Newhope Digital Billboard
Initial Study/Mitigated Negative Declaration

Lead Agency:

City of Garden Grove
Community Development Department
11222 Acacia Parkway
Garden Grove, CA 92840

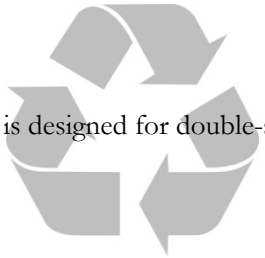
Applicant:

OUTFRONT Media
1731 Workman Street
Los Angeles, CA 90031

Consultant to the City:

MIG, Inc.
1500 Iowa Avenue, Suite 110
Riverside, CA 92507

July, 2016



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1 Introduction

The City of Garden Grove (Lead Agency) has received an application from OUTFRONT Media (Applicant) to allow the construction of a digital billboard located adjacent to State Route 22 (SR-22) in the City of Garden Grove. The billboard would be located on the north side of SR-22 at 13512 Newhope Street, within an existing commercial development located at the southeast corner of Newhope Street and Trask Avenue. The approval of the billboard construction constitutes a *project* that is subject to review under the California Environmental Quality Act (CEQA) 1970 (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Section 15000 et seq.).

This Initial Study has been prepared to assess the short-term, long-term, and cumulative environmental impacts that could result from approval of the proposed project. This report has been prepared to comply with Section 15063 of the State CEQA Guidelines, which sets forth the required contents of an Initial Study as follow:

- A description of the project, including the location of the project (see Section 2)
- Identification of the environmental setting (see Section 2.10)
- Identification of environmental effects by use of a checklist, matrix, or other methods, provided that entries on the checklist or other form are briefly explained to indicate that there is some evidence to support the entries (see Section 4)
- Discussion of ways to mitigate significant effects identified, if any (see Section 4)
- Examination of whether the project is compatible with existing zoning, plans, and other applicable land use controls (see Section 4.10)
- The name(s) of the person(s) who prepared or participated in the preparation of the Initial Study (see Section 5)

1.1 – Purpose of CEQA

The body of State law known as CEQA was enacted by the California legislature in 1970. The legislative intent of these regulations is established in Section 21000 of the California Public Resources Code, as follows:

"The Legislature finds and declares as follows:

a) The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
b) It is necessary to provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man.
c) There is a need to understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state.
d) The capacity of the environment is limited, and it is the intent of the Legislature that the government of the state takes immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent such thresholds being reached.
e) Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.
f) The interrelationship of policies and practices in the management of natural resources and waste disposal requires systematic and concerted efforts by public and private interests to enhance environmental quality and to control environmental pollution.
g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.

The Legislature further finds and declares that it is the policy of the State to:

h) Develop and maintain a high-quality environment now and in the future, and take all action necessary to protect, rehabilitate, and enhance the environmental quality of the state.
i) Take all action necessary to provide the people of this state with clean air and water, enjoyment of aesthetic, natural, scenic, and historic environmental qualities, and freedom from excessive noise.
j) Prevent the elimination of fish or wildlife species due to man's activities, insure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities and examples of the major periods of California history.
k) Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.
l) Create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations.
m) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.
n) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment."

A concise statement of legislative policy, with respect to public agency consideration of projects for some form of approval, is found in Section 21002 of the Public Resources Code, quoted below:

> The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required by this division are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which would avoid or substantially lessen such significant effects. The Legislature further finds and declares that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.

1.2 – Public Comments

The City invites comments from all agencies and individuals regarding the information contained in this Initial Study. Such comments should explain any perceived deficiencies in the assessment of impacts, identify the information that is purportedly lacking in the Initial Study or indicate where the information may be found. All comments on the Initial Study shall be submitted to:

Lee Marino, Senior Planner
City of Garden Grove
Community Development Department
11222 Acacia Parkway, Garden Grove, CA 92840
Phone: (714) 741-5302
Email: leem@ci.garden-grove.ca.us

Following a 30-day period of circulation and review of the Initial Study, all comments would be considered by the City of Garden Grove prior to adoption.

1.3 – Availability of Materials

All materials related to the preparation of this Initial Study are available for public review. To request an appointment to review these materials, please contact:

Lee Marino, Senior Planner
City of Garden Grove
Community Development Department
11222 Acacia Parkway, Garden Grove, CA 92840
Phone: (714) 741-5302

2 Project Description

2.1 – Project Title

Garden Grove Newhope LED Billboard Project

2.2 – Lead Agency Name and Address

City of Garden Grove
Community Development Department
11222 Acacia Parkway
Garden Grove, CA 92840

2.3 – Contact Person and Phone Number

Lee Marino, Senior Planner
Phone: (714) 741-5302

2.4 – Project Location

The digital billboard is proposed to be located on the north side of SR-22 at 13512 Newhope Street (Assessor's Parcel Number 100-125-02). This parcel is located at the southeast corner of Newhope Street and Trask Avenue, and is currently occupied by existing commercial development.

2.5 – Project Sponsor's Name and Address

OUTFRONT Media
1731 Workman Street
Los Angeles, CA 90031

2.6 – General Plan Land Use Designation

Heavy Commercial

2.7 – Zoning District(s)

Planned Unit Development (PUD)-104-72

2.8 – Project Description

The City of Garden Grove has received an application for approval of a site plan, variance, and related relocation agreement for the construction and operation of a new digital billboard pole sign advertising structure adjacent to and abutting SR-22 (see Exhibit 1, Regional and Vicinity Map). The project applicant proposes to remove existing non-electronic billboard sign faces and associated structures in the City at various locations (see Exhibit 4, Billboard Removal Map) and to construct and operate one new outdoor pole sign advertising structure (billboard) utilizing a two-sided digital display. The proposed new relocated billboard would be located on a parcel on the north side of SR-22 (see Exhibit 2, Site Plan) currently occupied by a law firm and auto repair shop. The sign would be approximately 75 feet tall, with a digital display area of approximately 48 feet wide by 14 feet tall (see Exhibit 3, Sign Elevation). While there are single-family residences located to the southwest of the project site on the opposite side

of SR-22, no residential uses are immediately adjacent to the site, and no changes to the existing parcel—other than construction of the billboard—are proposed.

In total, the project includes the removal of five non-electronic billboards (three structures, two of which are double-sided structures). Two of the billboards are bulletin size measuring 14 feet by 48 feet. Three of the billboards are posters measuring 12 feet by 24 feet. The three billboard structures to be relocated/removed consist of: 1) one single-sided billboard located at the northeast corner of Garden Grove Boulevard and Josephine Street (8751 Garden Grove Boulevard); 2) one double-sided billboard located at the northeast corner of Garden Grove Boulevard and Louise Street (8571 Garden Grove Boulevard); and 3) one double-sided billboard located on the west side of Harbor Boulevard adjacent to the south side of Trask Avenue and SR-22 (13551 Harbor Boulevard). All five billboards serve the Los Angeles media market. The proposed new digital billboard sign face measures 14 feet by 48 feet.

Utility connections (electrical) for the new billboard would be provided as part of the proposed project. No structures or buildings other than the sign pole and billboard facing are proposed. Construction of the sign would not require demolition, paving, or grading activities. Construction would include drilling of a hole for the sign pole, pouring of anchors, erection of the sign pole, and installation of the digital LED display atop the sign pole.

If the applicant's site plan and variance application are approved, it is anticipated that the project applicant would enter into a relocation agreement with the City of Garden Grove consistent with the terms of Garden Grove Municipal Code 9.20.110 and conditions of the site plan and variance approvals.

2.9 – Surrounding Land Uses

The construction of new billboards in the City of Garden Grove is prohibited. However, pursuant to Garden Grove Municipal Code Section 9.20.110, the owner of an existing legal non-conforming billboard located within the City may apply to relocate the billboard to another location within the City. Such relocated billboards may be converted to include digital displays if located within the "Garden Grove (22) Freeway Corridor (the area within the City comprised of the land within 300 feet of either edge of the California State Route 22 Freeway right-of-way)." The proposed relocated digital billboard would be located within 300 feet of the SR-22 right-of-way. The billboard would be located on a parcel that is developed with buildings occupied by a law firm and an auto repair shop. Existing development surrounds the project site to the west, east, south, and north. Immediately to the north of the proposed billboard location (on the opposite side of Trask Avenue) is an Elks Lodge community meeting center. To the east of the proposed project location are commercial uses located within the same development as the subject property. These commercial uses include a plumbing service, a marketing service, an auto repair shop, and a printing company. West of the proposed project site (on the opposite side of Newhope Street) is a former single-family residence now used as the headquarters for the Orange County Motorcycle Club; to the west of that is a private self-storage facility. Both areas are zoned for heavy commercial uses. Located immediately to the northwest of the site, on the opposite side if the intersection of Newhope Street and Trask Avenue, is the King of Kings Lutheran Church. This parcel is zoned for low-density residential uses; however, this parcel is designated for Civic/Institutional uses in the City's General Plan. Immediately to the south of the proposed project site is the SR-22 freeway. On the south side of the freeway, opposite the proposed project site, is a Southern California Edison substation. To the west of the substation are single-family homes (southwest of the subject property). The nearest single-family home is located approximately 308 feet to the southwest of the proposed billboard location, at the corner of Newhope Street and Jola Avenue. Table 1 (Surrounding Land Uses) lists the existing land use, General Plan designations, and zoning districts surrounding the project site.

Table 1
Surrounding Land Uses

Direction	General Plan Designation	Zoning District	Existing Land Use
Project Site	Heavy Commercial	Planned Unit Development (PUD-104-72)	Office/Commercial/Auto Repair
North	Medium-Density Residential	R3 (Multi-Family Residential)	Elks Lodge Community Center
Northwest	Civic/Institution	R-1-7 (Low-Density Residential)	Church
South	Industrial	M-1 (Limited Industrial)	SoCal Edison Substation
Southwest	Low-Density Residential	R-1-7 (Low-Density Residential)	Single-Family Homes
East	Heavy Commercial	Planned Unit Development (PUD-104-72)	Plumbing, Marketing, Auto Repaid, Printing
West	Heavy Commercial	M-1 (Limited Industrial)	Motorcycle Club Headquarters

2.10 – Environmental Setting

The proposed digital billboard would be located adjacent to the SR-22 freeway within the Garden Grove (SR-22) Freeway Corridor. Garden Grove is located in north-central Orange County and is bounded by the cities of Stanton and Seal Beach to the west, Anaheim to the north, Santa Ana and Orange to the east, and Westminster and Fountain Valley to the south. SR- 22 traverses the City and provides access to the regional freeway network, which includes Interstate 5 to the east and Interstate 405 to the west. Land uses surrounding Garden Grove are a mix of suburban residential, commercial, and industrial. Garden Grove is fully urbanized, with limited vacant land available for development. The project vicinity is completely urbanized and built out.

2.11 – Other Public Agency Whose Approval Is Required

The applicant will be required to obtain a Department of Transportation Outdoor Advertising Act Permit from the California Department of Transportation.

2.12 – Regulatory Provisions

Federal: The Federal Highway Beautification Act of 1965 (23 U.S.C.131) provides for the control of outdoor advertising, including removal of certain types of signs, along the interstate highway system. The Act is enforced by the Federal Highway Administration (FHWA). As part of its enforcement effort, the FHWA has entered into agreements regarding the Act with state departments of transportation. The agreements with California are described under State provisions, below.

In addition, the FHWA has responded to the development of signs that present changing messages, either mechanically or digitally, with an interpretation of its agreements with the states pursuant to the Highway Beautification Act. The FHWA discussed changeable message signs in a Memorandum dated July 17, 1996, concluding that a state could reasonably interpret the provisions of its agreement with the FHWA "…to allow changeable message signs."

The FHWA issued a subsequent memorandum on September 25, 2007 on the subject of off-premises changeable electronic variable message signs (CEVMS). The memorandum stated that proposed laws, regulations, and procedures that allowed changeable message signs subject to acceptable criteria would not violate the prohibition on "intermittent, flashing, or moving" signs as used in the state agreements. The 2007 memorandum identified ranges of acceptability relating to key location and operational characteristics, which have resulted in consistent basic guidelines throughout the country:

- Brightness: The sign brightness should be adjusted to respond to changes in light levels.
- Duration of Message: Duration of display is generally between 4 and 10 seconds; 8 seconds is recommended.
- Transition Time: Transition between messages is generally between 1 and 4 seconds; 1 to 2 seconds is recommended.
- Spacing: Spacing between signs should not be less than the minimum specified for other billboards, or greater if deemed required for safety.
- Locations: Location criteria are the same as for other signs unless it is determined that specific locations are inappropriate.

The memorandum also refers to other standards that have been found helpful to ensure driver safety, including a default designed to freeze the display in one still position if a malfunction occurs; a process for modifying displays and lighting levels where directed by the state departments of transportation to assure safety of the motoring public; and requirements that a display contain static messages without movement such as animation, flashing, scrolling, or intermittent or full-motion video.

State: The California Department of Transportation (Caltrans) is involved in the control of off-site displays along state highways. Such displays advertise products or services of businesses located on properties other than that which the display is located. Caltrans does not regulate on-site displays. The California Outdoor Advertising act contains a number of provisions relating to the construction and operation of billboards:

- The sign must be constructed to withstand a wind pressure of 20 pounds per square feet of exposed surface (§5401).
- No sign shall display any statements or words of an obscene, indecent, or immoral character (§5402).
- No sign shall display flashing, intermittent or moving light or lights (§5403[h]).
- Signs are restricted from areas within 300 feet of an intersection of highways or of highway and railroad right-of-ways, but a sign may be located at the point of interception, as long as a clear view is allowed for 300 feet, and no sign shall be installed that would prevent a traveler from obtaining a clear view of approaching vehicles for a distance of 500 feet along the highway (§5404).
- Message center signs may not include any illumination or message change that is in motion or appears to be in motion or that changes or exposes a message for less than four seconds. No message center sign may be located within 500 feet of an existing billboard, or 1,000 feet of another message center display, on the same side of the highway (§5405).
- No advertising display may be placed or maintained on property adjacent to a section of a freeway that has been landscaped if the advertising display is designed to be viewed primarily by persons traveling on the main–traveled way of the landscaped freeway (§ 5440).

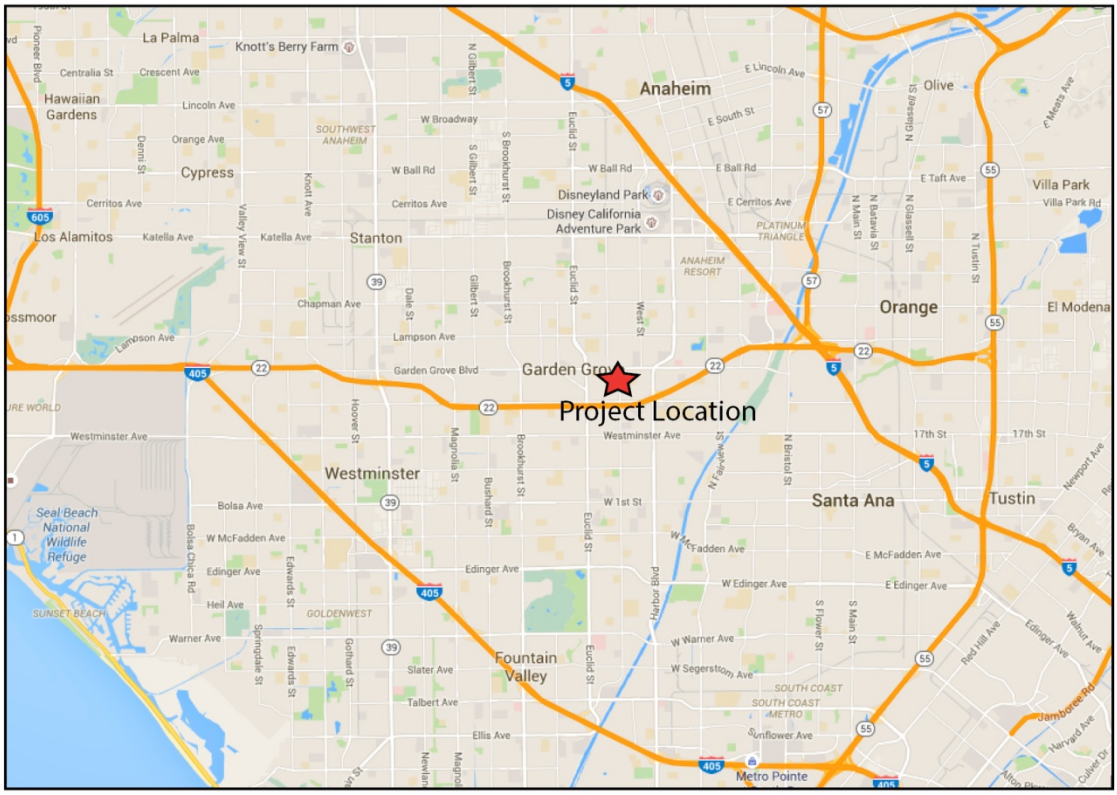
Some freeways are classified as "landscaped freeways." A landscaped freeway is defined as one that is now, or may in the future be, improved by the planting of lawns, trees, shrubs, flowers, or other ornamental vegetation requiring reasonable maintenance on one or both sides of the freeway (§5216). Off-premise displays are not allowed along landscaped freeways except when approved as part of relocation agreements. However, Caltrans has interpreted these provisions as allowing new billboards along such freeway segments if a relocation agreement has been approved pursuant to §5412 of the Outdoor Advertising Act.

Additional restrictions on outdoor signage are found in the California Vehicle Code. Vehicle Code §21466.5 prohibits the placing of any light source "…of any color of such brilliance as to impair the vision of drivers upon the highway." Specific standards for measuring light sources are provided. The restrictions may be enforced by Caltrans, the California Highway Patrol, or local authorities.

The FHWA has entered into written agreements with various states as part of implementation of the Highway Beautification Act, including written agreements dated May 1965 and February 1968. The agreements generally provide that the State would control the construction of all outdoor advertising signs, displays, and devices within 660 feet of the interstate highway right-of-way. The agreements provide that such signs shall be erected only in commercial or industrial zones, and are subject to the following restrictions:

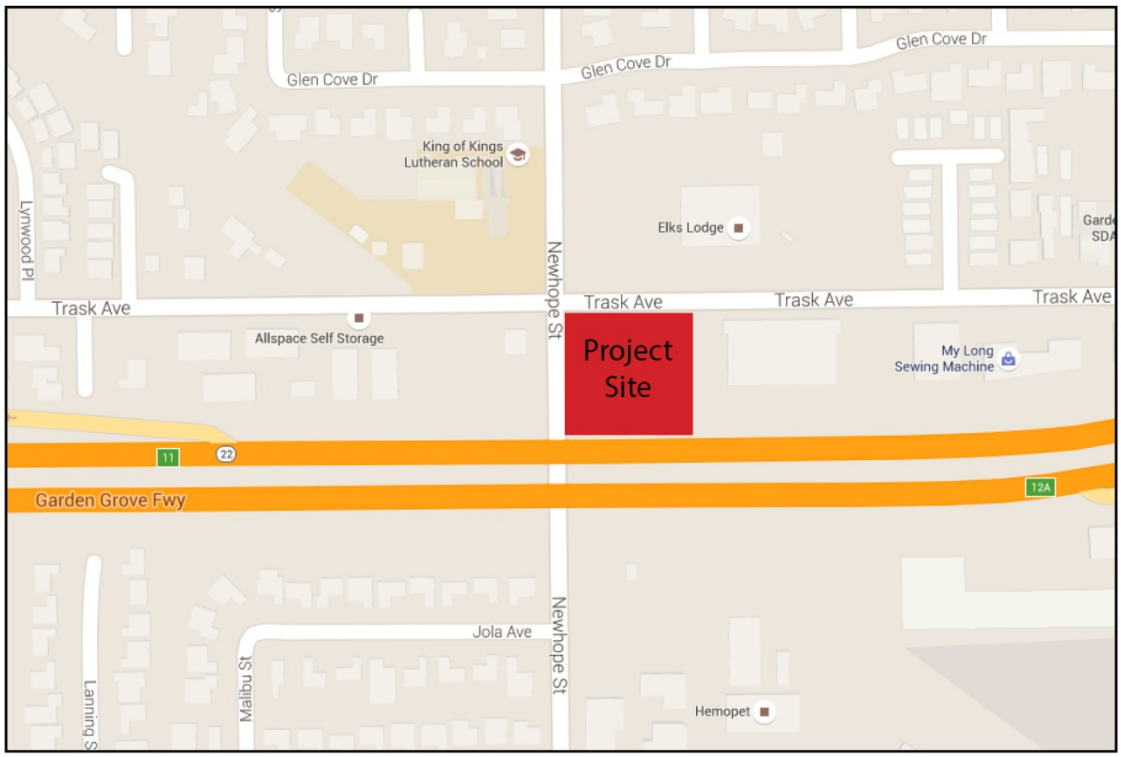
- No signs shall imitate or resemble any official traffic sign, signal, or device, nor shall signs obstruct or interfere with official signs.
- No signs shall be erected on rocks or other natural features.
- Signs shall be no larger than 25 feet in height and 60 feet in width, excluding border, trim, and supports.
- Signs on the same side of the freeway must be separated by at least 500 feet.
- Signs shall not include any flashing, intermittent or moving lights, and shall not emit light that could obstruct or impair the vision of any driver.

California regulates outdoor advertising in the Outdoor Advertising Act (Business and Professions Code §5240 et seq.). Caltrans enforces the law and regulations. Caltrans requires applicants for new outdoor lighting to demonstrate that the owner of the parcel consents to the placement sign, that the parcel on which the sign would be located is zoned commercial or industrial, and that local building permits are obtained and complied with. A digital billboard is identified as a "message center" in the statute, which is an advertising display where the message is changed more than once every two minutes, but no more than once every four seconds (Business and Professions Code §5216.4).



Source: Google Maps

Regional



Source: Google Maps

Vicinity

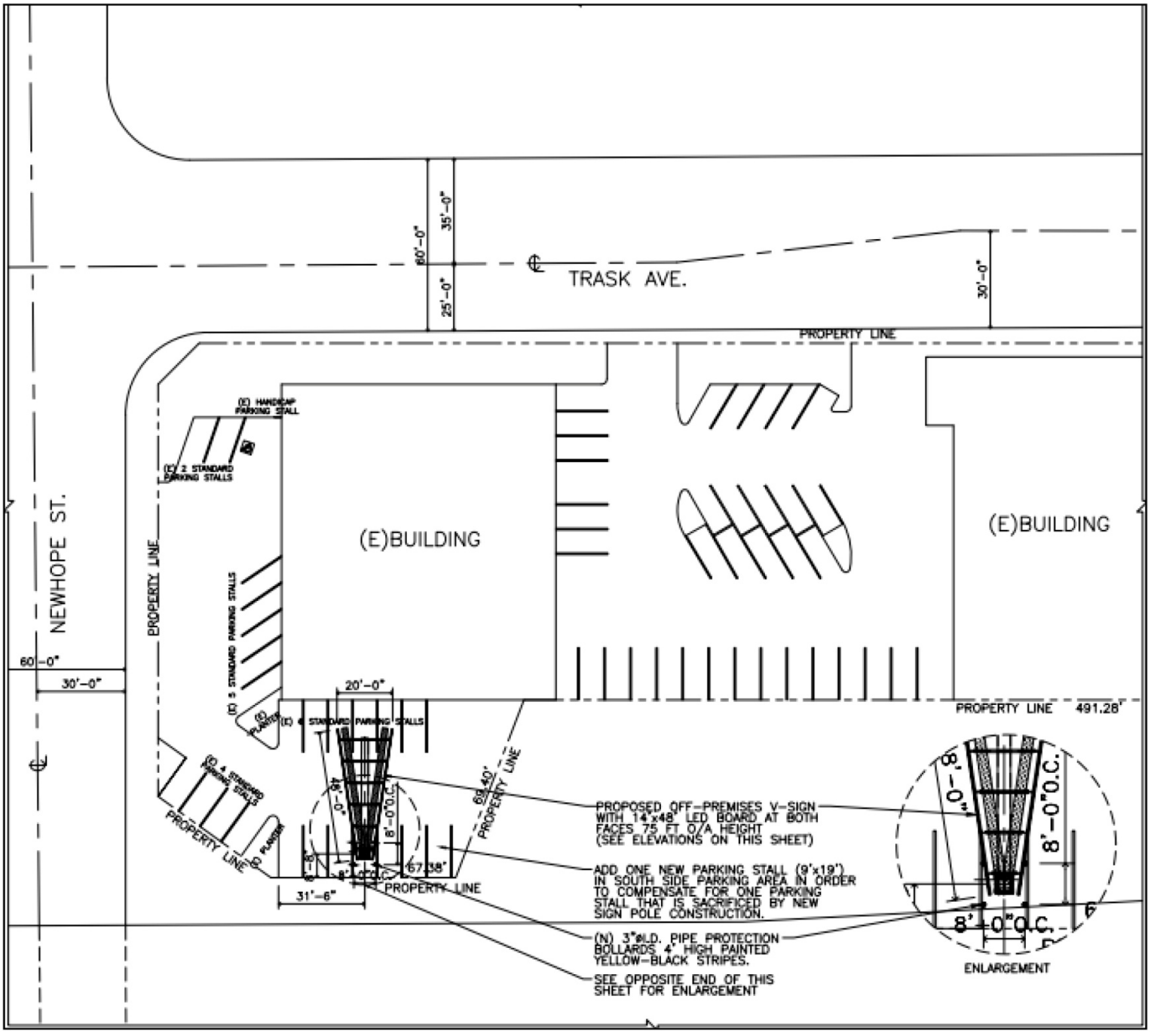
Not to Scale

Exhibit 1 Regional and Vicinity Map

Newhope Digital Billboard Project
Garden Grove, California

http://www.migcom.com • 951-787-9222

MIG

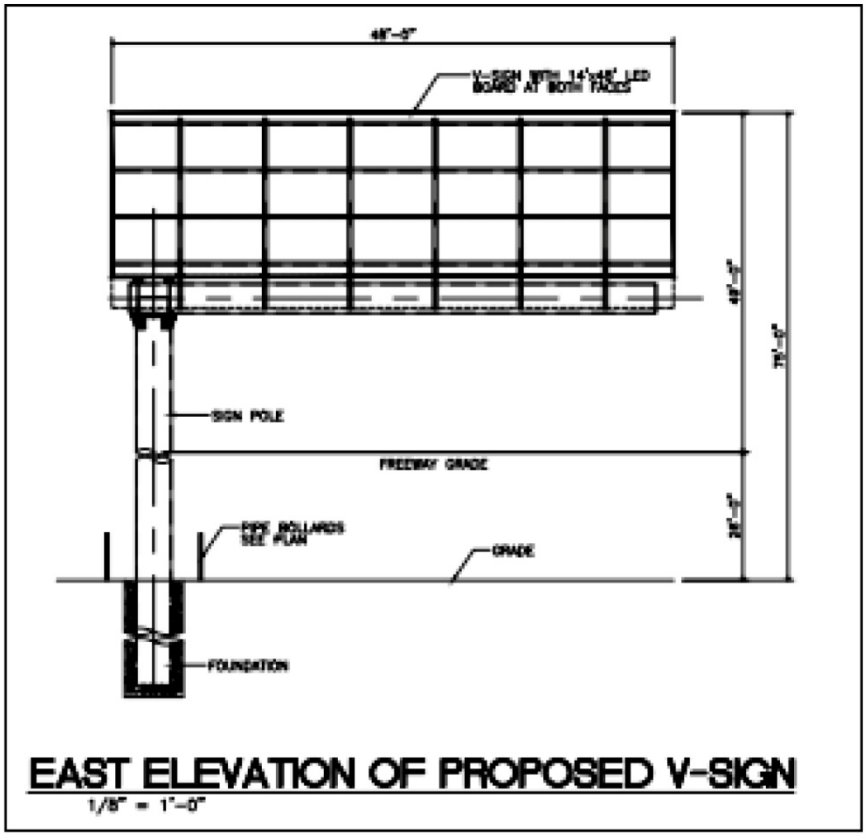


Not to Scale

Exhibit 2 Site Plan

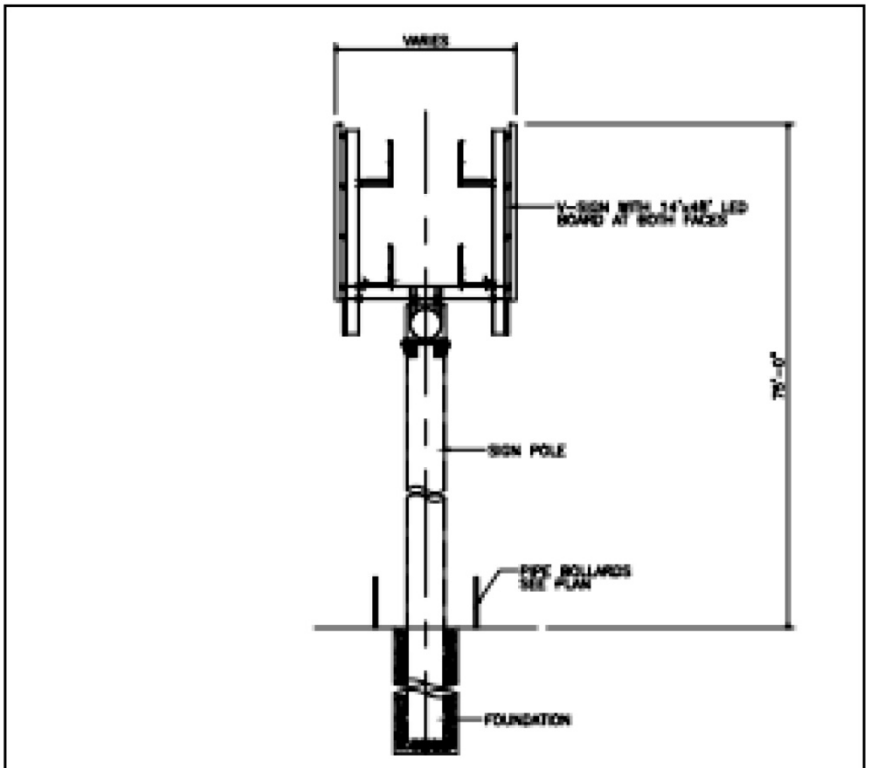
Newhope Digital Billboard Project

Garden Vale, California



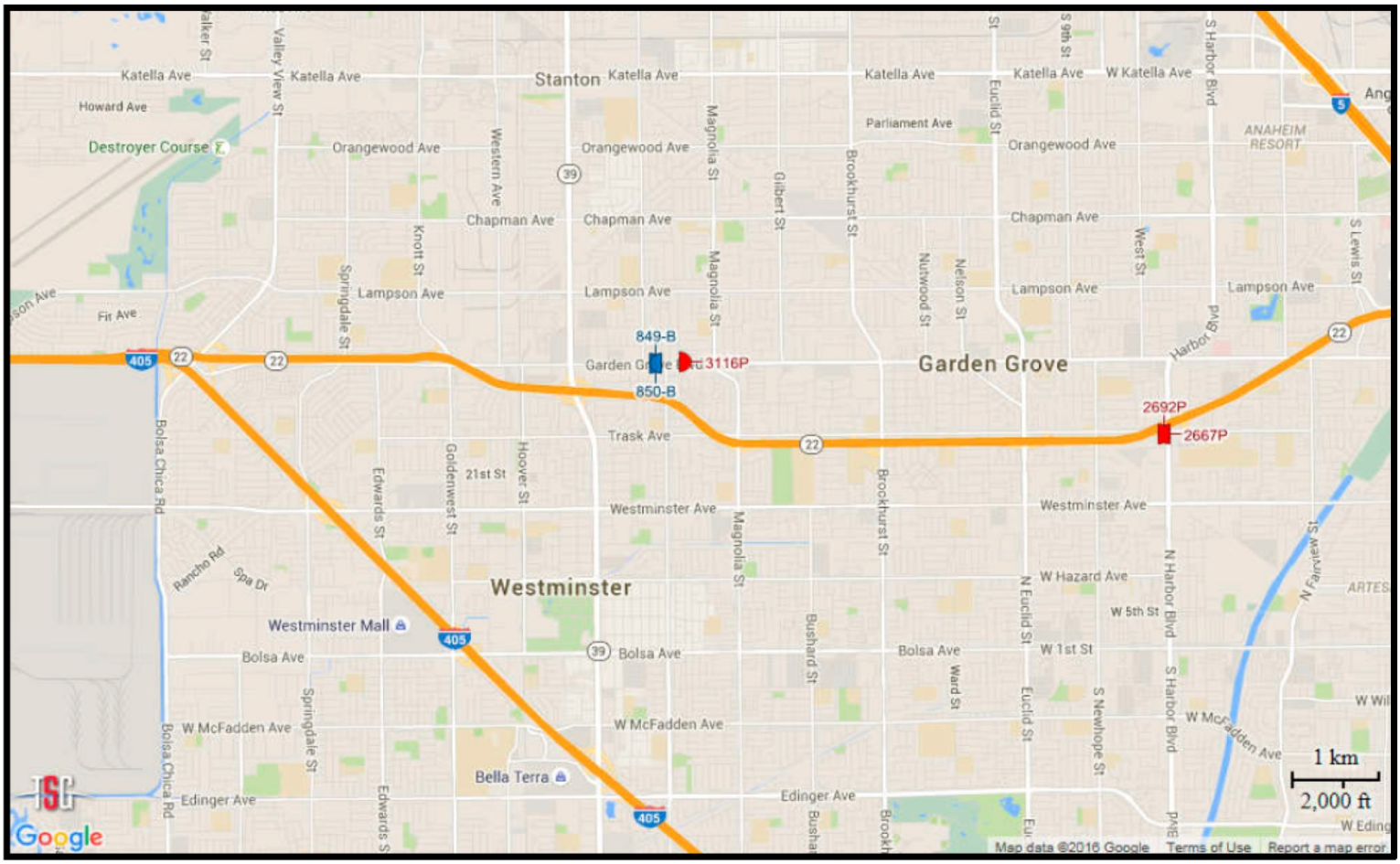
EAST ELEVATION OF PROPOSED V-SIGN

1/8" = 1'-0"



END ELEVATION OF PROPOSED V-SIGN

1/8" = 1'-0"



Icon	#	Unit	Location Description	Media		Market
	1	849-B	Garden Grove NE/L Louise #2	Bulletins	14x48	Los Angeles
	2	850-B	Garden Grove NE/L Louise #1	Bulletins		Los Angeles
	3	3116P	Garden Grove & Josephine Ne	Posters	12x24	Los Angeles
	4	2667P	Trask S/L 125 W Harbor Blvd	Posters		Los Angeles
	5	2692P	Trask S/L 125 W Harbor Blvd	Posters		Los Angeles

3 Determination

3.1 – Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a 'Potentially Significant Impact' as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Agriculture Resources	☐	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology /Soils
☐	Greenhouse Gas Emissions	☐	Hazards & Hazardous Materials	☐	Hydrology / Water Quality
☐	Land Use / Planning	☐	Mineral Resources	☐	Noise
☐	Population / Housing	☐	Public Services	☐	Recreation
☐	Transportation/Traffic	☐	Utilities / Service Systems	☐	Mandatory Findings of Significance

3.2 – Determination

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☑	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a 'potentially significant impact' or 'potentially significant unless mitigated' impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Name: Lee Marino, Senior Planner

Date

4.1 – Aesthetics

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☑	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within view from a state scenic highway?	☐	☐	☐	☑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☑	☐	☐

a) **Less Than Significant Impact.** Scenic vistas can be impacted by development in two ways. First, a structure may be constructed that blocks the view of a vista. Second, the vista itself may be altered (i.e., development on a scenic hillside). The Garden Grove 2030 General Plan does not identify any scenic vistas within the City.[1] Therefore, the Garden Grove (SR-22) freeway corridor, within which the proposed sign would be constructed, is not considered to be within or to comprise a portion of a scenic vista.

The primary scenic view from the proposed project site is of the San Gabriel Mountains to the north and the Santa Ana Mountains to the east. The proposed project is located on fully developed site, next to the SR-22 freeway, within a fully urbanized area visually dominated by commercial land uses and surface street features. Views of the San Gabriel Mountains and Santa Ana Mountains are already partially or completely obscured by existing development and landscaping. Development of the proposed project would be generally consistent in type and scale with existing surrounding commercial and industrial development, as there are multiple large commercial and industrial buildings in the vicinity. Furthermore, as views of the mountains to the north and east are currently not available at these locations, the project would not substantially block any scenic views.

Typical analysis of impacts to scenic vistas includes visual assessment through visual simulations. The nearest location that would be impacted by the proposed billboard is an Elk's Lodge community center located on the opposite side of Trask Avenue, north of the project site. There are also single-family residences located to the southwest at the corner of Newhope Street and Jola Avenue. Moreover, a church located to the northwest is on a

[1] City of Garden Grove. *Garden Grove General Plan 2030.*

property zoned for residential uses. None of these locations is situated such that they would have views of the mountains to the north or east. Even though the Elks Lodge and church are zoned for medium- and low-density density residential uses, respectively, they are currently not occupied by residential uses, and the church site is designated Civic/Institutional Use on the General Plan land use policy map. The Elks Lodge parking lot is currently used for off-street recreational vehicle parking/storage.

As shown in Exhibits 5a through 5f (Visual Impact Simulation), the proposed billboard would not have a substantial adverse effect on views of a scenic vista from these locations. The digital billboard faces would be oriented in an east-west direction, such that they would point into the view path of vehicles traveling in both directions on SR-22. Moreover, the proposed sign would be blocked from view of the single-family residences to the southwest by an existing sound wall that runs along SR-22 (see Exhibits 5e and 5f). The only portion of the sign that would be visible from these residences would be the sign pole and pylon, as well as a small portion of the top of the sign. However, as previously stated, the digital sign faces will be oriented in an east-west direction and will blocked from view by the existing sound wall barrier that runs along the top of SR-22. Adherence to the height restrictions and City Code Standards (Municipal Code Section 9.20.110: Billboards) of the Garden Grove (SR-22) Freeway Corridor, as well as the standards set out in the Outdoor Advertising Act and the Business and Professions Code §5240 et seq., would ensure that impacts to scenic vistas would be less than significant.

b) **No Impact.** The proposed digital Billboard would not be located adjacent to a designated state scenic highway or eligible state scenic highway, as identified on the California Scenic Highway Mapping System.[2] Moreover, the Garden Grove 2030 General Plan does not identify any scenic resources within the City.[3] The proposed digital Billboard would be located in a fully developed, urbanized area that contains no scenic resources. Therefore, no impact to scenic resources visible from a state scenic highway would occur.

c) **Less Than Significant Impact.** Development of the proposed billboard could result in a significant impact if it resulted in substantial degradation of the existing visual character or quality of the site and its surroundings. Degradation of visual character or quality is defined by substantial changes to the existing site appearance through construction of structures such that they are poorly designed or conflict with the site's existing surroundings.

Operation of the proposed billboard would not substantially alter the existing visual character of the site or area, as the proposed billboard would be located adjacent to commercial land uses. These types of signs are common in urban areas adjacent to freeways and other high-traffic volume roadways, and the property to the immediate southeast (on the opposite side of SR-22) has been developed with a digital billboard of similar size and height to that proposed, with no apparent adverse effect. The project site is currently occupied by a commercial building that houses a law firm and an auto repair shop. Development of the proposed sign on this site would not substantially alter the existing visual character of the area. All existing building features on the site would be retained with development of the proposed project. The proposed sign would be reviewed by City staff as part of the approval process, and design parameters would be imposed by the City based on Section 9.20.110 of the Municipal Code (Billboards).[4] The finished grade of the adjacent SR-22 Freeway is 60 feet, including the existing sound wall barrier. The proposed billboard would not exceed 75 feet in height, as measured from finished grade to the top of the billboard structure, as regulated in the City's Municipal Code standards. Generally, highway-oriented signs, such as the proposed digital billboard, are part of the urban landscape. In fact, the City has approved a similar digital billboard that is currently located to the southeast of the proposed billboard and on the opposite side of SR-22 (see Exhibit 5a). Also, several billboards exist today along the SR-22 through Garden Grove, five of which would be removed as part of the relocation agreement for the subject project. Given the prevalence of highway-oriented

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2 California Department of Transportation. California Scenic Highway Mapping System: Orange County. [Accessed April 2016].

3 City of Garden Grove. *Garden Grove General Plan 2030.*

4 City of Garden Grove. Garden Grove Municipal Code, 2016.

commercial uses in the project vicinity and along SR-22, the new proposed LED billboard is not considered demonstrably negative in character such that it could degrade the existing visual character of the site or surrounding area. Moreover, as previously mentioned, five existing billboard signs would be removed from the project vicinity as part of the proposed project. Additionally, as discussed above, the signs would not conflict with any protected views and would be consistent in character with surrounding uses. Impact would be less than significant.

d) **Less Than Significant Impact with Mitigation Incorporated.** Excessive or inappropriately directed lighting can adversely impact night-time views by reducing the ability to see the night sky and stars. Glare can be caused from unshielded or misdirected lighting sources. Reflective surfaces (i.e., polished metal) can also cause glare. Impacts associated with glare range from simple nuisance to potentially dangerous situations (i.e., if glare is directed into the eyes of motorists). Digital billboards rely on LED (light-emitting diode) technology to display messages on a display screen. The lighting of any proposed digital billboard sign would be designed to make the message display visible to passing motorists.

As mentioned above, the property to the immediate southeast (on the opposite side of SR-22) has been developed with a digital billboard of similar size and height to that being proposed, with no apparent adverse effect on the surrounding area. While the City does not have zoning ordinance regulations specifically regulating light from advertising signs, Section 9-20-110(B)(2)(f) of the Garden Grove Municipal Code states that lighting "shall not result in an adverse aesthetic or illumination nuisance upon any surrounding residential neighborhood." Furthermore, Municipal Code Section 9-20-110(D)(3)(i) establishes brightness criteria for Billboard Digital Displays. To comply with these standards and guidelines, Mitigation Measure AE-1 and AE-2 are included. With mitigation incorporated, impacts would be less than significant.

LED billboard technology allows sign brightness to be adjusted automatically depending on ambient lighting and weather conditions. The display, for example, is brighter in the daytime than at night-time and responds to changes in the ambient light conditions.

The proposed digital billboard would require a Department of Transportation Outdoor Advertising Act Permit from Caltrans. As a condition of that permit, digital billboard signs are required to comply with the brightness requirements outlined in the Outdoor Advertising Act in that the illumination shall not be of such brilliance or so positioned as to cause a hazardous condition on adjacent highways. The standard used by Caltrans for enforcing sign brightness is as follows:

> "The brightness reading of an objectionable light source shall be measured with a 1½ degree photoelectric brightness meter placed at the driver's point of view. The maximum measured brightness of the light source within 10 degrees from the driver's normal line of sight shall not be more than 1,000 times the minimum measured brightness in the driver's field of view, except that when the minimum measured brightness in the field of view is 10 foot-lamberts or less, the measured brightness of the light source in foot-lamberts shall not exceed 500 plus 100 times the angle, in degrees, between the driver's line of sight and the light source."[5]

Although these restrictions have been imposed for traffic safety reasons, the resulting controls effectively regulate the operation of digital billboard signs to ensure that individual signs do not create a substantial new source of light or glare.

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[5] California Business and Professions Code Section 5403 and California Vehicle Code Section 214466.5. [Accessed April 2016].

Exhibit 5a Visual Impact Simulation Location Map

Newhope Digital Billboard Project
Garden Grove, California

http://www.migcom.com • 951-787-9222

MIG

Existing Conditions

Proposed Sign

Exhibit 5b Visual Impact Simulation (Location 1)

Newhope Digital BIllboard Project
Garden Grove, California

http://www.migcom.com • 951-787-9222

MIG

Existing Conditions

Proposed Sign

Exhibit 5c Visual Impact Simulation (Location 2)

Newhope Digital BIllboard Project
Garden Grove, California

http://www.migcom.com • 951-787-9222

MIG

Existing Conditions

Proposed Sign

Exhibit 5d Visual Impact Simulation (Location 3)

Newhope Digital BIIlboard Project
Garden Grove, California

Existing Conditions

Proposed Sign

Exhibit 5e Visual Impact Simulation (Location 4)

Newhope Digital BIllboard Project
Garden Grove, California

Existing Conditions

Proposed Sign

Exhibit 5f Visual Impact Simulation (Location 5)

Newhope Digital BIllboard Project
Garden Grove, California

http://www.migcom.com • 951-787-9222

MIG

Development of the proposed digital billboard would comply with guidelines of the Outdoor Advertising Association of America (OAAA). These guidelines specify that lighting levels from a digital billboard would not exceed 0.3 foot-candles over ambient levels, as measured using a foot-candle meter at a pre-set distance based on the size of the sign. (Foot-candles is a standard measurement of light used.)The OAAA guidelines draw from recommendations in the OAAA-commissioned report, Digital Billboard Recommendations and Comparisons to Conventional Billboards.[6] This report developed a method for specification of brightness limits for LED signs based on accepted practice by the Illuminating Engineering Society of North America (IESNA). The report established criteria for brightness limits based on billboard-to-viewer measurements for standardized billboard categories. The recommended brightness level is 0.3 foot-candles above ambient light conditions. Illuminance can be measured simply by using a foot-candle meter held at a height of approximately five feet and aimed towards a sign consistent with the sign-to-viewer distance. A reading of no more than 0.3 foot-candles above ambient light conditions would indicate compliance.

Mitigation Measures

AES-1: The applicant shall demonstrate compliance with a maximum 0.3 foot-candle increase over ambient light at 250 feet from the sign face at all times upon initial start-up through field testing. If subsequent complaints consisting of direct personal impacts are received by the City of Garden Grove, the City shall require the applicant to fund follow-up field testing by an independent contractor or City staff trained in the use of a handheld photometer to demonstrate continued compliance with these requirements. If increases in ambient light are found to be above the 0.3 foot-candle level, the dimming level shall be adjusted until this level can be demonstrated.

AES-2: Signs shall be installed with sensors which automatically lower light output in accordance with atmospheric conditions (i.e. cloudy or overcast weather). Throughout sign operation, the dimness setting of the LED sign shall be adjusted in real time so it does not exceed the level of illumination identified under Mitigation Measure AE-1.

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[6] Lewin, Ian. Lighting Sciences, Inc. Digital Billboard Recommendations and Comparisons to Conventional Billboards. 2007.

4.2 – Agriculture and Forest Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☑
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104 (g))?	☐	☐	☐	☑
d) Result in loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

a) **No Impact.** The proposed digital billboard would be located in a fully developed, commercial, urbanized area that does not contain agriculture or forest uses. The map of Important Farmland in California (2010) prepared by the Department of Conservation does not identify the project site as being Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[7] In addition, the Garden Grove General Plan does not identify any areas for agriculture use within the city limits. Therefore, there would be no conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance to a non-agricultural use as a result of this project. No impact would occur.

[7] California Department of Conservation. Farmland Mapping and Monitoring Program, 2008. The City of Garden Grove, including the project site, is indicated within "Area Not Mapped" in 2010 maps of Orange County. ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2010/los10.pdf [Accessed April 2016].

b) **No Impact.** There is no existing agriculture zoning on or near the proposed project site. The Garden Grove (SR-22) Freeway Corridor, within which the proposed billboard would be located, does not permit agricultural uses. There are no uses in the immediate vicinity of the proposed project site that are zoned open space/recreation. No Williamson Act contracts are active for the project site.[8] Therefore, there would be no conflict with existing zoning for agricultural use or a Williamson Act contract. No impact would occur.

c) **No Impact.** Public Resources Code Section 12220(g) identifies forest land as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." The proposed project site and surrounding properties are not currently being managed or used for forest land, as identified in Public Resources Code Section 12220(g). The USDA Forest Service vegetation maps for the proposed site identify them as *urban* type, indicating that it is not capable of growing industrial wood tree species.[9] The proposed site and surrounding areas are fully urbanized. The project site and surrounding properties are not zoned for forest land or timberland production. No impact would occur.

d) **No Impact.** The proposed digital billboard would be located on a completely developed parcel in a fully urbanized area containing limited ornamental landscaping; thus, there would be no loss of forest land or conversion of forest land to non-forest use as a result of this project. No impact would occur.

e) **No Impact.** The proposed digital billboard would be located on a completely developed parcel within an urban environment. There are no agriculture or forest land uses in this area. Therefore, no conversion of farmland or forest land to non-agricultural or non-forest uses would occur.

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[8] California Department of Conservation. Williamson Act Program, 2007. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_12_13_WA.pdf [Accessed April 2016].

[9] USDA Forest Service. Pacific Southwest Region. EvegTile51A__02_03_v2. 2007. http://frap.fire.ca.gov/data/frapgismaps/pdfs/fvegwhr13b_map.pdf [Accessed April 2016].

4.3 – Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☑	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☑	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑

a) **No Impact.** A significant impact could occur if construction of the proposed billboard conflicts with or obstructs implementation of the South Coast Air Basin 2012 *Air Quality Management Plan* (AQMP). Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD CEQA *Air Quality Handbook*, consistency with the AQMP is affirmed when a project: 1) does not increase the frequency or severity of an air quality standards violation or cause a new violation, and 2) is consistent with the growth assumptions in the AQMP.[10] Consistency review is presented below.

The proposed project includes the removal of three existing non-electronic billboard structures (total of five signs) and related pole structures and the establishment of one new digital billboard. Construction of the proposed new billboard would take between 19 and 21 days. Due to the small-scale nature of disassembling the existing billboards and constructing the new billboard, short-term construction and long-term pollutant emissions would generally be less than the CEQA significance emissions thresholds established by the SCAQMD; therefore, the project would not result in an increase in the frequency or severity of any air quality standards violation and would not cause a new air quality standard violation.

[10] South Coast Air Quality Management District. *CEQA Air Quality Handbook*. 1993.

The CEQA *Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and "significant projects." Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities. The proposed project does not involve a General Plan Amendment, Specific Plan, and is not considered a significant project. Furthermore, the project would not involve any new housing or employment uses which would affect population or employment growth.

Based on the preceding analysis, the proposed project would not conflict with the AQMP, and no impact would occur.

b) **Less Than Significant Impact.** A project may have a significant impact if project-related emissions would exceed federal, state, or regional standards or thresholds, or if project-related emissions would substantially contribute to existing or project air quality violations. The proposed project is located within the South Coast Air Basin, where efforts to attain state and federal air quality standards are governed by the South Coast Air Quality Management District (SCAQMD). Both the State of California and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as criteria pollutants). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb). The State has also established AAQS for additional pollutants. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the State and federal standards differ, California AAQS are more stringent than the national AAQS.

Air pollution levels are measured at monitoring stations located throughout the air basin. Areas that are in nonattainment with respect to federal or State AAQS are required to prepare plans and implement measures that would bring the region into attainment. Table 2 (South Coast Air Basin Attainment Status – North Orange County) summarizes the attainment status in the project area for the criteria pollutants. Discussion of potential impacts related to short-term construction impacts and long-term operational impacts are presented below.

Table 2
South Coast Air Basin Attainment Status – North Orange County

Pollutant	Federal	State
O_3 (1-hr)	N/A	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM^{10}	Nonattainment	Nonattainment
$PM^{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Nonattainment
SO_2	Attainment	Attainment
Pb	Nonattainment	Nonattainment
Sources: CARB 2015		

Construction Emissions

Short-term criteria pollutant emissions would occur during site preparation and construction of the pole sign. Construction of the proposed digital billboard would not require demolition of any existing buildings or structures, nor would it require any site grading or other earth moving activities. Architectural coatings would also not be required, as the prefabricated signs would come factory coated. As such, user-defined CalEEMod inputs were used to simulate trenching and erecting of a single digital billboard. Emissions would occur from use of equipment, worker, vendor, and hauling trips, and disturbance of onsite soils (fugitive dust). To determine if construction of the

proposed project could result in a significant air quality impact, the CalEEMod has been utilized. CalEEMod defaults have generally been used as construction inputs into the model (see Appendix A for input values). The methodology for calculating emissions is included in the CalEEMod User Guide, available at http://www.caleemod.com. Construction of the digital billboard is anticipated to be completed in mid-2017, with the first operational year being 2018. The results of the CalEEMod outputs are summarized in Table 3 (Maximum Daily Construction Emissions). Based on the results of the model, maximum daily emissions from the construction of the digital billboard would not exceed the daily thresholds established by SCAQMD.

Table 3
Maximum Daily Construction Emissions (lbs/day)

Year	ROG*	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer						
2017	**3.76**	**43.13**	**28.24**	**0.04**	**2.70**	**2.08**
Winter						
2017	**3.76**	**43.13**	**28.16**	**0.04**	**2.70**	**2.08**
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Source: MIG, 2016.
*Volatile organic compounds (VOC) are measured as reactive organic compounds (ROG)

Operational Emissions

Due to its small-scale nature, the proposed project would not have any direct operational impacts that would affect air quality. The proposed Billboard would use a nominal amount of electricity for illumination purposes, and it is assumed that over time the portion of the sign column without aluminum cladding would require repainting, resulting in emissions from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of maintenance. It is also assumed that due to the multitude of LED lights inherent to digital billboard signs, the electricity consumption from digital billboards would be greater than the electricity consumption of static signs. However, these impacts are expected to be minimal. According to a 2014 San Diego Gas & Electric study on digital billboard energy use in California, previous reports studying the energy use of digital billboards present up to a six-fold difference in annual energy use, ranging from around 50,000- to over 300,000- kilowatt-hours per year, among equipment from different manufacturers installed around the country. However, digital billboard efficiency has improved as LED technology has matured, and today, annual energy use of new products is likely to be on the lower end of that range. Incorporating some key assumptions about brightness levels, operating conditions, size, and display content, the study calculated a typical, current generation digital billboard (14 feet by 48 feet) to use between 29,000- and 94,000-kilowatt-hours per year. By focusing on the two energy saving measures that offer the greatest potential, high quality LEDs and tighter brightness control settings, the study estimates potential annual energy savings of around 85% per sign.[11] It is assumed that the proposed sign would employ the current generation of high quality, energy efficient LEDs. Moreover, the incorporated Aesthetics Mitigation Measures would control for brightness during both the day and night. Therefore, given the annual reduction in energy that can be expected from high quality LEDs and brightness control, it can be estimated that the proposed sign would use between 29,000- and 94,000-kilowatt hours per year. (For comparison purposes, a typical 420,000-square-foot warehouse building, with associated office uses, parking and landscaping, can be expected to use approximately 2,362,000 kilowatt hours annually.) Furthermore, operation of the proposed billboard would not require employee or customer trips, and would only require periodic maintenance visits. The proposed project would not impact traffic levels on SR-22, and as such no other mobile-source emissions impacts would occur, including carbon monoxide impacts. As there are no mobile sources or direct emissions associated with operation of the proposed billboard, the proposed project's operational emissions are anticipated to be nominal and concluded to be less than significant.

[11] San Diego Gas & Electric. *Digital Billboard Energy Use in California.* Prepare by Energy Solutions. July, 2014.

c) **Less Than Significant Impact.** The SCAQMD has prepared the AQMP to set forth a comprehensive and integrated program that would lead the Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments toward meeting the federal 8-hour ozone standards. The Basin is currently in non-attainment for State and federal criteria pollutants ozone, nitrogen dioxide, and fine particulate matter ($PM_{2.5}$ and PM_{10}).[12]

Cumulative short-term, construction-related emissions and long-term, operational emissions from the proposed Billboard would not contribute considerably to any potential cumulative air quality impact because short-term project and operational emissions would not exceed any SCAQMD daily threshold. The project would contribute very minimal amounts of criteria pollutants to the area during short-term project construction and during operation. In addition, new electronic display billboards are required to comply with SCAQMD rules and regulations aimed at reducing construction-related pollutant emissions, including fugitive dust and other particulates, as well as organic compounds and other ozone precursors found in paints and other coatings. The proposed project does not change or otherwise interfere with the regional pollutant control strategies of the AQMP. Impact would be less than significant.

d) **Less Than Significant Impact.** The proposed project would not be classified as a sensitive land use because it would not cater specifically or generally to sensitive receptors such as children or the elderly; therefore, the project would not result in the siting of new sensitive receptors that could be impacted by any existing pollutant concentrations. There are no existing sensitive uses in the immediate vicinity of the projects. In the surrounding area, sensitive uses include King of Kings Lutheran School located approximately 303 feet to the northwest, Santiago High School located approximately 0.56 miles to the east, Peters Elementary School located approximately 0.31 miles to the north, and residential uses located approximately 308 feet to the southwest. Air quality impacts due to toxic air contaminants (TACs), carbon monoxide, and localized emissions as they relate to sensitive receptors are expected to be low to nil, as construction and operation of the proposed billboard would not directly create any significant air quality impacts.

Toxic Air Contaminants

Construction of the proposed billboard would result in short-term emissions from the use of on-site equipment, which would include drilling the foundation hole, pouring pylon anchors, and installing the pole sign structure atop which the digital display would be placed. The expected period of construction for a billboard sign is generally considered to be 19 to 21 days, and emission levels would therefore be low, as indicated in Section 4.3b above. Nearby homes and schools, therefore, would not be exposed to significant concentrations of TACs during the short-term construction period. No impact would occur.

Carbon Monoxide

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The potential for violation of State and federal CO standards at study area intersections and exposure to sensitive receptors at those intersections is addressed using the methodology outlined in the Transportation Project-Level Carbon Monoxide Protocol (Caltrans CO Protocol). According to the CO Protocol, projects may worsen air quality if they significantly increase the percentage of vehicles in cold start modes by two percent or more; significantly increase traffic volumes (by five percent or more) over existing volumes; or worsen traffic flow by increasing average delay at intersections operating at Level of Service (LOS) E or F. The installation and operation of the proposed Billboard would not directly increase the volume of vehicles in cold start mode over what is already occurring, nor would it have any impact on traffic volumes, as no vehicle trips are associated with

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[12] United States Environmental Protection Agency. *The Green Book Nonattainment Areas for Criteria Pollutants.* www.epa.gov/oar/oaqps/greenbk/index.html [Accessed April 2016].

operation of signs other than routine periodic maintenance. Therefore, there would not be any potential for increasing CO hotspots. Impact would be less than significant.

Localized Significance Thresholds

In addition to the mass daily emission thresholds established by the SCAQMD, short-term on-site emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ are examined for local impacts to nearby sensitive receptors. The closest receptor would be single-family homes to the southwest of the project site, on the opposite side of SR-22 from the proposed sign. Additional nearby receptors are the single- and multi-family residences located to the north and northeast of the proposed pole sign.

The SCAQMD methodology is called localized significance thresholds (LST). To assess local air quality impacts for development projects of five acres or less without complex dispersion modeling, the SCAQMD developed screening "lookup" tables to assist lead agencies in evaluating impacts. Construction of the proposed Billboard would result in very short-term emissions from the use of on-site equipment to drill the foundation, pour concrete anchors, and install the pole sign and digital display. No earth-moving, site, preparation, or grading activities are anticipated during construction, and no architectural coatings would be applied at the site. The expected period of construction for a digital billboard is 19 to 21 days. Given the relatively short period of time for construction, on-site emissions would not be in excess of any significance thresholds identified in the LST tables.[13] Nearby homes and other sensitive receptors, therefore, would not be exposed to significant concentrations of on-site emissions during the short-term construction period. Impact would be less than significant.

e) **No Impact.** According to the *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural operations, wastewater treatment plants, landfills, and certain industrial operations (such as manufacturing uses that produce chemicals, paper, etc.). Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. Signs do not include any of the above noted uses or processes; no impact would occur.

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13 South Coast Air Quality Management District. Localized Significance Thresholds. http://www.aqmd.gov/ceqa/handbook/lst/appC.pdf [Accessed April 2016].

4.4 – Biological Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☑
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☑	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

a) **No Impact.** The proposed Billboard project would occur on a parcel currently developed with commercial uses and surface parking. Landscaping currently exists on this parcel as well; however, this ornamental vegetation

is not habitat for any species identified as a candidate, sensitive, or special status species. The proposed project area is not identified as critical habitat for threatened and endangered species.[14] Considering the highly developed nature of the proposed project site and surrounding areas, the probability of existence of designated species under the federal Endangered Species Act or California Special Concern Species is low. Development of the proposed Billboard would, therefore, not have a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species in local or regional plans or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS). Considering the lack of habitat on the property, no impact to wildlife species of concern would occur.

b) **No Impact.** The proposed project would be located on fully developed land. The parcel proposed for the billboard has been previously graded, developed with commercial uses, and has landscaping consisting of non-native, ornamental shrubs and trees. There is no riparian habitat located on or in the vicinity of the sites. As such, no impact to riparian habitat or other sensitive natural habitat would occur.

c) **No Impact.** According to the federal National Wetlands Inventory, the proposed project site does not contain any wetlands, and there are no identified riverine areas near or within the SR-22 corridor.[15] No impact would occur.

d) **Less than Significant Impact.** The project site is not located within a known wildlife nursery site. Southern California forms a portion of the Pacific Flyway, a generic term used to categorize the numerous and complex migratory routes utilized by bird species migrating from Alaska to Mexico. Essentially, any water body or open space within the Pacific Flyway can serve as a travel node on a migratory path. Migration behavior is the regularly occurring, seasonally oriented movement of a species. Migration may consist of short- or long-distance dispersal and one-and two-way migratory trips over time cycles consisting of hours to years. A migratory route is the geographic path a species takes as it acts on its migratory behavior. Aquatic species typically migrate along streams and rivers. Avian species utilize wetlands and other open space areas as resting and feeding nodes as they migrate. Ground-borne species generally require wildlife corridors to migrate.

The Migratory Bird Treaty Act (MBTA) (16 USC 703) implements various treaties and conventions between the US, Canada, Japan, Mexico and Russia for the protection of migratory birds. Under the MBTA, the taking, killing or possessing of migratory birds is unlawful, unless expressly permitted by other federal regulations. The MBTA provides that it is unlawful to pursue, hunt, take, capture, or kill any migratory bird, part, nest, egg or product. The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (1 February to 31 August, annually). Migratory bird species protected by this act are defined in Title 50, CFR Section 10.13. The proposed project does not include the removal of any trees; therefore, impact to migratory birds would be less than significant.

e) **No Impact.** The City of Garden Grove Municipal Code includes regulations aimed at protecting biological resources such as trees (Section 11.32). However, the proposed project does not include the removal of any trees. As such, the proposed project would not conflict with any local ordinances or policies protecting trees. No impact would occur.

f) **No Impact.** The proposed Billboard would not be located within the planning area of any Habitat Conservation Plan[16] or a Natural Community Conservation Plan area,[17] or other approved local, regional, or State habitat conservation plan. No impact would occur.

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14 U.S. Fish and Wildlife Service. FWS Critical Habitat for Threatened & Endangered Species. http://criticalhabitat.fws.gov/ [Accessed April 2016].

15 U.S. Fish and Wildlife Service. National Wetlands Inventory. http://107.20.228.18/Wetlands/WetlandsMapper.html# [Accessed April 2016].

4.5 – Cultural Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?	☐	☐	☐	☑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?	☐	☐	☑	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☑	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☑	☐

a) **No Impact.** The proposed project site does not satisfy any of the criteria for a historic resource defined in Section 15064.5 of the State CEQA Guidelines. No known historically or culturally significant resources, structures, buildings, or objects are located on the proposed site. The City contains no federal or State-designated historic resources. Furthermore, the development of the pole sign and digital display would not involve any changes to existing buildings or structures; the only change would be the actual physical construction of the Billboard. As such, development of the proposed project would not cause an adverse change in the significance of a historical resource, and impacts to historic resources are not anticipated. No impact would occur.

b-d) **Less Than Significant Impact.** The proposed project site is currently occupied with commercial uses and is located in heavily urbanized area that has been previously disturbed and heavily affected by past activities. The project consists of the erection and operation of a 75-foot tall LED billboard sign. Pursuant to California AB 52 (Tribal Cultural Resources), Native American Tribes that previously requested the City to be notified about projects of interest were given a 30-day notice to request consultation regarding the project. Notices were sent to tribes that have requested notification (Gabrielino, Soboba, and Desert Cahuilla Indians); however, no requests for consultation were received (see Appendix B, AB 52 Consultation Letter). The potential for uncovering significant resources, including tribal cultural resources, at the project site during construction activities is considered unlikely given the developed nature of the site and the limited ground-disturbing activities associated with the project. Impact would be less than significant.

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16 U.S. Fish & Wildlife Services. Habitat Conservation Plans: Summary Report. http://ecos.fws.gov/conserv_plans/PlanReportSelect?region=8&type=HCP [Accessed April 2016].

17 California Department of Fish and Game. Natural Community Conservation Planning: Status of NCCP Planning Efforts. www.dfg.ca.gov/habcon/nccp/status/ [Accessed April 2016].

4.6 – Geology and Soils

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii) Strong seismic ground shaking?	☐	☐	☑	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv) Landslides?	☐	☐	☐	☑
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1997), creating substantial risks to life or property?	☐	☐	☑	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑

a.i) **No Impact.** Although the proposed project site is located in seismically active Southern California, it is not located within an Alquist-Priolo Earthquake Fault Zone.[18] The closest earthquake fault zones under the auspices of the Alquist-Priolo Earthquake Fault Zoning Act are the Los Alamitos fault approximately five miles to the west and the Whittier section of the Elsinore fault approximately eight miles to the east. Development of the proposed Billboard would be subject to all applicable City, State, and local building regulations, including the California Building Code (CBC) seismic standards as approved by the Garden Grove Building & Safety Division. No impact would occur.

a. ii)**Less Than Significant Impact.** The proposed Billboard would be subject to strong seismic ground shaking, as are all projects located within Southern California. Construction of the sign would be subject to the seismic design criteria of the 2013 CBC. In particular, prior to issuance of building permits, a project architect or engineer shall provide the City's Building Official with structural stability calculations that verify proposed signs would not collapse under either regional seismic loads or high wind conditions (up to 100 mph), and show that the project is compliant with the wind and seismic design criteria of the 2013 CBC. The sign foundation and pylons shall be designed to meet these design engineering requirements. Compliance with the CBC and the City's regulatory standards would ensure impacts due to strong seismic ground shaking would be less than significant.

a.iii) **Less Than Significant Impact.** Liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure. This typically occurs where susceptible soils (particularly the medium sand to silt range) are located over a high groundwater table. Affected soils lose all strength during liquefaction and foundation failure can occur.

According to the Seismic Hazard Evaluation of the Anaheim 7.5-minute quadrangle, the proposed project site, much like the rest of the City, is located in a Zone of Required Investigation for liquefaction.[19] This indicates that the area has been subject to historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacement such that mitigation as defined in Public Resources Code Section 2693(c) would be required. Groundwater below Garden Grove is approximately 5 to 13 feet below grade and therefore the potential for liquefaction is high. The State Seismic Hazards Mapping Act requires preparation of a geotechnical report prior to the approval of most new development projects where such conditions are present. However, the Seismic Hazards Mapping Act and the Alquist-Priolo Earthquake Fault Zoning Act define projects that are exempt from any investigation requirements. This exemption includes structures of Group U occupancy, which includes buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy.[20] Billboards are not specifically mentioned in this exception, however utility and/or cell towers are included in this classification. As such, for the purposes of this project, billboards would be considered exempt from requiring a geotechnical report as Group U occupancy. Because the proposed Billboard is not habitable, impacts to human health would be minimal. Furthermore, the proposed Billboard would be subject to building permit approval to ensure that footings are sufficient to prevent collapse of the sign. Impact would be less than significant with implementation of existing regulations.

a.iv)**No Impact.** Structures built below or on slopes subject to failure or landslides may expose people and structures to harm. The proposed site is level, and no obvious sloping is apparent. According to the Seismic Hazard

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18 California State Department of Conservation. California Geological Survey, Alquist-Priolo Earthquake Fault Zone Maps. http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm [Accessed April 2016].

19 California State Department of Conservation. California Geological Survey, Seismic Hazard Zones. Anaheim Quadrangle, April 15, 1998.

20 California Building Standards Commission. California Residential Code 2013. California Code of Regulations Title 24, Part 2.5, January 1, 2014.

Evaluation of the Anaheim 7.5-minute quadrangle, the proposed project site is not located in an Earthquake-Induced Landslide Zone.[21] There are no slopes in the vicinity of the proposed project. No impact would occur.

b) **Less Than Significant Impact.** Topsoil is used to cover surface areas for the establishment and maintenance of vegetation due to its high concentrations of organic matter and microorganisms. Little, if any, native topsoil is likely to occur since the proposed project site is covered with a commercial use as well as associated parking and landscaping. The proposed project site is currently paved and developed. The parcel is underlain by fill material due to previous development; therefore, development of the proposed Billboard would not affect native topsoil.

No grading would be included as part of development of the sign. Sign foundations would have to be dug and filled. As such, the project has the potential to expose surficial soils to wind and water erosion during construction activities. Wind erosion as a result of construction activities would be minimized through soil stabilization measures required by SCAQMD Rule 403 (Fugitive Dust), such as daily watering. Water erosion would be prevented through the City's standard erosion control practices required pursuant to the California Building Code and the National Pollution Discharge Elimination System (NPDES), such as silt fencing or sandbags. Following construction of the Billboard, the parcel would remain completely covered by paving, structures, the proposed sign, and landscaping. Impact related to soil erosion would be less than significant with implementation of existing regulations.

c-d) **Less Than Significant Impact.** Impacts related to liquefaction and landslides are discussed above in Section 4.6.a. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. This downslope movement is due to gravity and earthquake shaking combined. Such movement can occur on slope gradients of as little as one degree. Lateral spreading typically damages pipelines, utilities, bridges, and structures. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. Expansive soils are those that expand when exposed to water and contract when water is not present. Due to the absence of any natural channel within or near the proposed project site, the potential for lateral spreading occurring is considered negligible.

Development of the proposed billboard would be required to comply with the CBC with regard to construction; the sign requires building permits and would be constructed to current building code standards. These standards include consideration of geological and seismic conditions. Soil conditions at the billboard site would be identified and considered as part of the design process, as required by the City's Building Services Manager. Compliance with existing CBC regulations would limit hazard impacts arising from liquefaction, landslides, lateral spreading, and unstable soils to less than significant.

e) **No Impact.** Development and operation of the proposed billboard would not require use septic tanks, as signs would not create sewage waste. No impact would occur.

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[21] California State Department of Conservation. California Geological Survey, Seismic Hazard Zones. Los Alamitos Quadrangle, March 25, 1999.

4.7 – Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑

a) **Less Than Significant Impact.** Climate change is the distinct change in measures of climate for a long time period.[22] Climate change is the result of numerous, cumulative sources of greenhouse gas emissions all over the world. Natural changes in climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e. changes in ocean circulation). Human activities can affect the atmosphere through emissions of greenhouse gases (GHG) and changes to the planet's surface. Human activities that produce GHGs are the burning of fossil fuels (coal, oil and natural gas for heating and electricity, gasoline and diesel for transportation), methane from landfill wastes and raising livestock, deforestation activities, and some agricultural practices.

Greenhouse gases differ from other emissions in that they contribute to the "greenhouse effect." The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it warms the planet by approximately 60° Fahrenheit. Emissions from human activities since the beginning of the industrial revolution (approximately 250 years ago) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Greenhouse gases occur naturally and from human activities. Greenhouse gases produced by human activities include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Since 1750, the U.S. Environmental Protection Agency estimates that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity. Emissions of greenhouse gases affect the atmosphere directly by changing its chemical composition while changes to the land surface indirectly affect the atmosphere by changing the way the Earth absorbs gases from the atmosphere.

Construction and operation of the proposed billboard would create short-term construction-related greenhouse gas emissions. A numerical threshold for determining the significance of greenhouse gas emissions in the South Coast Air Basin has not officially been adopted by the SCAQMD. As an interim threshold based on guidance provided in the CAPCOA *CEQA and Climate Change* white paper, a non-zero threshold based on Approach 2 of the SCAQMD

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22 United States Environmental Protection Agency. *Frequently Asked Questions About Global Warming and Climate Change. Back to Basics.* April 2009.

handbook would be used.[23] Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest proposed threshold developed by SCAQMD using this method is 3,000 metric tons carbon dioxide equivalent ($MTCO_2E$) per year for commercial and residential projects.[24] This threshold is based on the review of 711 CEQA projects.

The CEQA Guidelines require a lead agency to make a good-faith effort based, to the extent possible, on scientific and factual data to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Operational emissions associated with the proposed Billboard would not include GHG emissions from mobile sources (transportation), water use and treatment, or waste disposal. Electricity use of each of the proposed billboard faces is considered to be nominal (less than 1.0 $MTCO_2E$ annually). It is therefore assumed that, given the limited scope of construction and minimal operational electricity demand of the proposed billboard, greenhouse gas emissions associated with the proposed project would not exceed SCAQMD's proposed 3,000 $MTCO_2E$ threshold; therefore, impacts would be less than significant.

b) **No Impact.** The City has adopted the 2013 edition of the CBC, including the California Green Building Standards Code. Construction of the proposed Billboard would be subject to the California Green Building Standards Code. The City of Garden Grove does not have any additional adopted plans, policies, standards, or regulations related to climate change and GHG emissions. No impact would occur.

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23 California Air Pollution Control Officers Association. *CEQA and Climate Change*. January 2008.

24 South Coast Air Quality Management District. CEQA Significance Thresholds Working Group. Meeting # 15, Main Presentation. September 28, 2010.

4.8 – Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑

a) **Less than Significant Impact.** The project would not involve the transport, use, or disposal of significant amounts of hazardous materials requiring special control measures. The small amount of paints and other substances used for maintenance of equipment would not be substantially hazardous and would be used in accordance with their labeling; thus, the project would have no impact on the public or the environment through the routine transport, use, or disposal of hazardous materials.

During construction and installation of the proposed billboard, a hole would be drilled and the excavated soil would be transported off site. Additionally, development of the proposed billboard may include minor trenching to connect to the electrical supply. Prior to construction activities, the sign location would be assessed for the presence of hazardous materials, which, if present, would be handled according to existing federal, State, and local regulations regarding hazardous materials handling and disposal. Based on the foregoing, impact relating to hazardous materials would be less than significant.

b) **Less than Significant Impact.** The proposed billboard would not utilize hazardous materials or produce hazardous wastes. No demolition of existing structures would be necessary that would expose persons to asbestos or other hazardous materials. Development of the proposed billboard would also be required to comply with the City's ordinances for construction materials, which requires diversion of at least 50 percent of the project's demolition waste.

Electronic components of the proposed billboard may contain materials considered "e-waste" when disposed of due to potential hazardous metals, flame-retardants, and other chemicals. The operator of the proposed Billboard would be required to follow applicable regulations regarding proper disposal and/or recycling, as appropriate, as components are replaced or removed over time; therefore, there is little potential for a hazardous release that could significantly impact the public. Impacts would be less than significant with implementation of existing regulations.

c) **Less than Significant Impact.** Operation of the proposed billboard would not generate any hazardous emissions, and storage, handling, production or disposal of acutely hazardous materials is not required or proposed for any aspect of this project. As discussed in Section 4.8.b, existing regulations address potential off-site construction-related hazards associated with removal and replacement of e-waste. Impact would be less than significant with implementation of existing regulations.

d) **No Impact.** The proposed project site is not listed on the State *Cortese List*, a compilation of various sites throughout the State that have been compromised due to soil or groundwater contamination from past uses.[25] Based upon review of the *Cortese List*, the parcel proposed for the billboard is not:

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[25] California Environmental Protection Agency. Cortese List. www.calepa.ca.gov/SiteCleanup/CorteseList/ [Accessed April 2016].

- listed as a hazardous waste and substance site by the Department of Toxic Substances Control (DTSC),[26]
- listed as a leaking underground storage tank (LUST) site by the State Water Resources Control Board (SWRCB),[27]
- listed as a hazardous solid waste disposal site by the SWRCB,[28]
- currently subject to a Cease and Desist Order (CDO) or a Cleanup and Abatement Order (CAO) as issued by the SWRCB,[29] or
- developed within a hazardous waste facility subject to corrective action by the DTSC.[30]

e-f) **No Impact.** There are no public airports or private airstrips within two miles of the proposed project site. The nearest airport is Orange County-John Wayne Airport, located approximately 6.7 miles south of the project site. Los Alamitos Air Force Base is located approximately 6.92 miles west of the project site. The project is not located within the Airport Land Use Plan planning area of either of these airports. No impact would occur.

g) **No Impact.** Development of the proposed billboard would not substantially change existing conditions with regard to transportation routes or evacuation plans. As there are no residential uses associated with development of billboard, the proposed project would not increase the population of the area. There are also no proposed new commercial buildings associated with the proposed billboard.

No public or private streets would be closed during or following construction of the proposed Billboard, and development of the project would have no effect upon existing opportunities for emergency access/evacuation on the site or to any surrounding land uses. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or evacuation plan. No impact would occur.

h) **No Impact.** There are no wildland conditions within the urbanized area that the project would be located. No impact would occur.

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26 California Department of Toxic Substances Control. EnviroStor. www.envirostor.dtsc.ca.gov/public/search.asp [Accessed April 2016].

27 California State Water Resources Control Board. GeoTracker. www.geotracker.waterboards.ca.gov [Accessed April 2016].

28 California State Water Resources Control Board. Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit. www.calepa.ca.gov/SiteCleanup/CorteseList/CurrentList.pdf [Accessed April 2016].

29 California State Water Resources Control Board. List of Active CDO and CAO. www.calepa.ca.gov/SiteCleanup/CorteseList/CDOCAOList.xls [Accessed April 2016].

30 California Department of Toxic Substances Control. Hazardous Facilities Subject to Corrective Action. www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm#Facilities [Accessed April 2016].

4.9 – Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☑	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☑	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☑	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☑	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☑	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☑
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☑
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☑	☐
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

a) **Less Than Significant Impact.** Operation of the proposed billboard would not involve the use of water or generation of wastewater. Short-term surface water quality impacts could potentially occur during construction of the sign due to construction-related activities such as drilling the hole for the foundation and pouring concrete. Runoff of loose soils and/or construction wastes and fuels during a rainstorm could flow into local storm drains. Such contaminated runoff could potentially threaten downstream water resources that receive runoff from the local drainage network. Compliance with the City's standard stormwater runoff provisions for construction activities, such as runoff control and other measures set forth in Municipal Code Chapter 6.40 (Stormwater Quality), would ensure that the projects do not violate any water quality standards or any waste discharge requirements during construction. Due to the lack of significant grading, earth-moving activities, and paving as part of the project, impact would be less than significant.

b) **Less Than Significant Impact.** The proposed billboard would not require water to operate. The proposed project site is paved and provides for little infiltration of water into underground aquifers. The site does not support any groundwater production systems, and construction and operation of the proposed billboard would not interfere with the operation of any production system. Development of the proposed billboard would not substantially change the amount of existing impervious surface area and would not have a substantial impact on groundwater recharge.

Development of the proposed billboard would not involve substantial excavation or trenching that would impact groundwater. Development of the sign would include drilling a hole approximately five feet in diameter to a depth of approximately 21 to 32 feet, depending on the location. In the event that groundwater is encountered and dewatering activities are required, it would be short term, as construction of the billboard would be expected to take 19 to 21 days to complete and the foundation hole would be filled with concrete, resulting in minimal effects to groundwater. Also, any groundwater extracted would be controlled pursuant to City-required Best Management Practices (BMPs) pursuant to its NPDES permit. Impact would be less than significant.

c-e) **Less Than Significant Impact.** There are no streams on the proposed project site, and development of the proposed billboard would not result in the alteration of any stream course. The proposed project site is fully developed and paved as a commercial complex, with drainage directed to gutters that discharge drainage flows into the existing stormwater collection system. Development of the proposed billboard would not impact or alter existing drainage flows or watercourses. At the completion of construction of the proposed billboard, the site would continue to consist of impervious surfaces and landscaped areas, and would therefore not be prone to substantial erosion. The proposed project would not be considered an industrial use that produces pollutants and therefore would not result in substantial pollutant loading such that treatment control best management practices (BMPs) would be required to protect downstream water quality. Impact would be less than significant.

During construction of the proposed billboard, pollutants may be created that could impact runoff water quality. However, minimal pollutants would be created due to the limited extent and scope of sign construction. Compliance with the City's standard stormwater runoff provisions for construction activities (BMPs pursuant to the City's NPDES permit) would ensure that the development of the proposed billboard does not violate any water quality standards or any waste discharge requirements during construction. Impact would be less than significant.

f) **No Impact.** The proposed billboard would not have the potential to otherwise degrade water quality beyond those issues discussed in Section 4.9 since the project would not involve any water use or create runoff.

g) **No Impact.** The proposed project would not include the development of any housing; therefore, no impact would occur.

h) **Impact.** The proposed project site is located in a Special Flood Hazard Area, as mapped by the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs), and is therefore subject to inundation by the 1% annual chance flood. As such, the project site is subject to flooding. However, the proposed billboard, given its small footprint, would not would impede or redirect flood flows.[31] Therefore, no impediment of flood flows would occur.

i) **Less than Significant Impact.** The proposed project site is located in a Special Flood Hazard Area subject to inundation by the 1% annual chance flood, as shown on FEMA's latest FIRM, indicating that the parcel is subject to flooding. However, development of the proposed billboard would not expose structures or the public to flooding hazards, either directly or due to the failure of a dam or levee, because the nature of the development is such that injury or the loss of life would not occur in the event of flood because the development does not include the construction of buildings or housing that would be occupied by people. Moreover, dam inundation is not considered to be a significant risk to development along the SR-22 corridor. Construction of the proposed billboard would not be subject to any special design standards related to protection from a dam failure. Impact would be less than significant.

j) **No Impact.** The proposed billboard would not be exposed to tsunami hazards due to the site's elevation and distance (nearly 10 miles) from the Pacific Ocean. All of Garden Grove, including the project site, is not located near any body of water or water storage facility that would be considered susceptible to seiche. No significant hills, mountains, or washes exist in the immediate vicinity that could result in mudflows onto or from the project site. No impact would occur.

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[31] Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06059C0143J. December 3, 2009. https://msc.fema.gov/portal/search?AddressQuery=garden%20grove%2C%20ca#searchresultsanchor [Accessed April 2016].

4.10 – Land Use and Planning

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☑	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

a) **No Impact.** The proposed project site currently supports commercial uses. Construction of the proposed billboard would not physically divide the surrounding community since it would be located on a site zoned for and supporting commercial uses. The proposed project would have no impact on land use or circulation patterns within the community. Therefore, no impact would occur.

b) **Less than Significant Impact.** The proposed project parcel is located along the SR-22 freeway corridor. The proposed project does not require a General Plan Amendment and thus would not conflict with policies designed to protect the environment. While the Garden Grove Municipal Code prohibits the establishment of new billboards to minimize visual impact, Municipal Code Section 9.20.110 allows the owner of an existing legal non-conforming billboard located within the City to apply to relocate the billboard to another location within the City. Such relocated billboards may be converted to include digital displays if located within the Garden Grove (22) Freeway Corridor (per the Code, the area within the City comprised of the land within 300 feet of either edge of the California State Route 22 Freeway right-of-way). The proposed project includes the removal of five existing billboard faces within the SR-22 corridor and thus is consistent with City policies and regulations intended to avoid adverse environmental effects.[32]

The proposed billboard is required to comply with Municipal Code requirements for billboards and digital billboards in particular. The proposed billboard would be located in a completely commercial/industrial area, away from residential dwellings, as required by the zoning ordinance. However, due to the fact that the sign would be located within 350 feet of residentially zoned properties to the north (Elks' Lodge), northwest (church), and southwest (single-family homes), a zoning variance was requested to allow the proposed location and siting of the billboard. In order for a variance to be granted by the Planning Commission, a project must demonstrate conformance with all of the following requirements:

[32] City of Garden Grove. Garden Grove Municipal Code Section 9.20.110 (Billboards). 2014.

1) There are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood;
2) Such variance is necessary for the preservation and enjoyment of a substantial property right possessed by other property in the same vicinity and zone but which is denied to the subject property;
3) The granting of the variance would not be materially detrimental to the public welfare or injurious to the property or improvements in such zone or neighborhood in which the property is located;
4) The granting of such variance would not adversely affect the City's General Plan; and
5) Approval of the variance is subject to such conditions as will assure that it does not constitute a grant of special privileges inconsistent with the limitations upon other properties in the vicinity and zone in which the subject property is situated.

The project applicant has provided evidence that the proposed site is the only location in the area (and one of just two locations in the entire city) adjacent to SR-22 that is not designated as "landscaped" by the State of California (Caltrans) and therefore could allow a new outdoor advertising structure (findings #1 and #2). This fact indicates that a very limited number of properties along SR-22 are suitable for a billboard. Additionally, evidence provided by the applicant indicates that the property to the immediate southeast (on the opposite side of SR-22) has been developed with a digital billboard of similar size and height to that proposed, with no apparent adverse effect (finding #3). Further, the applicant presents information that the proposed sign structure would be situated well above on-site and adjacent uses, and would be oriented entirely towards traffic on SR-22 freeway and in compliance with Caltrans' guidance for the design and operation of digital billboards (finding #3). The applicant demonstrated that the subject property is designated in the City's General Plan for commercial/industrial uses, and the proposed use is permitted within designated commercial/industrial zones per the sign ordinance (finding #4). Lastly, because the City will impose conditions on the operation of the billboard similar to those that would be imposed on any similar application, the project would not be afforded special privileges (finding #5). For these reasons, the granting of the variance would not to have the potential to be materially detrimental to the public welfare and would not adversely affect the City's General Plan or the intent of the Freeway Corridor. As such, the project would not conflict with any local policy or ordinance designed to mitigate environmental impacts. The proposed billboard would be subject to certain conditions of approval—including long-term review of potential light-related impacts—to minimize visual impacts on surrounding uses and ensure continued safety surrounding the sites. Other potential impacts, including aesthetics, are discussed in other sections of this Initial Study. Impact would be less than significant.

c) **No Impact.** As discussed in Checklist Response 4.4.f above, the project site is fully developed and within an urbanized area. Surrounding areas are not part of any habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan. As such, no impact would occur.

4.11 – Mineral Resources

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

a-b) **No Impact.** The proposed project is located in a completely urbanized area. No mineral extraction or processing facilities exist on or adjacent to the proposed site. No known mineral resources exist within the City of Garden Grove.[33] The project would not result in the loss of availability of an important mineral resource recovery site; no impact would occur.

[33] City of Garden Grove. Garden Grove General Plan 2030: Conservation Element.

4.12 – Noise

Would the project result in:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Noise can be defined as unwanted sound. Sound (and therefore noise) consists of energy waves that people receive and interpret. Sound pressure levels are described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called *bels*. In order to provide a finer description of sound, a *bel* is subdivided into ten *decibels*, abbreviated dB. To account for the range of sound that human hearing perceives, a modified scale is utilized known as the A-weighted decibel (dBA). Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dBA when it passes an observer, two 2 cars passing simultaneously would not produce 140 dBA. In fact, they would combine to produce 73 dBA. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic would increase the traffic noise level

by 3 dBA. Conversely, halving the traffic volume or speed would reduce the traffic noise level by 3 dBA. A 3 dBA change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a 5 dBA change is generally *readily perceptible*.[34]

The proposed Billboard is located in a fully urbanized area, in close proximity to the SR-22 freeway, and is surrounded by commercial, industrial and institutional uses. Existing noise conditions are representative of this environment. Traffic noise from SR-22 is the greatest contributor to ambient noise levels near the project site. There are no discernible stationary noise sources within the project site. The nearest sensitive receptors are the single-family homes located to the southwest, on the opposite side of the freeway. These receptors are located approximately 308 feet from the property line to the location of the proposed sign pole.

a) **Less Than Significant Impact.** The City's Municipal Code Chapter 8.47 ("Noise Control") contains the City's noise level standards. Additional noise standards are included in Municipal Code Sections 8.47.040 ("Ambient Base Noise Levels") and 8.47.050 ("General Noise Regulation"). Construction of the proposed billboard would result in minimal, short-term construction-related noise, anticipated to last 19 to 21 days. Project-related construction would result in short-term increases in noise levels and groundborne vibration on and immediately surrounding the site. However, given the small-scale nature of the proposed billboard, the short-term noise increase is not expected to exceed State recommended noise compatibility standards or local noise ordinances. Moreover, the proposed billboard will not produce operational noise (other than periodic, routine site maintenance); therefore, impacts would be less than significant.

b) **Less Than Significant Impact.** Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV would be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment.[35] The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads. Operation of the proposed Billboard would not include uses that cause vibration.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activities have the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. Construction of the proposed billboard would not include demolition, site clearing, grading, or other earth-moving activities that require any of the previously listed equipment. Therefore, the proposed project is not anticipated to result in vibration impacts. Activities associated with construction and operation of the proposed billboard would not result in any vibration-related impacts to adjacent properties. Impact would be less than significant.

c) **No Impact.** The proposed project would not increase ambient noise levels due to increased traffic generation in the project vicinity since the only associated vehicle trips would be those required for periodic sign maintenance. The proposed Billboard would not create any noise during operation. Therefore, the proposed project would not

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34 California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.

35 California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual. June 2004.

create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; no impact would occur.

d) **Less Than Significant Impact.** The project would result in temporary construction-related noise increases. However, these increases would be temporary, as construction of billboards generally takes 19 to 21 days. Moreover, construction of the proposed Billboard does not require any demolition, grading, or other earth-moving activities that cause substantial increases in noise. Short-term maximum noise levels generated by heavy construction equipment can range from approximately 68 dBA to noise levels in excess of 100 dBA when measured at 50 feet. These noise levels would diminish with distance from the construction site at a rate of approximately 6 dBA per each doubling of distance. Heavy construction equipment utilized for construction of the billboard would include a drilling rig, skip loader, dump truck, crane truck, and flatbed truck for transporting sign structures. The City's Municipal Code limits hours of construction to 7:00 A.M. to 10:00 P.M.[36] Adherence to these hours would ensure that the project is in compliance with all local construction noise standards. Based on the location of nearest sensitive receptors, the type of equipment used in the construction process, and the relatively short time period of construction that is required for signs, construction noise impacts associated with the proposed project would be less than significant.

Operationally, the project would result only in periodic noise associated with maintenance of the billboard sign; these activities would involve use of typical commercial-level power equipment, and the City's Noise Ordinance would apply to such activities. Operation of the billboard would not include other periodic outdoor noise sources such as landscaping activities or solid waste and recycling pick-up. Pole signs and billboard signs do not have any noise-related operational impacts. Pole signs and static billboards do not generate any noise, and digital LED billboards are not designed to emit any sounds. Long-term operation impacts of the proposed billboard would not expose persons to noise levels that exceed the standards of the Municipal Code, nor would it exceed existing ambient noise level conditions; therefore, impact would be less than significant.

e, f) **No Impact.** No airport land use plans apply to the area, and the proposed project site is not located within two miles of an airport. No impacts to airport land use plans or airports could occur. There are also no private airstrips in the project vicinity; there would be no impacts related to excessive noise near a private airstrip.

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36 City of Garden Grove. Municipal Code Section 8.47.060 "Special Noise Sources", Construction of Buildings and Projects.

4.13 – Population and Housing

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

a-c) **No Impact.** The proposed Billboard would not entail establishing any housing or creating any job-creating uses and would be developed on a site currently supporting commercial uses. Therefore, would not induce substantial population growth in the area nor result in the removal of any housing. No impact would occur.

4.14 – Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	☑
b) Police protection?	☐	☐	☐	☑
c) Schools?	☐	☐	☐	☑
d) Parks?	☐	☐	☐	☑
e) Other public facilities?	☐	☐	☐	☑

a) **No Impact.** No new fire stations or other capital improvements would need to be built and no new fire personnel would need to be hired to maintain existing service ratios and response times, as the project would not increase population or the need to service them. No impact related to fire protection services would occur.

b) **No Impact.** The proposed billboard would not increase the residential population or generate new employment; therefore, the project would not require law enforcement and public safety services from the Garden Grove Police Department. No new stations or other capital improvement would be required, and no new personnel would need to be hired to maintain existing service ratios and response times. No impact related to police protection services would occur.

c) **No Impact.** The proposed billboard would not generate any employees nor house any residents who might attend a local school. No impact would occur.

d) **No Impact.** The proposed billboard would not generate any employees nor house any residents who might increase the demand for new or use of existing park or recreation facilities. No impact would occur.

e) **No Impact.** No impact would occur to other public facilities such as libraries because the proposed Billboard would not expand the residential population.

4.15 – Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☑

a) **No Impact.** The proposed project would not create new households that could increase usage of local and regional parks and recreation facilities. No impact would occur.

b) **No Impact.** The proposed project would not include construction of any recreation facilities and would not require construction or improvement of any off-site facilities; thus, no impact would occur.

4.16 – Transportation and Traffic

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☑	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☑	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☑	☐
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☑	☐	☐
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☑	☐

a, b, c, f) **Less than Significant Impact.** Construction and operation of the proposed Billboard would generate only minimal vehicle trips on existing public streets. During construction activity, per standard City practices the applicant would be required to prepare and implement a temporary traffic control plan, as warranted. As noted above, the project site is not located near an airport and billboard operations would not generate any new airport-related trips. Impacts would be less than significant.

d) **Less than Significant Impact with Mitigation Incorporated.** The project would involve the construction of a digital billboard within the Garden Grove (SR-22) Freeway Corridor within the City. The proposed Billboard would be visible primarily from SR-22 freeway, to which it would be oriented, but would also be visible from surrounding public streets.

The capability of digital billboards to present changing images has raised general concerns regarding the effect of such signage on traffic safety. The primary concern has been effects on driver attention, but concerns have also been raised regarding the potential for such signage to produce light of such intensity or direction that it could interfere with driver vision. This is a topic of ongoing research. The FHWA,[37] the American Association of State Highway and Transportation Officials, the National Cooperative Highway Research Program (NCHRP),[38] the Transportation Research Board, the Illumination Engineering Society of America,[39] the digital billboard industry,[40] and private groups have conducted or participated in numerous research studies. Literature reviews have found that there are no definitive, widely accepted conclusions about the presence or strength of adverse safety impacts from digital billboards, or about specific location, design, and operating standards that would protect public safety.[41] Continued research is being conducted by various government agencies and private organizations.

The existing research points to a number of spatial and operational characteristics that could affect safety. These are mostly related to brightness and message duration. With regard to brightness, the brightness of a digital billboard would attract a driver's gaze earlier and longer than other visual stimuli that appear less bright.[42] Also, the NCHRP report notes that at night, dawn or dusk, or in inclement weather, a bright sign can draw attention away from the road and traffic, and render less brightly lit official traffic signs, markings, and brake lights, less conspicuous and more difficult to discern. With regard to message duration, drivers would be more distracted by a display that changes as they approach it; as such, a longer message duration lowers the number of message changes seen by a driver and is less distracting.[43] The FHWA has recommended a message duration of eight seconds;[44] California requires a minimum of four seconds.[45]

Another issue to consider is transition time between displays on the billboard, as it is a combination of brightness and apparent motion that attracts a viewer's gaze to the sign. A perceptible dark or blank interval between successive displays would increase the sense of apparent motion. The FHWA suggests that transition between messages be limited to one to two seconds.[46] Visual effects, such as fade, dissolve, or animation in the transition between successive messages is widely regarded as a distracting traffic safety hazard. State and federal law also establish

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37 U.S. Department of Transportation Federal Highway Administration. The Effects of Commercial Electronic Variable Message Signs (CEVMS) on Driver Attention and Distraction: An Update. Publication No. FHWA-HRT-09-018. February 2009.

38 National Cooperative Highway Research Program/Jerry Wachtel, CPE. Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs, NCRHP Project 20-7 (256). April 2009. This study was completed for the American Association of State Highway and Transportation Officials.

39 Illumination Engineering Society of North America. IESNA Lighting Handbook. 9th Edition.

40 Lighting Sciences/Ian Lewin Ph.D. Digital Billboard Recommendations and Comparisons to Conventional Billboards. 2007.

41 National Cooperative Highway Research Program/Jerry Wachtel, CPE. Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs, NCRHP Project 20-7 (256). April 2009.

42 Ibid.

43 Ibid.

44 U.S. Department of Transportation, Federal Highway Administration. Information: Guidance on Off-Premise Changeable Message Signs. September 25, 2007.

45 California Outdoor Advertising Act. Section 5405.

46 U.S. Department of Transportation, Federal Highway Administration. Information: Guidance on Off-Premise Changeable Message Signs. September 25, 2007.

minimum spacing distance between digital billboards, of 1,000 feet. Additionally, digital billboards should not be placed near driver decision and action points, such as interchanges and curves, or near official traffic control signs that guide drivers to these actions, as this is a potential traffic safety concern.[47] The proposed Billboard would be required to comply with this spacing requirement.

The proposed billboard would also be required to comply with all existing federal and State laws and regulations related to billboards, including the Highway Beautification Act, FHWA agreements with the State pursuant to the Highway Beautification Act, the California Outdoor Advertising Act, and the California Vehicle Code. These laws and regulations are enforced by Caltrans and the California Highway Patrol. To ensure establishment and continued operation of the billboard within acceptable safety ranges, the following mitigation measures are included.

Mitigation Measures

TRANS-1 The operator of the digital LED billboard shall comply with the following at all times:

a) No special visual effects that include moving or flashing lights shall accompany the transition between two successive messages, and no special visual effects shall accompany any message display.
b) The minimum display duration time for messages shall be not less than eight seconds, and the minimum display time between messages shall be not more than one second.
c) The LED billboard shall not contain any software, hardware, or other technology that would allow the billboard to interact with drivers, vehicles or any device located in vehicles, including, but not limited to, a radio frequency identification device, geographic positions system, or other device.
d) In the event of any failure or combination of failures that affect the digital billboards' luminance, the operator shall impose a default to an output level no higher than four percent of the maximum luminance of the billboard. If this cannot be achieved, then the display shall be required to default to an "off" position until the problem can be resolved.

TRANS-2 The operator of the digital LED billboard shall submit, within 30 days following June 30 of each year, a written report regarding operation of each digital billboard during the preceding period of July 1 to June 30. The operator may submit a combined report for all such digital billboards operated by such operator within the SR-22 freeway corridor. The report shall, when appropriate, identify incidents or facts that relate to specific digital billboards. The report shall be submitted to the Office of the City Manager and the City Attorney, and shall include the following information:

a) Status of the operator's license as required by California Business and Professions Code paragraph 5300 et seq.;
b) Status of the required permit for individual digital billboards, as required by California Business and Professions Code paragraph 5350 et seq.;
c) Compliance with the California Outdoor Advertising Act, California Business and Professions Code paragraph 5200 and all regulations adopted pursuant to such Act;
d) Compliance with California Vehicle Code paragraphs 21466.5 and 21467;
e) Compliance with provisions of written agreements between the U.S. Department of Transportation and the California Department of Transportation pursuant to the federal Highway Beautification Act (23 U.S.C. paragraph131);
f) Compliance with mitigation measures and/or conditions of approval adopted as part of the project approval;
g) Each written or oral complaint received by the operator, or conveyed to the operator by any government agency or any other person, regarding operation of digital billboards within the Garden Grove (SR-22) Freeway Corridor;

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47 National Cooperative Highway Research Program/Jerry Wachtel, CPE. Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs, NCRHP Project 20-7 (256). April 2009.

h) Each malfunction or failure of a digital billboard operated by the operator within the Garden Grove (SR-22) Freeway Corridor, which shall include only those malfunctions or failures that are visible to the naked eye, including reason for the malfunction, duration and confirmation of repair; and
i) Operating status of each digital billboard operated by the operator within the Garden Grove (SR-22) Freeway Corridor, including estimated date of repair and return to normal operation of any digital billboard identified in the report as not operating in normal mode.

If the report identifies any violation of the operational conditions required by the City of the LED billboard, the billboard shall be switched off until such time corrective actions, to the satisfaction of the Community and Economic Development Director, have been taken.

These measures would ensure that operation of the proposed billboard would meet short- and long-term safety requirements in the future; therefore, with incorporation of mitigation, impact would be less than significant.

e) **No Impact.** The proposed billboard would be located on a private parcel, outside of travelled portions of the driveway and parking areas, and would present no obstacles to emergency access. All construction activities would occur within the proposed parcel and would not involve any road closures on SR-22 or any other public street.

The proposed billboard would also have the capacity to display official messages regarding emergencies and could perform as part of the emergency response system, thus resulting in beneficial impacts. Therefore, the project would have no impact with regard to inadequate emergency access.

4.17 – Utilities and Service Systems

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☑
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☑
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☑

a-g) **No Impact.** The proposed billboard would require electrical service to support digital LED messages. Electric power service is currently provided to the project site suitable for commercial purposes, and providing modified electrical services would not result in any significant effects. The proposed Billboard would use electrical energy and would be constructed pursuant to current electrical codes, including Title 24 of the State Building Code. These standards would ensure that electrical energy would be used efficiently. Section 4.7 discusses the related greenhouse gas emissions associated with this energy use. Impact would be less than significant.

Operation of the proposed billboard would not generate any solid waste or wastewater, nor would operations require a supply of potable water. All waste materials associated with the removal of existing billboards would be recycled or deposited in landfills. Excavated soil would either be reused if determined to be feasible or be disposed of in landfills in compliance with State and local laws. Construction and operation of the proposed billboard would not require other utility services and would not affect drainage. Installation of the proposed billboard would include coordination with various other utility companies via the Underground Service Alert to prevent conflicts with subterranean utilities. Therefore, there would be no impact on utility services.

4.18 – Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☑	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable?	☐	☑	☐	☐
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐

a) **Less Than Significant.** The proposed billboard would not substantially impact any agricultural or forest resources, as discussed in Section 4.2. The project site is located within an urbanized area with no natural habitat. The project would not significantly impact any sensitive plants, plant communities, fish, wildlife, or habitat for any sensitive species as discussed in Section 4.4. The project would not significantly impact any mineral resources, as discussed in section 4.11. Adverse impacts to population and housing would not occur, as shown in Section 4.13. The project would not significantly impact the administration of public resources, as discussed in Section 4.14. The project would not significantly impact recreation facilities and/or resources, as discussed in Section 4.14. Adverse impacts to utilities and service systems would not occur, as discussed in section 4.15. The environmental analysis provided in Section 4.3 concludes that impacts related to emissions of criteria pollutants and other air quality impacts would be less than significant. Section 4.5 concludes that impacts related to cultural resources would be less than significant. Section 4.7 concludes that impacts related to geology and soils would be less than significant. The project would not significantly impact the environment with concern to the routine transport of hazardous materials, as concluded in Section 4.8. Impacts to hydrology and water quality were shown to be less than significant in Section 4.9. No impacts to land use and planning would occur because of the project, as discussed in Section 4.10. The environmental analysis provided in Section 4.12 concludes that impacts related to noise would be less than significant. Based on the preceding analysis of potential impacts in the responses to items 4.1 thru 4.17, no evidence is presented that this project would degrade the quality of the environment. The City hereby finds that impacts related to aesthetics, migratory birds, cultural resources, and traffic would be less than significant with mitigation incorporation as discussed in Section 4.1, 4.6, and 4.16 respectively.

b) **Less Than Significant with Mitigation Incorporation.** Cumulative impacts can result from the interactions of environmental changes resulting from one proposed project with changes resulting from other past, present, and

future projects that affect the same resources, utilities and infrastructure systems, public services, transportation network elements, air basin, watershed, or other physical conditions. Such impacts could be short term and temporary, usually consisting of overlapping construction impacts, as well as long term, due to the permanent land use changes involved in the project. Such impacts are expected to be less than significant for this project due to the fact that there are no other similar projects currently proposed within the project vicinity, and the proposed billboard would be a feature that is consistent with the character of the existing urbanized environment.

The proposed billboard would generally result in less than significant environmental impacts (with mitigation incorporated), as discussed herein. Short-term impacts related to light and glare and traffic hazards would be mitigated to less than significant levels. The proposed billboard could have the potential for long-term cumulative impacts if more digital billboards were to be constructed in the area in the future. However, as noted in Section 4.9 (Land Use and Planning), Caltrans has designated most of the SR-22 extent through Garden Grove as a landscaped area, within which billboards are not permitted; this condition would limit the establishment of additional billboards. Also, federal and State guidelines would be followed concerning the frequency at which signs can be placed along the freeway. Cumulative visual impacts would thus be avoided.

Impacts related to noise and air quality were determined to be less than significant given the limited scale of sign construction, and therefore would not contribute substantially to any other concurrent construction programs that may be occurring in the vicinity. Short-term impacts related to pollutant emissions would be less than significant and would not exceed maximum thresholds.

No other major projects are currently being planned to occur within the proposed project vicinity. Construction of the proposed billboard is generally estimated to take 19 to 21 days. Furthermore, development of the proposed billboard would require minimal on-site construction, which would result in less than significant impacts, as the sign structure is fabricated primarily off site. Construction that would occur on site would be limited to drilling a hole for the foundation, hauling away dirt and debris, and erecting the sign structure. Construction impacts were determined to be less than significant. The City hereby finds that the contribution of the proposed billboard to cumulative impacts would be less than significant with mitigation incorporation, as noted in previous sections of this Initial Study.

c) **Less Than Significant with Mitigation Incorporation.** Based on the analysis of the project's impacts in the responses to items 4.1 thru 4.17, there is no indication that this project could result in substantial adverse effects on human beings. While there would be limited temporary effects during construction related to noise and criteria pollutant emissions, these were determined to be to less than significant. Long-term effects would include minor changes of the visual character of the site and surrounding roadways due to the possible future addition of signs to the area and associated changes to lighting conditions. However, these changes are anticipated to be consistent with the existing aesthetic character and land uses of the area. Moreover, mitigation is incorporated to reduce the level of significance related to aesthetics and traffic safety to a less than significant level. The analysis herein concludes that direct and indirect environmental effects can be mitigated. Based on the analysis in this Initial Study, the City finds that direct and indirect impacts to human beings would be less than significant with mitigation incorporated.

5 References

5.1 – List of Preparers

City of Garden Grove (Lead Agency)

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Cameron Hile, Project Analyst

6 Summary of Mitigation Measures

AES-1: The applicant shall demonstrate compliance with a maximum 0.3 foot-candle increase over ambient light at 250 feet from the sign face at all times upon initial start-up through field testing. If subsequent complaints consisting of direct personal impacts are received by the City of Garden Grove, the City shall require the applicant to fund follow-up field testing by an independent contractor or City staff trained in the use of a handheld photometer to demonstrate continued compliance with these requirements. If increases in ambient light are found to be above the 0.3 foot-candle level, the dimming level shall be adjusted until this level can be demonstrated.

AES-2: Signs shall be installed with sensors which automatically lower light output in accordance with atmospheric conditions (i.e. cloudy or overcast weather). Throughout sign operation, the dimness setting of the LED sign shall be adjusted in real time so it does not exceed the level of illumination identified under Mitigation Measure AE-1.

TRANS-1 The operator of the digital LED billboard shall comply with the following at all times:

e) No special visual effects that include moving or flashing lights shall accompany the transition between two successive messages, and no special visual effects shall accompany any message display.
f) The minimum display duration time for messages shall be not less than eight seconds, and the minimum display time between messages shall be not more than one second.
g) The LED billboard shall not contain any software, hardware, or other technology that would allow the billboard to interact with drivers, vehicles or any device located in vehicles, including, but not limited to, a radio frequency identification device, geographic positions system, or other device.
h) In the event of any failure or combination of failures that affect the digital billboards' luminance, the operator shall impose a default to an output level no higher than four percent of the maximum luminance of the billboard. If this cannot be achieved, then the display shall be required to default to an "off" position until the problem can be resolved.

TRANS-2 The operator of the digital LED billboard shall submit, within 30 days following June 30 of each year, a written report regarding operation of each digital billboard during the preceding period of July 1 to June 30. The operator may submit a combined report for all such digital billboards operated by such operator within the SR-22 freeway corridor. The report shall, when appropriate, identify incidents or facts that relate to specific digital billboards. The report shall be submitted to the Office of the City Manager and the City Attorney, and shall include the following information:

j) Status of the operator's license as required by California Business and Professions Code paragraph 5300 et seq.;
k) Status of the required permit for individual digital billboards, as required by California Business and Professions Code paragraph 5350 et seq.;
l) Compliance with the California Outdoor Advertising Act, California Business and Professions Code paragraph 5200 and all regulations adopted pursuant to such Act;
m) Compliance with California Vehicle Code paragraphs 21466.5 and 21467;
n) Compliance with provisions of written agreements between the U.S. Department of Transportation and the California Department of Transportation pursuant to the federal Highway Beautification Act (23 U.S.C. paragraph131);
o) Compliance with mitigation measures and/or conditions of approval adopted as part of the project approval;
p) Each written or oral complaint received by the operator, or conveyed to the operator by any government agency or any other person, regarding operation of digital billboards within the Garden Grove (SR-22) Freeway Corridor;

q) Each malfunction or failure of a digital billboard operated by the operator within the Garden Grove (SR-22) Freeway Corridor, which shall include only those malfunctions or failures that are visible to the naked eye, including reason for the malfunction, duration and confirmation of repair; and
r) Operating status of each digital billboard operated by the operator within the Garden Grove (SR-22) Freeway Corridor, including estimated date of repair and return to normal operation of any digital billboard identified in the report as not operating in normal mode.

If the report identifies any violation of the operational conditions required by the City of the LED billboard, the billboard shall be switched off until such time corrective actions, to the satisfaction of the Community and Economic Development Director, have been taken.

7 Appendix Materials

Appendix A

Air Quality Modeling Data

Newhope Digital Billboard Project

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.10	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined

Construction Phase - Based on City construction estimates.

Off-road Equipment - Per City estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - According to City estimates.

Off-road Equipment - Per City Estimates

Demolition -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	300	0
tblConstructionPhase	NumDays	100.00	4.00
tblConstructionPhase	NumDays	100.00	1.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	100.00	7.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	1/22/2016	1/23/2016
tblLandUse	LandUseSquareFeet	0.00	200.00
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	HorsePower	62.00	97.00
tblOffRoadEquipment	HorsePower	62.00	89.00
tblOffRoadEquipment	HorsePower	62.00	226.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	9.00	97.00

tblOffRoadEquipment	HorsePower	64.00	205.00
tblOffRoadEquipment	HorsePower	80.00	226.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	LoadFactor	0.56	1.00
tblOffRoadEquipment	LoadFactor	0.73	1.00
tblOffRoadEquipment	LoadFactor	0.37	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0313	0.3273	0.1834	2.9000e-004	1.6700e-003	0.0188	0.0204	3.0000e-004	0.0174	0.0177	0.0000	26.9231	26.9231	7.2300e-003	0.0000	27.0749
Total	**0.0313**	**0.3273**	**0.1834**	**2.9000e-004**	**1.6700e-003**	**0.0188**	**0.0204**	**3.0000e-004**	**0.0174**	**0.0177**	**0.0000**	**26.9231**	**26.9231**	**7.2300e-003**	**0.0000**	**27.0749**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0313	0.3273	0.1834	2.9000e-004	1.6700e-003	0.0188	0.0204	3.0000e-004	0.0174	0.0177	0.0000	26.9230	26.9230	7.2300e-003	0.0000	27.0748
Total	**0.0313**	**0.3273**	**0.1834**	**2.9000e-004**	**1.6700e-003**	**0.0188**	**0.0204**	**3.0000e-004**	**0.0174**	**0.0177**	**0.0000**	**26.9230**	**26.9230**	**7.2300e-003**	**0.0000**	**27.0748**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.8000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.8000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	7.8000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.8000e-004**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Billboard Demolition	Demolition	1/1/2016	1/14/2016	5	10	
2	Site Preparation	Site Preparation	1/15/2016	1/18/2016	5	2	
3	Building Construction	Building Construction	1/19/2016	1/23/2016	5	4	
4	Building Construction 2	Building Construction	1/24/2016	1/25/2016	5	1	
5	Building Construction 3	Building Construction	1/26/2016	1/27/2016	5	2	
6	Building Construction 4	Building Construction	1/28/2016	2/1/2016	5	3	
7	Building Construction 5	Building Construction	2/2/2016	2/10/2016	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	1	8.00	97	1.00
Site Preparation	Bore/Drill Rigs	1	8.00	174	1.00
Site Preparation	Concrete/Industrial Saws	1	8.00	81	1.00
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Skid Steer Loaders	1	8.00	205	1.00
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	1.00
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cement and Mortar Mixers	1	8.00	97	1.00
Building Construction 2	Cranes	1	8.00	226	1.00

Building Construction 2	Forklifts	2	6.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 3	Aerial Lifts	1	8.00	89	1.00
Building Construction 3	Cranes	1	8.00	226	1.00
Building Construction 3	Forklifts	2	6.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Cranes	1	4.00	226	0.29
Building Construction 4	Forklifts	2	6.00	89	0.20
Building Construction 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Trenchers	1	8.00	226	1.00
Building Construction 5	Aerial Lifts	1	8.00	226	1.00
Building Construction 5	Cranes	1	4.00	226	0.29
Building Construction 5	Forklifts	2	6.00	89	0.20
Building Construction 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Billboard Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Billboard Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Billboard Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Billboard Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Billboard Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2800e-003	0.0440	0.0345	5.0000e-005		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	4.3130	4.3130	7.5000e-004	0.0000	4.3288
Total	**5.2800e-003**	**0.0440**	**0.0345**	**5.0000e-005**	**4.9000e-004**	**3.0800e-003**	**3.5700e-003**	**7.0000e-005**	**2.9700e-003**	**3.0400e-003**	**0.0000**	**4.3130**	**4.3130**	**7.5000e-004**	**0.0000**	**4.3288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	7.3000e-004	5.5000e-004	0.0000	4.0000e-005	1.0000e-005	5.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1686	0.1686	0.0000	0.0000	0.1686
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.4000e-004	2.4500e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4112	0.4112	2.0000e-005	0.0000	0.4116
Total	**2.0000e-004**	**9.7000e-004**	**3.0000e-003**	**1.0000e-005**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.5797**	**0.5797**	**2.0000e-005**	**0.0000**	**0.5802**

3.2 Billboard Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2800e-003	0.0440	0.0345	5.0000e-005		3.0800e-003	3.0800e-003		2.9700e-003	2.9700e-003	0.0000	4.3130	4.3130	7.5000e-004	0.0000	4.3287
Total	**5.2800e-003**	**0.0440**	**0.0345**	**5.0000e-005**	**4.9000e-004**	**3.0800e-003**	**3.5700e-003**	**7.0000e-005**	**2.9700e-003**	**3.0400e-003**	**0.0000**	**4.3130**	**4.3130**	**7.5000e-004**	**0.0000**	**4.3287**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	7.3000e-004	5.5000e-004	0.0000	4.0000e-005	1.0000e-005	5.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1686	0.1686	0.0000	0.0000	0.1686
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	2.4000e-004	2.4500e-003	1.0000e-005	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4112	0.4112	2.0000e-005	0.0000	0.4116
Total	**2.0000e-004**	**9.7000e-004**	**3.0000e-003**	**1.0000e-005**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**1.3000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.5797**	**0.5797**	**2.0000e-005**	**0.0000**	**0.5802**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-003	0.0357	0.0273	4.0000e-005		2.0000e-003	2.0000e-003		1.8800e-003	1.8800e-003	0.0000	3.8288	3.8288	1.0000e-003	0.0000	3.8498
Total	**3.4000e-003**	**0.0357**	**0.0273**	**4.0000e-005**	**5.3000e-004**	**2.0000e-003**	**2.5300e-003**	**6.0000e-005**	**1.8800e-003**	**1.9400e-003**	**0.0000**	**3.8288**	**3.8288**	**1.0000e-003**	**0.0000**	**3.8498**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.2000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1544
Total	**6.0000e-005**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1542**	**0.1542**	**1.0000e-005**	**0.0000**	**0.1544**

3.3 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-003	0.0357	0.0273	4.0000e-005		2.0000e-003	2.0000e-003		1.8800e-003	1.8800e-003	0.0000	3.8288	3.8288	1.0000e-003	0.0000	3.8498
Total	**3.4000e-003**	**0.0357**	**0.0273**	**4.0000e-005**	**5.3000e-004**	**2.0000e-003**	**2.5300e-003**	**6.0000e-005**	**1.8800e-003**	**1.9400e-003**	**0.0000**	**3.8288**	**3.8288**	**1.0000e-003**	**0.0000**	**3.8498**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	9.2000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1544
Total	**6.0000e-005**	**9.0000e-005**	**9.2000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1542**	**0.1542**	**1.0000e-005**	**0.0000**	**0.1544**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.0100e-003	0.0777	0.0340	6.0000e-005		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	5.2743	5.2743	1.5900e-003	0.0000	5.3077
Total	**7.0100e-003**	**0.0777**	**0.0340**	**6.0000e-005**		**4.1600e-003**	**4.1600e-003**		**3.8300e-003**	**3.8300e-003**	**0.0000**	**5.2743**	**5.2743**	**1.5900e-003**	**0.0000**	**5.3077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.0100e-003	0.0777	0.0340	6.0000e-005		4.1600e-003	4.1600e-003		3.8300e-003	3.8300e-003	0.0000	5.2743	5.2743	1.5900e-003	0.0000	5.3077
Total	**7.0100e-003**	**0.0777**	**0.0340**	**6.0000e-005**		**4.1600e-003**	**4.1600e-003**		**3.8300e-003**	**3.8300e-003**	**0.0000**	**5.2743**	**5.2743**	**1.5900e-003**	**0.0000**	**5.3077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction 2 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7500e-003	0.0194	8.5100e-003	1.0000e-005		1.0400e-003	1.0400e-003		9.6000e-004	9.6000e-004	0.0000	1.3186	1.3186	4.0000e-004	0.0000	1.3269
Total	**1.7500e-003**	**0.0194**	**8.5100e-003**	**1.0000e-005**		**1.0400e-003**	**1.0400e-003**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**1.3186**	**1.3186**	**4.0000e-004**	**0.0000**	**1.3269**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction 2 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.7500e-003	0.0194	8.5100e-003	1.0000e-005		1.0400e-003	1.0400e-003		9.6000e-004	9.6000e-004	0.0000	1.3186	1.3186	4.0000e-004	0.0000	1.3269
Total	**1.7500e-003**	**0.0194**	**8.5100e-003**	**1.0000e-005**		**1.0400e-003**	**1.0400e-003**		**9.6000e-004**	**9.6000e-004**	**0.0000**	**1.3186**	**1.3186**	**4.0000e-004**	**0.0000**	**1.3269**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction 3 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7600e-003	0.0431	0.0220	4.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	3.3580	3.3580	1.0100e-003	0.0000	3.3792
Total	**3.7600e-003**	**0.0431**	**0.0220**	**4.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**3.3580**	**3.3580**	**1.0100e-003**	**0.0000**	**3.3792**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Building Construction 3 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.7600e-003	0.0431	0.0220	4.0000e-005		2.2600e-003	2.2600e-003		2.0800e-003	2.0800e-003	0.0000	3.3580	3.3580	1.0100e-003	0.0000	3.3792
Total	**3.7600e-003**	**0.0431**	**0.0220**	**4.0000e-005**		**2.2600e-003**	**2.2600e-003**		**2.0800e-003**	**2.0800e-003**	**0.0000**	**3.3580**	**3.3580**	**1.0100e-003**	**0.0000**	**3.3792**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Building Construction 4 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9900e-003	0.0583	0.0245	5.0000e-005		2.9100e-003	2.9100e-003		2.6800e-003	2.6800e-003	0.0000	4.3545	4.3545	1.3100e-003	0.0000	4.3821
Total	**4.9900e-003**	**0.0583**	**0.0245**	**5.0000e-005**		**2.9100e-003**	**2.9100e-003**		**2.6800e-003**	**2.6800e-003**	**0.0000**	**4.3545**	**4.3545**	**1.3100e-003**	**0.0000**	**4.3821**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.7 Building Construction 4 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9900e-003	0.0583	0.0245	5.0000e-005		2.9100e-003	2.9100e-003		2.6800e-003	2.6800e-003	0.0000	4.3545	4.3545	1.3100e-003	0.0000	4.3821
Total	**4.9900e-003**	**0.0583**	**0.0245**	**5.0000e-005**		**2.9100e-003**	**2.9100e-003**		**2.6800e-003**	**2.6800e-003**	**0.0000**	**4.3545**	**4.3545**	**1.3100e-003**	**0.0000**	**4.3821**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Building Construction 5 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8400e-003	0.0480	0.0287	4.0000e-005		3.2900e-003	3.2900e-003		3.0300e-003	3.0300e-003	0.0000	3.7421	3.7421	1.1300e-003	0.0000	3.7658
Total	**4.8400e-003**	**0.0480**	**0.0287**	**4.0000e-005**		**3.2900e-003**	**3.2900e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**3.7421**	**3.7421**	**1.1300e-003**	**0.0000**	**3.7658**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.8 Building Construction 5 - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.8400e-003	0.0480	0.0287	4.0000e-005		3.2900e-003	3.2900e-003		3.0300e-003	3.0300e-003	0.0000	3.7421	3.7421	1.1300e-003	0.0000	3.7658
Total	**4.8400e-003**	**0.0480**	**0.0287**	**4.0000e-005**		**3.2900e-003**	**3.2900e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**3.7421**	**3.7421**	**1.1300e-003**	**0.0000**	**3.7658**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.8000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	7.8000e-004	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**7.8000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	6.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.2000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**7.8000e-004**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Newhope Digital Billboard Project

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.10	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined

Construction Phase - Based on City construction estimates.

Off-road Equipment - Per City estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - According to City estimates.

Off-road Equipment - Per City Estimates

Demolition -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	300	0
tblConstructionPhase	NumDays	100.00	4.00
tblConstructionPhase	NumDays	100.00	1.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	100.00	7.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	1/22/2016	1/23/2016
tblLandUse	LandUseSquareFeet	0.00	200.00
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	HorsePower	62.00	97.00
tblOffRoadEquipment	HorsePower	62.00	89.00
tblOffRoadEquipment	HorsePower	62.00	226.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	9.00	97.00

tblOffRoadEquipment	HorsePower	64.00	205.00
tblOffRoadEquipment	HorsePower	80.00	226.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	LoadFactor	0.56	1.00
tblOffRoadEquipment	LoadFactor	0.73	1.00
tblOffRoadEquipment	LoadFactor	0.37	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.7642	43.1322	28.2391	0.0435	0.6979	2.2568	2.6971	0.1017	2.0763	2.0763	0.0000	4,398.9146	4,398.9146	1.1165	0.0000	4,422.3614
Total	**3.7642**	**43.1322**	**28.2391**	**0.0435**	**0.6979**	**2.2568**	**2.6971**	**0.1017**	**2.0763**	**2.0763**	**0.0000**	**4,398.9146**	**4,398.9146**	**1.1165**	**0.0000**	**4,422.3614**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.7642	43.1322	28.2391	0.0435	0.6979	2.2568	2.6971	0.1017	2.0763	2.0763	0.0000	4,398.9146	4,398.9146	1.1165	0.0000	4,422.3613
Total	**3.7642**	**43.1322**	**28.2391**	**0.0435**	**0.6979**	**2.2568**	**2.6971**	**0.1017**	**2.0763**	**2.0763**	**0.0000**	**4,398.9146**	**4,398.9146**	**1.1165**	**0.0000**	**4,422.3613**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Billboard Demolition	Demolition	1/1/2016	1/14/2016	5	10	
2	Site Preparation	Site Preparation	1/15/2016	1/18/2016	5	2	
3	Building Construction	Building Construction	1/19/2016	1/23/2016	5	4	
4	Building Construction 2	Building Construction	1/24/2016	1/25/2016	5	1	
5	Building Construction 3	Building Construction	1/26/2016	1/27/2016	5	2	
6	Building Construction 4	Building Construction	1/28/2016	2/1/2016	5	3	
7	Building Construction 5	Building Construction	2/2/2016	2/10/2016	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	1	8.00	97	1.00
Site Preparation	Bore/Drill Rigs	1	8.00	174	1.00
Site Preparation	Concrete/Industrial Saws	1	8.00	81	1.00
Site Preparation	Graders	1	8.00	174	0.41

Site Preparation	Skid Steer Loaders	1	8.00	205	1.00
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	1.00
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cement and Mortar Mixers	1	8.00	97	1.00
Building Construction 2	Cranes	1	8.00	226	1.00
Building Construction 2	Forklifts	2	6.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 3	Aerial Lifts	1	8.00	89	1.00
Building Construction 3	Cranes	1	8.00	226	1.00
Building Construction 3	Forklifts	2	6.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Cranes	1	4.00	226	0.29
Building Construction 4	Forklifts	2	6.00	89	0.20
Building Construction 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Trenchers	1	8.00	226	1.00
Building Construction 5	Aerial Lifts	1	8.00	226	1.00
Building Construction 5	Cranes	1	4.00	226	0.29
Building Construction 5	Forklifts	2	6.00	89	0.20
Building Construction 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Billboard Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Billboard Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Billboard Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Billboard Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Billboard Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	1.0568	8.7972	6.8953	9.7000e-003		0.6159	0.6159		0.5944	0.5944		950.8527	950.8527	0.1654		954.3261
Total	**1.0568**	**8.7972**	**6.8953**	**9.7000e-003**	**0.0984**	**0.6159**	**0.7144**	**0.0149**	**0.5944**	**0.6093**		**950.8527**	**950.8527**	**0.1654**		**954.3261**

3.2 Billboard Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6200e-003	0.1384	0.0973	3.7000e-004	8.7100e-003	2.1400e-003	0.0109	2.3800e-003	1.9700e-003	4.3500e-003		37.2023	37.2023	2.7000e-004		37.2079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0333	0.0417	0.5189	1.1300e-003	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		95.1666	95.1666	4.8800e-003		95.2691
Total	**0.0419**	**0.1800**	**0.6162**	**1.5000e-003**	**0.0981**	**2.8900e-003**	**0.1010**	**0.0261**	**2.6600e-003**	**0.0288**		**132.3689**	**132.3689**	**5.1500e-003**		**132.4770**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	1.0568	8.7972	6.8953	9.7000e-003		0.6159	0.6159		0.5944	0.5944	0.0000	950.8527	950.8527	0.1654		954.3261
Total	**1.0568**	**8.7972**	**6.8953**	**9.7000e-003**	**0.0984**	**0.6159**	**0.7144**	**0.0149**	**0.5944**	**0.6093**	**0.0000**	**950.8527**	**950.8527**	**0.1654**		**954.3261**

3.2 Billboard Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.6200e-003	0.1384	0.0973	3.7000e-004	8.7100e-003	2.1400e-003	0.0109	2.3800e-003	1.9700e-003	4.3500e-003		37.2023	37.2023	2.7000e-004		37.2079
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0333	0.0417	0.5189	1.1300e-003	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		95.1666	95.1666	4.8800e-003		95.2691
Total	**0.0419**	**0.1800**	**0.6162**	**1.5000e-003**	**0.0981**	**2.8900e-003**	**0.1010**	**0.0261**	**2.6600e-003**	**0.0288**		**132.3689**	**132.3689**	**5.1500e-003**		**132.4770**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	3.4046	35.7200	27.2661	0.0414		1.9978	1.9978		1.8760	1.8760		4,220.4772	4,220.4772	1.1067		4,243.7185
Total	**3.4046**	**35.7200**	**27.2661**	**0.0414**	**0.5303**	**1.9978**	**2.5280**	**0.0573**	**1.8760**	**1.9333**		**4,220.4772**	**4,220.4772**	**1.1067**		**4,243.7185**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.0624**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	3.4046	35.7200	27.2661	0.0414		1.9978	1.9978		1.8760	1.8760	0.0000	4,220.4772	4,220.4772	1.1067		4,243.7185
Total	**3.4046**	**35.7200**	**27.2661**	**0.0414**	**0.5303**	**1.9978**	**2.5280**	**0.0573**	**1.8760**	**1.9333**	**0.0000**	**4,220.4772**	**4,220.4772**	**1.1067**		**4,243.7185**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0624	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.0624**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147		2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**		**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147	0.0000	2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**	**0.0000**	**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction 2 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147		2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**		**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.5 Building Construction 2 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147	0.0000	2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**	**0.0000**	**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.5 Building Construction 2 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.6 Building Construction 3 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7642	43.1322	22.0369	0.0356		2.2568	2.2568		2.0763	2.0763		3,701.5321	3,701.5321	1.1165		3,724.9789
Total	**3.7642**	**43.1322**	**22.0369**	**0.0356**		**2.2568**	**2.2568**		**2.0763**	**2.0763**		**3,701.5321**	**3,701.5321**	**1.1165**		**3,724.9789**

3.6 Building Construction 3 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7642	43.1322	22.0369	0.0356		2.2568	2.2568		2.0763	2.0763	0.0000	3,701.5321	3,701.5321	1.1165		3,724.9789
Total	**3.7642**	**43.1322**	**22.0369**	**0.0356**		**2.2568**	**2.2568**		**2.0763**	**2.0763**	**0.0000**	**3,701.5321**	**3,701.5321**	**1.1165**		**3,724.9789**

3.6 Building Construction 3 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.7 Building Construction 4 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3244	38.8639	16.3040	0.0308		1.9417	1.9417		1.7864	1.7864		3,200.0125	3,200.0125	0.9652		3,220.2825
Total	**3.3244**	**38.8639**	**16.3040**	**0.0308**		**1.9417**	**1.9417**		**1.7864**	**1.7864**		**3,200.0125**	**3,200.0125**	**0.9652**		**3,220.2825**

3.7 Building Construction 4 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3244	38.8639	16.3040	0.0308		1.9417	1.9417		1.7864	1.7864	0.0000	3,200.0125	3,200.0125	0.9652		3,220.2825
Total	**3.3244**	**38.8639**	**16.3040**	**0.0308**		**1.9417**	**1.9417**		**1.7864**	**1.7864**	**0.0000**	**3,200.0125**	**3,200.0125**	**0.9652**		**3,220.2825**

3.7 Building Construction 4 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.8 Building Construction 5 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.8 Building Construction 5 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.8 Building Construction 5 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Newhope Digital Billboard Project

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	1.00	User Defined Unit	0.10	200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - User Defined

Construction Phase - Based on City construction estimates.

Off-road Equipment - Per City estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - Based on City construction estimates.

Off-road Equipment - According to City estimates.

Off-road Equipment - Per City Estimates

Demolition -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	300	0
tblConstructionPhase	NumDays	100.00	4.00
tblConstructionPhase	NumDays	100.00	1.00
tblConstructionPhase	NumDays	100.00	2.00
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	100.00	7.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	1/22/2016	1/23/2016
tblLandUse	LandUseSquareFeet	0.00	200.00
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	HorsePower	62.00	97.00
tblOffRoadEquipment	HorsePower	62.00	89.00
tblOffRoadEquipment	HorsePower	62.00	226.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	9.00	97.00

tblOffRoadEquipment	HorsePower	64.00	205.00
tblOffRoadEquipment	HorsePower	80.00	226.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.29	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.31	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	LoadFactor	0.56	1.00
tblOffRoadEquipment	LoadFactor	0.73	1.00
tblOffRoadEquipment	LoadFactor	0.37	1.00
tblOffRoadEquipment	LoadFactor	0.50	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2017

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.7642	43.1322	28.1632	0.0434	0.6979	2.2568	2.6971	0.1017	2.0763	2.0763	0.0000	4,387.8315	4,387.8315	1.1165	0.0000	4,411.2782
Total	**3.7642**	**43.1322**	**28.1632**	**0.0434**	**0.6979**	**2.2568**	**2.6971**	**0.1017**	**2.0763**	**2.0763**	**0.0000**	**4,387.8315**	**4,387.8315**	**1.1165**	**0.0000**	**4,411.2782**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.7642	43.1322	28.1632	0.0434	0.6979	2.2568	2.6971	0.1017	2.0763	2.0763	0.0000	4,387.8315	4,387.8315	1.1165	0.0000	4,411.2782
Total	**3.7642**	**43.1322**	**28.1632**	**0.0434**	**0.6979**	**2.2568**	**2.6971**	**0.1017**	**2.0763**	**2.0763**	**0.0000**	**4,387.8315**	**4,387.8315**	**1.1165**	**0.0000**	**4,411.2782**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Billboard Demolition	Demolition	1/1/2016	1/14/2016	5	10	
2	Site Preparation	Site Preparation	1/15/2016	1/18/2016	5	2	
3	Building Construction	Building Construction	1/19/2016	1/23/2016	5	4	
4	Building Construction 2	Building Construction	1/24/2016	1/25/2016	5	1	
5	Building Construction 3	Building Construction	1/26/2016	1/27/2016	5	2	
6	Building Construction 4	Building Construction	1/28/2016	2/1/2016	5	3	
7	Building Construction 5	Building Construction	2/2/2016	2/10/2016	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Aerial Lifts	1	8.00	97	1.00
Site Preparation	Bore/Drill Rigs	1	8.00	174	1.00
Site Preparation	Concrete/Industrial Saws	1	8.00	81	1.00
Site Preparation	Graders	1	8.00	174	0.41

Site Preparation	Skid Steer Loaders	1	8.00	205	1.00
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	1.00
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 2	Cement and Mortar Mixers	1	8.00	97	1.00
Building Construction 2	Cranes	1	8.00	226	1.00
Building Construction 2	Forklifts	2	6.00	89	0.20
Building Construction 2	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 3	Aerial Lifts	1	8.00	89	1.00
Building Construction 3	Cranes	1	8.00	226	1.00
Building Construction 3	Forklifts	2	6.00	89	0.20
Building Construction 3	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Cranes	1	4.00	226	0.29
Building Construction 4	Forklifts	2	6.00	89	0.20
Building Construction 4	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction 4	Trenchers	1	8.00	226	1.00
Building Construction 5	Aerial Lifts	1	8.00	226	1.00
Building Construction 5	Cranes	1	4.00	226	0.29
Building Construction 5	Forklifts	2	6.00	89	0.20
Building Construction 5	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Billboard Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Billboard Demolition	Rubber Tired Dozers	1	1.00	255	0.40
Billboard Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 2	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 3	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 4	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction 5	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Billboard Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Billboard Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	1.0568	8.7972	6.8953	9.7000e-003		0.6159	0.6159		0.5944	0.5944		950.8527	950.8527	0.1654		954.3261
Total	**1.0568**	**8.7972**	**6.8953**	**9.7000e-003**	**0.0984**	**0.6159**	**0.7144**	**0.0149**	**0.5944**	**0.6093**		**950.8527**	**950.8527**	**0.1654**		**954.3261**

3.2 Billboard Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.1000e-003	0.1434	0.1115	3.7000e-004	8.7100e-003	2.1500e-003	0.0109	2.3800e-003	1.9700e-003	4.3600e-003		37.1140	37.1140	2.7000e-004		37.1196
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0458	0.4784	1.0600e-003	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		89.2556	89.2556	4.8800e-003		89.3581
Total	**0.0432**	**0.1891**	**0.5899**	**1.4300e-003**	**0.0981**	**2.9000e-003**	**0.1010**	**0.0261**	**2.6600e-003**	**0.0288**		**126.3696**	**126.3696**	**5.1500e-003**		**126.4777**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0984	0.0000	0.0984	0.0149	0.0000	0.0149			0.0000			0.0000
Off-Road	1.0568	8.7972	6.8953	9.7000e-003		0.6159	0.6159		0.5944	0.5944	0.0000	950.8527	950.8527	0.1654		954.3261
Total	**1.0568**	**8.7972**	**6.8953**	**9.7000e-003**	**0.0984**	**0.6159**	**0.7144**	**0.0149**	**0.5944**	**0.6093**	**0.0000**	**950.8527**	**950.8527**	**0.1654**		**954.3261**

3.2 Billboard Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.1000e-003	0.1434	0.1115	3.7000e-004	8.7100e-003	2.1500e-003	0.0109	2.3800e-003	1.9700e-003	4.3600e-003		37.1140	37.1140	2.7000e-004		37.1196
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0458	0.4784	1.0600e-003	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		89.2556	89.2556	4.8800e-003		89.3581
Total	**0.0432**	**0.1891**	**0.5899**	**1.4300e-003**	**0.0981**	**2.9000e-003**	**0.1010**	**0.0261**	**2.6600e-003**	**0.0288**		**126.3696**	**126.3696**	**5.1500e-003**		**126.4777**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	3.4046	35.7200	27.2661	0.0414		1.9978	1.9978		1.8760	1.8760		4,220.4772	4,220.4772	1.1067		4,243.7185
Total	**3.4046**	**35.7200**	**27.2661**	**0.0414**	**0.5303**	**1.9978**	**2.5280**	**0.0573**	**1.8760**	**1.9333**		**4,220.4772**	**4,220.4772**	**1.1067**		**4,243.7185**

3.3 Site Preparation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.0638**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	3.4046	35.7200	27.2661	0.0414		1.9978	1.9978		1.8760	1.8760	0.0000	4,220.4772	4,220.4772	1.1067		4,243.7185
Total	**3.4046**	**35.7200**	**27.2661**	**0.0414**	**0.5303**	**1.9978**	**2.5280**	**0.0573**	**1.8760**	**1.9333**	**0.0000**	**4,220.4772**	**4,220.4772**	**1.1067**		**4,243.7185**

3.3 Site Preparation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0638	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.0638**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147		2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**		**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.4 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147	0.0000	2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**	**0.0000**	**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.4 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction 2 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147		2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**		**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.5 Building Construction 2 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5044	38.8592	17.0123	0.0280		2.0812	2.0812		1.9147	1.9147	0.0000	2,906.9366	2,906.9366	0.8768		2,925.3501
Total	**3.5044**	**38.8592**	**17.0123**	**0.0280**		**2.0812**	**2.0812**		**1.9147**	**1.9147**	**0.0000**	**2,906.9366**	**2,906.9366**	**0.8768**		**2,925.3501**

3.5 Building Construction 2 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.6 Building Construction 3 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7642	43.1322	22.0369	0.0356		2.2568	2.2568		2.0763	2.0763		3,701.5321	3,701.5321	1.1165		3,724.9789
Total	**3.7642**	**43.1322**	**22.0369**	**0.0356**		**2.2568**	**2.2568**		**2.0763**	**2.0763**		**3,701.5321**	**3,701.5321**	**1.1165**		**3,724.9789**

3.6 Building Construction 3 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7642	43.1322	22.0369	0.0356		2.2568	2.2568		2.0763	2.0763	0.0000	3,701.5321	3,701.5321	1.1165		3,724.9789
Total	**3.7642**	**43.1322**	**22.0369**	**0.0356**		**2.2568**	**2.2568**		**2.0763**	**2.0763**	**0.0000**	**3,701.5321**	**3,701.5321**	**1.1165**		**3,724.9789**

3.6 Building Construction 3 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.7 Building Construction 4 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3244	38.8639	16.3040	0.0308		1.9417	1.9417		1.7864	1.7864		3,200.0125	3,200.0125	0.9652		3,220.2825
Total	**3.3244**	**38.8639**	**16.3040**	**0.0308**		**1.9417**	**1.9417**		**1.7864**	**1.7864**		**3,200.0125**	**3,200.0125**	**0.9652**		**3,220.2825**

3.7 Building Construction 4 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3244	38.8639	16.3040	0.0308		1.9417	1.9417		1.7864	1.7864	0.0000	3,200.0125	3,200.0125	0.9652		3,220.2825
Total	**3.3244**	**38.8639**	**16.3040**	**0.0308**		**1.9417**	**1.9417**		**1.7864**	**1.7864**	**0.0000**	**3,200.0125**	**3,200.0125**	**0.9652**		**3,220.2825**

3.7 Building Construction 4 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.8 Building Construction 5 - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646		1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**		**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.8 Building Construction 5 - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3816	13.7058	8.2122	0.0113		0.9398	0.9398		0.8646	0.8646	0.0000	1,178.5549	1,178.5549	0.3555		1,186.0202
Total	**1.3816**	**13.7058**	**8.2122**	**0.0113**		**0.9398**	**0.9398**		**0.8646**	**0.8646**	**0.0000**	**1,178.5549**	**1,178.5549**	**0.3555**		**1,186.0202**

3.8 Building Construction 5 - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Commercial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Commercial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	4.2900e-003	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	3.2000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.9600e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**4.2900e-003**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Appendix B

AB 52 Consultation Letter

May 17, 2016

Gabrieleno Band of Mission Indians-Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA. 91723

Subject: AB 52 Notification for the **Newhope LED Billboard Relocation Project**
City of Garden Grove, County of Orange, California

Dear Mr. Salas.:

As of July 15, 2015, Public Resources Sections (PRC) 21080.1, 21080.3.1 and 21080.3.2 requires public agencies to consult with California Native American tribes that have submitted a request to be notified of projects in their traditional/cultural use areas for the purpose of mitigating impacts to tribal cultural resources pursuant to California Environmental Quality (CEQA). You are being contacted because the City is in receipt of your formal AB 52 Notification Request: concerning projects located within the tribes traditional and/or cultural use area.

This letter serves as the Lead Agency's formal notification, pursuant to PRC 21080.1(d), that application for the Project is on-going. The City of Garden Grove is considering an application for the construction of relocation of a freeway oriented digital billboard. The proposed billboard will be located on a parcel on the north side of State Route-22. The sign will be approximately 75-feet tall and the digital display will be approximately 48-feet wide by 14-feet tall. There are no adjacent residential areas and no other change to the existing parcel other than construction of the billboard is proposed.

The Project occupies Sectioned 4, Township 4 South, Range 10 West as depicted on USGS Anaheim (1965) California 7.5 Minute Quadrangles (see Enclosure). The proposed project is located on 13512 Newhope Street, Garden Grove, County of Orange, California (APN 100-125-02).

Currently the project site is occupied by a law firm and auto repair shop and will not include the demolition of any existing structures or buildings. Utility connections (electrical) for the billboard will also be provided as part of the proposed project. No other structures or buildings in addition to the sign-pole and billboard facing are proposed. Construction of the sign will not require demolition, paving, or grading activities. Construction will include drilling of a hole for the sign-pole, pouring of anchors, erection of the sign-pole, and installation of the digital LED display atop the sign-pole.

If you would like the City of Garden Grove (Lead Agency) to consult with you regarding this project, please notify the City of Garden Grove Community Development Department in writing, within 30 days of this notification. Thank you for your assistance in this matter.

Sincerely,

Lee Marino, Senior Planner, Planning Division

City of Garden Grove

Enclosure: USGS 7.5 Minute Quadrangle (Anaheim)