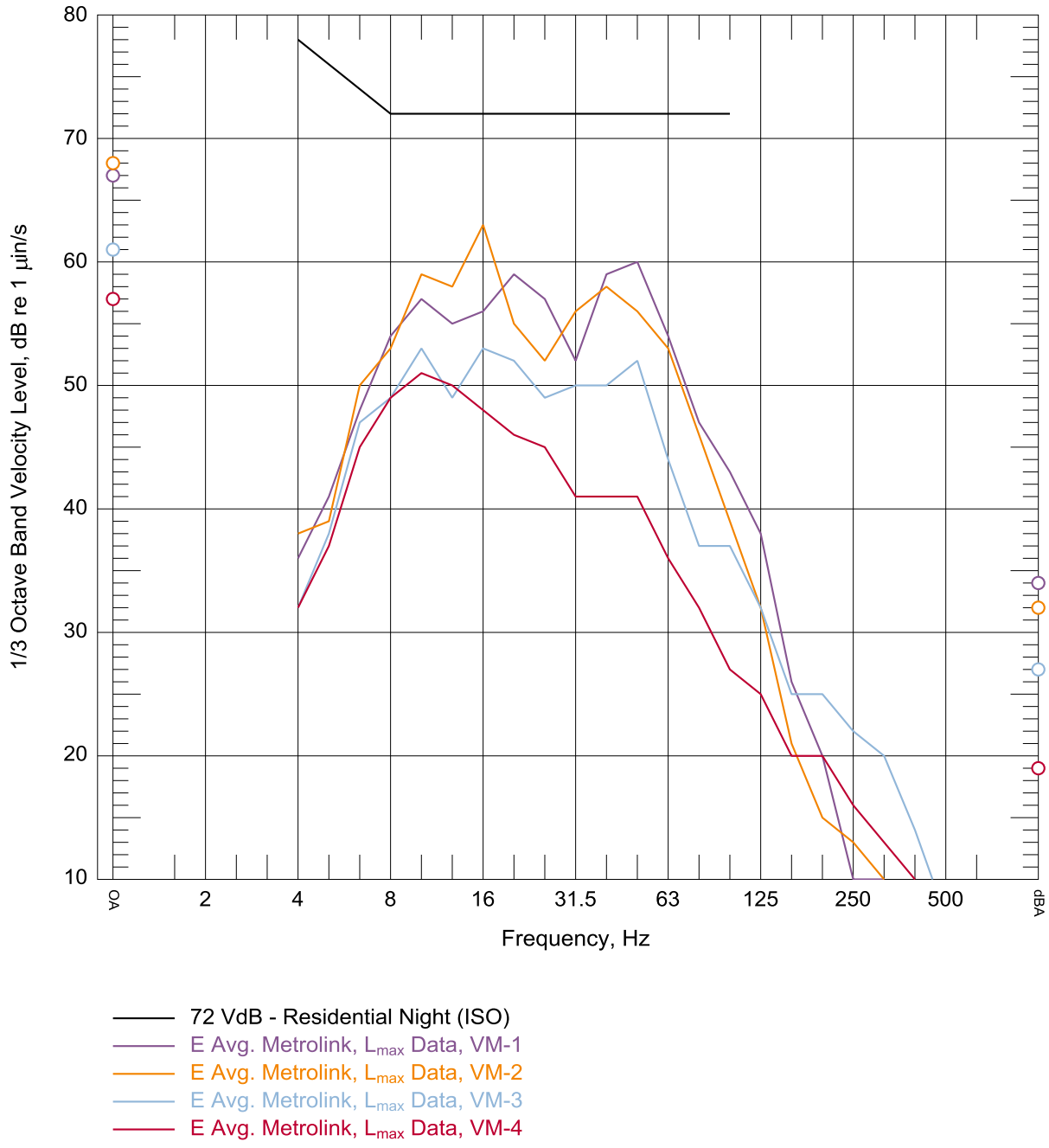

Figure 4: Metrolink, Eastbound and Westbound, Energy Mean of Train Passby Data, All Locations

4 Preliminary Assessment

The closet residences to the trains will be Level 3 above the podium as shown in Figure 5.



Figure 5: Measurement Locations Superimposed on 3rd Floor Podium Level and Building Section

The vibration survey data have been used as a basis to develop preliminary estimates of ground-borne noise and vibration which are presented in Table 3.

Table 3: Preliminary Estimates of Train Vibration and Ground-Borne Noise to Third Floor Residences

Train Type	Speed (mph)	Distance[1]	GBV[3] Estimate	GBV[3] Threshold	GBN[4] Estimate	GBN[4] Threshold
Freight	35	40 to 45 feet from CL MT02 to south edge of south platform	69 VdB (12 to 20 Hz)	72 VdB	**37 dBA**	35 dBA
Metrolink	10	21 to 27 feet from CL FMT3 to south edge of south platform	57 to 60 VdB (16 to 20Hz)	72 VdB	25 dBA	35 dBA
Amtrak[2]	60	Assumed same distance as Freight	67 VdB	68 VdB	31 dBA	35 dBA

Notes:
1) Closest potential distance from the new building to near-track centerline, based on Metrolink plans.
2) Amtrak trains were not operating during the survey, projection based on Metrolink train data.
3) VdB re 1 micro-inch/sec rms, third octave rms vibration velocity level.
4) MND is silent on ground-borne noise effects. Discretionary for consideration.

The projections assume the following operational assumptions:

- Distances measured from the Metrolink plan track centerlines to the southern edge of the new platform where the new building structure would presumably start. The Metrolink station plan is shown below in Figure 6.

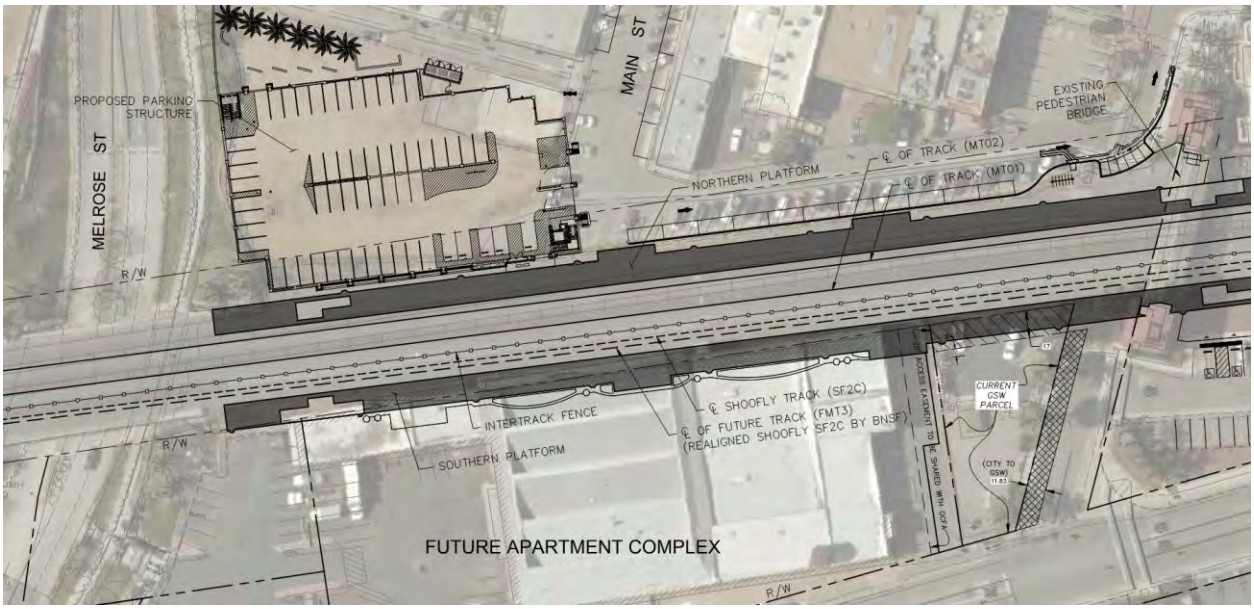

Figure 6: Metrolink Station Plan

- Speeds and track operations
    - Metrolink – operating at 10 mph on FMT3

  - Freight – operating at similar speeds to survey on MT01 and MT02 (typically not more than 35 mph)
  - Amtrak – operating at 60 mph on MT01 and MT02 (since no Amtrak trains were measured, the projections use the Metrolink data as a basis, scaled for Amtrak speed and distance assumptions).

- Building vibration response
  - Large building coupling loss plus 6 dB for floor amplification per FTA
  - 1 dB reduction per floor vertical attenuation

- Ground-borne noise conversion
  - Based on data contained in TCRP D-12 and measurements from past transit projects.

- No crossovers, switches, frogs etc., within vicinity of building footprint (i.e. less than 160 feet)
- Continuously welded track, no jointed track
- Rail wear nothing worse than currently on MT2 and MT1 at time of measurements

Metrolink. Using the vibration passby data obtained at the closer positions (VM-1 and VM-2), projections were made to the 3rd floor residences on the north side of the building along the tracks. The projected vibration is lower than the 72 VdB threshold without mitigation. The projected ground-borne noise is also lower than the 35 dBA threshold.

Freight. Similarly, using the freight vibration passby data obtained at VM-1 and VM-2, projections were made to the 3rd floor residences on the north side of the building along the tracks. The projected vibration is 69 VdB which approaches the 72 VdB threshold. The projected ground-borne noise is 37 dBA and somewhat higher than the 35 dBA threshold. Since the closest residences will likely have windows facing the tracks, airborne noise will likely dominate over the ground-borne noise component.

Amtrak. Since no Amtrak trains were measured, the projections use the Metrolink data as a basis and assume distance and speed scaling as outlined above. The projected Amtrak vibration is lower than the 72 VdB threshold without mitigation. The projected ground-borne noise is also lower than the 35 dBA threshold.

5 Findings and Preliminary Recommendations

1. Metrolink trains are not likely to exceed FTA passby ground-borne noise and vibration thresholds.

2. Amtrak vibration, using Metrolink vibration data as proxy, are not likely to exceed FTA passby ground-borne noise and vibration thresholds.

3. Freight vibration is likely to be close to or borderline with the project criterion vibration threshold of 72 VdB. These projections assume the structural vibration amplification of the development design will not be more than 6 VdB. If there is potential for the floor design to amplify vibration more than 6 VdB, then the 72 VdB threshold may be exceeded. In lightweight and lightly damped wood frame and concrete structures this is a distinct possibility.

4. The freight survey vibration data exhibit a substantial amount of mid- to high frequency vibration which can manifest as ground-borne noise. The projected ground-borne noise for the freight trains is 2 dBA higher than the FTA ground-borne threshold of 35 dBA. However, since airborne noise will dominate over ground-borne noise for units with windows, this does not necessarily trigger the need for mitigation.

5. The Crowther Ave design will need to include approved design provisions to prevent direct solid rigid contact between Crowther Ave structure (foundations, walls, etc.,) and the Metrolink structure (platforms, foundations, walls, etc.). Alternatively, the Metrolink station development must include such provisions to isolate against any direct contact with the Crowther development.

6. Conceptual recommendations for owner discretionary consideration for reducing ground-borne noise and vibration into the Crowther Ave building during train operations include:

    a. 2" thick continuous elastomeric mat placed along retaining wall to buffer railway vibration and prevent contact between ballast and retaining wall such as closed cell neoprene foam, or a closed cell urethane foam such as Getzner Sylodyn NB or approved equivalent.

    b. Thickened concrete foundation such as a 3-ft thick concrete mat slab.

    c. Additional analysis would be needed to quantify the benefit of the above measures including foundation design review in conjunction with the geotechnical report and possibly subsurface (borehole) vibration measurements at the planned foundation depths to confirm vibration levels representative of future footings.

7. There are existing retaining walls on site with varying conditions along the railway from east to west. These walls will be partially demolished to make room for new retaining walls and drilled concrete piles supporting the Metrolink south platform. It is not currently clear how the Crowther Ave subgrade foundation walls will interface with the Metrolink structures. Structural drawings and detailed cross sections should be provided for review to determine if and where vibration isolation provisions are needed.

8. The floor design and structural drawings should be reviewed when available to see if they change the findings herein.

9. The report does not include evaluation of track-side changes and/or track-side vibration control measures which may or may not be feasible. Please advise if vibration control measures within the Metrolink project scope of work can be considered; or if changes to the embankment and track cross-section are considered so we have the opportunity to review the potential to change the findings herein.

WILSON IHRIG
Gary Glickman, MS, INCE Bd. Cert.
Principal

Cc: Patrick Murphy, Associate Principal, Los Angeles Office Lead

APPENDIX A – VIBRATION MEASUREMENT PHOTOS



Figure A- 1: VM-1





Figure A- 2: VM-2





Figure A- 3: VM-3



Figure A- 4: VM-4



Figure A- 5: Freight Train Passage, View from Site



Figure A- 6: Freight Train and Tracks

APPENDIX B – TRAIN PASSBY MEASUREMENT DATA

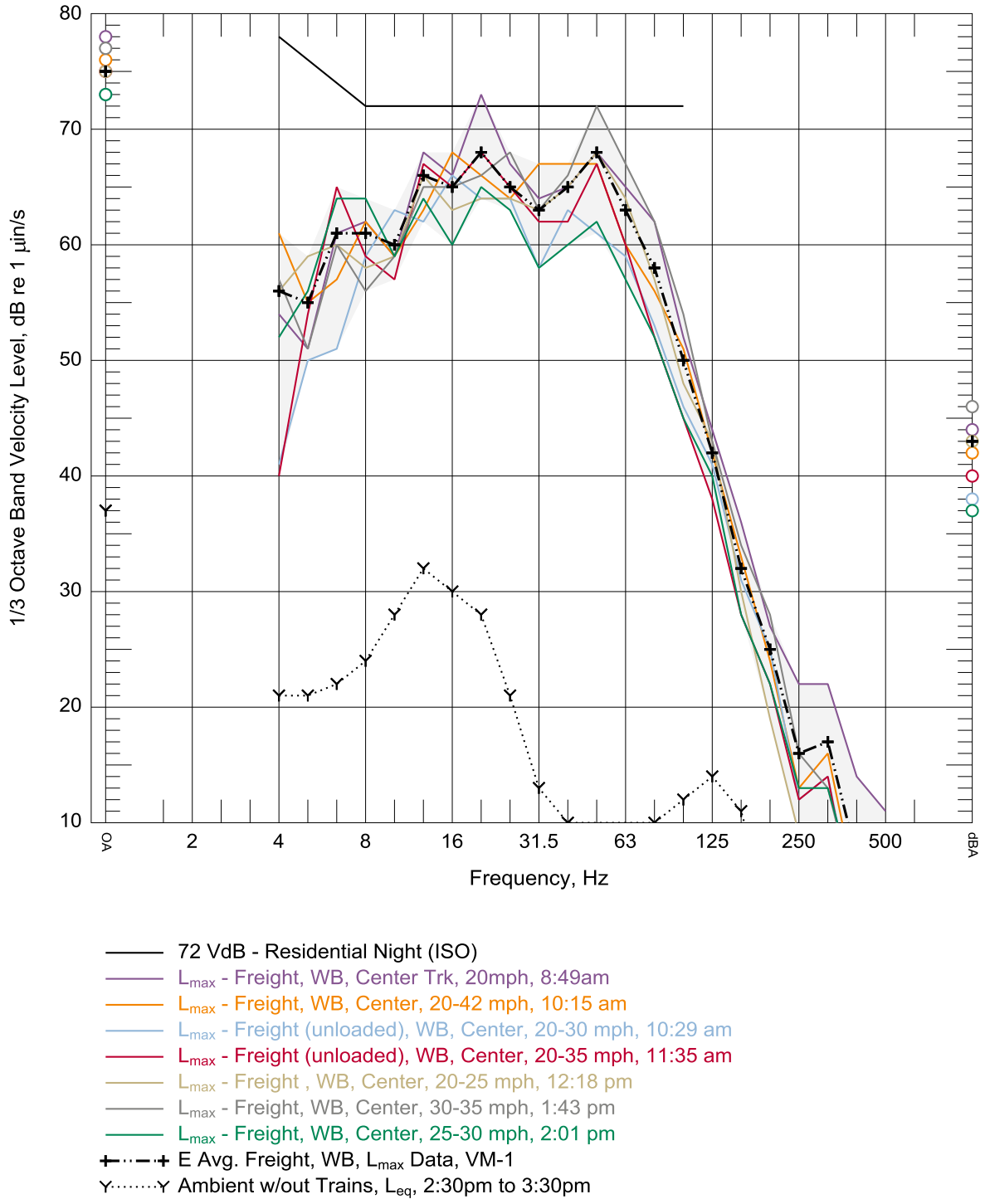

Figure B- 1: Freight Train Passbys WB, Center Track, at VM-1, Lmax

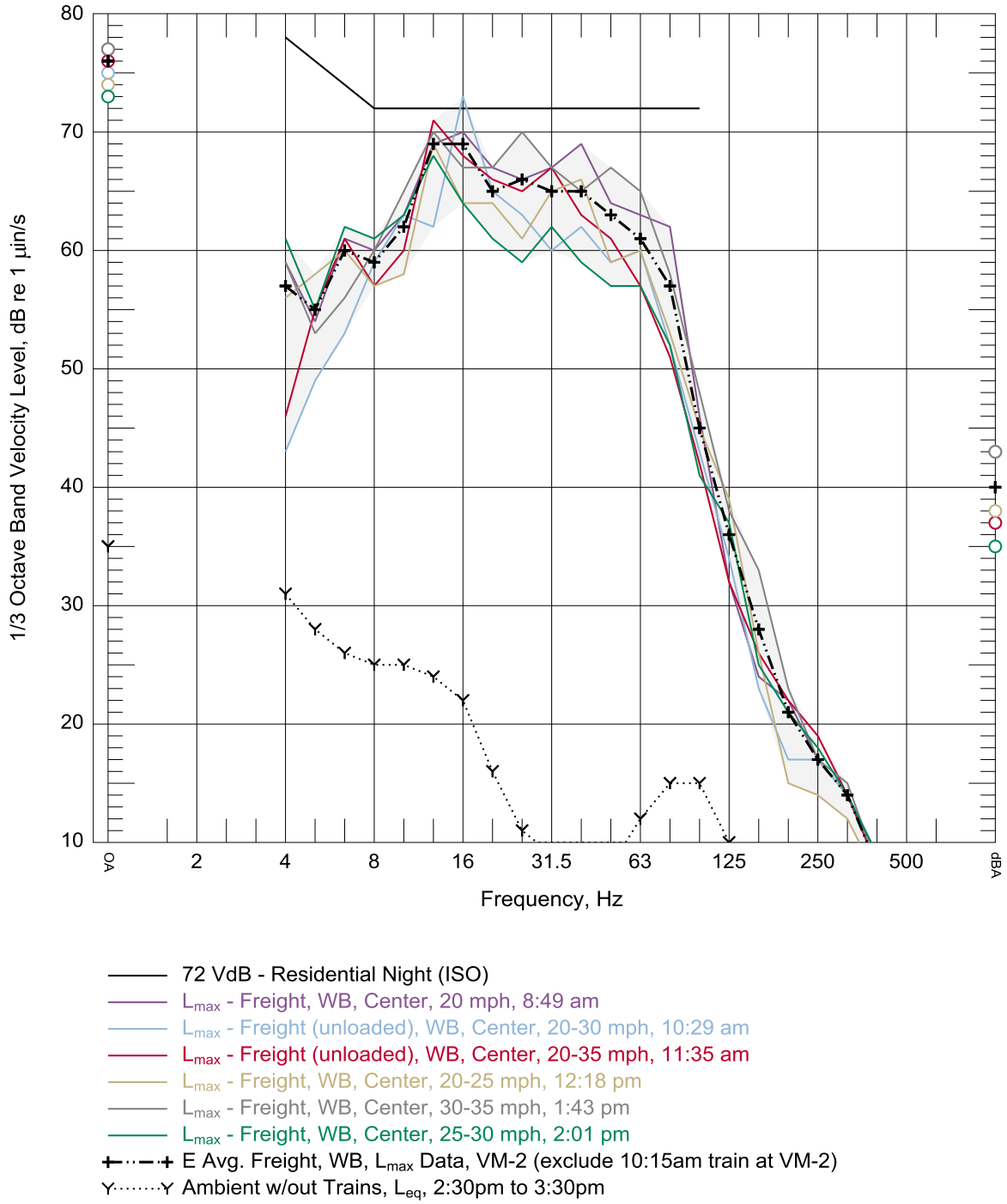

Figure B- 2: Freight Train Passbys WB, Center Track, at VM-2, Lmax

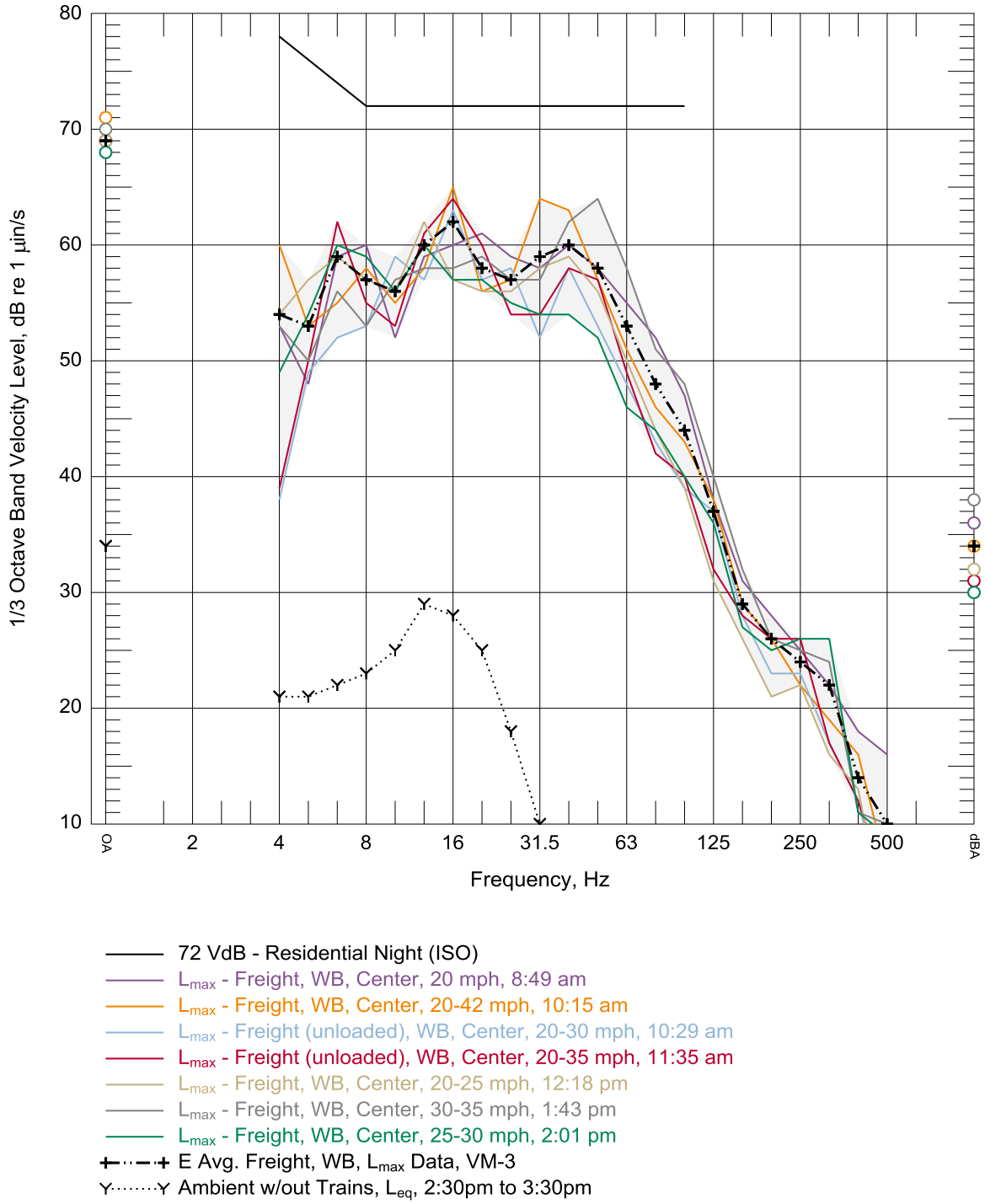

Figure B- 3: Freight Train Passbys WB, Center Track, at VM-3, Lmax

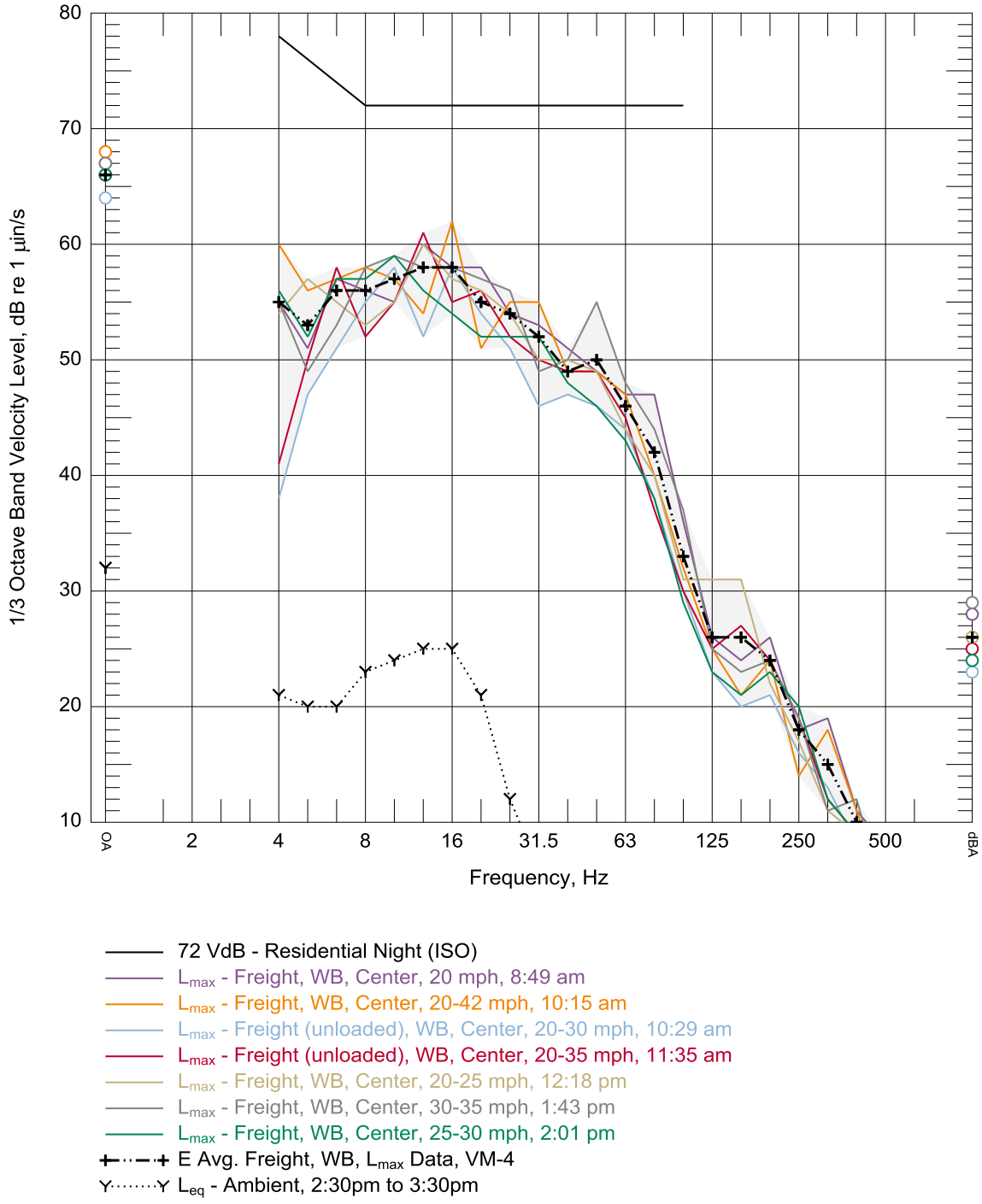

Figure B- 4: Freight Train Passbys WB, Center Track, at VM-4, Lmax

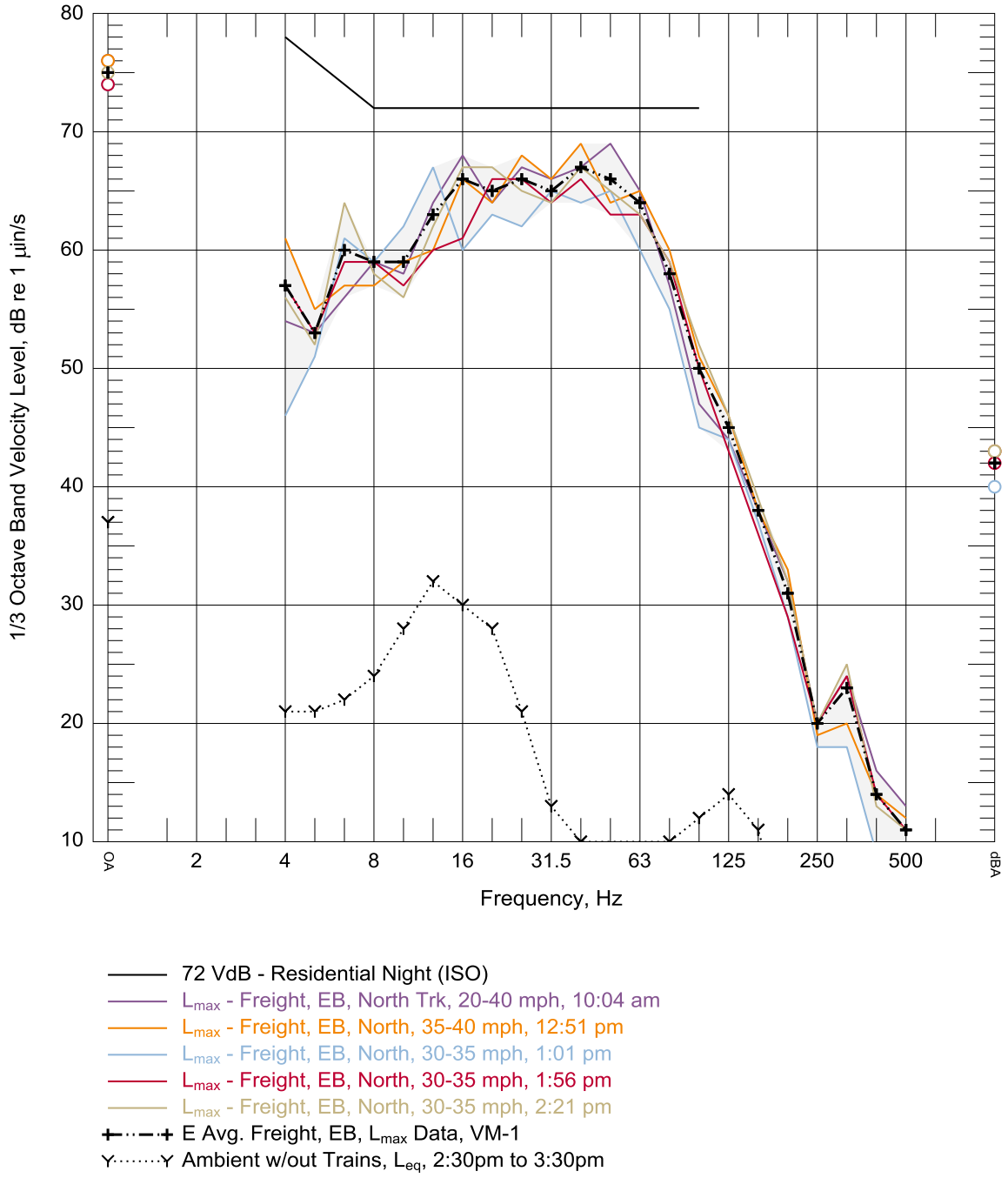

Figure B- 5: Freight Train Passbys EB, North Track, at VM-1, Lmax

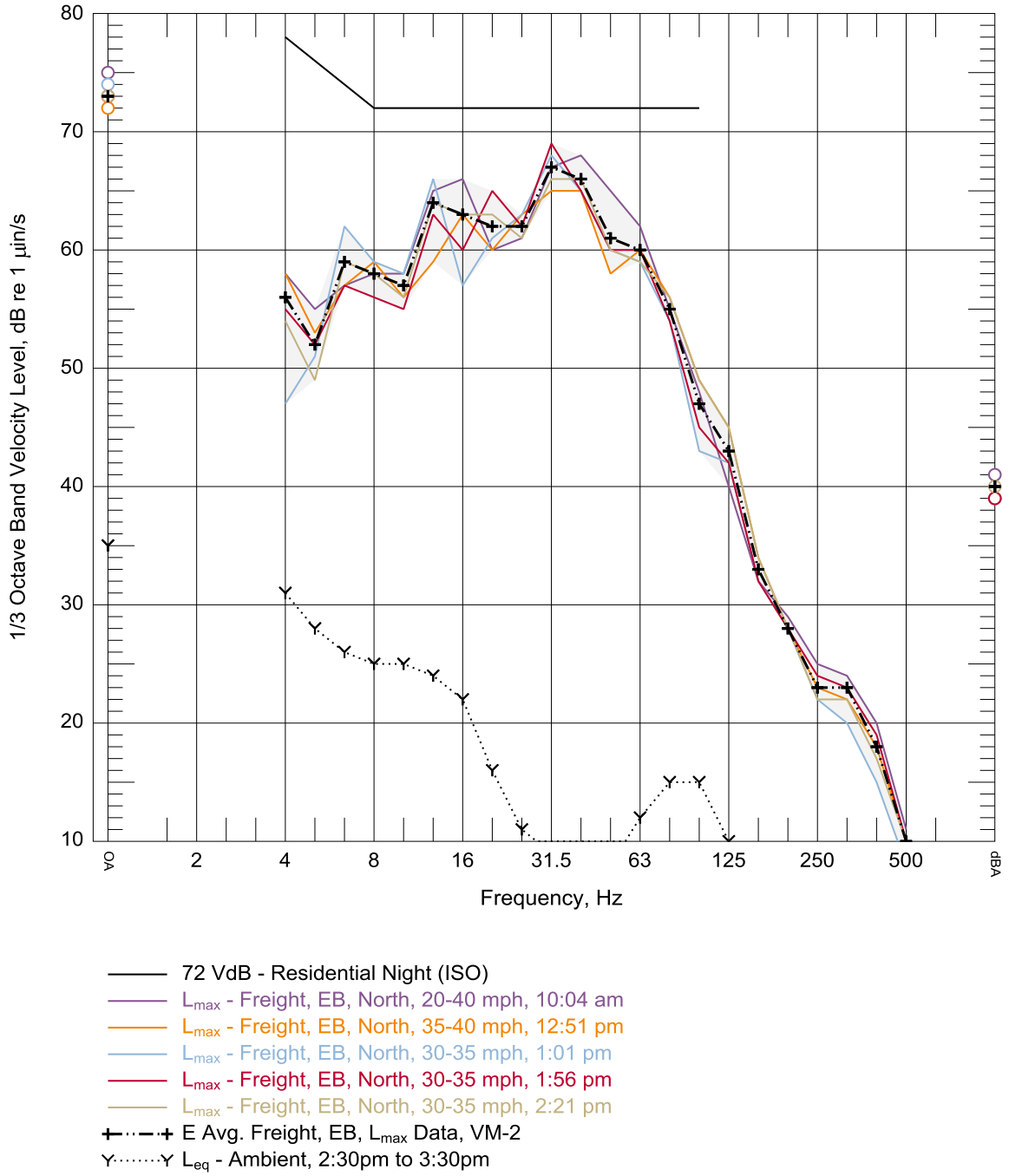

Figure B- 6: Freight Train Passbys EB, North Track, at VM-2, Lmax

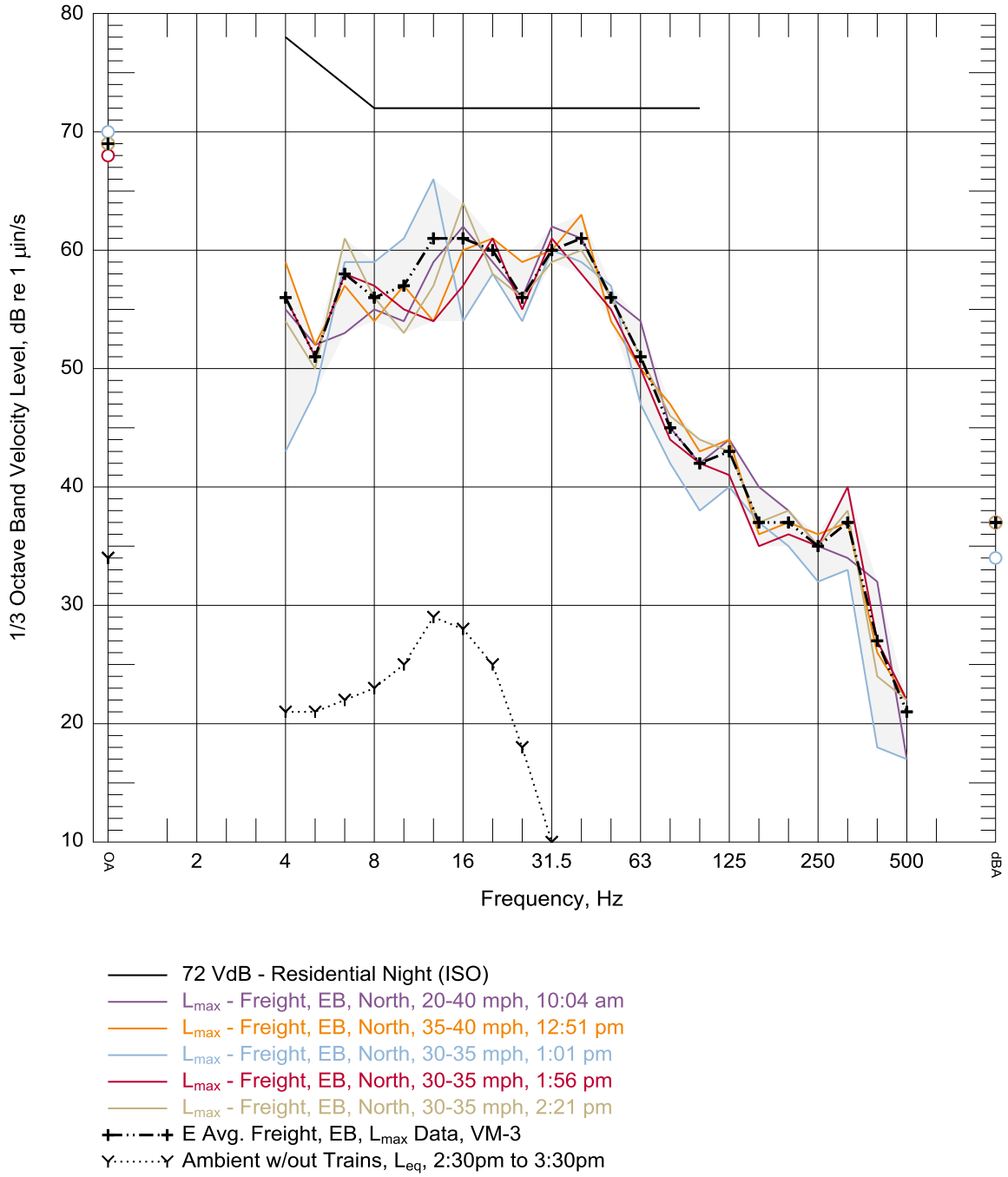

Figure B- 7: Freight Train Passbys EB, North Track, at VM-3, Lmax

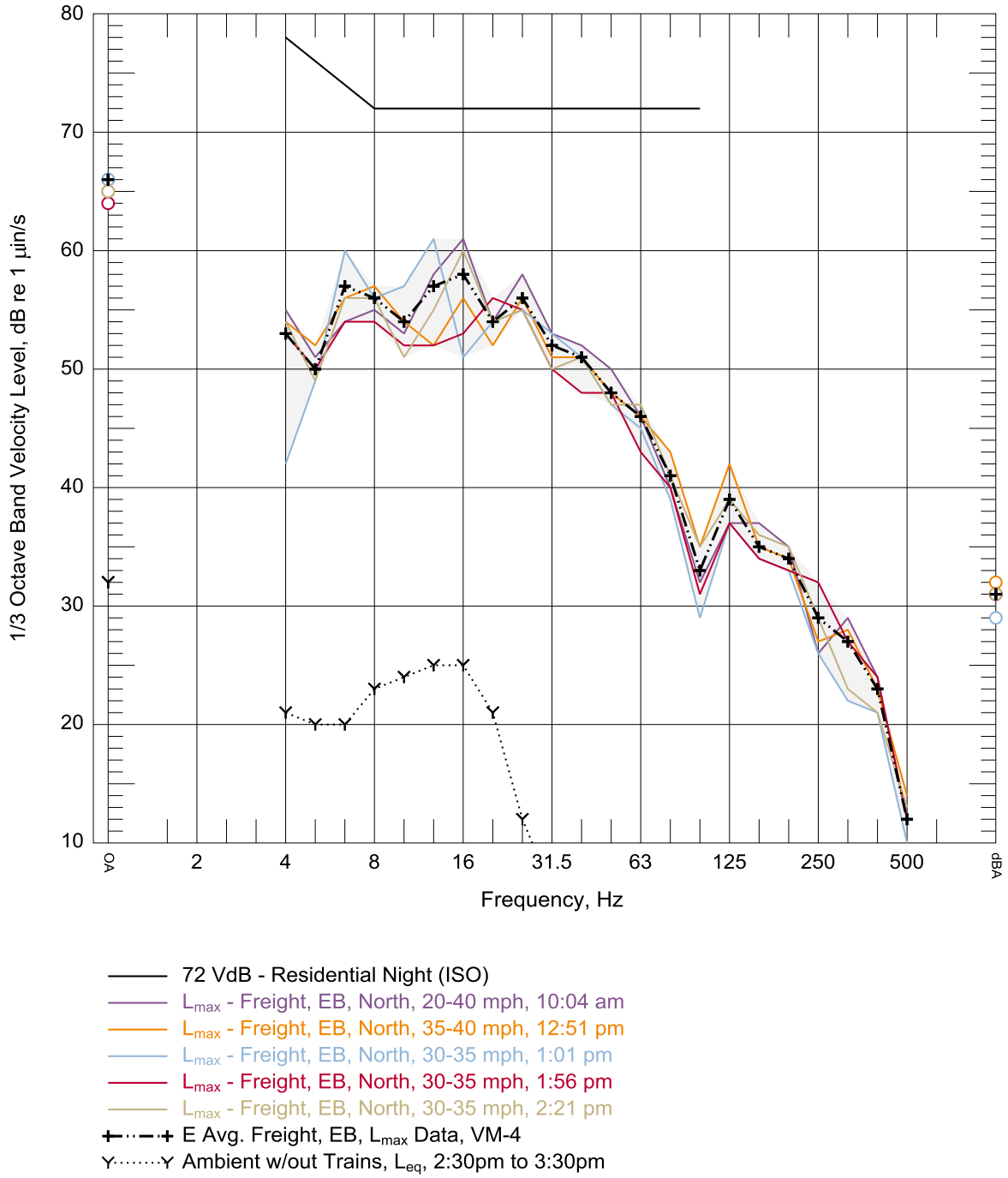

Figure B- 8: Freight Train Passbys EB, North Track, at VM-4, Lmax

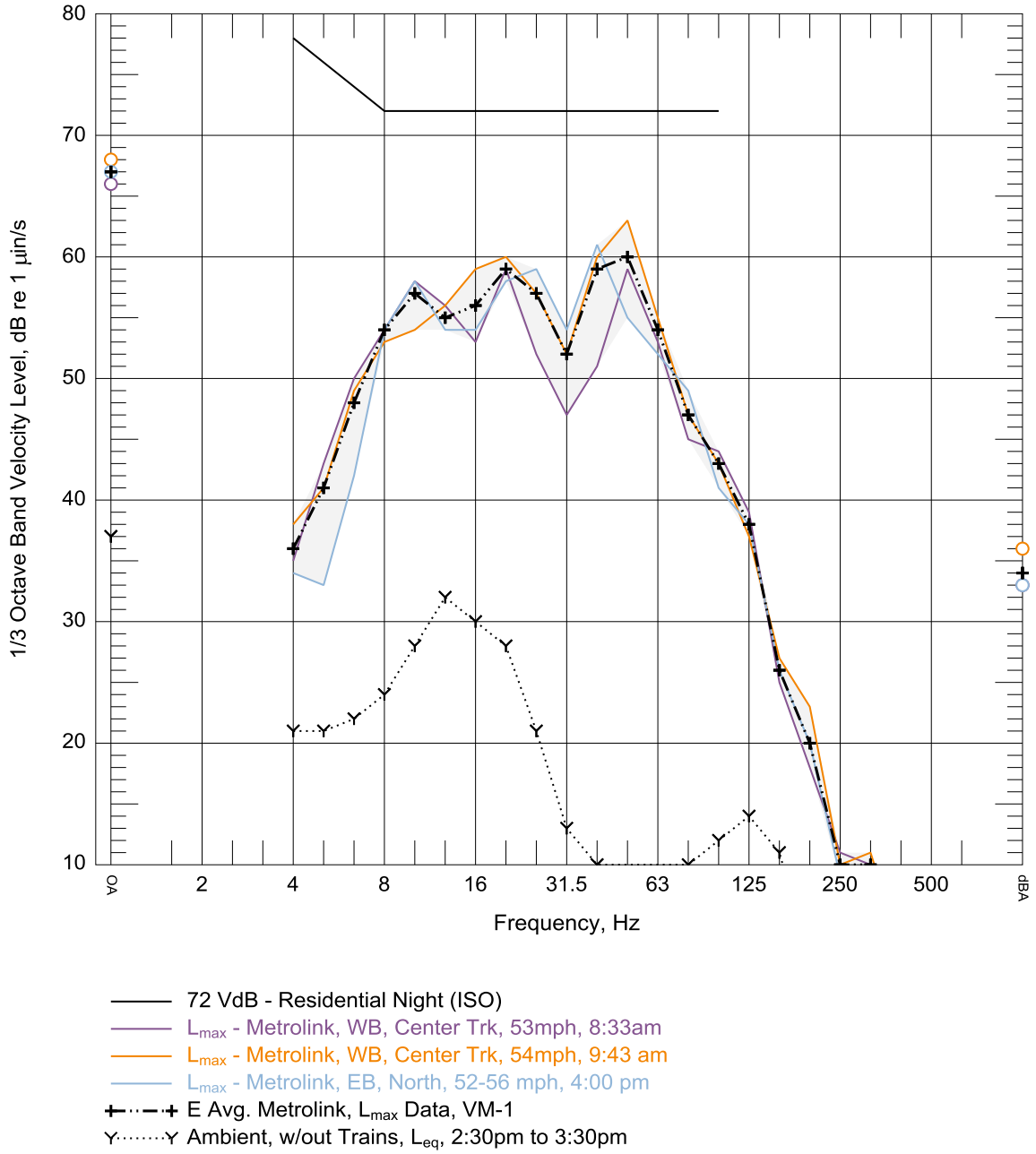

Figure B- 9: Metrolink Trains, VM-1, Lmax

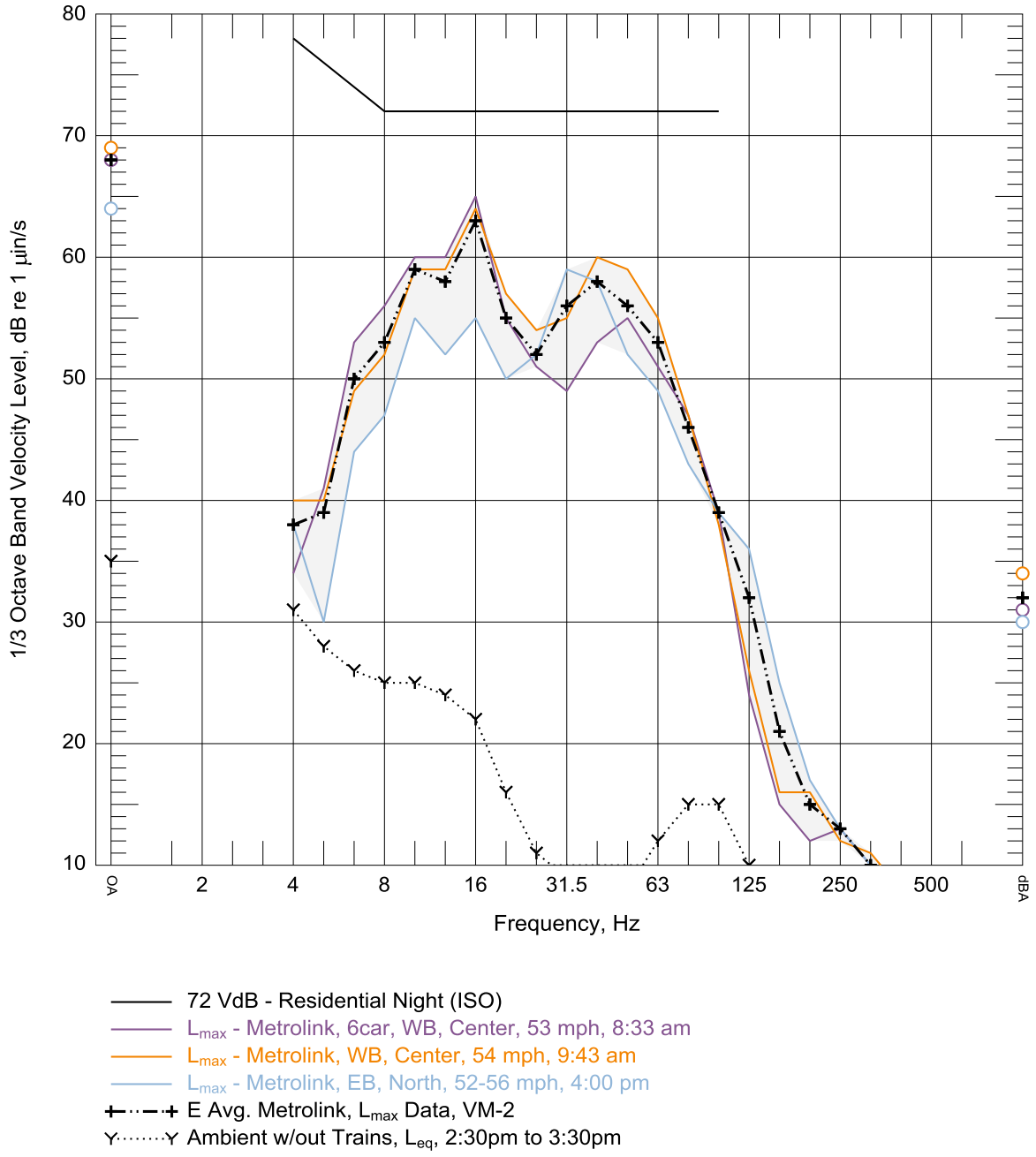

Figure B- 10: Metrolink Trains, VM-2, Lmax

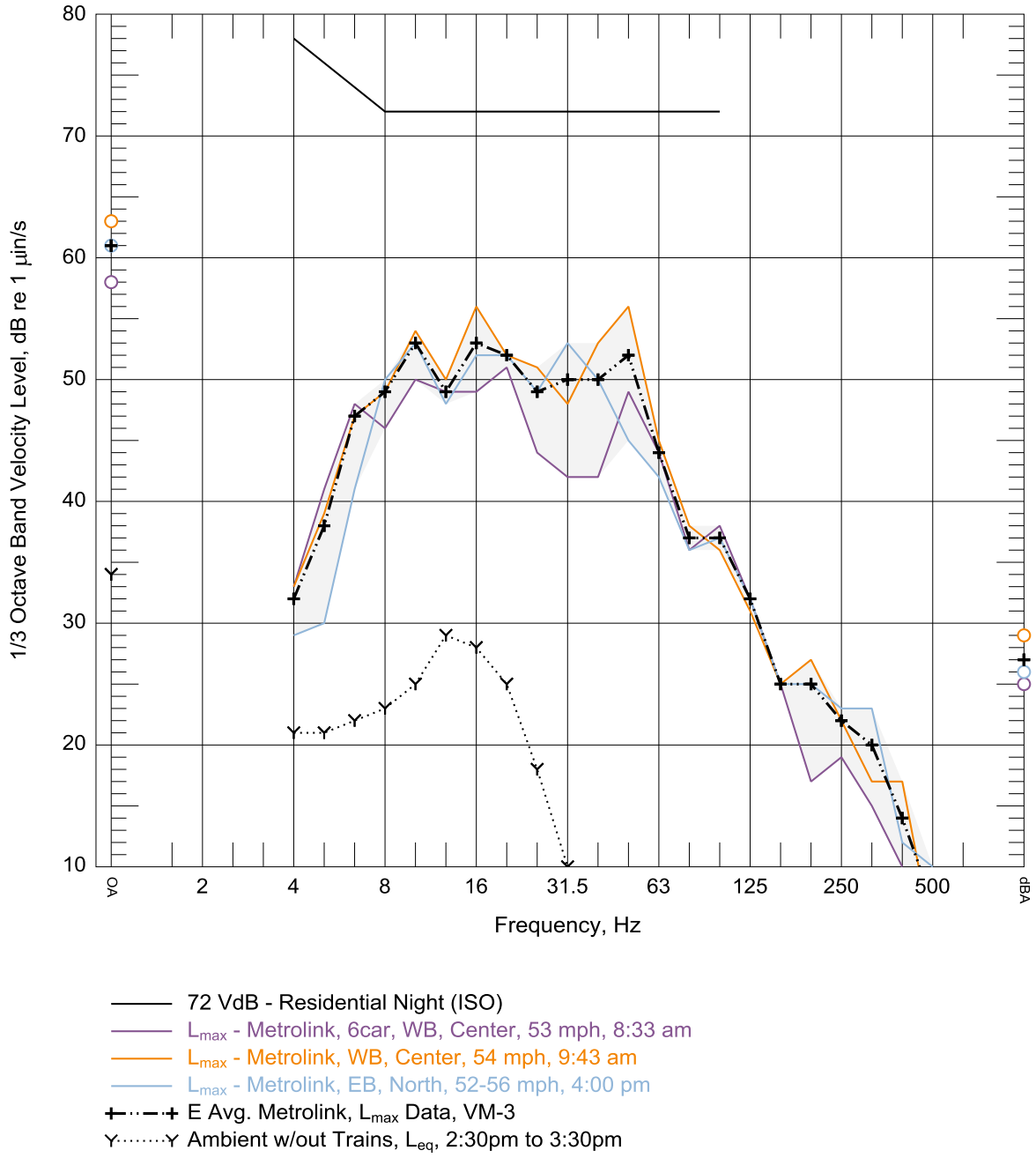

Figure B- 11: Metrolink Trains, VM-3, Lmax

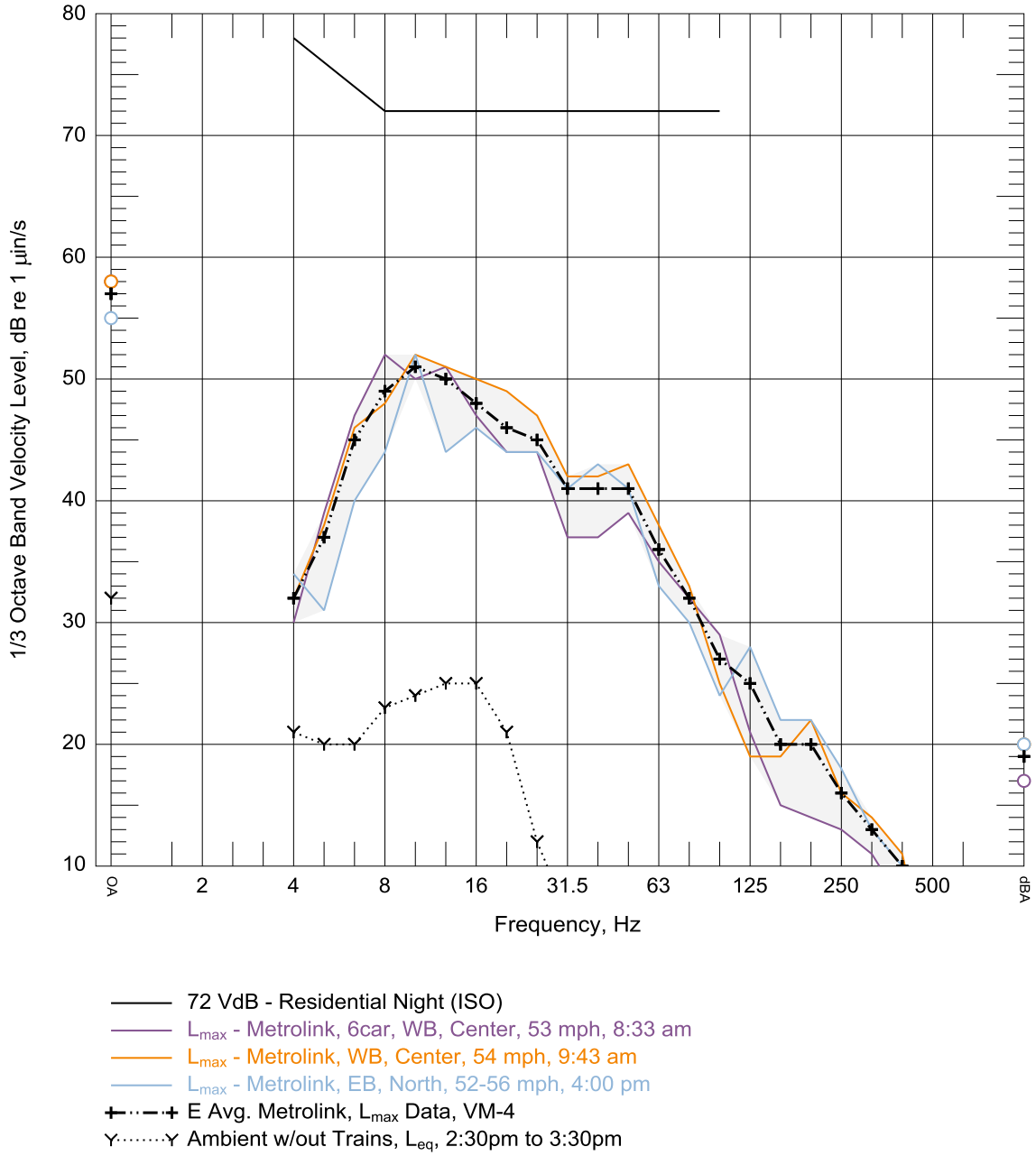

Figure B- 12: Metrolink Trains, VM-4, Lmax

Attachments

Attachment F.
Traffic Memo

Attachments

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Attachment F.
Traffic Memo

Attachments

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FEHR PEERS

MEMORANDUM

Date: Updated November 20, 2020

To: Leatha Clark – USA Properties Fund

From: Jason D. Pack, P.E.

Subject: Placentia Crowther Avenue Project

OC20-0731

Fehr & Peers has completed our review for the Crowther Avenue Project in Placentia, CA. Specifically, we have reviewed your proposed site plan for the project (dated November 16, 2020) and the *Traffic Impact Study for the Proposed Packing House Area Redevelopment* (Albert Grover & Associates, August 18, 2016) (hereby referred to as the AGA Study). We compared trip generation associated with the proposed project to determine if the project is consistent with the assumptions in the AGA Study and to assist with phasing/implementation of the mitigation measures associated with the *Packing House District Transit Oriented Development Project Initial Study* (Tom Dodson & Associates) (hereby referred to as the Initial Study). The purpose of this memorandum is to document the results of our assessment.

The remainder of this memorandum is divided into the following sections:

- Project Background
- Trip Generation Comparison
- Site Access, On-Site Circulation, and Parking Review
- Senate Bill (SB) 743 Discussion

Project Background

The Initial Study completed for the Parking House District identifies the following mitigation measures related to transportation and traffic:

XVI-1 Each future TOD project shall pay fair share fees for the intersection improvement costs at the time of entitlement based on the percentage of trips contributed at each intersection. I high level "order of magnitude" cost estimate is also provided in subsequent mitigation

identified in the Traffic Impact Study. These are rough estimate costs for engineering and construction and will need to be refined during future preliminary engineering phase. The mitigation measures should be re-evaluated for any refinement of the Draft General Plan Update and/or additional development of the TOD project over and beyond 5,000 trips. All significantly impacted intersections require mitigation prior to Future Buildout. Mitigation for each intersection and estimated costs are listed below:

- *Placentia/Crowther Avenue: Upgrade left turn signal phasing for all movements from permissive left turns to protected/permissive left turn phasing. Estimated Cost - $100,000;*
- *Orangethorpe Avenue/Placentia Avenue: Provide eastbound/westbound dual left-turn Lanes at Orangethorpe Avenue/Placentia Avenue. Estimated Cost - $450,000;*
- *Orangethorpe Avenue/SR-57 Northbound Ramps: Restripe Northbound Off-Ramp middle lane as shared Left-Turn/Thru/Right-Turn Lane. Estimated Cost - $50,000;*
- *Orangethorpe Avenue/SR-57 Northbound Ramps: The westbound right turn movement is expected to increase from 550 vehicles per hour (vph) to 800 vph during the PM period for year 2035. This movement should be closely monitored and may require additional improvements to reduce congestion and queuing. An additional improvement would be to modify the existing median on Orangethorpe Avenue to add an exclusive Westbound Right- Turn Lane. Estimated Cost - $200,000;*
- *Orangethorpe Avenue/Melrose Street: Provide an exclusive southbound right-turn lane without overlap signal phasing and northbound dual left-turn lanes at Orangethorpe Avenue/Melrose Street. Estimated Cost - $100,000;*
- *Kraemer Boulevard/Orangethorpe Avenue: Restripe Orangethrope Avenue to provide eastbound dual left-turn lanes. Add additional north/south thru lane (three lanes each) by restriping the northbound and southbound right turn lanes to thru lanes. Consider modifying the north/south left-turn movements from protected-only left-turn phasing to protected- permissive left-turn phasing. Restripe the southbound left-turn approach to provide a positive offset for better sight distance between the north/south left turn movements. Estimated Cost - $100,000.*

XVI-2 Truck access for the parcel on the southwest corner of Melrose Street and Crowther Avenue must be maintained to and from this site.

XVI-3 Construction hours should be five days a week, and in accordance with the City of Placentia Municipal Code, limited to the hours of 7 AM and 7 PM on working days (Monday through Friday).

XVI-4 Construction truck and worker automobile traffic will utilize the proposed driveways along Melrose Street and Crowther Avenue for access to and from the project site.

XVI-5 Trucks transporting materials to and from the project site must utilize the designated truck routes along Placentia Avenue, Crowther Avenue, Melrose Street, and Orangethorpe Avenue.

XVI-6 Trucks entering or exiting the construction site will need to yield to public traffic at all times.

XVI-7 It is unlikely that street traffic will be impacted by on-site construction activities; however, should it be necessary for temporary lane closures and/or detour routes for utility work or other such work in the public right-of-way those temporary traffic control activities are to be conducted in compliance with the requirements and guidelines outlined in the California Manual of Uniform Traffic Control Devices (MUTCD)

XVI-8 Construction staging should be conducted on-site and under no circumstances will be allowed on local or residential streets.

XVI-9 Construction work within the public right-of-way needs to be in compliance with City standards and the construction site shall be posted with the name, company and a phone number of a person to call for complaints.

XVI-10 The applicant will be fully responsible for the repair of damages to any public facility due to the hauling or transporting of construction related materials.

XVI-11 Parking for the construction trucks and worker trucks will be on-site, away from the adjacent public roadways and existing active businesses.

XVI-12 The City shall coordinate with OCTA to ensure that one or more bus routes to the future Placentia Metrolink Station will serve the TOD project area.

Tables 2-2a, 2-2b, and 2-2c of the AGA Study summarize the trip generation assumptions for the Packing House TOD project and presents different trip generation potentials depending on the land

use mix for each development area. For this assessment, the trip generation information summarized in Table 2-2a (which assumed 100% residential development) was used for comparative purposes as it generated the most peak hour trips (and was considered more conservative from a trip generation perspective). Table 2-2c accounts for the net new trips after accounting for transit trip reductions and existing land uses on the project site.

Exhibit 1 and Exhibit 2 below present Tables 2-2a and 2-2c from the AGA Study.

Exhibit 1 – AGA Study Trip Generation

Table 2-2a – 100% Residential Use Scenario
Project Trip Generation

Scenario	Quantity	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips	AM Peak Hour Trips		PM Peak Hour Trips	
					In	Out	In	Out
100% Residential: Single-Family (ITE 220) - 752 DU TOD Project, 5,000 Daily Trips								
Northwest Area (35%)		1,750	134	163	27	107	106	57
Southeast Area (35%)		1,750	134	163	27	107	106	57
Northeast Area (30%)		1,500	115	140	23	92	91	49
Total		**5,000**	**383**	**466**	**77**	**306**	**303**	**163**

Exhibit 2 – AGA Study Trip Generation

Table 2-2c – Net Project Trip Generation

Scenario	Quantity	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips	AM Peak Hour Trips		PM Peak Hour Trips	
					In	Out	In	Out
Existing Land Use								
Northwest Area								
Industrial: Warehousing (ITE 150)	87.94 KSF GFA	441	77	55	61	16	14	41
Residential: Single-Family (ITE 210)	13 DU	124	11	13	3	8	8	5
Residential: Apartment (ITE 220)	4 DU	27	2	2	0	2	1	1
Southeast Area								
Industrial: Warehousing (ITE 150)	139.22 KSF GFA	655	99	74	78	21	19	56
Total		1,247	189	144	142	47	42	103
100% Residential: Single-Family (ITE 220) - 752 DU TOD Project, 5,000 Daily Trips								
Northwest Area (35%)		1,750	134	163	27	107	106	57
Southeast Area (35%)		1,750	134	163	27	107	106	57
Northeast Area (30%)		1,500	115	140	23	92	91	49
Total		5,000	383	466	77	306	303	163
Net Trip Generation		**3,753**	**194**	**322**	**-65**	**259**	**261**	**60**

The proposed USA Properties project is located on the northeast area of the project site. As currently proposed, the project would consist of 189 multifamily dwelling units (DUs), a 1800 sq. ft. leasing office, and 1,500 sq. ft. retail pad to primarily serve the residents. Overall density is projected to be 88.7 units/acre and includes 226 parking spaces on-site, 15 of which are set aside with an easement for the Packing House.

Trip Generation Comparison

Fehr & Peers utilized the project information to estimate trip generation for the project site using rates from the Institute of Transportation Engineers' Trip Generation (10th Edition). The resulting trip generation information is summarized in Table 1.

As shown in Table 1, the project is estimated to generate 777 daily trips, 50 AM peak hour trips (14 inbound and 36 outbound), and 64 PM peak hour trips (39 inbound and 25 outbound).

Using information summarized in Exhibit 2, the AGA Study assumed new trips associated with the Northeast Area to be 1,500 daily trips, 115 AM peak hour trips, and 140 PM peak hour trips.

Comparing the proposed project trip generation to the assumptions from the AGA Study, we can conclude the following about the proposed project:

- It will generate 723 ***fewer*** daily trips than what was assumed in the AGA Study for the southeast area
- It will generate 65 ***fewer*** AM peak hour trips than what was assumed in the AGA Study for the southeast area
- It will generate 76 ***fewer*** PM peak hour trips than what was assumed in the AGA Study for the southeast area

Given that the proposed project will generate fewer trips than what was assumed in the AGA Study, the information and conclusions summarized in the AGA Study are relevant and applicable for the proposed project. As noted in the Initial Study Mitigation Measure XVI-1, the project would be responsible for a fair share contribution toward the noted improvements in that mitigation measure.

FEHR PEERS

Table 1 – Project Trip Generation Estimates

Land Use	Units[1]	ITE Code	Quantity	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Apartment (Peak Hour of Adjacent Streets, 7-9 AM, 4-6PM)	Dwelling Units	222[2]	189	1,028	18	50	68	51	32	83
Shopping Center	KSF	820[2]	1.500	57	1	1	2	3	3	6
Transit Reduction (3%)[3]				-308	-5	-15	-20	-15	-10	-25
Net New Project Trips				777	14	36	50	39	25	64

1. DU = dwelling units. KSF = 1000 square feet
2. ITE Trip Generation land use category (231) - Mid-Rise Residential with 1st Floor Commercial
3. From Exhibit 2 above for the Northeast Area from the AGA Study. Applied only to the Apartment Trips.
4. Sources:
    - ITE Trip Generation Manual, 10th Edition
    - Fehr and Peers, 2020
    - Albert Grover & Associates, 2016

Site Access, On-Site Circulation, and Parking

Given that the project site will generate traffic volumes consistent (or less than) what was assumed in the AGA Study, the assessment completed in that study is still valid.

The peak hour trip generation after transit reduction indicates that the driveway approach will not exceed 100 peak hour trips, the minimum volume identified in the MUTCD warrant for traffic signal installation. As such, side street stop control should be adequate.

The site plan indicates that pedestrian facilities are provided along the project frontage with Crowther Avenue. There is a pedestrian sidewalk along the project frontage with the railroad that will facilitate access to the pedestrian overcrossing and the future Metrolink station. Pedestrian access is provided along the east and west sides of the project to provide accessibility to the Metrolink station for pedestrians.

It is recommended that the project sponsor work with the City to investigate the feasibility of enhanced pedestrian crossings at the adjacent intersection such as high visibility crosswalk striping and advanced-stop bars.

Access to the project site is provided from two driveways; one located in close proximity to the signalized intersection of Melrose Street and Crowther Avenue and a second driveway located further east on the project site. It is recommended that westernmost access be restricted to right-turn in/out access only due to the proximity to the signalized intersection.

The project site will provide 226 parking spaces. These include 4 surface parking spaces, 91 subterranean spaces, and 116 upper level spaces; plus an additional easement of 15 spaces to set aside through an easement for use by the Packing House. Best practice for providing parking in TOD developments is one parking space per unit to encourage residents to use transit. The project is proposing 1.11 spaces per unit, exceeding this typical TOD parking requirement. Given that the site will be providing slightly more than one space per unit, it is recommended that the project monitor parking usage and potentially implement programs to manage parking on the site (such as a permit parking program to limit the number of vehicles allowed per unit).

In addition to the vehicle parking described above, the project will provide 38 total short-term bicycle parking spaces and 42 long-term bicycle parking spaces; or a total of 80 bicycle parking spaces

Based on our review, site access, on-site circulation, and parking are adequate for the project site; however, we do recommend that the site plan be reviewed by emergency services personal prior to approval of the site plan.

SB 743 VMT Assessment

SB 743, signed by the Governor in 2013, is changing the way transportation impacts are identified. Specifically, the legislation has directed the Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts under CEQA. The Final OPR guidelines were released in December 2018 and identified vehicle miles of travel (VMT) as the preferred metric moving forward. The Natural Resources Agency completed the rule making process to modify the CEQA guidelines in December of 2018. The CEQA Guidelines identify that, by July of 2020 all lead agencies must use VMT as the new transportation metric for identifying impacts for land use projects.

In anticipation of the change to VMT, seven North Orange County Cities (Fullerton, La Habra, Brea, Buena Park, Orange, Placentia, and Yorba Linda) formed a collaborative and are currently completing the North Orange County Cities (NOCC) SB 743 Implementation Study to assist with answering important implementation questions about the methodology, thresholds, and mitigation approaches for VMT impact analysis. The City's requirements are in Draft format and have not yet been adopted but were reviewed for application to this project.

The proposed project is adjacent to the future Metrolink station and is within a ½-mile radius of the station. As such, it qualifies for VMT screening as a Transit Priority Area (TPA). At 88.7 units per acre, the project will exceed a FAR of 1.0. As noted above, the project does not exceed the parking required by the City. These facts support the use of TPA screening.

Additionally, Fehr & Peers applied the NOCC+ screening tool to review VMT estimates. The results are summarized on Exhibit 3. As shown on Exhibit 3, the project is located in a TPA and is therefore screened from needing to complete VMT assessment under SB 743.

Exhibit 3 – VMT Screening Assessment

NOCC+

North Orange County Collaborative VMT Traffic Study Screening Tool

Project Information

Project Name	Opening Year
207-209 Crowther	2020

Parcel Number (OCTAM TAZ#160)
339-402-05, 339-402-07, 339-402-08, 339-402-11

Screening Criteria for Placentia

Is the project location in a Transit Priority Area?	Yes
Is the project location in a low VMT generating zone?	No
Is the Project one of these land use types? (show land use types)	No
Does the project generate fewer than 110 daily trips? (enter project land use in the section below)	No

The Project can be considered for screening from additional analysis.
Please refer to the 'secondary screening checks' table in the User Guide.

Project Land Use Information

		Unit
Residential : Single Family Homes	0	Dwelling Units
Residential : MultiFamily Homes	189	Dwelling Units
Office	0.000	1,000 Sqaure Feet
Retail	1.000	1,000 Sqaure Feet
Industrial	0.000	1,000 Sqaure Feet
Private School	0	Students
University	0	Students
Entertainment	0.000	1,000 Sqaure Feet
Hotel	0	Rooms

Project Trips and VMT Information

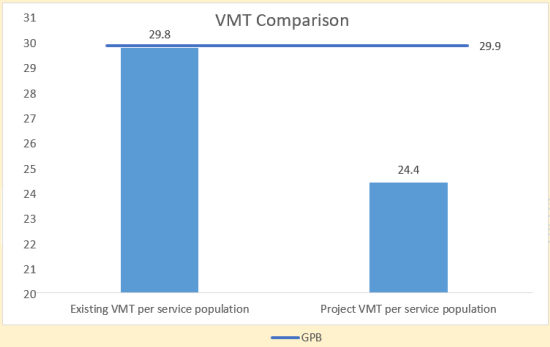
VMT Methodology: Origin Destination (OD)

Daily Trips: 1457 Average Trip Length: 8.0 Service Population: 476

VMT per service population 24.4

Project VMT Thresholds Comparison

- [ ] OPR Guidance (15% Below Existing)
- [ ] GHG Reduction Targets (14.3% Below Existing)
- [ ] Below Existing
- [x] Better than General Plan Buildout



FEHR PEERS

Should you have any questions or concerns about the above information, please contact Jason Pack at 949-308-6312.

Attachments

Attachment G.
Water and Sewer Technical Report

Attachments

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Attachment G.
Water and Sewer Technical Report

Attachments

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TECHNICAL MEMORANDUM

CROWTHER AVENUE TOD

207-209 W CROWTHER AVENUE
PLACENTIA, CA 92870

WATER and SEWER TECHNICAL REPORT

PREPARED FOR : USA PROPERTIES FUND

PREPARED BY : FUSCOE ENGINEERING, INC.

DATE : January 6, 2021

MITIGATION MEASURE

Future projects implemented under the TOD district shall submit a detailed evaluation of water demand and wastewater generation based on the fixtures that will be installed. This information shall be compared to the current demand by existing development and a net impact determination made. This net impact shall be compared to available water supply capacity and wastewater treatment capacity of the serving utility systems. If the demand/generation exceeds the capacity of either utility system, the modifications to the system(s) shall be evaluated and a determination of indirect impact reached in a second tier environmental document. The documentation shall be reviewed and approved by the City and if specific measures must be implemented, the City shall impose them as conditions of approval for the future projects. In no instance shall a project be approved that would cause significant environmental effects on either the water or wastewater system, including adequacy of water supply and treatment capacity. Mitigation in the form of offsets, such as funding water conservation or wastewater generation reductions at other location, shall be implemented where deemed necessary.

RESPONSE

Crowther Avenue TOD ("Project") within the City of Placentia ("City") will include 189 multi-family dwelling units (DU) and 26,821 square feet (sf) of common and private area landscaping that will result in an increase in water and sewer flows over existing conditions. In the existing condition, there is approximately 2.10 acres vacant land. This site was previously developed with an industrial facility which was demolished back in 2015. Since the existing site is vacant, only proposed water and sewer calculations were performed to quantify a net change in water demands and sewer flows to compare with the regional water and wastewater system capacities The evaluation of water demand and wastewater generation is required to ensure regional water supply capacity and wastewater treatment capacity is available to handle changes from the proposed Project. These calculations and associated analyses are provided below.

WATER SYSTEM FINDINGS

The City receives water from the Golden State Water Company (GSWC) that provides water to several regions throughout California. The Project area is within the Placentia-Yorba Linda jurisdiction of GSWC, where imported water is purchased from the Municipal Water District of Orange County (MWDOC). MWDOC obtains its water supply from Metropolitan Water District of Southern California (Metropolitan) and is largely a pass-through provider of Metropolitan's imported water. Water imported from the MWDOC is delivered to the Placentia-Yorba Linda System that has a combined active design capacity of 15,300 gallons per minute (gpm) or 22 million gallons per day (MGD). The Placentia-Yorba Linda System is also supplied by six active, GSWC-owned wells in the Orange County Groundwater Basin which is managed by the Orange County Water District (OCWD). The groundwater pumping for the Placentia-Yorda Linda System has ranged from 2,529 acre-feet per year (AFY) to 4,046 AFY. Between 2011 and 2015, groundwater represented an average of 44% of the total water supply to the Placentia-Yorba Linda System and the remainder was provided by imported water from MWDOC.[1] Demands within the Placentia-Yorba Linda system are anticipated to increase from 8,114 AFY (7.2 MGD) in 2020 to 8,965 AFY (8.0 MGD) in 2040 (an increase of 0.8 MGD).

Since the existing development is vacant, the proposed water demand for the planned development will be calculated to determine the additional demand generated from the Project. Water demand factors used for this Project are based on the City of Anaheim Water Supply Assessment for the Platinum Triangle project. As the City of Anaheim and the City of Placentia are neighboring cities, the water demand factors between these two regions are likely similar.

[1]2015 Golden State Water Company Placentia-Yorba Linda Urban Water Management Plan.

Table 1

Proposed Water Demands				
Land Use	**Land Use Unit Count**	**Water Demand Factor[1]**	**Water Demand (gpd)**	**Water Demand (AFY)**
Multi-Family Residences	189 DU	105 gpd/DU	19,845	22.23
Landscaped Area	26,821 sf	ETWU Method[2]	1,677	1.88
		Total Proposed	**+21,522**	**+24.11**

Notes
[1] Based on City of Anaheim Platinum Triangle Water Supply Assessment water demand factors.
[2] Based on Estimated Annual Water Use Equation: (Eto * Plant factor * landscaped area * 0.62)/ Irrigation efficiency.
Utilizing CIMIS Reference Evapotranspiration Zones Map, Eto= 49.7 in/yr,
Conservative Plant Factor = 0.60
Irrigation Efficiency = 0.81

As shown above, total water demands are estimated to be approximately, 21,522 gpd (0.02 MGD) or 24.11 AFY. This increase in demand represent 2.5% of the projected increase of 0.8 MGD of total demands through 2040 within the Placentia-Yorba Linda service area as noted in the GSWC 2015 UWMP. The increase is also well within the active design capacity of 22 MGD for regional water supplies to be delivered to the City. Therefore, impacts related to water supply availability and capacity to serve the Project are not significant.

SEWER SYSTEM FINDINGS

The City of Placentia provides wastewater collection service to the majority of parcels within the 6.6 square mile City limits through approximately 84 miles of gravity sanitary sewer pipelines. The City's wastewater collection system conveys untreated wastewater to Orange County Sanitation District's (OCSD) trunk sewer system via 35 separate connections.[2] Sewer flows to the OCSD Newhope-Placentia Trunk Line and ultimately reaches the OCSD Wastewater Treatment Plant #1 (WWTP1) in Fountain Valley.[3] WWTP1 has a secondary treatment capacity of 182 MGD for average daily flows and 273 MGD for peak wet weather flows. OCSD provides approximately 120-130 MGD of secondary effluent from WWPT1 to the Groundwater Replenishment System for recharge effluent from WWTP1 to the Groundwater Replenishment System for recharge of regional groundwater supplies. Current influent wastewater flows to WWTP1 are approximately 106 MGD. This yields an available capacity of 76 MGD.[4]

An evaluation of the sewer flow output from the proposed development to the wastewater sewer collection system was calculated to determine the impact to its existing capacity. Sewer generation factors from the City of Placentia Department of Public Works (Subject: Sewer Capacity Study Guidelines) was used to evaluate this project.

[2] Sanitary Sewer Master Plan and Condition Assessment for the City of Placentia. Prepared by Dudek, February 2018
[3] Orange County Sanitation District Facilities Master Plan 2009.
[4] GWRS Final Expansion FINAL Implementation Plan Volume 1 of 3 OCSD and OCWD. Prepared by CDM Smith in partnership with Drown and Caldwell, October 2016.

Table 2

Proposed Sewer Flows			
Land Use	**Land Use Unit Count**	**Sewer Generation Factor[1]**	**Sewer Flow (gpd)**
Multi-Family Residences	189 DU	3 persons per DU; 100 gpd/person	56,700
		Total Proposed	**+56,700**

Notes
[1] Based on City of Placentia, Department of Public Works, Subject: Sewer Capacity Study Guidelines

As shown above, total sewer flows associated with the proposed Project are 56,700 gpd or 0.06 MGD. As mentioned above, the available wastewater treatment capacity of the WWTP1 is 76 MGD. The proposed increase in sewer flows from the Project is less than 1% of the available capacity. Therefore, impacts related to regional wastewater treatment capacity are less than significant.

CONCLUSION

The above findings demonstrate that the proposed increase in water demand and sewer flows from redeveloping the Project area will not have a significant impact on regional water supply capacity or wastewater treatment capacity. There is enough water supply capacity as shown above and as stated in the GSWC 2015 UWMP to handle proposed increases in water demands from the Project. There is also sufficient wastewater treatment capacity of the OCSD WWTP1 to handle the proposed increases in sewer flows from the Project. Therefore, no significant regional water or sewer impacts are anticipated.

Table 3.3 Proposed Project Water Demand Increase

Land Use	Total Project		Demand Factor		Demand gpd	Demand AFY
Residential	18,909	units	105	gpd/unit	1,985,445	2,224
Commercial	4,909,682	sf	195	gpd/ksf	957,388	1,072
Office	14,340,522	sf	60	gpd/ksf	860,431	964
Institutional	1,500,000	sf	60	gpd/ksf	90,000	101
Parks	9.07	acre	3,500	gpd/acre	31,745	36
				Subtotal	**3,925,009**	**4,397**
Less Existing Industrial[1]	-2,272,155	sf			-89,473	-100
				Total	**3,835,536**	**4,297**
3.8% Losses						163
Existing Landscape Irrigation[2]	164	acre	3,000	gpd/acre	492,000	551
Existing Arena (Honda Center) and Angel Stadium of Anaheim[3]						238
Total Proposed Project Water Demand[4]						**5,249**
Less Existing Landscape Irrigation						*-551*
Less Existing Arena and Stadium						*-238*
Less February 2005 WSA Additional Demand (included in 2005 UWMP)						*-2,656*
Water Demand Increase						**1,804**

[1)] These industrial demands were derived from average of past three years of water meter readings from the subject industrial parcels.

[2)] Existing Landscape Irrigation demand calculated based on 20% of gross acreage of The Platinum Triangle (820 acres) being landscaped and irrigated. Demand factor based on typical application rate for median, parkway and on-site landscaping typical to the existing land uses. Since this demand is included in existing water usage figures in February 2005 WSA and 2005 UWMP (and not anticipated to change due to future land use intensification), it was not included in determining Water Demand Increase.

[3)] Existing Honda Center Arena and Angel Stadium demands are not included in above projections but are included in the currently approved Platinum Triangle plan. Since this demand is included in existing water usage figures in the February 2005 WSA and 2005 UWMP (and not anticipated to change due to future land use intensification), it was not included in determining Water Demand Increase.

[4)] Total water demand for the Proposed Project includes 2,656 AFY from existing and/or previously approved development included for the densities anticipated by the previous version of The Platinum Triangle plan, which was included in the 2005 UWMP, the existing landscape irrigation demand described in footnote 2, the existing Arena and Stadium demand described in footnote 3, and 1,804 AFY additional demands shown here and addressed in this WSA. Thus this WSA analyzes the full 5,249 AFY water demand projected for the current Platinum Triangle proposed development intensities.

City of Placentia

DEPARTMENT OF PUBLIC WORKS

SUBJECT: SEWER CAPACITY STUDY GUIDELINES

Developer is required to determine the impact of certain projects on the City's sewer system. The sanitary sewer capacity study shall analyze the impact of the proposed project on the capacity of the existing sanitary sewer system. The developer is responsible for all costs associated with this study. The following is a guideline for performing this study:

TRIGGER

A sanitary sewer study shall be required for a proposed project if it exceeds one or more of the following criteria:

1. 10 or more residential dwelling units
2. 10,000 square feet of office or commercial facility
3. 1,000 square feet of restaurant
4. Laundromat and/or industrial laundry

CRITERIA

1. At a minimum, two manhole locations shall be flow monitored for a two-week wet weather period to determine existing flow characteristics. The locations shall be at the sewer line nearest the project site, and at the nearest trunk line. The monitoring shall be dynamic, continuous and be recorded at 15-minute intervals.
2. The analysis of this data will use the following peaking factors for dry weather flow: 4.5 for local lines and 1.5 for trunk lines
3. In lieu of wet weather monitoring, wet weather flow will be calculated at 400% of peak dry weather flow.
4. Fixture unit equivalents shall be used to determine the amount of proposed project flow.
5. The average family unit shall be 3.0 persons per residence and 100 gal/person/day for proposed residential flows.

FINDINGS

1. Existing capacity of system.
2. The post-development capacity of system.
3. Percent (%) of pipe full at peak flow.
4. Confirm adequacy of existing local and trunk lines for both existing and anticipated future flows. Recommended actions required to mitigate any impact that overcharges the system.

FLOW MONITORING

Developers shall use a professional Engineer licensed in the State of California and/or a Contractor with at least 5 years' experience in flow monitoring to perform requirements of the Sanitary Sewer Capacity Study.

METRO AT MELROSE

DEVELOPMENT PLAN REVIEW SUBMITTAL - 02/26/2021

PROJECT SUMMARY

	REQUIRED	PROPOSED
SIZE OF THE PROPERTY	GROSS: 92,818 S.F.	NET: 91,263 S.F.
FRONT SETBACK:	3'-0" Min - 15'-0" Max	3'-0"
STREET SIDE SETBACK:	5'-0" Min - 15'-0" Max.	5'-0"
SIDE SETBACK:	0'-0"	20'-0"
REAR SETBACK:	N/A	2'-0"
RAILROAD TRACK SETBACK:	0'-0"	32'-0"
PARKING:	272-371 Stalls	272 Stalls
1 BEDROOM:	135- 203 Stalls	135 Stalls
2 BEDROOM:	81- 108 Stalls	81 Stalls
GUEST:	38- 57 Stalls	38 Stalls
RETAIL:	3 Stalls	3 Stalls
EASEMENT:	15 Stalls*	15 Stalls
DWELLING UNITS:	139-202 DU	1 BEDROOM: 135 DU
		2 BEDROOM: 54 DU
		TOTAL: 189 DU
DENSITY(GROSS):	65-95 DU/AC	88.7 DU/AC
% LOT COVERAGE:	MAXIMUM: N/A	N/A
% OPEN SPACE:		
Common (50 SF/DU)	9,450 SF	25,100 SF
Private Open Space (64 SF/DU)	12,096 SF	990
MAX. BUILDING STORIES	5	6
TYPE OF ARCHITECTURE:	CONTEXTUAL / CONTEMPORARY	

*15 STALLS REQUIRED PER RFP.

BICYCLE PARKING
23.111.040.t & 23.111.040.u

RESIDENTAIL	REQ.'D	PROV.'D
SHORT TERM BICYCLE PARKING:		
(1 BIKES/5 DU)	38	38
LONG TERM BICYCLE PARKING:		
2 BKES/5 DU (1ST 20 DU)	8	57
1 BIKES/5 DU (169 DU)	34	
TOTAL	80	95
NON-RESIDENTIAL		
SHORT TERM BICYCLE PARKING:		
1 BIKES/5,000 SF	1	1

PRELIMINARY FLOOR AREA AND USES

FLOOR	SF*
RESIDENTIAL TYPE I-A	
FIRST FLOOR	5,503
SECOND FLOOR	13,014
SUB-TOTAL	18,517
RESIDENTIAL TYPE V-A	
THIRD FLOOR(PODIUM)	37,586
FOURTH FLOOR	37,356
FIFTH FLOOR	37,356
SIXTH FLOOR	37,356
SUB-TOTAL	149,654
TOTAL	168,171
FAR	1.84

*BUILDING FLOOR AREAS INCLUDE BALCONIES BUT DO NOT INCLUDE SHAFTS, STAIRS AND GARAGE.

DETAILED UNIT MIX + RENTABLE AREA		
UNIT	**DU**	**DU (GSF*)**
A1 (1-BR/ 1-BA) ININE UNIT	96	572
A2 (1-BR/ 1-BA)	1	740
A3 (1-BR/ 1-BA) INSIDE CORNER	30	593
A4 (1-BR/ 1-BA)	1	780
A5 (1-BR/ 1-BA)	1	670
A6 (1-BR/ 1-BA)	4	720
A7 (1-BR/ 1-BA)	1	749
A8 (1-BR/ 1-BA)	1	770
SUB-TOTAL 1-BEDROOMS	**135**	
B1 (2-BR/ 1-BA) INLINE UNIT	44	758
B2 (2-BR/ 1-BA)	4	845
B3 (2-BR/ 1-BA)	1	850
B4 (2-BR/ 1-BA)	1	820
B5 (2BR/ 1BA)	4	840
SUB-TOTAL 2-BEDROOMS	**54**	
TOTAL	**189**	

* GSF AREA IS MEASURED TO CL OF PARTY WALLS & OUTSIDE FACE OF FRAMING AT EXTERIOR AND CORRIDOR WALLS



SHEET INDEX

CS COVER SHEET

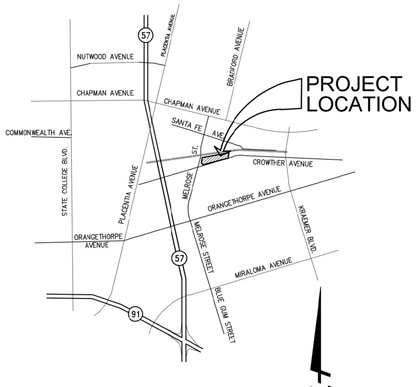
CIVIL ENGINEERING
C1 SITE PLAN
C2 CONCEPTUAL GRADING PLAN

LANDSCAPE ARCHITECTURE
L1 CONCEPTUAL LANDSCAPE PLAN
L2 LANDSCAPE NOTE AND PRELIMINARY PLANT PALETTE

ARCHITECTURE
A1.1 PERSPECTIVE RENDERING
A1.2 PERSPECTIVE RENDERING
A1.3 PERSPECTIVE RENDERING
A2.1 ELEVATIONS
A2.2 ELEVATIONS
A3.1 SECTIONS
A4.1 FIRST FLOOR PLAN
A4.2 SECOND FLOOR PLAN
A4.3 THIRD FLOOR (PODIUM) PLAN
A4.4 FOURTH FLOOR PLAN
A4.5 FIFTH FLOOR PLAN
A4.6 SIXTH FLOOR PLAN
A4.7 ROOF PLAN
A5.1 REPRESENTATIVE UNIT PLANS

PROJECT INFORMATION:
ADDRESS: 207-209 W. CROWTHER AVENUE, PLACENTIA, CA 92870

ASSESSOR PARCEL NUMBERS:
339-402-05
339-402-07
339-402-08
339-402-11



VICINITY MAP
NOT TO SCALE

PROJECT DIRECTORY:

PROJECT OWNER/APPLICANT
USA PROPERTIES FUND
3200 DOUGLAS BLVD, SUITE 200
ROSEVILLE, CA 95661
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TELEPHONE: 916.724.3858
EMAIL: SREYNOLDS@USAPROPFUND.COM

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CONTACT: JIRAIR GARABEDIAN
AIA, NCARB, LEED AP
TELEPHONE:949.250.4680
EMAIL:JIRAIR.GARABEDIAN@DAHLINGROUP.COM

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JETT LANDSCAPE ARCHITECTURE + DESIGN
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TELEPHONE: 925.254.5422
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JETT Landscape Architecture + Design

DAHLIN

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Suite 260
Irvine, CA 92612
949-250-4680

CS

LEGAL DESCRIPTION:

THE LAND REFERRED TO IN THIS COMMITMENT IS SITUATED IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL A:

PARCEL 1 AS SHOWN ON EXHIBIT A ATTACHED TO LOT LINE ADJUSTMENT ATTACHED TO A GRANT DEED RECORDED FEBRUARY 27, 1984 AS INSTRUMENT NO. 84–080654 OF OFFICIAL RECORDS OF ORANGE COUNTY, CALIFORNIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA.

LOTS 3, 4, 5 AND 6 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, ALONG WITH THAT PORTION OF THE NORTHERLY 96 FEET OF THAT PORTION OF LOT 7 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 7, THENCE SOUTH 8° 58' 00" EAST, ALONG THE EASTERLY LINE OF SAID LOT 96.00 FEET; THENCE SOUTH 81° 02' 00" WEST 0.25 FEET; THENCE NORTH 8° 58' 00" WEST 96.00 FEET; THENCE NORTH 81° 02' 00" EAST 0.25 FEET TO THE POINT OF BEGINNING.

SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 5, PAGE 40 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID

APN: 339–402–05

PARCEL B:

A PORTION OF LOT 2 OF BLOCK C OF MAP OF THE KRAEMER TRACT, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 12, PAGE 87 OF MISCELLANEOUS RECORDS, RECORDS OF LOS ANGELES COUNTY, CALIFORNIA, DESCRIBED AS FOLLOWS:

THE SOUTHERLY 6.5 FEET OF THAT CERTAIN 3.27 ACRE STRIP OF LAND DESCRIBED IN DEED DATED DECEMBER 6, 1909 TO SANTA FE LAND IMPROVEMENT COMPANY (PREDECESSOR IN INTEREST TO THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY) RECORDED MARCH 4, 1910 IN BOOK 177 OF DEEDS, PAGE 267, RECORDS OF ORANGE COUNTY, CALIFORNIA, LYING EASTERLY OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF LOT 6 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, AS SHOWN ON MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, RECORDS OF ORANGE COUNTY, CALIFORNIA.

EXCEPTING THEREFROM ALL MINERALS CONTAINED IN THE ABOVE DESCRIBED LAND, INCLUDING, WITHOUT LIMITING THE GENERALITY THEREOF, OIL, GAS AND OTHER HYDROCARBON SUBSTANCES, AS WELL AS METALLIC OR OTHER SOLID MINERALS, PROVIDED

THAT THE HOLDER THEREOF SHALL NOT HAVE THE RIGHT TO GO UPON OR USE THE SURFACE OF SAID LAND, OR ANY PART THEREOF, FOR THE PURPOSE OF DRILLING FOR, MINING, OR OTHERWISE REMOVING, ANY OF SAID MINERALS. HOLDER MAY, HOWEVER, AND RESERVED THE RIGHT TO, REMOVE ANY OF SAID MINERALS FROM SAID LAND BY MEANS OF WELLS, SHAFTS, TUNNELS, OR OTHER MEANS OF ACCESS TO SAID MINERALS WHICH MAY BE CONSTRUCTED, DRILLED OR DUG FROM OTHER LAND, PROVIDED THAT THE EXERCISE OF SUCH RIGHTS SHALL IN NO WAY INTERFERE WITH OR IMPAIR THE USE OF THE SURFACE OF THE LAND OR ANY IMPROVEMENTS THEREON, AS RESERVED BY THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY, A DELAWARE CORPORATION, IN THE DEED RECORDED DECEMBER 18, 1991 AS INSTRUMENT NO. 91–694364 AND RE–RECORDED JANUARY 27, 1992 AS INSTRUMENT NO. 92–048039, BOTH OF OFFICIAL RECORDS.

APN: 339–402–07

PARCEL C:

THAT PORTION OF LOTS 7 AND 8 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

THAT PORTION OF LAND BEGINNING AT THE CENTERLINE INTERSECTION OF MELROSE AVENUE AND CROWTHER AVENUE AS SHOWN ON SAID RECORD OF SURVEY; THENCE ALONG THE CENTERLINE OF MELROSE AVENUE NORTH 07° 33' 46" EAST 175.88 FEET; THENCE SOUTH 82°26'14" EAST 40.00 FEET TO THE EXISTING EASTERLY RIGHT–OF–WAY LINE OF MELROSE AVENUE; THENCE NORTH 81° 02' 00" EAST 76.41 FEET TO THE TRUE POINT OF BEGINNING AND DESIGNATED AS T.P.O.B. ON EXHIBIT B ATTACHED HERETO, AND BY THIS REFERENCE MADE A PART THEREOF; THENCE NORTH 27° 37' 16" EAST 3.17 FEET; THENCE NORTH 64° 59' 09" WEST 3.01 FEET; THENCE NORTH 25° 00' 51" EAST 24.82 FEET; THENCE SOUTH 64° 59' 09" EAST 11.50 FEET; THENCE NORTH 25° 00' 51" EAST 8.43 FEET; THENCE NORTH 16° 32' 52" EAST 78.26 FEET TO THE SOUTHERLY BNSF RIGHT–OF–WAY LINE; THENCE ALONG SAID SOUTHERLY BNSF RIGHT–OF–WAY LINE NORTH 81° 02' 00" EAST 52.62 FEET; THENCE SOUTH 08° 58' 00" EAST 96.00 FEET; THENCE SOUTH 81° 02' 00" WEST 113.84 FEET TO THE TRUE POINT OF BEGINNING.

SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 63, PAGE 18 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 339–402–08

PARCEL D:

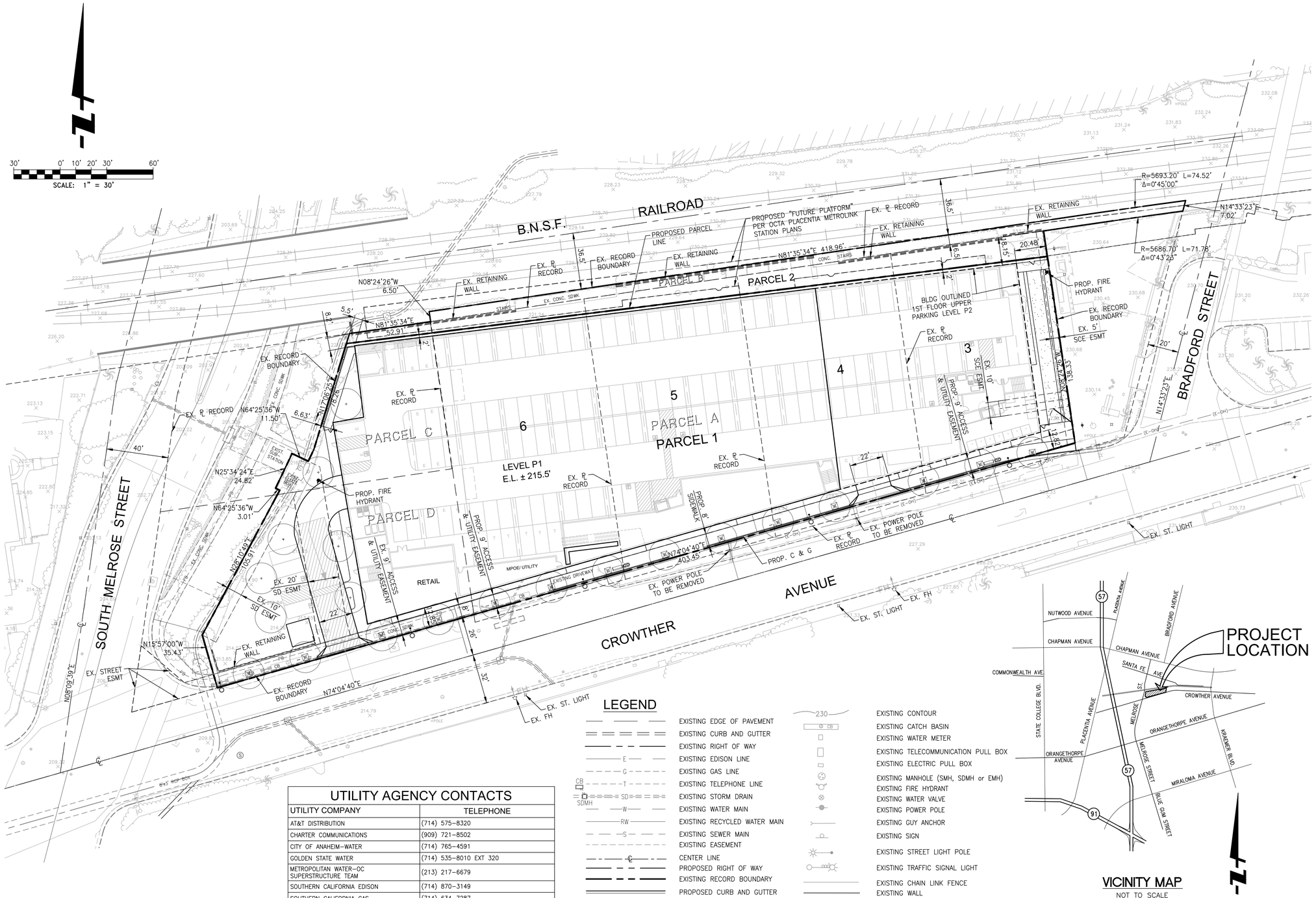
LOTS 7 AND 8 IN BLOCK G OF PLAT OF TOWNSITE OF PLACENTIA, IN THE CITY OF PLACENTIA, COUNTY OF ORANGE, STATE OF CALIFORNIA AS PER MAP RECORDED IN BOOK 6, PAGE 38 OF MISCELLANEOUS MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPTING THEREFROM THAT PORTION CONVEYED TO PLACENTIA ORANGE GROWERS' ASSOCIATION, A CALIFORNIA CORPORATION RECORDED DECEMBER 26, 1982 IN BOOK 6370, PAGE 257 OF OFFICIAL RECORDS.

ALSO EXCEPTING THEREFROM THOSE PORTIONS CONVEYED TO THE CITY OF PLACENTIA, A MUNICIPAL CORPORATION, BY THAT CERTAIN DEED RECORDED DECEMBER 2, 2003 AS INSTRUMENT NO. 2003001439515 OF OFFICIAL RECORDS.

SAID LAND IS INCLUDED WITHIN THE AREA SHOWN ON A MAP FILED FOR RECORD IN BOOK 63, PAGE 18 OF RECORD OF SURVEYS IN THE OFFICE OF THE COUNTY RECORDER OF SAID

APN: 339–402–11



UTILITY AGENCY CONTACTS

UTILITY COMPANY	TELEPHONE
AT&T DISTRIBUTION	(714) 575–8320
CHARTER COMMUNICATIONS	(909) 721–8502
CITY OF ANAHEIM–WATER	(714) 765–4591
GOLDEN STATE WATER	(714) 535–8010 EXT 320
METROPOLITAN WATER–OC SUPERSTRUCTURE TEAM	(213) 217–6679
SOUTHERN CALIFORNIA EDISON	(714) 870–3149
SOUTHERN CALIFORNIA GAS	(714) 634–7287
SPRINT	(800) 874–2389

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- EXISTING RIGHT OF WAY
- EXISTING EDISON LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING STORM DRAIN
- EXISTING WATER MAIN
- EXISTING RECYCLED WATER MAIN
- EXISTING SEWER MAIN
- EXISTING EASEMENT
- CENTER LINE
- PROPOSED RIGHT OF WAY
- EXISTING RECORD BOUNDARY
- PROPOSED CURB AND GUTTER
- PROPOSED BUILDING FOOT PRINT
- EXISTING CONTOUR
- EXISTING CATCH BASIN
- EXISTING WATER METER
- EXISTING TELECOMMUNICATION PULL BOX
- EXISTING ELECTRIC PULL BOX
- EXISTING MANHOLE (SMH, SDMH or EMH)
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING SIGN
- EXISTING STREET LIGHT POLE
- EXISTING TRAFFIC SIGNAL LIGHT
- EXISTING CHAIN LINK FENCE
- EXISTING WALL

VICINITY MAP

NOT TO SCALE

CITY OF PLACENTIA

SITE PLAN

METRO AT MELROSE

USA PROPERTIES FUND

PROPERTIES FUND
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949-250-4680

DATE	2-26-2021
JOB NO.	1236-008

NORTH

C-1

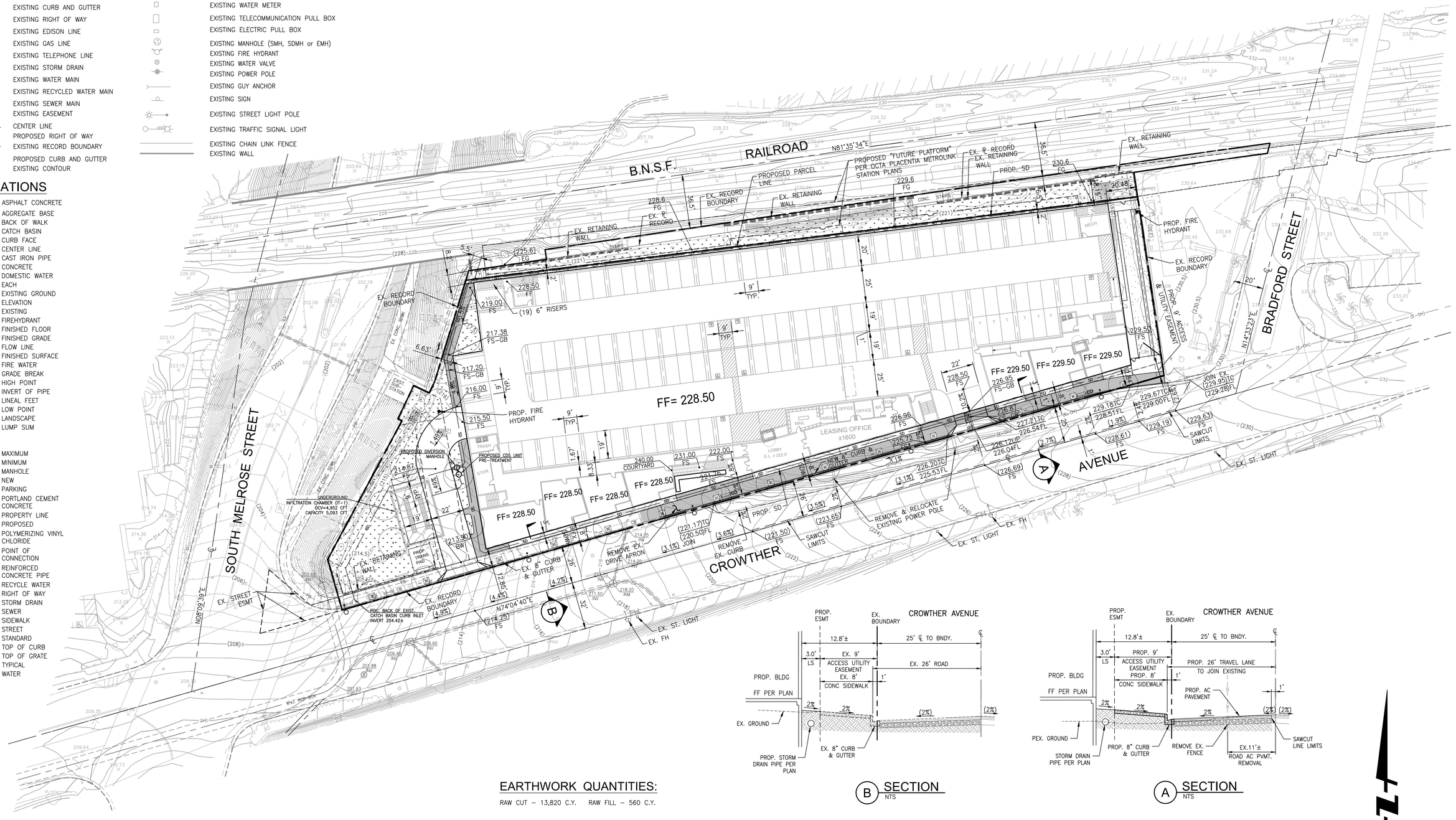
F:\PROJECTS\8780.002\PLANS\ENTITLEMENTS\CONCEPTUAL GRADING PLAN\8780-002-CGD1CS.DWG (02-26-21 9:21:52AM) Plotted by: Noel Jobson

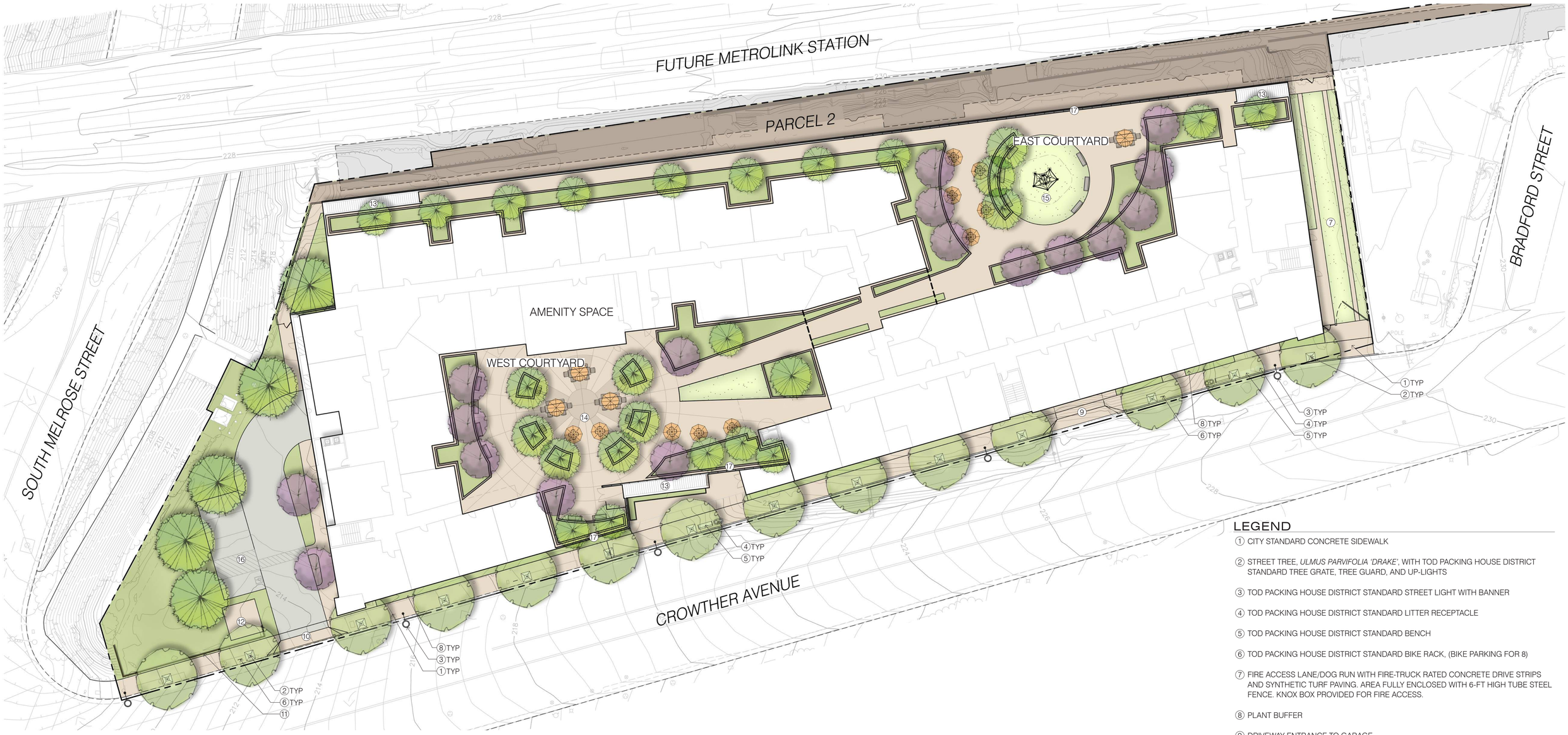
LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- EXISTING RIGHT OF WAY
- EXISTING EDISON LINE
- EXISTING GAS LINE
- EXISTING TELEPHONE LINE
- EXISTING STORM DRAIN
- EXISTING WATER MAIN
- EXISTING RECYCLED WATER MAIN
- EXISTING SEWER MAIN
- EXISTING EASEMENT
- CENTER LINE
- PROPOSED RIGHT OF WAY
- EXISTING RECORD BOUNDARY
- PROPOSED CURB AND GUTTER
- EXISTING CONTOUR
- EXISTING CATCH BASIN
- EXISTING WATER METER
- EXISTING TELECOMMUNICATION PULL BOX
- EXISTING ELECTRIC PULL BOX
- EXISTING MANHOLE (SMH, SDMH or EMH)
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING POWER POLE
- EXISTING GUY ANCHOR
- EXISTING SIGN
- EXISTING STREET LIGHT POLE
- EXISTING TRAFFIC SIGNAL LIGHT
- EXISTING CHAIN LINK FENCE
- EXISTING WALL

ABBREVIATIONS

A.C., AC	–	ASPHALT CONCRETE
AB	–	AGGREGATE BASE
BW	–	BACK OF WALK
CB	–	CATCH BASIN
CF	–	CURB FACE
C/L, ℄	–	CENTER LINE
CIP, C.I.P.	–	CAST IRON PIPE
CONC.	–	CONCRETE
DW	–	DOMESTIC WATER
EA, EA.	–	EACH
EG	–	EXISTING GROUND
EL, EL.	–	ELEVATION
EX., EXIST., (E)	–	EXISTING
FH	–	FIREHYDRANT
FF	–	FINISHED FLOOR
FG	–	FINISHED GRADE
FL	–	FLOW LINE
FS	–	FINISHED SURFACE
FW	–	FIRE WATER
GB	–	GRADE BREAK
HP	–	HIGH POINT
INV, INV.	–	INVERT OF PIPE
L.F., LF	–	LINEAL FEET
LP	–	LOW POINT
LS, L/S	–	LANDSCAPE
L.S.	–	LUMP SUM
MAX, MAX.	–	MAXIMUM
MIN, MIN.	–	MINIMUM
MH	–	MANHOLE
(N)	–	NEW
PRKG	–	PARKING
P.C.C.	–	PORTLAND CEMENT CONCRETE
P/L, ℙ	–	PROPERTY LINE
PROP.	–	PROPOSED
P.V.C., PVC	–	POLYMERIZING VINYL CHLORIDE
POC, P.O.C.	–	POINT OF CONNECTION
R.C.P., RCP	–	REINFORCED CONCRETE PIPE
RW	–	RECYCLE WATER
R/W	–	RIGHT OF WAY
SD	–	STORM DRAIN
SS, SW	–	SEWER
S/W, SDWK	–	SIDEWALK
ST., ST	–	STREET
STD.	–	STANDARD
TC	–	TOP OF CURB
TG	–	TOP OF GRATE
TYP.	–	TYPICAL
DW, W	–	WATER


B.N.S.F. RAILROAD
N81°35'34"E
PROPOSED "FUTURE PLATFORM" PER OCTA PLACENTIA METROLINK STATION PLANS
PROPOSED PARCEL LINE
EX. RECORD BOUNDARY
EX. RETAINING WALL
EX. R RECORD
PROP. SD
EX. RETAINING WALL
PROP. FIRE HYDRANT
EX. RECORD BOUNDARY & PROP. 9' ACCESS & UTILITY EASEMENT
BRADFORD STREET
N14°33'23"E
JOIN EX. (229.95)TC (229.28)FL
EX. ST. LIGHT
A
AVENUE
SOUTH MELROSE STREET
N08°09'39"E
EX. STREET ESMT
EX. RECORD BOUNDARY
EX. CONC. WORK
EXIST. GAS STATION
EX. RETAINING WALL
(E) 6" SD
PROPOSED DIVERSION MANHOLE
PROPOSED CDS UNIT PRE-TREATMENT
UNDERGROUND INFILTRATION CHAMBER (IT-1) OCV=4,952 CFT CAPACITY 5,093 CFT
PROP. TRANS PAD
POC: BACK OF EXIST. CATCH BASIN CURB INLET INVERT 204.42±
EX. RECORD BOUNDARY (4.9%)
N74°04'40"E
EX. 8" CURB & GUTTER
REMOVE EX. DRIVE APRON
REMOVE EX. CURB
NEW 8" CURB & GUTTER
REMOVE & RELOCATE EXISTING POWER POLE
CROWTHER
EX. FH
EX. ST. LIGHT
FF= 228.50
FF= 229.50
LEASING OFFICE ±1600
COURTYARD
PROP. BLDG
PARCEL 1
PARCEL 2
PARCEL 3
PARCEL 4
PARCEL 5
PARCEL 6
PARCEL 7
PARCEL 8
PARCEL 9
PARCEL 10
PARCEL 11
PARCEL 12
PARCEL 13
PARCEL 14
PARCEL 15
PARCEL 16
PARCEL 17
PARCEL 18
PARCEL 19
PARCEL 20
PARCEL



LEGEND

1. CITY STANDARD CONCRETE SIDEWALK
2. STREET TREE, *ULMUS PARVIFOLIA 'DRAKE'*, WITH TOD PACKING HOUSE DISTRICT STANDARD TREE GRATE, TREE GUARD, AND UP-LIGHTS
3. TOD PACKING HOUSE DISTRICT STANDARD STREET LIGHT WITH BANNER
4. TOD PACKING HOUSE DISTRICT STANDARD LITTER RECEPTACLE
5. TOD PACKING HOUSE DISTRICT STANDARD BENCH
6. TOD PACKING HOUSE DISTRICT STANDARD BIKE RACK, (BIKE PARKING FOR 8)
7. FIRE ACCESS LANE/DOG RUN WITH FIRE-TRUCK RATED CONCRETE DRIVE STRIPS AND SYNTHETIC TURF PAVING. AREA FULLY ENCLOSED WITH 6-FT HIGH TUBE STEEL FENCE. KNOX BOX PROVIDED FOR FIRE ACCESS.
8. PLANT BUFFER
9. DRIVEWAY ENTRANCE TO GARAGE
10. DRIVEWAY ENTRANCE TO SURFACE PARKING AND GARAGE
11. EXISTING RETAINING WALL
12. TRANSFORMER
13. STAIR ACCESS TO PODIUM
14. PODIUM WEST COURTYARD WITH BBQ GRILLS AND PICNIC TABLES
15. PODIUM EAST COURTYARD WITH CHILDREN'S PLAY STRUCTURE, BENCHES AND PICNIC TABLES
16. SURFACE PARKING
17. ACOUSTIC BARRIER, SEE ARCHITECTURE PLANS

IMAGERY


STREETSCAPE TREE GRATE


STREETSCAPE TREE GUARD

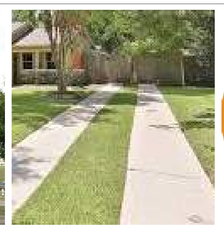

STREETSCAPE LITTER RECEPTACLE

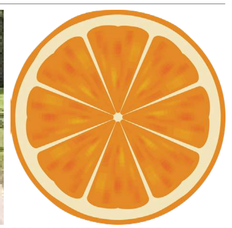

STREET LIGHT WITH BANNER


STREETSCAPE BENCH


SCREETSCAPE BIKE RACK


STREET TREE ULMUS PARVIFOLIA 'DRAKE'


FIRE ACCESS LANE / DOG RUN


PODIUM COURTYARD DESIGN INSPIRATION: ORANGE SLICE

0 10' 20' 40' 60'
SCALE: 1" = 20'-0"

NORTH

CONCEPTUAL LANDSCAPE PLAN

METRO AT MELROSE

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L1

PRELIMINARY PLANT PALETTE

SYMBOL	BOTANICAL NAME	COMMON NAME	CONT SIZE	SPACING	WUCOLS WTR USE
STREET TREES					
	ULMUS PARVIFOLIA 'DRAKE'	DRAKE CHINESE ELM	24" BOX	PER PLAN	M
SCREEN & SHADE TREES					
	ARBUTUS UNEDO 'MARINA'	STRAWBERRY TREE	15 GAL	PER PLAN	L
	LAURUS NOBILIS 'SARATOGA'	SWEET BAY	15 GAL	PER PLAN	L
	LOPHOSTOMEN CONFERTUS	BRISBANE BOX	15 GAL	PER PLAN	M
	OLEA EUROPAEA 'SWAN HILL'	SWAN HILL FRUITLESS OLIVE	15 GAL	PER PLAN	M
ACCENT TREES					
	ALBIZIA JULIBRISSIN 'SUMMER CHOCOLATE'	SUMMER CHOCOLATE MIMOSA TREE	15 GAL	PER PLAN	L
	ALBIZIA JULIBRISSIN 'ROSEA'	MIMOSA TREE	15 GAL	PER PLAN	L
	JACARANDA MIMOSIFOLIA	JACARANDA	15 GAL	PER PLAN	M
	LAGERSTROEMIA 'MUSKOGEE'	LAVENDER CRAPE MYRTLE	15 GAL	PER PLAN	M
SHRUBS, GRASSES & PERENNIALS					
	ABUTILON PALMERI	INDIAN MALLOW	5 GAL	4'-6" OC	L
	ACHILLEA 'MOONSHINE'	MOONSHINE YARROW	1 GAL	2'-0" OC	L
	BOUGAINVILLEA 'ROSENKA'	DWARF BOUGAINVILLEA	1 GAL	3'-0" OC	L
	CALLISTEMON 'LITTLE JOHN'	DWARF BOTTLEBRUSH	1 GAL	2'-0" OC	L
	CISTUS X HYBRIDUS	WHITE ROCKROSE	5 GAL	4'-6" OC	L
	CORREA 'RAY'S TANGERINE' (*SHADE*)	TANGERINE AUSTRALIAN FUCHSIA	1 GAL	2'-0" OC	L
	DAPHNE ODORA (*SHADE*)	WINTER DAPHNE	5 GAL	4'-0" OC	M
	FESTUCA MAIREI	ATLAS FESCUE	1 GAL	3'-0" OC	L
	JUNCUS PATENS 'ELK BLUE'	ELK BLUE CALIFORNIA GRAY RUSH	1 GAL	2'-0" OC	L
	LEUCOPHYLLUM FRUTESCENS 'GREEN CLOUD'	GREEN CLOUD TEXAS RANGER	5 GAL	4'-0" OC	L
	MUHLENBERGIA DUBIA	PINE MUHLY	1 GAL	2'-6" OC	L
	NANDINA DOMESTICA 'NANA'	DWARF HEAVENLY BAMBOO	1 GAL	1'-0" OC	L
	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	1 GAL	2'-0" OC	L
	PUNICA GRANATUM 'NANA'	DWARF POMEGRANATE	1 GAL	4'-0" OC	L
	RHAPHIOLEPIS INDICA 'BALLERINA'	DWARF INDIAN HAWTHORNE	5 GAL	2'-6" OC	L
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE'	TUSCAN BLUE ROSEMARY	5 GAL	3'-0" OC	L
	SARCOCOCCA RUSCIFOLIA (*SHADE*)	FRAGRANT SARCOCOCCA	1 GAL	4'-0" OC	M
	SALVIA LEUCANTHA 'MIDNIGHT'	MEXICAN BUSH SAGE	5 GAL	4'-0" OC	L
	TEUCRIUM CHAMAEDRYS	GERMANDER	1 GAL	2'-0" OC	L
	WESTRINGIA FRUTICOSA	COAST ROSEMARY	5 GAL	4'-0" OC	L
	XYLOSMA CONGESTUM	SHINY XYLOSMA	5 GAL	5'-0" OC	L
GROUNDCOVER					
	ARCTOSTAPHYLOS 'PACIFIC MIST'	PACIFIC MIST MANZANITA	1 GAL	3'-0" OC	L
	CARISSA MACROCARPA 'TOMLINSON'	DWARF NATAL PLUM	1 GAL	3'-0" OC	L
	CEANOTHUS 'DIAMOND HEIGHTS'	DIAMOND HEIGHTS CEANOTHUS	1 GAL	2'-6" OC	L
	CISTUS S. 'PROSTRATUS'	SAGELEAF ROCKROSE	1 GAL	4'-0" OC	L
	CORREA 'DUSKY BELLS'	RED AUSTRALIAN FUCHSIA	1 GAL	3'-0" OC	L
	COTONEASTER DAMMERI 'LOWFAST'	BEARBERRY COTONEASTER	1 GAL	4'-0" OC	L
	GAZANIA RIGENS 'SUN GOLD'	SUN GOLD GAZANIA	1 GAL	1'-6" OC	L
	MAHONIA REPENS (*SHADE*)	CREEPING MAHONIA	1 GAL	4'-0" OC	L
	MYOPORUM PARVIFOLIUM	MYOPORUM	1 GAL	4'-0" OC	L
	ROSMARINUS O. 'HUNTINGTON CARPET'	ROSEMARY	1 GAL	3'-6" OC	L
SUCCULENTS ACCENTS					
	AGAVE DESMETTIANA	VARIEGATED SMOOTH AGAVE	1 GAL	3'-6" OC	VL
	AGAVE AMER. V. MEDIO-PICTA 'ALBA'	WHITE-STRIPED CENTURY PLANT	1 GAL	4'-0" OC	VL
	AGAVE 'BLUE GLOW'	BLUE GLOW AGAVE	1 GAL	3'-6" OC	VL
	ALOE 'BLUE ELF'	BLUE ELF ALOE	1 GAL	1'-0" OC	L
	CRASSULA ARGENTEA 'CROSBY'S COMPACT'	COMPACT JADE	1 GAL	2'-6" OC	L
	DASYLIRION WHEELERI	SPOON YUCCA	1 GAL	2'-6" OC	VL
	HESPERALOE PARVIFLORA	RED/YELLOW YUCCA	1 GAL	1'-6" OC	VL
	PORTULACARIA AFRA 'PROSTRATE FORM'	DWARF ELEPHANT'S FOOD	1 GAL	3'-0" OC	VL
	SEDUM 'VERDE YELLOW'	VERDE YELLOW SEDUM	1 GAL	2'-0" OC	L
	SEDUM ADOLPHII 'FIRESTORM'	GOLDEN SEDUM	1 GAL	1'-6" OC	L
	SENECIO MANDRALISCAE	BLUE DICKS	1 GAL	1'-6" OC	L
	SENECIO SERPENS	BLUE CHALKSTICKS	1 GAL	1'-0" OC	L
	YUCCA FILAMENTOSA 'BRIGHT STAR'	ADAM'S NEEDLE	1 GAL	2'-0" OC	VL

PLANT IMAGERY


ULMUS PARVIFOLIA 'DRAKE'
DRAKE CHINESE ELM


ARBUTUS UNEDO 'MARINA'
STRAWBERRY TREE

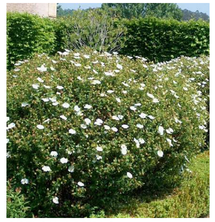

OLEA EUROPAEA 'SWAN HILL'
SWAN HILL FRUITLESS OLIVE


ALBIZIA JULIBRISSIN 'ROSEA'
MIMOSA TREE


JACARANDA MIMOSIFOLIA
JACARANDA


ABUTILON PALMERI
INDIAN MALLOW


CALLISTEMON 'LITTLE JOHN'
DWARFT BOTTLEBRUSH


CISTUS X HYBRIDUS
WHITE ROCKROSE


FESTUCA MAIREI
ATLAS FESCUE


LEUCOPHYLLUM F. 'GREEN CLOUD'
GREEN CLOUD TEXAS RANGERS


PUNICA GRANATUM 'NANA'
DWARF POMEGRANATE

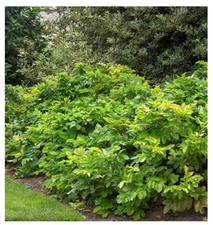

TEUCRIUM CHAMAEDRYS
GERMANDER

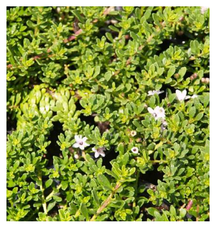

WESTRINGIA FRUTICOSA
COAST ROSEMARY


XYLOSMA CONGESTUM
SHINY XYLOSMA


ARCTOSTAPHYLOS 'PACIFIC MIST'
PACIFIC MIST MANZANITA


GAZANIA RIOGENS 'SUN GOLD'
SUN GOLD GAZANIA


MAHONIA REPENS
CREEPING MAHONIA


MYOPORUM PARVIFOLIA
MYOPORUM


ROSMARINUS O. 'HUNT. CARPET'
ROSEMARY


AGAVE A.V. MEDIO-PICTA 'ALBA'
WHITE STRIPE CENTURY PLANT


CRASSULA A. 'CROSBY''S COMPACT'
COMPACT JADE


DASYLIRION WHEELERI
SPOON YUCCA


HERSPERALOE PARVIFOLIA
RED/YELLOW YUCCA


SENECIO SERPENS
BLUE CHALKSTICK


YUCCA FILAMENTOSA 'BRIGHT STAR'
ADAM'S NEEDLE

IRRIGATION DESIGN INTENT

1. THESE PLAN SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE OF CALIFORNIA'S MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), AND CHAPTER 23.77 XERISCAPE ORDINANCE OF PLACENTIA MUNICIPAL CODE.
2. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO PROVIDE THE MINIMUM AMOUNT OF WATER NECESSARY TO SUSTAIN GOOD PLANT HEALTH.
3. THE IRRIGATION SYSTEM IS TO BE A FULLY AUTOMATIC, WEATHER-BASED SYSTEM USING RAIN SENSOR, LOW FLOW DRIP AND BUBBLER DISTRIBUTION, AND SPRINKLERS WITH MATCHED PRECIPITATION RATE NOZZLES DESIGNED FOR HEAD-TO-HEAD COVERAGE.
4. ALL SELECTED COMPONENTS SHALL BE PERMANENT, COMMERCIAL GRADE, SELECTED FOR DURABILITY, VANDAL RESISTANCE, AND MINIMUM MAINTENANCE REQUIREMENT.
5. THE SYSTEM SHALL INCLUDE A MASTER CONTROL VALVE AND FLOW SENSING CAPABILITY WHICH WILL SHUT DOWN ALL OR PART OF THE SYSTEM IF LEAKS ARE DETECTED.
6. THE IRRIGATION SYSTEM SHALL BE DESIGNED TO DELIVER WATER TO HYDROZONES BASED ON MOISTURE REQUIREMENTS OF THE PLANT GROUPING.

PLANTING DESIGN INTENT

1. PLANTING DESIGN WILL COMPLY WITH CHAPTER 23.77 XERISCAPE ORDINANCE OF PLACENTIA MUNICIPAL CODE.
2. PLANTING WITHIN THE STREETSCAPE AND RIGHT-OF-WAY SHALL ADHERE TO THE TRANSIT ORIENTED DEVELOPMENT PACKING HOUSE DISTRICT STREETSCAPE MASTER PLAN.
3. ALL TREES WITHIN 5' OF PAVEMENT OR UTILITIES SHALL USE TREE ROOT BARRIERS.
4. THE PLANTING DESIGN SHALL UTILIZE A VARIETY OF MEDITERRANEAN-STYLE, NATIVE, AND DROUGHT-TOLERANT PLANT SPECIES TO CREATE LAYERS OF COLOR AND TEXTURE TO COMPLEMENT THE ARCHITECTURE AND SETTING.
5. PLANT SPECIES SHALL BE SELECTED BASED ON LOCAL CLIMATE SUITABILITY, DISEASE AND PEST RESISTANCE, AND WATER-USE AS LISTED IN THE STATE OF CALIFORNIA'S MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) PLANT LIST, WUCOLS IV.
6. 80% OF PLANT MATERIAL TO BE NATIVE OR LOW WATER USE AND FOLLOW MWELO GUIDELINES.
7. TURF/LAWN SHALL NOT EXCEED 10% OF THE LANDSCAPE AREA. TURF SPECIES, IF INCLUDED, SHALL BE A FESCUE-BLEND TURF GRASS TO MINIMIZE WATER CONSUMPTION.
8. NO PLANT CONSIDERED INVASIVE IN THE REGION AS LISTED BY THE CAL-IPC WILL BE USED.
9. THE PLANTING DESIGN SHALL ALLOW FOR THE PLANTS TO REACH THEIR NATURAL, FULL-GROWN SIZE TO ELIMINATE THE NEED FOR EXCESSIVE PRUNING OR HEDGING.
10. PLANTS SHALL BE GROUPED IN HYDROZONES BASED ON WATER USE AND EXPOSURE.
11. TREE LOCATIONS SHALL BE DESIGNED FOR MAXIMUM AESTHETIC EFFECTS AND PASSIVE SOLAR BENEFITS, CREATING SUMMER SHADE AND WINTER SUN EXPOSURE.
12. ALL PLANTING AREAS SHALL RECEIVE A 3-INCH LAYER OF MULCH.

LANDSCAPE NOTES AND PRELIMINARY PLANT PALETTE

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NORTH

L2



1. VIEW OF SOUTHWEST CORNER ALONG CROWTHER

PERSPECTIVE RENDERING

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A1.1



2. VIEW OF MAIN ENTRY ALONG CROWTHER

PERSPECTIVE RENDERING

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3. VIEW OF SOUTHEAST CORNER ALONG CROWTHER

PERSPECTIVE RENDERING

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A1.3



1. SOUTH ELEVATION



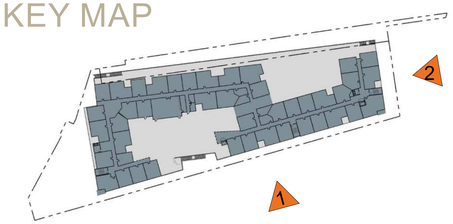
2. EAST ELEVATION

LEGEND*:

1. STUCCO FINISH COLOR 1a, 1b, and 1c
2. PAINTED CEMENTITIOUS HORIZONTAL SIDING
3. STANDING SEAM METAL
4. METAL WALL PANEL
5. MESH PANEL RAILING
6. METAL CANOPY
7. ALUMINUM STOREFRONT WINDOW/DOOR
8. WHITE VINYL WINDOW
9. ART MURAL
10. GARAGE OPENING MESH SCREEN
11. WALL-MOUNTED LIGHT FIXTURE
12. GLASS ACOUSTIC BARRIER

*NOTE: COLOR AND MATERIAL BOARD WILL BE PROVIDED AT LATER DATE.

KEY MAP



ELEVATIONS - SOUTH AND EAST ELEVATIONS

METRO AT MELROSE

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3. NORTH ELEVATION



4. WEST ELEVATION

LEGEND*:

1. STUCCO FINISH COLOR 1a, 1b, and 1c
2. PAINTED CEMENTITIOUS HORIZONTAL SIDING
3. STANDING SEAM METAL
4. METAL WALL PANEL
5. MESH PANEL RAILING
6. METAL CANOPY
7. ALUMINUM STOREFRONT WINDOW/DOOR
8. WHITE VINYL WINDOW
9. ART MURAL
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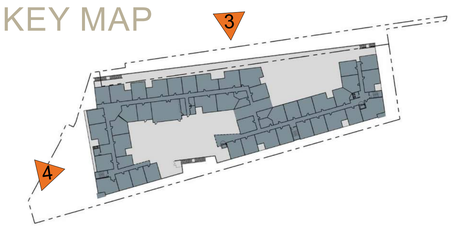
12. GLASS ACOUSTIC BARRIER

*NOTE: COLOR AND MATERIAL BOARD WILL BE PROVIDED AT LATER DATE.

KEY MAP



ELEVATIONS - NORTH AND WEST ELEVATIONS

METRO AT MELROSE

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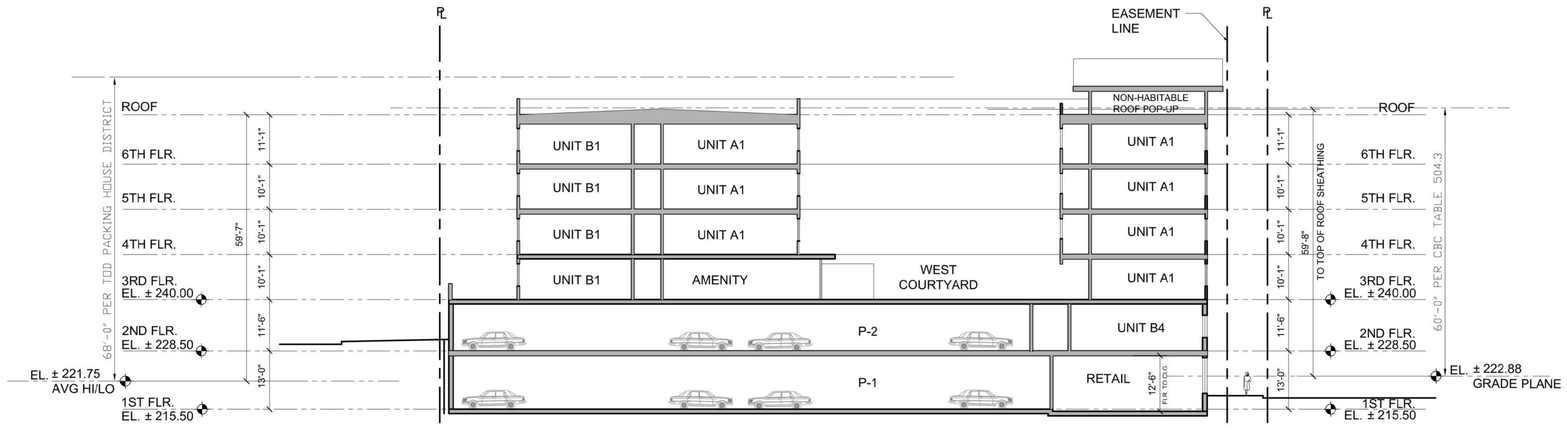
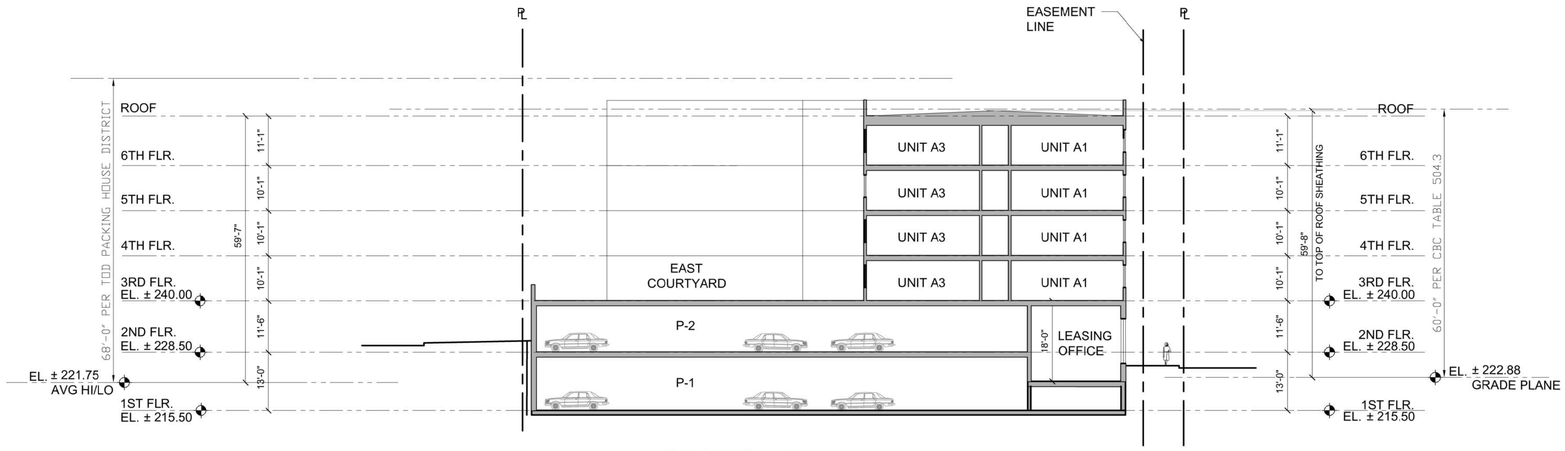
A2.2



SECTION A



SECTION B

SECTIONS

METRO AT MELROSE

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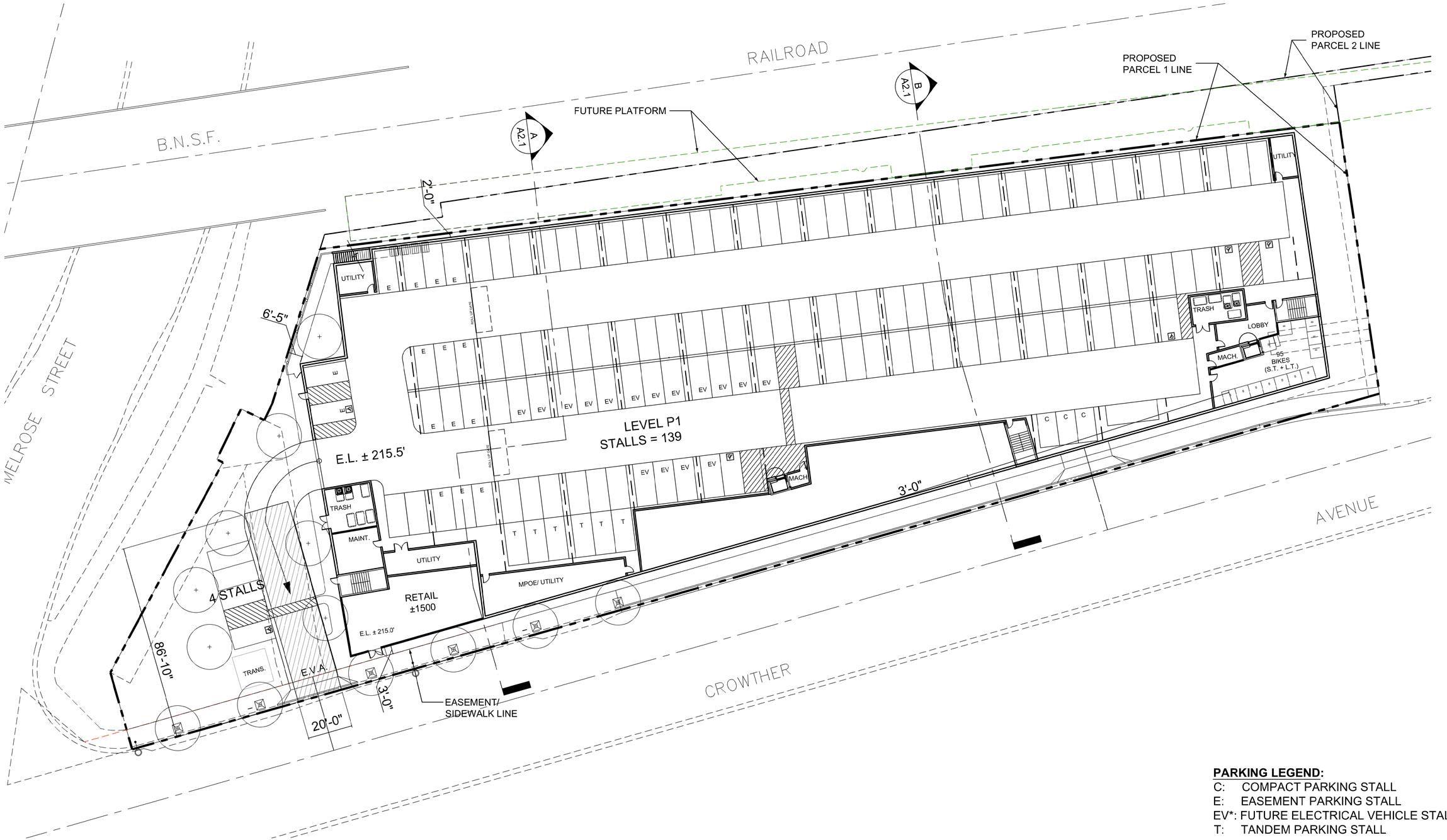
A3.1



PARKING LEGEND:

C: COMPACT PARKING STALL
E: EASEMENT PARKING STALL
EV*: FUTURE ELECTRICAL VEHICLE STALL
T: TANDEM PARKING STALL

* NOTE: PRE-WIRED FOR FUTURE CHARGER INSTALLATION

FIRST FLOOR PLAN

METRO AT MELROSE

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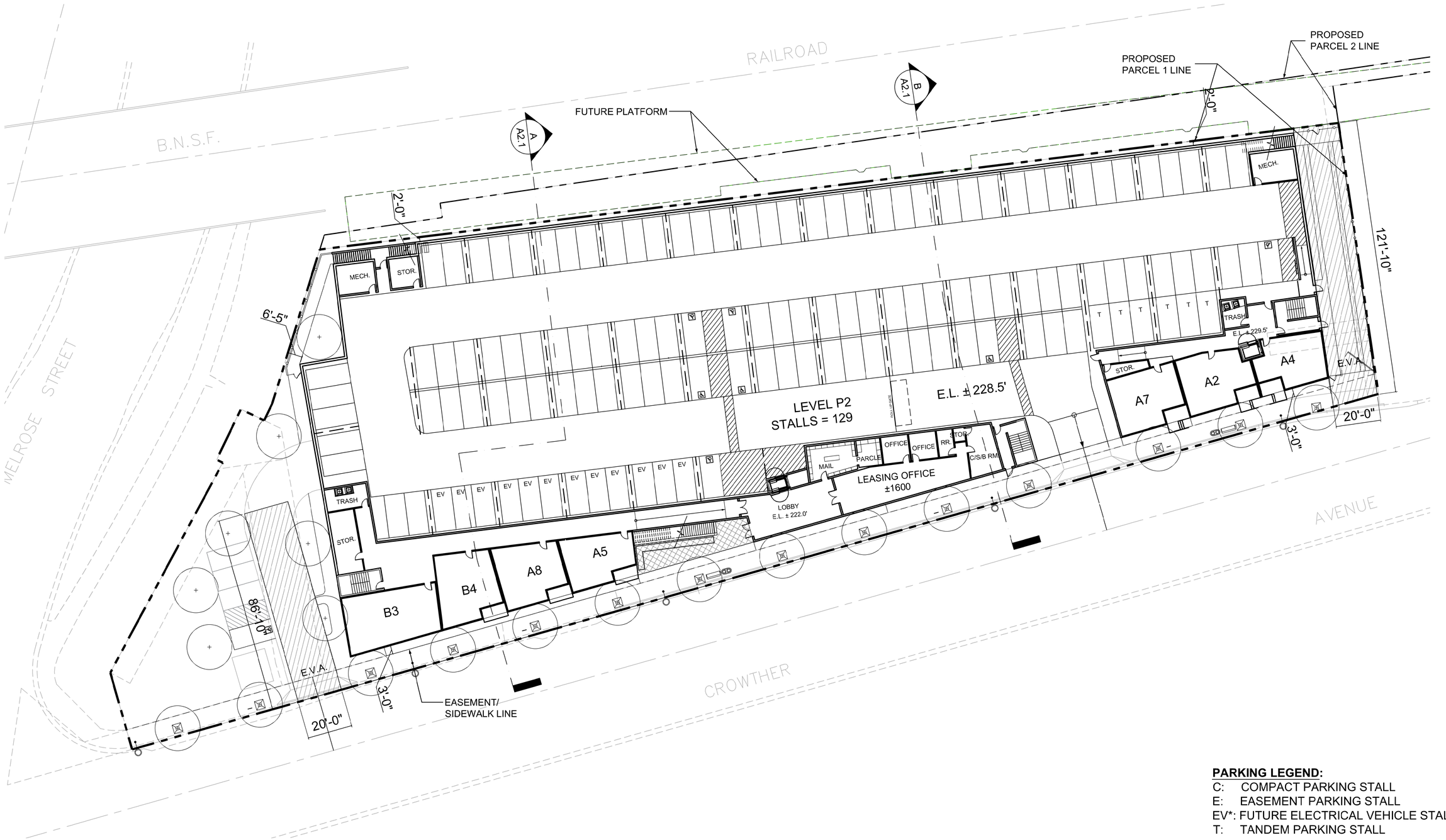
JOB NO. 1236-008

A4.1



PARKING LEGEND:

C: COMPACT PARKING STALL
E: EASEMENT PARKING STALL
EV*: FUTURE ELECTRICAL VEHICLE STALL
T: TANDEM PARKING STALL

* NOTE: PRE-WIRED FOR FUTURE CHARGER INSTALLATION

SECOND FLOOR PLAN

METRO AT MELROSE

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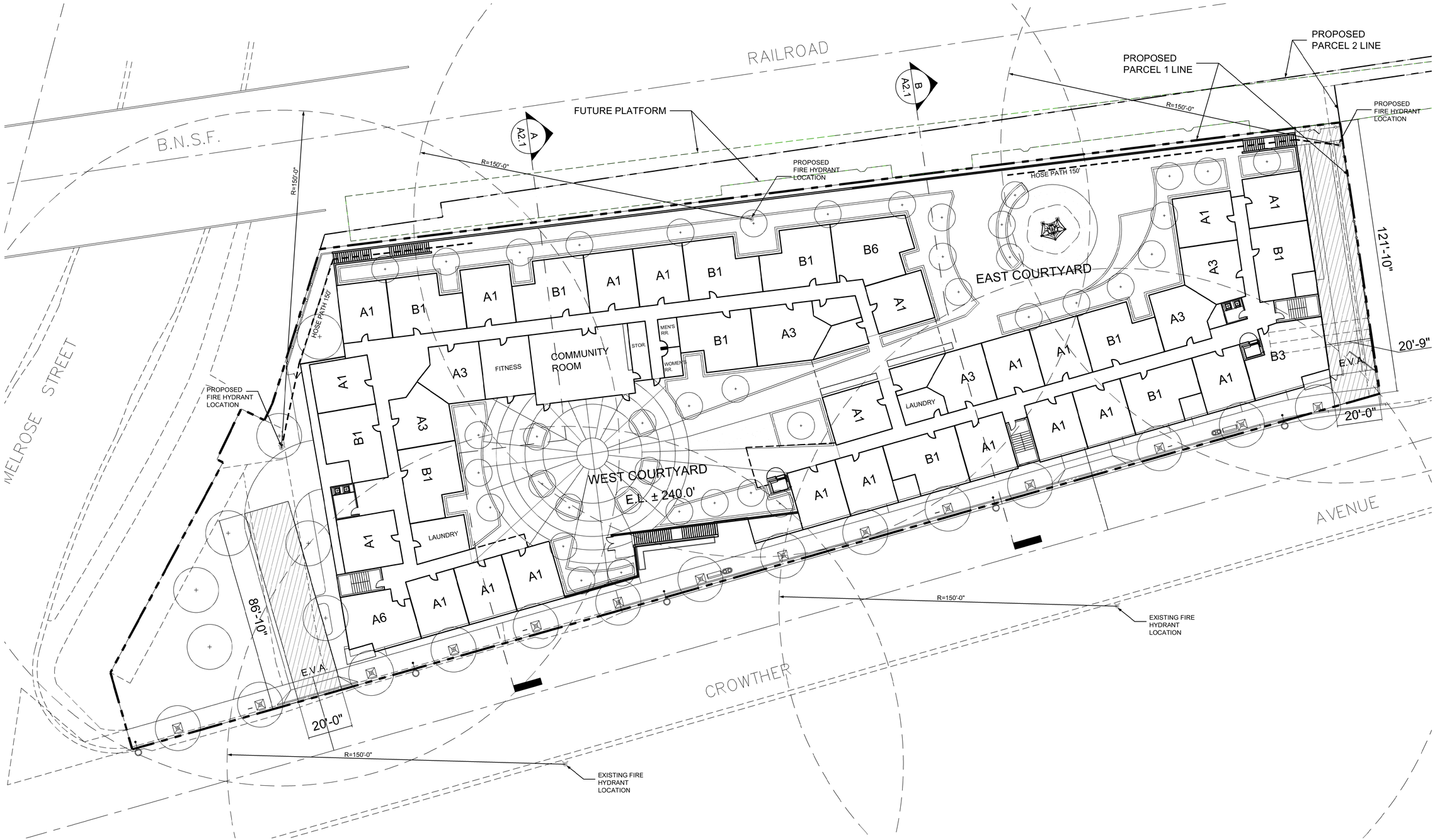

THIRD FLOOR (PODIUM) PLAN

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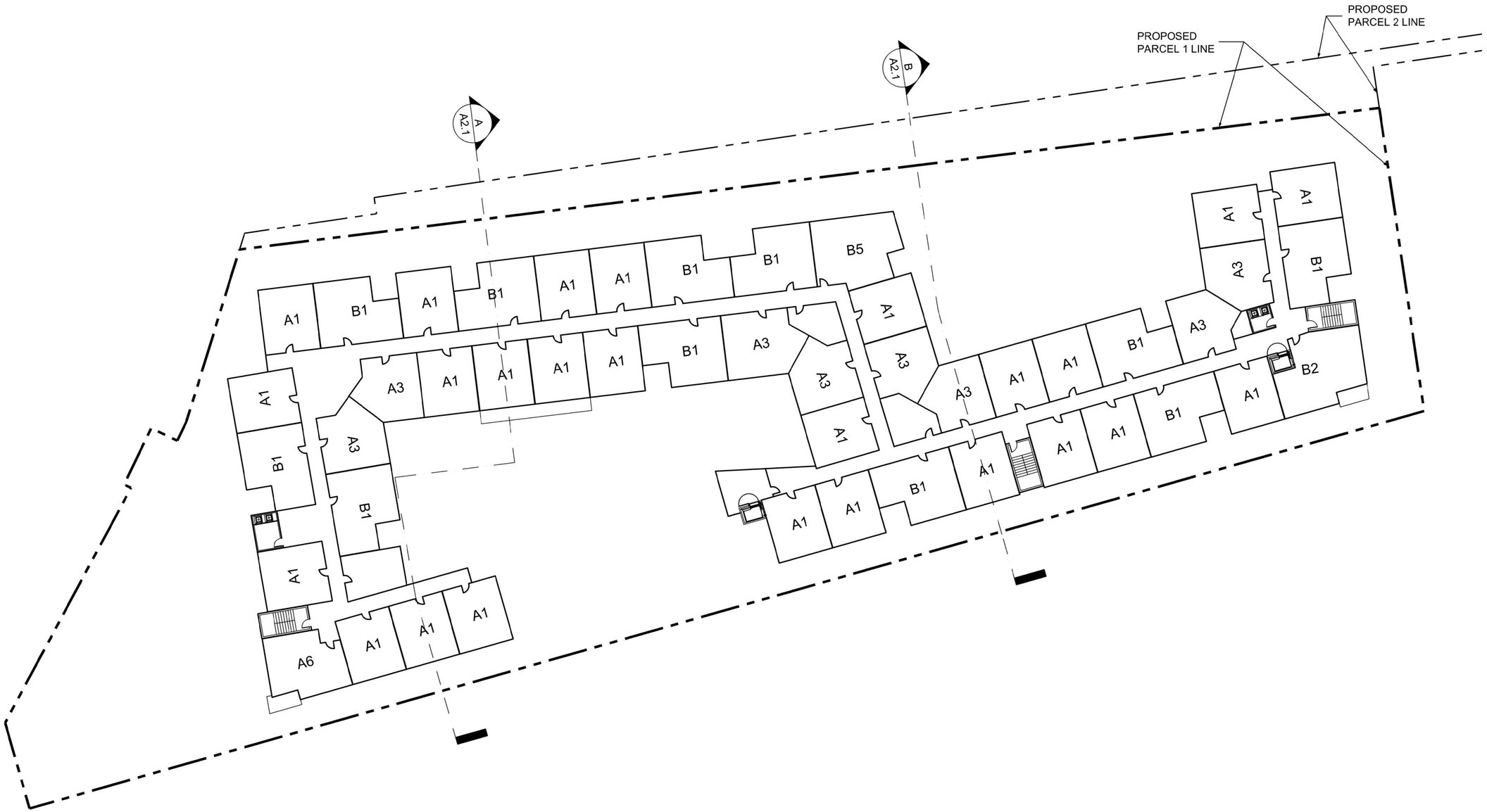
A4.3



FOURTH FLOOR PLAN

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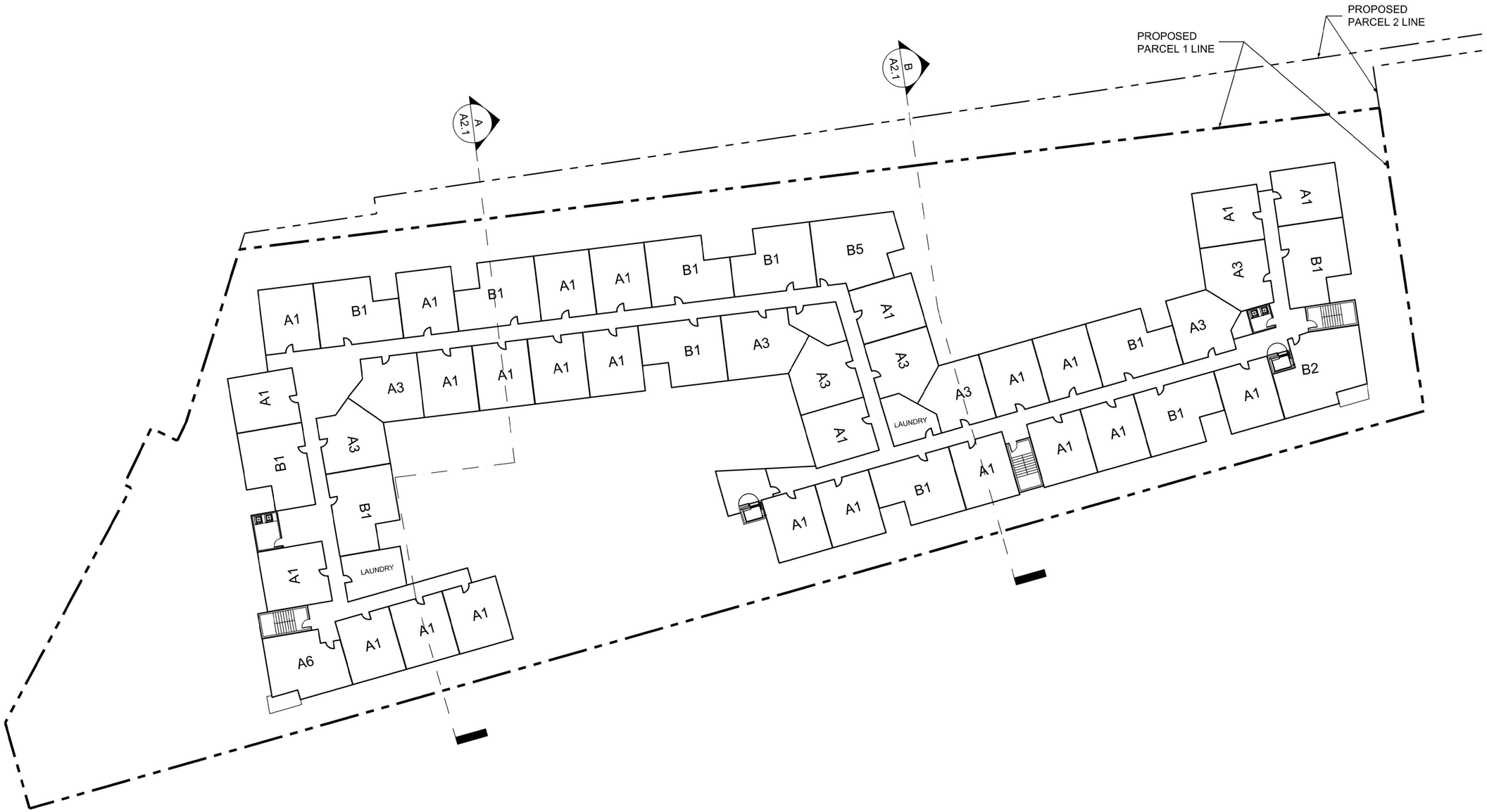

FIFTH FLOOR PLAN

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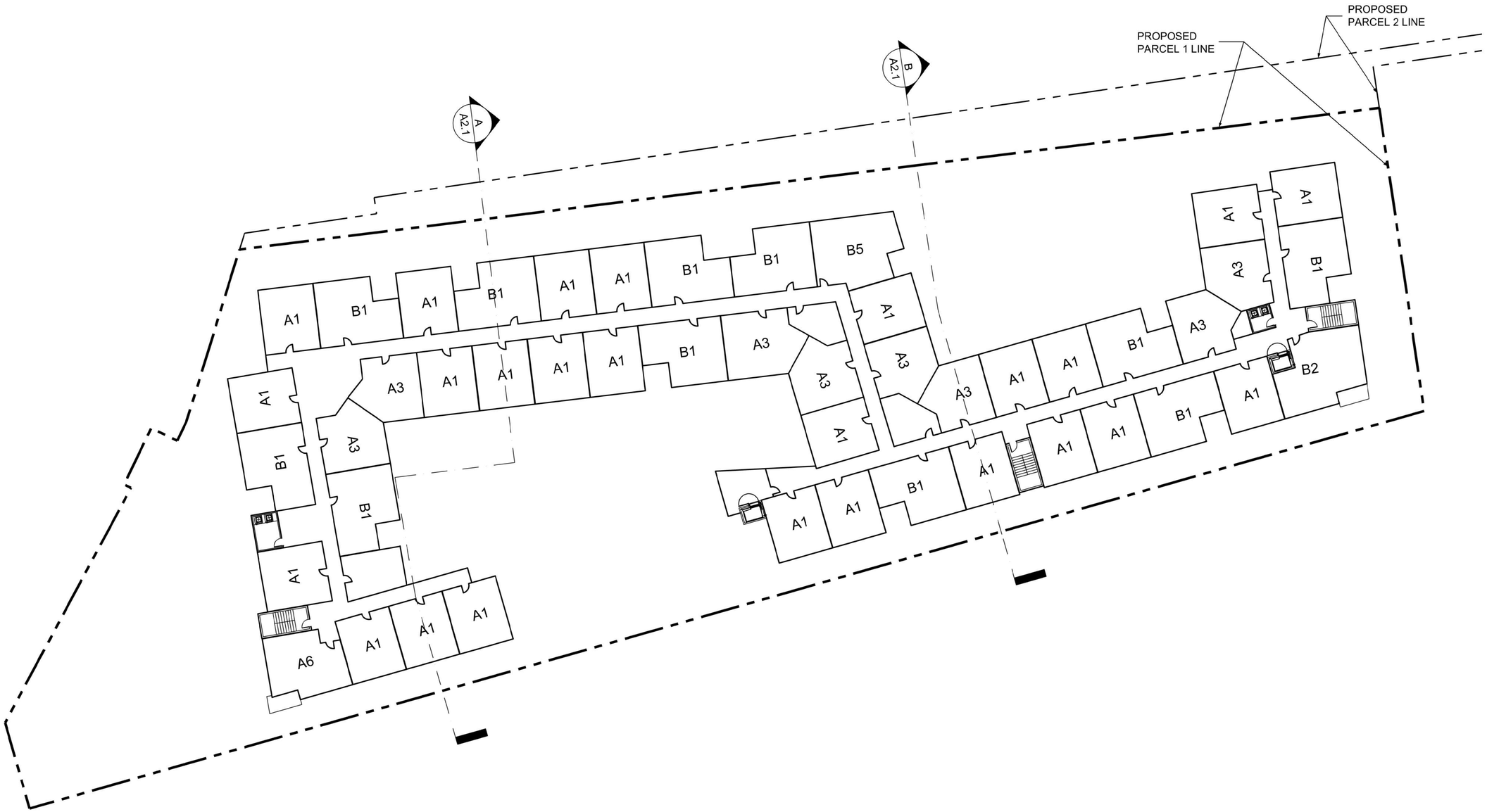
A4.5



SIXTH FLOOR PLAN

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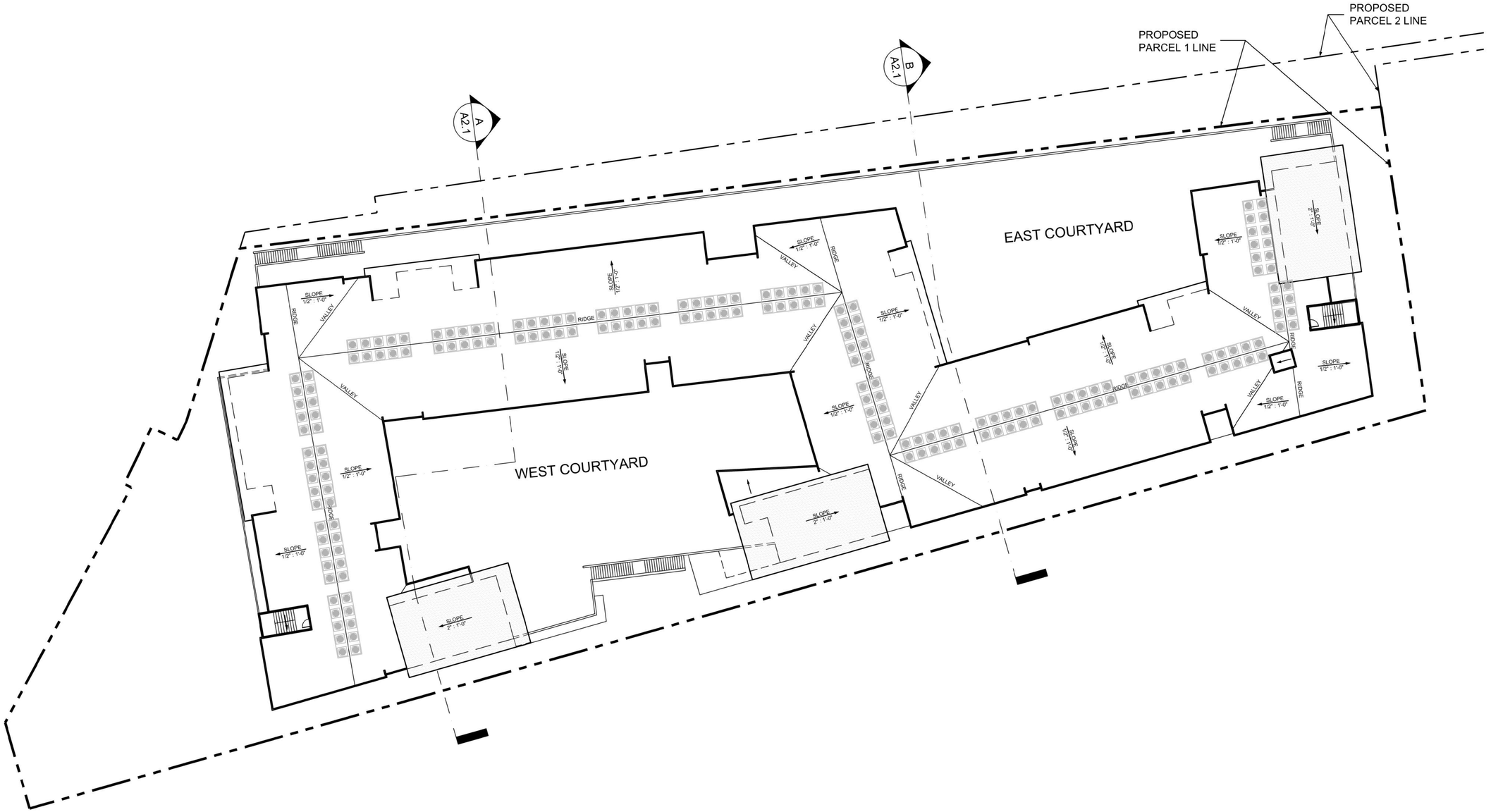
A4.6



ROOF PLAN

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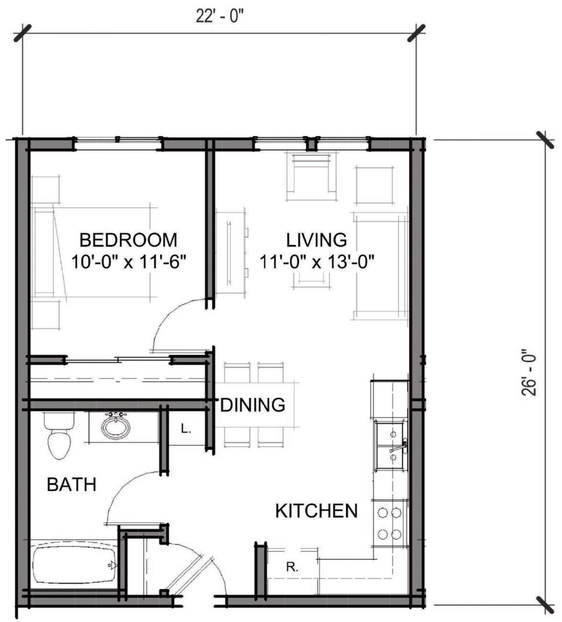
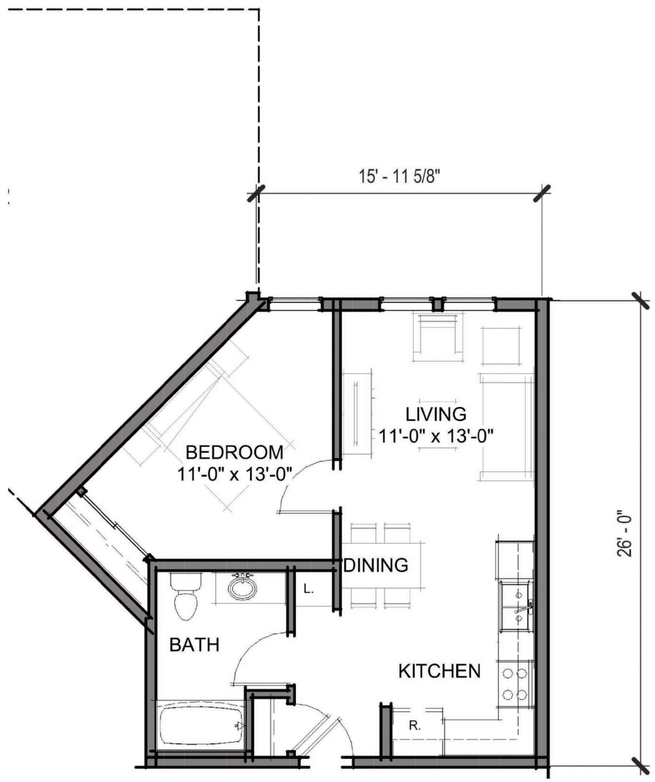


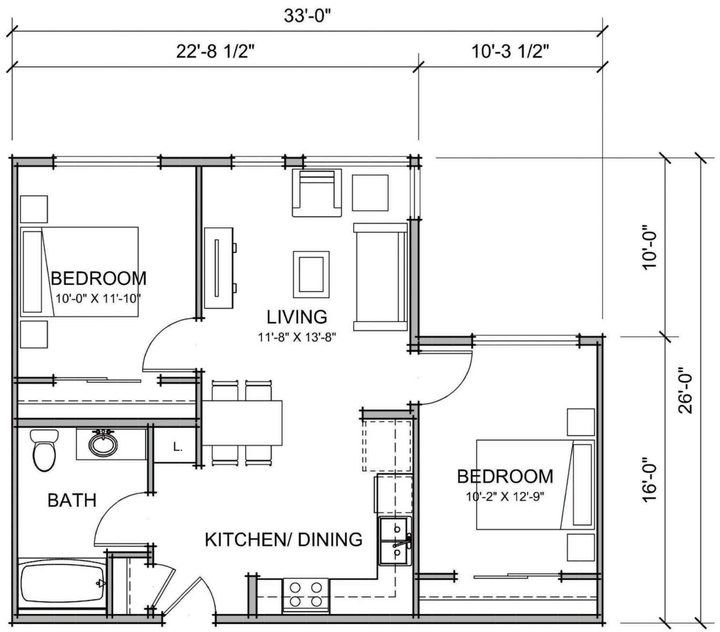
UNIT PLAN A1

1 BEDROOM + 1 BATH
NET AREA = 531 SF
GROSS AREA = 572 SF



UNIT PLAN A3

1 BEDROOM + 1 BATH
NET AREA = 551 SF
GROSS AREA = 593 SF



UNIT PLAN B1

2 BEDROOM + 1 BATH
NET AREA = 703 SF
GROSS AREA = 758 SF

REPRESENTATIVE UNIT PLANS

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A5.1



1. SOUTH ELEVATION

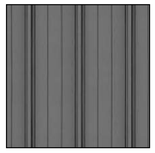
PAINT COLORS

High Reflective White 7757	Elephant Ear 9168	Grays Harbor 6236	Copper Pot 7709	Westchester Gray 2849	Dark Clove 9183
1a Stucco **High Reflective White** by Sherwin Williams	**1b** Stucco **Elephant Ear** by Sherwin Williams	**1c** Stucco **Grays Harbor** by Sherwin Williams	**2** Cementitious Horizontal Siding **Copper Pot** by Sherwin Williams	**3** Standing Seam Metal **Westchester Gray** by Sherwin Williams	**4** Metal Wall Panel **Dark Clove** by Sherwin Williams

MATERIAL SAMPLES



2 Cementitious Horizontal Siding



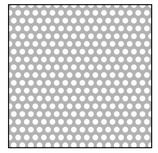
3 Standing Seam Metal



4 Metal Wall Panel



6 & 7 Metal Canopy & Storefront Window/ Door



5 & 10 Mesh Panel Railing & Garage Opening Mesh Screen

LEGEND:

1. STUCCO FINISH COLOR 1a, 1b, and 1c
2. PAINTED CEMENTITIOUS HORIZONTAL SIDING
3. STANDING SEAM METAL
4. METAL WALL PANEL
5. MESH PANEL RAILING
6. METAL CANOPY
7. ALUMINUM STOREFRONT WINDOW/DOOR
8. WHITE VINYL WINDOW
9. ART MURAL
10. GARAGE OPENING MESH SCREEN
11. WALL-MOUNTED LIGHT FIXTURE
12. GLASS ACOUSTIC BARRIER

COLOR CHIPS & MATERIAL SAMPLES BOARD

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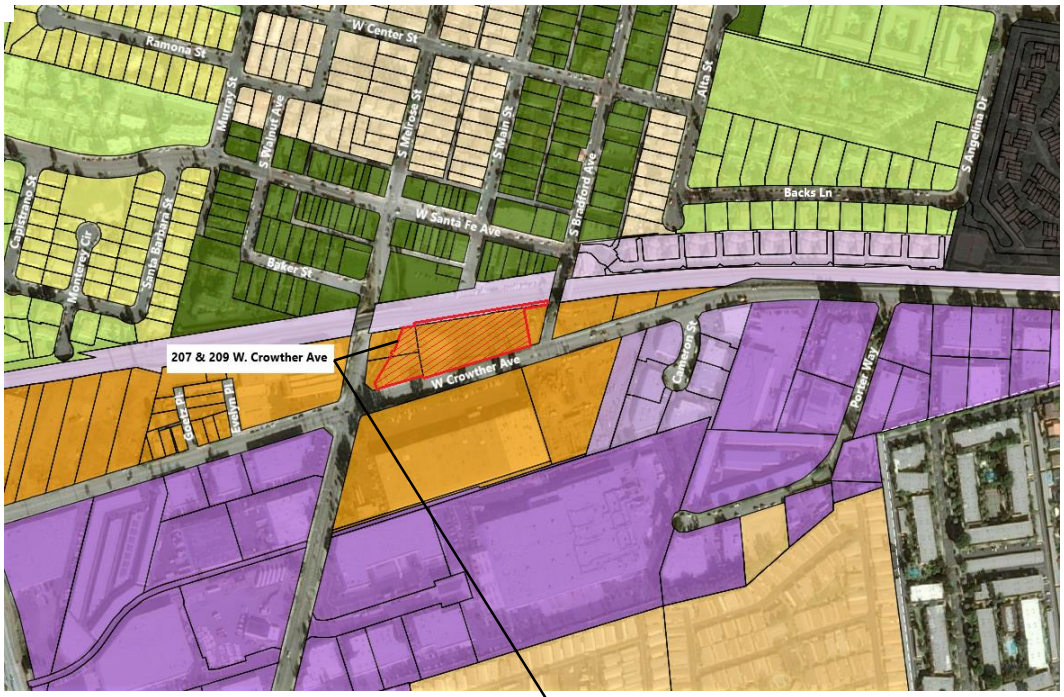
ATTACHMENT 6. VICINITY ZONING MAP

DPR 2020-03, DA 2020-01, ADDENDUM TO MND 2017-01; 207 & 209 W. CROWTHER AVENUE



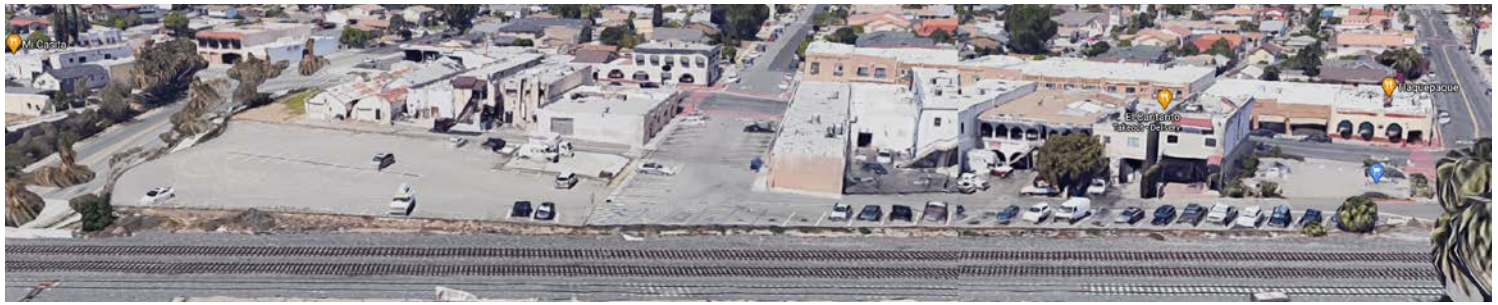
Aerial A.



Aerial B.

Zoning Code

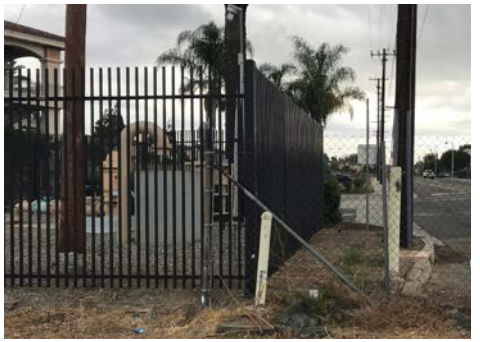
C-1	R-3
C-1 (O)	R-3 (O-1)
C-1 (O-1)	R-A
C-2	R-G
C-2-H65	R-G (O)
C-M	R-G(O) & C-1 (O)
C-O	RPC (O)
M	SP-1
M (O)	SP-2
M (PMD)	SP-3
PUD-1	SP-4
PUD-2	SP-5
PUD-2 (O)	SP-6 (O)
PUD-3	SP-7
PUD-3 (O)	SP-8
PUD-4	SP-9
R-1	SP-10
R-1 (MHP)	T-C
R-1 (O)	Old Town
R-2	TOD
R-2 (MHP)	N/A



A - Looking North







B - Looking East

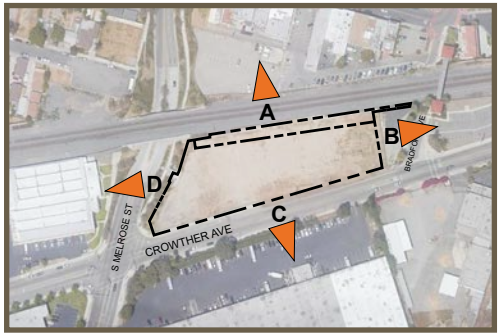


C - Looking South



D - Looking West

KEY MAP



PROJECT SITE PHOTOGRAPH EXHIBIT

CROWTHER AVENUE TOD **USA PROPERTIES FUND**

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A.1