

August 25, 2020

Mr. Scott Morgan, Chief Deputy Director
Office of Planning and Research
1400 10th Street
Sacramento, California 95814

RE: CARB DETERMINATION FOR THE AB 734 OAKLAND WATERFRONT BALLPARK DISTRICT PROJECT

Dear Mr. Morgan:

AB 734 (Bonta, Chapter 959, Statutes of 2018) authorizes the Governor to certify a specified sports center and mixed-use project located in the City of Oakland (City) for the streamlining of judicial review under the California Environmental Quality Act (CEQA), provided the project meets certain conditions. Three conditions for certification require the California Air Resources Board (CARB) to determine that:

1. The project does not result in any net additional emissions of greenhouse gases (GHG), including GHG emissions from employee transportation;
2. Not less than 50 percent of the GHG reductions from non-residential land uses would be achieved through local, direct measures within the project area and in the neighboring communities of the project area; and
3. Not more than 50 percent of the GHG reductions would be achieved through the purchase of offset credits.

For purposes of making these determinations, the Oakland Athletics (the Applicant) submitted to CARB an Original Application dated March 15, 2019, the First Supplemental Memorandum dated August 26, 2019, the Second Supplemental Memorandum dated November 1, 2019, the Third Supplemental Memorandum dated March 10, 2020, and the Fourth Supplemental Memorandum dated July 9, 2020 for the proposed Oakland Waterfront Ballpark District Project (Proposed Project). Collectively, these documents are considered the application for purposes of CARB's evaluation.

As required by the *Governor's Guidelines for Streamlining Judicial Review under CEQA*, the application included proposed GHG quantification methodologies and supporting documentation. CARB staff conducted an evaluation of the GHG emission estimates and reduction measures submitted by the Applicant, and confirmed that the

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Applicant's methodology, calculations, and documentation are adequate. Based on the documentation submitted by the Applicant, CARB has determined that the Proposed Project will meet the GHG requirements provided by AB 734, as stated above, once the conditions of approval for the project described in the enclosed staff evaluation and Executive Order are satisfied. CARB staff's evaluation and the Executive Order noting CARB's determination are enclosed.

If you have any questions regarding the evaluation, please contact Dr. Jennifer Gress, Chief of the Sustainable Transportation and Communities Division, at jennifer.gress@arb.ca.gov.

Sincerely,



Richard W. Corey
Executive Officer

Enclosures

cc: (via email, with enclosures):

Mr. Noah Rosen
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Ms. Mary G. Murphy
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cc: See next page.

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Dr. Jennifer Gress, Chief
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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER G-19-151

Determination of Compliance with the Greenhouse Gas Reduction Requirements Pursuant to Public Resources Code section 21168.6.7 for the Oakland Waterfront Ballpark District Project

WHEREAS, in September 2018, Governor Brown signed AB 734 (Bonta, Chapter 959, Statutes of 2018), an act titled “California Environmental Quality Act: Oakland Sports and Mixed-Use Project;”

WHEREAS, under AB 734, the Governor may certify a certain project for judicial streamlining under the California Environmental Quality Act (CEQA) if certain conditions are met;

WHEREAS, under California Public Resources Code section 21168.6.7, subdivision (a), paragraph (3)(A)(ii), one condition for the Governor’s certification is that the project does not result in any net additional emissions of greenhouse gases (GHG), with a minimum of 50 percent of the GHG emissions reductions from non-residential land uses resulting from local, direct GHG reduction measures, as determined by the California Air Resources Board (CARB). As specified in subdivision (a), paragraph (3)(A)(ii)(II) of section 21168.6.7, no more than 50 percent of the GHG emissions reductions may result from offset credits;

WHEREAS, the *Governor’s Guidelines for Streamlining Judicial Review under the California Environmental Quality Act* require, for purposes of CARB’s determination on GHG emissions, that an applicant submit electronically to CARB a proposed methodology for quantifying the project’s GHG emissions and documentation that the project does not result in any net additional GHG emissions;

WHEREAS, pursuant to the Governor’s Guidelines, the Oakland Athletics (the Applicant) submitted its Original Application to CARB on the proposed Oakland Waterfront Ballpark District Project (Proposed Project) dated March 15, 2019, the First Supplemental Memorandum dated August 26, 2019, the Second Supplemental Memorandum dated November 1, 2019, the Third Supplemental Memorandum dated March 10, 2020, and the Fourth Supplemental Memorandum dated July 9, 2020;

WHEREAS, as set forth in greater detail in the Application and CARB’s *Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project*, construction and operation of the Proposed Project would result in an estimated net increase of 1,369,440 metric ton (MT) carbon dioxide equivalent (CO_{2e}) over the project’s 30-year anticipated life, of which 1,290,212 MT CO_{2e} would result from non-residential land uses;

WHEREAS, as set forth in greater detail in the Application and CARB's *Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project*, the Applicant has identified two primary local reduction measure (LRM) strategies (in addition to project design strategies) to achieve local, direct GHG reductions. The first primary LRM is the conversion of the existing jet-fueled Oakland Power Project (OPP) to battery storage, which reduces 520,656 MT CO_{2e} emissions, and would amount to 865,017 MT in total local, direct reductions when coupled with the 344,362 MT local, direct reductions from project design strategies. This total amount is in excess of the 645,106 MT CO_{2e} reductions required (50 percent of 1,290,212 MT CO_{2e} from non-residential sources). In the event the OPP is not implemented, the second LRM is the installation of up to 1,013 community-serving Electric Vehicle Charging Stations (EVCS), which reduces 699,780 MT CO_{2e} emissions, and is 54 percent of total non-residential emissions (1,290,212 MT CO_{2e}), and thus exceeds the 50 percent requirement for local, direct reductions. The Applicant will identify and implement all LRMs prior to receiving a temporary certificate of occupancy (TCO) for any building in each phase, and the City of Oakland (City) will withhold issuance of the TCO for that phase if the Applicant does not demonstrate all required LRMs have been implemented;

WHEREAS, it is currently unknown if and when the existing Oakland-Alameda County Coliseum (Coliseum) would be demolished upon the relocation of the Applicant to the new ballpark at Howard Terminal, and as set forth in greater detail in the Application, the Applicant has committed to establishing and funding an escrow account to be used to implement the necessary LRMs and purchase the necessary offsets to fully reduce emissions from any events, in excess of the historic average of four (4) events per year, occurring at the Coliseum upon relocation to the new ballpark, as memorialized in a February 28, 2020 letter from Oakland Mayor Libby Schaaf to Mr. Richard Corey, Executive Officer of CARB;

WHEREAS, in the Application, the Applicant would secure, through purchasing voluntary carbon credits issued by an accredited carbon registry, 669,659 MT of carbon credits for the Proposed Project to offset the net increase in construction and operational emissions generated throughout the life of the project, which is 49 percent of the total increase of 1,369,440 MTCO_{2e} in net emissions and thus meets the 50 percent limit for offset credit purchases. With regard to purchasing voluntary carbon credits, the Applicant has committed to execute contracts for the purchase of carbon credits to offset construction emissions prior to the issuance of grading permits for each construction phase or subphase for horizontal development, and at the issuance of each building permit for vertical buildings, and contracts to purchase carbon credits for operational emissions prior to receiving the TCO for any buildings in each phase, and the City will withhold issuance of the TCO for that phase if the Applicant does not demonstrate offset credit purchases;

WHEREAS, as set forth in greater detail in the Application and CARB's *Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project*, in the event the actual rate of project development differs from that indicated in the Application, the Application establishes a methodology that identifies emissions per unit of development, which will allow the Applicant to calculate whether its GHG reduction obligation needs to

increase or decrease from that listed in the Application for that phase using unit emissions that have been reviewed and verified by CARB;

WHEREAS, the Applicant has committed that, prior to the construction of each phase of development identified in the Application, and consistent with the City's project and plan review and permitting requirements, the Applicant will prepare and submit to the City an "AB 734 Compliance Memorandum" identifying the final emissions and reduction obligations (both local, direct and offset credits), for that phase, by adjusting the Application emissions up or down to reflect the actual amount developed for that phase using the unit emissions methodology described above, and the City will provide courtesy copies of the "AB 734 Compliance Memorandum" for each phase to CARB;

WHEREAS, the Applicant shall commit to the required GHG emissions reduction measures and procurement of offsets in the terms of the Development Agreement between the lead agency (City of Oakland) and the Applicant, and these commitments will be imposed by the City as conditions of approval that will be monitored and fully enforceable by the City for the life of the obligation, pursuant to Public Resources Code section 21168.6.7, subdivision (d), paragraph (5);

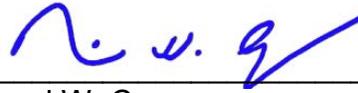
WHEREAS, CARB staff reviewed and evaluated the Application and verified the Application requirements with the lead agency (the City of Oakland);

WHEREAS, CARB staff conducted an evaluation of the GHG emission estimates and mitigation included in the Application and confirmed the documentation provides an adequate technical basis for estimating total GHG emissions and mitigation for the Proposed Project; and

WHEREAS, CARB's review and determination of the Proposed Project's GHG emissions is for the limited purpose of the Governor's findings and certification under AB 734 and should not be construed as meeting any other requirement under State or federal law, including CEQA, and the lead agency remains responsible for full CEQA compliance for this project.

NOW, THEREFORE, based on CARB Staff's Evaluation (Attachment 1) of the documentation submitted by the Applicant (Attachment 2), I determine that the Oakland Waterfront Ballpark District Project will not result in any net additional GHG emissions, with a minimum of 50 percent of emission reductions from non-residential land uses resulting from local, direct GHG reduction measures, and no more than 50 percent of emission reductions from the purchase of offset credits, pursuant to Public Resources Code section 21168.6.7, et seq. for purposes of certification under AB 734.

Executed at Sacramento, California this 25th day of August 2020.



Richard W. Corey
Executive Officer

Attachments

1. CARB Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project
2. AB 734 Application for the Oakland Waterfront Ballpark District Project

ATTACHMENT 1

ARB Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project

CARB Staff Evaluation of AB 734 Application for Oakland Waterfront Ballpark District Project

August 21, 2020

I. Executive Summary

The Oakland Athletics (Applicant) has proposed the Oakland Waterfront Ballpark District Project (Proposed Project), a new mixed-use development within the City of Oakland (City). The Applicant is seeking certification for this project under AB 734 (Bonta, Chapter 959, Statutes of 2018), which provides for streamlined judicial review under the California Environmental Quality Act (CEQA) if certain conditions are met. To be eligible for streamlining, the project must not result in any net additional emissions of greenhouse gases (GHG), and a minimum of 50 percent of the GHG emissions reductions from non-residential land uses¹ must result from local, direct measures, and no more than 50 percent of reductions may result from offset credits as determined by the California Air Resources Board (CARB). This technical evaluation supports CARB's determination.

CARB staff reviewed the projected GHG emissions provided by the Applicant using the data sources, emission factors, emission calculations and modeling files, and assumptions in the documentation provided by the Applicant. This documentation provided by the Applicant includes the Original Application dated March 15, 2019, the First Supplemental Memorandum dated August 26, 2019, the Second Supplemental Memorandum dated November 1, 2019, the Third Supplemental Memorandum dated March 10, 2020, and the Fourth Supplemental Memorandum dated July 9, 2020. Collectively these materials comprise the application and are included in Attachment 2.

Construction and operation of the entire Proposed Project would result in an estimated total net increase of 1,369,440 metric tons (MT) carbon dioxide equivalent (CO₂e) over the Proposed Project's 30-year anticipated life (1,338,864 MT CO₂e from net operations plus 30,576 MT CO₂e from construction). Of this amount, 1,290,212 MT CO₂e would result from non-residential land uses. Reduction measures committed by the project Applicant would achieve 699,780 MT CO₂e in local, direct emission reductions, which is 54 percent of total non-residential emissions and thus exceeds the 50 percent requirement for local, direct reductions (i.e., non-offset credit reductions). Further, offset credits purchased by the Applicant would achieve 669,659 MT CO₂e in reductions,

¹ Non-residential land uses associated with the project include the proposed ballpark, performance venue, office, retail/restaurant, and hotel.

which is 49 percent of the total net emissions of increase of 1,369,440 MT CO₂e and meets the AB 734 requirement for not more than 50 percent of GHG emissions reductions from offset credits. A detailed description of emissions by source is described later in this report.

The Applicant has committed to enter into contracts to offset construction emissions prior to the issuance of grading permits for each construction phase or subphase for horizontal development (e.g., site grading), and at the issuance of each building permit for vertical development (e.g., building construction). For operation emissions, the Applicant will identify and implement all local reduction measures² (LRM) and/or enter into contracts for offset credits prior to receiving a temporary certificate of occupancy (TCO) for any buildings in each phase. Prior to the construction of each phase of development, the Applicant is required to consult with the City and fulfill the City's project and plan review and permitting requirements. As part of this process, the Applicant will disclose the specific LRM and offset requirements for that phase to the City prior to construction. After construction is complete and before taking occupancy, the Applicant would apply for a TCO. As part of the City's TCO final inspection, they would confirm that the reduction requirements were fulfilled prior to issuing the TCO.

For each phase of development identified in the Application, the Applicant will prepare and submit to the City an AB 734 Compliance Memorandum that documents the amount of LRMs and offsets required in that phase of development. The City will provide courtesy copies of the AB 734 Compliance Memorandum for each phase to CARB. Enforcement of compliance will be outlined in the terms of the development agreement between the City and the Applicant and will be imposed by the City as conditions of approval that will be monitored and fully enforceable by the City for the life of the obligation.

Based on an evaluation of the documentation, CARB staff concludes that, with commitments to implement feasible GHG emissions reduction measures and purchase carbon credits, the Proposed Project would not result in any net additional GHG emissions relative to the baseline. CARB staff concludes that the Proposed Project would meet the GHG emissions requirements of AB 734. (Pub. Resources Code, § 21168.6.7, subd. (a), parag. (3)(A)(ii).)

² LRMs include project design features that are incorporated into the design of the Proposed Project (Transportation Management Plan and Transportation Demand Management Plan, 10 percent of onsite parking spaces will be equipped with an EV charger, and electrification of 50 percent of residential units), as well as two (2) additional strategies identified by the Applicant (the conversion of an existing jet-fueled power plant to battery storage and installation of off-site community-serving Electric Vehicle Charging Stations. A detailed description of local, direct reduction measures is described later in this report.

II. Introduction

Oakland Athletics (Applicant) has proposed the Oakland Waterfront Ballpark District Project (Proposed Project), a new mixed-use development on an approximately 55-acre site located at the Port of Oakland's Charles P. Howard Terminal and adjacent parcels, located along the Inner Harbor of the Oakland-Alameda Estuary, as described in Attachment 2³.

The Applicant is seeking certification for the Proposed Project under AB 734, which provides for streamlined judicial review under the CEQA if certain conditions are met, as described below.

CARB staff prepared this technical evaluation of the GHG emissions from the Proposed Project as part of its determination. This evaluation includes an executive summary, an overview of the AB 734 requirements, a brief description of the Proposed Project, a technical review and assessment of GHG emissions information provided by the Applicant in its AB 734 application, and CARB staff's determination regarding whether the Proposed Project meets the GHG requirements as provided in AB 734.

III. Overview of AB 734

AB 734 provides streamlined judicial review of challenges to the lead agency's decision to certify the project's environmental impact report (EIR) or grant project approval if certain conditions are met. To obtain these streamlining benefits, AB 734 requires the Proposed Project to meet various requirements, including the following conditions (as determined by CARB):

- **Section §21168.6.7, subd. (a), parag. (3)(A)(ii).** The Proposed Project would not result in any net additional GHG emissions, including GHG emissions from employee transportation, with a minimum of 50 percent of the GHG emissions reductions from non-residential land uses⁴ resulting from local, direct GHG reduction measures within the project area and in the project's neighboring communities.

³ Attachment 2 contains the following documentation provided by the Applicant: Original Application dated March 15, 2019, the First Supplemental Memorandum dated August 26, 2019, the Second Supplemental Memorandum dated November 1, 2019, the Third Supplemental Memorandum dated March 10, 2020, and the Fourth Supplemental Memorandum dated July 9, 2020. These comprise the Applicant's full AB 734 submittal, when taken in their entirety, and are used by CARB staff to make the AB 734 determination.

⁴ Non-residential land uses associated with the project include the proposed ballpark, performance venue, office, retail/restaurant, and hotel.

- **Section §21168.6.7 subd. (a), parag. (3)(A)(ii)(II).** Not more than 50 percent of GHG emissions reductions may result from offset credits.

The role of CARB in reviewing the AB 734 application for purposes of the Governor's certification is limited to an evaluation of the quantification methods and documentation⁵ submitted by the Applicant.

The Governor's Guidelines for AB 900 applications, under which the AB 734 application is evaluated, require applicants to submit a proposed methodology for quantifying the project's GHG emissions and documentation that the project will not result in any net additional GHG emissions. The documentation must quantify direct and indirect GHG emissions associated with the project's construction and operation, including GHG emissions from employee transportation, and the net emissions of the project after accounting for any mitigation measures. The City will monitor and enforce the mitigation measures from the EIR and reduction measures and offsets from the Application, as required by Public Resources Code section §21168.6.7, subdivision (d), paragraph (5).

IV. Existing Baseline Conditions

This section describes the existing condition at the Proposed Project site at the Port of Oakland's Charles P. Howard Terminal and adjacent parcels, located along the Inner Harbor of the Oakland-Alameda Estuary.

Onsite

The approximately 55-acre Howard Terminal site is bounded by the Oakland Estuary Middle Harbor on the south, Jack London Square on the east, Union Pacific railroad tracks and the Embarcadero on the north, and a metal recycling company (Schnitzer Steel) on the west. The site was used by the Port of Oakland as a shipping container terminal until 2014, and is currently used for truck parking, loaded and empty container storage and staging, and longshore training facilities. In addition, the Oakland Power Plant (OPP), owned and operated by the Vistra Power Company (Vistra), is located on site. The OPP is a peaker plant using jet fuel to produce electricity at times of peak demand. As part of the Proposed Project, Vistra would convert the existing jet fuel OPP to a battery electricity storage system (ESS). Much of the electricity stored in the ESS is likely to be produced through the Oakland Clean Energy Initiative, which is expected to have an electricity intensity of zero, the Application analysis conservatively assumes that the stored energy associated with the OPP conversion to the battery ESS would be

⁵ The technical elements of the project application evaluated by CARB staff include existing emissions in the absence of the project [i.e., baseline], project emissions, input data and assumptions used for emissions and mitigation calculations, and quantification methods used in the Application.

supplied at the grid-average intensity, which has a lower carbon-intensity than the existing jet-fueled OPP peaker plant.

This conversion of the OPP is not mandated by any existing law or regulation, but is a proposal being put forward by Vistra and the Applicant, with Vistra ceding all GHG benefits associated with this conversion to the Oakland Athletics to be used to help fulfill the AB 734 local reduction requirements.

The Application contains assumptions that the existing truck movements to pick up and drop off containers would continue elsewhere on Port property and not be eliminated altogether. Consequently, no credit is taken for the reduction of emissions associated with the existing Howard Terminal uses. In addition, the Application contains assumptions that trucks will continue to transport goods from the Port to locations throughout the Bay Area and that there is no evidence to suggest that the relocation of the repackaging activities to another Port location would affect existing activity in any way.

Offsite

The Applicant currently plays Major League Baseball (MLB) games at the Oakland-Alameda County Coliseum (Coliseum), which is located in the Coliseum Area Specific Plan area between East Oakland and the Oakland International Airport. In addition, the Athletics' 44,000 square foot (sq. ft.) team headquarters is located at Jack London Square, adjacent to the Proposed Project site, and will be relocated to the Proposed Project site.

V. Proposed Project Description

The Applicant proposes the construction of a new baseball park to serve as the new home to the Applicant's MLB team, with adjacent residential, hotel, entertainment, office (including the relocated Athletics' team headquarters), retail, parking, and open space, on the approximately 55-acre site in the City of Oakland.

Table 1 contains a description of the types of land uses and sizes of each land use that occur under the baseline and Proposed Project, while Figure 1 presents the site plan for the development planned at the Proposed Project site.

Table 1: Existing Baseline and Proposed Project Land Uses

Land Use Type		Existing (offsite)		Proposed Project
		Coliseum	Jack London Square	
Ballpark Uses				
MLB Uses	square feet	1,400,000	--	1,200,000
	capacity	47,170	--	35,000
	attendees	2,870,000	--	2,870,000
Other Events	events	4 ¹	--	160
	attendees	--	--	779,000
Athletics' Headquarters²	square feet	--	40,000	--
Parking	spaces	10,000	--	2,000
Non-Ballpark Uses				
Office	square feet	--	--	1,500,000
Retail³	square feet	--	--	270,000
Residential	units	--	--	3,000
	square feet	--	--	3,300,000
Performance Venue	square feet	--	--	50,000
	seats	--	--	3,500
Hotel	square feet	--	--	280,000
	rooms	--	--	400
Parking Garages	spaces	--	--	6,900
Notes				
¹ Please refer to Section IX for more information regarding Coliseum backfill.				
² The Athletics headquarters is anticipated to move from its present location in Jack London Square to the new Howard Terminal ballpark land uses and is therefore not separately listed under the Proposed Project.				
³ Proposed retail uses for purposes of this analysis are approximately 90,000 sq. ft. food and beverage, 90,000 sq. ft. entertainment (e.g., theater, bowling alley, gaming, etc.), and 90,000 sq. ft. soft goods retail including food retail.				

Construction activities are anticipated to begin in 2020 and continue through 2027. Operation of the new ballpark facility and 15,000 sq. ft. of retail/restaurant use will begin

in mid-2023, with the first full year of operations beginning in 2024. Completion of the entire project is anticipated to occur in 2027, with the first full year of full project operations beginning in 2028.

VI. Technical Review and Assessment

Ramboll, on behalf of the Applicant, prepared a GHG emissions assessment for the Proposed Project to demonstrate that the requirements of AB 734 are met. The documentation for the Applicant's assessment is included in Attachment 2. The Application identifies GHG emissions from full buildout of the entire project assuming a steady pace of development across the project site until full project buildout. This rate of development is defined as the "Anticipated Development Scenario" in the Application, and all emission and reduction requirements identified in the Application are based upon this development schedule. In addition to emissions associated with the Anticipated Development Scenario, the Application also presents a methodology to evaluate the Applicant's emissions and reduction requirements should the actual rate of project development differ from the "Anticipated Development Scenario" indicated in the Application. This methodology is described below in Section XII.

The Applicant relied upon a variety of sources for activity data and emission factors to quantify GHG emissions and reduction measures. This CARB staff evaluation is focused on reviewing the data sources, emission factors, emission calculations, and assumptions used for the emissions quantification, and determining whether these sources and assumptions are reasonable.

VII. Project Construction Emissions

Construction-related GHG emissions, including demolition-related emissions, are one-time, direct emissions. These emissions reflect the types of equipment expected and the number of hours of operation anticipated over the construction schedule, and include heavy-duty equipment such as refuse hauling trucks, excavators, cranes, and conventional work vehicles. The Applicant estimated GHG emissions associated with project construction by using methodologies consistent with the California Emissions Estimator Model (CalEEMod) Version 2016.3.2⁶. With some exceptions, the Applicant used project-specific information provided by the Applicant and CalEEMod default settings to generate construction-related GHG emissions. In addition, emissions from on-road construction trips were estimated using trip counts and provided by the

⁶ Available at: <http://www.caleemod.com/>.

Applicant for haul trips and CalEEMod default settings, and emissions factors from the Emission FACtor 2017 model (EMFAC2017)⁷.

Table 2 shows project GHG emissions generated by construction activities and indicates a total of 30,576 MT CO₂e over the project construction period for the Proposed Project.

Table 2: Project Construction-Generated GHG Emissions (MT CO₂e/year)

Construction Year	Proposed Project
2020	333
2021	5,580
2022	5,939
2023	3,543
2024	3,572
2025	3,793
2026	4,760
2027	3,056
Total	30,576
GHG Offset Credits Required	30,576

Notes: GHG = greenhouse gas.
Source: Attachment 2.

VIII. Baseline Operational Emissions

The AB 734 analysis of no net additional emissions of GHGs accounts for the change in emissions between existing baseline and Proposed Project conditions, such that the difference in emissions between these two conditions represents the net emissions associated with the Proposed Project that the Applicant must reduce to meet AB 734 requirements:

$$\text{Net GHG Emissions} = \text{New Project Emissions} - \text{Existing Baseline Emissions}$$

This is because, if the Proposed Project were not implemented, these existing baseline emissions would continue to operate in the future. However, with the implementation of the Proposed Project, the existing baseline emissions are essentially removed and replaced by those from the Proposed Project as the Applicant's baseball games are relocated from the Coliseum in the existing baseline to the new ballpark at the Howard Terminal location. Consequently, the existing baseline emissions are applied as a

⁷ Available at: <https://arb.ca.gov/emfac/>.

“credit” to the Proposed Project emissions, thereby reducing the amount of GHG emissions the Applicant must reduce pursuant to AB 734.

Baseline conditions represent currently operational offsite land uses and activities that will be relocated by the Proposed Project to the Howard Terminal location. These include the MLB games played by the Applicant at the existing Coliseum, as well as the Athletics’ team headquarters located at Jack London Square. The Application uses year 2020 to represent baseline conditions for operational activities and associated emissions using the historical Coliseum attendance of 35,000 visitors and 2020 emission factors. GHG emissions were quantified for mobile sources, energy consumption (i.e., electricity, natural gas), and emissions from area sources (e.g., landscaping activities), solid waste, water, and wastewater sources. As summarized in Table 3, GHG emissions associated with Proposed Project baseline conditions are estimated as 10,600 MT CO₂e annually for a lifetime total of 317,998 MT CO₂e, and these emissions are treated as a “credit” for the Proposed Project.

The currently operational jet-fueled OPP, which is separately owned and operated by Vistra (as indicated in Section IV), is located on-site. However, existing emissions associated with the operation of the OPP is not included in the existing baseline, as the Applicant has identified an LRM to convert the OPP to battery power to meet the AB 734 local, direct reduction requirement. Emissions reductions associated with the OPP LRM are discussed in Section XI.

IX. Proposed Project Operational Emissions

GHG emissions were quantified for mobile sources, energy consumption (i.e., electricity, natural gas), and emissions from area sources (e.g., landscaping activities), solid waste, water, and wastewater sources. Operational GHG emissions from the Proposed Project are assumed to begin with the opening of the new ballpark in April 2023, with full buildout of the project occurring in late 2027.

As discussed in Section VI, the Application identifies GHG emissions from full buildout of the entire project assuming a steady pace of development across the project site until full project buildout. This rate of development is defined as the “Anticipated Development Scenario,” with each block of development considered an individual phase of development. The phasing associated with the Application’s “Anticipated Development Scenario” is presented in Table 3. The Application indicates that development permit applications will be filed with the City for each of the “Anticipated Development Scenario” phases of development, with each of these phases requiring its own individual TCO from the City.

Backfill of Relocated Coliseum Baseball Games

Within CARB's AB 900 Program, under which the AB 734 application is evaluated, if a project involves the relocation of an existing land use/facility to a new location, the Application must include two (2) additional analyses: 1) how the relocation would affect emissions (i.e., a comparison of emissions at the existing land use location to those at the proposed project location), and 2) emissions from potential reuse of the existing land use/facility.

The first analysis, which evaluates the effect of relocation, analyzes the change in emissions as the 43 baseball game events (i.e., 50 percent of the anticipated pre- and regular-season home games) that currently occur at the existing Coliseum are completely relocated to the new ballpark at Howard Terminal.

The second analysis, which evaluates reuse of the existing land use/facility, analyzes potential emissions that would result at the existing land use/facility if the relocated land use/facility were fully replaced by a similar land use/facility so that the existing land use/facility would operate at 100 percent capacity. This concept where the existing land use/facility is fully replaced by a similar land use/facility is known as "backfill." However, the second analysis is predicated on whether the existing land use/facility would or would not be demolished/precluded from reuse⁸. The second analysis is not required if the existing land use/facility is demolished/precluded from reuse.

The Application states the Coliseum will not be demolished immediately upon the relocation of the Applicant to the new ballpark at Howard Terminal in 2023, and it is unknown if and when the Coliseum would be demolished. Because of this uncertainty, the analysis of operational emissions associated with the Proposed Project also assumes backfill at the existing Coliseum. The backfill analysis evaluates every additional backfilled event in excess of the historic average of four (4) events per year at the Coliseum. To ensure the GHG emissions from any additional backfilled events are fully reduced consistent with AB 734 requirements, the Applicant has committed to establishing and funding an escrow account in the amount of \$290,376⁹, which is sufficient to reduce emissions associated with 43 additional backfilled events in the event they occur. For every additional backfilled event at the Coliseum in excess of the historic average of four (4) events per year, the Applicant will use the funds from the escrow account to implement the necessary LRMs and purchase the necessary offsets

⁸ The preclusion of future operations could be, but not limited to, a deed restriction, board resolution, or similar mechanism that disallows reuse of the facility without demolition.

⁹ The escrow amount of \$290,376 is based on 43 events at 35,000 attendees per event, an emission factor of 0.0037 MT CO₂e/attendee/event), an approximate cost of \$86.61/MT reduced via local, direct measures, and \$17.87/MT reduced via offset credit purchase. Please refer to Attachment 2 for a detailed breakdown of escrow account assumptions.

to fully meet the AB 734 reduction requirements for each additional excess event. This is memorialized in the February 28, 2020 letter from Oakland Mayor Libby Schaaf to Mr. Richard Corey, Executive Officer of CARB committing the Applicant to provide reductions for each backfill event in excess of the rounded historic average of four (4) events per year. In the event the escrow account is fully depleted to \$0, the Applicant is required to place an additional amount of \$290,376 back into the escrow account to reduce any additional backfilled events that may occur.

The escrow account would be developed and funded prior to the issuance of the TCO for the new Howard Terminal ballpark if, and when, the Athletics leave the Coliseum for a new ballpark at Howard Terminal. The escrow account will be terminated upon the earlier of (a) closure or demolition of the Coliseum, or (b) 30-years of Proposed Project operation, and any remaining balance returned to the Applicant. Should the escrow account be fully depleted to \$0, the Applicant will deposit monies into the escrow up to the original amount of \$290,376.

To account for any backfilled events that may occur at the Coliseum upon relocation of the Applicant to the new ballpark at Howard Terminal, the Applicant will be required to submit to the City an "Annual Event Report" that documents the following:

- The number of backfilled events held in the immediately preceding year at the existing Oakland Coliseum and its surrounding parking lot.
- The approximate number of attendees of such events.
- Emissions for each event.
- The quantity of offsets required to be purchased (if any).
- The quantity of LRMs required to be implemented, and the cost associated with implementing those LRMs (if any).
- Documentation that any LRMs and/or offsets required for prior years have been implemented.

Emissions associated with any backfilled events will not be modeled. Rather, a per attendee emission factor identified in the Application, reviewed and verified by CARB as part of this Application, will be applied to backfilled event attendance to estimate emissions from these events. If LRMs are required, the Applicant would implement all LRMs as soon as feasible, while contracts for the purchase of any required offset credits would be entered into no later than six months after the City's review and approval of the "Annual Event Report." All LRMs and/or offset credits required to reduce emissions from backfilled events would be procured using funds from the escrow account.

The "Annual Event Report" shall be submitted to the City commencing twelve (12) months following the opening day of the new ballpark at the Howard Terminal Project

until the earlier of: (a) closure or demolition of the Coliseum or (b) 30-years of Proposed Project operation. The City will provide courtesy copies of the “Annual Event Report” for each phase to CARB to verify that backfilled emissions have been fully reduced consistent with AB 734 requirements. Enforcement of compliance will be outlined in the terms of the development agreement between the City and the Applicant, and all requirements will be imposed by the City as conditions of approval that will be monitored and fully enforceable by the City for the life of the obligation.

The Applicant estimated GHG emissions associated with project operations using CalEEMod Version 2016.3.2 and EMFAC methodologies. Where Project-specific information was not available, CalEEMod default assumptions were used.

Mobile Source Emissions

Mobile source emissions were estimated using CalEEMod and EMFAC methodologies based on the land use types and sizes associated with the Proposed Project. The analysis utilized a project-specific vehicle miles traveled analysis that was refined to reflect the City’s revised Transportation Impact Review Guidelines published on April 14, 2017, as indicated in the *Howard Terminal Project AB 734 Analysis Memorandum*, dated August 21, 2019, prepared by Fehr & Peers (included in Attachment 2).

Energy Emissions

Electricity and natural gas emissions were estimated using Pacific Gas & Electric (PG&E) electricity billing data, facility natural gas metering data, and 2017 MLB attendance data and CalEEMod methodologies (included in Attachment 2). CalEEMod default values were updated to reflect newer PG&E renewable portfolio standard data for 2017¹⁰, while electricity and natural gas usage was updated to reflect anticipated reductions beyond CalEEMod default assumptions from 2019 Title 24, based on the new California Energy Commission data¹¹.

Solid Waste Emissions

Emissions from solid waste disposal were estimated using waste generation rates calculated based on 2017 MLB waste rates at the Coliseum and attendance data for 2017 for MLB games, as reported in the *2017 – Stadium Waste Management and*

¹⁰ Source: PGE 2017 Corporate Responsibility Report. Available at: http://www.pgecorp.com/corp_responsibility/reports/2017/assets/PGE_CRSR_2017_Environment.pdf.

¹¹ Source: California Energy Commission. 2019. Impact Analysis for 2019 Energy Efficiency Standards. Available online at: https://www.energy.ca.gov/title24/2019standards/post_adoption/documents/2019_Impact_Analysis_Final_Report_2018-06-29.pdf.

Recycling Report for the Oakland Coliseum (included in Attachment 2), and CalEEMod methodologies and default assumptions.

Water and Wastewater Emissions

Emissions from water consumption were estimated using CalEEMod methodologies and East Bay Municipal Utility District water supply billing data for the 2017 MLB season and 2017 MLB attendance (included in Attachment 2).

Area Source Emissions

Emissions from area sources, including equipment used to maintain landscaping, such as lawnmowers and trimmers, were estimated with CalEEMod using default values. In addition, 17 emergency generators, ranging in capacity from 250 to 1,500 kW, would be located throughout the project site, where required, to provide emergency power primarily for lighting and other emergency building systems. Emissions of GHGs would be generated during maintenance and testing operations and were estimated using CalEEMod default assumptions. Emergency generators are permitted by the Bay Area Air Quality Management District (BAAQMD) and regulated under BAAQMD Regulation 9, Rule 8 (Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines). Maintenance and testing would not occur daily, but rather periodically BAAQMD Regulation 9, Rule 8, up to 20 hours per year per generator.

X. Net Greenhouse Gas Emissions

Table 3 presents emissions for each phase of development and indicates that lifetime Proposed Project construction and operational emissions would exceed baseline emissions. Construction and operation of the entire Proposed Project would result in an estimated total net increase of 1,369,440 MT) CO_{2e} over the Proposed Project's 30-year anticipated life (1,338,864 MT CO_{2e} from operations plus 30,576 MT CO_{2e} from construction). Of this amount, 1,290,212 MT CO_{2e} would result from non-residential land uses.

As previously noted in Section VIII, baseline emissions would result in a total of 317,998 MT CO_{2e} and are treated as a "credit" towards the Proposed Project. The first phase developed for the Proposed Project would include construction of the new ballpark and 15,000 sq. ft. of retail/restaurant use, which would result in emissions totaling 287,877 MT CO_{2e}. After this first phase is developed, 30,121 MT CO_{2e} in "credit" would remain from the relocation of games at the Coliseum with the first phase of the Proposed Project (317,998 MT minus 287,877 MT). These remaining 30,121 MT CO_{2e} may be applied as a "credit bank"¹² for reducing subsequent phases of development of the Proposed Project and are discussed further in Section XI.

¹² The "credit bank" includes two types of reductions: 1) Reductions from the OPP used to satisfy future local, direct reduction obligations via LRMs, and 2) the difference between the baseline emissions and the Project ballpark emissions, which may not be used to satisfy local, direct reduction obligations. They are identified as being a "credit bank" because they are reductions that are achieved prior to future phases that is then drawn upon as future phases are developed to fulfill the reduction obligations of the phases.

Table 3: Comparison of Proposed Project and Baseline GHG Emissions for each Project Phase

		Units	OPP ¹¹ Existing	Phase 1 (Stadium)	OPP Part A ¹⁴	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Land Use Buildout per Block	Ballpark	--	--	1	--	--	--	--	--	--
	Performance Venue	--	--	--	--	--	--	--	--	--
	Residential	DU	--	--	--	54	212	494	391	304
	Commercial (Non-Retail/Restaurant)	ksf	--	--	--	--	--	--	--	--
	Retail/ Restaurant	ksf	--	15	3.4	6.9	3.4	10	12	13
	Hotel	ksf	--	--	--	--	--	--	--	--
Lifetime Emissions	Construction	MT CO _{2e}	--	10,876	13	243	867	2,029	1,620	1,272
	Project Operations	MT CO _{2e}	--	277,001	6,282	19,623	33,459	82,441	72,164	62,301
	Total	MT CO _{2e}	--	287,877	6,295	19,866	34,326	84,470	73,784	63,573
	Non-Residential Emissions Only	MT CO _{2e}	--	287,877	6,294	12,715	6,256	19,059	22,011	23,320
Existing Coliseum Stadium Emissions		MT CO _{2e}	--	-317,998¹	--	--	--	--	--	--
Coliseum Backfill¹²		MT CO _{2e}	--	--	--	--	--	--	--	--
Net Lifetime Emissions		MT CO _{2e}	-520,655¹¹	287,877¹	6,294	19,866	34,326	84,469	73,783	63,572
Commitments to Local Reduction Measures (LRMs) or Offsets	Offset Credits Purchased ¹⁰	MT CO _{2e}	--	-30,121¹	3,147	9,933	17,163	42,235	36,892	31,786
	LRMs Through Project Design Features	MT CO _{2e}	--	--	1,466	5,052	9,664	23,562	20,263	17,200
	Remaining LRMs ¹² (Can be drawn from credit bank or implement offsite EVCS)	MT CO _{2e}	-520,655¹¹	--	1,681	4,880	7,500	18,673	16,629	14,586
Off-Site Community-Serving EVCS¹³		Number	--	--	4.8	14	21	53	47	42
Percent Local Reduction		Percent	100	100	50	78	274	222	168	136

Table 3: Comparison of Proposed Project and Baseline GHG Emissions for each Project Phase

		Units	Phase 7	Phase 8	Phase 9	Phase 10	Phase 11	Phase 12	Phase 13	Phase 14	Phase 15
Land Use Buildout per Block	Ballpark	--	--	--	--	--	--	--	--	--	--
	Performance Venue	--	--	--	--	--	--	--	--	--	--
	Residential	DU	--	--	130	360	460	400	--	--	--
	Commercial (Non-Retail/Restaurant)	ksf	--	--	--	--	--	--	--	620	400
	Retail/ Restaurant	ksf	17	16	13	12	18	48	9	14	11
	Hotel	ksf	--	--	--	--	--	--	--	--	--
Lifetime Emissions	Construction	MT CO ₂ e	1,044	59	571	1,495	1,919	1,789	33	2,329	1,510
	Project Operations	MT CO ₂ e	150,108	29,263	40,301	68,570	91,570	139,534	16,531	184,726	122,674
	Total	MT CO ₂ e	151,152	29,322	40,872	70,065	93,489	141,323	16,564	187,055	124,184
	Non-Residential Emissions Only	MT CO ₂ e	151,153	29,322	23,659	22,398	32,581	88,359	16,564	187,054	124,184
Existing Coliseum Stadium Emissions		MT CO ₂ e	--	--	--	--	--	--	--	--	--
Coliseum Backfill¹²		MT CO ₂ e	--	--	--	--	--	--	--	--	--
Net Lifetime Emissions		MT CO ₂ e	--	151,153	29,322	40,872	70,065	93,489	141,322	16,564	187,054
Commitments to Local Reduction Measures (LRMs) or Offsets	Offset Credits Purchased ¹⁰	MT CO ₂ e	75,576	14,661	20,436	35,033	46,744	70,661	8,282	93,527	62,092
	LRMs Through Project Design Features	MT CO ₂ e	21,685	6,831	10,544	19,153	25,396	36,067	3,859	47,559	31,499
	Remaining LRMs ¹² (Can be drawn from credit bank or implement offsite EVCS)	MT CO ₂ e	53,891	7,830	9,892	15,880	21,349	34,594	4,423	45,969	30,593
Off-Site Community-Serving EVCS¹³		Number	154	22	28	45	61	99	13	131	87
Percent Local Reduction		Percent	50	50	86	156	143	80	50	50	50

Table 3: Comparison of Proposed Project and Baseline GHG Emissions for each Project Phase

		Units	Phase 16	Phase 17	Phase 18	OPP Part B ¹⁴	Project Total	Net Additional
Land Use Buildout per Block	Ballpark	--	--	--	--	--	1	0
	Performance Venue	--	1.0	--	--	--	1	1
	Residential	DU	--	--	145	50	3,000	3,000
	Commercial (Non-Retail/Restaurant)	ksf	--	480	--	--	1,500	1,500
	Retail/ Restaurant	ksf	19	16	12	2.0	270	270
	Hotel	ksf	--	--	--	--	280	280
Lifetime Emissions	Construction	MT CO _{2e}	253	1,819	627	209	30,576	30,576³
	Project Operations	MT CO _{2e}	58,897	151,170	40,158	10,092	1,656,862	1,338,864⁴
	Total	MT CO _{2e}	59,150	152,989	40,785	10,301	1,687,438	1,369,440⁵
	Non-Residential Emissions Only	MT CO _{2e}	59,150	152,989	21,586	3,681	1,290,212⁶	--
Existing Coliseum Stadium Emissions		MT CO _{2e}	--	--	--	--	-317,998	--
Coliseum Backfill¹²		MT CO _{2e}	--	--	--	--	--	--
Net Lifetime Emissions		MT CO _{2e}	59,150	152,989	40,786	10,301	1,687,438	--
Commitments to Local Reduction Measures (LRMs) or Offsets	Offset Credits Purchased ¹⁰	MT CO _{2e}	29,575	76,495	20,393	5,151	669,659	669,659⁷
	LRMs Through Project Design Features	MT CO _{2e}	12,406	38,723	10,641	2,793	344,362	344,362⁸
	Remaining LRMs ¹² (Can be drawn from credit bank or implement offsite EVCS)	MT CO _{2e}	17,169	37,771	9,751	2,358	355,418	355,418⁸
Off-Site Community-Serving EVCS¹³		Number	49	108	28	6.7	1,013	1,013⁸
Percent Local Reduction		Percent	50	50	94	140	54⁸	--

Legend

Bolded text indicates key emissions data.

¹ 317,998 MT CO₂e from the existing Coliseum is replaced by 287,877 MT CO₂e from the new ballpark in Phase 1. This results in a net -30,121 MT CO₂e that may be applied to future phase development.

² 520,655 MT CO₂e is associated with the conversion of the jet-fueled OPP to battery storage. These reductions are local, direct reductions and are applied to the LRM "credit bank" to apply to the local, direct reduction requirement for future phase development. In the event the OPP is not implemented, 1,013 off-site community-serving EVCS would be implemented to achieve the necessary local, direct reductions.

³ 30,576 MT CO₂e would result from construction of the Proposed Project.

⁴ 1,338,864 MT CO₂e would result from net operation of the Proposed Project.

⁵ Construction and operation of the entire Proposed Project would result in an estimated total net increase of 1,369,440 MT CO₂e over the project's 30-year life.

⁶ A net of 1,290,212 MT CO₂e would result from construction and operation of non-residential land uses. Non-residential land uses associated with the project include the proposed ballpark, performance venue, office, retail/restaurant, and hotel. A minimum of 50 percent of these emissions (645,106 MT CO₂e) must be reduced through local, direct measures.

⁷ The Applicant would purchase 669,659 MT CO₂e of offset credits, which represents 49 percent of the 1,369,440 MT CO₂e net total. The Proposed Project would purchase offset credits below 50 percent of total net emissions.

⁸ The project would implement local reduction measures (LRMs) into the design of the proposed project (Transportation Management Plan and Transportation Demand Management Plan, 10 percent of onsite parking spaces will be equipped with an EV charger, and electrification of 50 percent of residential units). These project design features would result in 344,362 MT CO₂e in local, direct reductions. If the OPP LRM would not be implemented, 1,013 EVCS would need to be installed in order to result in 355,418 MT CO₂e in local, direct reductions. When these reductions from the EVCS LRM are coupled with the 344,362 MT CO₂e local, direct reductions from product design feature LRMs, the project would achieve 699,780 MT CO₂e in local, direct emission reductions, which is 54 percent of total non-residential emissions and thus exceeds the 50 percent requirement for local, direct reductions.

Notes

⁹ Coliseum backfill included in Table 3 for informational purposes only to indicate backfill emissions at the Coliseum will need to be reduced via the escrow account (Please refer to Section IX) in the event that backfilled events occur in excess of the historic average of four (4) events per year.

¹⁰ Up to 50 percent of the total net new emissions for the Proposed Project can be reduced with offset credits purchased through the carbon market. It is assumed that the maximum offset credits are purchased for each block of development. While the purchase of OPP is a local, direct measure, once there are no additional local direct measures required, the reduction from the OPP are applied to the offset credits purchased.

¹¹ The OPP emissions assume that 100 percent of power generation at the existing plant is terminated and that a 90 MW battery system is installed in its place. While the OPP is a local, direct measure, once there are no additional local direct measures required, the reduction from the OPP are applied to the offset credits purchased.

¹² The local, direct reductions from OPP are greater than the total additional LRMs required for the project, resulting in net negative remaining LRMs at full Project buildout. While the reductions associated with OPP are local and direct in nature, these excess LRMs can be used to reduce the number of offset credit purchases required.

¹³ An offsite neighborhood EVCS can reduce roughly 351 MT CO₂e over a 30-year lifetime. Should the OPP not occur, the Total Remaining Emissions per block can be offset through local community-serving EVCS. The number of EVCS required per block can be estimated using the lifetime reduction. Any excess remaining LRMs associated with the OPP conversion can be drawn as offset credits.

¹⁴ Upon conversion of the OPP to ESS, the OPP site would be further developed in two separate phases: Part A, which would result in 3.4 ksf of retail/restaurant, and Part B, which would result in 50 DU and 2 ksf of retail/restaurant. Please refer to Attachment 2 for additional information about these phases of development for the OPP site.

XI. Method to Mitigate Emissions

Construction and operation of the entire Proposed Project would result in an estimated total net increase of 1,369,440 MT CO_{2e} over the project's 30-year life, of which 1,290,212 MT CO_{2e} would result from non-residential sources.

AB 734 50 Percent Local, Direct Reduction Requirement

AB 734 requires that a minimum of 50 percent of the GHG emissions reductions from non-residential land uses must result from local, direct measures. As total non-residential land uses would result in 1,290,212 MT CO_{2e}, at least 645,106 MT CO_{2e} (50 percent of 1,290,212 MT CO_{2e}) must be reduced locally.

The applicant has identified LRMs to meet the AB 734 local, direct reduction requirement. These LRMs include project design features that are incorporated into the design of the Proposed Project, as well as two (2) additional strategies identified by the Applicant.

The project design features identified by the Applicant include the following:

- Transportation Management Plan (TMP) and Transportation Demand Management (TDM) Plan.
- 10 percent of onsite parking spaces to be equipped with an EV charger.
- Electrification (i.e., prohibition of non-electric energy, such as natural gas) of 50 percent of Residential Units.

Table 3 indicates these product design feature LRMs will result in 344,362 MT of direct, local GHG reductions.

The two additional LRMs identified by the applicant include the following, and each are discussed in detail below:

- The conversion of the OPP from jet fuel to battery storage.
- Off-site, community-serving Electric Vehicle Charging Stations (EVCS).

Oakland Power Plant Conversion Local Reduction Measure

The OPP LRM strategy would involve replacing the three (3) existing jet-fueled turbines with a 90 MW battery ESS with up to four hours of storage. The methodology used to estimate avoided GHG emissions resulting from the OPP LRM comprises two components: (1) a direct reduction in GHG emissions from closure of the existing jet-fueled turbines and replacement with cleaner grid energy; and (2) avoided indirect GHG emissions from the ramping down of fossil-fueled peaker plants that would have been required to regulate and condition the grid, a function now served by the battery ESS.

The Applicant is proposing the OPP LRM as the primary strategy to meet the direct, local reduction requirements. Table 3 indicates the OPP LRM would result in 520,656 MT of direct, local GHG reductions. These reductions would be associated with a “credit bank” to meet the reduction requirements for future phases of development, where, as each phase is developed, the required amount of local, direct reductions required would be obtained from this “credit bank” to fulfill the local, direct reduction requirement for that phase as an LRM.

When the 520,656 MT direct, local GHG reductions from the OPP LRM are coupled with the 344,362 MT local, direct reductions from product design feature LRMs (Table 3), the project would achieve 865,017 MT in local, direct reductions. These reductions more than exceed the 645,106 MT local, direct reductions needed to meet AB 734 requirements.

Community-Serving Electric Vehicle Charging Stations Local Reduction Measure

While the OPP LRM is the primary strategy identified to meet the direct, local reduction requirements, the Applicant has developed an additional strategy, the EVCS LRM, to provide an alternative path to meeting the AB 734 local, direct reduction requirement should the OPP not be implemented. If the OPP LRM is not be implemented, 1,013 EVCS¹³ would need to be installed in order to result in 355,418 MT (indicated in Table 3) in local, direct reductions. When these reductions from the EVCS LRM are coupled with the 344,362 MT local, direct reductions from product design feature LRMs (Table 3), the project would achieve 699,780 MT CO₂e in local, direct emission reductions, which is 54 percent of total non-residential emissions and thus exceeds the 50 percent requirement for local, direct reductions.

AB 734 50 Percent Offset Credit Limit

As previously indicated, emissions associated with baseline conditions amount to 317,998 MT CO₂e, while the first phase of development, which includes the new ballpark and 15,000 sq. ft. of retail/restaurant use, would result in emissions totaling 287,877 MT CO₂e (Table 3). As these baseline emissions are replaced by those from the first phase of development and the emissions associated with the first phase of development are 30,121 MT lower than baseline (i.e., are a net reduction), these emissions would be associated with a “credit bank” for reducing subsequent phases of development of the Proposed Project only through offset credits. The Applicant has elected to utilize these reductions in lieu of obtaining offset credits, meaning that rather than purchasing 30,121 MT worth of offset credits, the Applicant would apply these

¹³ The Application indicates an off-site community EVCS can reduce roughly 351 MT CO₂e over a 30-year lifetime.

baseline-related “credit bank” reductions to meet the reduction requirements for future phases of the Proposed Project development.

Total net emissions from the Proposed Project would amount to 1,369,440 MT CO₂e, and the Applicant has committed to purchase 669,659 MT in offset credits (Table 3). As this represents 49 percent of total emissions, this meets the AB 734 requirement for no more than 50 percent of GHG emissions reductions from offset credits. The Applicant will purchase voluntary carbon credits issued by an accredited third-party carbon registry. The Applicant will, to the extent feasible, prioritize offset credits that produce emission reductions within the City or the boundaries of the BAAQMD, and offset credits will not be for projects located outside the United States.

The Applicant has committed to enter into contracts to offset construction emissions prior to the issuance of grading permits for each construction phase or subphase for horizontal development, and at the issuance of each building permit for vertical development. For operation emissions, the Applicant will identify and implement all LRMs and/or will enter into contracts for offset credits placed prior to the City issuing a TCO for any buildings in each phase. Prior to the construction of each phase of development, the Applicant is required to consult with the City and fulfill the City’s project and plan review and permitting requirements. As part of this process, the Applicant will disclose the specific LRM and offset requirements for that phase to the City prior to construction. After construction is complete and before taking occupancy, the Applicant would apply for a TCO. As part of the City’s TCO final inspection, they would confirm that the required reduction requirements were fulfilled prior to issuing the TCO.

Conversation with City of Oakland Planning Department staff indicates the reduction measure commitments proposed by the Applicant in its AB 734 application will be incorporated into the project’s Final Environmental Impact Report (FEIR) as project design features or mitigation measures. Consistent with CEQA requirements, the Applicant agrees to comply with all project design features and mitigation measures contained in the FEIR through the project’s Mitigation Monitoring and Reporting Program, which represents a binding and enforceable agreement with the City, and will be in the terms of the development agreement.

XII. Unit Emission Factor Emissions Reconciliation

The Application identifies GHG emissions associated with the “Anticipated Development Scenario,” which assumes a steady pace of development across the project site until full project buildout. Recognizing that actual rate of project development could differ from that indicated in the Application, such as market conditions at the time of development, and to also ensure the Applicant fully complies with AB 734 requirements in the event actual development rates differ from the “Anticipated Development Scenario” identified in the Application, the Application also presents unit emission associated with the construction and operation of a single unit of each proposed land use development type over the Proposed Project’s 30-year anticipated life. The unit emissions identified in the Application are calculated using the methodologies described in Sections VII and IX; CARB staff have reviewed and verified the Applicant’s methodology and calculations used to develop the unit emissions are appropriate.

This unit emissions approach provides the Applicant with a method of identifying pro-rated emissions and reduction requirements, where the unit emissions (e.g., 1,837 MT CO₂e per sq. ft. of retail/restaurant use) can be multiplied by the types and number of land use units (e.g., 15,000 sq. ft. of retail/restaurant use) actually developed in a specific phase:

$$\begin{array}{l} \text{GHG} \\ \text{Emissions/Reductions} \\ \text{(given land use type)} \end{array} = \text{Application Unit Emissions} \times \text{Land Use Type} \times \# \text{ Land Uses}$$

Prior to the development of each phase when the Applicant initiates the entitlement process with the City, these unit emissions will be used to calculate the actual amount of reductions necessary (both local, direct and offset credits) for that phase to meet AB 734 requirements, and to reconcile these amounts with those reported in the Application for that phase. This approach allows the Applicant to calculate and implement additional reductions in the event a phase is developed in excess of the amount reported under the “Anticipated Development Scenario” in the Application. Conversely, the Applicant may also use this approach to reduce their reduction obligation should the development of a phase occur at a lower amount than reported under the “Anticipated Development Scenario” in the Application. Further, this approach ensures the reconciliation is completed using unit emissions that have been reviewed and verified by CARB as part of this Application.

$$\text{Additional/reduced reduction requirement}^{14} = (\text{Actual emissions}^{15}) - (\text{Application "Anticipated Development Scenario" emissions}^{16})$$

This approach allows the Applicant to determine whether they need to increase or decrease their GHG reduction obligation from that listed for the “Anticipated Development Scenario” in the Application for that phase. Table 4 summarizes the lifetime Unit Emissions for each land use type the Applicant will use prior to the development of each phase to identify the actual amount of emissions and reductions required to ensure that phase meets AB 734 requirements.

Prior to the development of each phase identified in the Application when the Applicant initiates the entitlement process with the City, the Applicant will prepare and submit to the City an “AB 734 Compliance Memorandum.” Each memo will identify the final emissions and reduction obligations (both local, direct and offset credits), for that phase, by adjusting the emissions from the “Anticipated Development Scenario” up or down to reflect the actual amount to be developed for that phase using the unit emissions methodology described above.

The “AB 734 Compliance Memorandum” will document the following for each phase of development (see Section 8 of Attachment 2 for hypothetical examples scenarios illustrating how these concepts will be implemented):

- The land use program identified for that phase in the Application “Anticipated Development Scenario.”
- The actual amount developed for that phase.
- A description of how the actual amount developed shown in the phase permit application differs from the “Anticipated Development Scenario” identified in the AB 734 Application, if necessary.
- The emissions, LRMs and offset credits required of that phase as defined in the Application for the “Anticipated Development Scenario.”
- Quantification of the difference in emissions and reduction (including those from the “credit bank¹⁷,” LRMs, and offset credit purchases) profiles between the

¹⁴ Additional/reduced reduction requirement = Amount Applicant’s reduction obligation may be adjusted.

¹⁵ Actual emissions = Emissions for the phase being developed, estimated based on the amount of development occurring for that phase and the Application Unit Emissions.

¹⁶ Application “Anticipated Development Scenario” emissions = Emissions for the phase being developed, as reported in the Application.

¹⁷ As described in Section X, the “credit bank” includes two types of reductions: 1) Reductions from the OPP used to satisfy future local, direct reduction obligations via LRMs, and 2) the difference between the baseline emissions and the Project ballpark emissions used as an offset credit. They are identified as

actual amount developed shown in the permit application for that phase and that defined in the Application for the “Anticipated Development Scenario,” using established unit emission methodology from the Application.

- The source of the LRMs to meet AB 734 local, direct requirements (i.e., a detailed accounting of the “credit bank” [comprised of OPP reductions] or community-serving EVCS) and the amount of offset credits purchased to meet AB 734 net zero GHG requirements for each phase.
- Confirmation of the emissions and reductions (including those from the “credit bank,” LRMs, and offset credit purchases) for that phase in the form of evidence of contracts entered into for the implementation of EVCS for LRM credits, as necessary, or the purchase of offset credits.

The Applicant must demonstrate all required LRMs and offset credits identified in the “AB 734 Compliance Memorandum” for that phase, including the entering into contracts for the implementation of LRMs and the purchase of offset credits, are in place prior to receiving a TCO for any buildings in each phase. In addition, project design features for LRM credit must be shown on the relevant building permits and implemented during construction. The Applicant will enter into contracts to offset construction emissions prior to the issuance of grading permits for each construction phase or subphase for horizontal development and at the issuance of each building permit for vertical development. For operation emissions, the Applicant will enter into contracts for offset credits placed prior to receiving TCO for any buildings in each phase. The City will withhold issuance of the TCO for that phase if the Applicant does not demonstrate LRM implementation and offset credit purchases.

The City will provide courtesy copies of the “AB 734 Compliance Memo” for each phase to CARB. Enforcement of compliance will be outlined in the terms of the development agreement between the City and the Applicant and will be imposed by the City as conditions of approval that will be monitored and fully enforceable by the City for the life of the obligation.

being a “credit bank” because they are reductions that are achieved prior to future phases that is then drawn upon as future phases are developed to fulfill the reduction obligations of the phases.

Table 4: Summary of Lifetime Unit Emissions and Reductions (MT CO_{2e}) by Land Use Type

Land Use and Size		Units	Performance Venue	Residential	Office	Retail/ Restaurant	Hotel
			1 Performance Venue	1 Dwelling Unit	1,000 Square Feet	1,000 Square Feet	1,000 Square Feet
A	Existing Conditions	MT CO _{2e}	--	--	--	--	--
B	Project Construction	MT CO _{2e}	185	4.0	3.7	3.7	3.5
C	Project Operations	MT CO _{2e}	24,741	128	255	1,837	425
D: A+B+C	Total Emissions to Reduce or Offset	MT CO_{2e}	24,926	132	259	1,840	428
E: D/2	Maximum Offset Credits Purchases for Each Land Use	MT CO _{2e}	12,463	66	129	920	214
F: (B+C)/2	Local Reductions Required for Each Land Use	MT CO _{2e}	12,463	--	129	920	214
G	Local Reductions from Project Site Design Features for Each Land Use ¹	MT CO _{2e}	4,434	39	67	429	51
H: D-E-G	Remaining Emissions to be Reduced through Local, Direct Measure	MT CO _{2e}	8,029	27	63	491	163
I	Off-site Community EVCS Required If Credit Bank Not Used ²	#	23	0.078	0.18	1.4	0.46

Source: Summarized from Attachment 2; refer to Attachment 2 for a complete summary.

¹ Project design features include Transportation Management Plan and Transportation Demand Management Plan, Onsite EV Charging, and 50 percent Electrification of Residences.

² In the event the OPP is not implemented, community-serving EVCS must be implemented to achieve local, direct reductions.

XIII. Conclusions and Recommendations

Based on CARB staff's evaluation of the documentation provided by the Applicant, CARB has concluded that the Proposed Project would result in no net additional GHG emissions, that a minimum of 50 percent of the GHG emissions reductions from non-residential land uses would result from local, direct measures, and that not more than 50 percent of reductions would result from offset credits.

ATTACHMENT 2

AB 734 Application for the Oakland Waterfront Ballpark District Project

(Original Application dated March 15, 2019; First Supplemental Memorandum dated August 26, 2019, Second Supplemental Memorandum dated November 1, 2019, Third Supplemental Memorandum dated March 10, 2020, and Fourth Supplemental Memorandum dated July 9, 2020)