

6701 SHELLMOUND STREET PROJECT

Response to Comments Document

Case No. UPDR14-003

State Clearinghouse No. 2014062022



Prepared for:
City of Emeryville

March 2016

URBAN
PLANNING
PARTNERS
INC.

6701 SHELLMOUND STREET PROJECT

Response to Comments Document

Case No. UPDR14-003

State Clearinghouse No. 2014062022

By:

Urban Planning Partners, Inc.

505 17th Street, 2nd Floor

Oakland, CA 94612

With:

BASELINE Environmental Consulting

Fehr & Peers

Prepared for:

City of Emeryville

March 2016

URBAN
PLANNING
PARTNERS
INC.



CITY OF EMERYVILLE

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NOTICE OF AVAILABILITY OF THE RESPONSES TO COMMENTS AND FINAL ENVIRONMENTAL IMPACT REPORT FOR THE 6701 SHELLMOUND STREET PROJECT EIR (SCH # 2014062022)

PROJECT LOCATION

The project site consists of a 2.3-acre triangular-shaped parcel (APN 49-1490-2) bounded by Interstate-80 (I-80) to the west, the Ashby Avenue exit on- and off-ramps to the north, Shellmound Street and the Union Pacific Railroad tracks to the east, and Ex'pression College for Digital Arts immediately to the south. 65th Street is located further south of the site.

PROJECT DESCRIPTION

The proposed project is a multi-family development that would include a total of 186 residential units and parking in a single seven-story building consisting of a five-level wood-frame structure on a podium over a two-story parking garage. The project also includes landscaped common areas and other resident amenities. The south entry and exit onto Shellmound Street provides vehicle access to the site through the parking garage and loading area. The two levels of parking provided within the building—at-grade and on the second floor—provide a total of 241 vehicle parking spaces and 206 bicycle parking spaces.

ENVIRONMENTAL REVIEW: The preparation of the Responses to Comments has been overseen by City staff and the conclusions and recommendations in the document represent the independent conclusions and recommendations of the City. The Final EIR is also available on the City of Emeryville website at:

<http://www.ci.emeryville.ca.us/969/6701-Shellmound-Street-Nady-Site>

PUBLIC HEARING: The Emeryville Planning Commission will hold a public hearing to consider the project on Thursday, **March 24, 2016, at 6:30p.m.** This action consists of consideration of the certification of the Final EIR. The Planning Commission hearing begins at 6:30 p.m. in City Council Chambers, 1333 Park Avenue, Emeryville, CA. For further information, please contact Miroo Desai, Senior Planner, at (510) 596-3785, or at mdesai@ci.emeryville.ca.us.

Copies of the DEIR were available on the City's website at <http://www.ci.emeryville.ca.us/969/6701-Shellmound-Street-Nady-Site>. Copies of the DEIR were also distributed to interested parties.

The public were encouraged to provide comments during the public comment period from November 4, 2015, through December 21, 2015. A public hearing was held on December 10, 2015, before the City Planning Commission. Comments were made at the public hearings as well as received in writing. All verbal and written comments that were received have been addressed in the Responses to Comments and Final EIR document.

The document is available for review at City Hall and on the City's website: www.ci.emeryville.ca.us.

Signature: _____

Miroo Desai, Senior Planner

Date: March 10, 2016

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I. INTRODUCTION

A. PURPOSE OF THE RESPONSE TO COMMENTS DOCUMENT

This document has been prepared to respond to comments received on the Draft Environmental Impact Report (Draft EIR or 6701 Shellmound Street Project Draft EIR) prepared for the 6701 Shellmound Street Project (SCH# 2014062022). The Draft EIR identifies the likely environmental consequences associated with the implementation of the proposed project, and recommends mitigation measures and standard conditions of approval to reduce potentially significant impacts. This Response to Comments (RTC) Document provides responses to comments received on the Draft EIR and makes revisions to the Draft EIR, as necessary, in response to these comments or to amplify or clarify material in the Draft EIR.

This RTC Document, together with the Draft EIR, constitutes the Final EIR for the proposed project.

B. ENVIRONMENTAL REVIEW PROCESS

According to CEQA, lead agencies are required to consult with public agencies having jurisdiction over a proposed project and to provide the general public with an opportunity to comment on the Draft EIR.

The City of Emeryville circulated a Notice of Preparation (NOP), which stated that the Draft EIR will address the potential environmental effects only for Air Quality, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, and Traffic and Transportation. The NOP was published on April 20, 2015, and the public comment period for the scope of the EIR lasted from April 20, 2015, to May 20, 2015. The NOP was sent to property owners within 300 feet of the project site as well as to responsible and trustee agencies, organizations, and interested individuals. Additionally, the NOP was sent to the State Clearinghouse. A scoping session was held for the project on May 11, 2015, before the Planning Commission. No members of the public provided any written or verbal comments at the scoping session held on May 11, 2015. Written comments received by the City on the NOP were taken into account during the preparation of the Draft EIR.

The Draft EIR was made available for public review on November 4, 2015, and distributed to applicable local and State agencies. Copies of the Notice of Availability (NOA) of the

Draft EIR were mailed to all individuals previously requesting to be notified of the EIR, in addition to those agencies and individuals who received a copy of the NOP.

The CEQA-mandated 45-day public comment period for the Draft EIR ended on December 21, 2015. A public hearing was held before the Planning Commission on December 10, 2015. Copies of all written comments received during the comment period and comments made at the public hearings before the Planning Commission are included in Chapter III of this document.

C. DOCUMENT ORGANIZATION

This RTC Document consists of the following chapters:

- *Chapter I: Introduction.* This chapter discusses the purpose and organization of this RTC Document and the Final EIR, and summarizes the environmental review process for the project.
- *Chapter II: List of Commenting Agencies, Organizations, and Individuals.* This chapter contains a list of agencies, organizations, and persons who submitted written comments during the public review period or spoke at the public hearing on the Draft EIR before the Planning Commission.
- *Chapter III: Comments and Responses.* This chapter contains reproductions of all comment letters received on the Draft EIR. A written response for each CEQA-related comment received during the public review period and for verbal comments received during the public hearing is provided. Each response is keyed to the associated comment.
- *Chapter IV: Text Revisions.* Corrections to the Draft EIR necessary in light of the comments received and responses provided, or necessary to amplify or clarify material in the Draft EIR, are contained in this chapter. Text with double underline represents language that has been added to the Draft EIR; text with ~~strikeout~~ has been deleted from the Draft EIR.

II. LIST OF COMMENTING AGENCIES, ORGANIZATIONS, AND INDIVIDUALS

This chapter presents a list of written and verbal comments received during the public review period and describes the organization of the letters, emails and verbal comment from the public hearing that are included in Chapter III, Comments and Responses, of this document.

A. ORGANIZATION OF COMMENT LETTERS AND RESPONSES

Chapter III includes a reproduction of each letter received on the Draft EIR and a summary of comments made at the public hearing before the Planning Commission. The comments are grouped by the affiliation of the commenter, as follows: State, local and regional agencies (A); groups and organizations (B); individuals (C); and the public hearing (D).

The comment letters are numbered consecutively following the A, B, C and D designations. The letters are annotated in the margin according to the following code:

- State, Local and Regional Agencies: A#-#
- Groups and Organizations: B#-#
- Individuals: C#-#
- Public Hearing Verbal Comment: D#-#

The letters are numbered and comments within that letter are numbered consecutively after the hyphen.

B. LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS COMMENTING ON THE DRAFT EIR

Each written comment submitted to the City during the public review period is listed in Table II-1. The comments are listed in order by the date of the correspondence.

TABLE II-1 LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS COMMENTING ON THE DRAFT EIR

Reference Number	Commenter	Date
State, Local, and Regional Agencies		
A1	East Bay Municipal Utility District	December 15, 2015
A2	Department of Transportation (CalTrans)	December 15, 2015
Groups and Organizations		
B1	Wendel, Rosen, Black & Dean LLP	December 10, 2015
B2	Wendel, Rosen, Black & Dean LLP	December 21, 2015
B3	Union Pacific Railroad Company	December 21, 2015
Individuals		
None		
December 10, 2015, Planning Commission Hearing Verbal Comments		
Planning Commissioner Verbal Comments		
D9	Commissioner Moss	December 10, 2015
D10	Commissioner Bauters	December 10, 2015
D11	Commissioner Kang	December 10, 2015
Public Hearing Verbal Comments		
None		

Source: Urban Planning Partners, 2016; City of Emeryville Planning Division, 2016.

III. COMMENTS AND RESPONSES

This chapter includes copies of the written comments received by hand-delivered mail or electronic mail during the public review period on the Draft EIR. This chapter also includes comments made at the public hearing on the Draft EIR before the City of Emeryville Planning Commission on December 10, 2015. Mail and electronic mail received during the public review period on the Draft EIR are provided in their entirety and summary of the comments made at the public hearings on the Draft EIR is also provided.

Each comment letter or email is immediately followed by responses keyed to the specific comments. The comments are grouped by affiliation of the commenting entity as follows: State, local, and regional agencies (A); groups and organizations (B); individuals (C); and public hearing verbal comments (D).

Responses specifically focus on comments that pertain to the adequacy of the analysis in the Draft EIR or other aspects pertinent to the environmental analysis of the proposed project pursuant to CEQA. Comments that address topics beyond the purview of the Draft EIR or CEQA are noted as such for the public record. Where comments and/or responses have warranted changes to the text of the Draft EIR, these changes appear as part of the specific response and are repeated in Chapter IV, Text Revisions, where they are listed generally in order of where the original text appeared in the Draft EIR document.

A. STATE, LOCAL, AND REGIONAL AGENCIES

December 15, 2015

Miroo Desai, Senior Planner
City of Emeryville
Planning and Building Department
1333 Park Avenue
Emeryville, CA 94608

Re: Notice of Availability of a Draft Environmental Impact Report – 6701 Shellmound Street Project, Emeryville

Dear Ms. Desai:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Draft Environmental Impact Report (EIR) for the 6701 Shellmound Street Project located in the City of Emeryville (City). EBMUD commented on the Notice of Preparation of a Draft EIR for the project on May 12, 2015. EBMUD's original comments (see enclosure) still apply regarding water service and water conservation. EBMUD's comments regarding wastewater service and recycled water have changed and are as follows.

1

WATER RECYCLING

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply. Appropriate recycled water uses could include landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in non-residential buildings and other applications.

2

Although the project falls within EBMUD's potable water service area, the proposed project's site falls three blocks outside the vicinity of the current planned East Bayshore Recycled Water Project distribution pipeline extension in Emeryville along Shellmound Street and Christie Avenue. There are no certain plans of any future alignment reaching the project's location. Considering the mainly residential nature of the development and the limited demand of landscape irrigation, EBMUD does not anticipate providing recycled water to this site. EBMUD recommends that the City of Emeryville and its developers maintain continued coordination and consultation with EBMUD as they plan and implement this new development should it become feasible to provide recycled water in the future.

WASTEWATER SERVICE

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to treat the proposed wastewater flows from this project, provided that the project and the wastewater generated by the project meet the requirements of the current EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to the Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) reinterpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. In addition, on July 22, 2009, a Stipulated Order for Preliminary Relief issued by the EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

3

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system, including the subbasin in which the proposed project is located. It is reasonable to assume that a new regional wet weather flow reduction program may be implemented in the East Bay, but the schedule for implementation of such a program has not yet been determined. In the meantime, it would be prudent for the lead agency to require the project applicant to incorporate the following measures into the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent infiltration/inflow to the maximum extent feasible. Please include such provisions in the environmental documentation and other appropriate approvals for this project.

If you have any questions concerning this response, please contact Timothy R. McGowan, Senior Civil Engineer, Major Facilities Planning at (510) 287-1981.

Sincerely,



David J. Rehnstrom
Manager of Water Distribution Planning

DJR:AMM:dks
sb15_207

Enclosure: Letter dated May 12, 2015 to Miroo Desai, Senior Planner, City of Emeryville from EBMUD

mailed
5/13/2015
ds

May 12, 2015

Miroo Desai, Senior Planner
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Re: Notice of Preparation of a Draft Environmental Impact Report – 6701 Shellmound Street Project, Emeryville

Dear Ms. Desai:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the 6701 Shellmound Street Project located in the City of Emeryville (City). EBMUD has the following comments.

WATER SERVICE

EBMUD's Central Pressure Zone, with a service elevation range between 0 and 100 feet, will serve the proposed project. A water main extension, at the project sponsor's expense, may be required to serve the property depending on EBMUD's metering requirements and fire flow requirements set by the local fire department. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine the costs and conditions of providing water service to the proposed development. Engineering and installation of water mains and services require substantial lead time, which should be provided for in the project sponsor's development schedule.

4

EBMUD's Standard Site Assessment Report and the project's placement on the Cortese list indicate the potential for contaminated soils or groundwater to be present within the project site boundaries. The project sponsor should be aware that EBMUD will not install piping or services in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste, or that may be hazardous to the health and safety of construction and maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping or services in areas where groundwater contaminant concentrations exceed specified limits for discharge to the sanitary sewer system and sewage treatment plants. The project sponsor must submit copies to EBMUD of all known information regarding soil and groundwater quality within or adjacent to the project boundary and a legally sufficient, complete and specific written remediation plan establishing the methodology,

5

planning and design of all necessary systems for the removal, treatment, and disposal of contaminated soil and groundwater.

EBMUD will not design piping or services until soil and groundwater quality data and remediation plans have been received and reviewed and will not start underground work until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists, or the information supplied by the project sponsor is insufficient, EBMUD may require the project sponsor to perform sampling and analysis to characterize the soil and groundwater that may be encountered during excavation, or EBMUD may perform such sampling and analysis at the project sponsor's expense. If evidence of contamination is discovered during EBMUD work on the project site, work may be suspended until such contamination is adequately characterized and remediated to EBMUD standards.

5 cont.

WATER RECYCLING

EBMUD's Policy 9.05 requires that customers use non-potable water, including recycled water, for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant, fish and wildlife to offset demand on EBMUD's limited potable water supply. Appropriate recycled water uses could include landscape irrigation, commercial and industrial process uses, toilet and urinal flushing in non-residential buildings and other applications.

The proposed project's site falls within the vicinity of the planned East Bayshore Recycled Water Project distribution pipeline extension in Emeryville along Shellmound Street and Christie Avenue and presents an opportunity for implementing recycled water use for landscape irrigation. Therefore, EBMUD recommends that the City and its developers maintain continued coordination and consultation with EBMUD, as they plan and implement this new development, regarding the feasibility of providing recycled water for appropriate non-potable uses.

6

WASTEWATER SERVICE

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to accommodate the proposed wastewater flows from this project and to treat such flows provided that the wastewater generated by the project meets the requirements of the EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. The East Bay regional wastewater collection system experiences exceptionally high peak flows during storms due to excessive infiltration and inflow (I/I) that enters the system through cracks and misconnections in both public and private sewer lines. EBMUD has historically operated three Wet Weather Facilities (WWFs) to provide primary treatment and disinfection for peak wet weather flows that exceed the treatment capacity of the MWWTP. Due to reinterpretation of applicable law, EBMUD's National Pollutant Discharge Elimination System (NPDES) permit now prohibits discharges from EBMUD's WWFs. Additionally,

7

the seven wastewater collection system agencies that discharge to the EBMUD wastewater interceptor system ("Satellite Agencies") hold NPDES permits that prohibit them from causing or contributing to WWF discharges. These NPDES permits have removed the regulatory coverage the East Bay wastewater agencies once relied upon to manage peak wet weather flows.

A federal consent decree, negotiated among EBMUD, the Satellite Agencies, the Environmental Protection Agency (EPA), the State Water Resources Control Board (SWRCB), and the Regional Water Quality Control Board (RWQCB), requires EBMUD and the Satellite Agencies to eliminate WWF discharges by 2036. To meet this requirement, actions will need to be taken over time to reduce I/I in the system. The consent decree requires EBMUD to continue implementation of its Regional Private Sewer Lateral Ordinance (www.eastbaypsl.com), construct various improvements to its interceptor system, and identify key areas of inflow and rapid infiltration over a 22-year period. Over the same time period, the consent decree requires the Satellite Agencies to perform I/I reduction work including sewer main rehabilitation and elimination of inflow sources. EBMUD and the Satellite Agencies must jointly demonstrate at specified intervals that this work has resulted in a sufficient, pre-determined level of reduction in WWF discharges. If sufficient I/I reductions are not achieved, additional investment into the region's wastewater infrastructure would be required, which may result in significant financial implications for East Bay residents.

7 cont.

To ensure that the proposed project contributes to these legally required I/I reductions, the lead agency should require the project applicant to comply with EBMUD's Regional Private Sewer Lateral Ordinance. Additionally, it would be prudent for the lead agency to require the following mitigation measures for the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines to ensure that such systems and lines are free from defects or, alternatively, disconnected from the sanitary sewer system, and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent I/I to the maximum extent feasible while meeting all requirements contained in the Regional Private Sewer Lateral Ordinance and applicable municipal codes or Satellite Agency ordinances.

WATER CONSERVATION

The proposed project presents an opportunity to incorporate water conservation measures. EBMUD requests that the City include in its conditions of approval a requirement that the project sponsor comply with Assembly Bill 325, "Model Water Efficient Landscape Ordinance," (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495) and "Landscape Water Conservation Guidelines" adopted by the Alameda Board of Supervisors. The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense.

8

Miroo Desai, Senior Planner
May 12, 2015
Page 4

If you have any questions concerning this response, please contact Timothy R. McGowan,
Senior Civil Engineer, Major Facilities Planning at (510) 287-1981.

Sincerely,

A handwritten signature in cursive script, appearing to read "David J. Rehnstrom".

David J. Rehnstrom
Manager of Water Distribution Planning

DJR:JRC:dks
sb15_075.doc

LETTER A1

East Bay Municipal Utility District (EBMUD)

David J. Rehnstrom, Manager of Water Distribution Planning

December 15, 2015

A1-1 This introductory comment is informational and does not specifically address the adequacy of the EIR; no further response is necessary. This comment states that EBMUD's comments made in their May 12, 2015, NOP comment letter still apply regarding water service and water conservation, but that EBMUD's comments regarding wastewater service and recycled water have been updated (as reflected in comments A1-2 and A1-3). Comments provided in EBMUD's May 12, 2015 letter are addressed in responses A1-4 through A1-8.

A1-2 The Initial Study included as Appendix B to the Draft EIR recognizes this on page 140, stating that recycled water use is a critical element of EBMUD's water supply management policies and stretches EBMUD's limited, high-quality drinking water supply, as any demand met with recycled or non-potable water reduces the demand for potable water supply.

EBMUD noted the project site falls just outside the boundaries for the recycled water project distribution pipeline extension in Emeryville along Shellmound Street and Christie Avenue. As recommended by EBMUD, the City of Emeryville along with its developers will continue coordination and consultation with EBMUD and consider the use of recycled water if it becomes feasible to utilize recycled water in the future.

A1-3 As discussed on page 136 of the Initial Study, Appendix B to the Draft EIR, the City initiated a Sanitary Sewer Overflow program in 2011 to remediate overflow during incidents and adopted a Sewer System Management Plan in 2012 to safely and effectively manage and operate the sewer system. Additionally, as described on page 136 of Appendix B, the City of Emeryville's General Plan states the following policies, which encapsulate the above recommended measures, and to which the project is subject:

Policy PP-P-27: The City will continue to cooperate with EBMUD, the Regional Water Quality Control Board, and other relevant agencies to adopt and implement programs and policies to further reduce inflow and infiltration (I&I) of storm water in the City's wastewater collection system and private sewer laterals during wet weather events.

Policy PP-P-28: The City will continue to require development projects to replace or upgrade as needed, sanitary sewer systems serving the development site to reduce inflow and infiltration (I&I) of stormwater in the

City's wastewater collection system and private sewer laterals during wet weather events.

Policy CSN-P-7: New commercial and industrial activities, as well as construction and demolition practices, shall be regulated to minimize discharge of pollutant and sediment concentrations into San Francisco Bay.

The project will be also be subject to the City's standard condition of approval that requires the Public Works Director confirm that the building permit submittal include detailed plans and design calculations for providing sewer service to the site, and that if an existing sanitary sewer lateral is to be reused, it shall comply with the City Sanitary Sewer Infiltration/Inflow Reduction Standards. As a condition of approval, the City will require that any existing sanitary sewer collection systems, including sewer lateral lines, be repaired or rehabilitated to reduce infiltration/inflow, and that any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent infiltration/inflow to the maximum extent feasible. Wastewater from the project would be directed to existing facilities, which would continue to comply with all provisions of the NPDES program, as enforced by the SF Bay RWQCB.

- A1-4 Water supply and infrastructure is addressed in the overview provided in the Draft EIR in Chapter V, Section A.8. Utilities and Service Systems (pages 229-231), and in further in detail in Appendix B, Section XVII, Utilities and Service Systems (pages 135-142). As noted therein, water service would be provided to the project site via existing and proposed water mains. The comment states that an extension of water mains, if required, would be at the project applicant's expense and that adequate lead-time should be allowed to complete the engineering and installation of water mains and services. This comment is noted. The City will require any proposed water mains to be installed at the expense of the project applicant and adequate lead-time be provided.
- A1-5 The site is well-characterized and potential soil and groundwater contamination are addressed in the Draft EIR in Chapter IV, Section E. Hazards and Hazardous Materials. Known soil and groundwater contamination within the project area is identified and the potential effects of the contamination on project construction and operation are assessed. A multi-part mitigation measure, HAZ-2, is recommended to ensure protection of construction workers, future residents, workers, the public, and the environment during construction and operation of the proposed project. As discussed in the Draft EIR (pages 178 and 186-187), this recommended mitigation includes the following activities, which would be prepared in accordance with hazardous waste laws and regulations and submitted to the appropriate overseeing regulatory agency (ies)—principally the Alameda County Department of Environmental Health (ACDEH)—for review:

- Conduct a Pre-Construction Subsurface Investigation;
- Update the Human Health Risk Assessment;
- Update the Conceptual Site Model;
- Update the Site Mitigation and Contingency Plan;
- Prepare and Record a modified Land Use Covenant;
- Develop a Vapor Intrusion Mitigation Plan;
- Construct Project Development and Vapor Intrusion Mitigation System; and
- Prepare As-Built Vapor Intrusion Mitigation System Plans

This information would be available and provided to EBMUD and others for their use and review prior to working at the project site. To clarify this point, the text of Mitigation Measure HAZ-2 in the Draft EIR is revised on pages 186-187 to read:

HAZ-2b: Prior to issuance of a building permit, the project applicant shall prepare a revised Site Management and Contingency Plan for the project site based on the results of the Pre-Construction Subsurface Investigation, revised Human Health Risk Assessment, and revised Conceptual Site Model. The revised Site Management and Contingency Plan shall summarize existing and new groundwater, soil, and soil gas data for the site, identify safety and training requirements for construction workers, establish procedures for assessing and managing contaminated soil and groundwater that could be encountered during construction activities (e.g., grading and excavation), and identify mitigation and contingency measures to be implemented post-construction. The revised Site Management and Contingency Plan shall be submitted to ACDEH for its review and approval in accordance with applicable law. The approved Site Management and Contingency Plan shall be submitted to the City prior to the issuance of a building permit. The approved Site Management and Contingency Plan shall also be provided to agencies and contractors who would direct others or assign their personnel to construct infrastructure on the project site in areas subject to the requirements of the Plan.

HAZ-2c: Prior to issuance of a building permit, the project applicant shall coordinate with ACDEH to identify and complete any additional environmental activities required to implement the approved Site Management and Contingency Plan and obtain case closure for the project site. Additional environmental activities may include, but are not limited to, designing a vapor intrusion mitigation system and recording a modified Land Use Covenant at the Alameda County Recorder's Office for the project site that describes long-term land use restrictions and continuing obligations (e.g., maintenance of the vapor intrusion mitigation system). All additional environmental activities shall be reviewed and approved by ACDEH. Documentation of these environmental activities shall also be

provided to agencies and contractors who would direct others or assign their personnel to construct infrastructure on the project site in areas subject to the requirements of the Plan.

- A1-6 This comment has been revised by EBMUD. The revised comment is included as comment A1-2. See response A1-2.
- A1-7 This comment has been revised by EBMUD. The revised comment is included as comment A1-2. See response A1-3.
- A1-8 The City concurs with the comment and, as a condition of approval, will require the applicant to comply with Article 9-4.54 of the Municipal Code of the City of Emeryville, Landscape Design and Development Requirements. The project sponsor is aware that Section 31 of EBMUD's Water Service Regulations, which requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense. Compliance with Section 31 of EBMUD's Water Service Regulations will be required in the conditions of approval for the project.

DEPARTMENT OF TRANSPORTATION

DISTRICT 4

P.O. BOX 23660

OAKLAND, CA 94623-0660

PHONE (510) 286-5528

FAX (510) 286-5559

TTY 711

www.dot.ca.gov

Letter A-2

*Serious Drought.
Help save water!*

December 15, 2015

ALAVAR024A
SCH# 2014062022

Ms. Miroo Desai
Planning Division
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

6701 Shellmound Street Project – Draft Environmental Impact Report

Dear Ms. Desai:

Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. The proposed infill project will demolish the site's existing office and warehouse buildings to construct a single, seven-story building with approximately 211 residential units and 264 parking spaces. The project site is generally bounded by Interstate (I-) 80 to the west and the I-80/State Route 13 (Ashby Avenue)/Shellmound Street on- and off- ramps to the north. Our comments seek to promote the State's smart mobility goals that support a vibrant economy and build active communities rather than sprawl. We have reviewed the Draft Environmental Impact Report and have the following comments to offer. Please also refer to our previous letters on the project dated February 17, 2015, and May 20, 2015.

Mitigation Responsibility

As the lead agency, the City of Emeryville (City) is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures.

Impacts to State Facilities

As noted in our previous letters on the project, please address any significant impacts to westbound I-80 from trips generated by the proposed project including when traffic enters and exits the project site. Potential safety issues for all road users should be identified and fully mitigated.

Please clarify the Existing Plus Project turning volumes at the I-80 On Ramp/Shellmound Street intersection. The provided Capacity Analysis and Intersection Turning Movement Volumes at this intersection do not concur.

Ms. Miroo Desai, City of Emeryville
December 15, 2015
Page 2

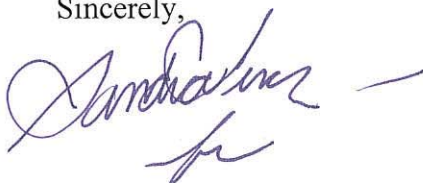
Encroachment Permit

Please be advised that any work or traffic control that encroaches onto the State right-of-way (ROW) requires an encroachment permit that is issued by Caltrans. Caltrans will not issue a permit until our concerns are adequately addressed and we strongly recommend that the City work with both the applicant and Caltrans to ensure that our concerns are resolved during the environmental process. Where construction-related traffic restrictions and detours affect State highways, a Transportation Management Plan or construction Traffic Impact Study may be required. Traffic-related mitigation measures should be incorporated into the construction plans prior to the encroachment permit process. To apply, a completed encroachment permit application, environmental documentation, and five (5) sets of plans clearly indicating State ROW must be submitted to the following address: David Salladay, District Office Chief, Office of Permits, California Department of Transportation, District 4, P.O. Box 23660, Oakland, CA 94623-0660. See the following website for more information:
<http://www.dot.ca.gov/hq/traffops/developserv/permits>.

5

Should you have any questions regarding this letter or require additional information, please contact Sherie George at (510) 286-5535 or by email at sherie.george@dot.ca.gov.

Sincerely,



PATRICIA MAURICE
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

LETTER A2

California State Transportation Agency (CALTRANS)

Patricia Maurice, District Branch Chief, Local Development – Intergovernmental Review

December 15, 2015

- A2-3 The proposed project is expected to increase peak-hour traffic volumes on Interstate 80 by less than 10 vehicles in either the westbound or eastbound direction. Additionally, the project is not expected to generate more than 100 net-new weekday peak hour trips, and as such, no assessment of the project's effect on the regional roadway system is required. Therefore, the project's impact to westbound I-80 is considered less-than-significant and no mitigation was identified.

Vehicular access to the site would be provided from a driveway on Shellmound Street between 67th and 66th Streets, connecting to the parking garage and loading zone. Emergency vehicle access would also be provided north of 67th Street, accessing a fire/ access lane that encircles the site and also connects to the main driveway. It is expected that the main driveway would allow for all turning movements to and from Shellmound Street.

The provision of an exclusive left-turn pocket from Shellmound Street to the project driveway was reviewed, as detailed in the Draft EIR starting on Page 76. Based on the roadway constraints and considerations of all models of travel, an exclusive left-turn lane into the site is not warranted nor recommended.

As detailed in the Draft EIR, the project would also increase the potential for pedestrian activity across Shellmound Street and the at-grade railroad crossing at 67th Street. There are currently no pedestrian accommodations across Shellmound Street or the railroad crossing at 67th Street. Therefore, the Draft EIR identifies recommendation Trans-C, described on page 88, to install a high visibility crosswalk with advance signage across the south approach of Shellmound Street at 67th Street and to provide an ADA compliant pedestrian crossing of the railroad tracks, similar to 65th Street.

- A2-4 Intersection 1 is the intersection of Shellmound Street at Potter Street, where access to eastbound I-80 is provided. The analysis conducted at this intersection indicates that the proposed project would add less than 10 peak hour trips to eastbound Interstate 80 and no additional analysis was conducted. Traffic volumes presented on Figure IV.A-6 correspond to the traffic volumes shown on the level of service output for the Existing plus Project condition.
- A2-5 The project does not propose any improvements within the Caltrans right-of-way, nor does it expect to result in detours that would affect the interstate highway

system. Therefore, the project would not require an encroachment permit from Caltrans.

B. GROUPS AND ORGANIZATIONS



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December 10, 2015

VIA ELECTRONIC MAIL ONLY

Brad Gunkel, Chairperson
City of Emeryville Planning Commission
c/o Miroo Desai, AICP
Senior Planner
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Email: mdesai@ci.emeryville.ca.us

**Re: Comment re 6701 Shellmound Street Project (UPDR14-003)
December 10, 2015 Meeting, Agenda Items VI.B. and VII.A**

Dear Chairperson Gunkel and Planning Commissioners:

On behalf of our client Pham Radio Communications LLC, licensee of radio station KVTO, we write regarding the proposed project at 6701 Shellmound Street in the City of Emeryville being considered at tonight's meeting for comments regarding the Draft Environmental Impact Report for the Project, and in a Study Session.¹

The 81-foot tall proposed development is approximately 500 feet from the shared broadcast antenna of AM Radio Stations KVTO and KEAR. Radio transmissions have been made from this site since 1936 without causing any hazard to owners and users of neighboring property. To avoid any future conflicts, the project applicant (and its successors) must take all necessary steps to protect future residents from electronic interference so that the radio station(s) may continue functioning at their normal operating power and geographic coverage. Because of the close proximity of the building site to the radio antenna and the proposed size of the new building, relatively high electromagnetic fields are predicted to be present at the building site that could potentially result in safety and interference issues for workers during the construction of the building and for residents of the building once the building is occupied.

In addition, if cranes or other large construction equipment are to be used in the construction of the proposed residential building, this equipment, and building being constructed, could materially impact the KVTO and KEAR omnidirectional radiation patterns, with the potential to adversely impact listenership.

¹ This comment is submitted in connection with both Agenda Items VI.B. and VII.A. Additional comment letters may be provided in the future.

When electromagnetic fields in the frequency bands existing in this location are incident on tall conducting structures, such as a construction crane or metal building structural members or pipes, currents and voltages are induced onto these structures. If the magnitude of the incident field is sufficiently high, the open-circuit voltage that can develop between the energized structure and ground may result in an arc when a person comes into contact with the structure. If the voltage is high enough the arc can result in a localized RF burn at the point of contact. Even if the RF burn is not serious on its own, a startle reaction to the arc can potentially result in an injury. In addition to potential injury from RF burns and startle reaction, the RF current that is induced on a structure can flow through a person coming into contact with the energized structure potentially causing localized heating of body tissues. (This is known as “contact currents”.)

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We note that pursuant to the materials included with the staff report for the study session, the proposed building features substantial metallic elements including deck railings and cladding (exterior metal panels).

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We previously requested that the EIR should analyze the impacts of the proposed project on the health and safety of workers and potential residents from interaction between the proposed building and construction equipment with the electromagnetic fields present at the site. While there is some limited discussion regarding construction workers, and one proposed mitigation measure (HAZ-1, DEIR p. 183-184), the discussion regarding potential residents is minimal and does not appear to take into the account the presence of significant metallic elements of the building’s design and how they might interact with the existing electromagnetic fields. The study relied on in the draft EIR (see e.g., DEIR at p. 183) was done in 2005, i.e., 10 years ago, for a different version of the project and must be updated to address the present project being proposed, including the metallic elements. Moreover, the mitigation measure impermissibly defers mitigation. It states that an “Occupational RF Exposure Guide” “shall be developed and implemented” but that there would be no public review of this guide nor is it clear whether the elements proposed to be included in the Occupational RF Exposure Guide will be effective in reducing the potential impact to less than significant levels. Moreover, there is not discussion of whether the building materials that are proposed would create an RF shock hazard to residents and users of the development.

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The EIR does not adequately analyze the impact of the building materials and construction equipment on the existing signal to KVTO and KEAR, as well as with electronic equipment that will be present in the completed project or may become available in the future. The study relied on in the draft EIR must be updated to address the present project being proposed, including the metallic elements.

10

The magnitudes of the electromagnetic fields that are predicted to be present at the proposed residential building site and within the building are sufficient to cause interference and/or malfunction to communications, monitoring, and control equipment, as well as computers and computer peripheral equipment, and control electronics used to operate cranes and other large construction equipment.

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The EIR should analyze potential radio frequency ("RF") safety and interference issues of the redesigned project so that mitigation measures may be incorporated into the design and construction processes to ensure both the safety of workers and residents, and to reduce the likelihood of interference to communications, monitoring, medical, computer and control equipment. In addition, suggested mitigation measures should be included to reduce the impact that large construction equipment may have on the radiation patterns of KVTO and KEAR. The project applicant must be required to take all steps necessary (including, but not limited to the installation of shielding) in the design and construction of the building to prevent KVTO/KEAR from having to reduce or in any way change its signal output.

12

A letter from Jaime Arbona, President of In-Language Radio and consultant to KVTO describing the critical public service provided by KVTO and relied on by its listeners is attached.

13

Very truly yours,

WENDEL, ROSEN, BLACK & DEAN LLP



Mark Epstein

Attachment

cc: Jaime Arbona
Paul Marks, KVTO



May 19, 2015

Planning Department
City of Emeryville,
1333 Park Avenue
Emeryville, CA 94608-3517

Re: 6701 Shellmound: Anton Development Planned Project

KVTO-AM 1400 is the Bay Area's preeminent Chinese-language radio station. Established in 1995, the station was the first, and remains the *only*, source of local news, information and entertainment 24 hours a day, seven days a week to the Bay's Chinese communities. KVTO's weekday programming is of particular importance to the community as it is produced in conjunction with the Bay Area's leading Chinese-language newspaper, providing up-to-the-minute national, regional and local news, weather and community information. Just as importantly, KVTO is an integral part of the Federal Emergency Alert System for the Chinese communities of the Bay Area, broadcasting public emergency alerts passed to it by KQED-FM 88.5 and KCBS-AM 740.

The Bay Area's Chinese population represents some 540,000 persons (2011 Census Bureau ACS figures) distributed over the counties of San Francisco, Alameda, San Mateo, Marin and Santa Clara Counties. By way of illustration, this number exceeds by almost 25% the entire population of the City of Oakland (406,253 per 2013 US Census).

According to the engineering report previously commissioned by the City of Emeryville, Anton Development's planned project will cause KVTO to suffer interference to its signal into Santa Clara County. It must be noted that Santa Clara County alone represents a Chinese population (in 2011) of some 148,995 persons, some 27% of the Chinese population of the Bay Area. To many of these people, KVTO remains the *only* daily source of local news and information. These linguistically-isolated listeners already put up with considerable signal interference in order to listen to KVTO, as the South Bay approaches the usable limits of the station's 1,000 watt signal. Any additional signal interference whatsoever from the proposed Anton Development project, aside from the negative impact on KVTO's revenue, may completely preclude South Bay listeners from being able to hear important news and information, including Emergency Alerts.

For further information, please contact the undersigned.

A handwritten signature in black ink, reading 'Jaime Arbona'.

Jaime Arbona
President, In-Language Radio
Consultant to KVTO

LETTER B1

Wendel, Rosen, Black & Dean LLP

Mark Epstein

December 10, 2015

- B1-1 This introductory comment is informational and does not specifically address the adequacy of the EIR; no further response is necessary.
- B1-2 These introductory concerns are expressed in greater detail in subsequent portions of this comment letter, and thus are responded to in detail in response to comment B1-4.
- B1-3 The CEQA Guidelines do not address the effects of development projects on transmission signals from proximate radio antennae, and the City of Emeryville does not have regulations in its General Plan or Planning Code, or adopted significance thresholds, that regulate development in relation to its potential effect on radio transmission signals. This comment therefore does not present an issue that is regulated by the City or per CEQA, and therefore does not address the adequacy of the Draft EIR. However, as noted in the Draft EIR, the proposed project could potentially affect transmission patterns due to the proximity of the AM antennas to the proposed development, and analysis addressing this was included in the Draft EIR, as an informational item independent of the CEQA analysis in Section V.C., Non-CEQA Environmental Topics.

A study was prepared by Hatfield & Dawson Consulting Electrical Engineers on behalf of the City to explore the effect of the proposed project on the operation of the antenna of Medium Wave (AM - Amplitude Modulated) radio stations KEAR & KVTO, located approximately 500 feet north of the project site. This study was included Appendix F to the Draft EIR, and the results of the study were discussed in the Draft EIR in Section V.C., Non-CEQA Environmental Topics, as mentioned above, as well as in the Initial Study included as Appendix B to the Draft EIR.

The analysis found that the proposed project will have no discernible impact on the operations of KEAR and KVTO. When the worst case (zero Ohm loss) effects of the building are included in a model of the antenna, the pattern distortion in KEAR and KVTO omni-directional antenna pattern show a variance for KEAR of +0.4 dB and -0.4 dB and for KVTO this variance is +0.7 dB and -1.0 dB. These variances are well within the ± 2 dB allowed by the Federal Communications Commission (FCC) per §1.30002 Tower construction or modification near AM stations of MM Docket No. 93-177 adopted in 2009. It is important to note that this is a "worst case" zero loss analysis, and that the effect of finite ground conductivity and I²R losses in the building structure will reduce these values substantially. The proposed project

would therefore have no discernible impact on the operations of KEAR and KVTO over time.

The study did not look specifically at the types of construction equipment (e.g., cranes) that would be involved in construction of the proposed project; however, given the relatively short duration of the presence of this equipment, any changes to antenna patterns caused by construction would be similarly short-term and considered less than significant.

- B1-4 Based on third-party review of the proposed project and the conditions at the nearby AM radio stations by a City-retained expert in electromagnetic (EM) and radio frequency (RF) fields, this potential scenario of an arc occurring and injuring a person is plausible¹ and therefore considered a significant impact. The Draft EIR identified the potential impact to construction workers as significant and required mitigation (starting on page 183). In response to the comment, Mitigation Measure HAZ-1 is revised as follows to more completely address construction period impacts and to address impacts during the operation period:

Mitigation Measure HAZ-1a: **Implement a Construction-period RF Safety Program.** An Occupational RF Exposure Guide shall be developed for the proposed project and implemented during project construction activities. The Occupational RF Exposure Guide shall be prepared by a qualified licensed professional electrical engineer and submitted to the City for review and approval prior to the start of construction activities. The Occupational RF Exposure Guide shall ~~include, but not be limited to, the following elements:~~

- Provide training of workers and supervisors to ensure that workers do not become the link between ground and ungrounded, potentially energized equipment and/or loads. The training would be conducted by a qualified professional and focus on practical methods of handling building materials to prevent construction worker injury. The frequency and focus of training shall be specified in the Occupational RF Exposure Guide. The qualified professional shall provide to the City training summaries and sign-in sheets demonstrating that workers have been adequately trained.
- Require the use of non-conductive cable or hooks for cranes utilized at the site.

¹ See Appendix A to this Response to Comments Document, which includes a letter from Hammett & Edison, Inc., entitled *Development at 6701 Shellmound Street, Emeryville*, and dated February 8, 2016.

- Require ground straps at the working end of all concrete booms utilized at the site.
- Require that protective, non-conductive gloves (such as lineman's gloves), protective glasses, and boots be utilized by construction workers when working with cranes, boom trucks, pile drivers, or any equipment of sufficient size to present an RF shock hazard.
- Require that all steel elements being raised by a crane be grounded to the building structure prior to being contacted and placed by construction workers.
- Require developer to use crane of minimum height possible to perform site construction work.
- Require crane boom to be lowered when not in use.
- Require daily testing of crane at beginning of work day to ensure on-board control electronics are functioning properly.

Mitigation Measure HAZ-1b: Implement an Operation-period RF Safety Program. To ensure that the elements and components of the completed building do not become energized by the RF fields, potentially causing injury to building occupants and/or damage to environmental and safety systems (e.g., elevators, fire alarms, computer systems) the building design shall avoid this potential hazard by installing shielding materials in or on the outer walls of the building; and by considering 1) reducing the length or height of conducting materials; 2) preventing access to such conducting structures and material; 3) the use of non-conductive couplings at intervals in long conduit runs; 4) installing power wiring and low voltage wiring in metal conduit and low voltage running cables and AC wiring into the building through underground conduits; and 5) grounding of all conduits and other elements at regular intervals. Prior to approval of building permits, all structural and building system designs shall be reviewed by a qualified electrical/RF professional to ensure that the hazard associated with RF fields is addressed.

Implementation of Mitigation Measure HAZ-1a and HAZ-1b would mitigate potential RF shock hazards during project construction to a less-than-significant level (LTS).

- B1-5 The potential for metallic building elements, including deck railings and exterior cladding, to contribute to RF hazards would be addressed by modified Mitigation Measure HAZ-1a and HAZ-1b as described in response to comment B1-4.

- B1-6 The potential operation period RF impacts would be addressed by modified Mitigation Measure HAZ-1b as described in response to comment B1-4. In addition, Mitigation Measure HAZ-1a has been modified (see response to comment B1-4) to include additional training requirements and reporting related to the construction period RF hazards. Implementation of Mitigation Measures HAZ-1a and HAZ-1b would reduce the potential impacts related to RF to a less-than-significant level.
- B1-7 In 2016, the City retained Hammett & Edison, Inc. (the preparers of the 2005 study), to address public comment on this specific project to supplement their 2005 report, which looked at the effect of a potential project on the project site for a range of building heights rather than on specific proposed project. The report is included as Appendix A to this Response to Comments Document.
- B1-8 Please refer to response to comment B1-6 regarding the effectiveness of Mitigation Measure HAZ-1.
- B1-9 Please refer to response to comment B1-6 regarding RF hazards during the operation period.
- B1-10 Please refer to response to comment B1-3 regarding the potential impact of building materials and construction equipment on the existing KVTO and KEAR signals.
- B1-11 Please refer to response to comment B1-4 regarding the potential effect of EM on building systems.
- B1-12 Please refer to response to comment B1-3 and B1-4 regarding the potential for the proposed project to interfere with the AM signal and potential construction and operation safety hazards.
- B1-13 The concerns raised in this comment regarding potential signal interference are noted. As described in response to comment B1-3, the proposed project would have no discernible impact on the operations, including signal strength and direction, of KEAR and KVTO. As a result, the project would not cause significant interference to the station's signal in Santa Clara County.



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December 21, 2015

VIA ELECTRONIC MAIL ONLY

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Email: mdesai@ci.emeryville.ca.us

**Re: Comment re 6701 Shellmound Street Project (UPDR14-003)
December 10, 2015 Meeting, Agenda Items VI.B. and VII.A**

Dear Ms. Desai:

On behalf of our client Pham Radio Communications LLC, licensee of radio station KVTO, we write regarding the proposed project at 6701 Shellmound Street in the City of Emeryville (the "Project") and the Draft Environmental Impact Report for the Project. This comment letter will serve as an addendum to our letter dated December 10, 2015, submitted to the City's Planning Commission. That December 10, 2015 letter, and its attachment, is incorporated herein by this reference.

1

Attached to this letter is a 2015 report by Carl T. Jones regarding the Project and raising issues that should be addressed in the EIR. As noted in our earlier letter, and in the attached report, to avoid any future conflicts, the project applicant (and its successors) must take all necessary steps to protect workers and future residents from electronic interference so that the radio station(s) may continue functioning at their normal operating power and geographic coverage. Because of the close proximity of the building site to the radio antenna and the proposed size of the new building, relatively high electromagnetic fields are predicted to be present at the building site that could potentially result in safety and interference issues for workers during the construction of the building and for residents of the building once the building is occupied.

2

In addition, if cranes or other large construction equipment are to be used in the construction of the proposed residential building, this equipment, and building being constructed, could materially impact the KVTO and KEAR omnidirectional radiation patterns, with the potential to adversely impact listenership.

3

We previously requested that the EIR should analyze the impacts of the proposed project on the health and safety of workers and potential residents from interaction between the proposed building and construction equipment with the electromagnetic fields present at the site. The recent California Supreme Court decision in *CBIA v. BAAQMD* issued last week held that where a project may exacerbate existing environmental conditions, the CEQA document must consider the impacts of the project on such conditions and on future users. The EIR must include such an analysis.

4

Very truly yours,

WENDEL, ROSEN, BLACK & DEAN LLP



Mark Epstein

Attachment

cc: Jaime Arbona
Paul Marks, KVTO



**Potential RF Safety, Interference and Pattern Issues
Proposed Residential Building
6701 Shellmound Street, Emeryville, CA
March, 2015**

1. Introduction

Anton Development Company, LLC has proposed construction of a seven-story residential building at 6701 Shellmound Street in the City of Emeryville, California. The proposed building location is approximately 500 feet from the shared broadcast antenna of AM Radio Stations KVTO and KEAR. Because of the close proximity of the building site to the radio antenna, relatively high electromagnetic fields are predicted to be present at the site that could potentially result in safety and interference issues for workers during the construction of the building and for residents of the building once the building is occupied. Further, if cranes or other large construction equipment are to be used in the construction of the residential building, these structures could materially impact the KVTO and KEAR omnidirectional radiation patterns, potentially adversely impacting listenership.

The primary purpose of this report is to identify and bring awareness to the project of the potential Radio Frequency ("RF") safety and interference issues so that mitigation measures may be incorporated into the design and construction processes to ensure the safety of workers and residents and to reduce the likelihood of interference to communications, monitoring, computer and control equipment. In addition, suggested mitigation measures are proposed to reduce the impact that large construction equipment may have on the radiation patterns of KVTO and KEAR. Carl T. Jones Corporation has been retained by Pham Radio Communication LLC, licensee of Radio station KVTO, to perform a preliminary evaluation of the potential safety, interference, and pattern issues associated with the construction of the proposed residential building and to prepare this report of findings.

The suggestions and recommendations contained herein are based on the currently available information about the proposed construction project; information that is limited and incomplete. It is the responsibility of the developer and builder of the project, as approved by the City of Emeryville, to address any issues of health and safety and/or nuisance that may be posed by the existing surroundings, including the KVTO and KEAR radio antenna, and the impacts that the surroundings may have on the proposed building and its residents.

8

2. Reasons for Concern over Electromagnetic Fields and Regulatory Background with Regard to Human Exposure

The magnitudes of the ambient RF fields at the site of the proposed residential building from the combined signals of radio stations KVTO and KEAR are predicted to be less than 0.1% of the Maximum Permissible Exposure Limit ("MPE Limit") specified by the Federal Communications Commission ("FCC") for whole body exposure to electromagnetic fields in the AM frequency band. Once the building is constructed however, tall metal structures within the building can receive energy from the RF fields and reradiate a portion of that energy resulting in localized fields that could be 10 or even 100 times the ambient field that was present in the absence of the building. This phenomenon was discussed in the Report prepared by Hammett and Edison in regard to a previously proposed building on the proposed site.¹ However, these predicted fields are located within only a few inches of the energized structure and therefore pose no issue with regard to whole body exposure. Therefore whole body exposure for either workers or the general public is not of concern at this site. However, when electromagnetic fields in this frequency band are incident on tall conducting structures, such as a construction crane or metal building structural members or pipes, currents and voltages are induced onto these structures. If the magnitude of the incident field is sufficiently high, the open-circuit voltage that can develop between the energized

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¹ Hammett and Edison, Inc., 2005. Trammell Crow – Proposed Emeryville Residential Development. August 15.

structure and ground may result in an arc when a person comes into contact with the structure. If the voltage is high enough the arc can result in a localized RF burn at the point of contact. Even if the RF burn is not serious on its own, a startle reaction to the arc can potentially result in an injury. In addition to potential injury from RF burns and startle reaction, the RF current that is induced on a structure can flow through a person coming into contact with the energized structure potentially causing localized heating of body tissues. This current is referred to as contact current.

The FCC places regulations on broadcast station licensees with regard to whole body exposure to electromagnetic fields, but does not regulate station licensees with regard to RF burns or contact currents resulting from induced voltages and currents on tall conducting structures. In order to evaluate the potential for RF burns or excessive contact currents, the Institute of Electrical and Electronic Engineers ("IEEE") has developed a voluntary standard ("the IEEE Safety Standard") with the purpose of protecting workers and the general public from established adverse health effects associated with exposure to electromagnetic fields in the frequency band from 3 kilohertz (kHz) to 300 Gigahertz (GHz) which is inclusive of the AM frequency band.²

9 cont.

The IEEE Safety Standard contains MPE Limits with regard to whole body exposure and with regard to contact currents. In addition, the IEEE Safety Standard establishes an open-circuit voltage threshold for the onset of RF burns.³ Two tiers of limits are established in the standard. The upper tier, which is protective of all with a margin of safety built into the limit, applies to exposure of individuals in a controlled environment. A controlled environment is one where individuals entering the environment are subject to control and accountability as established by an RF Safety Program for the purpose of protection from RF exposure hazards. The upper tier limits would be the limits that would apply to workers constructing the residential building,

² IEEE Standard C95.1-2005, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

³ The IEEE Safety Standard also establishes MPE limits for induced currents; however, the predicted magnitude of the fields present at the building site are not believed to be sufficient to result in exceedance of the induced current MPE Limit and therefore induced currents are not addressed in this report.

provided an RF Safety Program is in place and the workers are made aware of and trained with regard to RF exposure. The lower tier limits, which are generally more restricted than upper tier limits, apply to uncontrolled environments where individuals entering such an environment are unaware of potential RF hazards. The lower tier limits would apply to the general public which, in this case, would be residents and guests at the building. The lower tier limits incorporate an additional margin of safety over and above the margin of safety applied to the upper tier limits.

The IEEE Safety Standard upper tier contact current limit (worker limit) for grasping contact is 100 milliamperes (mA) and for touch contact it is 50 mA. Lightly touching an energized object can result in an arc and RF burn so workers are taught to firmly grasp an object to minimize the potential for RF burns. The lower tier limit (general public limit) for touch contact is 16.7 mA. Since individuals in an uncontrolled environment would not be trained to grasp a potentially energized conducting object rather than lightly touch the object, there is no lower tier grasping contact current limit. The contact current limits are based on a 6 minute time duration; that is to say that a worker could grasp an energized object that produced a 100 mA contact current for up to 6 minutes as long as the worker did not grasp the object for the next 6 minute period. For a 200 mA contact current, the worker could remain in contact for up to 3 minutes out of every 6 minute interval without exceeding the MPE limit.

9 cont.

The IEEE Safety Standard has a suggested limit for contact voltage to protect against RF burns. The voltage limit was actually developed by the Navy and the IEEE Safety Standard states that the limit should be considered tentative until a more thorough scientific and technical basis for the limit is developed. The Navy open-circuit contact voltage limit is 140 Volts (RMS). This level of open-circuit voltage on an energized object, such as a crane hook, would be sufficient to cause an arc when a person attempts to contact the object and could result in a small RF burn at the point of contact.

In addition to the safety concerns, the magnitudes of the electromagnetic fields that are predicted to be present at the proposed residential building site and within the building are sufficient to cause interference to communications, monitoring, and control

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equipment, as well as computers and computer peripheral equipment, if not properly treated.

10 cont.

3. Potential Worker Safety Issues Associated with the Use of Cranes and Other Large Construction Equipment at the Proposed Site

As discussed in the previous section, when electromagnetic fields in the AM frequency band are incident on large conducting structures, such as a crane or pile driving equipment for example, currents and voltages are induced on the structures. Some structures are more efficient than other structures at receiving energy at AM frequencies depending on their size, configuration and orientation. A crane, for example, can be characterized as a loop antenna at AM frequencies with the loop being formed by the boom, the lift cable and the conducting earth between the end of the lift cable and the base of the boom. When a grounded person comes into contact with the crane hook, the body of the person completes the loop circuit and current is passed through the body between the hook and ground. If the voltage is high enough, an RF burn can be sustained on contact with the hook. If the current is high enough, tissue heating can occur while grasping the hook. Although it is believed that cranes represent the greatest potential for worker injury resulting from induced currents and voltages, other tall metal structures such as pile drivers may be capable of receiving sufficient energy to result in an RF burn or contact current above the IEEE MPE Limit. In addition, some loads, such as long steel beams or trusses that are elevated above ground may also be of sufficient size to result in an RF burn when a worker contacts the load even if the load is insulated from the crane hook by use of a nylon sling.

11

Several techniques are effective to minimize the potential for worker injury when working with cranes that are energized by fields in the AM frequency band. These techniques include: 1) the use of a non-conducting nylon sling between the hook and load; 2) the use of an insulated crane hook; 3) the implementation of grounding procedures prior to making contact with the hook/load; and 4) the use of work gloves whenever working with the crane hook or load.

One final point is that the control electronics used to operate cranes and other large construction equipment at the proposed site could potentially malfunction due to interference from the electromagnetic fields present at the site.

11 cont.

4. Safety Issues for Residents and Guests

The close proximity of the proposed building to the radio station's shared broadcast antenna combined with the height of the building (84 feet) may result in the potential for contact currents that exceed the lower tier (general public) MPE Limit. Keep in mind that exceedance of the limit does not equate to injury in that the limit incorporates a large margin of safety. The limit is considered by the IEEE Safety Standard as an action level where mitigation must be employed to reduce the level of potential exposure or to inhibit access to those areas where exposure above the MPE Limit might occur.

12

The types of structures and materials within the proposed building that a resident may contact that have the potential to result in contact currents above the MPE Limit include: metal structural members of a building, metal water pipes, electrical cables and conduits, elevator cables and shafts, etc. Although unlikely, there is also a small probability that the open circuit-voltage RF burn threshold could be exceeded. For these reasons, it is recommended that mitigation measures be taken in the design and construction of the residential building. These measures could include: the installation of shielding materials in the outer walls of the building, the reduction of the length/height of conducting materials, or the prevention of access to such conducting structures and materials.

5. Potential for Interference

The magnitude of the predicted electromagnetic fields on the proposed residential building property are sufficient to cause interference to communications, control, and monitoring equipment, as well as computers, computer peripheral equipment, and other electronic equipment. The United States has no standards or regulations with regard to the susceptibility of electronics equipment to electromagnetic fields; therefore, fields as

13

low as 0.5 Volts per meter (V/m) have the potential to cause interference to equipment manufactured for the US market.⁴ Since the predicted electric field at the proposed building site is approximately 5 V/m, there is a strong likelihood of interference to these types of devices. Because of the long wavelengths in the AM frequency band, systems that are interconnected with long runs of low voltage wiring are more susceptible than compact standalone electronic systems because the long wire runs act as efficient antennas in the AM frequency band. It is therefore highly recommended that some shielding be added to the building exterior walls to reduce the magnitude of the fields that would otherwise be present within the building. Even a modest amount of properly designed and properly bonded metal shielding could reduce the fields within the building to levels below 0.5 V/m and minimize the potential for interference. Other techniques may also be implemented to minimize interference such as installing power wiring and low voltage wiring in metal conduit and bringing low voltage cables and AC wiring feeds into the building through underground conduits.

13 cont.

6. Potential Temporary Impact of Construction Equipment on Radio Station Omnidirectional Radiation Patterns

A report prepared by Hatfield and Dawson Consulting Electrical Engineers (“H&D”) entitled, “Engineering Report: Analysis of Proposed Anton Development Company, LLC Housing Development on the Antenna Patterns of KEAR and KVTO”, describes a computer modeling study that was performed to evaluate the impact of a proposed seven-story residential building on the omnidirectional radiation patterns of AM Radio Stations KVTO and KEAR. The report concludes that “the proposed building will have no discernable impact on the operations of KEAR and KVTO”.

14

A review of the H&D report was performed by this office on behalf of Pham Radio, licensee of Radio Station KVTO, and concluded that, based on the information contained in the H&D report, the impact of the proposed building on the ability of Radio

⁴ Many countries around the world have susceptibility standards and regulations. For example, Europe has a 3 V/m standard for all electronic equipment.

Station KVTO to serve its target audience is predicted to be minimal. However, there may be temporary impacts during the construction of the building that may adversely impact the Radio Station. Specifically, if one or more large cranes are to be used in the construction of the residential building, the presence of the crane(s) could result in pattern distortion that is considerably greater than that shown in the H&D Report. Further, it is possible that coupling between the crane(s) and the antenna at this close distance could change the impedance of the antenna to the degree that the transmitter shuts down due to high reflected power. In the latter case, there would be complete loss of audience.

14 cont.

To minimize the potential for significant pattern distortion or an off-air occurrence, it is recommended that any cranes to be used in the construction of the residential building have the minimum possible height to perform the work. Further, during periods when the crane(s) is not in use, it is requested that the crane boom be lowered so that the impact on the station coverage is minimized.

7. Summary and Recommendations

The magnitudes of the electromagnetic fields at the proposed residential building site, while not extreme, are of sufficient magnitude to potentially result in safety issues for workers and residents and to potentially result in interference to communications, control and monitoring equipment, as well as computers and computer peripheral equipment. In addition the use of tall cranes on the site of the proposed construction could adversely impact the omnidirectional radiation pattern of KVTO.

15

Potential worker safety issues associated with electromagnetic fields at the proposed building site are primarily associated with the use of tall cranes and other large construction equipment. It is recommend that an RF Safety Plan be developed for the construction project and that mitigation procedures and the use of work gloves and non-metallic slings be employed at the site to minimize the potential for worker injury due to induced currents and voltages on cranes and other tall construction equipment.

16

Because of the height of the building and the close proximity to the station's broadcast antenna, there is some potential that exceedance of the IEEE Safety

17

Standard MPE Limit for contact currents may occur when a resident touches tall metal objects within the building. These may include metal water pipes, electrical conduits, elevator shafts, etc. Because of this, it is recommended that mitigation measures be included in the design and construction of the building that may include the installation of metal shielding in the outer walls of the building, the reduction of the length/height of conducting materials or the prevention of access to such conducting structures and materials.

17 cont.

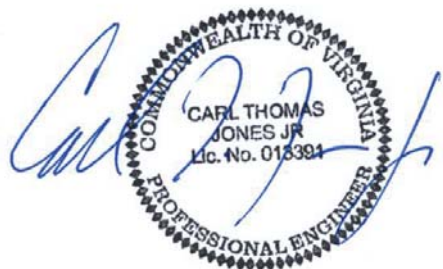
There is a strong likelihood that interference to communications, monitoring and control equipment, as well as computer and computer peripheral equipment will occur at the proposed residential building unless mitigation measures are employed. Again, it is recommended that metal shielding be added to the building exterior walls to significantly reduce magnitude of the fields within building and the corresponding likelihood of interference.

18

The use of cranes during the construction of the building may result in distortion of the KVTO pattern and temporary loss of listenership in certain portions of the station's normal coverage area. Therefore, it is requested that cranes of minimum height to perform the construction be selected and that the crane boom be lowered anytime the crane is not in use.

19

DATED: March 24, 2015



LETTER B2

Wendel, Rosen, Black & Dean LLP

Mark Epstein

December 21, 2015

- B2-1 This introductory comment is informational and does not specifically address the adequacy of the EIR; no further response is necessary.
- B2-2 Please refer to response to comments B1-3 and B1-4 regarding construction and operation period safety impacts at the project site.
- B2-3 Please refer to response to comment B1-3 regarding potential effects on listenership.
- B2-4 Please refer to response to comment B1-4 regarding impacts associated with EM fields.
- B2-5 Please refer to response to comment B1-4 regarding safety impacts related to EM fields.
- B2-6 Please refer to response to comment B1-3 regarding potential effects on listenership.
- B2-7 Please refer to response to comment B1-4 regarding potential RF safety and interference issues.
- B2-8 The Draft EIR describes the RF environment, starting on page 182, and found that the impacts from RF on construction workers was potentially significant and requires mitigation. Response to comment B1-4 expands on the nature of the impacts and enhances the Draft EIR required mitigation measures. When implemented, Mitigation measures HAZ-1a and HAZ-1b (detailed in response to comment B1-4) would reduce the impact to a less-than-significant level.
- B2-9 Implementation of Mitigation Measures HAZ-1a and HAZ-1b (detailed in response to comment B1-4) will require both construction and operation period RF Safety Programs and reduce the impact to a less-than-significant level.
- B2-10 Please refer to response to comment B1-4 regarding EM fields and potential interference with building systems.
- B2-11 Mitigation Measure HAZ-1a (detailed in response to comment B1-4) includes each of the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.

- B2-12 Mitigation Measure HAZ-1b (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-13 Please refer to response to comment B1-4 regarding EM fields and potential interference with building systems. Mitigation Measure HAZ-1b (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-14 Please refer to response to comment B1-3 regarding potential effects on listenership. Mitigation Measure HAZ-1a (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-15 The summary comment restates the previously detailed issues with EM fields at the project site, including hazards to construction workers and occupants of the completed structure (please refer to response to comment B1-4), interference with project building systems (please refer to response to comment B1-4), and interference with the radio station signals to listeners (please refer to response to comment B1-3).
- B2-16 This summary comment states that the proposed development could expose workers to safety impacts related to RF fields. Please refer to response to comment B1-4. Mitigation Measure HAZ-1a (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-17 This summary comment states that the proposed development could expose residents to safety impacts related to RF fields. Please refer to response to comment B1-4. Mitigation Measure HAZ-1b (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-18 The summary comment states that the EM fields that are predicted to be present in the project site area are sufficient to cause interference with building systems, including communications, computer, and control equipment. Please refer to response to comment B1-4. Mitigation Measure HAZ-1b (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.
- B2-19 The summary comment states that, if cranes or other large construction equipment are to be used in the construction of the proposed residential building, this equipment, and building being constructed, could materially impact the KVTO and KEAR omnidirectional radiation patterns, with the potential to adversely impact

listenership. Please refer to response to comment B1-3. Mitigation Measure HAZ-1a (detailed in response to comment B1-4) includes the measures suggested by the comment and would reduce the potential impact to a less-than-significant level.

Letter B-3

December 21, 2015

Ms. Miroo Desai
Planning Division
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Sent via email: mdesai@emeryville.org.

Re: 6701 Shellmound Street Project – Union Pacific Railroad Company Comments on Draft Environmental Impact Report

Dear Ms. Desai:

Union Pacific Railroad Company (“Union Pacific”) appreciates this opportunity to comment on the November 4, 2015 Draft Environmental Impact Report (“DEIR”) prepared by the City of Emeryville (“City”) for the 211 unit apartment building proposed for 6701 Shellmound Avenue (the “Project”).

Union Pacific owns and operates the north/south railroad line running parallel to Shellmound Street. At 67th and Shellmound, where the Project would be located, there are five sets of railroad tracks. Union Pacific operates freight trains on these lines and Amtrak and Capitol Corridor Joint Powers Authority operate passenger service. Approximately forty-five to seventy trains use these tracks each day. The area is currently low-density light industrial.

1

The Project would add over 1,000 vehicle trips per day to already congested conditions. In particular, the DEIR reports that traffic backs up along Shellmound Avenue as vehicles travel northbound past the Project location to access I-80 East. As the DEIR reports, this traffic may block access to the Project from 66th and 67th Streets as vehicles queue up to access the freeway. In the event a train approaches while vehicles are waiting for an opening in the traffic, those vehicles could be on the tracks when the crossing gates activate and unable to clear the tracks. Even with current conditions, Union Pacific believes this crossing should be closed in order to improve safety. The Project would significantly exacerbate these conditions.

2

Union Pacific has advised the California Public Utilities Commission about the need to close the 67th Street crossing. Current traffic conditions do not warrant crossings at each of these three adjacent streets, and as noted above, the increase in vehicle traffic from the Project would significantly exacerbate existing conditions. The crossing at 65th Street is the principal artery and is already signalized; 65th Street should therefore be the preferred route for traffic traveling to and from the Project.

3

The crossing at 67th Street should be closed to both automobile and pedestrian traffic. Hollis Street, which runs parallel to Shellmound Street, provides businesses located on 66th and 67th Streets adequate access to Ashby Avenue and Interstate 80. As noted in the DEIR:

There are unique conditions in the study area that contribute to worse intersection operations, for periods of time, than presented in Table IV.A-4, including at-grade rail crossing activity, and vehicle queue spillback from regional facilities, including I-80 and the Ashby Road corridor. Results of the data collection effort * * * indicates about 50 to 63 daily railroad crossings on a typical weekday with access to 67th , 66th , and 65th streets blocked for about 10 minutes during the PM peak hour.

DEIR at pp. 60-61.

4

[V]ehicle queues for turning movements to 65th, 66th or 67th streets block the ability of through traffic to proceed along Shellmound Street. When there are back-to-back trains during periods with high travel demand, vehicle queues that form from one gate closure period may not have an opportunity to clear before the next gate crossing is activated. At the Shellmound Street/65th street intersection, vehicle queues are further exacerbated by the close proximity of the Overland Street/65th street intersection.

Id. at pp. 61-62.

These conditions will only be exacerbated by the additional 1000-plus daily vehicle trips resulting from the Project. The queueing of vehicles accessing I-80 via Shellmound Street, blocking access from 66th and 67th Streets, should be addressed through Project mitigation measures, including the closure of the 67th Street crossing.

The DEIR also appears to contemplate emergency vehicles using 67th Street to access the Project. Like ordinary vehicle traffic, emergency vehicles may be delayed due to congestion on Shellmound Street. In addition, because the nearest fire station is located at 6303 Hollis Street at 63rd Street, emergency services are more likely to use 65th Street to cross the tracks to

5

Letter B-3 cont.

Shellmound Street. In the event that 65th Street is for some reason unavailable, 66th Street (with four sets of tracks instead of the five at 67th Street) provides a viable alternative if signalized.

5 cont.

The DEIR states that:

The project, as well as other developments in the area, is projected to increase traffic volumes at these crossings, potentially increasing pedestrian and bicycle conflicts with vehicles and contributing to the need to provide a multi-modal street network within the City of Emeryville to maintain mobility. Signalizing the Hollis Street/66th Street intersection could encourage additional vehicle traffic along these corridors further increasing pedestrian and bicycle conflicts with vehicles.

6

DEIR at p. 76

The basis for these conclusions about the infeasibility of 66th and Hollis Streets is not set forth in the DEIR, other than the bare allegations that vehicle queue spillback would occur and traffic might increase at the Greenway crossings. The Guidelines require that the DEIR provide the basis for these assertions.

More importantly, the DEIR fails to consider signalization or closure of the 66th Street crossing. Like 67th Street, 66th Street provides secondary access to Shellmound Street. And like 67th Street, 66th Street crosses several sets of tracks and is subject to traffic congestion on Shellmound Street that could result in vehicles being unable to clear the tracks as a train approaches. Given the close proximity of 65th Street, which is signalized, the 66th Street crossing should be closed. In the event that closure is not deemed feasible at this time, the intersection should be signalized.

7

In addition to the above, the DEIR includes a Recommendation C1 in support of establishing a quiet zone at 65th, 66th and 67th Streets, stating: "A quiet zone would cease the routine sounding of train horns by improving the safety of the at-grade crossing." Union Pacific disagrees. Union Pacific believes quiet zones compromise the safety of railroad employees, customers, and the general public. While the railroad does not endorse quiet zones, it does comply with provisions outlined in federal law. Federal regulations provide public authorities the option to maintain and/or establish quiet zones provided certain supplemental or alternative safety measures are in place and the crossing accident rate meets FRA standards. [Closing the crossings at 66th and 67th Streets would reduce horn sounding, even without a quiet zone.]

8

Letter B-3 cont.

Union Pacific appreciates this opportunity to comment on the DEIR. Please feel free to contact the undersigned if you have questions about this letter.

Regards,

UNION PACIFIC RAILROAD COMPANY

A handwritten signature in black ink, reading "Melissa B. Hagan". The signature is written in a cursive style with a long horizontal flourish at the end.

Melissa B. Hagan

cc: Wesley Lujan
Peggy J. Ygbuhay
David Pickett

LETTER B3

Union Pacific Railroad Company
Melissa B. Hagan
December 21, 2015

- B3-1 The introductory information regarding railroad lines near the site is noted.
- B3-2 Although the project is expected to generate approximately 1,000 vehicle trips on a daily basis, not all of these trips would cross the railroad tracks. Based on the project trip distribution and assignment, as detailed in the Draft EIR, increases of approximately 320 daily vehicle trips over the 67th Street crossing, 190 daily vehicle trips over the 66th Street crossing and 270 trips over the 65th Street crossing are expected. During the weekday PM peak hour, the project could increase vehicle traffic on the 67th Street crossing by approximately 24 vehicles over the hour, or less than one additional vehicle every two minutes. The PM peak hour traffic volume increases would be less on the other two crossings.

Since vehicle queues on Shellmound Street spill back along the corridor, the Highway-Rail Grade Crossing Accident/Incident Reports as generated by the Department of Transportation Federal Railroad Administration (FRA) were reviewed. Based on this review, there have not been reported incidents at the 67th Street crossing. At the 66th Street crossing, there was one reported incident in 1979 and one reported incident in 2012. The 1979 incident resulted in minor property damage. In 2012, a vehicle stalled on the tracks and was struck by a train. No injuries were reported in either incident.

At the 65th Street crossing, there was a reported incident in 2002 when a vehicle was struck by a train after driving around or through the gate arms. The driver of the vehicle was injured.

Based on a review of the reported incidents at the three at-grade crossings, existing congestion and vehicle queues do not appear to have contributed to the reported incidents at the crossings.

The planned reconstruction of the Ashby Avenue interchange is expected to minimize congestion on Interstate 80, which would reduce the occurrence of vehicle queues on Shellmound Street.

- B3-3 The California Public Utilities Commission (CPUC) provided comments on this project in their letter dated May 18, 2015. The CPUC letter did not identify existing safety concerns or suggest crossing closure. CPUC did suggest the provision of enhancements at the 65th, 66th and 67th street crossings, including additional pedestrian treatments, signage, striping, and gate enhancements. Furthermore, as noted in response to comment B3-2, while the project is expected to generate

approximately 1,000 daily vehicle trips, not all of those trips would cross the railroad tracks.

The project would be conditioned to provide an ADA compliant pedestrian crossing of the railroad tracks at the 67th Street crossing, connecting to a new pedestrian crossing of Shellmound Street. Additionally, the project would be required to pay the City of Emeryville Transportation Impact Fee (TIF), which would help fund Quiet Zone improvements to provide additional safety enhancements at all three at-grade crossings.

Although the 65th Street crossing is signalized, the three existing crossings distribute travel demand through the area, allowing for more efficient clearing of vehicle queues on Shellmound Street and on 67th, 66th and 65th streets during crossing events. Consolidating vehicle travel to the other crossings could increase the potential for residual queuing between crossing activities.

B3-4 As noted in response to comment B3-2, while the project is expected to generate approximately 1,000 daily vehicle trips, not all of those trips would cross the railroad tracks. As described in response to comment B3-3, the existing operation of the crossings does not suggest the need for closure. Closure of the 67th Street crossing to vehicle and pedestrian traffic would constrain access to land uses on the 67th Street corridor and closure of this roadway would need to be considered in the larger context of redevelopment of the area with a public participation process. Additionally, closure of the 67th Street crossing would result in more circuitous travel in the area and potentially increase vehicle miles of travel in the area.

B3-5 As noted in the comment, the closest fire station to the project is at 6303 Hollis Street, approximately half a mile from the project site. It is expected that emergency vehicles from this fire station would access the project site on Shellmound Street via 65th Street. Vehicles queued on northbound Shellmound Street are able to pull into the bicycle lane to provide passing room for emergency vehicles, if necessary.

B3-6 Results of the analysis indicate that peak hour volume signal warrants are met at the 66th Street/Hollis Street intersection in the existing condition. However, as specified in the Manual on Uniform Traffic Control Devices (MUTCD), *"The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal."*

The City has decided against installation of a traffic signal at the 66th Street/Hollis Street intersection. Signalization of the 66th Street/Hollis Street intersection could result in two closely spaced signalized intersections on Hollis Street with

- approximately 330 feet between the two intersections. Minimum spacing between signalized intersections is typically 800 feet as poor operations can occur with closely spaced signalized intersections when vehicle queues form between intersections.
- B3-7 As noted in response to comment B3-2, while the project is expected to generate approximately 1,000 daily vehicle trips, not all of those trips would cross the railroad tracks. Based on the results of the Draft EIR analysis, the 66th Street/Shellmound Street intersection operates with minimal delay for vehicles when there is no rail crossing event. Installation of a traffic signal is not warranted based on traffic volumes through the intersection. Based on Signal Warrant 9 (Intersection Near a Grade Crossing) in the MUTCD, signalization of the 66th Street/Shellmound Street intersection could be warranted due to the proximity of the intersection to the railroad crossing. However, as noted in response to comment B3-7, meeting of a warrant does not necessarily require the installation of a signal.
- B3-8 The City of Emeryville retained a consulting firm to prepare the Emeryville Railroad Quiet Zone Study, June 2, 2008.² This report concluded that a Quiet Zone could be established for all three crossings if warning devices are upgraded. The project would pay their fair share towards upgrading the crossing equipment to provide a four-quadrant gate arm system and improved treatments for pedestrians and bicyclists through payment of the TIF. A four quadrant gate-arm system would reduce the risk for a train-motor vehicle accident to a rate less-than the National Significant Risk Threshold established by the FRA. This improvement is identified in the City's Capital Improvement (CIP) and TIF but full funding has not been identified.

² City of Emeryville, 2008. Emeryville Railroad Quiet Zone Study, June 2. Accessed at <http://www.ci.emeryville.ca.us/DocumentCenter/View/8246>.

C. INDIVIDUALS

No individuals submitted comment(s) to the City of Emeryville during the public review period for the Draft EIR.

D. PUBLIC HEARING COMMENTS

A public hearing on the Draft EIR was held at the City of Emeryville Planning Commission meeting held on December 10, 2015. Comments were heard from Commissioners, Board members and from members of the public. In general, the issues that were verbally expressed at the public hearings were repeated in the written comments received, and thus the responses presented in this section refer to responses provided for the written comments in sections A, B and C of this chapter.

D1 Commissioner Moss

- Commissioner is intrigued by the radio letter and states that he has not seen anything like it in his experience.

Response: See responses to letters B1 and B2.

- Commissioner wonders if you can even have a mitigation measure for something which the FCC does not regulate.

Response: As described on pages 182 to 183 of the Draft EIR, the Federal Communications Commission (FCC) has adopted limits for continuous public exposure to EM fields from radio frequencies. The applicable FCC limits for the KFRC 610 kHz frequency are 614 volts per meter (V/m) for electric fields and 1.63 amperes per meter (A/m) for magnetic fields. The applicable limits for the KVTO 1,400 kHz frequency are 588 V/m for electric fields and 1.56 A/m for magnetic fields.³ The Draft EIR concluded that the maximum electromagnetic fields formed by the proposed project would be below the FCC exposure limits.

D2 Commissioner Bauters

- Suggests staff look into whether the reduced alternative would mitigate the radio listenership issues.

Response: Section 15126.6 of the CEQA Guidelines states that “an EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” The alternatives analysis addresses potentially significant impacts for all topic areas under CEQA. As described above in response to comment B1-3, signal interference is not a topic considered under CEQA. As a result,

³ Hammett & Edison, Inc., 2005. *Trammel Crow – Proposed Emeryville Residential Development*, August 15.

this is not specifically considered in the alternatives analysis. However, an analysis of the project's potential to affect signal strength was conducted and the analysis concludes that the project would not impact signal strength.

- Commissioner is concerned about the noise impacts on southeastern end of building. Will the proposed mitigation measures adequately mitigate noise?

Response: The noise study for the proposed project (CSDA Design Group, 2014) indicates that noise levels at the southeastern end of the building could reach up to 86 dBA Ldn, potentially exposing future occupants of the building to excessive noise. However, the noise study found that the use of sound-rated windows, balcony doors, and exterior walls would be effective in preventing interior noise levels from exceeding the 45 dBA Ldn criterion for residential spaces and the 50 dbA Leq criterion for commercial spaces. Sound-rated windows, exterior doors (such as balcony doors), and exterior walls are commonly used to control interior noise from exterior sources. All sound-rated components have sound transmission class (STC ratings). A STC rating roughly equals the decibel reduction in noise volume that a window, door, or wall can provide.⁴ The recommended STC ratings for windows, balcony doors, and exterior walls for the various portions of the building are presented in Table IV.D-11 of the Draft EIR. Windows, balcony doors, and exterior walls with STC ratings ranging of 45, 42, and 55, respectively, are recommended for the southeast portion of the building. Assuming interior noise is reduced by only 42 dBA (the estimated noise reduction from the lowest STC rated component – the balcony doors), interior noise would be reduced to approximately 44 dBA. The true reduction would be greater because the windows and exterior walls would have higher STC ratings. The study acknowledges that the calculations used to estimate these STC ratings will need to be refined as the project design progresses.

Mitigation Measure NOISE-4 of the Draft EIR explicitly states that the residential units must be designed and built so that the residential and commercial spaces criteria are not exceeded. Furthermore, the mitigation measures specifies that the project shall meet or exceed building construction techniques detailed in Table IV.D-11 of the Draft EIR, and requires that the techniques be refined based on the final building design. Although high STC-rated materials are more expensive, Mitigation Measure NOISE-4 does not provide any exception or loophole that would allow the applicant to avoid the expense associated with using high STC rated materials. Therefore, compliance with this mitigation measure will ensure that interior noise levels within the building will meet the legal criteria for acceptable interior noise levels so that future occupants

⁴ U.S. Department of Housing and Urban Development, undated. Noise Notebook, Chapter 4 Supplement, Sound Transmission Class Guidance.

have a comfortable noise environment. Furthermore, because noise levels from trains along the railroad tracks will be still perceptible to occupants of the building, Mitigation Measure NOISE-4 requires a noise disclosure statement to be provided to prospective occupants so that they can make an informed decision based on their personal sensitivity to train noise. Consequently, Mitigation Measure NOISE-4 will be effective in mitigating noise throughout the building, including the southeastern end of the building.

D3 Commissioner Kang

- Summarizes December 10, 2015 letter from the radio station for the Planning Commission.

Response: See responses to letter B1.

No public speakers provided comment at this hearing.

IV. TEXT REVISIONS

This chapter presents specific revisions to the text of the Draft EIR that are being made in response to comments, or to amplify and clarify material in the Draft EIR. Where revisions to the main text are called for, the page and paragraph are set forth, followed by the appropriate revision. Added text is indicated with double underlined text. Deletions to text in the Draft EIR are shown with strikeout. Page numbers correspond to the page numbers of the Draft EIR. The revisions to the Draft EIR derive from two sources: (1) comments raised in one or more of the comment letters received by the City of Emeryville on the Draft EIR; and (2) staff-initiated changes that correct minor inaccuracies, typographical errors or clarify material found in the Draft EIR subsequent to its publication and circulation. None of the changes or clarifications presented in this chapter significantly alters the conclusions or findings of the Draft EIR.

II SUMMARY

The Noise and Vibration and Hazards and Hazardous Materials sections of Table II-1, beginning on page 16 of the Draft EIR, are revised as shown on the following pages:

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
<u>NOISE-4</u> : The proposed project could result in the exposure of occupants of the proposed development to excessive noise.	S	<p><u>NOISE-4</u>: The project applicant shall ensure that noise levels in residential units do not exceed 45 dBA L_{dn} and that noise levels in non-residential spaces (e.g., dog spa, bike spa) do not exceed 50 dBA L_{eq} in occupied areas during any hour of operation.</p> <ul style="list-style-type: none"> ▪ In order to meet these standards, the project shall meet or exceed the special building construction techniques detailed in the CSDA Design Group (CSDA) noise and vibration study date May 13, 2014 (summarized in Table IV.D-11). These techniques include sound-rated windows, doors and exterior wall assemblies. The techniques shall be refined, as necessary, based on the final building design. ▪ Additionally, because noise levels from trains along the UPRR tracks will still be perceived by occupants of the proposed residential units, a disclosure statement shall be provided to prospective occupants that notifies them of noise from train activity. ▪ A copy of the disclosure statement and the proposed project design, including a detailed description of all necessary noise abatement measures, shall be submitted to the City of Emeryville along with the building plans and approved prior to issuance of a building permit. 	<u>LTS</u>
IV.E. HAZARDS AND HAZARDOUS MATERIALS			
<u>HAZ-1</u> : Exposure of construction workers and site occupants to routine hazardous materials and/or electric and magnetic fields could cause health and safety impacts.	S	<p><u>HAZ-1a: Implement a Construction-period RF Safety Program.</u> An Occupational RF Exposure Guide shall be developed for the proposed project and implemented during project construction activities. The Occupational RF Exposure Guide shall be prepared by a qualified licensed professional electrical engineer and submitted to the City for review and approval prior to the start of construction activities. The Occupational RF Exposure Guide shall include, but not be limited to, the following elements:</p> <ul style="list-style-type: none"> ▪ <u>Provide training of workers and supervisors to ensure that workers do not become the link between ground and ungrounded, potentially</u> 	LTS

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		<p><u>energized equipment and/or loads. The training would be conducted by a qualified professional and focus on practical methods of handling building materials to prevent construction worker injury. The frequency and focus of training shall be specified in the Occupational RF Exposure Guide. The qualified professional shall provide to the City training summaries and sign-in sheets demonstrating that workers have been adequately trained.</u></p> <ul style="list-style-type: none"> ▪ Require the use of non-conductive cable or hooks for cranes utilized at the site. ▪ Require ground straps at the working end of all concrete booms utilized at the site. ▪ Require that protective, non-conductive gloves (such as lineman's gloves), protective glasses, and boots be utilized by construction workers when working with cranes, boom trucks, pile drivers, or any equipment of sufficient size to present an RF shock hazard. ▪ Require that all steel elements being raised by a crane be grounded to the building structure prior to being contacted and placed by construction workers. ▪ <u>Require developer to use crane of minimum height possible to perform site construction work.</u> ▪ <u>Require crane boom to be lowered when not in use.</u> ▪ <u>Require daily testing of crane at beginning of work day to ensure on-board control electronics are functioning properly.</u> <p><u>HAZ-1 b: Implement an Operation-period RF Safety Program. To ensure that the elements and components of the completed building do not become energized by the RF fields, potentially causing injury to building occupants and/or damage to environmental and safety systems (e.g., elevators, fire alarms, computer systems) the building design shall avoid this potential hazard by installing shielding materials in or on the outer walls of the building; and by considering 1) reducing the length or</u></p>	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		<p><u>height of conducting materials; 2) preventing access to such conducting structures and material; 3) the use of non-conductive couplings at intervals in long conduit runs; 4) installing power wiring and low voltage wiring in metal conduit and low voltage running cables and AC wiring into the building through underground conduits; and 5) grounding of all conduits and other elements at regular intervals. Prior to approval of building permits, all structural and building system designs shall be reviewed by a qualified electrical/RF professional to ensure that the hazard associated with RF fields is addressed.</u></p> <p>Implementation of Mitigation Measure HAZ-1a and HAZ-1b would mitigate potential RF shock hazards during project construction to a less-than-significant level.</p>	
HAZ-2: Previously known, reasonably foreseeable, or accidental releases of hazardous materials could potentially cause significant impacts to the public, environment, and constructions workers and occupants on the project site.	S	<p><u>HAZ-2:</u> To ensure protection of construction workers, future residents, workers, the public, and the environment during construction and operation of the proposed project, the following four-part mitigation measure shall be implemented:</p> <p><u>HAZ-2a:</u> Prior to issuance of a building permit, the project applicant shall conduct a Pre-Construction Subsurface Investigation and prepare a revised Human Health Risk Assessment and a revised Conceptual Site Model for the project site to further characterize the extent of residual soil, groundwater, and soil gas contamination on the project site. All environmental assessment and investigation activities shall be conducted and evaluated by a licensed professional with regulatory oversight and approval from ACDEH.</p> <p><u>HAZ-2b:</u> Prior to issuance of a building permit, the project applicant shall prepare a revised Site Management and Contingency Plan for the project site based on the results of the Pre-Construction Subsurface</p>	LTS

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		<p>Investigation, revised Human Health Risk Assessment, and revised Conceptual Site Model. The revised Site Management and Contingency Plan shall summarize existing and new groundwater, soil, and soil gas data for the site, identify safety and training requirements for construction workers, establish procedures for assessing and managing contaminated soil and groundwater that could be encountered during construction activities (e.g., grading and excavation), and identify mitigation and contingency measures to be implemented post-construction. The revised Site Management and Contingency Plan shall be submitted to ACDEH for its review and approval in accordance with applicable law. The approved Site Management and Contingency Plan shall be submitted to the City prior to the issuance of a building permit. <u>The approved Site Management and Contingency Plan shall also be provided to agencies and contractors who would direct others or assign their personnel to construct infrastructure on the project site in areas subject to the requirements of the Plan.</u></p> <p><u>HAZ-2c:</u> Prior to issuance of a building permit, the project applicant shall coordinate with ACDEH to identify and complete any additional environmental activities required to implement the approved Site Management and Contingency Plan and obtain case closure for the project site. Additional environmental activities may include, but are not limited to, designing a vapor intrusion mitigation system and recording a modified Land Use Covenant at the Alameda County Recorder's Office for the project site that describes long-term land use restrictions and continuing obligations (e.g., maintenance of the vapor intrusion mitigation system). All additional environmental activities shall be reviewed and approved by ACDEH. <u>Documentation of these environmental activities shall also be provided to agencies and contractors who would direct others or assign their personnel to</u></p>	

TABLE II-1 SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, AND MITIGATION MEASURES

Impacts	Level of Significance Prior to Mitigation Measure	Mitigation Measures/SCAs	Level of Significance With SCA or Mitigation Measure
		<p><u>construct infrastructure on the project site in areas subject to the requirements of the Plan.</u></p> <p><u>HAZ-2d:</u> The City shall not allow occupancy of the project site until a case closure letter or a conditional case closure letter (or a similar document) has been issued for the project site by ACDEH, indicating that the residential occupancy of the site is approved.</p> <p>Implementation of Mitigation Measures HAZ-2a, HAZ-2b, HAZ-2C, and HAZ-2d would comply with City Policies CSN-P-7, CSN-P-38, and CSN-P-4; Section III.A.8 of the City's COAs; and Title 9, Chapter 5, Article 11 of the Emeryville Municipal Code, and would reduce the potential impacts of hazardous materials releases during construction and operation of the proposed project to a less-than-significant level.</p>	

IV.E HAZARDS AND HAZARDOUS MATERIALS

Pages 183 to 184, Mitigation Measure HAZ-1, are revised:

HAZ-1a: **Implement a Construction-period RF Safety Program.** An Occupational RF Exposure Guide shall be developed for the proposed project and implemented during project construction activities. The Occupational RF Exposure Guide shall be prepared by a qualified licensed professional electrical engineer and submitted to the City for review and approval prior to the start of construction activities. The Occupational RF Exposure Guide shall ~~include, but not be limited to, the following elements:~~

- Provide training of workers and supervisors to ensure that workers do not become the link between ground and ungrounded, potentially energized equipment and/or loads. The training would be conducted by a qualified professional and focus on practical methods of handling building materials to prevent construction worker injury. The frequency and focus of training shall be specified in the Occupational RF Exposure Guide. The qualified professional shall provide to the City training summaries and sign-in sheets demonstrating that workers have been adequately trained.
- Require the use of non-conductive cable or hooks for cranes utilized at the site.
- Require ground straps at the working end of all concrete booms utilized at the site.
- Require that protective, non-conductive gloves (such as lineman's gloves), protective glasses, and boots be utilized by construction workers when working with cranes, boom trucks, pile drivers, or any equipment of sufficient size to present an RF shock hazard.
- Require that all steel elements being raised by a crane be grounded to the building structure prior to being contacted and placed by construction workers.
- Require developer to use crane of minimum height possible to perform site construction work.
- Require crane boom to be lowered when not in use.
- Require daily testing of crane at beginning of work day to ensure on-board control electronics are functioning properly.

Mitigation Measure HAZ-1b: Implement an Operation-period RF Safety Program. To ensure that the elements and components of the completed building do not

become energized by the RF fields, potentially causing injury to building occupants and/or damage to environmental and safety systems (e.g., elevators, fire alarms, computer systems) the building design shall avoid this potential hazard by installing shielding materials in or on the outer walls of the building; and by considering 1) reducing the length or height of conducting materials; 2) preventing access to such conducting structures and material; 3) the use of non-conductive couplings at intervals in long conduit runs; 4) installing power wiring and low voltage wiring in metal conduit and low voltage running cables and AC wiring into the building through underground conduits; and 5) grounding of all conduits and other elements at regular intervals. Prior to approval of building permits, all structural and building system designs shall be reviewed by a qualified electrical/RF professional to ensure that the hazard associated with RF fields is addressed.

Implementation of Mitigation Measure HAZ-1a and HAZ-1b would mitigate potential RF shock hazards during project construction to a less-than-significant level (LTS).

Pages 186 to 187, Mitigation Measure HAZ-2, are revised:

HAZ-2b: Prior to issuance of a building permit, the project applicant shall prepare a revised Site Management and Contingency Plan for the project site based on the results of the Pre-Construction Subsurface Investigation, revised Human Health Risk Assessment, and revised Conceptual Site Model. The revised Site Management and Contingency Plan shall summarize existing and new groundwater, soil, and soil gas data for the site, identify safety and training requirements for construction workers, establish procedures for assessing and managing contaminated soil and groundwater that could be encountered during construction activities (e.g., grading and excavation), and identify mitigation and contingency measures to be implemented post-construction. The revised Site Management and Contingency Plan shall be submitted to ACDEH for its review and approval in accordance with applicable law. The approved Site Management and Contingency Plan shall be submitted to the City prior to the issuance of a building permit. The approved Site Management and Contingency Plan shall also be provided to agencies and contractors who would direct others or assign their personnel to construct infrastructure on the project site in areas subject to the requirements of the Plan.

HAZ-2c: Prior to issuance of a building permit, the project applicant shall coordinate with ACDEH to identify and complete any additional environmental activities required to implement the approved Site Management and Contingency Plan and obtain case closure for the project site. Additional environmental activities may include, but are not limited to, designing a vapor intrusion

mitigation system and recording a modified Land Use Covenant at the Alameda County Recorder's Office for the project site that describes long-term land use restrictions and continuing obligations (e.g., maintenance of the vapor intrusion mitigation system). All additional environmental activities shall be reviewed and approved by ACDEH. Documentation of these environmental activities shall also be provided to agencies and contractors who would direct others or assign their personnel to construct infrastructure on the project site in areas subject to the requirements of the Plan.

APPENDIX A

Hammett & Edison Memorandum



HAMMETT & EDISON, INC.
CONSULTING ENGINEERS
BROADCAST & WIRELESS

WILLIAM F. HAMMETT, P.E.
STANLEY SALEK, P.E.
ROBERT P. SMITH, JR.
RAJAT MATHUR, P.E.
ANDREA L. BRIGHT, P.E.
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ROBERT L. HAMMETT, P.E.
1920-2002
EDWARD EDISON, P.E.
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DANE E. ERICKSEN, P.E.
CONSULTANT

BY E-MAIL HCOX@UP-PARTNERS.COM

February 10, 2016

Ms. Hayley Cox
Urban Planning Partners, Inc.
505 17th Street, Second Floor
Oakland, California 94612

Re: Review on Behalf of the City of Emeryville
Development at 6701 Shellmound Street, Emeryville

Dear Hayley:

As you requested, I have reviewed the engineering statement of Carl T. Jones, Jr., dated March 24, 2015, and am happy to provide my professional opinion as to the sufficiency of its recommendations. You have annotated the nine-page document by numbers 5 through 19; as you requested, I will address each section in turn. Let me summarize here, however, by saying that **I find Jones' assessments to be clear and his recommendations both reasonable and effective.**

5. Jones states that high electromagnetic fields (hereafter "EMF") from the nearby AM radio stations (operating from a single tower at 610 and 1400 kHz) could "potentially result in safety and interference issues for workers during construction of the [proposed seven-story residential] building and for residents of the building once the building is occupied." This possibility certainly exists.

6. Jones also notes that, "cranes or other large construction equipment ... used in construction ... could materially impact the [stations'] omnidirectional radiation patterns, potentially adversely impacting listenership." This possibility also exists.

7. This section merely states Jones' scope of work: "perform a preliminary evaluation of the potential safety, interference, and pattern issues."

8. This section merely disclaims Jones' responsibility for problems that these issues may, in fact, pose.

9. Jones describes (referencing our 2005 study for an earlier proposal to develop the subject property) the fact that while the radio power densities are low (he states "less than 0.1%" of the FCC public, that is, over 1,000 times below), a long vertical metal element can act as a

receiving antenna and can capture significant levels of radio power, which might manifest itself as an electric arc if such a vertical element were to be grounded, such as a person might do inadvertently by touching the element. Jones describes how the pertinent IEEE standard [C95.1 in this case] sets standards limiting the grasping and contact current values. It's worth noting here that in §11, Jones provides recommendations to mitigate such possibilities.

10. Jones states that such elevated radio power levels "are sufficient to cause interference to communications, monitoring, and control equipment, as well as computers and computer peripheral equipment, if not properly treated." While Jones has not quantified the elevated levels, the issue is correctly characterized, and it's worth noting here that in §13, Jones provides recommendations to mitigate such conditions.

11. Jones describes here certain work practices that are standard in the industry for preventing high current levels in excess of the IEEE limits. Those practices include: "1) the use of a non-conducting nylon sling between the hook and load; 2) the use of an insulated crane hook; 3) the implementation of grounding procedures prior to make contact with the hook/load; and 4) the use of work gloves whenever working with the crane hook or load." He also notes the correct possibility that the control electronics for cranes or other tall equipment might be affected and even malfunction. While modern equipment should have some immunity to such an environmental condition, appropriate practices to assess this might include the daily movement of the equipment throughout their ranges of motion, prior to commencement of work.

12. Jones describes here certain design practices that are common in the industry for minimizing the potential for residents to experience high current levels in excess of the IEEE limits. Those practices include: "the installation of shielding materials in the outer walls of the building, [and] the reduction of the length/height of conducting materials, or the prevention of access to such conducting structures and material." Subject to building codes, the reductions mentioned can be accomplished, for instance, by the use of non-conductive couplings at intervals in long conduit runs.

13. Jones states that the magnitude of the incident EMF fields in the building "are sufficient to cause interference to communications, control, and monitoring equipment." He does note, however, that the building shielding mentioned in §12 should be effective at reducing the interference potential. Jones also includes other mitigation measures that are common in the industry: "installing power wiring and voltage wiring in metal conduit and bringing low voltage cables and AC wiring feeds into the building through underground conduits." Effective grounding of those conduits at regular intervals would be helpful, as well.

14. Jones states that the City's consultant, Hatfield & Dawson, has found that "the proposed building will have not discernable impact on the operations of the [radio stations]." On behalf of one of the stations, Jones agrees with that finding, stating that "the impact of the proposed building on the ability of Radio Station KVTO to serve its target audience is predicted to be minimal." I concur with those opinions. With regard to the use during construction of cranes and other tall equipment, the relatively short time that they would be in use means that their potential impact on the stations' patterns would also be of limited duration. I agree with Jones' recommendations that short cranes be used when possible and that the crane boom be lowered when idle.

Ms. Hayley Cox, page 3
February 10, 2016

15 to 19. Jones summarizes here the points made in more detail, and reviewed above, in §5 to 14, with no new information or recommendations provided.

As you also requested, I have reviewed “Section E. Hazards and Hazardous Materials” from the project EIR that you provided, specifically the text under “Impact HAZ-1” regarding mitigation of potentially significant impacts from the RF power levels due to the nearby operation of the two radio stations. I concur that an Occupational RF Exposure Guide should be established and adopted by the appropriate parties to ensure that appropriate work rules are in place for the construction workers. The five bullet points identified under “Mitigation Measure HAZ-1” are essential, and I would include a sixth, as follows:

- Provide training of workers and supervisors as required to ensure that workers do not actually themselves become the link between ground and ungrounded, potentially energized equipment and/or loads.

I do note that this Mitigation Measure does not address building design elements that might give rise to potentially unsafe conditions for tenants of the building once construction is complete, addressed by Jones in §9 discussed above. Perhaps the EIR preparer relied on the statement (page 184) that, “since steel framing would not be used for project construction, localized electromagnetic fields on the proposed project would likely be less than estimated.” In fact, such framing, depending on its design and installation, could have helped to reduce radio power levels inside the building. The vertical elements that Jones discusses are not just structural elements but specifically include conduit runs for power, control, and communications purposes. The recommendations in the discussions at §12 and 13 above should be incorporated as mitigation measures.

I trust that this review of Jones’ statement and of the EIR RF hazard section is helpful to your analysis. Please let me know if any questions arise.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Bill Hammett", with a stylized flourish at the end.

William F. Hammett, P.E.

ms

Attached: Letter from Wendel Rosen, dated December 21, 2015,
with Carl T. Jones, Jr., statement dated March 24, 2015;
comment numbering added by Urban Planning Partners



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December 21, 2015

VIA ELECTRONIC MAIL ONLY

City of Emeryville
c/o Miroo Desai, AICP
Senior Planner
City of Emeryville
1333 Park Avenue
Emeryville, CA 94608

Email: mdesai@ci.emeryville.ca.us

**Re: Comment re 6701 Shellmound Street Project (UPDR14-003)
December 10, 2015 Meeting, Agenda Items VI.B. and VII.A**

Dear Ms. Desai:

On behalf of our client Pham Radio Communications LLC, licensee of radio station KVTO, we write regarding the proposed project at 6701 Shellmound Street in the City of Emeryville (the "Project") and the Draft Environmental Impact Report for the Project. This comment letter will serve as an addendum to our letter dated December 10, 2015, submitted to the City's Planning Commission. That December 10, 2015 letter, and its attachment, is incorporated herein by this reference.

1

Attached to this letter is a 2015 report by Carl T. Jones regarding the Project and raising issues that should be addressed in the EIR. As noted in our earlier letter, and in the attached report, to avoid any future conflicts, the project applicant (and its successors) must take all necessary steps to protect workers and future residents from electronic interference so that the radio station(s) may continue functioning at their normal operating power and geographic coverage. Because of the close proximity of the building site to the radio antenna and the proposed size of the new building, relatively high electromagnetic fields are predicted to be present at the building site that could potentially result in safety and interference issues for workers during the construction of the building and for residents of the building once the building is occupied.

2

In addition, if cranes or other large construction equipment are to be used in the construction of the proposed residential building, this equipment, and building being constructed, could materially impact the KVTO and KEAR omnidirectional radiation patterns, with the potential to adversely impact listenership.

3

We previously requested that the EIR should analyze the impacts of the proposed project on the health and safety of workers and potential residents from interaction between the proposed building and construction equipment with the electromagnetic fields present at the site. The recent California Supreme Court decision in *CBIA v. BAAQMD* issued last week held that where a project may exacerbate existing environmental conditions, the CEQA document must consider the impacts of the project on such conditions and on future users. The EIR must include such an analysis.

4

Very truly yours,

WENDEL, ROSEN, BLACK & DEAN LLP



Mark Epstein

Attachment

cc: Jaime Arbona
Paul Marks, KVTO



**Potential RF Safety, Interference and Pattern Issues
Proposed Residential Building
6701 Shellmound Street, Emeryville, CA
March, 2015**

1. Introduction

Anton Development Company, LLC has proposed construction of a seven-story residential building at 6701 Shellmound Street in the City of Emeryville, California. The proposed building location is approximately 500 feet from the shared broadcast antenna of AM Radio Stations KVTO and KEAR. Because of the close proximity of the building site to the radio antenna, relatively high electromagnetic fields are predicted to be present at the site that could potentially result in safety and interference issues for workers during the construction of the building and for residents of the building once the building is occupied. Further, if cranes or other large construction equipment are to be used in the construction of the residential building, these structures could materially impact the KVTO and KEAR omnidirectional radiation patterns, potentially adversely impacting listenership.

The primary purpose of this report is to identify and bring awareness to the project of the potential Radio Frequency ("RF") safety and interference issues so that mitigation measures may be incorporated into the design and construction processes to ensure the safety of workers and residents and to reduce the likelihood of interference to communications, monitoring, computer and control equipment. In addition, suggested mitigation measures are proposed to reduce the impact that large construction equipment may have on the radiation patterns of KVTO and KEAR. Carl T. Jones Corporation has been retained by Pham Radio Communication LLC, licensee of Radio station KVTO, to perform a preliminary evaluation of the potential safety, interference, and pattern issues associated with the construction of the proposed residential building and to prepare this report of findings.

The suggestions and recommendations contained herein are based on the currently available information about the proposed construction project; information that is limited and incomplete. It is the responsibility of the developer and builder of the project, as approved by the City of Emeryville, to address any issues of health and safety and/or nuisance that may be posed by the existing surroundings, including the KVTO and KEAR radio antenna, and the impacts that the surroundings may have on the proposed building and its residents.

8

2. Reasons for Concern over Electromagnetic Fields and Regulatory Background with Regard to Human Exposure

The magnitudes of the ambient RF fields at the site of the proposed residential building from the combined signals of radio stations KVTO and KEAR are predicted to be less than 0.1% of the Maximum Permissible Exposure Limit ("MPE Limit") specified by the Federal Communications Commission ("FCC") for whole body exposure to electromagnetic fields in the AM frequency band. Once the building is constructed however, tall metal structures within the building can receive energy from the RF fields and reradiate a portion of that energy resulting in localized fields that could be 10 or even 100 times the ambient field that was present in the absence of the building. This phenomenon was discussed in the Report prepared by Hammett and Edison in regard to a previously proposed building on the proposed site.¹ However, these predicted fields are located within only a few inches of the energized structure and therefore pose no issue with regard to whole body exposure. Therefore whole body exposure for either workers or the general public is not of concern at this site. However, when electromagnetic fields in this frequency band are incident on tall conducting structures, such as a construction crane or metal building structural members or pipes, currents and voltages are induced onto these structures. If the magnitude of the incident field is sufficiently high, the open-circuit voltage that can develop between the energized

9

¹ Hammett and Edison, Inc., 2005. Trammell Crow – Proposed Emeryville Residential Development. August 15.

structure and ground may result in an arc when a person comes into contact with the structure. If the voltage is high enough the arc can result in a localized RF burn at the point of contact. Even if the RF burn is not serious on its own, a startle reaction to the arc can potentially result in an injury. In addition to potential injury from RF burns and startle reaction, the RF current that is induced on a structure can flow through a person coming into contact with the energized structure potentially causing localized heating of body tissues. This current is referred to as contact current.

The FCC places regulations on broadcast station licensees with regard to whole body exposure to electromagnetic fields, but does not regulate station licensees with regard to RF burns or contact currents resulting from induced voltages and currents on tall conducting structures. In order to evaluate the potential for RF burns or excessive contact currents, the Institute of Electrical and Electronic Engineers ("IEEE") has developed a voluntary standard ("the IEEE Safety Standard") with the purpose of protecting workers and the general public from established adverse health effects associated with exposure to electromagnetic fields in the frequency band from 3 kilohertz (kHz) to 300 Gigahertz (GHz) which is inclusive of the AM frequency band.²

9 cont.

The IEEE Safety Standard contains MPE Limits with regard to whole body exposure and with regard to contact currents. In addition, the IEEE Safety Standard establishes an open-circuit voltage threshold for the onset of RF burns.³ Two tiers of limits are established in the standard. The upper tier, which is protective of all with a margin of safety built into the limit, applies to exposure of individuals in a controlled environment. A controlled environment is one where individuals entering the environment are subject to control and accountability as established by an RF Safety Program for the purpose of protection from RF exposure hazards. The upper tier limits would be the limits that would apply to workers constructing the residential building,

² IEEE Standard C95.1-2005, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

³ The IEEE Safety Standard also establishes MPE limits for induced currents; however, the predicted magnitude of the fields present at the building site are not believed to be sufficient to result in exceedance of the induced current MPE Limit and therefore induced currents are not addressed in this report.

provided an RF Safety Program is in place and the workers are made aware of and trained with regard to RF exposure. The lower tier limits, which are generally more restricted than upper tier limits, apply to uncontrolled environments where individuals entering such an environment are unaware of potential RF hazards. The lower tier limits would apply to the general public which, in this case, would be residents and guests at the building. The lower tier limits incorporate an additional margin of safety over and above the margin of safety applied to the upper tier limits.

The IEEE Safety Standard upper tier contact current limit (worker limit) for grasping contact is 100 milliamperes (mA) and for touch contact it is 50 mA. Lightly touching an energized object can result in an arc and RF burn so workers are taught to firmly grasp an object to minimize the potential for RF burns. The lower tier limit (general public limit) for touch contact is 16.7 mA. Since individuals in an uncontrolled environment would not be trained to grasp a potentially energized conducting object rather than lightly touch the object, there is no lower tier grasping contact current limit. The contact current limits are based on a 6 minute time duration; that is to say that a worker could grasp an energized object that produced a 100 mA contact current for up to 6 minutes as long as the worker did not grasp the object for the next 6 minute period. For a 200 mA contact current, the worker could remain in contact for up to 3 minutes out of every 6 minute interval without exceeding the MPE limit.

9 cont.

The IEEE Safety Standard has a suggested limit for contact voltage to protect against RF burns. The voltage limit was actually developed by the Navy and the IEEE Safety Standard states that the limit should be considered tentative until a more thorough scientific and technical basis for the limit is developed. The Navy open-circuit contact voltage limit is 140 Volts (RMS). This level of open-circuit voltage on an energized object, such as a crane hook, would be sufficient to cause an arc when a person attempts to contact the object and could result in a small RF burn at the point of contact.

In addition to the safety concerns, the magnitudes of the electromagnetic fields that are predicted to be present at the proposed residential building site and within the building are sufficient to cause interference to communications, monitoring, and control

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equipment, as well as computers and computer peripheral equipment, if not properly treated.

10 cont.

3. Potential Worker Safety Issues Associated with the Use of Cranes and Other Large Construction Equipment at the Proposed Site

As discussed in the previous section, when electromagnetic fields in the AM frequency band are incident on large conducting structures, such as a crane or pile driving equipment for example, currents and voltages are induced on the structures. Some structures are more efficient than other structures at receiving energy at AM frequencies depending on their size, configuration and orientation. A crane, for example, can be characterized as a loop antenna at AM frequencies with the loop being formed by the boom, the lift cable and the conducting earth between the end of the lift cable and the base of the boom. When a grounded person comes into contact with the crane hook, the body of the person completes the loop circuit and current is passed through the body between the hook and ground. If the voltage is high enough, an RF burn can be sustained on contact with the hook. If the current is high enough, tissue heating can occur while grasping the hook. Although it is believed that cranes represent the greatest potential for worker injury resulting from induced currents and voltages, other tall metal structures such as pile drivers may be capable of receiving sufficient energy to result in an RF burn or contact current above the IEEE MPE Limit. In addition, some loads, such as long steel beams or trusses that are elevated above ground may also be of sufficient size to result in an RF burn when a worker contacts the load even if the load is insulated from the crane hook by use of a nylon sling.

11

Several techniques are effective to minimize the potential for worker injury when working with cranes that are energized by fields in the AM frequency band. These techniques include: 1) the use of a non-conducting nylon sling between the hook and load; 2) the use of an insulated crane hook; 3) the implementation of grounding procedures prior to making contact with the hook/load; and 4) the use of work gloves whenever working with the crane hook or load.

One final point is that the control electronics used to operate cranes and other large construction equipment at the proposed site could potentially malfunction due to interference from the electromagnetic fields present at the site.

11 cont.

4. Safety Issues for Residents and Guests

The close proximity of the proposed building to the radio station's shared broadcast antenna combined with the height of the building (84 feet) may result in the potential for contact currents that exceed the lower tier (general public) MPE Limit. Keep in mind that exceedance of the limit does not equate to injury in that the limit incorporates a large margin of safety. The limit is considered by the IEEE Safety Standard as an action level where mitigation must be employed to reduce the level of potential exposure or to inhibit access to those areas where exposure above the MPE Limit might occur.

12

The types of structures and materials within the proposed building that a resident may contact that have the potential to result in contact currents above the MPE Limit include: metal structural members of a building, metal water pipes, electrical cables and conduits, elevator cables and shafts, etc. Although unlikely, there is also a small probability that the open circuit-voltage RF burn threshold could be exceeded. For these reasons, it is recommended that mitigation measures be taken in the design and construction of the residential building. These measures could include: the installation of shielding materials in the outer walls of the building, the reduction of the length/height of conducting materials, or the prevention of access to such conducting structures and materials.

5. Potential for Interference

The magnitude of the predicted electromagnetic fields on the proposed residential building property are sufficient to cause interference to communications, control, and monitoring equipment, as well as computers, computer peripheral equipment, and other electronic equipment. The United States has no standards or regulations with regard to the susceptibility of electronics equipment to electromagnetic fields; therefore, fields as

13

low as 0.5 Volts per meter (V/m) have the potential to cause interference to equipment manufactured for the US market.⁴ Since the predicted electric field at the proposed building site is approximately 5 V/m, there is a strong likelihood of interference to these types of devices. Because of the long wavelengths in the AM frequency band, systems that are interconnected with long runs of low voltage wiring are more susceptible than compact standalone electronic systems because the long wire runs act as efficient antennas in the AM frequency band. It is therefore highly recommended that some shielding be added to the building exterior walls to reduce the magnitude of the fields that would otherwise be present within the building. Even a modest amount of properly designed and properly bonded metal shielding could reduce the fields within the building to levels below 0.5 V/m and minimize the potential for interference. Other techniques may also be implemented to minimize interference such as installing power wiring and low voltage wiring in metal conduit and bringing low voltage cables and AC wiring feeds into the building through underground conduits.

13 cont.

6. Potential Temporary Impact of Construction Equipment on Radio Station Omnidirectional Radiation Patterns

A report prepared by Hatfield and Dawson Consulting Electrical Engineers (“H&D”) entitled, “Engineering Report: Analysis of Proposed Anton Development Company, LLC Housing Development on the Antenna Patterns of KEAR and KVTO”, describes a computer modeling study that was performed to evaluate the impact of a proposed seven-story residential building on the omnidirectional radiation patterns of AM Radio Stations KVTO and KEAR. The report concludes that “the proposed building will have no discernable impact on the operations of KEAR and KVTO”.

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A review of the H&D report was performed by this office on behalf of Pham Radio, licensee of Radio Station KVTO, and concluded that, based on the information contained in the H&D report, the impact of the proposed building on the ability of Radio

⁴ Many countries around the world have susceptibility standards and regulations. For example, Europe has a 3 V/m standard for all electronic equipment.

Station KVTO to serve its target audience is predicted to be minimal. However, there may be temporary impacts during the construction of the building that may adversely impact the Radio Station. Specifically, if one or more large cranes are to be used in the construction of the residential building, the presence of the crane(s) could result in pattern distortion that is considerably greater than that shown in the H&D Report. Further, it is possible that coupling between the crane(s) and the antenna at this close distance could change the impedance of the antenna to the degree that the transmitter shuts down due to high reflected power. In the latter case, there would be complete loss of audience.

14 cont.

To minimize the potential for significant pattern distortion or an off-air occurrence, it is recommended that any cranes to be used in the construction of the residential building have the minimum possible height to perform the work. Further, during periods when the crane(s) is not in use, it is requested that the crane boom be lowered so that the impact on the station coverage is minimized.

7. Summary and Recommendations

The magnitudes of the electromagnetic fields at the proposed residential building site, while not extreme, are of sufficient magnitude to potentially result in safety issues for workers and residents and to potentially result in interference to communications, control and monitoring equipment, as well as computers and computer peripheral equipment. In addition the use of tall cranes on the site of the proposed construction could adversely impact the omnidirectional radiation pattern of KVTO.

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Potential worker safety issues associated with electromagnetic fields at the proposed building site are primarily associated with the use of tall cranes and other large construction equipment. It is recommend that an RF Safety Plan be developed for the construction project and that mitigation procedures and the use of work gloves and non-metallic slings be employed at the site to minimize the potential for worker injury due to induced currents and voltages on cranes and other tall construction equipment.

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Because of the height of the building and the close proximity to the station's broadcast antenna, there is some potential that exceedance of the IEEE Safety

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Standard MPE Limit for contact currents may occur when a resident touches tall metal objects within the building. These may include metal water pipes, electrical conduits, elevator shafts, etc. Because of this, it is recommended that mitigation measures be included in the design and construction of the building that may include the installation of metal shielding in the outer walls of the building, the reduction of the length/height of conducting materials or the prevention of access to such conducting structures and materials.

17 cont.

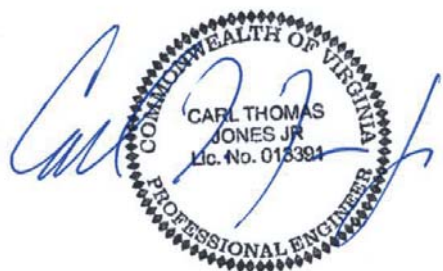
There is a strong likelihood that interference to communications, monitoring and control equipment, as well as computer and computer peripheral equipment will occur at the proposed residential building unless mitigation measures are employed. Again, it is recommended that metal shielding be added to the building exterior walls to significantly reduce magnitude of the fields within building and the corresponding likelihood of interference.

18

The use of cranes during the construction of the building may result in distortion of the KVTO pattern and temporary loss of listenership in certain portions of the station's normal coverage area. Therefore, it is requested that cranes of minimum height to perform the construction be selected and that the crane boom be lowered anytime the crane is not in use.

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