

MINUTES OF THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



**21.1**

(1)

On motion of Supervisor Perez, seconded by Supervisor Washington and duly carried by unanimous vote, IT WAS ORDERED that the recommendation from the Transportation And Land Management Agency/Planning regarding the Public Hearing on Specific Plan No. 343 Amendment No. 2, General Plan Amendment No. 200005, Change of Zone No. 2000025, Plot Plan No. 200021, Tentative Parcel Map No. 38040– Consider Addendum to Certified EIR No. 470 - Applicant: SoCal Arena Company LLC– Stephen Collins–Fourth Supervisorial District–Thousand Palms Zoning District–Western Coachella Valley Area Plan: Business Park (BP), Mixed Use Area (MUA), Commercial Tourist (CT), Commercial Office (CO), Very High Density Residential (VHDR), Medium High Density Residential (MHDR), Open Space: Recreation (OS:R)–Zoning: SP Zone (Specific Plan No. 343)–Location: northeast of I-10 and Varner Rd., east of Cook St., west of Washington St., south of Chase School Rd.–455.75 Acres (Entire Specific Plan)–REQUEST: The Specific Plan Amendment proposes to amend the existing Specific Plan by adding a Planning Area 11 for the purposes of accommodating a sports and events arena. Existing Planning Area 8 primarily will be reduced in size to accommodate Planning Area 11. The Specific Plan Amendment also proposes to incorporate guidelines for signs, including guidelines for digital signage. The General Plan Amendment proposes to modify the land use designations of the General Plan to match those as proposed by the Specific Plan Amendment and to modify Western Coachella Valley Area Plan Policy 15.4 to allow for alternative standards for free standing signs within Specific Plans. The Change of Zone proposes to modify the Specific Plan Zoning Ordinance text to accommodate the proposed Planning Area 11 and to define the Specific Plan Planning Area boundaries. The Plot Plan proposes to construct and operate a sports and events arena and hockey training facility totaling a maximum of 295,000 sq. ft. on 44.41 gross acres. The Tentative Parcel Map proposes to subdivide a 101.58 gross acre area into 4 parcels – APNs: 695-100-004 through 695-100-014. District 4, is approved as recommended.

Roll Call:

Ayes: Jeffries, Spiegel, Washington, Perez and Hewitt

Nays: None

Absent: None

Continued on page 2

MINUTES OF THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



Page 2

**21.1**

(2)

On Motion of Supervisor Perez, seconded by Supervisor Jeffries and duly carried by unanimous vote, IT WAS ORDERED that the above matter be reconsidered.

Roll Call:

Ayes: Jeffries, Spiegel, Washington, Perez and Hewitt

Nays: None

Absent: None

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I hereby certify that the foregoing is a full true, and correct copy of an order made and entered on May 25, 2021, of Supervisors Minutes.

WITNESS my hand and the seal of the Board of Supervisors  
Dated: May 25, 2021  
Kecia R. Harper, Clerk of the Board of Supervisors, in  
and for the County of Riverside, State of California.

(seal)

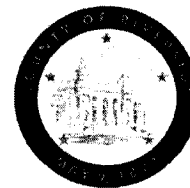
By:  Deputy

AGENDA NO.  
21.1

xc: Planning



**SUBMITTAL TO THE BOARD OF SUPERVISORS  
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**



ITEM: 21.1  
(ID # 14898)

**MEETING DATE:**

Tuesday, May 25, 2021

**FROM:** TLMA-PLANNING:

**SUBJECT:** TRANSPORTATION AND LAND MANAGEMENT AGENCY/PLANNING: PUBLIC HEARING ON SPECIFIC PLAN NO. 343 AMENDMENT NO. 2, GENERAL PLAN AMENDMENT NO. 200005, CHANGE OF ZONE NO. 2000025, PLOT PLAN NO. 200021, TENTATIVE PARCEL MAP NO. 38040– Consider Addendum to Certified EIR No. 470 - Applicant: SoCal Arena Company LLC–Stephen Collins–Fourth Supervisorial District–Thousand Palms Zoning District–Western Coachella Valley Area Plan: Business Park (BP), Mixed Use Area (MUA), Commercial Tourist (CT), Commercial Office (CO), Very High Density Residential (VHDR), Medium High Density Residential (MHDR), Open Space: Recreation (OS:R)–Zoning: SP Zone (Specific Plan No. 343)–Location: northeast of I-10 and Varner Rd., east of Cook St., west of Washington St., south of Chase School Rd.–455.75 Acres (Entire Specific Plan)–REQUEST: The Specific Plan Amendment proposes to amend the existing Specific Plan by adding a Planning Area 11 for the purposes of accommodating a sports and events arena. Existing Planning Area 8 primarily will be reduced in size to accommodate Planning Area 11. The Specific Plan Amendment also proposes to incorporate guidelines for signs, including guidelines for digital signage. The General Plan Amendment proposes to modify the land use designations of the General Plan to match those as proposed by the Specific Plan Amendment and to modify Western Coachella Valley Area Plan Policy 15.4 to allow for alternative standards for free standing signs within Specific Plans. The Change of Zone proposes to modify the Specific Plan Zoning Ordinance text to accommodate the proposed Planning Area 11 and to define the Specific Plan Planning Area boundaries. The Plot Plan proposes to construct and operate a sports and events arena and hockey training facility totaling a maximum of 295,000 sq. ft. on 44.41 gross acres. The Tentative Parcel Map proposes to subdivide a 101.58 gross acre area into 4 parcels – APNs: 695-100-004 through 695-100-014. District 4. [Applicant Fees 100%]

**RECOMMENDED MOTION:** That the Board of Supervisors:

Continued on Page 2

**ACTION: Policy**

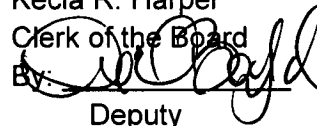
  
John Hildebrand, Planning Director 5/11/2021

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3) **MINUTES OF THE BOARD OF SUPERVISORS**

On motion of Supervisor Perez, seconded by Supervisor Spiegel and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes: Jeffries, Spiegel, Washington, Perez, and Hewitt  
Nays: None  
Absent: None  
Date: May 25, 2021  
xc: Planning

Kecia R. Harper  
Clerk of the Board  
By:   
Deputy

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. **CONSIDER an ADDENDUM to ENVIRONMENTAL IMPACT REPORT NO. 470** based on the findings and conclusions incorporated in the Initial Study that the Project will not have a significant effect on the environment and that none of the conditions described in State CEQA Guidelines section 15162 exist;
2. **TENTATIVELY APPROVE GENERAL PLAN AMENDMENT NO. 200005**, which changes the General Plan land use designation of the project site from Community Development: Business Park (CD:CT) to Community Development: Commercial Tourist (CD:CT), updates Figure 3 of the Western Coachella Valley Area Plan and other related tables and figures to reflect the Planning Area boundary changes proposed by SP No. 343A2, in accordance with Exhibit 6, and modifies Policy 15.4 of the Western Coachella Valley Area Plan, based on the findings and conclusions incorporated in this staff report;
3. **TENTATIVELY APPROVE AMENDMENT NO. 2 TO SPECIFIC PLAN NO. 343** to amend the specific plan land use plan and specific plan text for Specific Plan No. 343 to include a Planning Area 11 within the current specific plan boundaries, revise the boundaries of Planning Areas 4, 6b, 7, and 8, and incorporate guidelines for signs specific to Planning Area 11, including guidelines for digital signage, subject to the attached advisory notification document and conditions of approval, and based on the findings and conclusions incorporated in this staff report;
4. **TENTATIVELY APPROVE CHANGE OF ZONE NO. 2000025** to modify the specific plan zoning ordinance to include Planning Area 11 and establish its permitted uses and development standards, including development standards for signs specific to Planning Area 11; and to establish Planning Area boundaries with metes and bounds, based upon the findings and conclusions provided in this staff report;
5. **APPROVE TENTATIVE PARCEL MAP NO. 38040**, subject to the attached advisory notification document and conditions of approval, and based upon the findings and conclusions provided in this staff report, pending the Board of Supervisors' final adoption of the resolutions for GPA No. 200005 and SP No. 343A2, and the zoning ordinance for Change of Zone No. 1800020; and
6. **APPROVE PLOT PLAN NO. 200021**, subject to the attached advisory notification document and conditions of approval, and based upon the findings and conclusions provided in this staff report, pending the Board of Supervisors' final adoption of the resolutions for GPA No. 200005 and SP No. 343A2, and the zoning ordinance for Change of Zone No. 1800020.

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

<b>FINANCIAL DATA</b>	<b>Current Fiscal Year:</b>	<b>Next Fiscal Year:</b>	<b>Total Cost:</b>	<b>Ongoing Cost</b>
<b>COST</b>	\$ N/A	\$ N/A	\$ N/A	\$ N/A
<b>NET COUNTY COST</b>	\$ N/A	\$ N/A	\$ N/A	\$ N/A
<b>SOURCE OF FUNDS:</b> Applicant Fees 100%			<b>Budget Adjustment:</b>	No
			<b>For Fiscal Year:</b>	N/A

**C.E.O. RECOMMENDATION:** Approve

**BACKGROUND:**

**Summary**

**GENERAL PLAN AMENDMENT NO. 200005 (GPA200005)** is a proposal to change the subject site's General Plan land use designation from Community Development: Business Park (CD:CT) to Community Development: Commercial Tourist (CD:CT), update Figure 3 of the Western Coachella Valley Area Plan and other related tables and figures to reflect the Planning Area boundary changes proposed by Amendment No. 2 to Specific Plan No. 343. GPA No. 200005 also modifies Western Coachella Valley Area Plan Policy 15.4 to allow alternative standards for free standing signs for on-site advertising within Specific Plans by including the following provision: "e. the provisions of this policy shall not apply to signs and development located in an approved Specific Plan where the approved Specific Plan has sign design guidelines or standards".

**AMENDMENT NO. 2 to SPECIFIC PLAN NO. 343 (SP00343A02)** is a proposal to amend the adopted specific plan land use plan and the specific plan text of Specific Plan No. 343 by:

- Including a Planning Area 11 within the existing Specific Plan boundaries for the purposes of accommodating a sports and events arena;
- Reducing the acreage of the existing Planning Area 8 to accommodate Planning Area 11;
- Revising the boundaries of Planning Areas 4, 6B, and 7 to accommodate Planning Area 11;
- Updating the Specific Plan land use plan to reflect Planning Area 11 and changes to Planning Areas 4, 6B and 7; and,
- Incorporating guidelines for signs specific to Planning Area 11, including guidelines for digital signage.

**CHANGE OF ZONE NO. 2000025** is a proposal to modify the Specific Plan Zoning Ordinance text to include permitted and conditionally permitted uses and development standards, including standards for signs, for Planning Area 11, make clarifying revisions to the ordinance text and to establish the boundaries of the Specific Plan Planning Areas by metes and bounds.

**TENTATIVE PARCEL MAP NO. 38040** is a proposal for a Schedule E subdivision of 101.50 gross acres into four parcels, one parcel for the proposed concurrent arena and related

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

facilities, one parcel including the primary parking area for the arena, one parcel for adjacent Planning Areas 6B and 8, and one parcel for entry road/landscaping from Varner Road.

**PLOT PLAN NO. 200021** is a proposal to construct and operate a sports and events arena totaling 273,879 square feet with a maximum height of 58 feet on 44.4 gross acres with 3,000 parking spaces. The arena is planned to host an American Hockey League (AHL) team and provide a venue for other events including other sports events, concerts, cultural events, conferences, and conventions. The arena includes a variety of facilities and services that include but are not limited to, up to 11,700 spectator seating for a concert scenario, concessions, bars, clubs/lounges, meeting rooms, kitchens, retail, team practice facilities, management offices, and media support facilities. A 35,000 square foot hockey training facility is also proposed next to the arena for AHL team practice and the community.

Additional details on each of the components of the Project and analysis by staff and required findings are included in the Planning Commission staff report package.

*Public Safety/Fire Response Services*

Due to the unique nature of the project, County staff, in particular Fire Department staff, have evaluated the design and operation of the arena, its potential demand for public safety services, the services available in the area, the on-site emergency services and procedures proposed by the applicant, impact fees applicable to the arena and overall Specific Plan, as well as information on emergency service responses for comparable facilities. The determination of the evaluation is for the need for an aerial ladder truck to adequately serve the arena due to the height of the building as well as proportional funding for construction of a new fire station within the City of Palm Desert. County staff proposed and the applicant agreed to conditions of approval that require a \$1.8 million payment to fully fund acquisition of an aerial ladder truck prior to building permit issuance and a \$2.5 million payment for a proportional share of construction of the new fire station prior to building final inspection.

*EIR Addendum*

The findings in the Planning Commission staff report Environmental Review and Environmental Findings section details the required findings for the Addendum and the Initial Study-Addendum and supporting appendices with technical reports provide the details for each CEQA topic for analysis. EIR No. 470, certified in 2006, was prepared to evaluate the environmental impacts of the NorthStar Specific Plan project. The Project, including an amendment to the NorthStar Specific Plan, the preparation of an Addendum to EIR No. 470 CEQA in accordance with CEQA Section 21166 and CEQA Guidelines Section 15162 and 15164 is the appropriate approach to the environmental review of the proposed Project. The applicable standard of review is whether the changes to the NorthStar Specific Plan via the Amendment to incorporate the proposed arena component of the Project will result in any new significant impacts or substantially more severe significant impacts than were identified in EIR No. 470 for the NorthStar Specific Plan Project.

**SUBMITTAL TO THE BOARD OF SUPERVISORS COUNTY OF RIVERSIDE,  
STATE OF CALIFORNIA**

It is important to note that the Addendum does not fully rely on the information in the 2006 EIR. The Addendum contains fully updated current information and analysis for each topic evaluated in EIR No. 470 to support its conclusions that the proposed Specific Plan Amendment to allow the arena project will not result in any new or substantially more severe impacts than identified in EIR No. 470.

Specific comments regarding the appropriateness and adequacy of the EIR Addendum were raised through public comments submitted. Staff responded to those comments during the Planning Commission hearing process that addresses the comments received at that time and concludes that the EIR Addendum is appropriate and adequate to reflect the proposed Project. Those comments and responses are included in one of the Planning Commission memos included in the attachments.

**Planning Commission Action**

On May 5, 2021, the Planning Commission recommended the Board of Supervisors approve the project on a 5-0 vote.

**Impact on Residents and Businesses**

All potential project impacts have been studied under CEQA and noticed to the public pursuant to the requirements of the County.

**Additional Fiscal Information**

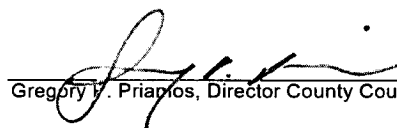
All fees are paid by the applicant. There is no General Fund obligation.

**ATTACHMENTS:**

- A. Planning Commission Minutes
- B. Planning Commission Memos
- C. Planning Commission Staff Report Package
- D. Specific Plan No. 343 Amendment No. 2 Document
- E. Plot Plan No. 200021 Exhibits
- F. Tentative Parcel Map No. 38040 Exhibits



Jason Farin, Principal Management Analyst 5/18/2021



Gregory V. Priamos, Director County Counsel 5/13/2021



**PLANNING COMMISSION  
MINUTE ORDER  
MAY 5, 2021**

**I. AGENDA ITEM 3.1**

**SPECIFIC PLAN NO. 343 AMENDMENT NO. 2, GENERAL PLAN AMENDMENT NO. 200005, CHANGE OF ZONE NO. 2000025, PLOT PLAN NO. 200021, and TENTATIVE PARCEL MAP NO. 38040 – Intent to Consider an Addendum to Certified Environmental Impact Report – EIR470 – Applicant: SoCal Arena Company, LLC/Stephen Collins – Representative: Meridian Consultants, LLC/Tony Locacciato – Fourth Supervisorial District – Thousand Palms Zoning District – Western Coachella Valley Area Plan: Community Development: Business Park (CD-BP) – Mixed Use Area (CD-MUA) – Commercial Tourist (CD-CT) – Commercial Office (CD-CO) – Very High Density Residential (CD-VHDR) - Medium High Density Residential (CD-MHDR) - Open Space: Recreation (OS-R) – Zoning: Specific Plan Zone (North Star Ranch, Specific Plan No. 343) – Location: Northeasterly of Interstate 10 and Varner Road, easterly of Cook Street, westerly of Washington Street, northerly of 38<sup>th</sup> Avenue, and southerly of Chase School Road – 455.75 Acres (Entire Specific Plan).**

**II. PROJECT DESCRIPTION:**

The Specific Plan Amendment is a proposal to amend the existing Specific Plan by adding a Planning Area 11 for the purposes of accommodating a sports and events arena. Existing Planning Area 8 primarily will be reduced in size to accommodate Planning Area 11 and Planning Areas 4, 6B, and 7 would also have boundary changes to accommodate Planning Area 11. The Specific Plan Amendment also proposes to incorporate guidelines for signs specific to Planning Area 11, including guidelines for digital signage. The General Plan Amendment is a proposal to modify the land use designations of the General Plan to match those as proposed by the Specific Plan Amendment, in particular to designate the proposed Planning Area 11 area as Commercial Tourist, and to modify Western Coachella Valley Area Plan Policy 15.4 to allow for alternative standards for free standing signs within Specific Plans with the inclusion of the following provision “e. the provisions of this policy shall not apply to signs and development located in a Specific Plan where the Specific Plan has sign design guidelines or standards”. The Change of Zone is a proposal to modify the Specific Plan Zoning Ordinance text to accommodate the proposed Planning Area 11 and to define the Specific Plan Planning Area boundaries. The Plot Plan is a proposal to construct and operate a sports and events arena and hockey training facility totaling a maximum of 295,000 sq. ft. with a maximum height of 58 feet above ground level on 44.41 gross acres with 3,000 parking spaces. The Tentative Parcel Map is a proposal to subdivide a 101.58 gross acre area into four (4) parcels. APNs: 695-100-004 through 695-100-014. Continued from April 7, 2021 and April 27, 2021.

**III. MEETING SUMMARY:**

The following staff presented the subject proposal:

Project Planner: Russell Brady at (951) 955-3025 or email at [rbrady@rivco.org](mailto:rbrady@rivco.org).

Spoke in favor:

Tim Leiweke, Applicant's Representative, 424-280-2506  
Michael Bates, Applicant's Representative, 949-292-4938  
Randi Berstein, Applicant's Representative, 410-299-8736  
John Bolton, Applicant's Representative, 760-917-5444  
Brad Benke, Applicant's Representative, 701-741-4127  
Carole Van Zandt, Interested Party, 760-567-2829  
Carolyn Martino, Interested Party, 310-403-2559  
DoeLeen Rover, Interested Party, 760-578-9743  
Eric Ceja, Interested Party, 707-971-0621  
Fred Bell, 760-578-1600  
Joseph Tromey, Interested Party, 908-268-3636  
Robert Gilliland, Interested Party, 760-340-1515  
Sandra Schulz, Interested Party, 760-773-9223  
Bill Santos, Interested Party  
Sara Pinank, Interested Party  
Walter Stevenson, Interested Party, 760-883-0148  
Chris Kirikian, Interested Party, 818-415-7274  
Gina McFanny, Interested Party





**PLANNING COMMISSION  
MINUTE ORDER  
MAY 5, 2021**

Spoke in opposition:  
Brian Flynn, Interested Party, 508-380-4151

No one spoke in a neutral position.

**IV. CONTROVERSIAL ISSUES:**

None.

**V. PLANNING COMMISSION ACTION:**

Public Comments: Closed  
Motion by Commissioner Sanchez, 2<sup>nd</sup> by Commissioner Thornhill  
By a vote of 5-0

**ADOPTED** Planning Commission Resolution No. 2021-003; and,

The Planning Commission Recommends that the Board of Supervisors take the following actions:

**CONSIDER** an Addendum to Environmental Impact Report No. 470; and,

**TENTATIVELY** Approve General Plan Amendment No. 200005; and,

**TENTATIVELY** Approve Amendment No. 2 to Specific Plan No. 343; and,

**TENTATIVELY** Approve Change of Zone No. 1800020; and,

**APPROVE** Tentative Tract Map No. 38040; and,

**APPROVE** Plot Plan No. 200021, subject to the conditions of approval as modified at hearing.





*John Hildebrand  
Planning Director*

# RIVERSIDE COUNTY PLANNING DEPARTMENT

## Memorandum

**DATE:** May 4, 2021  
**TO:** Planning Commission  
**FROM:** Russell Brady, Project Planner  
**RE:** Item 3.1 – Fire Department Conditions of Approval

Based on the previously ongoing and now concluded discussions with the Fire Department and project applicant regarding the project's service demands and contribution, the below conditions of approval are proposed to be added to the Plot Plan to address these primary items for the project to fund acquisition of an aerial ladder truck and proportional funding for construction of a new fire station.

Following these conditions are more standard conditions proposed to be included on the Plot Plan and Tentative Parcel Map in the Advisory Notification Document.

### Plot Plan

#### *Aerial Ladder Truck Contribution*

Prior to building permit issuance, \$1.8 million shall be provided to the County of Riverside for purposes of procuring a tractor drawn aerial ladder truck, or for other purposes as determined by the Fire Chief.

#### *Fire Station Construction Contribution*

Prior to any building permit final inspection or occupancy, \$2.5 million shall be provided to the County of Riverside for purposes of proportional funding for construction of a new fire station.

#### *AND - Federal, State & Local Regulation Compliance*

1. **Fire Hydrants and Fire Flow:** Prior to the issuance of building permits, plans for the water system shall be submitted to the fire department for review and approval. The water system shall be capable of delivering the required fire flow. Fire hydrant(s) location and spacing shall comply with the fire code. An approved water supply for fire protection during construction shall be made available prior to the arrival of combustible materials on site. Reference 2019 California Fire Code (CFC) 507.5.1, 3312, Appendices B and C.
2. **Fire Department Access:** Prior to building permit issuance, a fire access site plan shall be approved. Access roads shall be provided to within 150 feet to all portions of the exterior building walls and shall have an unobstructed width of not less than 24 feet. Fire access driveways with a dead-end exceeding 150 feet in length shall be provided with an approved space to turnaround the fire apparatus. The access roads shall be capable of sustaining 60,000 lbs. over two axels in all-weather

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Palm Desert, California 92211  
(760) 863-8277 · Fax (760) 863-7040



- conditions. Approved vehicle access, either permanent or temporary, shall be provided during construction. CFC 503.1.1, 3310.1 and 503.2.1
3. Grading Permit Fire Department Review: Grading plans shall be submitted to the Office of the Fire Marshal for approval.
  4. Requests for installation of traffic calming designs/devices on fire apparatus access roads shall be submitted and approved by the Office of the Fire Marshal. CFC 503.4.1
  5. Construction Permits Fire Department Review: Submittal of construction plans to the Office of the Fire Marshal for development, construction, installation and operational use permitting will be required. Final fire and life safety conditions will be addressed when the Office of the Fire Marshal reviews these plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code, and related codes, which are in effect at the time of building plan submittal.
  6. Phased Construction Access: If construction is phased, each phase shall provide approved access for fire protection prior to any construction. CFC 503.1
  7. Fire Sprinkler System: All new commercial structures 3,600 square feet or larger shall be protected with a fire sprinkler system. CFC 903.2 as amended by the County of Riverside.
  8. Fire Alarm and Detection System: A fire alarm system will be required. CFC 903.4, CFC 907.2 and NFPA 72
  9. Knox Box and Gate Access: Buildings shall be provided with a Knox Box. The Knox Box shall be installed in an accessible location approved by the Office of the Fire Marshal. All electronically operated gates shall be provided with Knox key switches and automatic sensors for access. CFC 506.1
  10. Addressing: All commercial buildings shall display street numbers in a prominent location on the address side and additional locations as required. CFC 505.1 and County of Riverside Office of the Fire Marshal Standard #07-01
  11. Emergency Responder Radio Coverage Systems: Projects that do not meet the exceptions set forth by the Riverside County Office of the Fire Marshal shall provide plans for an emergency responder radio coverage system. CFC 510.1 and Riverside County Office of the Fire Marshal Technical Policy #TP19-002

### **Tentative Parcel Map**

#### *AND - Federal, State & Local Regulation Compliance*

1. Fire Hydrants and Fire Flow: Prior to the issuance of building permits, plans for the water system shall be submitted to the fire department for review and approval. The water system shall be capable of delivering the required fire flow. Fire hydrant(s) location and spacing shall comply with the fire code. An approved water supply for fire protection during construction shall be made available prior to the arrival of combustible materials on site. Reference 2019 California Fire Code (CFC) 507.5.1, 3312, Appendices B and C.
2. Fire Department Access: Prior to building permit issuance, a fire access site plan shall be approved. Access roads shall be provided to within 150 feet to all portions of the exterior building walls and shall have an unobstructed width of not less than 24 feet. Fire access driveways with a dead-end exceeding 150 feet in length shall be provided with an approved space to turnaround the fire apparatus. The access roads shall be capable of sustaining 60,000 lbs. over two axels in all-weather conditions. Approved vehicle access, either permanent or temporary, shall be provided during construction. CFC 503.1.1, 3310.1 and 503.2.1
3. Grading Permit Fire Department Review: Grading plans shall be submitted to the Office of the Fire Marshal for approval.
4. Requests for installation of traffic calming designs/devices on fire apparatus access roads shall be submitted and approved by the Office of the Fire Marshal. CFC 503.4.1

5. Construction Permits Fire Department Review: Submittal of construction plans to the Office of the Fire Marshal for development, construction, installation and operational use permitting will be required. Final fire and life safety conditions will be addressed when the Office of the Fire Marshal reviews these plans. These conditions will be based on occupancy, use, California Building Code (CBC), California Fire Code, and related codes, which are in effect at the time of building plan submittal.
6. Phased Construction Access: If construction is phased, each phase shall provide approved access for fire protection prior to any construction. CFC 503.1
7. Fire Sprinkler System: All new commercial structures 3,600 square feet or larger shall be protected with a fire sprinkler system. CFC 903.2 as amended by the County of Riverside.
8. Fire Alarm and Detection System: A fire alarm system will be required. CFC 903.4, CFC 907.2 and NFPA 72
9. Knox Box and Gate Access: Buildings shall be provided with a Knox Box. The Knox Box shall be installed in an accessible location approved by the Office of the Fire Marshal. All electronically operated gates shall be provided with Knox key switches and automatic sensors for access. CFC 506.1
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*John Hildebrand*  
*Planning Director*

# RIVERSIDE COUNTY PLANNING DEPARTMENT

## Memorandum

**DATE:** May 4, 2021  
**TO:** Planning Commission  
**FROM:** Russell Brady, Project Planner  
**RE:** Item 3.1 – Sheriff Department Conditions of Approval

Based on comments from the City of Palm Desert concerned with adequate Sheriff Department services for their City and surrounding area, the below conditions of approval are proposed to be included as noted below to provide support for Sheriff Department services by the project.

### Plot Plan

#### New Conditions

#### *Radio Frequency Coverage for Riverside County Sheriff's Department*

Prior to building permit issuance, emergency responder radio coverage (ERRC) systems shall be designed to support specific radio frequency and bandwidths for the Riverside County Sheriff's Department. Currently, frequencies that need to be amplified are:

700/800 MHz Riverside County Public Safety Enterprise Communications System (PSEC)- Riverside County Sheriff's Department.

#### *Agency Specific Technical, Installation and Testing*

Prior to building permit issuance, requirements shall be provided by Riverside County Office of the Fire Marshal and the Riverside County Sheriff's Department to be incorporated into building design.

#### *Supplemental Law Enforcement Deployment at Venue Events*

Prior to building permit final inspection, so as not to over burden existing, regular, Riverside County Sheriff's Department (RSO) personnel, the venue proprietors shall enter a Memorandum of Understanding (MOU) or an agreement with RSO that requires the venue to engage RSO on event staff requirements. Supplemental law enforcement support shall be funded by the venue.

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P.O. Box 1409, Riverside, California 92502-1409  
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Palm Desert, California 92211  
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Modified Condition

Additional text for 90 *RCTD-USE - Events*

At large scale events where supplemental traffic control will be required, pursuant to the approved Transportation Management Plan, the venue shall engage with the California Highway Patrol and negotiate required coverage. Supplemental traffic control support shall be funded by the venue.





*John Hildebrand  
Planning Director*

**RIVERSIDE COUNTY**  

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**PLANNING DEPARTMENT**

## Memorandum

**DATE:** May 4, 2021  
**TO:** Planning Commission  
**FROM:** Russell Brady, Project Planner  
**RE:** Item 3.1 – Transportation Management Plan

As requested by the Planning Commission, attached are additional details to the Transportation Management Plan (TMP) that would be implemented for the proposed arena.

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## **Outline of Proposed Transportation Management Plan**

### ***Introduction***

A detailed Transportation Management Plan (“TMP”) will be implemented to address the potential traffic impacts from the proposed Riverside County Arena (the “Arena”) that have been identified, and to ensure the efficient coordination and management of traffic and parking. This TMP will be developed by the County of Riverside in conjunction with affected agencies and stakeholders, including those listed below, prior to the opening of the Arena. TMP details will be developed by a working group led by the County of Riverside, in cooperation with (but not limited to) the City of Palm Desert, Caltrans, the Sun City Homeowners Association, the Ivey Ranch Homeowners Association, Classic Club Golf Course, Xavier College Preparatory High School, and the Duncan Bridge Club.

The TMP working group will start detailing the TMP elements 6 to 9 months before the Arena opening and will complete the plan 3 to 6 months before the Arena opening. The TMP will be monitored by the County for the first 6 months of Arena operation, with reports delivered to the working group at a monthly meeting to review operational effectiveness and update the TMP as necessary. Thereafter, the TMP will be revisited on an as-needed basis, but no less frequently than annually, to determine if additional updates are warranted.

Unlike residential and commercial developments which generate trips on a regular and recurring basis, arena events do not occur every day, and instead are sporadic and temporary in nature. Arena traffic generation occurs during short time periods before and after events, and therefore do not represent typical roadway operating conditions. As such, a TMP focuses on traffic control and management measures to control traffic operations temporarily for the few hours before, during, and after an event.

### ***TMP Contents***

The general content of a TMP is shown below and the specific details would be tailored to the arena.

#### **Building a Mobile-Friendly Website with Helpful Features for Arena Visitors**

- Maps of all available parking lots.
- Maps of recommended travel routes to parking locations (can be adjusted over time).
- Bicycle parking information.
- Bicycle lane information.
- Uber/Lyft information (drop-off/pick-up zones).
- Transit information – lines, stops, walk routes to Arena.
- Pedestrian routes – safe walking routes from parking locations to Arena



### **Deploy Traffic Control Officers and Implement Other Manual Traffic Changes**

- Deploy traffic control officers (“TCOs”) at key intersections before and after events to manually direct traffic and pedestrians efficiently.
- Modify signal timing plans for pre-event and post-event hours, if necessary and beneficial.
- Implement temporary intersection lane configuration modifications during pre-event and post-event hours.
- Implement temporary lane and/or road closures as necessary.
- Deploy temporary Changeable Message Signs on freeway and arterial roadways as needed to provide routing information for patrons.

### **Install Signage and Wayfinding**

- Install permanent wayfinding signs to direct patrons to available parking.
- Deploy temporary wayfinding signs and changeable message boards as needed to announce recommended traffic routes.

### **Actively Facilitate Trip Reduction Measures**

- Encourage rideshare programs (carpool programs which lead to increased auto occupancy)
- Work with rideshare companies such as Uber and Lyft for joint promotional programs.
- Clearly define and manage drop-off and pick-up areas.

### **Monitor and Refine the Plan on an Ongoing Basis**

- Monitor operations in coordination with agencies and stakeholders, and continually modify and refine as necessary to improve efficiency and effectiveness.

### **Prioritize Emergency Vehicle Access**

- Identify emergency vehicle ingress/egress routes, and coordinate same with first responders.

### **Integrate Safety and Security into Traffic Control Plans**

- Coordinate traffic control with security and safety plans to ensure consistency with access needs of public safety and emergency vehicles.

### **Have Clear Decision-Making Structure to Respond to Events in Real Time**

- Identify command and control structure, responsibilities, and procedures.
- Identify on-site location of centralized command.

### ***Plan Levels According to Events***

Rather than adopting a “one size fits all” model, the scale and scope of the Transportation Management Plans should be tailored based on the expected attendance for events. Sell-out events will only comprise about 20% of all events at the arena. In order to provide flexibility, and ensure the appropriate plan is applied for each event, it is anticipated that three event levels will be defined, and the plans tailored to each event level.

- A Level 1 Event would be for an attendance of more than 8,000 patrons. This would include a sell-out for a concert, AHL event, or a corporate /other event.
- A Level 2 Event would be for an attendance in the 5,000 to 8,000 patrons range, which would include a typical concert and a typical AHL event.
- A Level 3 Event would be for attendance of 5,000 patrons or less, which would be all remaining events.

An event would be classified by event level (Level 1, Level 2, or Level 3), depending on the expected attendance, to determine the appropriate TMP measures.

### ***Potential Specific Measures by Location for a Concert Sellout Event***

#### **Pre-Event Hour – Concert Sellout**

Potential TMP measures to address traffic conditions at identified intersections include:

- Modify signal timing (typically longer cycle lengths, and modified splits).
- Potential deployment of traffic control officers (TCOs).
- Temporary lane additions and/or lane reassignments and/or channelizations (with traffic cones/delineators and message boards).
- Utilize changeable message boards to direct incoming patrons to designated routes/areas.

The potential measures identified for each of the intersections for the Pre-Event hour are listed below:

#### ***Cook Street & Varner Road***

- Modify cycle length.
- Add temporary NB right turn lane (for two total).
- Assign TCO.



*Cook Street & I-10 WB Ramps*

- Modify cycle length.
- Assign TCO.

*Cook Street & I-10 EB Ramps*

- Modify cycle length.
- Temporary reconfiguration of EB off-ramp from one left lane, one thru/right lane and one right lane, to two left lanes and one right turn lane.

*Cook Street & Gerald Ford Drive*

- Assign TCO.

*Washington Street & Varner Road*

- Changeable message board for “No Event Access vis Avenue 38”.

*Varner Road & Berkey Drive*

- Install traffic signal.

**Post-Event Hour – Concert Sellout**

The potential measures identified for each of the identified intersections for the Post-Event hour are listed below.

*Cook Street & Varner Road*

- Modify cycle length.
- Assign TCO.
- Add one temporary WB left turn lane (for three total).
- Traffic management (parking lot exits) to divert approximately 900 trips (30% of total) from using I-10 WB on-ramp at Cook Street to use I-10 WB on-ramp at Berkey Drive. Divert trips from WB left turn on Varner Road at Cook Street to EB right turn at Varner Road & Berkey Drive to I-10 WB on-ramp.

*Cook Street & I-10 WB Ramps*

- Traffic management (parking lot exits) to divert approximately 900 trips (30% of total) from using I-10 WB on-ramp at Cook Street to use I-10 WB on-ramp at Berkey Drive. Divert trips from SB right turn to WB on-ramp at Cook Street, to use EB right turn at Varner Road & Berkey Drive to I-10 WB on-ramp.

- Assign TCO.

*Varner Road & Avenue 38*

- Close access to Avenue 38 from Varner Road.


*Varner Road & Berkey Drive*

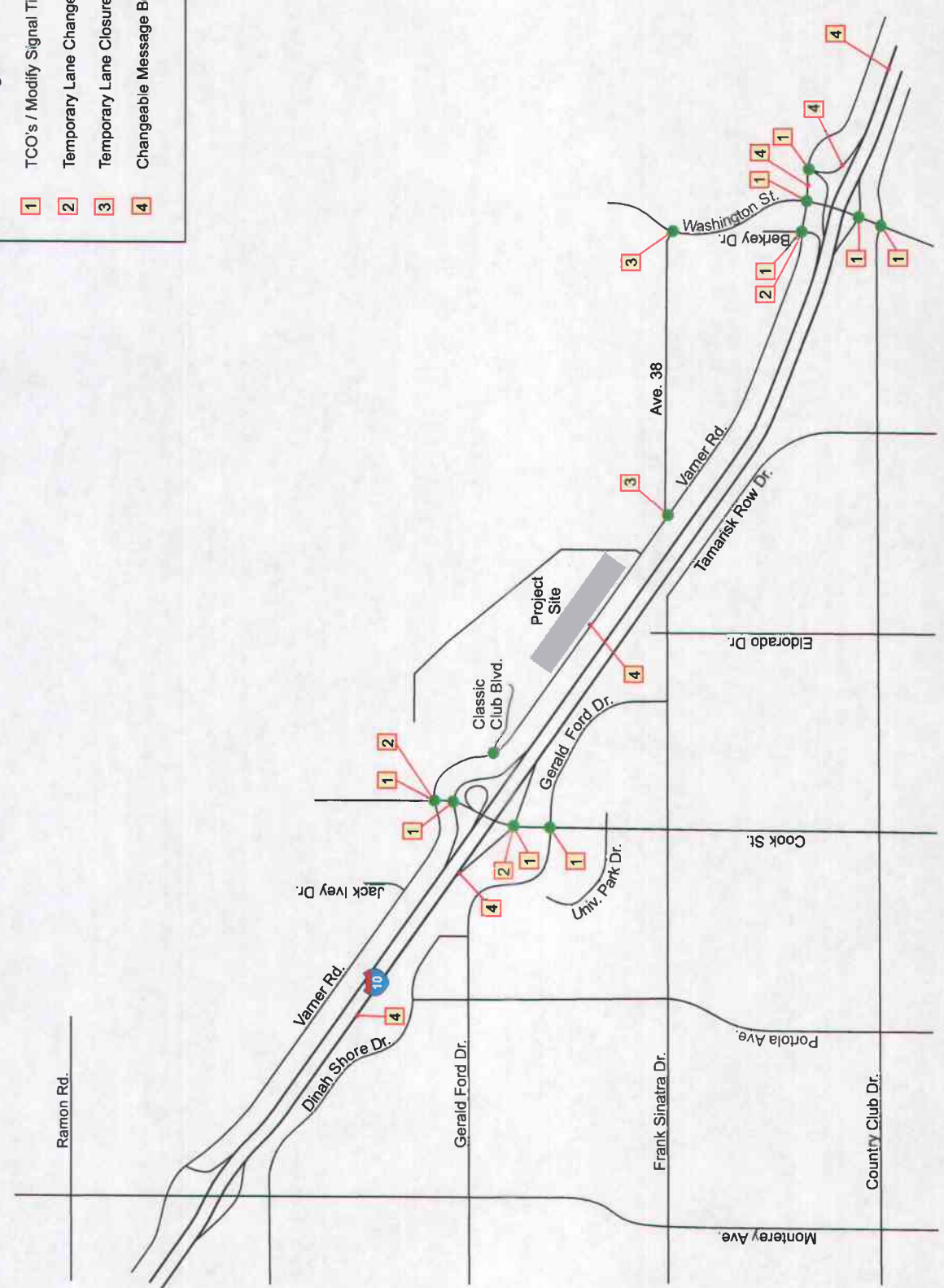
- Install traffic signal.
- Add one EB right turn lane and one WB left turn lane.
- Add approximately 900 trips diverted from Cook Street I-10 WB on-ramp to Berkey Drive I-10 WB on-ramp.

*Washington Street & I-10 EB Ramps*

- Modify cycle length and/or assign TCO.

- Legend**
- 1 TCO's / Modify Signal Timing
  - 2 Temporary Lane Changes
  - 3 Temporary Lane Closures
  - 4 Changeable Message Boards

N  
  
 Not to Scale  
 4/10/21





*John Hildebrand*  
*Planning Director*

**RIVERSIDE COUNTY**  
**PLANNING DEPARTMENT**

## Memorandum

**DATE: May 4, 2021**

**TO: Planning Commission**

**FROM: Russell Brady, Project Planner**

**RE: Item 3.1 – Response to Public Comments**

Attached are the responses prepared by the project consultant at the direction of County staff to comments received from the City of Palm Desert and comments received from Lozeau Drury on behalf of Supporters Alliance for Environmental Responsibility (SAFER).

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May 4, 2021

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Riverside, California 92502

**Attn:** Russell Brady  
Project Planner

**Re:** Addendum to the NorthStar Specific Plan  
Final Environmental Impact Report No. 470  
SCH #2005011054  
Responses to Comments from City of Palm Desert

Dear Mr. Brady,

On April 21, 2021, Richards Watson Gershon Law on behalf of the City of Palm Desert (City) submitted a letter opposing the Addendum to the NorthStar Specific Plan Final Environmental Impact Report No. 470 (EIR No. 470). The City contracted Terra Nova Planning & Research, Inc. to review the potential financial impacts associated with the Coachella Valley Arena Project (Arena Project). The City also attached a comment from Cathedral City concerning the potential cost to provide public safety services.

Provided below are detailed responses to each comment raised by the City in the letter. The responses show the Addendum is the appropriate environmental documentation under the California Environmental Quality Act (CEQA) and no further review is required under the criteria established by CEQA.





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April 21, 2021

VIA ELECTRONIC MAIL

Russell Brady, Project Planner  
Riverside County Planning Department  
County of Riverside  
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[RBrady@rivco.org](mailto:RBrady@rivco.org)

**Re: SoCal Arena Company, LLC Arena Project – Comments on Addendum to the Northstar Specific Plan Final Environmental Impact Report No. 470 (SCH#2005011054)**

Dear Mr. Brady:

On behalf of the City of Palm Desert (City), we submit the following comments on the Addendum to the 2006 Northstar Specific Plan Final Environmental Impact Report No. 470 (SCH#2005011054), dated March 2021, which was prepared in connection with SoCal Arena Company, LLC's application for (1) Specific Plan Amendment (SP00343A02), (2) General Plan Amendment (GPA200005 and OAP2001271), (3) Plot Plan (PPT200021), (4) Tentative Parcel Map (38040), and (5) Change of Zone (CZ2000025) (the Project). As stated in the Addendum, the purpose of the Project is to "accommodate the addition of a new Planning Area 11, which would allow the development of a new multi-purpose arena, event center, and hockey training facility with practice ice, surface parking, and retail skate shop [(collectively referred to as the "Arena")], on approximately 44.41-acres." The Arena is proposed to have a capacity of up to 11,000 attendees and will hold 184 events of varying sizes throughout the year.

Based on the comments set forth below, the City believes that the Addendum fails to comply with the requirements of the California Environmental Quality Act (CEQA) (Pub. Res. Code § 21000, *et seq.*), and the State of California Guidelines for CEQA (14 Cal. Code Regs. § 15000, *et seq.*). Specifically, an addendum to a previously prepared environmental impact report (EIR) is only permitted when "some changes or additions are necessary or none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred." (CEQA Guidelines § 15164.) A subsequent EIR is required when there are substantial changes to the project or the circumstances under which the project is undertaken requiring major revisions to



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the previous EIR due to new significant environmental effects or a substantial increase in previously identified significant effects. (CEQA Guidelines § 15162.) A subsequent EIR is also required if new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified, shows new or substantially more severe significant effects, or new or different feasible mitigation measures that could reduce impacts. (*Id.*) As explained further below, the City believes that the Project triggers the requirement to prepare a subsequent EIR in order to fully disclose, analyze, and mitigate impacts from the Project, including those impacts that will have a direct adverse impact on the City, its residents, and its visitors.

Accordingly, the City requests that the County suspend any further consideration of the Project until a subsequent EIR that fully discloses, analyzes, and attempts to mitigate the impacts of the Project has been prepared and circulated for public review and comment. The City objects to any further action by the County on the Project until the necessary and proper environmental review has been completed.

The City requests that written responses to each of the following comments be provided in accordance with CEQA Guidelines section 15088.

**I. The Addendum Suggests Impermissible Post Hoc Rationalization**

The law is clear that “before conducting CEQA review, agencies must not take any action that significantly furthers a project in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review for that public project.” (*Save Tara v. City of West Hollywood*, 45 Cal.4th 116, 138 (2008) [internal quotations omitted]; CEQA Guidelines § 15004(b)(2)(B).)

The use of an Addendum when a subsequent EIR is appropriate is an indication of the County rushing to rationalize a decision that appears to have already been made. The County has reason to want an expedited review. The Project proponent is advertising on its website that the Arena will be open for the 2022 National Hockey League Season.<sup>1</sup> The Addendum, and its cursory treatment of significant impacts requiring further analysis and mitigation, suggests that the County has already committed to approving the Project, thus rendering this environmental review process impermissible post hoc rationalization. We urge the County not to disregard its obligations as a lead agency under CEQA and instead to require proper environmental review of the Project.

<sup>1</sup> (See <https://www.ahlpalmsprings.com/> [“The American Hockey League has awarded its 32nd Franchise to the Coachella Valley, which will take the ice in 2022 at the Greater Palm Springs Arena.”].)



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## II. The 2005 EIR is Outdated

The prior EIR was prepared in 2005. The environmental setting on which the prior analysis was based has changed in the 16 years since certification of that EIR. For one, the “future home of a private high school” noted in the Notice of Preparation of a Draft Environmental Impact Report for the 2005 EIR has been developed into Xavier College Prep. (See County of Riverside, Transportation and Land Management Agency, Planning Department, Agency Notice of Preparation of a Draft Environmental Impact Report 6 (January 5, 2005).) The Coachella Valley Multi-Species Habitat Conservation Plan has been adopted and amended. Other aspects of the environmental setting have changed as well but the current environmental setting is not clear due to the reliance on the 2005 EIR. Establishing the current environmental setting is crucial to the CEQA analysis, as it serves as the baseline for the assessment of impacts.

The CEQA Guidelines, Appendix G, also has been amended in several categories since certification of the EIR. In particular, evaluation of greenhouse gas emissions and vehicle miles traveled was not expressly required when the 2005 EIR was certified. The following threshold criteria also were not previously analyzed under the 2005 EIR:

- Aesthetics (c)
- Biological Resources (g)
- Energy (a), (b)
- Soils (c),
- Tribal Cultural Resources (a), (b)
- Transportation (c)

Other criteria have been amended since certification of the 2005 EIR as well:

- Air Quality
- Hydrology and Water Quality
- Population and Housing

The County asserts there was enough information in the 2005 EIR about then-existing conditions that “with the exercise of reasonable diligence” information on the impacts under subsequently added or modified criteria was “readily available to the public.” Despite this, the County attempts to address these issues for the first time in the Addendum. This clearly demonstrates how outdated the 2005 EIR is and the need for a more thorough analysis under a subsequent EIR.



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### III. The Arena Project Presents New and More Severe Significant Impacts Requiring Analysis Under a Subsequent or Supplemental EIR

Under CEQA, a subsequent EIR is required when there are substantial changes to the project or the circumstances under which the project is undertaken requiring major revisions to the previous EIR due to new significant environmental effects or a substantial increase in previously identified significant effects. (CEQA Guidelines § 15162.) A subsequent EIR is also required if new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified, shows new or substantially more severe significant effects, or new or different feasible mitigation measures. (*Id.*)

An addendum is only appropriate if the criteria for a subsequent EIR are not met based on substantial evidence. The use of an addendum, though convenient for the preparing agency, has meaningful and detrimental consequences if used inappropriately. An addendum is not required to be circulated for public comment as a subsequent EIR is, additional tribal consultation does not have to be performed (which is particularly significant when the prior EIR predates the consultation requirements of Assembly Bill 52 as the 2005 EIR does), and further alternatives analysis is not required. By using an Addendum when an EIR is warranted, the County is forcing the public to review thousands of pages of technical analysis over the course of a few days, only recently expanded by an additional two weeks. This is still an insufficient amount of time and deprives the public and decisionmakers of an opportunity for meaningful public engagement on the Project which will have significant impacts for years to come.

The Project proposes an Arena, which is a significantly different use than the office park contemplated under the currently-approved Specific Plan. The Addendum attempts to classify this as a less intensive use, but when used at capacity or for larger events the Arena will draw more people to the Project site at one time and at different hours than an office park. The office park use under the current Specific Plan would operate five days a week. While the Arena would host events on fewer total days a year, it would include much more intensive uses on event days. The Addendum looks to annual averages for key impacts and fails to grapple with impacts caused by this different impact distribution.

There are over 2000 pages of appendices attached to the Addendum (including a new Air Quality Study, Geotechnical Exploration Report, Greenhouse Gas Model Outputs, Drainage and Hydrology evaluations, Noise Study, Transportation Analysis, Water Supply Assessment, Biological Resources Report, and Cultural Resources Report) and intended to address issues or information missing from the 2005 EIR analysis and relevant to the Project. The sheer volume of these additional studies accompanying the Addendum demonstrates that the changes to the Project and the circumstances surrounding the Project are substantial and require analysis in a

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subsequent EIR. This is supported by the fact that the 2005 environmental review is an EIR. The 2005 EIR was also evaluating a change to the Specific Plan to allow for a different mix of uses. At that time the County thought it appropriate to engage in a full EIR to evaluate a different mix of uses in the Specific Plan, and that still holds true for the Project.

As discussed in greater detail below, there are several issue areas in which the Addendum fails to demonstrate with substantial evidence that none of the criteria in Section 15162 calling for preparation of a subsequent EIR has been met. Thus, the County has failed to provide, as required, an "explanation of [its] decision not to prepare a subsequent EIR [that is] supported by substantial evidence." (CEQA Guidelines § 15164(e).)

#### A. Public Services Impacts

The Addendum fails to adequately analyze potential impacts to public services resulting from the Project, which will allow for events approximately every other day (184 events per year) in an area that currently experiences no activity at all. The Addendum's failure to meaningfully address these issues renders the analysis deficient under CEQA.

*Fire Services*— The fire stations closest to the Project are located east, off Washington Street, and west, in Thousand Palms. Neither station can currently meet the County's four-minute response time to the Project site. According to the Addendum, a new facility is already planned by Riverside County Fire Department to meet increased demand for fire services. (Addendum at 171.) The Addendum acknowledges the Riverside County Fire Department found "the Arena would generate additional calls for service that would contribute to the need for [a] new facility." Based on that, the Addendum concludes the Project "would contribute to cumulative impacts from growth in the area." (Addendum at 171.) But the Addendum does not explain the level of increase anticipated from the conversion of office park uses to an Arena or whether the new facility has enough capacity, including other known and anticipated growth, to accommodate and address the additional calls for service caused by the Arena. Indeed, the new University area station would currently respond to 1,300 calls annually within the four-minute response window if it were available, and 3,500 calls annually within the five-minute window, which does not even account for calls generated not only at the Project but from traffic accidents resulting from Project traffic. It is not clear from the analysis offered whether the Arena proposed by the Project would result in a substantial increase in the severity of the previously identified significant effect on fire services. Thus, the Addendum's determination that "implementation of the proposed Project would not result in any project or cumulative new impacts or increase the severity of a previously identified significant impact as analyzed in the [2005 EIR]" is not supported by substantial evidence.



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Furthermore, the Addendum's conclusion that the Project's payment of development impact fees would sufficiently address the Project's impacts to fire services is false. The University station is still in the planning stages and, under current conditions, would take approximately two to four years to plan and build. This leaves years of impacts unaddressed and unmitigated because any new fire station facility will not be built based on the Arena's targeted opening date. The development impact fees resulting from the Project also will be insufficient by several million dollars to account not only for the construction of the facility but its annual operating costs, thus further imperiling its ability to adequately serve the Project. (See Attachment A.)

*Sheriff Services*—The Addendum states that the Project would be required to comply with the mitigation measures identified in the 2005 EIR, including the payment of development impact fees. The Addendum does not address whether the Arena use would increase the calls for police services similar to those for fire services. Instead, the Addendum focuses on population growth, stating the Project, "would not result in unplanned population growth and would have no significant effects on police protection services on a project or cumulative level. Accordingly, there would be no new impact to sheriff protection services associated with the proposed Project." (Addendum at 173.) Based on this circular and conclusory statement, the Addendum finds "implementation of the proposed Project would not result in any project or cumulative new impacts or increase the severity of a previously identified significant impact as analyzed in [the 2005 EIR]." This analysis does not address whether the Arena proposed by the Project would result in a substantial increase in the severity of the previously identified significant effect on sheriff services. Thus, the Addendum's conclusions are not supported by substantial evidence.

In fact, based on evidence from other venues with similar facilities or event concentrations, including Ontario (Toyota Arena), Lake Elsinore (Diamond Stadium), and Indio (multiple events ranging from the Coachella Arts and Music Festival to special events at the polo grounds), the Project is likely to result in 25-45 public safety calls annually. (See Attachment A.) The County currently has one Sheriff's deputy assigned to the unincorporated area north of Palm Desert. That deputy is based out of the Thermal station, and is responsible for a wide area of County lands far beyond Palm Desert, from Sky Valley to the east end of the County. (See Attachment A.) Thus, it is questionable at best that a single deputy will be able to respond to the dozens of calls for service that will be generated by the Project.

*Surrounding Area*—Under the 2005 EIR, impacts to public services were found not to be significant but only with mitigation measures in place. Such mitigation measures include payment of development impacts fees to the County. The Addendum merely incorporates these mitigation measures for the Project without analyzing whether the Arena would result in an increase in demand for public services, including fire and sheriff services from neighboring incorporated areas such as the City, whose emergency response services are inextricably tied with the Project's demand. The City expects an increase in collisions, citations, and arrests off-



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site from the Project associated with attendees arriving to and leaving from the Project. The City estimates that approximately 38% of Project traffic will occur in Palm Desert, equating to 383,358 trips annually. Based on the number of collisions the City currently experiences annually for its 97,900 daily trips, the Project could result in as many as 2,525 collision calls for the police department annually on City streets. (See Attachment A.) The City anticipates needing to hire three new officers to handle increased demand for police services due to the Arena. Additionally the City of Palm Desert's fire department estimates the need to plan for 1,000-1,500 calls to the Arena based on the anticipated number of events. The Addendum fails to grapple with or mitigate any of these impacts.

These concerns over public safety impacts do not come from the City of Palm Desert alone. The City of Cathedral City, in whose sphere of influence the Project site is located, "share[s] the concerns expressed by Palm Desert regarding the provision of local services to the area" and supports efforts to "make sure that the ability to serve is carefully considered during the County review process and that consideration is given to the cost to provide the required services, especially in Public Safety." (See Attachment B.)

*Mitigation*—With respect to each of these public services discussed above, the Addendum fails to consider what additional mitigation may be appropriate due to the increased demand from the Arena. The mitigation instead is based on outdated analysis premised on an office park land use, not an arena use with large-scale events drawing thousands of attendees nearly every other day.

In short, the Addendum's analysis of impacts to Public Services and its conclusion that there are no new or more severe significant impacts is not supported by substantial evidence.

#### **B. Transportation and Traffic Impacts**

*Severity of Impacts from Events*—The Addendum leans on the fact that a special event scenario was evaluated under the 2005 EIR for a major golf tournament expected to bring an estimated 30,000-50,000 spectators. Under that scenario, the 2005 EIR "identified (6) intersections in the area projected to operate at a LOS 'F'." The 2005 EIR also identified mitigation to address these impacts but found "impacts to transportation when a major golf tournament is held would be significant and unavoidable on a direct and cumulative basis." (Addendum at 183 [quoting the 2005 EIR].) The 2005 EIR also identified a significant and unavoidable impact from the golf tournament to road maintenance. (Addendum at 188.) The Addendum concludes that because the number of persons drawn to an Arena event is lower than the estimated level of attendance for the golf tournament, the Project does not result in new or increased transportation impacts. But the Arena use is an event use *in addition* to the golf course event, with multiple large events occurring approximately 184 times over the course of a year. The Arena events are also distinct

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from the golf tournament in that they are regular and recurring. The Addendum entirely fails to analyze the transportation impacts when there is both a golf tournament and an Arena event at the same time, including whether that combined impact would be a substantial increase in the significant unavoidable transportation impact identified by the 2005 EIR. The Addendum also does not analyze whether the regular and recurring Arena events, when considered over a year, result in a substantial increase in transportation impacts or a significant change in the distribution of impacts given the location of the Arena and its ingress and egress, which is different from the golf course. Thus, there is no substantial evidence supporting the finding that the previously identified significant unavoidable impact is not substantially increased by the Project.

Significantly, we understand that the original plans to place the Arena near Palm Springs ultimately were scuttled due in part to traffic and parking issues, with the applicant's own representative citing these concerns.<sup>2</sup> Yet, the County has chosen not to meaningfully study or mitigate these impacts for the proposed location adjacent to Palm Desert. There is no reason to believe that traffic and parking impacts will be any less at this location, or that the County does not have the obligation to fully analyze and mitigate these impacts here.

*Vehicle Miles Traveled*—The 2005 EIR also did not evaluate the vehicles miles traveled (VMT) in its transportation impact analysis. This is because 16 years ago, transportation impacts were assessed by level of service, not VMT. Now agencies are required to analyze VMT. The Addendum performed the missing VMT analysis for the current Specific Plan and the Project and found that the Project would result in a 0.3% increase in total VMT over the current Specific Plan. Because this is less than 1%, the Addendum concluded that the Project would not result in a new impact or increase the severity of a previously identified significant impact. There are several problems with this analysis.

First, the Addendum provides no explanation or substantial evidence to support its use of a 1% VMT threshold for when an increase in VMT is substantial.

Second, the Addendum fails to state whether the post hoc analysis of the current Specific Plan resulted in a significant unavoidable impact or whether independent of the comparison, the impacts from the Project are significant and unavoidable. Given that the 2005 EIR failed to analyze VMT impacts, the Project's VMT impacts, if significant and unavoidable, would result in

<sup>2</sup> The Patch, City News Service, September 16, 2020 article (available at <https://patch.com/california/palmdesert/plans-palm-springs-sports-arena-shift-palm-desert-area>) ["Oak View Group CEO and co-founder Tim Leiweke told the Desert Sun that the company's partnership with the Agua Caliente Band of Cahuilla Indians "ultimately unwound." [¶] He also cited concerns over parking and traffic in downtown Palm Springs as hindering the original plans."].



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a new significant impact requiring analysis under a subsequent EIR. The Addendum does not address this and instead focuses on the comparison of the two VMTs.

Third, the Addendum states that “[s]ince the arena events vary in size, vary in type of event, and the events only occur on 180 days out of the year, the model daily project-level VMT estimates were annualized in order to effectively compare” the current Specific Plan and the Project. (Addendum at 186.) The Addendum does not explain how or whether annualizing the VMT for the Project is acceptable to assess transportation impacts from an event-based use or why a comparison of most intensive daily uses between the current Specific Plan and the Project was not performed.

*Mitigation*—The Addendum also relies on a Transportation Management Plan to minimize transportation impacts from the Project and considered additional measures to address impacts, including signal timing and diversion management. (Appendix F1, Transportation Analysis Report at ix.) Specifically, the Addendum states that the Project “would therefore develop and implement a Transportation Management Plan . . . in detail in conjunction with the appropriate agencies prior to the opening of the arena.” (Appendix F1 at 83, 105.) The Traffic Management Plan constitutes impermissible deferred analysis and mitigation. Rather than fully analyzing and mitigating traffic and circulation impacts at this time, including potential impacts to emergency access, the County is simply requiring preparation of a Traffic Management Plan in the future. The public, including the City, presumably will not have an opportunity to review or consider the sufficiency of this Plan which may not address all impacts. This problem is compounded by the County’s failure to identify the City as a responsible agency under CEQA, resulting in the City potentially trying to enforce on its streets portions of a Traffic Management Plan with which it had no involvement. In addition, the Traffic Management Plan represents new mitigation applied to a significant unavoidable impact that was not included in the EIR. The inadequacy of the transportation related mitigation is also discussed further below in Section IV.

Finally, it is not clear that the transportation analysis in general is correctly comparing the current Specific Plan to the Project. The analysis of the Project focuses on the Arena use in Planning Area 11 as compared to the office park use in Planning Area 8 under the current Specific Plan. But some of Planning Area 8 will remain and still be used for office uses. It is not clear whether the transportation analysis is taking into account the continued use of Planning Area 8 under the Project. This needs to be clarified.

For all of these reasons, the Addendum’s analysis of Transportation Impacts and the determination that there is no substantial increase in a previously identified significant unavoidable impact is not supported by substantial evidence.



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### C. Greenhouse Gas Emission Impacts

The evaluation of greenhouse gas emissions was not required at all when the 2005 EIR was certified. The Addendum states that the 2005 EIR “contained enough information about air quality emissions” that information about the Specific Plan’s greenhouse gas emissions was readily available to the public.” (Addendum at 111.) But the Air Quality criteria themselves have been modified since certification of the EIR. The Addendum engages in a review of greenhouse gas emissions for the first time, going as far as to evaluate GHG emissions under the current Specific Plan to manufacture a comparison point.

Although the Addendum found the greenhouse gas emissions for the Project to be below the selected brightline threshold of significant of 3,000 MTCO<sub>2e</sub> per year, the Addendum’s analysis is flawed. The Addendum appears to give the Project credit for reduction in greenhouse gas emissions from mobile sources due to increased efficiency standards—standards that would lead to a reduction in emissions regardless of the Project. Specifically, the Addendum states, “[s]ince [2005 EIR] . . . was certified . . . , more stringent regulations and requirements have been adopted to address air quality emissions, including GHG emissions, such as increased fuel efficiency standards and energy and water related efficiency requirements . . . . As such, the proposed Specific Plan land uses, which includes the Arena, would result in a reduction in GHG emissions compared to the adopted Specific Plan land uses as analyzed in [2005 EIR].” The Project should not take credit for reductions in emissions that are not truly attributable to it.

Furthermore, the Addendum only analyzes the Project’s consistency with the County of Riverside’s Climate Action Plan for unincorporated areas. The applicable screening criteria is whether the Project would conflict with *any* applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gases, not just local ones. The Addendum fails to analyze the Project’s consistency with Assembly Bill 32 and Senate Bills 375, 1078, and 107; Executive Orders S-3-05, B-30-15, B-55-18, S-01-07; and the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategies. Without this analysis, the Addendum has not demonstrated with substantial evidence that the Project does not present new significant impacts related to greenhouse gas emissions.

It is also unlikely that a project that admittedly results in significant and unavoidable traffic impacts (and as discussed above results in *increased* traffic impacts from the 2005 EIR) will have less than significant GHG impacts when the main source of GHG impacts is from mobile sources. (Addendum at 121.) As a result, the Addendum is missing significant information and analysis and does not comply with CEQA.

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#### D. Noise Impacts

The Noise Study (Appendix E) dismisses any operational noise impacts due to parking lot noise during the pre- and post-event timeframe because “there are no existing sensitive receptors within 500 feet of the Project Site.” First, the County’s threshold is not limited only to sensitive receptors so this analysis is deficient on its own terms. Second, this suggests that if such sensitive receptors were within 500 feet there would be an impact. The Study goes on to say that Planning Area 11 would be bordered by proposed residential uses, the nearest of which is “located approximately 230 feet from the Arena.” The Study concludes that the Arena would not have a significant impact on the proposed residential uses because the houses would be required to include interior noise protection features to meet County standards. Neither the Addendum nor the Noise Study explain what level of noise is expected at 230 feet from the Project or whether the Project operational noise at these receptors is at a level where the design features of the houses would ensure the noise levels are less than significant. It also fails to consider or discuss any potential mitigation measures the Project could undertake to reduce any noise impacts to the anticipated residential uses.

The Noise Study also failed to adequately analyze the timing of peak operational noise impacts. The Arena contemplates use in the evenings for events such as hockey games and concerts. This is distinct from the peak hours of use for an office park—morning and early afternoon. The Addendum and accompanying Noise Study do not examine whether the change in time of peak noise impacts creates a new or more severe significant impact, and simply assert that “events associated with the Arena would occur indoors.” In contrast, for construction impacts, the Addendum acknowledges the Project would need to comply with Ordinance 457.90 prohibiting construction from 6:00 PM – 6:00 AM June through September and 7:00 AM October through May when a construction site is within one-quarter mile of an occupied residence.

The Addendum also makes the conclusory statement that because the Project “would not result in a substantial increase in the number of trips previously analyzed in [2005 EIR] . . . there would also not be a substantial increase in mobile sources of noise.” While not entirely clear, it is assumed this refers to the total number of trips annually. This statement does not address any change in noise impacts due to different trip distribution. For the Arena events, more trips will occur at one time than for office park use and at different peak hours. Once again the Addendum fails to adequately analyze increased intensity of the event use of the site.

The lack of analysis of these noise impacts highlights the significant difference between the Project and the uses currently contemplated under the Specific Plan and demonstrates the need for a subsequent EIR.



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### E. Tribal Cultural Resources

It is unclear whether the County performed the required tribal consultation for the General Plan Amendment as required by SB 18.

The County appears to have engaged in SB 18 consultation with respect to the off-site work to extend the electrical distribution line but the project description in that consultation correspondence does not mention the Arena or the associated General Plan Amendment to change the land use designation and to amend the policy regarding free standing signs. The consultation letter specifically states that the project for which consultation is being sought is "an extension of an existing electrical distribution line that currently ends approximately 1,600 feet north of Cook Street/Chase School Road in unincorporated Riverside County" and that "[t]his line extension is proposed to support development in the approved NorthStar Specific Plan Area. Existing development in the NorthStar Specific Plan Area consists of the Classic Club Golf Course and Club House." (Addendum Appendix J, Confidential Appendix B.7.)

In the discussion of archaeological resources, human remains, paleontological resources, and tribal cultural resources in the Addendum, it is clear that the County is relying on the previous consultation performed under the prior 2005 EIR for all the "on-site improvements" (i.e., within the Specific Plan area). The Addendum acknowledges the possibility of impacts to these resources due to excavation but in all cases simply finds that the previously imposed mitigation shall apply. (Addendum at 83, 84, 85, 164, 195.) The Addendum states with respect to "on-site improvements" that "Consultation with California Native American tribes affiliated with the area was conducted as part of the cultural resource investigations for [the 2005 EIR], consistent with Senate Bill (SB) 18 requirements." The Addendum does not discuss or reference any tribal consultation regarding the General Plan Amendment for the proposed Project as is required by SB 18, and therefore appears to be in violation of CEQA.

### F. Biological Impacts

The Addendum "assume[s] no biological resources exist on the Project Site due to . . . constant disturbance" from the site being mass graded. (Addendum at 72.) But the site was graded more than 16 years ago. The Addendum does not explain why or how these conditions should be assumed to remain constant in the intervening time between then and now.

Mitigation for Biological Resources includes WR-9, which requires that "prior to any special event on the golf course that is expected to attract large crowds, the Coachella Valley Preserve management staff shall be contacted with regard to crowd control, press, and media controls, equipment placement and other issues regarding the operations of the event." (Addendum at 81.) The Project proposes an Arena use (as opposed to the office park) that would include regular

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and recurring large events attracting large crowds on a regular basis. It does not appear that the need for additional mitigation consistent with WR-9 for the Arena was considered or examined. The Addendum does not address whether the large events at the Arena would have additional impacts that need to be managed. This lack of analysis and any appropriate mitigation renders the Addendum flawed.

### G. Aesthetic Impacts

*Scenic Highways.* In the staff report for the April 7th Planning Commission meeting, County staff explained that the Project proposes a revision to General Plan Policy 15.4 to provide an exception from the 25 feet height/150 square feet surface area sign requirements and to supplement the current Specific Plan sign design guidelines. (Staff Report at 19.) The goal of these changes is to provide for greater flexibility in signage requirements for the Arena. (*Id.*) The analysis of aesthetic impacts in the Addendum fails to address or discuss the proposed General Plan amendment and states only that the "Freeway Sign planned for the Proposed Project would be 65 feet, which is within the allowed 70 feet height requirement in the Signage Program." (Addendum at 45.) Presumably this means the Signage Program as amended by the Project, but this is not clear.

The Addendum also states, without any analysis or support, that the Freeway Signs and Monument Signs for the Project along I-10 "would not substantially obstruct existing long-range views of the San Jacinto Mountains and Santa Rosa Mountains along the I-10 scenic corridor." The Addendum notes that the proposed Freeway sign is a similar height to the Indio Auto Mall sign 3 miles southeast on the I-10 but fails to analyze any cumulative impacts that may result from having multiple large signs on the scenic highway in relatively close proximity.

The 2005 EIR also did not analyze whether the Specific Plan would substantially degrade the existing visual character or quality of public views of the site and its surroundings (if considered rural) or conflict with applicable zoning and other regulations governing scenic quality (if considered urban). This was not a threshold criteria when the 2005 EIR was prepared and certified. The Project proposes signage along a scenic highway corridor that requires modification of the General Plan policies designed to protect scenic views. This, in turn, represents a new potentially significant impact that was not adequately analyzed in the 2005 EIR and is inappropriately addressed for the first time in the Addendum in a summary fashion.

### H. Cumulative Impacts

The Addendum concludes that the "analysis [of each type of impact] demonstrates that all Project cumulative impacts would be less than significant or would be reduced in comparison to the analysis and conclusions of [the 2005 EIR]" and that the "physical impacts associated with

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the project (e.g., biological resources, cultural resources, geology/soils, etc.) would not substantially change or increase compared to the analysis presented in [the 2005 EIR].” (Addendum at 217.) As discussed above, the Addendum’s conclusions for several impacts are not supported by substantial evidence. This calls into question the Addendum’s conclusions with respect to any associated cumulative impacts. Furthermore, the Addendum does not clearly discuss or analyze whether the surrounding area has changed in the 16 years since the 2005 EIR was prepared such that the Project’s cumulative impacts are more severe than under the prior analysis. Further analysis of cumulative impacts is necessary.

#### **IV. Previously Imposed Mitigation is Not Tailored to Address Arena Impacts**

The mitigation measures imposed under the 2005 EIR are, for the most part, general boilerplate mitigation for the types of construction and uses contemplated under the current Specific Plan. While helpful at reducing impacts from the Specific Plan generally, they are not tailored to the specific (and in some cases new or substantially more severe) impacts caused by the Arena. In the staff report for the April 7 meeting, County staff candidly acknowledges that development of an Arena “that is a unique land use in the area” was “a new circumstance . . . not originally anticipated at the time the Special Plan was originally approved.” The mitigation imposed under the 2005 EIR reflects the Arena’s novelty.

For example, all of the mitigation to address fire protection services amount to provisions requiring payment of fire related development fees and compliance with the law (specifically the Riverside County Fire Code, the 1998 California Fire Code, and Riverside County fire-related development standards). This does not address any concerns regarding fire safety or provision of fire emergency services at an indoor Arena with regular and recurring events attended by thousands of people approximately 184 days per year.

In some cases the prior mitigation is simply inadequate to address the impacts from the Arena. For example, mitigation to address circulation impacts of “special events” includes only the following two measures:

- C-7 “Key elements of the parking management for the proposed development as described in Section VI of the Traffic/Parking Analysis shall be implemented”
- C-8 “On-site traffic signing/stripping shall be implemented in conjunction with detailed construction plans for the project site”

The parking management in mitigation C-7 is specifically designed for management of the golf event and includes requirements for the number of parking spaces, notice of events, manual traffic control, channelization, and circulation patterns. These mitigation measures do not sufficiently address circulation or traffic impacts caused by regular and recurring Arena events



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with thousands of people in attendance. The fact that the 2005 EIR included specific mitigation among the mostly boilerplate measures demonstrates that the Arena events, which differ in size, type, duration, and frequency from the golf event, require specific mitigation. The inadequacy of the current traffic mitigation is further demonstrated by the Addendum's addition of a new Transportation Management Plan with additional measures to address transportation impacts, including signal timing and diversion management. (Appendix F1, Transportation Analysis Report at ix.)

Similarly, there are fifteen geology and soils mitigation measures regarding grading and structures, many with subparts, but it is not clear measures are adequate or appropriate to address the development of an Arena that is sunken below grade.

#### V. Conclusion and Request for Notices

Based on the foregoing identified deficiencies with the Addendum and the need for environmental review that complies with CEQA, the City objects to any further action by the County on the Project until the necessary and proper environmental review has been completed and the public has been provided a meaningful opportunity to comment on the subsequent or supplemental EIR. The City reserves all rights to take necessary action to ensure that impacts affecting the City are fully mitigated, and the City and its residents and visitors do not bear the brunt of negative impacts from the Project.

Finally, pursuant to Public Resources Code section 21167(f), the City intends that this letter serve as a written request for a copy of any notice of determination that may be filed related to this Project or any part or component thereof. Please email a copy of any such notice of determination to my attention at [ggiovinco@rwglaw.com](mailto:ggiovinco@rwglaw.com).

Very truly yours,



Ginetta L. Giovinco

cc: Todd Hileman, City Manager, City of Palm Desert  
Eric Ceja, Deputy Director of Development Services, City of Palm Desert

Attachments A and B

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☐ ☐  
☐ ☐ **TERRA NOVA PLANNING & RESEARCH, INC.**

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April 19, 2021

Mr. Todd Hileman  
City Manager  
City of Palm Desert  
73510 Fred Waring Drive  
Palm Desert, CA 92260

RE: Preliminary Findings, County Arena Project

Dear Mr. Hileman:

Terra Nova Planning & Research has completed our first review of the potential financial impacts associated with the development of the Arena Project, currently planned on the north side of Varner Road, immediately east of Cook Street, on unincorporated County lands. Our task was to attempt to estimate the potential public safety costs the City is likely to experience as a result of the activity generated by the Arena Project.

The Project proposes an arena with a capacity of up to 11,000 attendees, holding 184 events of varying sizes throughout the year, including professional hockey games, concerts, family shows and private rental events. The Project will employ a small number of people (60 on a permanent basis, and an additional 20 to 125 for events), who are likely to be local residents of the City and surrounding area. The primary impact of the Project, however, will be from attendees.

Our research for this analysis included discussions and data gathering from both City Sheriff's Department and Fire Department representatives; as well as from other venues with similar facilities or event concentrations, including the Ontario (Toyota Arena), Lake Elsinore (Diamond Stadium), and Indio (multiple events ranging from the Coachella Arts and Music Festival to special events at the polo grounds).

General Research and Findings

From our discussions with multiple representatives, we have determined the following:

- According to the Project documents, there will be up to 1.2 million attendees annually at 184 events. This represents an event every other day.



or a full time escalation of activity in a part of the County that currently experiences no activity at all.

- The County currently has one Sheriff's deputy assigned to the unincorporated area north of Palm Desert. That deputy is based out of the Thermal station, and is responsible for a wide area of County lands far beyond Palm Desert, from Sky Valley to the east end of the County.
- Public safety calls to the Project are likely to range between 25 and 45 annually, if consistent with other facilities of similar type in southern California.
- The primary public safety activity will not occur at the Project.
- The primary public safety activity will be related to the concentration of traffic that the events will create. The City should expect an increase in collisions, citations and arrests associated with attendees arriving to and leaving from the Project.
- The fire stations closest to the Project are located east, off Washington Street, and west, in Thousand Palms. Neither station can currently meet the County's 4 minute response time to the Project site. It is likely that in the absence of a station in proximity to the Project, fire calls will be split between the two stations.
- The station planned in the City's University area, south of the Project, would meet the County's 4 minute response time.
- The EIR Addendum prepared for the Project acknowledges that the Project will impact fire services cumulatively, and that the University area fire station is required to serve the Project. The EIR Addendum, however, considers the payment of developer impact fees sufficient to address the impact created by the Project. That statement is false.
- The University area station would currently respond to 1,300 calls annually within the 4 minute response window if it were available, and 3,500 calls annually within the 5 minute window. Adding the calls generated not only at the Project, but from traffic accidents resulting from Project traffic, the Project generates the need for immediate construction of the station.
- The University area station is still in the planning stages, and will take 2 to 4 years to plan and build under current conditions. The City has collected approximately \$1.2 million in developer impact fees for the station. The cost for construction of the station is estimated to be between \$12 and \$15 million. Engines and equipment for the station are likely to add an additional \$1.6 million to the cost, for a total construction cost of \$13.6 to \$16.6 million.
- Annual operating expenses, including staffing and equipment, will range between \$2.5 and \$4 million. Since the station is in Palm Desert, the City will incur costs regardless of the number of calls generated by a Project located in unincorporated Riverside County.

### Specific City Impacts

Based on the information we gathered from outside sources, prior studies and consultation with County representatives and those of other jurisdictions, we have developed estimates of the potential impacts of the Project on the City. It is important to note that all the calculations below assume current (2020-2021) dollars. As you are aware, the City is experiencing annual public safety budget increases ranging from 2% to over 5%. Therefore, the costs described below can be expected to increase every year following the Project's opening.

- Neither the City nor the County have sufficient funds reserved for the University area fire station to allow for its immediate construction. Conversely, there is an immediate need, exacerbated by the Project's high intensity land use. The City can offset construction cost by approximately \$1.2 million, and an unknown amount from County impact fee collections, but the majority of the \$13.6 to \$16.6 million required to build and equip the station is not secured. The University area station should be built by the Project, with a reimbursement agreement for that portion of the cost which is not the Project's direct responsibility. A nexus analysis of the area of benefit, and the percentage fair share of Project responsibility should be conducted immediately.
- Based on current City budget and 2018 and 2019 (pre-COVID) service call data, we have reached the following conclusions:
  - The Project will generate 1,008,838 trips annually.
  - 38% of Project traffic will occur in Palm Desert, equating to 383,358 trips annually.
  - Based on the number of collisions the City currently experiences annually for its 97,900 daily trips, the Project could result in as many as 2,525 collision calls for the police department annually on City streets. These same collisions would result in up to 1,566 collision calls for the fire department.
  - Based on 2018 call volume and the current City police budget, the cost of responding to those collision calls could increase the City's police costs by \$2,116,000 annually.
  - Based on 2018 call volume and the current City fire budget, the cost of responding to those collisions could increase the City's fire costs by \$2,571,000 annually.
  - Total public safety cost increases to the City would be \$4,687,000 annually.
  - If 50% of attendees, at 2 attendees per room, were to stay overnight in the desert, and 10% of those attendees stay in Palm Desert, City hotel occupancy will increase by 30,300 room-nights. Based on 2018 call volumes and current City public safety budgets, this would increase calls for police and fire services to hotels by 2%, and cost the City \$45,992



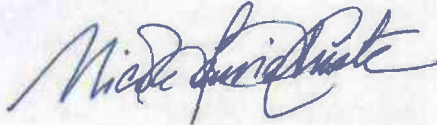
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annually. Altogether, City public safety costs could increase \$4,732,992 annually.

- o 30,300 room-nights would generate Transient Occupancy Tax (TOT) of up to \$757,905.
- o Net costs to the City, not offset by TOT, would total \$3,975,087.

As you are aware, the amount of time we have had to research and document this analysis has been extremely limited. As a result, these findings are preliminary. We will continue to work on expanding our research and providing the City with a more comprehensive analysis in the coming weeks.

Sincerely,



Nicole Sauviat Criste  
Principal





## Cathedral City

April 20, 2021

Todd Hileman, City Manager  
City of Palm Desert  
73510 Fred Waring Drive  
Palm Desert, CA 92260

Mr. Hileman,

I am pleased to have this opportunity, as the City Manager of Cathedral City to offer my observations on the review process for the proposed new development near Cook Street and I-10. As you know, the property in question is in the Cathedral City Sphere of Influence so we share the concerns expressed by Palm Desert regarding the provision of local services to the area and how such services will be funded.

While I agree that the proposed development offers exciting possibilities for the Coachella Valley, I support your efforts to make sure that the ability to serve is carefully considered during the County review process and that consideration is given to the cost to provide the required services, especially in Public Safety. Neither our residents nor visitors to the Valley are well served when local governments are unable to adequately provide essential public safety services.

I look forward to working cooperatively with Palm Desert and with County officials to meet our common objective of providing excellent service to our communities.

Sincerely,

Charles P. McClendon,  
City Manager



**COMMENT LETTER:**

City of Palm Desert  
Ginetta L. Giovinco  
Attorney, Richards Watson Gershon Law  
350 South Grand Avenue, 37<sup>th</sup> Floor  
Los Angeles, CA 90071

**Response to Comment 1**

Final EIR No. 470 was prepared by the County of Riverside to evaluate the potential environmental effects of the 455-acre mixed-use NorthStar Specific Plan Project (Approved Specific Plan Project). The proposed Coachella Valley Arena Project (Arena Project) is a modification of the Approved Specific Plan Project and, accordingly, review of the proposed Specific Plan Amendment and related actions is governed by CEQA Section 21166 and State CEQA Guidelines Sections 15162 to 15164. These sections provide that no new EIR shall be required unless there are “substantial” changes to the project, “substantial” changes with respect to the circumstances under which the project is being undertaken, or new information of “substantial importance,” that would change the conclusions in the previous EIR. Importantly, these sections further define information of substantial importance as information that results in the identification of new or substantially more severe impacts than were identified in the previous EIR.

The State CEQA Guidelines thus create an express presumption against further CEQA review once an EIR has been certified. The purpose of this provision is to “accord a reasonable measure of finality and certainty to the results achieved” once an EIR has been prepared. (*Bowman v. Petaluma* (1984) 185 Cal.App.3d 1065.) This determination is a predominantly factual question for the local agency that will be upheld by a reviewing court if it is supported by substantial evidence in the record. (*Friends of College of San Mateo Gardens v. San Mateo* (2016) 1 Cal.5th 937, 953.).

Moreover, if some changes or additions are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred, an Addendum may be prepared pursuant to State CEQA Guidelines Section 15164. An Addendum to an EIR is attached to the previously certified final EIR and is considered by decisionmakers along with the final EIR. Pursuant to State CEQA Guidelines Section 15164(e), a brief explanation of the decision not to prepare a subsequent EIR should be included in the Addendum, which explanation must be supported by substantial evidence.

In this case, the Addendum prepared by the County of Riverside constitutes a thorough analysis of the proposed project modifications. Briefly stated, these modifications would result in the Arena Project replacing certain other commercial and light industrial uses within a defined area that comprises less than 10% of the overall NorthStar project. The Addendum provides ample evidence that this limited project

change will not result in any new or worsened environmental effects when compared with those impacts previously identified in EIR No. 470. Moreover, the Addendum documents that mitigation measures identified in EIR No. 470 will similarly be applied to the Arena Project, and myriad areas of analysis from EIR No. 470 are directly applicable to the Arena Project. Thus, the Addendum demonstrates that the analysis provided by EIR No. 470 remains highly relevant to the currently proposed project modification. Accordingly, the County's preparation of an Addendum pursuant to CEQA Section 21166 and State CEQA Guidelines Sections 15162 and 15164 is fully justified by both the applicable facts and the law.

Section 15088 (Evaluation of and Response to Comments) specifically applies to the comments submitted on a Draft EIR and is not applicable to an Addendum. Section 15088.5(a) of the State CEQA Guidelines specifically states:

*The lead agency shall evaluate comments on environmental issues received from persons who reviewed the draft EIR and shall prepare a written response. The Lead Agency shall respond to comments raising significant environmental issues received during the noticed comment period and any extensions and may respond to late comments.*

This language clearly states that a Lead Agency is required to respond to comments received on a Draft EIR received during a noticed comment period.

Public circulation of an Addendum to an EIR is not required by Section 15164 of the State CEQA Guidelines. This is because an Addendum is a document that does not identify any new or substantially more severe impacts than were identified in the certified Final EIR prepared for a project. Section 15088 of the State CEQA Guidelines does not, therefore, apply to the Addendum prepared by the County. The responses to the comments below support the County's determination that preparation of an Addendum for the proposed Project, which consists of a proposed amendment to the approved NorthStar Specific Plan and related actions, is consistent with the standards in Sections 15162-15164 of the State CEQA Guidelines.

#### **Response to Comment 2**

The County's determination that an Addendum complies with CEQA is based on the technical analysis completed, which in this case supports the determination that the proposed Specific Plan Amendment, which would amend the approved NorthStar Specific Plan to allow the proposed Arena to be developed on approximately 41 acres of the 455-acre specific plan area and reduce the amount of Industrial Park development by over 830,000 square feet, will not result in any new significant impacts or substantial increase in the severity of the significant impacts identified in the certified 2006 NorthStar Specific Plan EIR. Based on this information and analysis, the County determined preparation of Addendum to EIR No. 470 was consistent with the standards in Sections 15162 – 15164 of the State CEQA Guidelines.



The County's environmental determination is not based on the schedule objectives of the applicant. This determination is based on the detailed and extensive technical analysis provided in the Addendum. This detailed analysis is not cursory as asserted in this comment, in fact; as noted below in the comments in this letter, "[t]here are over 2000 pages of appendices attached to the Addendum (including a new Air Quality Study, Geotechnical Exploration Report, Greenhouse Gas Model Outputs, Drainage and Hydrology evaluations, Noise Study, Transportation Analysis, Water Supply Assessment, Biological Resources Report, and Cultural Resources Report)," which clearly indicate that the analysis supporting the conclusions in the Addendum is rigorous and thorough.

The comment argues this point both ways, claiming the analysis in the Addendum is "cursory" while later claiming the large number of pages of information in the Addendum Appendices, together with additional staff analysis, indicates a Subsequent EIR should have been prepared.

### **Response to Comment 3**

This comment mischaracterizes the information and conclusions in the Addendum. It is well settled that the "age of the original environmental document is irrelevant if subsequent events do not trigger the need for further environmental review." (2 Stephen L. Kostka and Michael H. Zischke, Practice Under the California Environmental Quality Act § 19.2 (2020), citing *Snarled Traffic Obstructs Progress v City & County of San Francisco* (1999) 74 Cal.4th 793.) Indeed, once the limited time period for challenging an EIR has passed, CEQA Section 21167.2 provides that the EIR conclusively shall be presumed to be valid unless the provisions of Section 21166 apply. As discussed below, the 254-page Addendum and supporting appendices provide more than substantial evidence demonstrating that no further CEQA review is required under the criteria established by CEQA Section 21166.

Illustrating that an EIR of similar age can remain valid so long as the proper analysis under CEQA Section 21166 is applied, the California Supreme Court recently approved of the reasoning in *Mani Brothers Real Estate Group v. City of Los Angeles* (2007) 153 Cal.App.4th 1385, a case in which the Court of Appeal upheld the City of Los Angeles' reliance on a fifteen-year old EIR to analyze the effects of a proposed project modification that resulted in the introduction of residential uses for the first time, and a 500,000 square foot expansion of the originally proposed project. (*Friends of College of San Mateo Gardens v. San Mateo* (2016) 1 Cal.5th 937, 948.).

Thus, preparation of an Addendum to EIR No. 470 to evaluate the proposed Project, which consists of a proposed amendment to the approved NorthStar Specific Plan and related actions, is consistent with the applicable standards in Sections 15162-15164 of the State CEQA Guidelines. Section 15162 states: "When an EIR has been certified...., no subsequent EIR shall be prepared for that project unless" there are



“substantial” changes to the project, “substantial” changes with respect to the circumstances under which the project is being undertaken, or new information of “substantial importance,” that would change the conclusions in the previous EIR.

If some changes or additions to the information in the certified EIR are necessary, but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred, an Addendum may be prepared pursuant to State CEQA Guidelines Section 15164. An Addendum to an EIR is attached to the previously certified final EIR and is considered by decisionmakers along with the final EIR.

The Addendum to EIR No. 470 is not solely reliant upon the 2006 NorthStar EIR. Instead, the Addendum contains fully updated and current technical studies and analysis of the proposed Specific Plan Amendment and related actions that support the conclusion that the proposed Project will not result in any new or substantially more severe significant impacts than were identified in EIR No. 470. The County, through preparation of a 254-page Addendum, plus Appendices and additional staff analysis presented to the Planning Commission, constitutes a thorough analysis of the proposed project modifications and has provided substantial evidence in the record that the environmental effects of the currently proposed project were previously analyzed in EIR No. 470. The relevant standards are in Section 15162 of the State CEQA Guidelines. Analysis is provided for all topics currently identified in the standard CEQA Initial Study Checklist form. The Addendum and Appendices provide updates to the thresholds and environmental setting to the aesthetics, biological resources, energy, soils, tribal cultural resources, transportation, air quality, hydrology and water quality, and population and housing environmental issue areas that the comment mentions. The analysis of these new topics did not identify any new significant impacts. For this reason, preparation of an Addendum is appropriate and the statement that EIR No. 470 is outdated and a more thorough analysis under a subsequent EIR is needed demonstrates that minimal attention was paid to the details of the analysis presented in the Addendum and Appendices.

#### **Response to Comment 4**

The relevant question under CEQA is not whether the proposed change in use is significantly different, but rather whether the proposed change in use will result in any new or substantially more severe impacts. The Addendum contains substantial evidence supporting the conclusions that the change in use will not result in new or substantially more severe impacts.

The comment also states the Addendum attempts to classify the Arena Project as a less intensive use, but when used at capacity or for larger events the Arena will draw more people to the Project site at one time and at different hours than an office park. This specific issue is defined, disclosed, and analyzed in the



Addendum. The analysis in the Addendum and Appendices show the proposed Project would not result in new impacts or substantially more severe impacts than previously disclosed in EIR No. 470.

The comment incorrectly asserts that the Addendum looks at annual averages for key impacts and fails to grapple with impacts caused by this different impact distribution. This is not an accurate representation of the description of the Arena Project or the information and analysis in the Addendum. The Addendum contains a complete and accurate description of the Arena Project, including the physical and operational characteristics of the Project. It is factual that the 273,879 square foot Arena and 35,000 square foot hockey training facility will replace 818,965 square feet of industrial park development currently allowed by the Approved NorthStar Specific Plan on the 44.4-acre project site. It is also factual to state the Arena will host approximately 160 events per year, consisting of AHL Hockey games, concerts, and other events that will typically begin at 7 PM in the evening, in comparison to the daily operations of the approved business park uses. The number of visitors for each of the 160 events planned at the proposed Arena is fully described and evaluated in the technical studies and Addendum. For example, the Traffic Study examines the potential effects of a sell-out concert event. Additionally, the operational noise analysis evaluated the roadway noise based on the trip generation in the Traffic Study, which examined the potential effects of a sell-out concert event, and also does not rely on any annualized averages. Furthermore, the parking lot noise analysis evaluates the noise that would occur during the peak arena traffic hours identified in the Traffic Study (one hour pre-event and one hour post-event). Therefore, the analysis in the Addendum does not rely on an any annualized averages as asserted in this comment.

As discussed above in Response to Comment 1, the Addendum provides ample evidence that this limited project change will not result in any new or worsened environmental effects when compared with those impacts previously identified in EIR No. 470. Moreover, the Addendum documents that mitigation measures identified in EIR No. 470 will similarly be applied to the Arena Project, and myriad areas of analysis from EIR No. 470 are directly applicable to the Arena Project. Thus, the Addendum demonstrates that the analysis provided by EIR No. 470 remains highly relevant to the currently proposed project modification. Accordingly, the County's preparation of an Addendum pursuant to CEQA Section 21166 and State CEQA Guidelines Sections 15162 and 15164 is fully justified by both the applicable facts and the law.

#### **Response to Comment 5**

This comment inaccurately mischaracterizes the over 2,000 pages of appendices attached to the Addendum, including a new Air Quality Study, Geotechnical Exploration Report, Greenhouse Gas Model Outputs, Conceptual Drainage Summary, Hydrology Report, Transportation Analysis Report, Biological Resources Report, and Cultural Resources Report as addressing issues and "missing" information from EIR



No. 470. First, this comment is contradictory to Comment 2, which stated that the Addendum and its analysis is cursory. With a 254-page Addendum and over 2,000 pages of appendices, the analysis was thorough and could not be considered cursory. Furthermore, these appendices provide updates to the thresholds and environmental setting in order to analyze the current environmental setting, as requested in Comment 3.

The comment incorrectly states the sheer volume of these studies demonstrates that a subsequent EIR is required. Again, volume of analysis does not trigger the preparation of a subsequent EIR under CEQA. Neither CEQA, the State CEQA Guidelines, nor case law supports the argument that the volume of analysis and study is indicative of the need to create a subsequent or supplemental EIR, as opposed to an addendum. As discussed above in Response to Comment 1, the Addendum provides ample evidence that this limited project change will not result in any new or worsened environmental effects when compared with those impacts previously identified in EIR No. 470, and none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred with the proposed Arena Project. Thus, the Addendum is consistent with applicable CEQA standards, State CEQA Guidelines Section 15164, and the preparation of a Supplemental or Subsequent EIR is not required.

#### **Response to Comment 6**

The Addendum contains adequate analysis of the potential impacts of the Arena Project on public services. First, and importantly, it should be noted that the review of potential public safety impacts under CEQA is limited as indicated in this question from the Environmental Checklist form in Appendix G of the State CEQA Guidelines:

*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: Fire protection?*

As indicated in this question, the review of potential impacts under CEQA is limited to “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.”

This was specifically addressed in *Hayward Planning Association et al. v. Board of Trustees of the California State University* (2012) 207 Cal.App.4th 446, a case in which the Court of Appeal upheld the analysis of the impact of the proposed expansion of CSU Hayward on public services. With regard to the impact of the CSU project on Fire and Emergency Services, this decision held “The need for additional fire protection



services is not an environmental impact that CEQA requires a project proponent to mitigate. Section 15382 of the State CEQA Guidelines defines "significant effect on the environment" as,

*A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.*

This comment incorrectly states that the Arena Project Site is not within the four-minute response area for the two nearest fire stations located on Washington Street (Fire Station 82) and west in Thousand Palms (Fire Station 71). The County Fire Department's map of the planned Primary Response Area for the new University Fire Station planned on Gerald Ford Drive in the City of Palm Desert, provided on the following page, clearly shows the majority of the Arena Project site located within the Primary Response Area for existing Fire Station 81 on Washington Street, meaning that the site is within the 4-minute response area for this station.

This comment also incorrectly states that the Arena is proposed in an area that "currently experiences no activity at all." This statement ignores the Classic Club Golf Course and Club House, which were developed in 2006 and have been in continuous operation since such date.

The proposed Arena is similar in size to the Toyota Arena in the City of Ontario, which hosts an American Hockey League team and concert and other events, similar to the proposed Arena Project. Chief Ray Gayk, Ontario Fire Department, provided the following information on calls for service in 2019:

Toyota Arena

- 300 Event Days
- 2,000,000 visitors

Fire Alarm:	6
Vehicle Fire:	2
Investigation:	2
<u>Medical:</u>	<u>30</u>
Total:	40

These statistics show no fires, a handful of fire alarm calls, two vehicle fires, two investigation calls, and 2-3 medical calls per month.

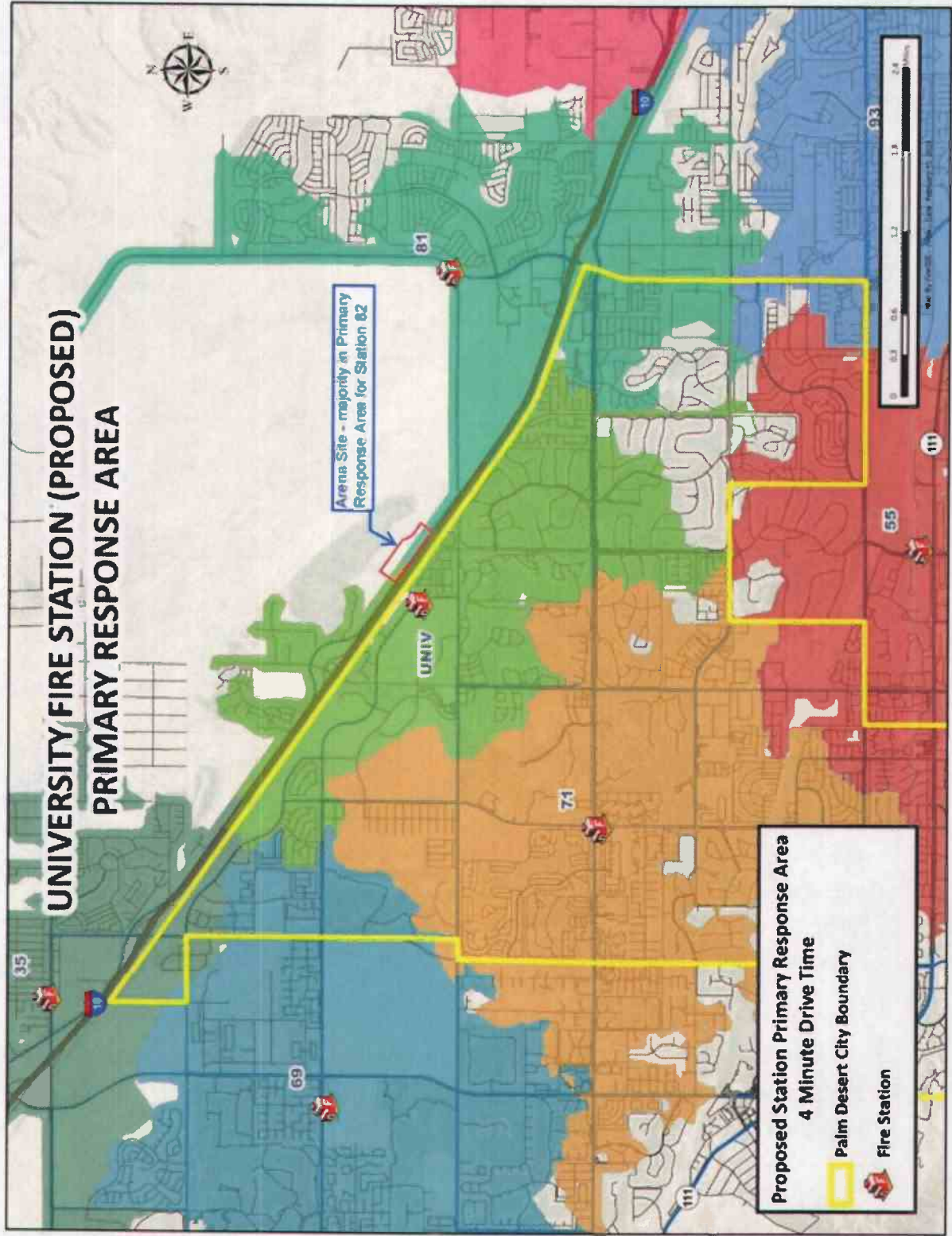
The Toyota Arena has Emergency Medical Technicians (EMTs) on site during events and also has an ambulance on site for transport for events with attendance greater than 5,000 patrons. Coachella Valley



Arena will have 2 EMTs plus an ambulance on site for all events with attendance greater than 1,500 patrons, thus reducing the need for calls for medical service.

As the size of the Coachella Valley Arena and types of events are similar to the Toyota Arena, the number and types of calls are expected to be similar. The Coachella Valley Arena will have approximately 160 event days, which is 53% of the 300 event days at the Toyota Arena. Based on the number of calls at the Toyota Arena in 2019 for 300 events, the expected number of calls for 160 events at the Coachella Valley Arena would be approximately 21 calls per year or 1.75 per month; basically 1 or 2 calls per month.





The Coachella Valley Arena will generate a small number of calls for service on an annual basis and, for this reason, will not affect the level of Fire Protection services provided in the City of Palm Desert or require the new University Fire Station planned by the City of Palm Desert and the Riverside County Fire Department on Gerald Ford south of the I-10 Freeway to be constructed sooner than currently planned.

The Riverside County Fire Department 2019 Annual Report, which includes the summary of calls for service in Palm Desert in 2019, is shown on the following page. The total number of calls for service in the City of Palm Desert in 2019 was 10,423, with the majority - 79% - being medical calls. Twenty-one (21) additional calls for service (not taking into account the potential reduction in medical calls for service due to on-site ambulance for transport for all events) from the Coachella Valley Arena would be 0.002% of this total.

CITY OF PALM DESERT CULTURAL CENTER OF THE DESERT COMMUNITIES		CITY OF PALM DESERT			
<b>Mayor - Gina Nestande</b>		<b>Commercial Structure Fee</b>	<b>Rate Alarm</b>	<b>Alarm</b>	
<b>Mayor Pro Tem - Kathleen Kelly</b>		2019	7	1048	12
<b>Council Member - Joe Korb</b>		2018	9	877	47
<b>Council Member - Sally Jonathan</b>		<b>Medical Emergencies</b>	<b>Multi-Family Dwelling Fee</b>	<b>Other Fee</b>	
<b>Council Member - Susan Marie Weber</b>		2019	8066	10	45
<b>City Manager - Louis Ayala</b>		2018	7818	4	35
		<b>Other Miscellaneous</b>	<b>Public Service Asset</b>	<b>Residential Structure Fee</b>	
		2019	59	457	17
		2018	45	524	15
		<b>House</b>	<b>Monthly</b>	<b>Bulk Collection</b>	
		2019	22	83	384
		2018	14	70	400
		<b>Vacuity Fee</b>	<b>Initial Fee</b>	<b>Total with % Change</b>	
		2019	24	7	10243
		2018	19	5	9882

The County's 2006 EIR on the NorthStar Specific Plan Project identified that the Approved Specific Plan Project would contribute to cumulative impacts on public services and that the contribution to the need for new or expanded public safety facilities would be met by the payment of the County's Development Impact Fees. The proposed Arena Project will pay its proportionate share of such Development Impact Fees.

The new University Fire Station planned in the City of Palm Desert is proposed on a graded parcel in the City's University Neighborhood Specific Plan Area. The University Neighborhood Specific Plan project was evaluated in the City of Palm Desert's 2016 General Plan EIR, and in 2018, the City prepared an Addendum to the General Plan Program EIR supporting plans to subdivide over 170 acres within the specific plan area located immediately west of the site for the planned University Fire Station to accommodate 1,100 new housing units. The City's planned construction of this new fire station will not result in any additional impacts on the physical environment that require additional evaluation by the County in the Addendum



to EIR No. 470 to address potential impacts related to the provision of fire services to the proposed Arena Project.

**Response to Comment 7**

As discussed in Response to Comment 6, the need for additional public services is not an environmental impact that CEQA requires a project proponent to mitigate. The proposed Arena Project will generate a variety of revenues, including property and sales taxes, to the County's General Fund that will be available for allocation to pay for additional sheriff personnel, if determined to be needed by the Sheriff's Department at some future date.

**Response to Comment 8**

The basis for the City's estimates of the potential for increased traffic accidents from events at the proposed Arena is neither explained nor justified. As shown in the Fire Department annual summary of calls for service in Palm Desert in 2018 and 2019 in Response to Comment 6, the Fire Department responded to a total of 400 traffic collision calls in 2018 and 386 traffic collision calls in 2019. The claim by the City that traffic generated by events at the proposed Arena will result in 1,566 calls is not only unsupported, but obviously cannot be supported when the total number of traffic calls for the entire City in 2018 and 2019 was less than one-quarter of this amount.

The 386 calls for service for traffic collisions in the City in 2019 is a small percentage of the total of 10,243 calls for service in the City in 2019. As shown in the annual summary in Response to Comment 6, the vast majority of the calls for service in the City in 2019, at 8,066 calls, are medical calls. Medical calls accounted for 78.75% of the total calls for service in the City in 2019, in comparison to 3.77% for calls for service for traffic collisions. The need for the new University Fire Station is clearly driven by population growth in the City and by medical calls and the small increase in calls for service that will result from the Arena Project will not affect the level of fire protection services in the City of Palm Desert or require the City's new fire station to be built sooner than currently planned by the City.

Nonetheless, the project applicant has agreed to voluntary conditions of approval on the project for contributions for additional equipment and towards the cost of the new University Fire Station planned by the City of Palm Desert. The applicant will contribute \$1.8 million to the County of Riverside to be used to purchase a new tractor drawn aerial ladder truck. The applicant will also contribute \$2.5 million in funds for the construction of a new fire station to the County of Riverside. This amount is equivalent to approximately 20 percent of the projected \$12 million cost for a new fire station.

#### **Response to Comment 9**

Contrary to the assertion in this comment, while the Addendum mentions the fact that a special event scenario consisting of a major golf tournament was analyzed in the 2005 EIR, the traffic analysis in the Addendum does not “lean” on this fact. This comment does not recognize the complete analysis of the potential traffic impacts of the Arena Project prepared under the direction of the County provided in the Transportation Analysis Report appended to the Addendum and prepared in full accordance with the December 2020 Riverside County Analysis Guidelines and the Traffic Study Scoping Agreement provided in Attachment T to the Transportation Analysis Report. The golf tournament analyzed in the 2005 EIR was, in fact, only held once and does not, therefore, occur on an annual basis. As Traffic Management Plans are required for both any golf tournament and for events at the Arena, these events can be coordinated through the preparation and review of these plans to avoid any cumulative traffic impacts.

#### **Response to Comment 10**

As noted in this comment, analysis of VMT was not a CEQA requirement in 2005 when the NorthStar Specific Plan EIR was prepared. This comment incorrectly implies that the conclusion of the VMT analysis is based on a “1% threshold.”

Instead, because the Arena Project is proposed as a change to the NorthStar Specific Plan, the VMT analysis evaluates whether the proposed change to the NorthStar Specific Plan Project would result in new or substantially more severe impacts. To determine this, the VMT that would be generated by the uses permitted by the Approved Specific Plan Project and the uses that would be permitted by the amended NorthStar Specific Plan with the proposed Arena Project (to replace the majority of the allowed Industrial Park uses) were compared. As correctly noted in this comment, the comparative analysis concludes that the proposed Specific Plan Amendment would result in the VMT generated by the NorthStar Specific Plan increasing by 0.3%, which supports the conclusion that the proposed Specific Plan Amendment would not result in a substantial increase in the severity of the VMT impacts of the Approved Specific Plan Project.

#### **Response to Comment 11**

A complete explanation of the methodology for the VMT estimate is provided in the NorthStar Specific Plan EIR Addendum Vehicles Miles Traveled (VMT) Analysis Memo provided in Appendix F2 of the Addendum. The Transportation Analysis Report contains detailed VMT estimates for the Arena Project by event type and attendance level, including both patron and employee trips. Origin-destination (OD) and trip distribution assumptions were derived from the arena’s market information and expectations by event type. The trips from 30 jurisdictions were estimated and multiplied by the round-trip length



measured from Google Maps to forecast total VMT for each event day and event type. The individual day VMT was then multiplied by the numbers of each event occurring each year to forecast annual VMT.

In accordance with the County's December 2020 Riverside County Analysis Guidelines, the comparative VMT estimates were prepared using the Riverside County Transportation Demand Model (RIVTAM). The results from the RIVTAM modeling were compared to the detailed VMT estimate included in the Transportation Analysis Report, and the two estimates were determined to be within 1% of each other.

**Response to Comment 12**

This comment asserts the County failed to identify the City as a responsible agency and, for this reason, the City potentially would be trying to enforce on its streets portions of a Traffic Management Plan with which it was not involved. The Transportation Management Plan (TMP) is a feature of the Arena Project as proposed, and not a mitigation measure for impacts. The TMP will be developed with the input of the City of Palm Desert and other jurisdictions in the area, as well as with the input of homeowner's association and other organizations in the area. In addition, it should be noted that the City of Palm Desert is not a responsible agency for the Arena Project as proposed, which consists of a proposed amendment to the NorthStar Specific Plan and related actions the County will consider for approval. The City of Palm Desert does not have approval authority over the Arena Project as proposed, and for this reason, is not a responsible agency for this project. Nonetheless, as previously stated, the County will coordinate with surrounding jurisdictions, including the City of Palm Desert, in developing the TMP.

**Response to Comment 13**

This comment states that it is unclear whether the transportation analysis takes into account the continued use of Planning Area 8 under the Arena Project. The Approved Specific Plan Project defines Planning Area 8 Industrial Park (Research & Development) as 69.6 acres in size and permits development of 1.2 million square feet of industrial park development in this area. As described and analyzed in the Addendum, the proposed amendment to the Specific Plan would reduce the size of Planning Area 8 to 28.2 acres and the amount of development permitted to 381,035 square feet.

The Transportation Analysis Report and Addendum clearly describe and analyze the Specific Plan Amendment as proposed by defining and evaluating all land uses allowed in Planning Areas 1-10 by the Approved Specific Plan Project and all uses that would be permitted by the Specific Plan with the proposed amendment in Planning Areas 1-11, including the new Planning Area 11, which is proposed to accommodate the proposed Arena Project.

**Response to Comment 14**

This comment does not accurately represent the approximately 20 pages of information and analysis provided in the Addendum related to Greenhouse Gas (GHG) analysis. A full discussion and description of GHGs and laws, plans, and policies related to GHG reduction is provided, including Assembly Bill 32, Executive Order S-3-05, Executive Order B-30-15, Executive Order B-55-18, the Climate Change Scoping Plan prepared by the California Air Resources Board, the Cap and Trade Program, California Senate Bills 1078, 107, and 2; Renewables Portfolio Standard, Low Carbon Fuel Standard, SB 375, Sustainable Communities Strategy, and plans and policies of the South Coast Air Quality Management District and County of Riverside. The County adopted its Climate Action Plan (CAP) to meet its responsibilities for GHG Reduction consistent with relevant and applicable plans and policies for GHG reduction. For this reason, analysis of the consistency of the project with the County's CAP is appropriate. Analysis of the consistency of the Arena Project with the CAP is provided and supports the conclusion that the Arena Project on its own is consistent with the CAP.

In addition, as with the transportation analysis, the change in GHG emissions that would be generated by the NorthStar Specific Plan Project as a whole, including all uses, was determined for the uses allowed by the Approved Specific Plan Project and for the Specific Plan with the proposed Arena Project. While the Addendum states, for information purposes, that, "[s]ince [the 2005 EIR]...was certified...more stringent regulations and requirements have been adopted to address air quality emissions, including GHG emissions, such as increased fuel efficiency standards and energy and water related efficiency requirements," the comparative analysis does not, as questioned in this comment, take credit for these increases in efficiencies. The new quantified estimates of the GHG emissions that would result from the uses allowed by the Approved Specific Plan Project and for the Specific Plan with the proposed Arena Project use the same assumptions to provide a basis for comparison to understand the effect of the proposed Specific Plan Amendment. As shown on page 120 of the Addendum, all of the uses allowed by the Approved Specific Plan would generate 86,213 MTCO<sub>2e</sub> of GHG per year compared to 83,442 MTCO<sub>2e</sub> per year for the Specific Plan with the proposed Specific Plan Amendment to allow the proposed Arena Project. The proposed Specific Plan Amendment, therefore, would reduce the GHG emissions generated by the NorthStar Specific Plan Project.

#### **Response to Comment 15**

As described in the Addendum, there are no noise sensitive uses existing near the Arena Site in the NorthStar Specific Plan Area. The proposed Specific Plan Amendment would create Planning Area 11, which would contain the proposed Arena. Retail commercial uses are permitted in Planning Area 7, located immediately west of Planning Area 11. The majority of the northern boundary of the Planning Area 11 would be bordered by Industrial Park uses in Planning Area 8. Residential uses are permitted in Planning Areas 4 and 6B, located north of the western portion of Planning Area 11. The Conceptual Plan included



as Figure IV-2 in the NorthStar Specific Plan shows residential development in the northern portion of Planning Areas 4 and 6B on the edge of the existing Classic Club Golf Course and not in the southern portion of these Planning Areas along the street that separates these Planning Areas from the Arena in Planning Area 11. Any residential uses in these Planning Areas would be located 300 or more feet away from the Arena Site.

As described on pages 18-20 in the Addendum, events at the proposed Arena would include approximately 46 hockey games that would begin at 7 PM and end at 9:30 PM, an estimated 45 annual concert events that would typically occur between 7 and 11 PM on Friday and Saturday evenings, 38 annual family shows that would include some performances between 7 and 10 PM, and approximately 30 smaller events that would typically occur in the daytime. As noted in this comment, while the industrial park uses currently allowed by the Approved Specific Plan Project would operate in the daytime hours, events held at the Arena would occur in the evening for approximately 100 nights per year. Traffic exiting the Arena parking areas after events would be directed to Varner Road on the southern edge of the Arena Site along the I-10 Freeway to the Cook and Washington Street interchanges with the I-10 Freeway, away from existing and planned uses to the north of the Arena Site. Traffic leaving after an event ends would primarily occur with 30 minutes after the end of an event. Based on these characteristics of the Arena Project, no significant noise impacts to any residential uses that may be developed north of the Arena Site will occur from the operations of the Arena as proposed.

This comment also states that the Addendum includes a conclusory statement that because the Project "would not result in a substantial increase in the number of trips previously analyzed in [2005 EIR] there would also not be a substantial increase in mobile sources of noise (i.e., roadway noise levels)." This statement is not conclusory, but instead is a conclusion based on the traffic volume analysis in the Transportation Analysis Report, which shows that the proposed Arena Project will not result in a substantial increase in overall daily traffic volumes or, for this reason, average daily roadway noise volumes.

As documented in the Transportation Analysis Report, the peak traffic volumes before events would typically occur after the peak hour for traffic on roadways in the area. As discussed above, traffic after events end during evening hours would use Varner Road, a frontage road located immediately north of the I-10 Freeway to access freeway interchanges to the west and east. Because of the location of Varner Road immediately north of the I-10 Freeway, which itself is a substantial source of traffic noise, the short term change in noise levels on Varner Road for approximately 30 minutes in the evening after events end on approximately 100 evening per year would not result in significant impacts on any noise sensitive uses.

**Response to Comment 16**

The County of Riverside completed tribal consultation as required by SB 18 for the proposed Specific Plan Amendment. The County also consulted with the Agua Caliente Band of Cahuilla Indians during the preparation of the 2005 NorthStar Specific Plan EIR. As a result of this consultation, a mitigation measure adopted for the Approved Specific Plan Project requires a tribal monitor to be present during any grading or other ground disturbing activities. This adopted mitigation measure also applies to the Arena Project. No further request for additional consultation on the NorthStar Specific Plan Amendment was received by the County.

As noted in this comment, separate consultation was conducted for the off-site electrical distribution line improvements planned by the Imperial Irrigation District, as this off-site area was not included in the consultation conducted for the Specific Plan Area in 2005.

**Response to Comment 17**

This comment does not present an accurate summary of the information presented in the Addendum. The approximately 44-acre Arena Project Site was mass graded in 2006. As noted in the Biological Resources Report by ELMT Consulting appended to the Addendum, no natural plant communities are present on the Arena site and only heavily disturbed, human modified areas will be affected by development of the proposed Arena as clearly shown in the December 2019 aerial photograph provided on the following page.

The approximate 44-acre Arena Project Site was mass graded in 2006. Fill materials were brought in between 2011 and 2017. As a result, the current surface of the Arena site does not consist of soil native to the site or the immediately surrounding area. The Arena site is also used as an overflow parking area during the Bob Hope Chrysler Classic golf tournament held at the Classic Club Golf Course from 2006-2008. The Arena site has been subject to routine human disturbance since the NorthStar Specific Plan project was approved in 2006 and the Classic Club Golf Course and Clubhouse were developed.



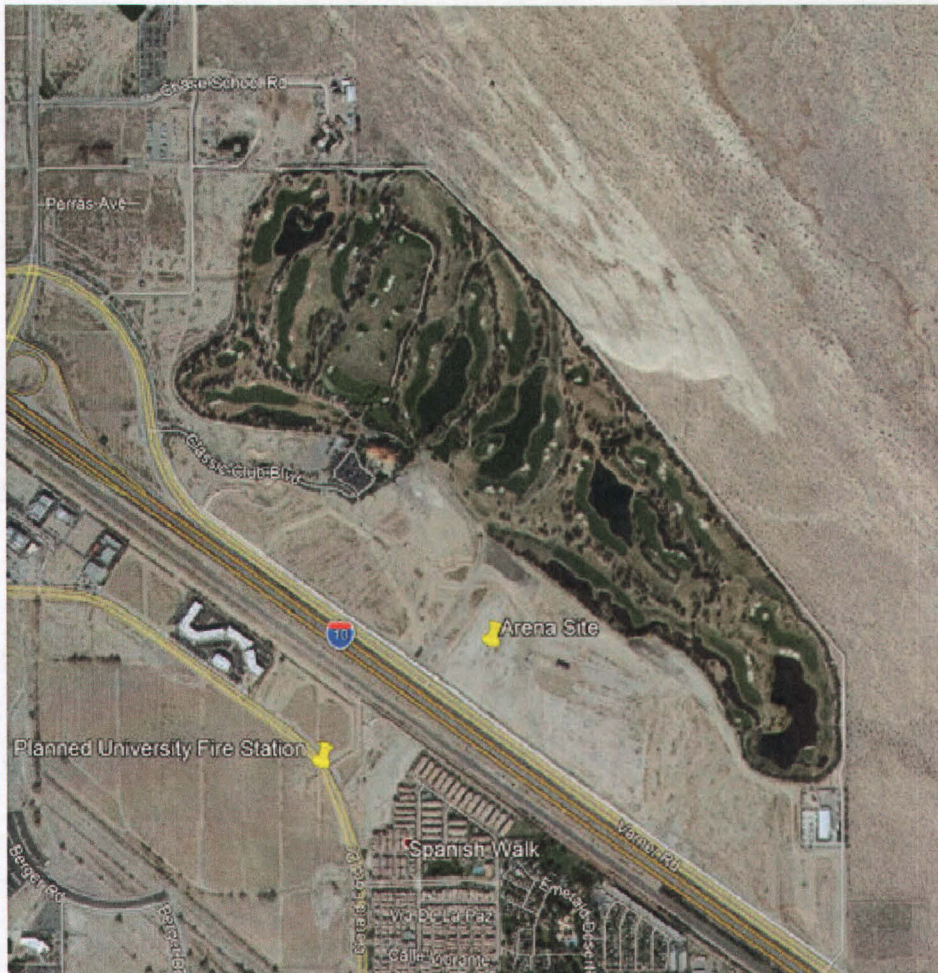
### **Response to Comment 18**

The Approved NorthStar Specific Plan includes a Comprehensive Sign Program in Appendix A to the Specific Plan. The Specific Plan Amendment includes changes to this Sign Program to allow the proposed Freeway and Monument Signs discussed in this comment.

This comment incorrectly states the Addendum includes no analysis for support for the conclusion that these proposed signs would not substantially obstruct existing long-range views of the San Jacinto Mountains and Santa Rosa Mountains along the I-10 scenic corridor. The Addendum includes photo visual simulations of the signs showing how views currently available to motorists on the I-10 Freeway would be affected by these proposed signs and analysis based on this photo visual simulations. These photo visual simulations show that existing long-range views of the mountains surrounding the Coachella Valley would not be substantially obstructed or affected by the proposed signs.

The Indio Auto Mall sign is located on the northwest corner of Adams Street and Varner Road in the City of Indio, approximately 3.5 miles southeast of the Freeway Sign proposed as part of the Arena Project. This location of this sign is separated from the proposed Freeway Sign on the Arena Site by the Washington Street/I-10 Interchange and existing commercial uses located north of the freeway to the east and west of this interchange. Due to the distance between the Indio Auto Mall sign and the proposed Freeway Sign on the Arena Site and the alignment and orientation of the I-10 Freeway between these two locations, motorists on the I-10 will not view both signs at the same time and, for this reason, there will be no cumulative impact to available scenic vistas.





**Response to Comment 19**

This comment references previous comments that the conclusions in the Addendum for several potential impacts of the Arena Project are not supported by substantial evidence and thus calls into question the conclusions on cumulative impacts. The responses to the previous comments demonstrate and discuss how each conclusion on the potential impacts of the Arena Project are supported by substantial evidence. As documented by the information and analysis in the Addendum, the proposed Project will not result in new or substantially more severe project or cumulative impacts.

**Response to Comment 20**

Each mitigation measure adopted for the Approved Specific Plan Project was reviewed based on the updated information and analysis in the Addendum, which fully evaluates the construction and operation of the proposed Arena Project.



As discussed in Response to Comment 6, based on the recent experience of other jurisdictions with similar facilities, the operation of the proposed Arena will generate a minimal number of calls for service. Accordingly, the payment of the County's Development Impact Fee, which generates revenue available for the construction of new public service facilities, including fire stations, continues to be appropriate proportional mitigation for the Approved Specific Plan Project and the proposed Arena Project.

The conditions of approval for circulation cited in this comment were originally developed for, and apply to, a special event consisting of a major golf tournament and were not developed to apply to the proposed Arena Project. A complete analysis of the access, circulation, and traffic impacts of the proposed Arena Project is provided in the Transportation Analysis Report appended to the Addendum. As stated in this comment, the Transportation Analysis Report, based on detailed analysis of the proposed Arena Project, identifies the preparation and implementation of a Traffic Management Plan prepared specifically for the Arena as an appropriate method to avoid traffic impacts.

With regard to geology and soils, while the mitigation measure adopted for the Approved Specific Plan Project apply to all individual development projects in the Specific Plan Area, the Addendum also includes site-specific analysis of the potential for geology and soils impacts based on a current study of the Arena Project Site and the Arena as designed. The Addendum does not, therefore, as asserted in this comment, only rely on the mitigation measures adopted for the Approved Specific Plan Project in 2006.

**COMMENT LETTER ATTACHMENT A:**

Terra Nova Planning & Research, Inc.  
42635 Melanie Place, Suite 101  
Palm Desert, CA 92211

**Response to Comment 21**

This introductory comment states that discussions and data was gathered from the City's Sheriff and Police representatives and other jurisdictions that have similar venues and event concentrations. No specific references or citations are offered anywhere in this letter. While this comment states that research was conducted in the City of Ontario for the Toyota Arena, the information on the number of calls for service provided in Response to Comment 6, which shows few calls for service from the type of facility proposed, is not provided anywhere in this letter. This comment also indicates that the Coachella Arts and Music Festival is a similar event held at a similar facility. The Coachella Arts and Music Festival and the Stagecoach Country Music Festival are 3-day festivals held over 3 consecutive weekends outdoors on an approximately 600-acre site made up of the Empire and Eldorado Polo Clubs and adjacent properties in the City of Indio. These events have attendance levels of 85,000 patrons for the Stagecoach Country Music Festival and 125,000 patrons for the Coachella Music Festival. These events are clearly not comparable in any way to the proposed Arena, which will have an average attendance of approximately 7,500 patrons for events held inside the proposed Arena that will primarily occur in the evening.

**Response to Comment 22**

This comment states that the Arena Project is proposed in a part of the County that currently experiences no activity at all. This statement is both factually incorrect and misleading. The Classic Club Golf Course and Clubhouse were developed in the NorthStar Specific Plan Area in 2006 and have been in continuous operation since this time. Xavier Preparatory High School is also in operation on Cook Street north of the NorthStar Specific Plan Area.

The statement that the City should expect an increase in public safety activity due to traffic from events at the Arena is not supported by any information. The Transportation Analysis Report included with the Addendum contains a thorough analysis of the changes in traffic conditions that will occur from events at the Arena that supports the opposite conclusion – that traffic conditions will not be adversely affected by events at the Arena.

This comment also states that the proposed Arena Project Site is not located within the 4-minute response area for either of the two existing fire stations located closest to the site. This statement is clearly contradicted by the map on the following page, prepared by the Riverside County Fire Department, that



shows that the majority of the Arena Project Site is within the Primary Response Area for Fire Station 81, located on Washington Street at 38<sup>th</sup> Avenue. This map also shows the Primary Response Area for the new University Fire Station, planned on Gerald Ford Drive in the City of Palm Desert to meet the needs generated by growth in the City. As shown, the Arena Project Site is located on the border the Primary Response Areas for these two stations.

The purpose and need for the planned new University Fire Station is described in the Background Analysis set forth in a March 17, 2021 Staff Report presented to the City of Palm Desert Public Safety Commission:

*Background Analysis*

*The City of Palm Desert contracts with the Riverside County for fire protection and related emergency services, who in turn contracts with the State (CalFire). The City operates three fire stations with approximately fifty-eight firefighter and paramedic professionals, one shared Cove Communities ladder truck, three fire engines, four ambulances (one located at Indian Wells Station No. 55), three reserve ambulances, and one paramedic squad introduced this year.*

*Annual call volume for the Fire Department continues to be significant (approximately 10,000), especially emergency medical services, which historically account for approximately 80% of all emergency response. Fire Station No. 71 (the Portola/Country Club station) responds to over half of the City's call volume and is one of the busiest in the County. Given the increased development in the northern region of the City, staff anticipates the need within the next few years to begin construction of the proposed fourth fire station, which will alleviate call demand at Station 71. Initial estimates indicate that if in service today, the new station would respond to approximately 1,500 emergency calls annually.*

The City's own staff report clearly indicates that the near fire station is needed in response to "increased development in the northern region of the City." The new fire station is planned in the City's University Neighborhood Specific Plan Area. As described on the City's website:

*In 2018, the City's Planning Commission approved plans to subdivide 170+ acres within the UNSP to accommodate 1,100 housing units. The plans include a mix of housing options and lot sizes including: multi-family housing, alley-loaded housing units, duplexes, townhomes, and detached housing. An extensive roadway and open space network are also provided to comply with the intent of the UNSP.*

The Primary Response Area Map prepared by the Riverside County Fire Department is consistent in that it shows almost all of the Primary Response Area for the new University Fire Station is south of the I-10 Freeway within the City of Palm Desert.

**Response to Comment 23**

The annual increase in public safety costs being experienced by the City is the result of growth within the City, as evidenced by the information on the increase in calls for service from 2018 to 2019 from the Riverside County Fire Department provided in Response to Comment 6, and not by the calls for service that will be generated by the proposed Arena Project, which will be limited. It is not accurate to describe the proposed Arena as a high intensity use that requires the construction of this planned station at this time. As discussed in Response to Comment 6, the Arena will likely generate 1-2 calls for service monthly, and the Arena location is primarily within the Primary Response Area of Fire Station 81 on Washington Street.

As discussed in Response to Comment 8, the assertion that the traffic generated by the Arena will result in a much greater number of collisions than are currently experienced in the entire City is not supported by accurate or reliable information. This comment indicates that the estimated number of collisions from Arena traffic is based on the number of collisions generated annually in the City, based on 97,900 daily trips. However, the actual number of collisions and the resulting number of calls for service is not disclosed. As documented in Response to Comment 6, in 2019, the Fire Department responded to 386 calls for service related to traffic accidents. This equates to approximately 1.1 calls on a daily basis for the 97,900 trips occurring on a daily basis.

Events will not occur at the Arena on a daily basis. As described in the Transportation Analysis Report appended to the Addendum, the Arena will host approximately 160 events on an annual basis. The weighted mean average number of daily trips generated by these events would be between approximately 30,000 and 39,000, approximately one-third of the 97,900 daily trips the City says occur on a daily basis in the City. Accordingly, the number of collisions that would result for a call for fire protection services would be approximately one-third of the 1.1 calls the City currently experiences on daily basis. This equates to approximately 1 call every 3 days on an annual basis; at most perhaps 10 calls per month. The estimate of thousands of calls presented in this comment, far more than are experienced in the City as a whole, is clearly inaccurate and not supportable. The calls for responses from public safety agencies directly from the Arena and as a result of traffic generated by events at the Arena will be minimal and do not require the construction of the City's planned new University fire station.



**COMMENT LETTER ATTACHMENT B:**

Cathedral City  
Charles P. McClendon

**Response to Comment 24**

As discussed in the responses to the previous comments, the Arena Project will have minimal demands for public safety services and these demands will not affect the level of public safety services available in any of the communities located near the proposed location, including the City of Palm Desert and Cathedral City.

As the responses above show, the Addendum is the appropriate environmental documentation and no further review is required under the criteria established by CEQA. Please feel free to contact me at (805) 444-7896 with any questions.

Sincerely,

**Meridian Consultants**

A handwritten signature in blue ink, appearing to read "Tony Locacciato", is written over a faint, illegible background.

Tony Locacciato, AICP



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(805) 367-5720

May 4, 2021

Riverside County Planning Department  
4080 Lemon Street, 9th Floor  
Riverside, California 92502

**Attn:** Russell Brady  
Project Planner

**Re:** Addendum to the NorthStar Specific Plan  
Final Environmental Impact Report No. 470  
SCH #2005011054  
Responses to Comments from SAFER

Dear Mr. Brady,

On April 6, 2021, Lozeau Drury, LLP on behalf of the Supporters Alliance for Environmental Responsibility (SAFER) submitted a letter opposing the Addendum to the NorthStar Specific Plan Final Environmental Impact Report No. 470 (EIR No. 470). SAFER contracted a wildlife biologist, Dr. Shawn Smallwood, Ph.D., and an environmental firm, Soil Water Air Protection Enterprise (SWAPE), to evaluate the biological resources and air quality analyses in the Addendum.

Provided below are detailed responses to each comment raised by SAFER in the letter. The responses show the Addendum is the appropriate environmental documentation under the California Environmental Quality Act (CEQA) and no further review is required under the criteria established by CEQA.





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**VIA EMAIL ONLY**

April 6, 2021

Carl Bruce Shaffer  
David Leonard  
Gary Thornhill  
Guillermo Sanchez  
Eric Kroencke  
Planning Commission  
County of Riverside  
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P.O. Box 1409  
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Russell Brady, Project Planner  
Riverside County Planning Department  
P.O. Box 1409  
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Elizabeth Sarabia, TLMA Commission Secretary  
County of Riverside Administrative Center  
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**Re: Opposition to Addendum for the Coachella Valley Arena  
(Specific Plan No. 343 Amendment No. 2; General Plan Amendment No.  
200005; Change of Zone No. 200025; Plot Plan No. 200021; Tentative Parcel  
Map No. 38040)  
PLANNING COMMISSION AGENDA ITEM 4.3 (April 7, 2021)**

Dear Honorable Commissioners of Riverside County Planning Commission:

I am writing on behalf of the Supporters Alliance for Environmental Responsibility ("SAFER") and its members living or working in and around Riverside County in opposition to the Addendum to the NorthStar Specific Plan EIR prepared for the proposed Coachella Valley Arena (SP No. 343 Amendment No. 2; GPA No. 200005; CZ No. 200025; PP No. 200021; TPM No. 38040) ("Arena Project") to be heard as Agenda Item 4.3 at the April 7, 2021 Planning Commission meeting.

SAFER is particularly concerned that the County has prepared an Addendum for the Arena Project based on an environmental impact report ("EIR") prepared 15 years ago for the NorthStar Specific Plan ("North Star SP") which, at the time, did not contemplate anything remotely similar to the proposed Arena Project. Rather than analyzing and mitigating the impacts of the Arena Project in a supplemental EIR, the County has bypassed the procedural and substantive requirements of the California Environmental Quality Act ("CEQA").

As explained below, when a proposed project is not within the scope of a previously



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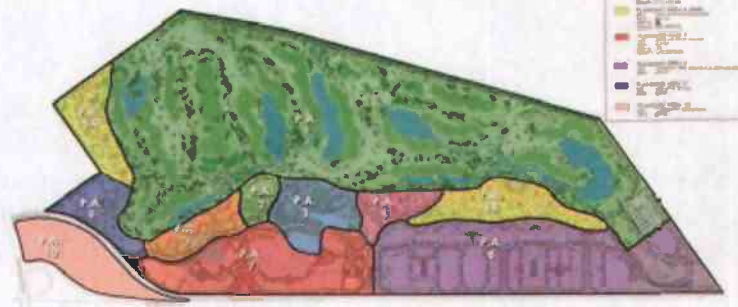
certified programmatic EIR, CEQA requires that a supplemental EIR or mitigated negative declaration (“MND”) be prepared. Due to the fact that the 2006 NorthStar SP EIR did not contemplate, analyze, or mitigate the impacts of a hockey arena with a 10,000-person capacity and hosting over 100 events annually, the current Arena Project is not within the scope of the 2006 EIR. Furthermore, as evidenced by the expert comments submitted herewith by expert wildlife biologist Dr. Shawn Smallwood, Ph.D, and air quality experts Soil Water Air Protection Enterprise (“SWAPE”), CEQA requires that a full supplemental EIR, rather than an MND, be prepared for the Arena Project.

SAFER respectfully requests that the Planning Commission refrain from approving the Arena Project and the Addendum at this time. To comply with CEQA, the County should consider the Arena Project only after a supplemental EIR has been prepared.

### **BACKGROUND**

In 2006, the County certified the EIR for the NorthStar Specific Plan. The NorthStar SP covers 455.75 acres of unincorporated land within the Western Coachella Valley, approximately ½ mile north of the City of Palm Desert. At the time of approval in 2006, the NorthStar SP consisted of ten (10) planning areas allowing for the following uses:

- Planning Area 1- Championship golf course on approximately 240 acres,
- Planning Area 2- Golf clubhouse facilities on approximately 5.9 acres,
- Planning Area 3- Deluxe golf-view hotel on approximately 17.6 acres,
- Planning Area 4- Golf villas on approximately 7.3 acres,
- Planning Area 5- Resort timeshare units on approximately 9.95 acres,
- Planning Area 6- Golf view condominiums on approximately 33.2 acres,
- Planning Area 7- Mixed use retail development on approximately 36.2 acres,
- Planning Area 8- Industrial park uses on approximately 69.6 acres,
- Planning Area 9- Executive office uses on approximately 16 acres, and
- Planning Area 10- Community commercial uses on approximately 20 acres.



APPROVED CONCEPTUAL LAND USE PLAN



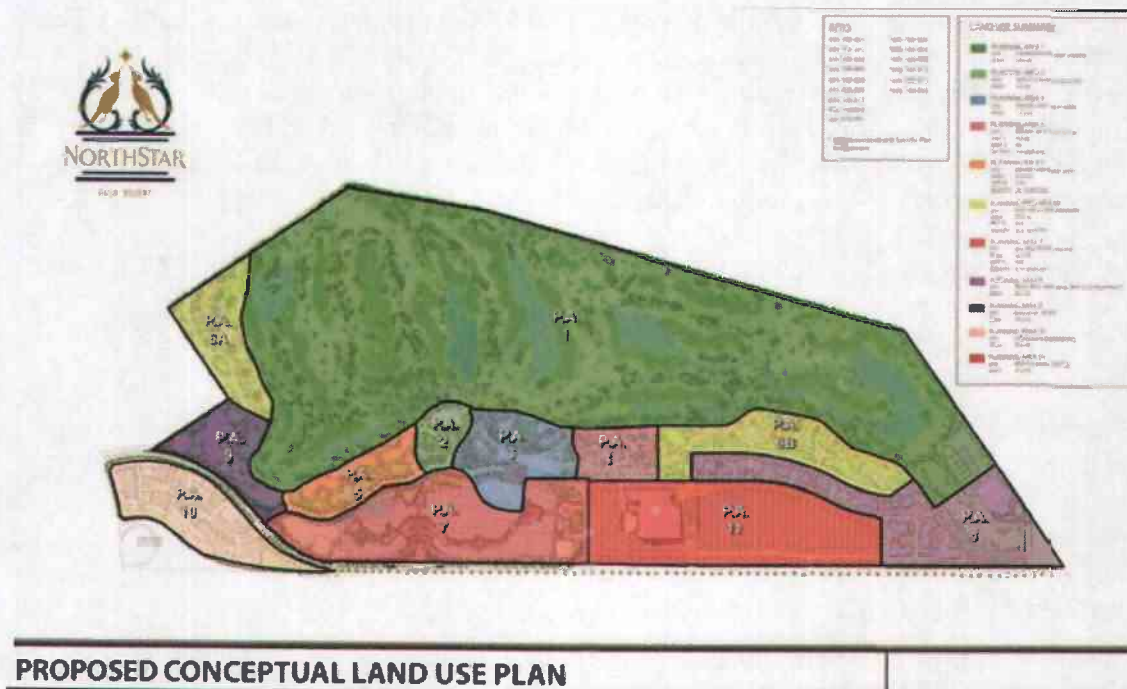
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Now, fifteen years after the approval of the NorthStar SP and associated EIR, a new applicant (SoCal Arena Company, LLC) is proposing a massive amendment to the NorthStar SP to allow for the development of new multi-purpose arena, event center, and hockey training facility with practice ice, surface parking, and a retail skate shop on approximately 44.41-acres within the NorthStar SP (“Arena Project”). The Arena would consist of an approximately 260,000 square foot arena event center, an approximately 35,000 square foot hockey training facility, surface parking, and loading areas.

The primary purpose of the Arena Project is to host an American Hockey League (“AHL”) team and provide a venue for other events in the Coachella Valley, including concerts, family shows, other sporting events, cultural events, conferences, and conventions. The Arena would host the following events:

- Up to forty-six (46) annual AHL games with 7,500-9,918 patrons;
- An estimated forty-five (45) annual concerts, with approximately 7,500-11,7000 patrons;
- An estimated thirty-eight (38) annual family shows with 4,000-5,000 patrons;
- An estimated ten (10) non-AHL sporting events with 7,000-10,000 patrons;
- An estimated twenty (20) rental uses of the Arena annually (e.g. conventions, conferences, cultural events) with 800-3,000 patrons.

As shown below, the proposed amendment to the NorthStar SP add a new Planning Area 11 for the Arena and reduce the size of Planning Area 8 and make adjustments to the boundaries of Planning Area 4, 6, and 7 to accommodate the Arena.



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## DISCUSSION

### **I. CEQA's environmental review requirements for later activities under a program EIR do not allow the use of an Addendum for the Arena Project.**

The 2006 EIR prepared for the NorthStar SP is a program EIR. The CEQA Guidelines define a "program EIR" as an EIR "prepared on a series of actions that can be characterized as one large project and are related either: (1) Geographically, (2) As logical parts in the chain of contemplated actions, (3) In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways. (14 CCR § 15168.) The 10 separate planning areas of the 2006 NorthStar SP covered a series of separate projects (e.g. the golf course, hotel, industrial, commercial, residential) (1) within the NorthStar SP geographic area, (2) as a chain of contemplated actions under the NorthStar SP, and (3) in connection with the issuance of the NorthStar SP. As such, the 2006 EIR is properly characterized as a program EIR subject to the provisions of CEQA Guidelines section 15168.

Guidelines section 15168 provides the procedure for the use of a program EIR (e.g. the 2006 NorthStar SP EIR) with later activities (e.g. the Arena Project). "Later activities in the program must be examined in light of the PEIR to determine whether an additional environmental document must be prepared." (14 CCR § 15168(c)(1).) A program EIR may only serve for subsequent actions "to the extent that it contemplates and adequately analyzes the potential environmental impacts of the project. . . ." (*Center for Sierra Nevada Conservation v. County of El Dorado* (2012) 202 Cal.App.4th 1156, 1171 [citations omitted].) "If a later activity would have *effects* that were not examined in the project EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration." (14 CCR § 15168(c)(1) [emphasis added].) Notably, as emphasized in the preceding quote, Guidelines section 15168 focuses on "effects" rather than "significant impacts." Furthermore, Guidelines section 15168 does not allow for the use of an addendum, but rather requires an EIR or MND for a later project that is not within the scope of the program EIR.

"Whether a later activity is within the scope of a program EIR is a factual question that the lead agency determines based on substantial evidence in the record." (14 CCR § 15168(c)(2).) Guidelines section 15168 emphasizes that the analysis contained in the program EIR is largely determinative of whether a subsequent project falls within its scope:

Factors that an agency may consider in making that determination [i.e. that a later activity is within the scope of a program EIR] include, but are not limited to, consistency of the later activity with the type of allowable land use, overall planned density and building intensity, geographic area analyzed for environmental impacts, and covered infrastructure, as described in the program EIR. (14 CCR § 15168(c)(2).)

Where there is no evidence that a later project was contemplated at the time of the program EIR or that any site-specific environmental issues related to the later project were



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addressed in the program EIR, that later project is not within the scope of the program EIR. (*See NRDC v. City of Los Angeles* (2002) 103 Cal.App.4th 268, 284-85.) When a later project is not within the scope of the program EIR, an initial study followed by “either an EIR or a negative declaration” must be prepared. (14 CCR § 15168(c)(1).)

There can be no doubt that the effects of a minor-league hockey arena were not contemplated whatsoever when the NorthStar SP and EIR were approved in 2006. The allowable land uses in the 10 planning areas of the 2006 NorthStar SP did not include the uses proposed by the Arena Project. The 2006 EIR does not include a project-level review of the Arena Project or any previous version of the Arena Project. The factors identified by Section 15168(c)(2) for determining whether a new activity is within the scope of a program EIR are all conditioned on being “described in the program EIR.” (14 CCR § 15168(c)(2).) These factors include “allowable land use” and “covered infrastructure” described in the EIR. (*Id.*) The 2006 EIR’s description of “allowable land” and “covered infrastructure” not only do not make any reference to a new arena within the NorthStar SP.

Because there is no detail or analysis in the 2006 EIR of the construction and operation of a new arena, there is no substantial evidence that the Arena is within the scope of the 2006 EIR. As such, CEQA Guidelines section 15168 requires the County to prepare at least a negative declaration for the Arena Project. As explained below, even though a negative declaration is permissible under CEQA Guidelines 15168, expert evidence submitted by SAFER establishes a fair argument that a supplemental EIR, rather than a negative declaration, is required for the Arena Project.

**II. A supplemental EIR is required for the Arena Project because the Arena Project will result in significant environmental impacts that were not addressed by the 2006 EIR.**

Because the Arena Project is not within the scope of the 2006 NorthStar SP EIR, Guidelines section 15168(c)(1) requires that “a new initial study would need to be prepared leading to either an EIR or a negative declaration.” (14 CCR § 15168(c)(1).) In determining whether to prepare an EIR or negative declaration under Guidelines section 15168, the “fair argument test” applies. (*Sierra Club v. Cty. of Sonoma* (1992) 6 Cal.App.4th 1307, 1318.) Under the fair argument test, an EIR must be prepared “whenever it can be fairly argued on the basis of substantial evidence that the project may have a significant environmental impact.” (*Id.* at 1316; *see Friends of Coll. of San Mateo Gardens v. San Mateo Cty. Comm. Coll. Dist.* (2016) 1 Cal.5th 937, 960.)

When an EIR is prepared for a later activity under a program EIR, CEQA allows the project-specific EIR to “tier” off the program EIR. (PRC § 21094.) “[I]f there is substantial evidence in the record that the later project may arguably have a significant adverse effect on the environment which was not examined in the prior program EIR, doubts must be resolved in favor of environmental review and the agency must prepare a new tiered EIR.” (*Sierra Club*, 6 Cal.App.4th at 1319.) The tiered EIR may “incorporate by reference the discussion in any prior

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[EIR] and [] concentrate on the environmental effects which (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior [EIR]" (PRC § 21068.5.) A tiered EIR is required if any substantial evidence in the record indicates that a project may have an significant environmental impact—even if contrary evidence exists to support the agency’s decision. (14 CCR § 15064(f)(1); *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 931.) “It is a question of law, not fact, whether a fair argument exists, and the courts owe no deference to the lead agency’s determination.” (*Pocket Protectors*, 124 Cal.App.4th at 928.)

**A. The Addendum and 2006 EIR inadequately addresses the Arena Project’s impacts on biological resources.**

Expert wildlife biologist Dr. Shawn Smallwood, Ph.D., reviewed the Addendum for the Arena Project as well as the 2006 EIR. Dr. Smallwood’s comment and CV are attached as Exhibit A.

Dr. Smallwood’s associate, Noriko Smallwood, performed a site visit to the Area Project site on April 3, 2021. (Ex. A, p. 1.) Noriko detected “27 species of vertebrate wildlife during her 141 minutes at the site.: (*Id.*) Twelve of the species detected by Noriko had not been identified in the biological surveys prepared for the 2006 EIR or the current Addendum. (*Id.*) Of the 27 species detected by Noriko on April 3, 2021, eight or nine were special-status species, five of which had not been identified in the biological surveys prepared for the 2006 EIR or the current Addendum (*Id.* at p. 2.)

Noriko also observed abundant bird life at the Arena Project site including osprey, Swainson’s hawk (a California threatened species), red-tailed hawk, northern harrier, Costa’s hummingbird, double-crested cormorant, verdin, Gambel’s quail, long-billed curlew and American avocets among other species. (Ex. A, pp. 6-8.) In only 2 hours and 20 minutes, Noriko had more than twice the number of species detected by the Addendum’s biological survey and half the species detected over 13 days and nights in the 2006 EIR’s biological survey.

Dr. Smallwood concluded that since the 2006 EIR (and its associated biological survey conducted in 1997) “changed circumstances relevant to potential impacts to wildlife warrant the preparation of a project-specific EIR.” (Ex. A, p. 8.) Specifically, Dr. Smallwood found that the following factors necessitate the preparation of an EIR:

- (1) biological surveys at the site from 1997 to 2021 reveal an incomplete characterization of the environmental setting, and hence a misleading analysis of impacts;
- (2) wildlife species declined since 1997/2006;
- (3) statues protecting wildlife have been added or changed;
- (4) new research tools and data were developed;
- (5) habitat loss and habitat fragmentation further diminished wildlife over the past 24 years;

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- (6) road mortality is better understood, and is particularly relevant in the face of the project's proposed construction of an Arena that would draw audience participants from far and wide; and understanding vastly improved of
- (7) bird-window collision mortality;
- (8) electric line-strike mortality;
- (9) mortality caused by greater energy demand;
- (10) the effects of artificial lighting; and
- (11) cumulative impacts.

**1. Incomplete characterization of the environmental setting.**

Dr. Smallwood review found that the biological surveys conducted in 1997 for the 2006 EIR and 2021 for the Addendum failed to properly establish the baseline environmental setting for the Project area. (Ex. A, pp. 9-17.) The 1997 biological survey detected 56 vertebrate species of wilflike and the 2021 biological survey detected an addition 3. However, in only 2 hours and 20 minutes on the site, Noriko Smallwood detected an additional *twelve* species. (*Id.* at 9.) As Dr. Smallwood explains, "Given that survey outcomes changed so greatly from [the 1997] survey to [the 2021] survey to Noriko's survey, the Addendum's assertions are readily refuted. Neither the 2006 EIR nor the Addendum have realistically characterized the wildlife community that occurs at the project site." (*Id.* at p. 14.)

Dr. Smallwood also explains that the biological surveys conducted were not detection surveys and "therefore unlikely to provide satisfactory evidence in support of presence or absence determinations of special-status species." (Ex. A, p. 16.) Also, the Addendum's determination of species occurrence likelihoods conflict with the biological surveys and with database records for the area. For example, the Addendum concludes that the northern harrier hawk is absent from the Arena Project site even though Noriko Smallwood observed a northern harrier hawk at the Project site on April 3, 2021. (Ex. A, p. 16; see Photo 9 (Ex. A, p. 6).)

**2. Decline of wildlife.**

Dr. Smallwood also highlights the severe decline in the North American bird population (a 29% decline in overall abundance over the past 48 years) as a substantial change in circumstance unknown in 2006 when the NorthStar SP EIR was approved. (Ex. A, p. 17.) Based on this decline and, as discussed above, the inadequacy of the biological surveys conducted for the Arena Project and 2006 EIR, "a project-specific EIR is necessary to properly address the Project's direct and cumulative impacts on birds." (*Id.*)

**3. Change in conservation status of species**

In the time since the NorthStar SP was approved in 2006, the conservation status of species detected at the Project site has changed. (Ex. A, pp. 17-18.) For example, the Costa's hummingbird, which is now listed as a Species of Conservation Concern, has been found on the site by surveys in 1997 and 2021. (*Id.*) However, the Costa's hummingbird was not listed as a special-status species in 2006 when the NorthStar SP EIR was approved. (*Id.*) Similarly, the

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yellow warbler, Nuttall's woodpecker, and Bell's sage sparrow were all listed as Species of Conservation Concern after approval of the 2006 EIR. (*Id.* at pp. 17-18.) Furthermore, California law now requires protections to birds protected by the federal Migratory Bird Treaty Act, which covers "most of the bird species documented at or near the project site, as well as most of the birds recently reported on eBird." (*Id.* at p. 18.)

#### 4. New research tools and data.

Dr. Smallwood notes that, since the 2006 EIR, there has been a "proliferation in use of electronic data bases . . . These data bases have rapidly added to the scientific body of knowledge on the distribution of wildlife species." (Ex. A, p. 18.) According to eBird and iNaturalist records, 81 special-status species of wildlife have been detected nearby or within the region of the project site. (*Id.*) These databases, which were not available when the 2006 EIR was prepared, indicate that "the site is inherently rich in wildlife and it is rich in special-status species of wildlife." (*Id.*) Dr. Smallwood concluded that "[g]reater use of the new tools and data are needed to appropriately analyze the project's potential impacts to wildlife" and therefore, "[a] new project-specific EIR is warranted." (*Id.*)

#### 5. Habitat loss and fragmentation.

Given the changes to the landscape of the Coachella Valley since 1997, Dr. Smallwood concludes that "the Addendum is not credible in its assertions that no substantial changes have occurred with the environmental setting and potential impacts to biological resources since the 2006 EIR." (Ex. A, p. 18.) Dr. Smallwood explains that since the 2006 EIR, "large tracts of open space have been lost to wildlife" in the vicinity of the Arena Project. (*Id.* at 20.) Dr. Smallwood calculates that the Arena Project would cause significant impacts to birds (105,940 birds lost over the next century) due to the loss of terrestrial habitat. (*Id.* at 21.) However, the Addendum failed to address or analyze the changed circumstance of habitat fragmentation and the resulting impact on wildlife. (*Id.* at 20-21.)

The Addendum also fails to mention that the Coachella Valley itself is a well-known wildlife movement corridor. (Ex. A, p. 21.) The Addendum improperly focuses on whether wildlife corridors intersect the Arena Project site. However, CEQA requires that impacts to wildlife movement be analyzed regardless of the movement is channeled by a corridor. (*Id.*) Dr. Smallwood concludes that an EIR is required to properly analyze the Project's impacts on wildlife movement because "[t]he project would cut wildlife off from stopover and staging opportunities, forcing volant wildlife to travel even farther between remaining patches of stopover refugia." (*Id.*)

#### 6. Road Mortality.

Dr. Smallwood noted that the impacts of wildlife mortality from traffic generated by the Arena Project and NorthStar SP were not addressed in the Addendum or 2006 EIR. (Ex. A, p. 21.) According to the Addendum, the Arena Project would result in 21,323,770 vehicle miles

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traveled annually. Dr. Smallwood estimates that collisions with vehicles as a result of the Arena Project would kill 43,056 birds annually (over 2 million birds over 50 years of project operations). (*Id.*, p. 23.) Especially due to the special-status bird species likely to occur at or near the Arena Project, these collisions represent a significant impact to wildlife that has not been addressed, discussed, or mitigated in the Addendum or 2006 EIR.

Dr. Smallwood suggests mitigation measures that would reduce the impact due to vehicle collisions. (Ex. A, p. 29.) Because this significant impact or feasible mitigation measures have not been considered by the County in the Addendum or 2006 EIR, the County must address this impact in an EIR.

#### 7. Window Collisions.

Based on the Arena's design depicted in the Addendum, the Arena includes extensive glass panels. Dr. Smallwood notes that bird fatality from collision with glass surfaces is a well-documented problem, that neither the Addendum nor 2006 EIR discussed the issue. Dr. Smallwood calculated that the glass facades of the Arena would result in 21 bird deaths per year (Ex. A, p. 24.) Especially due to the special-status species in the Project area, Dr. Smallwood's analysis indicates the impact to birds with from collision with glass is a significant impact, unmitigated by the Addendum or 2006 EIR. (*Id.*)

Dr. Smallwood suggests a number of mitigation measures that would reduce the impact from window collisions. (Ex. A, pp. 29-30.) Because this significant impact or feasible mitigation measures have not been considered by the County in the Addendum or 2006 EIR, the County must address this impact in an EIR.

#### 8. Line-strike mortality.

Dr. Smallwood noted that the impacts of electric line-strikes to wildlife were not addressed in the Addendum or 2006 EIR. (Ex. A, p. 25.) The Arena Project includes a 1,600-foot extension of electrical circuit line north from Cook Street, but the Addendum does not analyze the extension's impact on birds. Dr. Smallwood calculated that the circuit line extension would cause 55 bird fatalities per year. Especially due to the special-status species in the Project area, Dr. Smallwood's analysis indicates the impact to birds with from line-strikes is a significant impact, unmitigated by the Addendum or 2006 EIR. (*Id.*)

#### 9. Impacts to wildlife from increased energy demand.

Based on the energy information available in the Addendum, Dr. Smallwood calculated that the Arena Project would require 2.4 MW of offsite energy generation, which in the upcoming years will be all renewable. (Ex. A, p. 27.) Dr. Smallwood calculated that the impacts to wildlife from renewable energy projects serving the Arena Project would kill 51 birds and 2 bats annually. (*Id.* at p. 28.) This impact is not discussed, disclosed, or analyzed in the Addendum or 2006 EIR.

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## 10. Artificial lighting.

Although the 2006 EIR includes a mitigation measure to cast outdoor lighting down and away from the Coachella Valley Preserve, the Addendum's depiction of the Arena Project shows considerable light being cast toward the Preserve. (Ex. A, p. 28.) Dr. Smallwood notes, "The excess light cast from the Arena could penetrate the Preserve, illuminating surface areas normally traversed by nocturnal wildlife that rely on darkness for stealth. Penetrating light would also generate stark light/shadow contrasts that can be confusing to wildlife." (*Id.*) Neither the Addendum nor the 2006 EIR addressed this potential impact to wildlife from artificial lighting.

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## 11. Cumulative Impacts.

Dr. Smallwood found the Addendum's discussion of cumulative impacts to wildlife to be inadequate because it was "based on the unfounded assumption that the disturbed environmental setting precludes occurrences of special-status species of wildlife." (Ex. A, p. 29.) However, as discussed above, the Addendum (and 2006 EIR) relied on a faulty environmental baseline, ignored changes in protection status for species, ignored habitat loss and fragmentation, and ignored the impacts from vehicles, glass surfaces, and power lines. Dr. Smallwood concluded that without an adequate analysis of the Arena Project's impacts on wildlife, the Addendum's conclusions as to the Arena's Project's cumulative impacts are unfounded.

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### B. The Addendum and 2006 EIR inadequately addresses the Arena Project's impacts on air quality.

Matt Hagemann, P.G., C.Hg., and Dr. Paul E. Rosenfeld, Ph.D., of the environmental consulting firm SWAPE reviewed the Addendum's analysis of the Arena Project's impacts on air quality. SWAPE's comment letter and CVs are attached as Exhibit B.

#### 1. The Addendum underestimated the Arena Project's emissions.

SWAPE found that the Addendum underestimated the Project's emissions and therefore cannot be relied upon to determine the significant of the Project's air quality impacts. The Addendum relies on emissions calculated from the California Emissions Estimator Model Version CalEEMod.2016.3.2 ("CalEEMod"). (Ex. B, p. 1) This model, which is used to generate a project's construction and operational emissions, relies on recommended default values based on site specific information related to a number of factors (*Id.*, pp. 1-2.) CEQA requires that any changes to the default values must be justified by substantial evidence. (*Id.*)

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SWAPE reviewed the Project's CalEEMod output files and found that the values input into the model were inconsistent with information provided in the Addendum. (Ex. A, p. 2.) This results in an underestimation of the Project's emissions. (*Id.*) As a result, the Addendum's air quality analysis cannot be relied upon to compare the Project's impacts to the impacts analyzed in the 2006 EIR.



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Specifically, SWAPE found that the following values used in the Addendum's air quality analysis were either inconsistent with information provided in the Addendum or otherwise unjustified:

1. Incorrect Land Use Type (Ex. B, pp. 2-3.)
2. Underestimated Parking Land Use Size (Ex. B, p. 3.)
3. Unsubstantiated Construction Phase Lengths (Ex. B, pp. 4-5.)
4. Unsubstantiated Changes to Off-Road Equipment HP Values (Ex. B, pp. 5-6.)
5. Unsubstantiated Changes to Gas Fireplace Values (Ex. B, p. 6.)
6. Improper Application of Tier 4 Final Mitigation Measure (Ex. B, pp. 6-9.)
7. Improper Application of Operational Mitigation Measure (Ex. B, pp. 9-11.)

As a result of these errors in the Addendum, the Project's construction and operational emissions are underestimated and cannot be relied upon to determine the significance of the Project's air quality impacts nor relied upon to compare the Project's impacts to the 2006 EIR.

**2. The Arena Project will result in a potentially significant air quality impact.**

In an effort to accurately determine the proposed Arena Project's construction and operational emissions, SWAPE prepared an updated CalEEMod model that includes more site-specific information and correct input parameters, as provided by the DEIR. (Ex. B, p. 11.) SWAPE included "all proposed land use types and sizes as described by the Addendum; omitted the unsubstantiated changes to the individual construction phase lengths, off-road construction equipment horsepower values, and gas fireplaces; and excluded the unsubstantiated construction-related and operational mitigation measures." (*Id.*) SWAPE's updated model found that Arena Project's construction-related NO<sub>x</sub> as well as operational VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions, exceeded the applicable SCAQMD thresholds of the South Coast Air Quality Management District ("SCAQMD").

Construction-Related Emissions:

Model	NO <sub>x</sub>
Addendum Construction	53
SWAPE Construction	134
% Increase	152%
<b>SCAQMD Regional Threshold (lbs/day)</b>	<b>75</b>
<b>Threshold Exceeded?</b>	<b>Yes</b>

Operational Emissions:

Model	VOC	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Addendum Operation	123	237	625	153	43
SWAPE Operation	127	437	709	239	67
% Increase	3%	85%	13%	56%	55%
<b>SCAQMD Regional Threshold (lbs/day)</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>55</b>
<b>Threshold Exceeded?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

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SWAPE's updated model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the Addendum. Furthermore, SWAPE's updated model indicated that the Arena Project will have significant environmental impacts not identified or mitigated by the 2006 EIR. As such, an EIR is required to address and mitigate the Arena Project's air quality impacts.

**3. The Addendum inadequately analyzed the Arena Project's impact on human health due to emissions of diesel particulate matter.**

The Addendum concluded that the Arena Project would not pose a significant health impact, but failed to include a quantified construction or operational health risk assessment ("HRA"). (Ex. B., p. 12.) As SWAPE noted, "the Addendum fails to quantitatively evaluate the Project's construction-related and operational toxic air contaminant ("TAC") emissions or make a reasonable effort to connect these emissions to potential health risk impacts posed to nearby existing sensitive receptors." (*Id.*) The Project will generate approximately 39,275 daily vehicle trips with sellout concerts and hockey games scattered throughout the year. Yet, the Addendum failed to indicate or discuss the concentration of Project-generated DPM that would trigger adverse health effects. (*Id.*)

Additionally, the failure of the Addendum to provide a quantified HRA is inconsistent with the most recent guidance of the Office of Environmental Health Hazard Assessment ("OEHHA"). OEHHA recommends that all short-term projects lasting at least two months (e.g. the Arena Project's 20-month construction schedule) be evaluated for cancer risks to nearby sensitive receptors. (Ex. B, p. 13.) OEHHA also recommends that exposure from projects lasting more than 6 months (e.g. the Arena's future years of operation) be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). (*Id.*)

Lastly, by failing to provide a quantified HRA for the Arena Project, the Addendum fails to compare the excess health risk impact to the applicable SCAQMD threshold of 10 in one million and lacks evidence to support its conclusion that the health risk would be under the threshold. (Ex. B, p. 12.)

**2. The Arena Project will result in a potentially significant impact to human health from emissions of diesel particulate matter.**

SWAPE prepared a screening-level health risk assessment ("HRA") to evaluate potential DPM impacts from the construction and operation of the Project. (Ex. B, pp. 13-17.) SWAPE used AERSCREEN, the leading screening-level air quality dispersion model. (*Id.* at p. 13.) SWAPE used a sensitive receptor distance of 500 meters and analyzed impacts to individuals at different stages of life based on OEHHA and SCAQMD guidance. (*Id.* at pp. 14-16.)

SWAPE found that the excess cancer risk for adults, children, infants, and third-



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trimester gestations at the closest sensitive receptor located approximately 500 meters away, over the course of Project construction and operation, are approximately 18, 160, 63, and 2.5 in one million in one million, respectively. (Ex. B, p. 16.) Moreover, SWAPE found that the excess cancer risk over the course of a residential lifetime is approximately 240 in one million. (*Id.*) Thus, the infant, child, adult, and lifetime cancer risks all exceed the SCAQMD threshold of 10 in one million. Even with a less-conservative model that does not include the recommended age sensitivity factors, SWAPE still found that the child, adult, and lifetime cancer risks exceeded the SCAQMD threshold.

SWAPE's analysis indicated that the County must prepare an EIR for the Arena Project with a quantified HRA in order to connect the Project's air quality emissions and the potential health risks posed to nearby receptors and to compare the impacts to those analyzed in the 2006 EIR.

**C. The Addendum inadequately addresses the Arena Project's impacts on greenhouse gases.**

The Addendum concluded that the Arena Project would result in net annual greenhouse gas ("GHG") emissions of 83,442 metric tons of carbon dioxide equivalents per year ("MT CO<sub>2</sub>e/year"). (Ex. B, p. 17.) The County's Climate Action Plan ("CAP") sets a threshold of 3,000 MT CO<sub>2</sub>e/year. However, the CAP includes screening tables with measures to reduce the emissions of GHGs. According to the CAP, a project that implements "100 points of mitigation measures from the Screening Tables" have a less than significant GHG impact. (*Id.* at p. 18.)

Although the Addendum concluded that the Arena Project would satisfy 100 points from the CAP's screening tables, SWAPE found that the Addendum provided inadequate explanations for many of the measures. (*Id.* at pp. 18-20.) For example, the Addendum concludes that the Project would satisfy measure EE10.A.2 (Windows) by stating, "The proposed Arena would satisfy this measure by providing enhanced window insulation." (Addendum, p. 124). However, as SWAPE notes, window insulation is not included as a mitigation measure for the Project and therefore cannot be relied upon to necessarily reduce the Project's GHG emissions. (Ex. B, p. 19.) As another example, the Addendum concludes that the Project would satisfy measure EE10.A.4 (Air Infiltration) by stating, "The proposed Arena would satisfy this measure" (Addendum, p. 124). However, as SWAPE notes, the Addendum fails to explain how the Project would satisfy the measure or provide information regarding the specific actions that would be required in order to implement the measure. (Ex. B, p. 20.)

Accordingly, SWAPE concluded that "the Addendum's screening table analysis, as well as the subsequent less-than-significant GHG impact conclusion, should not be relied upon." (Ex. B, p. 20.)

**CONCLUSION**

The County's use of an Addendum to approve the Arena Project violates CEQA. The

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Addendum is not appropriate because the 2006 NorthStar SP EIR did not contemplate the development of an arena and, therefore, the Arena Project is not within the scope of the 2006 EIR. Pursuant to CEQA, the County should have prepared an EIR or negative declaration for the Arena Project. Due the Arena Project's potential significant impacts to wildlife, air quality, human health, and greenhouse gas emissions, the County should prepare an EIR for the Arena Project tiered from the 2006 EIR prior to approval of the Project.

As such, SAFER respectfully requests that the Planning Commission refrain from approving the Addendum and Specific Plan amendment at this time. Rather, SAFER respectfully requests that the Arena Project be sent back for review under the tiering provisions of CEQA to to prepare an instead of an Addendum for the Project.

Sincerely,



Brian B. Flynn  
Lozeau Drury LLP



# **EXHIBIT A**



Shawn Smallwood, PhD  
3108 Finch Street  
Davis, CA 95616

Riverside County Planning Department  
4080 Lemon Street, 9th Floor  
Riverside, California 92502

5 April 2021

RE: Coachella Valley Arena

To Whom It May Concern,

I write to comment on the Addendum to the 2006 Northstar Specific Plan FEIR (County of Riverside 2006, 2021), which I understand addresses potential impacts of the proposed Coachella Valley Arena on 44.41 acres and the extension of an electrical circuit at the north end of Cook Street near Thousand Palms, California.

My qualifications for preparing expert comments are the following. I hold a Ph.D. degree in Ecology from University of California at Davis, where I subsequently worked for four years as a post-graduate researcher in the Department of Agronomy and Range Sciences. My research has been on animal density and distribution, habitat selection, interactions between wildlife and human infrastructure and activities, conservation of rare and endangered species, and on the ecology of invading species. I authored numerous papers on special-status species issues. I served as Chair of the Conservation Affairs Committee for The Wildlife Society – Western Section. I am a member of The Wildlife Society and the Raptor Research Foundation, and I've been a part-time lecturer at California State University, Sacramento. I was Associate Editor of wildlife biology's premier scientific journal, The Journal of Wildlife Management, as well as of Biological Conservation, and I was on the Editorial Board of Environmental Management. I have performed wildlife surveys in California for thirty-five years, including at many proposed project sites. My CV is attached.

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#### SITE VISIT

Noriko Smallwood, a wildlife biologist pursuing a Master's Degree at California State University Los Angeles, visited the site of the proposed project 06:59 to 09:20 hours on 3 April 2021 (Photos 1-3). She walked the site's perimeter, stopping to scan for wildlife with binoculars. The sky was clear, winds moderate, and temperatures 70-84° F.

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Noriko detected >94 members of 27 species of vertebrate wildlife during her 141 minutes at the site (Table 1). Combined with the earlier surveys of Cornett (1997) and ELMT (2021), 71 species of vertebrate wildlife have been detected on the Northstar Specific Plan area by professional biologists, including 12 that Noriko added to the list of species that were earlier detected by Cornett and ELMT.





**Photos 1-3.** View east from the proposed new electrical circuit line at the north end of Cook Street (top), view west of the proposed Arena site (middle), and view of the area undergoing sprinkler irrigation (see pipe) on the proposed Arena site (bottom). Photos by Noriko Smallwood, 3 April 2021.

Noriko detected 8 to 9 special-status species, depending on whether the lizard she photographed in the bill of a common raven was a Coachella Valley fringe-toed lizard (Photos 4 and 5). (The length and width and of the lizard's tail, its wide abdomen, its light-colored ventral surface, and its leg-length resemble attributes of Coachella Valley fringe-toed lizard.) Five of the special-status species detected by Noriko had not previously been detected by professional biologists who surveyed the site.

**Table 1.** Species of wildlife observed (X) by James Cornett (JC) in Fall 1997, by ELMT's biologist on 2 February 2021, and by Noriko Smallwood (NS) during 06:59 to 09:20 hours on 3 April 2021 at the proposed Coachella Valley Arena site. The Cornett surveys spanned 13 dates across all 463 acres of the Northstar Specific Plan area.

Species	Scientific name	Status <sup>1</sup>	JC	ELMT	NS
Desert banded gecko	<i>Coleonyx variegatus variegatus</i>		X		
Desert iguana	<i>Dipsosaurus d. dorsalis</i>		X		X
Zebra-tailed lizard	<i>Callisaurus draconoides rhodostictus</i>		X		
Southern sagebrush lizard	<i>Sceloporus graciosus vandenburgianus</i>			X	
Western long-tailed brush lizard	<i>Urosaurus graciosus graciosus</i>		X		
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	FT, CE	X		?
Side-blotched lizard	<i>Uta stansburiana</i>		X		
Great Basin whiptail	<i>Aspidoscelis t. tigris</i>		X		
Desert glossy snake	<i>Arizona elegans eburnata</i>		X		
Mohave shovel-nosed snake	<i>Chionactis occipitalis</i>		X		
Red racer	<i>Coluber flagellum piceus</i>		X		
California kingsnake	<i>Lampropeltis californiae</i>		X		
Spotted leaf-nosed snake	<i>Phyllorhynchus decurtatus</i>		X		
Gopher snake	<i>Pituophis catenifer</i>		X		
Long-nosed snake	<i>Rhinocheilus lecontei</i>		X		
Colorado Desert sidewinder	<i>Crotalus cerastes laterorepens</i>		X		
Brahminy blindsnake	<i>Indotyphlops braminus</i>		X		
Double-crested cormorant	<i>Phalacrocorax auritus</i>	TWL			X
Mallard	<i>Anas platyrhynchos</i>				X
American avocet	<i>Recurvirostra americana</i>				X
Long-billed curlew	<i>Numenius americanus</i>	TWL			X
Gambel's quail	<i>Callipepla gambelii</i>		X		X
Osprey	<i>Pandion haliaetus</i>	TWL, FGC 3503-5			X
Turkey vulture	<i>Cathartes aura</i>	FGC 3503-5	X		
Red-tailed hawk	<i>Buteo jamaicensis</i>	FGC 3503-5	X		X
Swainson's hawk	<i>Buteo swainsoni</i>	CT, FGC 3503-5			X
Northern harrier	<i>Circus cyaneus</i>	SSC3, FGC 3503-5			X
American kestrel	<i>Falco sparverius</i>	FGC 3503-5	X		



Prairie falcon	<i>Falco mexicanus</i>			X			
Mourning dove	<i>Zenaida macroura</i>			X		X	X
Rock pigeon	<i>Columba livia</i>		Non-native	X			X
Eurasian collared-dove	<i>Streptopelia decaocto</i>		Non-native			X	
Greater roadrunner	<i>Geococcyx californianus</i>			X			
Barn owl	<i>Tyto alba</i>		FGC 3503-5	X			
Lesser nighthawk	<i>Chordeiles acutipennis</i>			X			
Common poorwill	<i>Phalaenoptilus nuttalli</i>			X			
Costa's hummingbird	<i>Calypte costae</i>		BCC	X		X	X
Black phoebe	<i>Sayornis nigricans</i>			X			
Say's phoebe	<i>Sayornis saya</i>			X			
Loggerhead shrike	<i>Lanius ludovicianus</i>		BCC, SSC2	X			
European starling	<i>Sturnus vulgaris</i>		Non-native	X		X	
Common raven	<i>Corvus corax</i>			X		X	X
Verdin	<i>Auriparus flaviceps</i>			X		X	X
Northern mockingbird	<i>Mimus polyglottos</i>			X			X
Tree swallow	<i>Tachycineta bicolor</i>						X
Cliff swallow	<i>Petrochelidon pyrrhonota</i>						X
Black-throated sparrow	<i>Amphispiza bilineata</i>			X			
White-crowned sparrow	<i>Zonotrichia leucophrys</i>					X	X
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>		SSC2				X
Abert's towhee	<i>Pipilo aberti</i>			X			
Western meadowlark	<i>Sturnella neglecta</i>						X
Brewer's blackbird	<i>Euphagus cyanocephalus</i>			X			
House finch	<i>Carpodacus mexicanus</i>			X		X	X
Lesser goldfinch	<i>Carduelis psaltria</i>						X
House sparrow	<i>Passer domesticus</i>		Non-native	X			X
Pallid bat	<i>Antrozous pallidus</i>		SSC, WBWG H	X			
Hoary bat	<i>Lasiurus cinereus</i>		WBWG M	X			
California myotis	<i>Myotis californicus</i>			X			
Canyon bat	<i>Parastrellus hesperus</i>			X			
Mexican free-tailed bat	<i>Tadarida brasiliensis</i>			X			
Black-tailed jackrabbit	<i>Lepus americanus</i>			X			



Desert cottontail	<i>Sylvilagus audubonii</i>		X	X
California ground squirrel	<i>Otospermophilus beecheyi</i>		X	
Palm Springs round-tailed ground squirrel	<i>Xerospermophilus tereticaudus chlorus</i>	SSC	X	
Botta's pocket gopher	<i>Thomomys bottae</i>		X	X
Long-tailed pocket mouse	<i>Perognathus formosus</i>		X	X
Desert kangaroo rat	<i>Dipodomys deserti</i>		X	X
Cactus mouse	<i>Peromyscus eremicus</i>		X	
Deer mouse	<i>Peromyscus maniculatus</i>		X	
House mouse	<i>Mus musculus</i>	Non-native	X	
Coyote	<i>Canis latrans</i>		X	X

<sup>1</sup> See footnote 1 of Table 2 for definitions of terms under Status.



**Photos 4 and 5.** Common raven carrying a prey item which resembles Coachella Valley fringe-towed lizard, 3 April 2021. Photos by Noriko Smallwood.



Noriko also detected osprey and Swainson's hawk – a California threatened species (Photos 6 and 7), red-tailed hawk and northern harrier (Photos 8 and 9), Costa's hummingbird and double-crested cormorant (Photos 10 and 11), verdin and Gambel's quail (Photos 12 and 13), and long-billed curlew and American avocets (Photos 14 and 15) among other species. Her visit was busy with wildlife observations, having detected more than twice the number of species detected by ELMT in February 2021, and half the species Cornett detected over 13 days and nights in Fall 1997.



**Photos 6 and 7.** Osprey (left) and Swainson's hawk (right) on the project site, 3 April 2021. Photos by Noriko Smallwood.



**Photos 8 and 9.** Red-tailed hawk (left) and northern harrier (right), 3 April 2021. Photos by Noriko Smallwood.





**Photos 10 and 11.** Costa's hummingbird (left) and double-crested cormorant (right) at the project site, 3 April 2021. Photos by Noriko Smallwood.



**Photos 12 and 13.** Verdin (left) and Gambel's quail (right) on the project site, 3 April 2021. Photos by Noriko Smallwood.

**Photo 14.** Long-billed curlews (right) over the project site, 3 April 2021. Photo by Noriko Smallwood.





**Photo 15.** American avocets (right) over the project site, 3 April 2021. Photo by Noriko Smallwood.



### POTENTIAL BIOLOGICAL IMPACTS

According to the Addendum (2021:72), “a biological impact assessment was performed that substantiated that the property does not have significant biological resources.” And, “It is assumed no biological resources exist on the Project Site due to this constant disturbance [by grading and importation of fill soil].” The Addendum adds that the 1,600-foot extension of the electrical circuit at the north of Cook Street would cause no biological impacts because a dirt road disturbs the habitat there. The Addendum (2021:75) also claims, “...EIR No. 470 stated no native habitat existed prior to development and none will be on site after construction.” None of these claims comport with the findings of biological surveys prior to construction nor more recently. Table 1 includes 71 species of vertebrate wildlife, 16 of which are special-status species and 2 of which are listed species.

The 2021 Addendum characterizes its findings of potential project impacts as of no substantial change from the analysis in the 2006 EIR. The Addendum (p. 77) concludes, “...implementation of the proposed Project, would not result in any new impacts or increase the severity of a previously identified significant impact as analyzed in EIR No. 470.” However, biological surveys in support of the Addendum helped to reveal the inadequacy of the surveys and analysis performed in support of the 2006 EIR, and which remain through the 2021 Addendum (see below). Inadequate consideration is given to new information on biological resources since the 2006 EIR, nor to impacts caused by new or changed project features. Before considering the changes to the project, it is important to consider the changes in circumstances that warrant a more substantial environmental review.

Since the 1997 biological survey and since the 2006 EIR, changed circumstances relevant to potential impacts to wildlife warrant the preparation of a project-specific EIR. These changes include (1) biological surveys at the site from 1997 to 2021 reveal an incomplete characterization of the environmental setting, and hence a misleading analysis of impacts; (2) wildlife species declined since 1997/2006; (3) statues protecting wildlife have been added or changed; (4) new research tools and data were developed;

(5) habitat loss and habitat fragmentation further diminished wildlife over the past 24 years; (6) road mortality is better understood, and is particularly relevant in the face of the project's proposed construction of an Arena that would draw audience participants from far and wide; and understanding vastly improved of (7) bird-window collision mortality; (8) electric line-strike mortality; (9) mortality caused by greater energy demand, and (10) the effects of artificial lighting. Given the long list of special-status species known or suspected to use the site of the proposed project (Table 2), these and other changes in circumstances are all the more in need of a project-specific EIR. A reasonable argument can be made for the need to prepare a new project-specific EIR to appropriately analyze potential impacts and formulate mitigation measures.

### **(1) Incomplete characterization of the environmental setting**

One biological consultant visited the project site on in Fall 1997 to survey for wildlife. He implemented multiple methods to survey 463 acres during daytime and nighttime hours over 13 days. In performing his reconnaissance-level surveys, Cornett (1997) provided vastly more survey effort than consultants typically provide for proposed projects these days. As an example, wildlife occurring around the proposed circuit extension off of Cook Street were surveyed by a botanist on a single date, but starting and ending his survey at unreported times of the day (ELMT 2021). The ELMT survey was worse than uninformative; it was misleading in its implication that its meager survey effort had characterized the wildlife community of the area. But even Cornett's (1997) commendable survey would not qualify as a detection survey for any particular special-status species. Cornett's survey was still merely a reconnaissance-level survey.

Detection surveys are designed by species' experts to, at reasonable cost, provide the best chance for detecting the targeted species by applying the methods and survey effort most likely to detect the species if it is indeed present. The objectives of detection surveys are to (1) support negative findings of species when appropriate, (2) inform preconstruction surveys to improve their efficacy, (3) estimate project impacts, and (4) inform compensatory mitigation and other forms of mitigation. An example of a detection survey protocol is CDFW (2012), which is directed towards burrowing owls. CDFW (2012) improved on 1994 guidelines, and like the detection survey protocols for most other special-status species, did not exist in 1997-2006. Detection surveys should have been implemented to inform the Addendum, but they were not.

Cornett's (1997) survey effort detected 56 vertebrate species of wildlife. ELMT (2021) added 3 species, and Noriko Smallwood added another 12 species in only 2 hours and 21 minutes at the site. The differences in reconnaissance-level survey outcomes could have resulted from different species being available for detection in different seasons and different years, or they could have resulted from different times of day or different levels of skill, or they could have resulted from changes to the site or the surrounding landscape. Whatever the reasons for the differences, the differences reveal the weakness of relying on any single reconnaissance-level survey for characterizing the baseline environmental setting. In fact, the results of a single survey qualify as an absurdly thin empirical foundation for characterizing the environmental setting of a proposed project.



**Table 2.** Occurrence likelihoods of wildlife species at the project site, as determined by the 2021 Addendum and as indicated by eBird/iNaturalist records and survey findings of Cornett (1997) and Noriko Smallwood's survey in 2021, and whether species are covered by the incidental take permit of the Coachella Valley multispecies HCP.

Common name	Species name	Status <sup>1</sup>	Occurrence likelihoods		CVMS HCP cover
			2021 Addendum	eBird/iNaturalist/Cornett/ Smallwood	
Coachella Valley fringe-towed lizard	<i>Uma inornata</i>	FT, CE	Mod	On site	Yes
Brant	<i>Branta bernicla</i>	SSC2		Nearby	
Redhead	<i>Aythya americana</i>	SSC3		Recent near	
Common loon	<i>Gavia immer</i>	SSC		Nearby	
American white pelican	<i>Pelicanus erythrorhynchos</i>	SSC1		Onsite; recent near	
Double-crested cormorant	<i>Phalacrocorax auritus</i>	TWL		On site	
White-faced ibis	<i>Plegadis chihi</i>	TWL		Adjacent	
Long-billed curlew	<i>Numenius americanus</i>	BCC, TWL		On site	
California gull	<i>Larus californicus</i>	TWL		Adjacent	
Caspian tern	<i>Hydropogone caspia</i>	TWL		Nearby	
Turkey vulture	<i>Cathartes aura</i>	FGC 3503.5		On site	
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA, CFP		Nearby	
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, BCC, CE		Nearby	
Osprey	<i>Pandion haliaetus</i>	FGC 3503.5, TWL		On site	
Red-tailed hawk	<i>Buteo jamaicensis</i>	FGC 3503.5		On site	
Swainson's hawk	<i>Buteo swainsoni</i>	CT, FGC 3503.5		On site	
Red-shouldered hawk	<i>Buteo lineatus</i>	FGC 3503.5		Recent near	
Ferruginous hawk	<i>Buteo regalis</i>	TWL, FGC 3503.5		Nearby	
Northern harrier	<i>Circus cyaneus</i>	SSC3, FGC 3503.5	Absent	On site	
White-tailed kite	<i>Elanus leucurus</i>	CFP, FGC 3503.5		Nearby	
Sharp-shinned hawk	<i>Accipiter striatus</i>	TWL, FGC 3503.5	Mod	Recent near	
Cooper's hawk	<i>Accipiter cooperi</i>	TWL, FGC 3503.5	Mod	Adjacent; recent near	
American kestrel	<i>Falco sparverius</i>	FGC 3503.5		On site	
Merlin	<i>Falco columbarius</i>	FGC 3503.5		Recent near	

Common name	Species name	Status <sup>1</sup>	Occurrence likelihoods		CVMS HCP cover
			2021 Addendum	eBird/ iNaturalist/ t/ Smallwood	
Prairie falcon	<i>Falco mexicanus</i>	BCC, FGC 3503.5	Low	On site	
Peregrine falcon	<i>Falco peregrinus</i>	BCC, CFP, FGC 3503.5		Adjacent; recent near	
Barn owl	<i>Tyto alba</i>	FGC 3503.5		On site	
Great-horned owl	<i>Bubo virginianus</i>	FGC 3503.5		Recent near	
Long-eared owl	<i>Asio otus</i>	SSC		Recent near	
Western screech-owl	<i>Megascops kennicottii</i>	FGC 3503.5		Nearby	
Burrowing owl	<i>Athene cucularia</i>	BCC, SSC2, FGC 3503.5	Absent	Adjacent	Yes
Vaux's swift	<i>Chaetura vauxi</i>	SSC2	Absent	Adjacent	
Costa's hummingbird	<i>Calypte costae</i>	BCC	Present	On site	
Nuttall's woodpecker	<i>Picoides nuttalli</i>	BCC		Nearby	
Lewis's woodpecker	<i>Melanerpes lewis</i>	BCC		Nearby	
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	BCC		Recent near	
Horned lark	<i>Eremophila alpestris actia</i>	TWL	Low	Adjacent	
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	FE, CE	Absent	In region	Yes
Willow flycatcher	<i>Empidonax traillii</i>	BCC, CE		Nearby	
Olive-sided flycatcher	<i>Contopus cooperi</i>	SSC2	Absent	Nearby	
Vermilion flycatcher	<i>Pyrocephalus rubinus</i>	SSC2		Adjacent; recent near	
Purple martin	<i>Progne subis</i>	SSC2		In region	
Loggerhead shrike	<i>Lanius ludovicianus</i>	BCC, SSC2	High	On site	
Oak titmouse	<i>Baeolophus inornatus</i>	BCC		Nearby	
Black-tailed gnatcatcher	<i>Polioptila nigriceps</i>	TWL	High	Adjacent; recent near	
LeConte's thrasher	<i>Toxostoma leconte</i>	BCC, SSC1	Absent	Recent near	Yes
Crissal thrasher	<i>Toxostoma crissale</i>	SSC3	Absent	Nearby	Yes
Bendire's thrasher	<i>Toxostoma bendirei</i>	BCC, SSC3		In region	
Least Bell' vireo	<i>Vireo belli pusillus</i>	FE, CE		Nearby	Yes



Common name	Species name	Status <sup>1</sup>	Occurrence likelihoods		CVMS HCP cover
			2021 Addendum	eBird/iNaturalist/Cornet/Smallwood	
Yellow warbler	<i>Dendroica petachia</i>	BCC, SSC2	Absent	Adjacent	Yes
Yellow-breasted chat	<i>Icteria virens</i>	SSC3	Absent	Nearby	Yes
Summer tanager	<i>Piranga rubra</i>	SSC1	Absent	Nearby	Yes
Black-chinned sparrow	<i>Spizella atrogularis</i>	BCC		Nearby	
Southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	FSC, SSC		Nearby	
Bell's sage sparrow	<i>Amphispiza b. belli</i>	TWL		Recent near	
Oregon vesper sparrow	<i>Poocetes gramineus affinis</i>	SSC2		On site	
Tricolored blackbird	<i>Agelaius tricolor</i>	BCC, CT		In region	
Yellow-headed blackbird	<i>X. xanthocephalus</i>	SSC3		Adjacent	
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	BCC	Absent	Recent near	
California leaf-nosed bat	<i>Macrotus californicus</i>	BLM, WBWG:H		In region	
Western mastiff bat	<i>Eumops perotis californicus</i>	BLM, SSC, WBWG:H		In region	
Pocketed free-tailed bat	<i>Nyctinomops femorosaccus</i>	SSC, WBWG:M		Nearby	
Big free-tailed bat	<i>Nyctinomops macrotis</i>	SSC, WBWG:MH		In region	
Pallid bat	<i>Anrozous pallidus</i>	BLM, SSC, WBWG:H		On site	
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	BLM, SSC, WBWG:H		Nearby	
Canvon bat	<i>Parastrellus hesperus</i>	WBWG:L		On site	
Big brown bat	<i>Episticus fuscus</i>	WBWG:L		Nearby	
Spotted bat	<i>Eudernma maculatum</i>	BLM, SSC, WBWG:H		In region	
Silver-haired bat	<i>Lasiomycteris noctivagans</i>	WBWG:M		In region	
Western red bat	<i>Lasiurus blossevillii</i>	SSC, WBWG:H		Nearby	
Hoary bat	<i>Lasiurus cinereus</i>	WBWG:M		On site	
Western yellow bat	<i>Lasiurus xanthinus</i>	SSC, WBWG:H	Absent	Nearby	Yes



Common name	Species name	Status <sup>1</sup>	Occurrence likelihoods		CVMS HCP cover
			2021 Adden dum	eBird/ iNaturalist/ Cornet t/Smallwood	
Western small-footed myotis	<i>Myotis californicus</i>	BLM, WBWG:M		Nearby	
Little brown myotis	<i>Myotis lucifugus</i>	WBWG:M		In region	
Fringed myotis	<i>Myotis thysanodes</i>	BLM, WBWG:H		Nearby	
Long-eared myotis	<i>Myotis evotis</i>	WBWG:M		Nearby	
Long-legged myotis	<i>Myotis volans</i>	BLM, WBWG:H		Nearby	
Yuma myotis	<i>Myotis yumanensis</i>	BLM, SSC, WBWG:LM		Nearby	
American badger	<i>Taxidea taxus</i>	SSC		In region	
Palm Springs pocket mouse	<i>Perognathus longimembris bangsi</i>	SSC	Absent	In region	Yes
Palm Springs round-tailed ground squirrel	<i>Xerospermophilus tereticaudus chlorus</i>	SSC	Low	On site	Yes

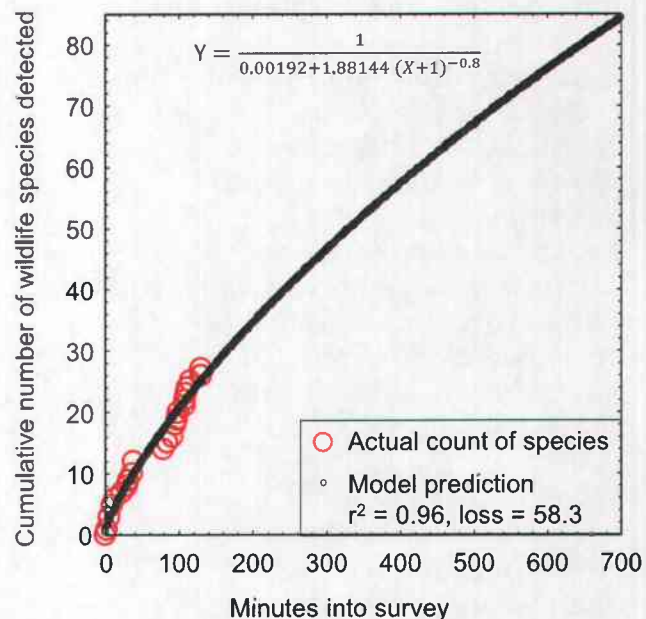
<sup>1</sup> FE and FT = federal endangered and threatened, BCC = U.S. Fish and Wildlife Service Bird Species of Conservation Concern, BLM = BLM Sensitive, CE and CT = California endangered and threatened, CFP = California Fully Protected (FGC Code 3511), CSP = California Specially Protected, SSC = California species of special concern, SSC1, SSC2 and SSC3 = California Bird Species of Special Concern priorities 1, 2 and 3, respectively, and TWL = Taxa to Watch List (Shuford and Gardali 2008), FGC 3503.5 = California Fish and Game Code 3503.5 (Birds of prey), and WBWG = Western Bat Working Group with priority rankings, of low, moderate, and high.



Given that survey outcomes changed so greatly from Cornett's survey to ELMT's survey to Noriko's survey, the Addendum's assertions are readily refuted. Neither the 2006 EIR nor the Addendum have realistically characterized the wildlife community that occurs at the project site. Noriko Smallwood's survey more than doubled the number of species detected by ELMT, and combined the 71 species of wildlife detected by the surveys of Cornett, ELMT and Smallwood remains many species fewer than the number that occur at the site. That this is true can be demonstrated graphically and quantitatively as follows.

When diligently performed, and when outcomes are analyzed appropriately and fully reported, the number of species detected within a given reconnaissance survey effort can inform of the number of species that likely would have been detected with a larger survey effort during the same time of year. Noriko Smallwood had only 2.33 hours available to perform a visual scan survey on 3 April 2021, so there were only so many species she was likely to detect. By recording when she detected each species, I was able to forecast the number of species that could have been detected with a longer effort using the same visual scan method. Figure 1 shows her cumulative count of species detected at the site with increasing time into her survey. Just as I have seen for many other survey efforts, a nonlinear regression model fit the data very well, explaining 96% of the variation in the data, and it showed progress towards the inevitable asymptote of the number of species detectable from the same survey method over a longer time period. The model typically performs well with logistic growth curves.

**Figure 1.** Actual and predicted relationships between the number of vertebrate wildlife species detected and the elapsed survey time based on visual scan on 13 March 2021. Note that the relationship would differ if the survey was based on another method, another time of day, or during another season. Also note the cumulative number of vertebrate species across all methods, times of day, and seasons would increase substantially.

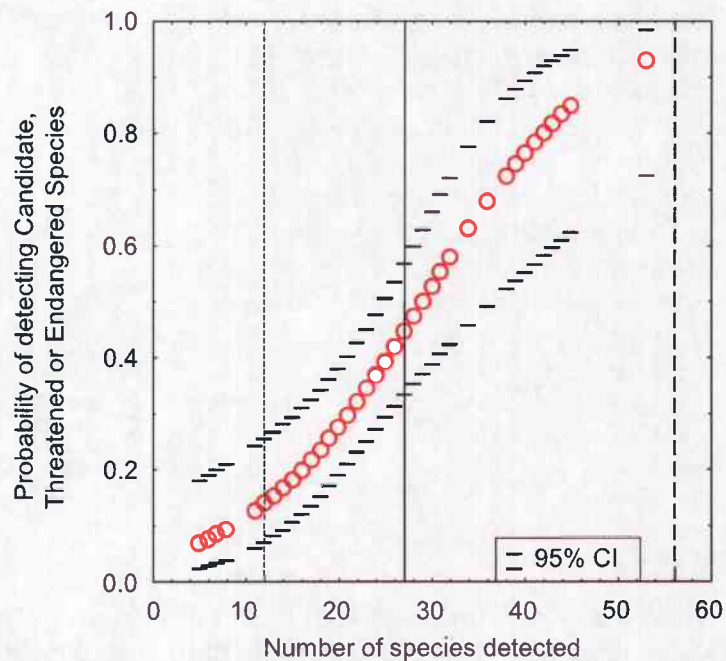


In this case, the model fit to the data indicate that Noriko Smallwood came nowhere close to approaching an asymptote of the number of vertebrate wildlife species she could have detected by continuing what she was doing (Figure 1). She could have detected many more species with commitment of more hours, or by surveying at different times of day to detect diurnal, nocturnal and crepuscular species, or by surveying in different

seasons and years to accommodate detection of migrants and species with multi-annual cycles of abundance, or by surveying with various methods such as acoustic detectors or thermal-imaging for bats, owls, and nocturnally migratory birds, and live-trapping for small mammals. Her reconnaissance-level survey, performed carefully and analyzed appropriately, informs me that the site is rich in wildlife but also that its environmental setting remains insufficiently characterized as foundation for analysis of impacts to special-status species. What her reconnaissance survey does not inform me, and what detection surveys could, is which of the potentially occurring special-status species actually occur at the site in addition to those she had the good fortune to detect.

The likelihood of detecting special-status species is typically lower than that of more common species. This difference can be explained by the fact that special-status species tend to be rarer than common species. Special-status species also tend to be more cryptic, fossorial, or active during nocturnal periods when reconnaissance surveys are not performed. Another useful relationship from careful recording of species detections and subsequent comparative analysis is the probability of detection of listed species as a function of an increasing number of vertebrate wildlife species detected (Figure 2). (Note that listed species number fewer than special-status species, which are inclusive of listed species.) As demonstrated in Figure 1, the number of species detected is a function of survey effort. Therefore, greater survey effort increases the likelihood that listed species will be detected. Based on the outcomes of 106 previous surveys that I performed at sites of proposed projects, the ELMT survey effort carried only a 14% chance of detecting a listed species. ELMT would have needed to repeat its survey 7 time to stand a reasonable chance of detecting a listed species.

**Figure 2.** Probability of detecting  $\geq 1$  Candidate, Threatened or Endangered Species of wildlife listed under California or federal Endangered Species Acts, based on survey outcomes that I logit-regressed on the number of wildlife species I detected as an expert witness during 106 site visits throughout California. The solid vertical line represents the cumulative number of species detected by Noriko Smallwood on 3 April 2021, the short-dashed line represents the number of species ELMT detected on 2 February 2021, and the long-dashed line represents the number detected by Cornett (1997).





Noriko Smallwood's survey effort at the proposed project site carried a 44% chance of detecting a listed species. She beat the odds by detecting Swainson's hawk, which is a California threatened species, and by probably also detecting Coachella Valley fringe-toed lizard in the bill of a common raven. But this federally Threatened and California Endangered species had already been detected by Cornett (1997), so its presence on the site should be of no surprise. A project-specific EIR should be prepared to more carefully analyze potential project impacts to special-status species of wildlife.

Outcomes of the three reconnaissance-level biological surveys at the site reveal the inadequacies of such surveys – they were not detection surveys, and were therefore unlikely to provide satisfactory evidence in support of presence or absence determinations of special-status species. Noriko's survey detected too many species that were missed by ELMT's survey, even by Cornett's (1997) survey, thereby revealing the inadequacy of such cursory surveys for characterizing the environmental setting. I am confident that with greater survey effort, including surveys during other times of year and using additional methods, and including the appropriate detection survey protocols, multiple additional special-status species would be detected, including merlin, burrowing owl, multiple additional species of bats, and most of the species listed in Table 2. A larger effort is needed to inform the public and decision-makers about the potential project impacts to wildlife and how to mitigate them.

Determinations of species occurrence likelihoods are inconsistent in the Addendum, and they do not comport well with eBird and iNaturalist records in the area, or with the survey findings of Cornett (1997) and Noriko Smallwood in 2021. For example, the Addendum determines northern harrier as absent based on the assertion that no habitat is available for this species. Based on my experience with northern harrier, I would have expected to see this species on the site, and Noriko confirmed my expectation (Photo 9).

The Addendum determines the occurrence likelihoods of both prairie falcon and Palm Springs round-tailed ground squirrel to be low, even though Cornett detected both of these species on the site in 1997 and eBird postings depict sightings of prairie falcons in the area. The Addendum determines another 10 special-status species to be absent, even though recent observations of these same species have been reported on eBird for sites nearby or adjacent to the proposed project site.

Furthermore, the 2006 EIR and its 2021 Addendum determine occurrence likelihoods for only 22 (27%) of the 81 species listed in Table 2. The Addendum inexplicably neglects to analyze potential project impacts to 59 special-status species of vertebrate wildlife. Neither the 2006 EIR nor the 2021 Addendum consider the occurrence likelihood of Oregon vesper sparrow, which is a California Species of Special Concern Priority Level 2, and which Noriko found on the project site along the proposed circuit line extension (Photo 16). Analyses of occurrence likelihoods need to be more thorough. In the face of high uncertainty, such as having under-surveyed the site for wildlife and having not performed appropriate detection surveys for special-status species, the prudent approach is to err on the side of caution (National Research Council 1986), in

this case by assuming all of the species in Table 2 are present. A project-specific EIR is needed to appropriately analyze potential project impacts to wildlife.

**Photo 16.** Oregon vesper sparrows on the project site, 3 April 2021. This species is a California Species of Special Concern Priority Level 2. Photo by Noriko Smallwood.



## (2) Decline of wildlife

Another substantial change in circumstances was the recent report that North American birds have suffered a 29% decline in overall abundance over the past 48 years (Rosenberg et al. 2019). This stunning loss, which remained unknown at the time of the 2006 EIR, poses dire ecological and economic consequences that have yet to be fully understood, but which must be considered in any serious cumulative impact analysis. Rosenberg et al. (2019) attributed the 29% loss of birds primarily to habitat loss, which I will address below. The finding of Rosenberg et al. (2019) was reported at about the same time California's Governor signed AB 454, which amended California Fish and Game Code to protect most California birds. A project-specific EIR is needed to address the project's direct and cumulative impacts on birds.

Mammals, reptiles and amphibians are also declining, as are special-status species of plants. Evidence of these declines is available in the literature at species-specific levels. In the face of these declines, greater effort is needed in surveys and analyses of potential impacts, as well as greater attention to mitigation.

## (3) Changed statutes

The overall decline in bird abundance across North America has also included declines in special-status species. These declines prompted recent changes in statutes. For example, Costa's hummingbird, which has been found at the site in both 1997 and 2021, is listed by the US Fish and Wildlife Service as a Bird Species of Conservation Concern, but it was not so listed in 1997 when Cornett performed his biological survey for the EIR, nor was it so listed by the time the EIR was certified in 2006. Neither yellow warbler nor Nuttall's woodpecker were US Fish and Wildlife Bird Species of



Conservation Concern in 2006, but they became so since then. The same is true for Bell's sage sparrow. Furthermore, rankings of conservation priority among special-status bird species did not even exist at the time of the 2006 EIR, but they exist now (Shuford and Gardali 2008).

Another change in statute was the recent amendment to California Fish and Game Code section to protect most California birds (AB 454, signed by the Governor on 27 September 2019). This amendment adds California protections to birds protected by the federal Migratory Bird Treaty Act. It covers most of the bird species documented at or near the project site, as well as most of the birds recently reported on eBird, which I discuss next.

#### **(4) New research tools and data**

Another development since 1997/2006 has been the proliferation in use of electronic data bases into which members of the public report detections of wildlife. These data bases have rapidly added to the scientific body of knowledge on the distribution of wildlife species. Many papers in peer-reviewed journals have been informed by these data bases. No impact assessment should be made without consulting these data for occurrence records at and nearby a proposed project site. However, no such use of these data bases helped to inform either the 2006 EIR or its 2021 Addendum.

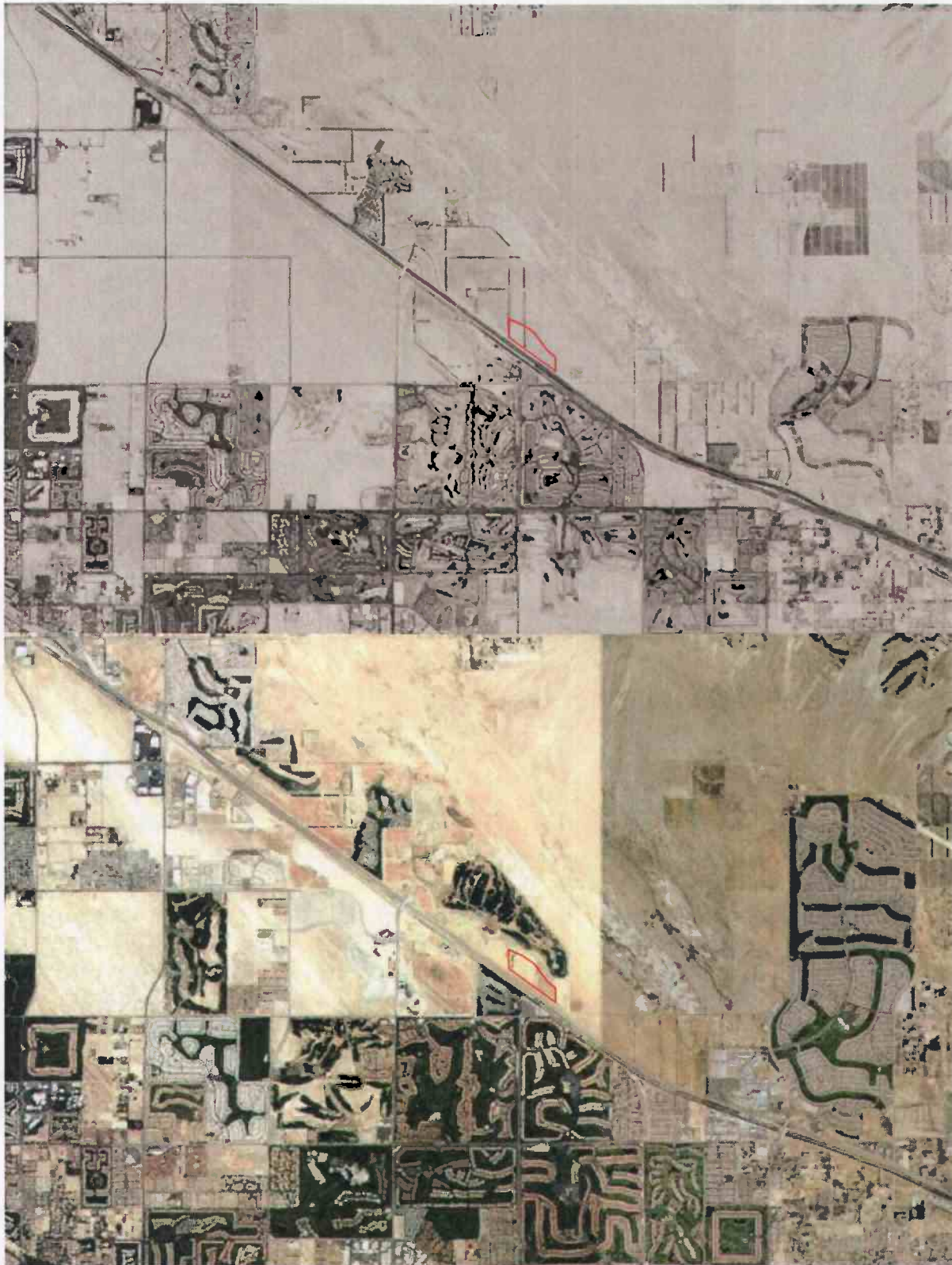
According to eBird and iNaturalist records, 81 special-status species of wildlife have been detected nearby or within the region of the project site (Table 2). Multiple special-status species of bats likely forage on site. According to the growing data bases that have since become available following the 2006 EIR, the site is inherently rich in wildlife and it is rich in special-status species of wildlife. Greater use of the new tools and data are needed to appropriately analyze the project's potential impacts to wildlife. A new project-specific EIR is warranted.

#### **(5) Habitat loss and habitat fragmentation**

Another changed circumstance is the diminished availability of open space to wildlife in the region of the project site since the 1997 biological survey and its 2006 EIR. Given the recently documented 29% decline in overall bird abundance across North America over the last 48 years – a decline driven by multiple factors including habitat loss and habitat fragmentation (Rosenberg et al. 2019), an analysis of the effects of habitat loss and habitat fragmentation is warranted. Given the changes to the landscape of the Coachella Valley since 1997 (Figure 3), the Addendum is not credible in its assertions that no substantial changes have occurred with the environmental setting and potential impacts to biological resources since the 2006 EIR.

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**Figure 3.** The project site (red) amid open spaces that have been built-over since the 1997 biological survey (top image) in support of the 2006 EIR (middle image), and in 2019 (bottom image). Severe habitat fragmentation progressed since the 1997 survey.

Since the 1997 biological survey and since the 2006 EIR for which the survey was performed, large tracts of open space have been lost to wildlife (Figure 3). Open space that in 1997 formed contiguous travel routes across and inclusive of the project site, has since been severely constrained. The project would further fragment terrestrial travel routes that currently remain available to wildlife. The Addendum ignores this changed circumstance caused by habitat fragmentation, which also likely concentrated use of the project site by wildlife and hence might also explain why Noriko Smallwood detected so many more special-status species that had not been detected by the larger survey effort of Cornett in 1997.

Given the changed circumstance of likely concentration of wildlife on the project site after large and small tracts of habitat were lost near the site, an estimate of the avian breeding capacity that would be lost to the project is warranted. Habitat loss not only results in the immediate numerical decline of wildlife, but also in permanent loss of productive capacity (Smallwood 2015). For example, a grassland/wetland/woodland complex at one study site had a total bird nesting density of 32.8 nests per acre (Young 1948). In another study on a similar complex of vegetation cover, the average annual nest density was 35.8 nests per acre (Yahner 1982). These densities averaged 34.3 nests per acre. Assuming nest site density at the project site would be about 20% of these reported densities, then 7 nest sites per acre multiplied against the 45.88 acres of the

project site (44.41 acres at the Arena site and 1.47 acres along the circuit line extension at Cook Street), the loss of habitat caused by the project would predict a loss of 321 bird nests. The average number of fledglings per nest in Young's (1948) study was 2.9. Assuming Young's (1948) study site typifies bird productivity, the project would prevent the production of 931 fledglings per year.

After 100 years and assuming an average generation time of 5 years and the project site supports 20% the nesting density of Yahner's (1982) and Young's (1948) study sites, the lost capacity of both breeders and annual fledgling production can be estimated from the following formula:  $\{(nests/year \times chicks/nest \times number\ of\ years) + (2\ adults/nest \times nests/year) \times (number\ of\ years \div years/generation)\}$ . In the case of this project, this formula would predict **the project would deny California 105,940 birds over the next century due solely to loss of terrestrial habitat**. This predicted loss would be substantial, and would qualify as significant impacts that have yet to be addressed by County of Riverside (2006, 2021). A fair argument can be made for the need to prepare a project-specific EIR.

### Wildlife movement

According to the Addendum (p. 76), "The Project Site does not contain migratory wildlife corridor areas." The Addendum neglects to mention that the Coachella Valley itself is a well-known wildlife movement corridor. McCrary et al. (1982) used radar to count an average 4,006 birds per hour per km flying through San Gorgonio Pass during the night, or >36,000 birds/km/night. Many of these birds fly low in the aerosphere of the Coachella Valley, and many must stopover in suitable terrestrial habitat to feed and rest. However, the Addendum's analytical focus on whether corridors intersect the project site is misdirected. The primary phrase of the CEQA standard goes to wildlife movement regardless of whether the movement is channeled by a corridor. A site such as the proposed project site is all the more important for wildlife movement because it provides opportunities for stopover and staging of volant wildlife during migration, and for dispersal and home range patrol while opportunities nearby diminish as anthropogenic uses expand (Warnock 2010, Taylor et al. 2011, Runge et al. 2014). The project would cut wildlife off from stopover and staging opportunities, forcing volant wildlife to travel even farther between remaining patches of stopover refugia. The project would interfere with wildlife movement in the region. A project-specific EIR is needed to analyze this type of impact.

### (6) Road mortality

Scientific advances in understanding of road traffic impacts to wildlife represent another important changed circumstance. But this issue also represents a shortfall of the 2006 EIR and its Addendum. A fundamental shortfall of both the 2006 EIR and its 2021 Addendum is their failure to analyze the impacts of the project's added road traffic on special-status species of wildlife, including many animals that would be killed far from the project's construction footprint; they would be crossing roads traversed by cars and trucks originating from or headed toward the project site. The project's impacts to



wildlife would reach as far from the project as cars and trucks travel to or from the project site, and would affect many more species than are listed in Table 2.

Vehicle collisions have accounted for the deaths of many thousands of reptile, amphibian, mammal, bird, and arthropod fauna, and the impacts have often been found to be significant at the population level (Forman et al. 2003). Across North America traffic impacts have taken devastating tolls on wildlife (Forman et al. 2003). In Canada, 3,562 birds were estimated killed per 100 km of road per year (Bishop and Brogan 2013), and the US estimate of avian mortality on roads is 2,200 to 8,405 deaths per 100 km per year, or 89 million to 340 million total per year (Loss et al. 2014). Local impacts can be more intense than nationally.

In a recent study of traffic-caused wildlife mortality, investigators found 1,275 carcasses of 49 species of mammals, birds, amphibians and reptiles over 15 months of searches along a 2.5 mile stretch of Vasco Road in Contra Costa County, California (Mendelsohn et al. 2009). Using carcass detection trials performed on land immediately adjacent to the traffic mortality study (Brown et al. 2016) to adjust the found fatalities for the proportion of fatalities not found due to scavenger removal and searcher error, the estimated traffic-caused fatalities was 12,187. This fatality estimate translates to a rate of 3,900 wild animals per mile per year killed. In terms comparable to the national estimates, the estimates from the Mendelsohn et al. (2009) study would translate to 243,740 animals killed per 100 km of road per year, or 29 times that of Loss et al.'s (2014) upper bound estimate and 68 times the Canadian estimate. An analysis is needed of whether increased traffic generated by the project site would similarly result in local impacts on wildlife.

Increased use of existing roads would increase wildlife fatalities (see Figure 7 in Kobylarz 2001). It is possible that project-related traffic impacts would far exceed the impacts of land conversion to use for a warehouse and expansive parking lot. Wildlife roadkill is not randomly distributed, and so it can be predicted. Causal factors include types of roadway, human population density, and temperature (Chen and Wu 2014), as well as time of day and adjacency and extent of vegetation cover (Chen and Wu 2014, Bartonička et al. 2018), and intersections with streams and riparian vegetation (Bartonička et al. 2018). For example, species of mammalian Carnivora are killed by vehicle traffic within 0.1 miles of stream crossings >40 times other than expected (K. S. Smallwood, 1989-2018 unpublished data). Reptiles are killed on roads where roadside fences end or where fences are damaged (Markle et al. 2017). There has even been a function developed to predict the number of golden eagles killed along the road, where the function includes traffic volume and density of road-killed animals available for eagles to scavenge upon (Lonsdorf et al. 2018). These factors also point the way toward mitigation measures, which should be formulated in a new project-specific EIR.

#### Predicting project-generated traffic impacts to wildlife

The Addendum predicts the Coachella Valley Arena project would result in 21,323,770 vehicle miles traveled annually. This is a lot of mileage to be driven at great peril to wildlife that must cross roads to go about their business of foraging, patrolling home



ranges, dispersing and migrating (Photo 17). Despite the obvious risk to wildlife, and despite the multiple papers and books written about this type of impact and how to mitigate them, neither the Addendum nor the 2006 EIR addresses impacts to wildlife caused by vehicles traveling to and from the project site.

**Photo 17.** A Gambel's quail dashes across the road at the project site (right) on 3 April 2021. The essential question is not "Why did the quail cross the road?" but rather, "Can it survive 21 million miles per year of auto traffic to and from the Arena?" Unlikely. Photo by Noriko Smallwood.



The project's impacts to volant wildlife can be predicted to a reasonable degree of accuracy based on what scientific monitoring has learned from collision impacts of moving obstacles elsewhere in the lower atmosphere. One type of impact to consider is blunt-force injury and death caused by collisions with the front ends of vehicles. Assuming the average car frontal surface area is 3.08 m<sup>2</sup> (average height of 1.7 m and average wheelbase of 1.81 m), then the predicted average annual volume of airspace intercepted by cars would be 3.08 m<sup>2</sup> × 3.431 × 10<sup>10</sup> m (1,609 m/mile × 21,323,770 miles) = 1.056746 × 10<sup>11</sup> m<sup>3</sup>. This volume of intercepted airspace would be equivalent to the intercepted winds of 1,248 2.3-MW wind turbines each of which in the Altamont Pass Wind Resource Area averages about 34.5 bird fatalities per year (based on my independent estimates derived from data reported in H.T. Harvey & Associates 2020 and Great Basin Bird Observatory and H.T. Harvey & Associates 2020).<sup>1</sup> Therefore, front-end, blunt-force mortality would be predicted, in this example, to tally 43,056 birds annually. **Operations over 50 years would accumulate 2,152,800 bird fatalities.** It remains unknown whether collision risk is higher or lower for vehicles traveling forward to intercept airspace as compared to wind turbines remaining stationary to intercept wind, but I can think of no reason to adjust the prediction based on wind turbine collisions. Yet to be considered are the deaths and injuries to vertebrate wildlife caused by crushing under tires, broadside impacts of flying birds, and turbulence-induced injuries and deaths above, to the side, and in the wake of traveling

<sup>1</sup> A 2.3-MW wind turbine is rated at 14 m/s. It runs an average of about 8 hours per day with a blade area of about 210 m<sup>2</sup>. Daily volume of wind intercepted by the turbine blades is 210 m<sup>2</sup> × 14 m/s × 8 hr × 3600 s/hr = 84.67 million m<sup>3</sup>. Fatality monitoring at the Vasco Winds and Golden Hills projects resulted in fatality estimates that accounted for the proportion of fatalities never found by searchers.



cars and trucks. However, even if one or more assumptions prove inaccurate, the magnitude of the impact would remain very large.

Based on my assumptions and simple calculations, the project-generated traffic would cause substantial, significant impacts to wildlife. There is at least a fair argument that can be made for the need to prepare a project-specific EIR to analyze this impact. Mitigation measures to improve wildlife safety along roads are available and are feasible, and they need exploration for their suitability with the proposed project.

### (7) Bird-window collisions

The extent of structural glass used in a project is important for analyzing potential project impacts to wildlife from bird-window collision mortality, which is the second or third largest source of anthropogenic mortality of birds (Klem 1990, Dunn 1993, Calvert et al. 2013, Machtans et al. 2013, Loss et al. 2014). The Arena's design, according to depictions of it in the Addendum, would use much less structural glass than has been popular lately. This lesser use of glass is commendable from the point of view of a biologist concerned about bird-window collision mortality. However, extensive glass panels are still part of the project and they will kill birds. Even though bird-window collisions is a well-documented problem, County of Riverside (2021) makes no mention of the potential for bird-window collision impacts, nor does it offer any measures to mitigate impacts. Knowing the extent of glass in the project, and informed by bird-window collisions per m<sup>2</sup> that has been measured in scientific investigations elsewhere, a basis exists for predicting the bird-window collision mortality that would be caused by the project.

By the time of these comments I had reviewed and processed results of bird collision monitoring at 213 buildings and façades for which bird collisions per m<sup>2</sup> of glass per year could be calculated and averaged (Johnson and Hudson 1976, O'Connell 2001, Somerlot 2003, Hager et al. 2008, Borden et al. 2010, Hager et al. 2013, Porter and Huang 2015, Parkins et al. 2015, Kahle et al. 2016, Ocampo-Peñuela et al. 2016, Sabo et al. 2016, Barton et al. 2017, Gomez-Moreno et al. 2018, Schneider et al. 2018, Loss et al. 2019, Brown et al. 2020, City of Portland Bureau of Environmental Services and Portland Audubon 2020, Riding et al. 2020). These study results averaged 0.073 bird deaths per m<sup>2</sup> of glass per year (95% CI: 0.042-0.102). To make use of this average, I needed an estimate of the extent of structural glass in the project.

Renderings of the project depict expansive use of structural glass on select facades. Ignoring the narrow strips of windows around the Arena, I measured the extents of extensive glass panels on those the select facades where they would occur. I estimated the hazardous portions of glass on the Arena would be 285 m<sup>2</sup>. Applied to the mean fatality rate 0.073 bird deaths per m<sup>2</sup> of glass per year (95% CI: 0.042-0.102), I predict 21 bird deaths per year (95% CI: 12-29). The 100-year toll from this average annual fatality rate would be at least **2,100 bird deaths (95% CI: 120,400-2,900)**. These estimates would be perhaps 3 times higher after accounting for the proportions of fatalities removed by scavengers or missed by fatality searchers where studies have been performed. The mortality of bird-window collisions would continue until the buildings

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are either renovated to reduce bird collisions or they come down. If the project moves forward as proposed, and annually takes 21 birds protected by state and federal laws, the project will cause significant unmitigated impacts.

### (8) Line-strike mortality

In its analysis of potential impacts caused by the proposed 1,600-foot extension of electrical circuit line north from Cook Street, the Addendum is silent on bird-line collisions, which is one of the largest anthropogenic sources of mortality of birds. Birds would collide with the proposed new lines. I have recorded hundreds of avian electrocutions and line strikes on distribution circuits (e.g., Photos 18 to 21)

At national scales, Rioux et al. (2013) estimated annual bird deaths with Canada's transmission lines within a range of 17.24 deaths/mile to 176.6 deaths/mile. Loss et al. (2014) estimated annual bird deaths along USA power lines at 14.5/mile to 18.5/mile. Rioux et al.'s (2013) collision fatality rates applied to the 1,600-foot circuit line extension would predict 54 bird deaths per year, whereas Loss et al.'s (2014) rates would predict 4 to 6 bird deaths per year.

In another study, Yee (2007) found 9.7 bird carcasses per mile along 12 kV lines on Staten Island, Sacramento County, over 4 winter months. Assuming an adjustment factor of 10 for the proportion of fatalities not found, the fatality rate was likely 97/mile, and extended to the proposed project the toll would be 29 fatalities. In another study, Hartman et al. (1992) estimated that 115 kV transmission lines spanning across Mare Island annually killed 100 birds per mile over hay fields and 907 birds per mile over wetlands, or 33 and 302 birds per mile of circuit line, respectively. Extending the Mare Island fatality rates to the proposed project, the annual fatality toll caused by avian collisions with the extended circuit lines would be 10 to 91. In my recent review of wildlife impacts caused by 14 utility-scale solar projects in California, I averaged avian collision mortality along generation tie-ins. The mean was 182.1 (95% CI: 115.5–319.3) bird fatalities/mile/year. This rate applied to the extended circuit lines of the proposed project would **predict 55 (95% CI: 35–96) bird fatalities/year**. This last prediction is probably the most accurate. A fatality rate of this level would be significant, and presents a fair argument for the need to prepare a project-specific EIR.



**Photo 18.** Great egret killed in Sacramento Valley in December 2006 after colliding with power lines. Photo by Shawn Smallwood.



**Photos 19 and 20.** A mallard was a distribution line collision victim (left), and a great blue heron killed by the ground wire atop transmission lines in eastern Alameda County (right). Photos by Shawn Smallwood.



**Photo 21.** Short-eared owl injured by distribution line collision in the Sacramento Valley. It was later euthanized at the UC Davis Wildlife Hospital. Photo by Brian Karas.

### **(9) Mortality caused by greater energy demand**

The approved project in the 2006 EIR was for a research park, but the 2021 Addendum proposes to replace the research park with an ice arena in the desert. The energy demand to maintain a large ice floor in the desert might be much higher than it would have been to support a research park, but the Addendum is vague about the amount of energy needed. In fact, I could find no explicit prediction of the energy needed for the project. The closest I could find for the energy demand was on page 24, where the Addendum says that 600 kW of direct current would be generated by a solar PV array atop a pedestrian walkway, thereby providing 20% of the Arena's energy demand. Based on this statement, I assume the energy demand would require 2.4 MW of offsite generation. Recent changes in California law would require incrementally more of this generation to come from renewable sources, soon to total 100% of the generation. (Senate Bill 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045). I also assume 10% power loss along transmission to the Arena, which means the installed generation of wind or solar collectors would be 2.7 MW.

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Because we know the magnitudes of impacts to wildlife caused by renewable energy projects, it is possible to predict the project's impacts to wildlife caused indirectly by the project's demand for 2.7 MW of offsite electrical generation. Wind projects in Contra Costa and Alameda Counties are averaging 11.765 bird fatalities/MW/year and 17.463 bat fatalities/MW/year (Smallwood 2021), which applied to the project's energy demand for its ice rink would result in 32 bird fatalities and 47 bat fatalities per year.

In a review of fatality monitoring at 14 of California's utility-scale solar projects (Smallwood 2020), I estimated 18.90 (12.96-35.77) birds/MW/year and 0.806 (0.042-1.689) bats/MW/year. Applying these rates to the 2.7 MW energy demand would predict annual fatalities of 51 birds and 2 bats.

The magnitude of indirect mortality of volant wildlife caused by the project's offsite energy demand would depend the mix of energy sources as well as the transmission distances involved. No matter the mix, the annual mortality would be significant and it remains unaddressed and unmitigated in the Addendum. Preparation of a project-specific EIR is warranted.

### **(10) Artificial lighting**

Artificial lighting causes a variety of substantial impacts on a variety of wildlife species (Rich and Longcore 2006), including interference with circadian rhythm, disruption of foraging activity, disruption of movement patterns, navigational interference and lethal attraction of flying birds, and altered development of eggs and juveniles/larvae. Added lighting could cause displacement or altered activity patterns of at least some species, resulting in habitat degradation and habitat loss. Although the 2006 EIR includes a mitigation measure to cast outdoor lighting down and away from the Coachella Valley Preserve, the Addendum's depiction of the Arena shows considerable light being cast toward the Preserve (Figure 4). The pedestrian walkway covers would shield some of this light from nocturnally migrating birds, but not all of it. The excess light cast from the Arena could penetrate the Preserve, illuminating surface areas normally traversed by nocturnal wildlife that rely on darkness for stealth. Penetrating light would also generate stark light/shadow contrasts that can be confusing to wildlife. A project-specific EIR is needed to adequately address this potential suite of project impacts.

Figure 4. Rendering of the Coachella Valley Arena (source: Addendum), depicting considerable light cast north towards the Coachella Valley Preserve.



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## CUMULATIVE IMPACTS

On p. 217, the Addendum concludes, "...the analysis herein demonstrates that physical impacts associated with the project (e.g., biological resources ...) would not substantially change or increase compared to the analysis presented in EIR No. 470." I disagree. The analysis starts from a flawed characterization of the biological community, which is based on the unfounded assumption that the disturbed environmental setting precludes occurrences of special-status species of wildlife. Determinations of occurrence likelihoods are speculated from flawed assumptions rather than based on appropriate data base review, adequate detection surveys and appropriate use of the first tenets of risk analysis. The Addendum ignores substantial changes in the status of wildlife, including changes to statutes protecting wildlife and to the physical status of each of the species at issue. The Addendum ignores the substantial physical changes that would come from the project and that would adversely affect wildlife, including >21 million vehicle miles to and from the project each year, the 1,600-foot extension of an electrical circuit line into a healthy stand of desert vegetation, and an offsite energy demand for 2.7 MW that will kill birds and bats. The Addendum also ignores the devastating habitat loss and habitat fragmentation since the 1997 biological survey and the certification of the 2006 EIR (see Figure 3). A more careful analysis of cumulative impacts is warranted, and it needs to be provided in a project-specific EIR.

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## MITIGATION

The mitigation measures proposed in the 2021 Addendum are simply the continued implementation of measures promised in the 2006 EIR. Although not explicitly stated in the Addendum, I assume the payment of mitigation fees to the HCP is regarded as the principal mitigation. Otherwise, the measures consist of best management practices. But already it would appear that the proposed project would not be consistent with WR-7, which requires outdoor lighting to be directed down and away from the Coachella Valley Preserve. Rendering of the project shows the light cast north towards the Preserve.

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Regardless of whether the project is consistent with requirements of the CVMSHCP, only 12 species in Table 2 are covered by the incidental take permit of the CVMSHCP. Coverage of these species does not cover the other 59 special-status species in Table 2, 17 of which are known to occur on the project site.

## RECOMMENDED MEASURES

**Road Mortality:** Compensatory mitigation is needed for the increased wildlife mortality that will be caused by the project's contribution to increased road traffic in the region. I suggest that this mitigation can be directed toward funding research to identify fatality patterns and effective impact reduction measures. Compensatory mitigation can also be provided in the form of donations to wildlife rehabilitation facilities (see below).

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**Window Collisions:** County of Riverside could minimize impacts by implementing available guidelines, such as those prepared by American Bird Conservancy and New



York and San Francisco. The American Bird Conservancy (ABC) produced an excellent set of guidelines recommending actions to: (1) Minimize use of glass; (2) Placing glass behind some type of screening (grilles, shutters, exterior shades); (3) Using glass with inherent properties to reduce collisions, such as patterns, window films, decals or tape; and (4) Turning off lights during migration seasons (Sheppard and Phillips 2015). The City of San Francisco (San Francisco Planning Department 2011) also has a set of building design guidelines, based on the excellent guidelines produced by the New York City Audubon Society (Orff et al. 2007). The ABC document and both the New York and San Francisco documents provide excellent alerting of potential bird-collision hazards as well as many visual examples. The San Francisco Planning Department's (2011) building design guidelines are more comprehensive than those of New York City, but they could have gone further. For example, the San Francisco guidelines probably should have also covered scientific monitoring of impacts as well as compensatory mitigation for impacts that could not be avoided, minimized or reduced.

**Indirect mortality at offsite Solar PV and Wind Energy Facilities:** The most effective mitigation measure would be to reduce project demand for electricity and to generate more of its needed electricity on site. Solar PV could extend across the entirety of the Arena's roof, or across the entirety of parking lots to meet the Arena's power needs.

**Fund Wildlife Rehabilitation Facilities:** Compensatory mitigation ought also to include funding contributions to wildlife rehabilitation facilities to cover the costs of injured animals that will be delivered to these facilities for care. Most of the injuries will likely be caused by the increased vehicle mileage to and from the Arena.

Thank you for your attention,



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Shawn Smallwood, Ph.D.

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Born May 3, 1963 in  
Sacramento, California.  
Married, father of two.

### Ecologist

#### Expertise

- Finding solutions to controversial problems related to wildlife interactions with human industry, infrastructure, and activities;
- Wildlife monitoring and field study using GPS, thermal imaging, behavior surveys;
- Using systems analysis and experimental design principles to identify meaningful ecological patterns that inform management decisions.

#### Education

Ph.D. Ecology, University of California, Davis. September 1990.  
M.S. Ecology, University of California, Davis. June 1987.  
B.S. Anthropology, University of California, Davis. June 1985.  
Corcoran High School, Corcoran, California. June 1981.

#### Experience

- 477 professional publications, including:
  - 81 peer reviewed publications
  - 24 in non-reviewed proceedings
  - 370 reports, declarations, posters and book reviews
  - 8 in mass media outlets
  - 87 public presentations of research results at meetings
  - Reviewed many professional papers and reports
  - Testified in 4 court cases.

Editing for scientific journals: Guest Editor, *Wildlife Society Bulletin*, 2012-2013, of invited papers representing international views on the impacts of wind energy on wildlife and how to mitigate the impacts. Associate Editor, *Journal of Wildlife Management*, March 2004 to 30 June 2007. Editorial Board Member, *Environmental Management*, 10/1999 to 8/2004. Associate Editor, *Biological Conservation*, 9/1994 to 9/1995.

Member, Alameda County Scientific Review Committee (SRC), August 2006 to April 2011. The

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five-member committee investigated causes of bird and bat collisions in the Altamont Pass Wind Resource Area, and recommended mitigation and monitoring measures. The SRC reviewed the science underlying the Alameda County Avian Protection Program, and advised the County on how to reduce wildlife fatalities.

Consulting Ecologist, 2004-2007, California Energy Commission (CEC). Provided consulting services as needed to the CEC on renewable energy impacts, monitoring and research, and produced several reports. Also collaborated with Lawrence-Livermore National Lab on research to understand and reduce wind turbine impacts on wildlife.

Consulting Ecologist, 1999-2013, U.S. Navy. Performed endangered species surveys, hazardous waste site monitoring, and habitat restoration for the endangered San Joaquin kangaroo rat, California tiger salamander, California red-legged frog, California clapper rail, western burrowing owl, salt marsh harvest mouse, and other species at Naval Air Station Lemoore; Naval Weapons Station, Seal Beach, Detachment Concord; Naval Security Group Activity, Skaggs Island; National Radio Transmitter Facility, Dixon; and, Naval Outlying Landing Field Imperial Beach.

Fulbright Research Fellow, Indonesia, 1988. Tested use of new sampling methods for numerical monitoring of Sumatran tiger and six other species of endemic felids, and evaluated methods used by other researchers.

#### **Peer Reviewed Publications**

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# **EXHIBIT B**





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April 6, 2021

Brian Flynn  
Lozeau | Drury LLP  
1939 Harrison Street, Suite 150  
Oakland, CA 94612

**Subject: Comments on the NorthStar Specific Plan Amendment (SCH No. 2005011054)**

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Dear Mr. Flynn,

We have reviewed the March 2021 Addendum (“Addendum”), which proposes an Amendment (“Project”) to the Final Environmental Impact Report (“FEIR”) the NorthStar Specific Plan (“Plan”), located in the County of Riverside (“City”). The Project proposes to amend the Plan to allow the development a new multi-purpose arena, event center, and training facility with practice ice, public open space, surface parking, and a retail skate shop on the 44.41-acre site.

Our review concludes that the Addendum fails to adequately evaluate the Project’s air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

## Air Quality

### Unsubstantiated Input Parameters Used to Estimate Project Emissions

The Addendum’s air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 64).<sup>1</sup> CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act (“CEQA”) requires that such changes

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<sup>1</sup> CAPCOA (November 2017) CalEEMod User’s Guide, [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4).

be justified by substantial evidence. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters are utilized in calculating the Project's air pollutant emissions and make known which default values are changed as well as provide justification for the values selected.

When reviewing the Project's CalEEMod output files, provided in the Air Quality Study ("AQ Study") as Appendix A to the Addendum, we found that several model inputs were not consistent with information disclosed in the Addendum. As a result, the Project's construction and operational emissions are underestimated. As a result, a Project-specific EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

*Use of an Incorrect Land Use Type*

According to the Addendum, the Project proposes to construct a 260,000-SF arena event center and 35,000-SF hockey training facility (p. 14). As such, the models should have included 260,000-SF of "Arena" and 35,000-SF of "Health Club." However, review of the CalEEMod output files demonstrates that the "Riverside Arena Construction" and "Proposed NorthStar Specific Plan – Operation" models include all 295,000-SF as "Arena" (see excerpt below) (Appendix A, pp. 32, 60, 88, 104).

"Riverside Arena Construction"

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Parking Lot	3,090.00	Space	27.00	1,200,000.00
Arena	295.00	1000sqft	14.40	295,000.00

"Proposed NorthStar Specific Plan – Operation"

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
General Office Building	230.00	1900sqft	16.00	230,000.00
Industrial Park	381.04	1000sqft	28.20	381,035.00
Arena	295.00	1000sqft	41.40	295,000.00
Golf Course	18.00	Hole	245.90	0.00
Hotel	350.00	Room	17.60	506,200.00
Apartments Low Rise	216.00	Dwelling Unit	9.95	216,000.00
Apartments Mid Rise	550.00	Dwelling Unit	33.20	550,000.00
Single Family Housing	54.00	Dwelling Unit	7.30	97,200.00
Regional Shopping Center	400.00	1000sqft	36.20	400,000.00
Regional Shopping Center	100.00	1000sqft	20.00	100,000.00

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As you can see in the excerpt above, the models fail to distinguish between the proposed arena event center and hockey training facility. This inconsistency presents an issue, as CalEEMod includes 63 different land use types that are each assigned a distinctive set of energy usage emission factors.<sup>2</sup> Furthermore, each land use type includes a specific trip rate that CalEEMod uses to calculate mobile-

<sup>2</sup> "CalEEMod User's Guide, Appendix D." CAPCOA, September 2016, available at: [http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05\\_appendix-d2016-3-1.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/05_appendix-d2016-3-1.pdf?sfvrsn=2).



source emissions.<sup>3</sup> Thus, by failing to include the proposed training facility land use, the models may underestimate the Project’s construction-related and operational emissions and should not be relied upon to determine Project significance.

*Underestimated Parking Land Use Size*

According to the Addendum, the proposed Project “includes 3,005 spaces in the on-site surface parking lot” (p. 33). However, review of the CalEEMod output files demonstrates that the “Riverside Arena Construction” model includes only 3,000 parking spaces (see excerpt below) (Appendix A, pp. 32, 60).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
Parking Lot	3,000.00	Space	27.00	1,206,000.00
Arena	295.00	1000sqft	14.40	295,000.00

Furthermore, review of the CalEEMod output files demonstrates that the “Proposed NorthStar Specific Plan – Operation” model fails to include any parking spaces whatsoever (see excerpt below) (Appendix A, pp. 88, 104).

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area
General Office Building	230.00	1000sqft	16.00	230,000.00
Industrial Park	381.04	1000sqft	28.20	381,035.00
Arena	295.00	1000sqft	41.40	295,000.00
Golf Course	18.00	Hole	245.90	0.00
Hotel	350.00	Room	17.60	508,200.00
Apartments Low Rise	216.00	Dwelling Unit	9.95	216,000.00
Apartments Mid Rise	550.00	Dwelling Unit	33.20	550,000.00
Single Family Housing	94.00	Dwelling Unit	7.30	97,200.00
Regional Shopping Center	400.00	1000sqft	36.20	400,000.00
Regional Shopping Center	100.00	1000sqft	20.00	100,000.00

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As you can see in the excerpts above, the number of parking spaces are underestimated by 5 and 3,005 spaces in the “Riverside Arena Construction” and “Proposed NorthStar Specific Plan – Operation” models, respectively. These underestimations present an issue, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model’s calculations. The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).<sup>4</sup> Thus, by underestimating the number of proposed parking spaces, the models underestimate the Project’s construction-related and operational emissions and should not be relied upon to determine Project significance.

<sup>3</sup> CalEEMod User’s Guide, available at: [http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01\\_user-39-s-guide2016-3-1.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/caleemod/upgrades/2016.3/01_user-39-s-guide2016-3-1.pdf?sfvrsn=2), p. 14.

<sup>4</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 28.

*Unsubstantiated Changes to Individual Construction Phase Lengths*

Review of the CalEEMod output files demonstrates that the “Riverside Arena Construction” model includes changes to the paving and architectural coating construction phase lengths (see excerpt below) (Appendix A, pp. 34, 60).

Table Name	Column Name	Default Value	New Value
lbiConstructionPhase	NumDays	75.00	65.00
lbiConstructionPhase	NumDays	55.00	89.00

As a result, the model includes a construction schedule as follows (see excerpt below) (Appendix A, pp. 39, 65):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Grading	Grading	3/1/2021	5/28/2021	5	65
2	Building Construction - Concrete	Building Construction	5/1/2021	11/3/2021	5	133
3	Building Construction - Steel Erection	Building Construction	11/4/2021	5/10/2022	5	134
4	Architectural Coating	Architectural Coating	12/20/2021	5/31/2022	5	117
5	Paving	Paving	5/1/2022	9/1/2022	5	89
6	Building Construction - Interior/Exterior	Building Construction	5/11/2022	11/14/2022	5	134

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As you can see in the excerpt, the architectural coating phase was increased by approximately 113%, from the default value of 55 to 117 days, and the paving phase was increased by approximately 62%, from the default of 55 to 89 days. As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>5</sup> According to the “User Entered Comments and Non-Default Data” table, the justification provided for these changes is: “No demolition required as site is currently vacant. Construction schedule provided by applicant” (Appendix A, pp. 32, 60). However, while the Addendum provides the anticipated grading and building construction phase lengths, it fails to mention or justify the paving and architectural coating phase lengths whatsoever (p. 33-34). As such, we cannot verify the revised architectural coating and paving phase lengths.

These unsubstantiated changes present an issue, as they improperly spread out construction emissions over a longer period of time than is anticipated for the Project. According to the CalEEMod User’s Guide, each construction phase is associated with different emissions activities (see excerpt below).<sup>6</sup>

<sup>5</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

<sup>6</sup> “CalEEMod User’s Guide.” CAPCOA, November 2017, available at: [http://www.aqmd.gov/docs/default-source/caleemod/01\\_user-39-s-guide2016-3-2\\_15november2017.pdf?sfvrsn=4](http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4), p. 31.



Demolition involves removing buildings or structures.

Site Preparation involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.

Grading involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.

Building Construction involves the construction of the foundation, structures and buildings.

Architectural Coating involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.

Paving involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks.

As such, by disproportionately altering individual construction phase lengths without proper justification, the models' calculations are altered and underestimate emissions. Thus, by including unsubstantiated changes to the default architectural coating and paving phase lengths, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

#### *Unsubstantiated Changes to Off-Road Equipment Horsepower Values*

Review of the CalEEMod output files demonstrates that the "Riverside Arena Construction" model includes several changes to the default off-road construction equipment horsepower values (see excerpt below) (Appendix A, pp. 34, 60).

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	HorsePower	231.00	270.00
tblOffRoadEquipment	HorsePower	231.00	225.00
tblOffRoadEquipment	HorsePower	231.00	225.00
tblOffRoadEquipment	HorsePower	88.00	49.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00
tblOffRoadEquipment	HorsePower	402.00	350.00

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As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.<sup>7</sup> According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Anticipated construction equipment for concrete phase [interior/exterior construction phase, steel erection phase, grading phase, and paving phase]" (Appendix A, pp. 32-33, 60-61). However, the Addendum and associated documents fail to mention or justify the revised horsepower values whatsoever, and as a result, they are unsubstantiated.

These unsubstantiated changes present an issue, as CalEEMod uses horsepower values to calculate emissions associated with off-road construction equipment.<sup>8</sup> By including unsubstantiated changes to

<sup>7</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

<sup>8</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 32.

the default off-road construction equipment horsepower values, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

### Unsubstantiated Changes to Gas Fireplace Values

Review of the CalEEMod output files demonstrates that the "Proposed NorthStar Specific Plan – Operation" model includes several reductions to the default gas fireplace values (see excerpt below) (Appendix A, pp. 89, 105).

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	183.80	0.00
tblFireplaces	NumberGas	467.50	0.00
tblFireplaces	NumberGas	45.90	0.00

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As you can see in the excerpt above, the model assumes that the Project would not include any gas fireplaces. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.<sup>9</sup> According to the "User Entered Comments & Non-Default Data" table for these models, the justification provided for these changes is: "No woodstoves" (Appendix A, pp. 89, 105).

However, these changes remain unsupported for two reasons. First, the "User Entered Comments & Non-Default Data" table fails to address the changes to gas fireplaces. Second, the Addendum and associated documents fail to indicate that the Project would not include any gas fireplaces. As such, we cannot verify the changes included in the model.

This presents an issue, as CalEEMod uses the number of gas fireplaces to calculate the Project's area-source operational emissions.<sup>10</sup> Thus, by including unsubstantiated changes to the number of gas fireplaces, the model may underestimate the Project's area-source operational emissions and should not be relied upon to determine Project significance.

### Incorrect Application of Tier 4 Final Mitigation

Review of the CalEEMod output files demonstrates that the "Riverside Arena Construction" model assumes that the Project's off-road construction equipment fleet would meet Tier 4 Final emissions standards (see excerpts below) (Appendix A, pp. 33-34, 61-62).

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<sup>9</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

<sup>10</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 40.



Table Name	Column Name	Default Value	New Value
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	23.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	14.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tbiConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final
tbiConstEquipMitigation	Tier	No Change	Tier 4 Final

As you can see in the excerpt above, the model assumes that 88 pieces of off-road construction equipment would meet Tier 4 Final emission standards. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.<sup>11</sup> According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "As recommended by SCAQMD, alternative applicable strategies include construction equipment with Tier 4 emissions standards" (Appendix A, pp. 33, 61). Furthermore, regarding the use of Tier 4 construction equipment, the AQ Study states:

"In addition, SCAQMD Staff recommends that the Lead Agency require the use of Tier 4 construction equipment of 50 horsepower or greater during construction... Therefore, the following condition was included in CalEEMod as a regulatory compliance measure:

- **Construction Equipment Controls.** During construction, all off-road construction equipment greater than 50 horsepower shall meet USEPA Tier 4 emission standards with Level 3 DPF to

<sup>11</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9

minimize emissions of NOx associated with diesel construction equipment” (emphasis added) (p. 15-16).

However, the inclusion of Tier 4 emission standards remains unsupported for two reasons.

First, simply because SCAQMD *recommends* the use of Tier 4 construction equipment does not justify the inclusion of this measure in the model. According to the Association of Environmental Professionals’ (“AEP”) *CEQA Portal Topic Paper* on mitigation measures:

“While not “mitigation”, a good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact” (emphasis added).<sup>12</sup>

As you can see in the excerpts above, measures that are not formally included in the mitigation monitoring and reporting program (“MMRP”) may be eliminated from the Project’s design altogether. Thus, as SCAQMD does not *explicitly require* this measure, and the use of Tier 4 Final construction equipment is not formally included as a mitigation measure in the Project’s MMRP, we cannot guarantee that Tier 4 emission standards would be implemented, monitored, and enforced on the Project site. Thus, the model’s assumption that the entire off-road construction equipment fleet would meet Tier 4 Final emissions standards is incorrect.

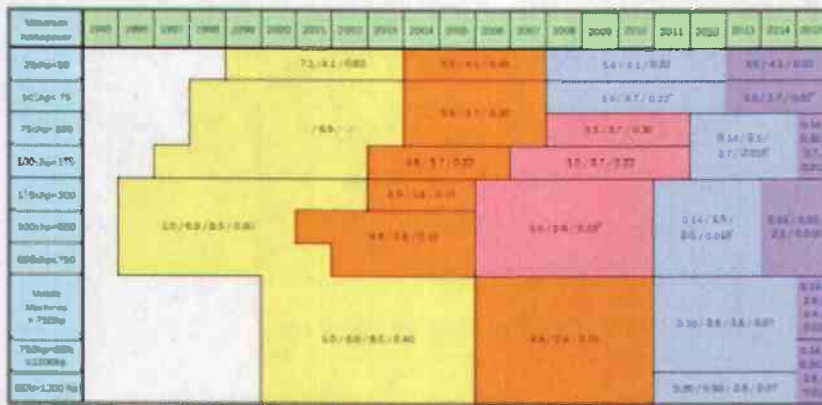
Second, the Addendum fails to specify that the Project would comply with the more efficient Tier 4 *Final* emission standards. The United States Environmental Protection Agency (“U.S. EPA”) has slowly adopted more stringent standards to lower the emissions from off-road construction equipment since 1994. Since that time, Tier 1, Tier 2, Tier 3, Tier 4 *Interim*, and Tier 4 *Final* construction equipment have been phased in over time. Tier 4 *Final* represents the *cleanest* burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 *Interim* equipment (see excerpt below):<sup>13</sup>

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<sup>12</sup> “CEQA Portal Topic Paper Mitigation Measures.” AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 6.

<sup>13</sup> “San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects.” August 2015, available at: [https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San\\_Francisco\\_Clean\\_Construction\\_Ordinance\\_2015.pdf](https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf), p. 6





Source: California Air Resources Board, <http://www.arb.ca.gov/reginfo/reginfo.cfm?topic=04%20New%20Standards>

a) Tier 0 and EPA standards only. The standards chart here represent the main segment of the law.  
 b) Standards given for 30 cfm of Tier 1 engines are for 100hp/1000cc of engine (100hp/1000cc CO<sub>2</sub>/1000cc HC/1000cc PM) in g/hp-hr.  
 c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)/CO/PM in g/hp-hr.  
 d) Standards given for Tier 4 engines above 75 horsepower are NMHC/CO/PM in g/hp-hr.  
 e) Emission limits in this power category may alternate each Tier 3 PM standard to 30 g/hp-hr from 2006-2011 in exchange for meeting Tier 4 standards in 2012.  
 f) The implementation schedule shown is the three-year alternate NMHC/CO/PM. Other schedules are possible.  
 g) Certain manufacturers have agreed to comply with these standards by 2005.

As demonstrated in the figure above, Tier 4 Interim equipment has greater emission levels than Tier 4 Final equipment. Therefore, by modeling construction emissions assuming nearly a full Tier 4 Final equipment fleet, the Addendum fails to account for higher emissions that may occur as a result of the use of Tier 4 Interim equipment. Since the Addendum fails to specify whether the Project will use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that the more efficient Tier 4 Final equipment would be implemented.

Incorrect Application of Operational Mitigation Measures

Review of the CalEEMod output files demonstrates that the “Proposed NorthStar Specific Plan – Operation” Summer model includes following energy-, area-, and water-related operational mitigation measures (see excerpts below) (Appendix A, pp. 82, 83, 85)

Energy-Related Mitigation Measures:

**5.1 Mitigation Measures Energy**

**Install Energy Efficient Appliances**

Area-Related Mitigation Measure:

**6.1 Mitigation Measures Area**

**Use Low VOC Cleaning Supplies**

Water-Related Mitigation Measures:

**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet  
Install Low Flow Kitchen Faucet  
Install Low Flow Toilet  
Install Low Flow Shower  
Use Water Efficient Irrigation System

Furthermore, review of the CalEEMod output files demonstrates that the “Proposed NorthStar Specific Plan – Operation” *Winter* model includes following mobile-, area-, and water-related operational mitigation measures (see excerpts below) (Appendix A, pp. 112, 116, 117)

Mobile-Related Mitigation Measures:

**4.1 Mitigation Measures Mobile**

Increase Density  
Increase Diversity  
Increase Transit Accessibility

Area-Related Mitigation Measure:

**6.1 Mitigation Measures Area**

Use Low VOC Cleaning Supplies

Water-Related Mitigation Measures:

**7.1 Mitigation Measures Water**

Install Low Flow Bathroom Faucet  
Install Low Flow Kitchen Faucet

As previously mentioned, the CalEEMod User’s Guide requires any changes to model defaults be justified.<sup>14</sup> However, no justifications are provided by the “User Entered Comments and Non-Default Data” tables for the above-mentioned energy-, mobile-, area-, and water-related operational mitigation measures. Furthermore, review of the Project’s MMRP demonstrates that these measures are not included as formal mitigation measures (p. 223-254). As such, we cannot guarantee that they would be implemented, monitored, and enforced on the Project site. As a result, the inclusion of the above-mentioned energy-, area-, water- and waste-related operational mitigation measures in the model is

<sup>14</sup> CalEEMod User Guide, available at: <http://www.caleemod.com/>, p. 2, 9



incorrect, and the Addendum’s CalEEMod models should not be relied upon to determine Project significance.

### Updated Analysis Indicates a Potentially Significant Air Quality Impact

In an effort to more accurately estimate the Project’s construction-related and operational emissions, we prepared updated CalEEMod models, using the Project-specific information provided by the Addendum. In our updated models, we included all proposed land use types and sizes as described by the Addendum; omitted the unsubstantiated changes to the individual construction phase lengths, off-road construction equipment horsepower values, and gas fireplaces; and excluded the unsubstantiated construction-related and operational mitigation measures.

Our updated analysis estimates that the Project’s construction-related NO<sub>x</sub> as well as operational VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions, exceed the applicable SCAQMD thresholds of 75, 55, 55, 550, 150, and 55-pounds per day (“lbs/day”), respectively (see tables below).<sup>15</sup>

#### Construction-Related Emissions:

Model	NO <sub>x</sub>
Addendum Construction	53
SWAPE Construction	134
% Increase	152%
<b>SCAQMD Regional Threshold (lbs/day)</b>	<b>75</b>
<b>Threshold Exceeded?</b>	<b>Yes</b>

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#### Operational Emissions:

Model	VOC	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Addendum Operation	123	237	625	153	43
SWAPE Operation	127	437	709	239	67
% Increase	3%	85%	13%	56%	55%
<b>SCAQMD Regional Threshold (lbs/day)</b>	<b>55</b>	<b>55</b>	<b>550</b>	<b>150</b>	<b>55</b>
<b>Threshold Exceeded?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

As you can see in the excerpt above, the Project’s construction-related NO<sub>x</sub>, as well as operational VOC, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions, as estimated by SWAPE, increase by approximately 152%, 3%, 85%, 13%, 56%, and 55%, respectively, and exceed the applicable SCAQMD significance thresholds. Thus, our model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the Addendum. As a result, an EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the surrounding environment.

<sup>15</sup> “South Coast AQMD Air Quality Significance Thresholds.” SCAQMD, April 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

## Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The Addendum concludes that the proposed Project would have a less-than-significant health risk impact, without conducting a quantified construction or operational health risk analysis (“HRA”) (p. 66). Specifically, regarding potential health risk impacts associated with the proposed Project, the Addendum states:

“[T]he Project would not generate emissions to a level that exceeds what is included in EIR No. 470. Moreover, the proposed Project does not include any land uses that would generate substantial point source emissions during operation. As such, the Project would result in similar air quality impacts as EIR No. 470 with regard to exposing sensitive receptors located within 1 mile of the Project Site to substantial pollutant concentrations. Therefore, implementation of the proposed Project would not result in any new impacts or increase the severity of a previously identified significant impact as analyzed by EIR No. 470” (p. 66).

As demonstrated above, the Addendum concludes that Project operation would result in a less-than-significant health risk impact, because it would “not include any land uses that would generate substantial point source emissions during operation” (p. 66). However, the Addendum’s evaluation of the Project’s potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for three reasons.

First, the Addendum fails to quantitatively evaluate the Project’s construction-related and operational toxic air contaminant (“TAC”) emissions or make a reasonable effort to connect these emissions to potential health risk impacts posed to nearby existing sensitive receptors. Specifically, the Addendum fails to mention the Project’s construction-related TAC emissions whatsoever. This is incorrect, as construction of the proposed Project will produce emissions of diesel particulate matter (“DPM”) through the exhaust stacks of construction equipment over a potential construction period of approximately 20 months (p. 33). Furthermore, despite the Addendum’s qualitative claim that the Project’s operational TAC emissions would be less-than-significant, the Addendum Transportation Report, provided as Appendix F1 to the Addendum, indicates that the proposed land uses are expected to generate approximately 39,275 daily vehicle trips with sellout concerts, which will generate additional exhaust emissions and continue to expose nearby sensitive receptors to DPM emissions (Appendix F1, p. 42). However, the Addendum’s vague discussion of potential Project-generated DPM fails to indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project’s construction-related and operational TAC emissions to the potential health risks posed to nearby receptors, the Addendum is inconsistent with CEQA’s requirement to correlate the increase in emissions generated by the Project with the potential adverse impacts on human health.

Second, the Office of Environmental Health Hazard Assessment (“OEHHHA”), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment*

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Guidelines: *Guidance Manual for Preparation of Health Risk Assessments* in February 2015.<sup>16</sup> This guidance document describes the types of projects that warrant the preparation of an HRA. The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. As the Project's proposed 20-month construction duration vastly exceeds the 2-month requirement set forth by OEHHA, it is clear that the Project meets the threshold warranting a quantified HRA under OEHHA guidance (p. 33). Furthermore, the OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project operation be included in an EIR for the Project.

Third, by claiming a less than significant impact without conducting a quantified construction or operational HRA for nearby, existing sensitive receptors, the Addendum fails to compare the excess health risk impact to the applicable SCAQMD threshold of 10 in one million and lacks evidence to support its conclusion that the health risk would be under the threshold.<sup>17</sup> Thus, pursuant to CEQA, an analysis of the health risk posed to nearby, existing receptors from Project construction and operation should have been conducted.

### Screening-Level Analysis Indicates a Potentially Significant Health Risk Impact

In order to conduct our screening-level risk analysis we relied upon AERSCREEN, which is a screening level air quality dispersion model.<sup>18</sup> The model replaced SCREEN3, and AERSCREEN is included in the OEHHA<sup>19</sup> and the California Air Pollution Control Officers Associated ("CAPCOA")<sup>20</sup> guidance as the appropriate air dispersion model for Level 2 health risk screening analyses ("HRSA"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

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<sup>16</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: [http://oehha.ca.gov/air/hot\\_spots/hotspots2015.html](http://oehha.ca.gov/air/hot_spots/hotspots2015.html)

<sup>17</sup> "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

<sup>18</sup> U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, [http://www.epa.gov/ttn/scram/guidance/clarification/20110411\\_AERSCREEN\\_Release\\_Memo.pdf](http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf)

<sup>19</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: [http://oehha.ca.gov/air/hot\\_spots/2015/2015GuidanceManual.pdf](http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf)

<sup>20</sup> CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, [http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA\\_HRA\\_LU\\_Guidelines\\_8-6-09.pdf](http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf).

In order to estimate the health risk impacts posed to residential sensitive receptors as a result of the Project's construction-related and operational TAC emissions, we prepared a preliminary HRA using the annual PM<sub>10</sub> exhaust estimates from SWAPE's updated CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. SWAPE's updated CalEEMod model indicates that construction activities will generate approximately 1,023 pounds of DPM over the 807-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$\text{Emission Rate} \left( \frac{\text{grams}}{\text{second}} \right) = \frac{1,022.8 \text{ lbs}}{807 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = 0.00665 \text{ g/s}$$

Using this equation, we estimated a construction emission rate of 0.00665 grams per second ("g/s"). Subtracting the 807-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 27.79 years, approximately. SWAPE's operational CalEEMod emissions indicate that operational activities will generate approximately 1,079 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

$$\text{Emission Rate} \left( \frac{\text{grams}}{\text{second}} \right) = \frac{1,078.8 \text{ lbs}}{365 \text{ days}} \times \frac{453.6 \text{ grams}}{\text{lbs}} \times \frac{1 \text{ day}}{24 \text{ hours}} \times \frac{1 \text{ hour}}{3,600 \text{ seconds}} = 0.0155 \text{ g/s}$$

Using this equation, we estimated an operational emission rate of 0.0155 g/s. Construction and operational activity was simulated as a 44.41-acre rectangular area source in AERSCREEN with dimensions of 998.5 by 180 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.<sup>21</sup> According to the Addendum, the nearest sensitive receptors are located approximately 615 feet, or 187 meters, south of the Project Site (p. 159). However, review of the AERSCREEN output files demonstrates that the *maximally exposed* individual resident ("MEIR") is located approximately 500 meters from the

<sup>21</sup> "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, available at: [http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019\\_OCR.pdf](http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf); see also "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnrn/2015guidancemanual.pdf> p. 4-36.



Project site. Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 1.875  $\mu\text{g}/\text{m}^3$  DPM at approximately 500 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.1875  $\mu\text{g}/\text{m}^3$  for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 4.372  $\mu\text{g}/\text{m}^3$  DPM at approximately 500 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.4372  $\mu\text{g}/\text{m}^3$  for Project operation at the MEIR.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA. Consistent with the 807-day construction schedule, the annualized average concentration for Project construction was used for the entire third trimester of pregnancy (0.25 years) and the first 1.96 years of the infantile stage of life (0 – 2 years); and the annualized averaged concentration for operation was used for the remainder of the 30-year exposure period, which makes remaining 0.04 years of the infantile stage of life, the entire child stage of life (2 – 16 years), and the entire the adult stage of life (16 – 30 years).

Consistent with OEHHA guidance and recommended by the SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors (“ASF”) to account for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution.<sup>22, 23, 24</sup> According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant), as well as multiplied by a factor of three during the child stage of life (2 – 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district with jurisdiction over the City, and several other air districts in the state. Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95<sup>th</sup> percentile breathing rates for infants.<sup>25</sup> Finally, according to SCAQMD guidance, we used a Fraction of Time At

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<sup>22</sup> “Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058).” SCAQMD, March 2019, available at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/march/RVC190115-03.pdf?sfvrsn=8>, p. 4.

<sup>23</sup> “California Environmental Quality Act Air Quality Guidelines.” BAAQMD, May 2017, available at: [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en), p. 56; see also “Recommended Methods for Screening and Modeling Local Risks and Hazards.” BAAQMD, May 2011, available at: <http://www.baaqmd.gov/~media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx>, p. 65, 86.

<sup>24</sup> “Update to District’s Risk Management Policy to Address OEHHA’s Revised Risk Assessment Guidance Document.” SJVAPCD, May 2015, available at: <https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf>, p. 8, 20, 24.

<sup>25</sup> “Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics ‘Hot Spots’ Information and Assessment Act,” July 2018, available at: <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf>, p. 16.

“Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments.” OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnrn/2015guidancemanual.pdf>

Home ("FAH") Value of 1 for the 3<sup>rd</sup> trimester and infant receptors.<sup>26</sup> We used a cancer potency factor of 1.1 (mg/kg-day)<sup>-1</sup> and an averaging time of 25,550 days. The results of our calculations are shown below.

**The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)**

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.1875	361	2.5E-07	10	2.5E-06
<b>3rd Trimester Duration</b>	<b>0.25</b>			<b>2.5E-07</b>	<b>3rd Trimester Exposure</b>	<b>2.5E-06</b>
Construction	1.96	0.1875	1090	6.0E-06	10	6.0E-05
Operation	0.04	0.4372	1090	2.8E-07	10	2.8E-06
<b>Infant Exposure Duration</b>	<b>2.00</b>			<b>6.3E-06</b>	<b>Infant Exposure</b>	<b>6.3E-05</b>
Operation	14.00	0.4372	572	5.3E-05	3	1.6E-04
<b>Child Exposure Duration</b>	<b>14.00</b>			<b>5.3E-05</b>	<b>Child Exposure</b>	<b>1.6E-04</b>
Operation	14.00	0.4372	261	1.8E-05	1	1.8E-05
<b>Adult Exposure Duration</b>	<b>14.00</b>			<b>1.8E-05</b>	<b>Adult Exposure</b>	<b>1.8E-05</b>
<b>Lifetime Exposure Duration</b>	<b>30.00</b>			<b>7.7E-05</b>	<b>Lifetime Exposure</b>	<b>2.4E-04</b>

\* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

As demonstrated in the table above, the excess cancer risk to adults, children, infants, and during the 3<sup>rd</sup> trimester of pregnancy at the MEIR located approximately 500 meters away, over the course of Project construction and operation, utilizing ASFs, are approximately 18, 160, 63, and 2.5 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), utilizing ASFs, is approximately 240 in one million. The infant, child, adult, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the Addendum.

Utilizing ASFs is the most conservative, health-protective analysis according to the most recent guidance by OEHHA and reflects recommendations from the air district. Results without ASFs are presented in the table above, although we **do not** recommend utilizing these values for health risk analysis. Regardless, the excess cancer risk to adults, children, infants, and during the 3<sup>rd</sup> trimester of pregnancy at the MEIR located approximately 500 meters away, over the course of Project construction and operation, without ASFs, are approximately 18, 53, 6.3, and 0.25 in one million, respectively. The excess cancer risk over the

<sup>26</sup> "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, available at: [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures\\_2017\\_080717.pdf](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf), p. 7.



course of a residential lifetime (30 years), without ASFs, is approximately 77 in one million. The child, adult, and lifetime cancer risks, without ASFs, exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the Addendum. While we recommend the use of ASFs, the Project's cancer risk without ASFs, as estimated by SWAPE, exceeds the SCAQMD threshold regardless.

An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection.<sup>27</sup> The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level HRA indicates a potentially significant impact, the City should prepare a Project-specific EIR with an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

## Greenhouse Gas

### Failure to Adequately Evaluate Greenhouse Gas Impacts

The Addendum estimates that the proposed Project would result in net annual greenhouse gas ("GHG") emissions of 83,442 metric tons of carbon dioxide equivalents per year ("MT CO<sub>2</sub>e/year") (see excerpt below) (p. 121).

**Table 11**  
**Operational Proposed Specific Plan Greenhouse Gas Emissions**

Source	MTCO <sub>2</sub> e per year
Construction (amortized)	154
Area	14
Energy	19,422
Mobile	58,750
Waste	920
Water	4,182
<b>TOTAL</b>	<b>83,442</b>

Source: Refer to Appendix C for operational GHG calculation sheets.  
 Notes: GHG = greenhouse gas; MTCO<sub>2</sub>e = metric tons of carbon dioxide equivalent.

52

<sup>27</sup> "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, available at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>, p. 1-5

As a result, the Addendum concludes that the Project's net annual GHG emissions would exceed the City's Climate Action Plan ("CAP") screening threshold of 3,000 MT CO<sub>2</sub>e per year. Specifically, the Addendum states:

"Any project that exceeds the 3,000 MTCO<sub>2</sub>e per year threshold has been determined by the CAP to create significant levels of GHG emissions that can be mitigated by garnering a minimum of 100 points of mitigation measures from the CAP's Screening Tables. According to the CAP, projects that implement 100 points of mitigation measures from the Screening Tables would be determined to have a less than significant individual impact for GHG emissions.

The analysis of the impacts associated with the proposed Specific Plan followed the two-step CAP process described above. Based on the Project-specific analysis, the operational plus amortized construction emissions associated with the proposed Specific Plan would generate 83,442 MTCO<sub>2</sub>e per year, which would exceed the CAP's screening threshold of 3,000 MTCO<sub>2</sub>e per year without implementing measures from the screening tables to reduce the emissions associated with the proposed Specific Plan. According to the CAP, projects that implement 100 points of mitigation measures from the Screening Tables are determined to have a less than significant individual impact for GHG emissions. As such, the option selected to determine GHG impacts is an analysis pursuant to the Screening Tables, as shown in Table 12: County of Riverside Greenhouse Gas Screening Table" (p. 122).

As demonstrated above, the Addendum relies upon a screening table analysis to demonstrate the Project's consistency with the County of Riverside Climate Action Plan ("CAP"). However, the Addendum's screening table analysis, as well as the subsequent less-than-significant GHG impact conclusion, is insufficient for three reasons.

First, the Addendum concludes that the Project would satisfy measure EE5.B.4, "Appliances," stating:

"The Project will satisfy this measure by adhering to the Riverside County General Plan Energy Efficiency and Conservation policy AQ 5.2 which adopts incentives and/or regulations to enact energy conservation requirements for private and public developments" (p. 123).

However, this response is insufficient. Simply stating that the Project would comply with Riverside County General Plan Energy Efficiency and Conservation policy AQ 5.2 does not demonstrate that the Project would satisfy the screening table measure. According to the Association of Environmental Professionals' ("AEP") *CEQA Portal Topic Paper* on mitigation measures:

"By definition, mitigation measures are not part of the original project design. Rather, mitigation measures are actions taken by the lead agency to reduce impacts to the environment resulting from the original project design. Mitigation measures are identified by the lead agency after the



project has undergone environmental review and are above-and-beyond existing laws, regulations, and requirements that would reduce environmental impacts” (emphasis added).<sup>28</sup>

As you can see in the excerpt above, mitigation measures “are not part of the original project design” and should go “above-and-beyond” existing regulatory requirements. As a result, we cannot verify that the Project would satisfy measure EE5.B.4 of the CAP screening table solely on the basis of Project compliance with City policy.

Second, the Addendum concludes that the Project would satisfy measure EE10.A.2, “Windows,” stating:

“The proposed Arena would satisfy this measure by providing enhanced window insulation” (p. 124).

However, this response is insufficient, as enhanced window insulation is not formally included as a mitigation measure. According to the AEP *CEQA Portal Topic Paper* on mitigation measures:

“By definition, mitigation measures are not part of the original project design... [A] good practice is to include those project design feature(s) that address environmental impacts in the mitigation monitoring and reporting program (MMRP). Often the MMRP is all that accompanies building and construction plans through the permit process. If the design features are not listed as important to addressing an environmental impact, it is easy for someone not involved in the original environmental process to approve a change to the project that could eliminate one or more of the design features without understanding the resulting environmental impact” (emphasis added).<sup>29</sup>

Accordingly, design features that address environmental impacts, but are not included as formal mitigation measures, may be eliminated from the Project altogether. Thus, as the above-mentioned mitigation measure is not formally included as a mitigation measure in the Project’s mitigation monitoring and reporting program (“MMRP), we cannot guarantee that it would be implemented, monitored, and enforced on the Project site. As the Addendum’s responses to measures EE10.A.3, EE10.B.2, EE10.B.4, EE10.B.6, EE10.B.7, W2.D.1, W2.E.1, W2.E.3, W2.F.1, and T2.B.1 are similarly insufficient for the reason described above, we cannot verify that the Project would satisfy 100 points of CAP screening table mitigation measures.

Third, the Addendum concludes that the Project would satisfy measure EE10.A.4, “Air Infiltration,” stating:

“The proposed Arena would satisfy this measure” (p. 124).

<sup>28</sup> “CEQA Portal Topic Paper Mitigation Measures.” AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 5.

<sup>29</sup> “CEQA Portal Topic Paper Mitigation Measures.” AEP, February 2020, available at: <https://ceqaportal.org/tp/CEQA%20Mitigation%202020.pdf>, p. 5-6.

However, this response is insufficient, as it fails to substantiate *how* the Project would satisfy the measure or provide information regarding the specific actions that would be required in order to implement the measure. As the Addendum’s responses to measures W2.D.2, W2.E.2, T3.A.1, T3.A.2, T3.A.3, T3.A.4, T1.F.1, and S1.B.1 are similarly insufficient for the reason described above, we cannot verify that the Project would satisfy 100 points of CAP screening table mitigation measures. Thus, the Addendum’s screening table analysis, as well as the subsequent less-than-significant GHG impact conclusion, should not be relied upon. An EIR should be prepared to provide additional information and analysis demonstrating the Project would satisfy 100 points of CAP screening table mitigation measures.

### Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. In an effort to reduce the Project’s emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation measures can be found in CAPCOA’s *Quantifying Greenhouse Gas Mitigation Measures*.<sup>30</sup> Therefore, to reduce the Project’s emissions, consideration of the following measures should be made:

<i>CAPCOA’s Quantifying Greenhouse Gas Mitigation Measures</i> <sup>31</sup>	
<b>Measures – Energy</b>	
<b><i>Building Energy Use</i></b>	
Install Programmable Thermostat Timers	
Obtain Third-party HVAC Commissioning and Verification of Energy Savings	
Install Energy Efficient Boilers	
<b><i>Lighting</i></b>	
Install Higher Efficacy Public Street and Area Lighting	
Limit Outdoor Lighting Requirements	
<b><i>Alternative Energy Generation</i></b>	
Establish Onsite Renewable or Carbon-Neutral Energy Systems	
Establish Onsite Renewable Energy System – Solar Power	
Utilize a Combined Heat and Power System	
<b>Measures – Transportation</b>	
<b><i>Land Use/Location</i></b>	
Increase Density	
Increase Location Efficiency	

<sup>30</sup> <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>

<sup>31</sup> “Quantifying Greenhouse Gas Mitigation Measures.” California Air Pollution Control Officers Association (CAPCOA), August 2010, available at: <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>, p.



Increase Destination Accessibility
Increase Transit Accessibility
Locate Project near Bike Path/Bike Lane
<b>Neighborhood/Site Enhancements</b>
Provide Traffic Calming Measures, such as: <ul style="list-style-type: none"> <li>• Marked crosswalks</li> <li>• Count-down signal timers</li> <li>• Curb extensions</li> <li>• Speed tables</li> <li>• Raised crosswalks</li> <li>• Raised intersections</li> <li>• Median islands</li> <li>• Tight corner radii</li> <li>• Roundabouts or mini-circles</li> <li>• On-street parking</li> <li>• Planter strips with trees</li> <li>• Chicanes/chokers</li> </ul>
Create Urban Non-Motorized Zones
Incorporate Bike Lane Street Design (on-site)
Provide Bike Parking in Non-Residential Projects
Provide Bike Parking with Multi-Unit Residential Projects
<b>Parking Policy/Pricing</b>
Limit Parking Supply through: <ul style="list-style-type: none"> <li>• Elimination (or reduction) of minimum parking requirements</li> <li>• Creation of maximum parking requirements</li> <li>• Provision of shared parking</li> </ul>
Unbundle Parking Costs from Property Cost
Implement Market Price Public Parking (On-Street)
Require Residential Area Parking Permits
<b>Commute Trip Reduction Programs</b>
Implement Commute Trip Reduction (CTR) Program – Voluntary <ul style="list-style-type: none"> <li>• Carpooling encouragement</li> <li>• Ride-matching assistance</li> <li>• Preferential carpool parking</li> <li>• Flexible work schedules for carpools</li> <li>• Half time transportation coordinator</li> </ul>

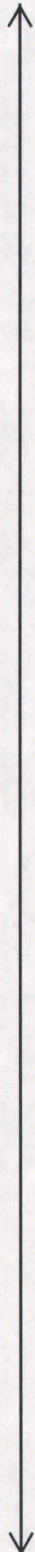


<ul style="list-style-type: none"> <li>• Vanpool assistance</li> <li>• Bicycle end-trip facilities (parking, showers and lockers)</li> <li>• New employee orientation of trip reduction and alternative mode options</li> <li>• Event promotions and publications</li> <li>• Flexible work schedule for employees</li> <li>• Transit subsidies</li> <li>• Parking cash-out or priced parking</li> <li>• Shuttles</li> <li>• Emergency ride home</li> </ul>
<b>Implement Commute Trip Reduction (CTR) Program – Required Implementation/Monitoring</b> <ul style="list-style-type: none"> <li>• Established performance standards (e.g. trip reduction requirements)</li> <li>• Required implementation</li> <li>• Regular monitoring and reporting</li> </ul>
<b>Provide Ride-Sharing Programs</b> <ul style="list-style-type: none"> <li>• Designate a certain percentage of parking spaces for ride sharing vehicles</li> <li>• Designating adequate passenger loading and unloading and waiting areas for ride-sharing vehicles</li> <li>• Providing a web site or messaging board for coordinating rides</li> <li>• Permanent transportation management association membership and funding requirement.</li> </ul>
<b>Implement Subsidized or Discounted Transit Program</b>
<b>Provide End of Trip Facilities, including:</b> <ul style="list-style-type: none"> <li>• Showers</li> <li>• Secure bicycle lockers</li> <li>• Changing spaces</li> </ul>
<b>Encourage Telecommuting and Alternative Work Schedules, such as:</b> <ul style="list-style-type: none"> <li>• Staggered starting times</li> <li>• Flexible schedules</li> <li>• Compressed work weeks</li> </ul>
<b>Implement Commute Trip Reduction Marketing, such as:</b> <ul style="list-style-type: none"> <li>• New employee orientation of trip reduction and alternative mode options</li> <li>• Event promotions</li> <li>• Publications</li> </ul>
<b>Implement Preferential Parking Permit Program</b>
<b>Implement Car-Sharing Program</b>
<b>Provide Employer-Sponsored Vanpool/Shuttle</b>
<b>Price Workplace Parking, such as:</b> <ul style="list-style-type: none"> <li>• Explicitly charging for parking for its employees;</li> <li>• Implementing above market rate pricing;</li> </ul>





<ul style="list-style-type: none"> <li>Validating parking only for invited guests;</li> <li>Not providing employee parking and transportation allowances; and</li> <li>Educating employees about available alternatives.</li> </ul>
Implement Employee Parking “Cash-Out”
<b>Transit System Improvements</b>
Transit System Improvements, including: <ul style="list-style-type: none"> <li>Grade-separated right-of-way, including bus only lanes (for buses, emergency vehicles, and sometimes taxis), and other Transit Priority measures. Some systems use guideways which automatically steer the bus on portions of the route.</li> <li>Frequent, high-capacity service</li> <li>High-quality vehicles that are easy to board, quiet, clean, and comfortable to ride.</li> <li>Pre-paid fare collection to minimize boarding delays.</li> <li>Integrated fare systems, allowing free or discounted transfers between routes and modes.</li> <li>Convenient user information and marketing programs.</li> <li>High quality bus stations with Transit Oriented Development in nearby areas.</li> <li>Modal integration, with BRT service coordinated with walking and cycling facilities, taxi services, intercity bus, rail transit, and other transportation services.</li> </ul>
Implement Transit Access Improvements, such as: <ul style="list-style-type: none"> <li>Sidewalk/crosswalk safety enhancements</li> <li>Bus shelter improvements</li> </ul>
Expand Transit Network
Increase Transit Service Frequency/Speed
Provide Local Shuttles
<b>Road Pricing/Management</b>
Implement Area or Cordon Pricing
Improve Traffic Flow, such as: <ul style="list-style-type: none"> <li>Signalization improvements to reduce delay;</li> <li>Incident management to increase response time to breakdowns and collisions;</li> <li>Intelligent Transportation Systems (ITS) to provide real-time information regarding road conditions and directions; and</li> <li>Speed management to reduce high free-flow speeds.</li> </ul>
Required Project Contributions to Transportation Infrastructure Improvement Projects
<b>Vehicles</b>
Utilize Electric or Hybrid Vehicles
<b>Measures – Water</b>
<b>Water Supply</b>





Use Reclaimed Water
Use Gray Water
Use Locally Sourced Water Supply
<b>Water Use</b>
Install Low-Flow Water Fixtures
Adopt a Water Conservation strategy
Use Water-Efficient Landscape Irrigation Systems ("Smart" irrigation control systems)
Reduce Turf in Landscapes and Lawns
<b>Measures – Area Landscaping</b>
<b>Landscaping Equipment</b>
Prohibit Gas Powered Landscape Equipment
Implement Lawnmower Exchange Program
Electric Yard Equipment Compatibility
<b>Measures – Solid Waste</b>
<b>Solid Waste</b>
Institute Recycling and Composting Services
Recycle Demolished Construction Material
<b>Measures – Vegetation</b>
<b>Vegetation</b>
Urban Tree Planting
Create New Vegetated Open Space
<b>Measures – Construction</b>
<b>Construction</b>
Urban Tree Planting
Limit Construction Equipment Idling Beyond Regulation Requirements
Institute a Heavy-Duty Off-Road Vehicle Plan, including: <ul style="list-style-type: none"> <li>• Construction vehicle inventory tracking system;</li> <li>• Requiring hour meters on equipment;</li> <li>• Document the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment; and</li> <li>• Daily logging of the operating hours of the equipment.</li> </ul>
Implement a Construction Vehicle Inventory Tracking System
<b>Measures – Miscellaneous</b>





<b>Miscellaneous</b>
<p>Establish a Carbon Sequestration Project, such as:</p> <ul style="list-style-type: none"> <li>• Geologic sequestration or carbon capture and storage techniques, in which CO<sub>2</sub> from point sources is captured and injected underground;</li> <li>• Terrestrial sequestration in which ecosystems are established or preserved to serve as CO<sub>2</sub> sinks;</li> <li>• Novel techniques involving advanced chemical or biological pathways; or</li> <li>• Technologies yet to be discovered.</li> </ul>
Use Local and Sustainable Building Materials
<p>Require Environmentally Responsible Purchasing, such as:</p> <ul style="list-style-type: none"> <li>• Purchasing products with sustainable packaging;</li> <li>• Purchasing post-consumer recycled copier paper, paper towels, and stationary;</li> <li>• Purchasing and stocking communal kitchens with reusable dishes and utensils;</li> <li>• Choosing sustainable cleaning supplies;</li> <li>• Leasing equipment from manufacturers who will recycle the components at their end of life;</li> <li>• Choosing ENERGY STAR appliances and Water Sense-certified water fixtures;</li> <li>• Choosing electronic appliances with built in sleep-mode timers;</li> <li>• Purchasing 'green power' (e.g. electricity generated from renewable or hydropower) from the utility; and</li> <li>• Choosing locally-made and distributed products.</li> </ul>

Furthermore, in an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project from NEDC's *Diesel Emission Controls in Construction Projects*.<sup>32</sup> Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

<b>NEDC's Diesel Emission Controls in Construction Projects<sup>33</sup></b>
<b>Measures – Diesel Emission Control Technology</b>
<p>a. Diesel Onroad Vehicles          All diesel nonroad vehicles on site for more than 10 total days must have either (1) engines that meet EPA onroad emissions standards or (2) emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.</p>
<p>b. Diesel Generators          All diesel generators on site for more than 10 total days must be equipped with emission control technology verified by EPA or CARB to reduce PM emissions by a minimum of 85%.</p>

<sup>32</sup> "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, available at: <https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>.

<sup>33</sup> "Diesel Emission Controls in Construction Projects." Northeast Diesel Collaborative (NEDC), December 2010, available at: <https://www.epa.gov/sites/production/files/2015-09/documents/nedc-model-contract-sepcification.pdf>.



<p>c. Diesel Nonroad Construction Equipment</p> <p>i. All diesel nonroad construction equipment on site for more than 10 total days must have either (1) engines meeting EPA Tier 4 nonroad emission standards or (2) emission control technology verified by EPA or CARB for use with nonroad engines to reduce PM emissions by a minimum of 85% for engines 50hp and greater and by a minimum of 20% for engines less than 50hp.</p>
<p>d. Upon confirming that the diesel vehicle, construction equipment, or generator has either an engine meeting Tier 4 non road emission standards or emission control technology, as specified above, installed and functioning, the developer will issue a compliance sticker. All diesel vehicles, construction equipment, and generators on site shall display the compliance sticker in a visible, external location as designated by the developer.</p>
<p><b>Measures – Additional Diesel Requirements</b></p>
<p>a. Construction shall not proceed until the contractor submits a certified list of all diesel vehicles, construction equipment, and generators to be used on site. The list shall include the following:</p> <p>i. Contractor and subcontractor name and address, plus contact person responsible for the vehicles or equipment.</p> <p>ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation.</p> <p>iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.</p>
<p>b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions and provide information.</p>
<p>c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.</p>
<p>d. The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.</p>
<p><b>Reporting</b></p>
<p>a. For each onroad diesel vehicle, nonroad construction equipment, or generator, the contractor shall submit to the developer’s representative a report prior to bringing said equipment on site that includes:</p> <p>i. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number.</p> <p>ii. The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level.</p> <p>iii. The Certification Statement signed and printed on the contractor’s letterhead.</p>
<p>b. The contractor shall submit to the developer’s representative a monthly report that, for each onroad diesel vehicle, nonroad construction equipment, or generator onsite, includes:</p> <p>i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date.</p> <p>ii. Any problems with the equipment or emission controls.</p> <p>iii. Certified copies of fuel deliveries for the time period that identify:</p> <ol style="list-style-type: none"> <li>1. Source of supply</li> <li>2. Quantity of fuel</li> <li>3. Quality of fuel, including sulfur content (percent by weight)</li> </ol>



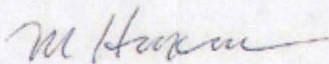


These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An EIR should be prepared to include all feasible mitigation measures, as well as include an updated health risk and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

### Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,



Matt Hagemann, P.G., C.Hg.



Paul E. Rosenfeld, Ph.D.

Attachment A:	SWAPE Health Risk Calculations
Attachment B:	SWAPE Project CalEEMod Modeling
Attachment C:	SWAPE Project AERSCREEN Modeling
Attachment D:	Paul Rosenfeld CV
Attachment E:	Matt Hagemann CV



Attachment A

Construction				Operation	
2021		Total		Emission Rate	
Annual Emissions (tons/year)	0.2494	Total DPM (lbs)	1022.768767	Annual Emissions (tons/year)	0.5394
Daily Emissions (lbs/day)	1.366575342	Total DPM (g)	463927.9128	Daily Emissions (lbs/day)	2.955616438
Construction Duration (days)	161	Total Construction Days	807	Emission Rate (g/s)	0.015516986
Total DPM (lbs)	220.0186301	Emission Rate (g/s)	0.0066537	Release Height (meters)	3
Total DPM (g)	99800.45063	Release Height (meters)	3	Initial Vertical Dimension (meters)	1.5
Start Date	7/24/2021	Initial Vertical Dimension (meters)	1.5	Max Horizontal (meters)	998.5
End Date	1/1/2022	Max Horizontal (meters)	998.5	Min Horizontal (meters)	180.0
Construction Days	161	Min Horizontal (meters)	180.0	Total Acreage	44.41
		Total Acreage	44.41	Setting	Urban
		Setting	Urban	Population	2,471,000
		Population	2,471,000	Total Pounds of DPM	
		Start Date	7/24/2021	Total Days of Operation	1078.80
		End Date	10/9/2023		
		Total Construction Days	807		
		Total Years of Operation	27.79		
2022					
Annual Emissions (tons/year)	0.3006				
Daily Emissions (lbs/day)	1.647123288				
Construction Duration (days)	365				
Total DPM (lbs)	601.2				
Total DPM (g)	272704.32				
Start Date	1/1/2022				
End Date	1/1/2023				
Construction Days	365				
2023					
Annual Emissions (tons/year)	0.1309				
Daily Emissions (lbs/day)	0.717260274				
Construction Duration (days)	281				
Total DPM (lbs)	201.550137				
Total DPM (g)	91423.14214				
Start Date	1/1/2023				
End Date	10/9/2023				
Construction Days	281				



The Maximum Exposed Individual at an Existing Residential Receptor (MEIR)

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.1875	361	2.5E-07	10	2.5E-06
<b>3rd Trimester Duration</b>	<b>0.25</b>			<b>2.5E-07</b>	<b>3rd Trimester Exposure</b>	<b>2.5E-06</b>
Construction	1.96	0.1875	1090	6.0E-06	10	6.0E-05
Operation	0.04	0.4372	1090	2.8E-07	10	2.8E-06
<b>Infant Exposure Duration</b>	<b>2.00</b>			<b>6.3E-06</b>	<b>Infant Exposure</b>	<b>6.3E-05</b>
Operation	14.00	0.4372	572	5.3E-05	3	1.6E-04
<b>Child Exposure Duration</b>	<b>14.00</b>			<b>5.3E-05</b>	<b>Child Exposure</b>	<b>1.6E-04</b>
Operation	14.00	0.4372	261	1.8E-05	1	1.8E-05
<b>Adult Exposure Duration</b>	<b>14.00</b>			<b>1.8E-05</b>	<b>Adult Exposure</b>	<b>1.8E-05</b>
<b>Lifetime Exposure Duration</b>	<b>30.00</b>			<b>7.7E-05</b>	<b>Lifetime Exposure</b>	<b>2.4E-04</b>

\* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.



Attachment B

CalEEMod Version: CalEEMod.2016.3.2

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Riverside Arena Construction - Riverside-South Coast County, Annual

**Riverside Arena Construction**  
**Riverside-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	3,005.00	Space	27.04	1,202,000.00	0
Arena	260.00	1000sqft	14.40	260,000.00	0
Health Club	35.00	1000sqft	0.00	35,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023

Utility Company Imperial Irrigation District

CO2 Intensity (lb/MW/hr)	1270.9	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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**1.3 User Entered Comments & Non-Default Data**



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Project Characteristics -

Land Use - See SWAPE comment about health club and parking land uses.

Construction Phase - See SWAPE comment about individual construction phase lengths.

Off-road Equipment -

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Trips and VMT -

Grading - Consistent with Addendum's model.

Vehicle Trips - Construction run only.

Construction Off-road Equipment Mitigation - Consistent with Addendum's model.

Mobile Land Use Mitigation -

Area Mitigation - Construction run only.

Energy Mitigation - Construction run only.

Water Mitigation - Construction run only.

Table Name	Column Name	Default Value	New Value
tbConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tbiConstructionPhase	NumDays	740.00	133.00
tbiConstructionPhase	NumDays	740.00	134.00
tbiConstructionPhase	NumDays	740.00	134.00
tbiConstructionPhase	NumDays	75.00	65.00
tbiGrading	MaterialExported	0.00	30,000.00
tbiLandUse	LotAcreage	83.57	14.40

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tblLandUse	Lot/Acreage	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount	tblOffRoadEquipmentUnitAmount
tblOffRoadEquipment	0.80								0.00
tblOffRoadEquipment	1.00								4.00
tblOffRoadEquipment	1.00								2.00
tblOffRoadEquipment	3.00								4.00
tblOffRoadEquipment	3.00								16.00
tblOffRoadEquipment	1.00								7.00
tblOffRoadEquipment	1.00								8.00
tblOffRoadEquipment	2.00								1.00
tblOffRoadEquipment	1.00								2.00
tblOffRoadEquipment	2.00								6.00
tblOffRoadEquipment	3.00								4.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	0.00								4.00
tblOffRoadEquipment	0.00								4.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	0.00								1.00
tblOffRoadEquipment	0.00								4.00
tblOffRoadEquipment	0.00								2.00
tblOffRoadEquipment	PhaseName								Building Construction - Concrete
tblOffRoadEquipment	PhaseName								Grading
tblOffRoadEquipment	PhaseName								Grading
tblOffRoadEquipment	PhaseName								Building Construction - Concrete
tblOffRoadEquipment	PhaseName								Building Construction - Concrete
tblOffRoadEquipment	PhaseName								Building Construction - Interior/Exterior



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tbIOffRoadEquipment	PhaseName	Grading
tbIOffRoadEquipment	PhaseName	Building Construction - Concrete
tbIOffRoadEquipment	PhaseName	Paving
tbIOffRoadEquipment	PhaseName	Paving

**2.0 Emissions Summary**

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**2.1 Overall Construction**

**Unmitigated Construction**

Year	tons/yr										MT/yr					
	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
2021	0.6657	6.7895	4.7857	0.0146	0.8784	0.2494	1.1277	0.3101	0.2319	0.5420	0.0000	1,305.825 6	1,305.825 6	0.2771	0.0000	1,312.751 9
2022	1.0808	9.1670	8.9738	0.0297	1.0999	0.3006	1.4005	0.2967	0.2864	0.5831	0.0000	2,677.980 6	2,677.980 6	0.3330	0.0000	2,686.304 6
2023	2.0098	3.5057	3.3138	0.0112	0.4315	0.1309	0.5624	0.1162	0.1206	0.2368	0.0000	1,011.296 7	1,011.296 7	0.1733	0.0000	1,015.629 3
<b>Maximum</b>	<b>2.0098</b>	<b>9.1670</b>	<b>8.9738</b>	<b>0.0297</b>	<b>1.0999</b>	<b>0.3006</b>	<b>1.4005</b>	<b>0.3101</b>	<b>0.2864</b>	<b>0.5831</b>	<b>0.0000</b>	<b>2,677.980 6</b>	<b>2,677.980 6</b>	<b>0.3330</b>	<b>0.0000</b>	<b>2,686.304 6</b>

**Mitigated Construction**

Year	tons/yr										MT/yr					
	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
2021	0.6657	6.7895	4.7857	0.0146	0.8784	0.2494	1.1277	0.3101	0.2319	0.5420	0.0000	1,305.824 6	1,305.824 6	0.2771	0.0000	1,312.750 9
2022	1.0808	9.1670	8.9738	0.0297	1.0999	0.3006	1.4005	0.2967	0.2864	0.5831	0.0000	2,677.979 2	2,677.979 2	0.3330	0.0000	2,686.303 2
2023	2.0098	3.5057	3.3138	0.0112	0.4315	0.1309	0.5624	0.1162	0.1206	0.2368	0.0000	1,011.296 1	1,011.296 1	0.1733	0.0000	1,015.628 8
<b>Maximum</b>	<b>2.0098</b>	<b>9.1670</b>	<b>8.9738</b>	<b>0.0297</b>	<b>1.0999</b>	<b>0.3006</b>	<b>1.4005</b>	<b>0.3101</b>	<b>0.2864</b>	<b>0.5831</b>	<b>0.0000</b>	<b>2,677.979 2</b>	<b>2,677.979 2</b>	<b>0.3330</b>	<b>0.0000</b>	<b>2,686.303 2</b>





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**2.2 Overall Operational  
 Unmitigated Operational**

Category	tons/yr										MT/yr						
	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	
Area	1.3010	3.8000e-004	0.0421	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0000	0.0873
Energy	0.0517	0.4698	0.3947	2.8200e-003		0.0357	0.0357		0.0357	0.0357	0.0000	2,480.0862	2,480.0862	0.0547	0.0187		2,487.0182
Mobile	0.8686	6.2397	9.0648	0.0420	3.1611	0.0238	3.1848	0.8468	0.0222	0.8690	0.0000	3,898.3992	3,898.3992	0.1981	0.0000		3,903.3518
Waste						0.0000	0.0000		0.0000	0.0000	41.9501	0.0000	41,9501	2.4792	0.0000		103.9296
Water						0.0000	0.0000		0.0000	0.0000	36.1892	910.1483	946.3376	3.7378	0.0921		1,067.2160
<b>Total</b>	<b>2.2213</b>	<b>6.7099</b>	<b>9.5016</b>	<b>0.0448</b>	<b>3.1611</b>	<b>0.0596</b>	<b>3.2207</b>	<b>0.8468</b>	<b>0.0580</b>	<b>0.9048</b>	<b>78.1393</b>	<b>7,288.7156</b>	<b>7,366.8549</b>	<b>6.4700</b>	<b>0.1107</b>		<b>7,561.6029</b>



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2.2 Overall Operational

Mitigated Operational

Category	tons/yr										MT/yr					
	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
Area	1.3010	3.8000e-004	0.0421	0.0000	1.5000e-004	1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
Energy	0.0517	0.4698	0.3947	2.8200e-003	0.0357	0.0357	0.0357	0.0000	2.480.0862	2.480.0862	0.0000	2.480.0862	2.480.0862	0.0547	0.0187	2.487.0182
Mobile	0.8686	6.2397	9.0648	0.0420	3.1611	0.0238	3.1848	0.8468	0.0222	0.8690	0.0000	3.898.3992	3.898.3992	0.1981	0.0000	3,903.3518
Waste						0.0000	0.0000	0.0000	0.0000	0.0000	41.9501	0.0000	41.9501	2.4792	0.0000	103.9296
Water						0.0000	0.0000	0.0000	0.0000	0.0000	36.1892	910.1483	946.3376	3.7378	0.0921	1,067.2160
Total	2.2213	6.7099	9.5016	0.0448	3.1611	0.0596	3.2207	0.8468	0.0580	0.9048	78.1393	7,288.7156	7,366.8549	6.4700	0.1107	7,561.6029

Construction_Phase	tons/yr										MT/yr					
	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
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



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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	7/24/2021	10/22/2021	5	65	
2	Building Construction - Concrete	Building Construction	10/23/2021	4/27/2022	5	133	
3	Building Construction - Steel	Building Construction	4/28/2022	11/1/2022	5	134	
4	Building Construction - Interior/Exterior	Building Construction	11/2/2022	5/8/2023	5	134	
5	Paving	Paving	5/9/2023	7/24/2023	5	55	
6	Architectural Coating	Architectural Coating	7/25/2023	10/9/2023	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 422.5

Acres of Paving: 27.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,500; Non-Residential Outdoor: 147,500; Striped Parking Area: 72,120 (Architectural Coating – sqft)

OffRoad Equipment



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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Concrete	Bore/Drill Rigs	2	8.00	221	0.50
Building Construction - Concrete	Forklifts	4	8.00	89	0.20
Building Construction - Concrete	Generator Sets	7	8.00	84	0.74
Building Construction - Concrete	Off-Highway Trucks	2	8.00	402	0.38
Building Construction - Concrete	Off-Highway Trucks	4	8.00	402	0.38
Building Construction - Concrete	Rollers	1	8.00	80	0.38
Building Construction - Concrete	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction - Steel	Cranes	4	7.00	231	0.29
Building Construction - Steel	Forklifts	3	8.00	89	0.20
Building Construction - Steel	Generator Sets	8	8.00	84	0.74
Building Construction - Interior/Exterior	Cranes	2	7.00	231	0.29
Building Construction - Interior/Exterior	Forklifts	16	8.00	89	0.20
Building Construction - Interior/Exterior	Off-Highway Trucks	4	8.00	402	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Dozers	4	8.00	247	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37

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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
Grading	19	48.00	0.00	3,750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Concrete	26	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Steel	19	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Interior/Exterior	27	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	126.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area  
 Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2021  
 Unmitigated Construction On-Site

Category	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
Fugitive Dust					0.6174	0.0000	0.6174	0.2396	0.0000	0.2396	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3672	3.9253	2.4235	5.8100e-003	0.1619	0.1619	0.1619	0.1490	0.1490	0.1490	0.0000	510.8880	510.8880	0.1652	0.0000	515.0188
<b>Total</b>	<b>0.3672</b>	<b>3.9253</b>	<b>2.4235</b>	<b>5.8100e-003</b>	<b>0.6174</b>	<b>0.1619</b>	<b>0.7793</b>	<b>0.2396</b>	<b>0.1490</b>	<b>0.3886</b>	<b>0.0000</b>	<b>510.8880</b>	<b>510.8880</b>	<b>0.1652</b>	<b>0.0000</b>	<b>515.0188</b>



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3.2 Grading - 2021

Unmitigated Construction Off-Site

Category	tons/yr										MT/yr						
	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	
Hauling	9.3300e-003	0.4166	0.0574	1.4000e-003	0.0323	1.2500e-003	0.0336	8.8700e-003	1.1900e-003	0.0101	0.0000	134.5299	134.5299	8.2200e-003	0.0000	0.0000	134.7353
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	0.0000
Worker	6.8900e-003	4.5100e-003	0.0491	1.5000e-004	0.0172	1.0000e-004	0.0173	4.5500e-003	9.0000e-005	4.6500e-003	0.0000	13.8660	13.8660	3.2000e-004	0.0000	0.0000	13.8741
<b>Total</b>	<b>0.0160</b>	<b>0.4211</b>	<b>0.1066</b>	<b>1.5500e-003</b>	<b>0.0495</b>	<b>1.3500e-003</b>	<b>0.0508</b>	<b>0.0134</b>	<b>1.2800e-003</b>	<b>0.0147</b>	<b>0.0000</b>	<b>148.3959</b>	<b>148.3959</b>	<b>8.5400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>148.6093</b>

Mitigated Construction On-Site

Category	tons/yr										MT/yr						
	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	
Fugitive Dust					0.6174	0.0000	0.6174	0.2396	0.0000	0.2396	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3672	3.9253	2.4235	5.8100e-003		0.1619	0.1619	0.1490	0.1490	0.1490	0.0000	510.8874	510.8874	0.1652	0.0000	0.0000	515.0182
<b>Total</b>	<b>0.3672</b>	<b>3.9253</b>	<b>2.4235</b>	<b>5.8100e-003</b>	<b>0.6174</b>	<b>0.1619</b>	<b>0.7793</b>	<b>0.2396</b>	<b>0.1490</b>	<b>0.3886</b>	<b>0.0000</b>	<b>510.8874</b>	<b>510.8874</b>	<b>0.1652</b>	<b>0.0000</b>	<b>0.0000</b>	<b>515.0182</b>

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**3.2 Grading - 2021**

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr						
	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	
Hauling	9.3300e-003	0.4166	0.0574	1.4000e-003	0.0323	1.2500e-003	0.0336	8.8700e-003	1.1900e-003	0.0101	0.0000	134.5299	134.5299	8.2200e-003	0.0000	0.0000	134.7353
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	0.0000
Worker	6.6900e-003	4.5100e-003	0.0491	1.5000e-004	0.0172	1.0000e-004	0.0173	4.5500e-003	9.0000e-005	4.6500e-003	0.0000	13.8660	13.8660	3.2000e-004	0.0000	0.0000	13.8741
<b>Total</b>	<b>0.0160</b>	<b>0.4211</b>	<b>0.1066</b>	<b>1.5500e-003</b>	<b>0.0495</b>	<b>1.3500e-003</b>	<b>0.0508</b>	<b>0.0134</b>	<b>1.2800e-003</b>	<b>0.0147</b>	<b>0.0000</b>	<b>148.3959</b>	<b>148.3959</b>	<b>8.5400e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>148.6093</b>

**3.3 Building Construction - Concrete - 2021**

**Unmitigated Construction On-Site**

Category	tons/yr										MT/yr						
	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	
Off-Road	0.2004	1.8266	1.6507	4.0900e-003		0.0840	0.0840		0.0796	0.0796	0.0000	357.3371	357.3371	0.0886	0.0000	0.0000	359.5528
<b>Total</b>	<b>0.2004</b>	<b>1.8266</b>	<b>1.6507</b>	<b>4.0900e-003</b>		<b>0.0840</b>	<b>0.0840</b>		<b>0.0796</b>	<b>0.0796</b>	<b>0.0000</b>	<b>357.3371</b>	<b>357.3371</b>	<b>0.0886</b>	<b>0.0000</b>	<b>0.0000</b>	<b>359.5528</b>



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3.3 Building Construction - Concrete - 2021

Unmitigated Construction Off-Site

Category	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
	tons/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	0.0146	0.5711	0.1099	1.5600e-003	0.0387	1.0900e-003	0.0398	0.0112	1.0400e-003	0.0122	0.0000	149.4336	149.4336	0.0114	0.0000	149.7186
Worker	0.0674	0.0454	0.4950	1.5500e-003	0.1728	1.0400e-003	0.1739	0.0459	9.5000e-004	0.0469	0.0000	139.7711	139.7711	3.2600e-003	0.0000	139.8525
<b>Total</b>	<b>0.0820</b>	<b>0.6165</b>	<b>0.6049</b>	<b>3.1100e-003</b>	<b>0.2115</b>	<b>2.1300e-003</b>	<b>0.2137</b>	<b>0.0571</b>	<b>1.9900e-003</b>	<b>0.0591</b>	<b>0.0000</b>	<b>289.2047</b>	<b>289.2047</b>	<b>0.0147</b>	<b>0.0000</b>	<b>289.5711</b>
MT/yr																

Mitigated Construction On-Site

Category	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
	tons/yr															
Off-Road	0.2004	1.8266	1.6507	4.0900e-003	0.0840	0.0840	0.0840	0.0796	0.0796	0.0796	0.0000	357.3366	357.3366	0.0886	0.0000	359.5523
<b>Total</b>	<b>0.2004</b>	<b>1.8266</b>	<b>1.6507</b>	<b>4.0900e-003</b>	<b>0.0840</b>	<b>0.0840</b>	<b>0.0840</b>	<b>0.0796</b>	<b>0.0796</b>	<b>0.0796</b>	<b>0.0000</b>	<b>357.3366</b>	<b>357.3366</b>	<b>0.0886</b>	<b>0.0000</b>	<b>359.5523</b>
MT/yr																



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3.3 Building Construction - Concrete - 2021

Mitigated Construction Off-Site

Category	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
tons/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	0.0146	0.5711	0.1099	1.5600e-003	0.0367	1.0800e-003	0.0398	0.0112	1.0400e-003	0.0122	0.0000	149.4336	149.4336	0.0114	0.0000	149.7186
Worker	0.0674	0.0454	0.4950	1.5500e-003	0.1728	1.0400e-003	0.1739	0.0459	9.5000e-004	0.0469	0.0000	139.7711	139.7711	3.2600e-003	0.0000	139.8525
<b>Total</b>	<b>0.0820</b>	<b>0.6165</b>	<b>0.6049</b>	<b>3.1100e-003</b>	<b>0.2115</b>	<b>2.1300e-003</b>	<b>0.2137</b>	<b>0.0571</b>	<b>1.9900e-003</b>	<b>0.0591</b>	<b>0.0000</b>	<b>289.2047</b>	<b>289.2047</b>	<b>0.0147</b>	<b>0.0000</b>	<b>289.5711</b>
MT/yr																

3.3 Building Construction - Concrete - 2022

Unmitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.2957	2.5283	2.6674	6.8000e-003	0.1139	0.1139	0.1139	0.1082	0.1082	0.1082	0.0000	593.4420	593.4420	0.1466	0.0000	597.1077
<b>Total</b>	<b>0.2957</b>	<b>2.5283</b>	<b>2.6674</b>	<b>6.8000e-003</b>	<b>0.1139</b>	<b>0.1139</b>	<b>0.1139</b>	<b>0.1082</b>	<b>0.1082</b>	<b>0.1082</b>	<b>0.0000</b>	<b>593.4420</b>	<b>593.4420</b>	<b>0.1466</b>	<b>0.0000</b>	<b>597.1077</b>
MT/yr																



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3.3 Building Construction - Concrete - 2022

Unmitigated Construction Off-Site

Category	tons/yr											MT/yr				
	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
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	0.0226	0.8932	0.1699	2.5700e-003	0.0642	1.5200e-003	0.0657	0.0185	1.4600e-003	0.0200	0.0000	245.9260	245.9260	0.0179	0.0000	246.3742
Worker	0.1049	0.0679	0.7570	2.4700e-003	0.2869	1.6700e-003	0.2886	0.0762	1.5400e-003	0.0777	0.0000	223.5533	223.5533	4.8600e-003	0.0000	223.6747
<b>Total</b>	<b>0.1275</b>	<b>0.9610</b>	<b>0.9269</b>	<b>5.0400e-003</b>	<b>0.3511</b>	<b>3.1900e-003</b>	<b>0.3543</b>	<b>0.0947</b>	<b>3.0000e-003</b>	<b>0.0977</b>	<b>0.0000</b>	<b>469.4792</b>	<b>469.4792</b>	<b>0.0228</b>	<b>0.0000</b>	<b>470.0489</b>

Mitigated Construction On-Site

Category	tons/yr											MT/yr				
	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
Off-Road	0.2957	2.5283	2.6674	6.8000e-003	0.1139	0.1139	0.1139	0.1082	0.1082	0.1082	0.0000	593.4413	593.4413	0.1466	0.0000	597.1070
<b>Total</b>	<b>0.2957</b>	<b>2.5283</b>	<b>2.6674</b>	<b>6.8000e-003</b>	<b>0.1139</b>	<b>0.1139</b>	<b>0.1139</b>	<b>0.1082</b>	<b>0.1082</b>	<b>0.1082</b>	<b>0.0000</b>	<b>593.4413</b>	<b>593.4413</b>	<b>0.1466</b>	<b>0.0000</b>	<b>597.1070</b>



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3.3 Building Construction - Concrete - 2022

Mitigated Construction Off-Site

Category	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
tons/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	0.0226	0.8932	0.1699	2.5700e-003	0.0642	1.5200e-003	0.0657	0.0185	1.4600e-003	0.0200	0.0000	245.9260	245.9260	0.0179	0.0000	246.3742
Worker	0.1049	0.0679	0.7570	2.4700e-003	0.2869	1.6700e-003	0.2886	0.0762	1.5400e-003	0.0777	0.0000	223.5533	223.5533	4.8600e-003	0.0000	223.6747
<b>Total</b>	<b>0.1275</b>	<b>0.9610</b>	<b>0.9269</b>	<b>5.0400e-003</b>	<b>0.3511</b>	<b>3.1900e-003</b>	<b>0.3543</b>	<b>0.0947</b>	<b>3.0000e-003</b>	<b>0.0977</b>	<b>0.0000</b>	<b>469.4792</b>	<b>469.4792</b>	<b>0.0228</b>	<b>0.0000</b>	<b>470.0489</b>
MT/yr																

3.4 Building Construction - Steel - 2022

Unmitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.2872	2.7628	2.6460	5.1900e-003		0.1335	0.1335		0.1291	0.1291	0.0000	448.8264	448.8264	0.0616	0.0000	450.3657
<b>Total</b>	<b>0.2872</b>	<b>2.7628</b>	<b>2.6460</b>	<b>5.1900e-003</b>		<b>0.1335</b>	<b>0.1335</b>		<b>0.1291</b>	<b>0.1291</b>	<b>0.0000</b>	<b>448.8264</b>	<b>448.8264</b>	<b>0.0616</b>	<b>0.0000</b>	<b>450.3657</b>
MT/yr																



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**3.4 Building Construction - Steel - 2022**

**Unmitigated Construction Off-Site**

Category	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
	tons/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	0.0365	1.4420	0.2743	4.1500e-003	0.1037	2.4600e-003	0.1061	0.0299	2.3500e-003	0.0323	0.0000	397.0371	397.0371	0.0289	0.0000	397.7607
Worker	0.1693	0.1095	1.2222	3.9900e-003	0.4692	2.7000e-003	0.4659	0.1230	2.4900e-003	0.1255	0.0000	360.9173	360.9173	7.8400e-003	0.0000	361.1134
<b>Total</b>	<b>0.2058</b>	<b>1.5515</b>	<b>1.4964</b>	<b>8.1400e-003</b>	<b>0.5669</b>	<b>5.1600e-003</b>	<b>0.5720</b>	<b>0.1529</b>	<b>4.8400e-003</b>	<b>0.1578</b>	<b>0.0000</b>	<b>757.9544</b>	<b>757.9544</b>	<b>0.0368</b>	<b>0.0000</b>	<b>758.8741</b>
	MT/yr															

**Mitigated Construction On-Site**

Category	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
	tons/yr															
Off-Road	0.2872	2.7628	2.6460	5.1900e-003	0.1335	0.1335	0.1335	0.1291	0.1291	0.1291	0.0000	448.8259	448.8259	0.0616	0.0000	450.3652
<b>Total</b>	<b>0.2872</b>	<b>2.7628</b>	<b>2.6460</b>	<b>5.1900e-003</b>	<b>0.1335</b>	<b>0.1335</b>	<b>0.1335</b>	<b>0.1291</b>	<b>0.1291</b>	<b>0.1291</b>	<b>0.0000</b>	<b>448.8259</b>	<b>448.8259</b>	<b>0.0616</b>	<b>0.0000</b>	<b>450.3652</b>
	MT/yr															

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3.4 Building Construction - Steel - 2022

Mitigated Construction Off-Site

Category	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
tons/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	0.0365	1.4420	0.2743	4.1500e-003	0.1037	2.4600e-003	0.1061	0.0299	2.3500e-003	0.0323	0.0000	397.0371	397.0371	0.0289	0.0000	397.7607
Worker	0.1693	0.1095	1.2222	3.9900e-003	0.4632	2.7000e-003	0.4659	0.1230	2.4900e-003	0.1255	0.0000	360.9173	360.9173	7.8400e-003	0.0000	361.1134
<b>Total</b>	<b>0.2058</b>	<b>1.5515</b>	<b>1.4964</b>	<b>8.1400e-003</b>	<b>0.5669</b>	<b>5.1600e-003</b>	<b>0.5720</b>	<b>0.1529</b>	<b>4.8400e-003</b>	<b>0.1578</b>	<b>0.0000</b>	<b>757.9544</b>	<b>757.9544</b>	<b>0.0368</b>	<b>0.0000</b>	<b>758.8741</b>
MT/yr																

3.5 Building Construction - Interior/Exterior - 2022

Unmitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.0986	0.8655	0.7569	1.8800e-003	0.0431	0.0431	0.0431	0.0397	0.0397	0.0397	0.0000	165.0544	165.0544	0.0534	0.0000	166.3890
<b>Total</b>	<b>0.0986</b>	<b>0.8655</b>	<b>0.7569</b>	<b>1.8800e-003</b>	<b>0.0431</b>	<b>0.0431</b>	<b>0.0431</b>	<b>0.0397</b>	<b>0.0397</b>	<b>0.0397</b>	<b>0.0000</b>	<b>165.0544</b>	<b>165.0544</b>	<b>0.0534</b>	<b>0.0000</b>	<b>166.3890</b>
MT/yr																



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3.5 Building Construction - Interior/Exterior - 2022

Unmitigated Construction Off-Site

Category	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
tons/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	0.0117	0.4627	0.0880	1.3300e-003	0.0333	7.9000e-004	0.0341	9.6000e-003	7.6000e-004	0.0104	0.0000	127.4074	127.4074	9.2900e-003	0.0000	127.6396
Worker	0.0543	0.0352	0.3922	1.2800e-003	0.1486	8.7000e-004	0.1495	0.0395	8.0000e-004	0.0403	0.0000	115.8168	115.8168	2.5200e-003	0.0000	115.8797
<b>Total</b>	<b>0.0661</b>	<b>0.4979</b>	<b>0.4802</b>	<b>2.6100e-003</b>	<b>0.1819</b>	<b>1.6600e-003</b>	<b>0.1836</b>	<b>0.0491</b>	<b>1.5600e-003</b>	<b>0.0506</b>	<b>0.0000</b>	<b>243.2242</b>	<b>243.2242</b>	<b>0.0118</b>	<b>0.0000</b>	<b>243.5193</b>
MT/yr																

Mitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.0986	0.8655	0.7569	1.8800e-003	0.0431	0.0431	0.0431	0.0397	0.0397	0.0397	0.0000	165.0542	165.0542	0.0534	0.0000	166.3888
<b>Total</b>	<b>0.0986</b>	<b>0.8655</b>	<b>0.7569</b>	<b>1.8800e-003</b>	<b>0.0431</b>	<b>0.0431</b>	<b>0.0431</b>	<b>0.0397</b>	<b>0.0397</b>	<b>0.0397</b>	<b>0.0000</b>	<b>165.0542</b>	<b>165.0542</b>	<b>0.0534</b>	<b>0.0000</b>	<b>166.3888</b>
MT/yr																

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3.5 Building Construction - Interior/Exterior - 2022

Mitigated Construction Off-Site

Category	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
tons/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	0.0117	0.4627	0.0880	1.3300e-003	0.0333	7.9000e-004	0.0341	9.6000e-003	7.6000e-004	0.0104	0.0000	127.4074	127.4074	9.2900e-003	0.0000	127.6396
Worker	0.0543	0.0352	0.3922	1.2800e-003	0.1486	8.7000e-004	0.1495	0.0395	8.0000e-004	0.0403	0.0000	115.8168	115.8168	2.5200e-003	0.0000	115.8797
<b>Total</b>	<b>0.0661</b>	<b>0.4979</b>	<b>0.4802</b>	<b>2.6100e-003</b>	<b>0.1819</b>	<b>1.6600e-003</b>	<b>0.1836</b>	<b>0.0491</b>	<b>1.5600e-003</b>	<b>0.0506</b>	<b>0.0000</b>	<b>243.2242</b>	<b>243.2242</b>	<b>0.0118</b>	<b>0.0000</b>	<b>243.5193</b>
MT/yr																

3.5 Building Construction - Interior/Exterior - 2023

Unmitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.1943	1.6518	1.5780	3.9800e-003	0.0793	0.0793	0.0793	0.0730	0.0730	0.0730	0.0000	349.4495	349.4495	0.1130	0.0000	352.2750
<b>Total</b>	<b>0.1943</b>	<b>1.6518</b>	<b>1.5780</b>	<b>3.9800e-003</b>	<b>0.0793</b>	<b>0.0793</b>	<b>0.0793</b>	<b>0.0730</b>	<b>0.0730</b>	<b>0.0730</b>	<b>0.0000</b>	<b>349.4495</b>	<b>349.4495</b>	<b>0.1130</b>	<b>0.0000</b>	<b>352.2750</b>
MT/yr																



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**3.5 Building Construction - Interior/Exterior - 2023**  
**Unmitigated Construction Off-Site**

Category	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
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	0.0190	0.7323	0.1622	2.7400e-003	0.0704	7.5000e-004	0.0712	0.0203	7.1000e-004	0.0210	0.0000	262.5258	262.5258	0.0150	0.0000	262.9020
Worker	0.1080	0.0671	0.7650	2.6100e-003	0.3146	1.7900e-003	0.3164	0.0835	1.6500e-003	0.0852	0.0000	235.7982	235.7982	4.7800e-003	0.0000	235.9178
<b>Total</b>	<b>0.1270</b>	<b>0.7994</b>	<b>0.9272</b>	<b>5.3500e-003</b>	<b>0.3850</b>	<b>2.5400e-003</b>	<b>0.3875</b>	<b>0.1038</b>	<b>2.3600e-003</b>	<b>0.1062</b>	<b>0.0000</b>	<b>498.3240</b>	<b>498.3240</b>	<b>0.0198</b>	<b>0.0000</b>	<b>498.8198</b>

**Mitigated Construction On-Site**

Category	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
Off-Road	0.1943	1.6518	1.5780	3.9800e-003	0.0793	0.0793	0.0793	0.0730	0.0730	0.0730	0.0000	349.4491	349.4491	0.1130	0.0000	352.2746
<b>Total</b>	<b>0.1943</b>	<b>1.6518</b>	<b>1.5780</b>	<b>3.9800e-003</b>	<b>0.0793</b>	<b>0.0793</b>	<b>0.0793</b>	<b>0.0730</b>	<b>0.0730</b>	<b>0.0730</b>	<b>0.0000</b>	<b>349.4491</b>	<b>349.4491</b>	<b>0.1130</b>	<b>0.0000</b>	<b>352.2746</b>

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3.5 Building Construction - Interior/Exterior - 2023

Mitigated Construction Off-Site

Category	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
tons/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	0.0190	0.7323	0.1622	2.7400e-003	0.0704	7.5000e-004	0.0712	0.0203	7.1000e-004	0.0210	0.0000	262.5258	262.5258	0.0150	0.0000	262.9020
Worker	0.1080	0.0671	0.7650	2.6100e-003	0.3146	1.7900e-003	0.3164	0.0835	1.6500e-003	0.0852	0.0000	235.7982	235.7982	4.7800e-003	0.0000	235.9178
<b>Total</b>	<b>0.1270</b>	<b>0.7994</b>	<b>0.9272</b>	<b>5.3500e-003</b>	<b>0.3850</b>	<b>2.5400e-003</b>	<b>0.3875</b>	<b>0.1038</b>	<b>2.3600e-003</b>	<b>0.1062</b>	<b>0.0000</b>	<b>498.3240</b>	<b>498.3240</b>	<b>0.0198</b>	<b>0.0000</b>	<b>498.8198</b>
MTYr																

3.6 Paving - 2023

Unmitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.0974	1.0088	0.6456	1.3800e-003		0.0468	0.0468		0.0430	0.0430	0.0000	121.6092	121.6092	0.0393	0.0000	122.5925
Paving	0.0354					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1328</b>	<b>1.0088</b>	<b>0.6456</b>	<b>1.3800e-003</b>		<b>0.0468</b>	<b>0.0468</b>		<b>0.0430</b>	<b>0.0430</b>	<b>0.0000</b>	<b>121.6092</b>	<b>121.6092</b>	<b>0.0393</b>	<b>0.0000</b>	<b>122.5925</b>
MTYr																



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3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	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
tons/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	2.9100e-003	1.8000e-003	0.0206	7.0000e-005	8.4600e-003	5.0000e-005	8.5100e-003	2.2500e-003	4.0000e-005	2.2900e-003	0.0000	6.3441	6.3441	1.3000e-004	0.0000	6.3473
<b>Total</b>	<b>2.9100e-003</b>	<b>1.8000e-003</b>	<b>0.0206</b>	<b>7.0000e-005</b>	<b>8.4600e-003</b>	<b>5.0000e-005</b>	<b>8.5100e-003</b>	<b>2.2500e-003</b>	<b>4.0000e-005</b>	<b>2.2900e-003</b>	<b>0.0000</b>	<b>6.3441</b>	<b>6.3441</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>6.3473</b>
MT/yr																

Mitigated Construction On-Site

Category	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
tons/yr																
Off-Road	0.0974	1.0088	0.6456	1.3800e-003	0.0468	0.0468	0.0468	0.0430	0.0430	0.0430	0.0000	121.6090	121.6090	0.0393	0.0000	122.5923
Paving	0.0354				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.1328</b>	<b>1.0088</b>	<b>0.6456</b>	<b>1.3800e-003</b>	<b>0.0468</b>	<b>0.0468</b>	<b>0.0468</b>	<b>0.0430</b>	<b>0.0430</b>	<b>0.0430</b>	<b>0.0000</b>	<b>121.6090</b>	<b>121.6090</b>	<b>0.0393</b>	<b>0.0000</b>	<b>122.5923</b>
MT/yr																

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3.6 Paving - 2023

Mitigated Construction Off-Site

Category	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
tons/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	2.9100e-003	1.8000e-003	0.0206	7.0000e-005	8.4600e-003	5.0000e-005	8.5100e-003	2.2500e-003	4.0000e-005	2.2900e-003	0.0000	6.3441	6.3441	1.3000e-004	0.0000	6.3473
<b>Total</b>	<b>2.9100e-003</b>	<b>1.8000e-003</b>	<b>0.0206</b>	<b>7.0000e-005</b>	<b>8.4600e-003</b>	<b>5.0000e-005</b>	<b>8.5100e-003</b>	<b>2.2500e-003</b>	<b>4.0000e-005</b>	<b>2.2900e-003</b>	<b>0.0000</b>	<b>6.3441</b>	<b>6.3441</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>6.3473</b>
MT/yr																

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

Category	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
tons/yr																
Archit. Coating	1.5345					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0358	0.0498	8.0000e-005	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	0.0000	7.0215	7.0215	4.2000e-004	0.0000	7.0320
<b>Total</b>	<b>1.5397</b>	<b>0.0358</b>	<b>0.0498</b>	<b>8.0000e-005</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>0.0000</b>	<b>7.0215</b>	<b>7.0215</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>7.0320</b>
MT/yr																



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**3.7 Architectural Coating - 2023**  
**Unmitigated Construction Off-Site**

Category	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
tons/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	0.0131	8.1200e-003	0.0926	3.2000e-004	0.0381	2.2000e-004	0.0383	0.0101	2.0000e-004	0.0103	0.0000	28.5484	28.5484	5.8000e-004	0.0000	28.5629
<b>Total</b>	<b>0.0131</b>	<b>8.1200e-003</b>	<b>0.0926</b>	<b>3.2000e-004</b>	<b>0.0381</b>	<b>2.2000e-004</b>	<b>0.0383</b>	<b>0.0101</b>	<b>2.0000e-004</b>	<b>0.0103</b>	<b>0.0000</b>	<b>28.5484</b>	<b>28.5484</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>28.5629</b>

**Mitigated Construction On-Site**

Category	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
tons/yr																
Archit. Coating	1.5345					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0358	0.0498	8.0000e-005	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	1.9500e-003	0.0000	7.0214	7.0214	4.2000e-004	0.0000	7.0319
<b>Total</b>	<b>1.5397</b>	<b>0.0358</b>	<b>0.0498</b>	<b>8.0000e-005</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>1.9500e-003</b>	<b>0.0000</b>	<b>7.0214</b>	<b>7.0214</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>7.0319</b>

MT/yr

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3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

Category	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
	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	0.0131	8.1200e-003	0.0926	3.2000e-004	0.0381	2.2000e-004	0.0383	0.0101	2.0000e-004	0.0103	0.0000	28.5484	28.5484	5.8000e-004	0.0000	28.5629
<b>Total</b>	<b>0.0131</b>	<b>8.1200e-003</b>	<b>0.0926</b>	<b>3.2000e-004</b>	<b>0.0381</b>	<b>2.2000e-004</b>	<b>0.0383</b>	<b>0.0101</b>	<b>2.0000e-004</b>	<b>0.0103</b>	<b>0.0000</b>	<b>28.5484</b>	<b>28.5484</b>	<b>5.8000e-004</b>	<b>0.0000</b>	<b>28.5629</b>

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile



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Category	ROG	NOx	CO	SO2	toms/yr					PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5							
Mitigated	0.86986	6.2397	9.0648	0.0420	3.1611	0.0238	3.1848	0.8468	0.0222	0.8690	0.0000	3.898,399.2	3.898,399.2	0.1981	0.0000	3,903,351.8
Unmitigated	0.86986	6.2397	9.0648	0.0420	3.1611	0.0238	3.1848	0.8468	0.0222	0.8690	0.0000	3,898,399.2	3,898,399.2	0.1981	0.0000	3,903,351.8
Total																

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Arena	2,784.60	2,784.60	2784.60	6,010,564	6,010,564
Health Club	1,152.55	730.45	935.55	2,269,771	2,269,771
Parking Lot	0.00	0.00	0.00		
Total	3,937.15	3,515.05	3,720.15	8,280,335	8,280,335

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	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	Primary	Diverted	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6			
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9			
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Health Club	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
Electricity Mitigated					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,968.618	1,968.618	0.0449	9.2900e-003	1,972.510
Electricity Unmitigated					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1,968.618	1,968.618	0.0449	9.2900e-003	1,972.510
Natural Gas Mitigated	0.0517	0.4698	0.3947	2.8200e-003	0.0357	0.0357	0.0357	0.0357	0.0357	0.0357	0.0000	511.4681	511.4681	9.8000e-003	9.3800e-003	514.5075
Natural Gas Unmitigated	0.0517	0.4698	0.3947	2.8200e-003	0.0357	0.0357	0.0357	0.0357	0.0357	0.0357	0.0000	511.4681	511.4681	9.8000e-003	9.3800e-003	514.5075
MT/yr																



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5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use KBTU/yr	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	
						tons/yr	tons/yr	tons/yr	tons/yr		tons/yr	tons/yr	tons/yr	tons/yr								
Arena	8.4474e+006	0.0456	0.4141	0.3478	2.4800e-003		0.0315	0.0315	0.0315	0.0315		0.0315	0.0315	0.0315	0.0000	450.7854	450.7854	8.6400e-003	8.2600e-003		453.4642	
Health Club	1.13715e+006	6.1300e-003	0.0557	0.0468	3.3000e-004		4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	4.2400e-003	0.0000	60.6827	60.6827	1.1600e-003	1.1100e-003		61.0433	
Parking Lot	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	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0517</b>	<b>0.4698</b>	<b>0.3947</b>	<b>2.8100e-003</b>		<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>		<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>	<b>0.0000</b>	<b>511.4681</b>	<b>511.4681</b>	<b>9.8000e-003</b>	<b>9.3700e-003</b>		<b>514.5075</b>	

Mitigated

Land Use	NaturalGas Use KBTU/yr	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	
						tons/yr	tons/yr	tons/yr	tons/yr		tons/yr	tons/yr	tons/yr	tons/yr								
Arena	8.4474e+006	0.0456	0.4141	0.3478	2.4800e-003		0.0315	0.0315	0.0315	0.0315		0.0315	0.0315	0.0315	0.0000	450.7854	450.7854	8.6400e-003	8.2600e-003		453.4642	
Health Club	1.13715e+006	6.1300e-003	0.0557	0.0468	3.3000e-004		4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003		4.2400e-003	4.2400e-003	4.2400e-003	0.0000	60.6827	60.6827	1.1600e-003	1.1100e-003		61.0433	
Parking Lot	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	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0517</b>	<b>0.4698</b>	<b>0.3947</b>	<b>2.8100e-003</b>		<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>		<b>0.0357</b>	<b>0.0357</b>	<b>0.0357</b>	<b>0.0000</b>	<b>511.4681</b>	<b>511.4681</b>	<b>9.8000e-003</b>	<b>9.3700e-003</b>		<b>514.5075</b>	

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Arena	2,639e+006	1,521,305.8	0.0347	7.1800e-003	1,524,313.9
Health Club	355,250	204,791.2	4.6700e-003	9.7000e-004	205,196.1
Parking Lot	420,700	242,521.2	5.5300e-003	1.1400e-003	243,000.7
<b>Total</b>		<b>1,968,618.1</b>	<b>0.0449</b>	<b>9.2900e-003</b>	<b>1,972,510.7</b>

**Mitigated**

Land Use	Electricity Use kWh/yr	Total CO2	CH4	N2O	CO2e
Arena	2,639e+006	1,521,305.8	0.0347	7.1800e-003	1,524,313.9
Health Club	355,250	204,791.2	4.6700e-003	9.7000e-004	205,196.1
Parking Lot	420,700	242,521.2	5.5300e-003	1.1400e-003	243,000.7
<b>Total</b>		<b>1,968,618.1</b>	<b>0.0449</b>	<b>9.2900e-003</b>	<b>1,972,510.7</b>

**6.0 Area Detail**



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6.1 Mitigation Measures Area

Category	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
Mitigated	1.3010	3.8000e-004	0.0421	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
Unmitigated	1.3010	3.8000e-004	0.0421	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
	tons/yr															
	MT/yr															

6.2 Area by SubCategory

Unmitigated

SubCategory	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
Architectural Coating	0.1535				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1437				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.9000e-003	3.8000e-004	0.0421	0.0000	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
Total	1.3010	3.8000e-004	0.0421	0.0000	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
	tons/yr															
	MT/yr															

Riverside Arena Construction - Riverside-South Coast County, Annual

6.2 Area by SubCategory

Mitigated

SubCategory	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
Architectural Coating	0.1535				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1437				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.9000e-003	3.8000e-004	0.0421	0.0000	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	1.5000e-004	0.0000	0.0819	0.0819	2.1000e-004	0.0000	0.0873
<b>Total</b>	<b>1.3010</b>	<b>3.8000e-004</b>	<b>0.0421</b>	<b>0.0000</b>	<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>0.0819</b>	<b>0.0819</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.0873</b>

7.0 Water Detail

7.1 Mitigation Measures Water



Riverside Arena Construction - Riverside-South Coast County, Annual

Category	Total CO2	CH4	N2O	CO2e
	MT/Yr			
Mitigated	946,3376	3,7378	0,0921	1,067,216 0
Unmitigated	946,3376	3,7378	0,0921	1,067,216 0

**7.2 Water by Land Use**  
**Unmitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/Yr			
Arena	112 / 7,14895	922,0173	3,6698	0,0904	1,040,688 0
Health Club	2,07001 / 1,26872	24,3203	0,06880	1,7000e- 003	26,5280
Parking Lot	0 / 0	0,0000	0,0000	0,0000	0,0000
<b>Total</b>		<b>946,3376</b>	<b>3,7378</b>	<b>0,0921</b>	<b>1,067,216 0</b>

Riverside Arena Construction - Riverside-South Coast County, Annual

7.2 Water by Land Use

Mitigated

Land Use	Indoor/Outdoor Use Mgal	Total CO2	CH4	N2O	CO2e
Arena	112 / 7-14895	922.0173	3.6698	0.0904	1,040.6880
Health Club	2.07001 / 1.26872	24.3203	0.0680	1.7000e-003	26.5280
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>946.3376</b>	<b>3.7378</b>	<b>0.0921</b>	<b>1,067.2160</b>

8.0 Waste Detail

8.1 Mitigation Measures Waste



Riverside Arena Construction - Riverside-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MTYr			
Mitigated	41,9501	2,4792	0,0000	103,9296
Unmitigated	41,9501	2,4792	0,0000	103,9296

**8.2 Waste by Land Use**  
**Unmitigated**

Land Use	Waste Disposed tons	Total CO2	CH4	N2O	CO2e
		MTYr			
Arena	7.16	1,4534	0,0859	0,0000	3,6008
Health Club	199.5	40,4967	2,3933	0,0000	100,3289
Parking Lot	0	0,0000	0,0000	0,0000	0,0000
<b>Total</b>		<b>41,9501</b>	<b>2,4792</b>	<b>0,0000</b>	<b>103,9296</b>

Riverside Arena Construction - Riverside-South Coast County, Annual

**8.2 Waste by Land Use**

**Mitigated**

Land Use	Waste Disposed Tons	Total CO2	CH4	N2O	CO2e
Arena	7.16	1.4534	0.0859	0.0000	3.6008
Health Club	199.5	40.4967	2.3933	0.0000	100.3289
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>41.9501</b>	<b>2.4792</b>	<b>0.0000</b>	<b>103.9296</b>

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

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

**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

**User Defined Equipment**

Equipment Type	Number
----------------	--------



## 11.0 Vegetation

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Riverside Arena Construction - Riverside-South Coast County, Summer

**Riverside Arena Construction**  
 Riverside-South Coast County, Summer

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	3,005.00	Space	27.04	1,202,000.00	0
Arena	260.00	1000sqft	14.40	260,000.00	0
Health Club	35.00	1000sqft	0.00	35,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023

Utility Company Imperial Irrigation District

CO2 Intensity (lb/MW/hr)	1270.9	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006
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**1.3 User Entered Comments & Non-Default Data**



Riverside Arena Construction - Riverside-South Coast County, Summer

Project Characteristics -

Land Use - See SWAPE comment about health club and parking land uses.

Construction Phase - See SWAPE comment about individual construction phase lengths.

Off-road Equipment -

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Trips and VMT -

Grading - Consistent with Addendum's model.

Vehicle Trips - Construction run only.

Construction Off-road Equipment Mitigation - Consistent with Addendum's model.

Mobile Land Use Mitigation -

Area Mitigation - Construction run only.

Energy Mitigation - Construction run only.

Water Mitigation - Construction run only.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	740.00	133.00
tblConstructionPhase	NumDays	740.00	134.00
tblConstructionPhase	NumDays	740.00	134.00
tblConstructionPhase	NumDays	75.00	65.00
tblGrading	MaterialExported	0.00	30,000.00
tblLandUse	LotAcreage	83.57	14.40







Riverside Arena Construction - Riverside-South Coast County, Summer

tblOffRoadEquipment	PhaseName	Grading
tblOffRoadEquipment	PhaseName	Building Construction - Concrete
tblOffRoadEquipment	PhaseName	Paving
tblOffRoadEquipment	PhaseName	Paving

**2.0 Emissions Summary**



Riverside Arena Construction - Riverside-South Coast County, Summer

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

Year	lb/day															
	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
2021	11.8080	133.4468	93.3297	0.2945	20.5416	5.0233	25.5648	7.7925	4.6228	12.4154	0.0000	29,147.8005	29,147.8005	5.8842	0.0000	29,261.4613
2022	10.4484	83.8424	89.4863	0.2915	8.5995	2.8206	11.4201	2.3163	2.6785	4.9948	0.0000	28,853.0773	28,853.0773	4.4917	0.0000	28,965.3708
2023	56.5142	53.7670	57.7925	0.2109	8.5994	1.7993	10.3987	2.3162	1.6559	3.9722	0.0000	21,134.4669	21,134.4669	3.2149	0.0000	21,214.8387
Maximum	56.5142	133.4468	93.3297	0.2945	20.5416	5.0233	25.5648	7.7925	4.6228	12.4154	0.0000	29,147.8005	29,147.8005	5.8842	0.0000	29,261.4613

**Mitigated Construction**

Year	lb/day															
	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
2021	11.8080	133.4468	93.3297	0.2945	20.5416	5.0233	25.5648	7.7925	4.6228	12.4154	0.0000	29,147.8005	29,147.8005	5.8842	0.0000	29,261.4613
2022	10.4484	83.8424	89.4863	0.2915	8.5995	2.8206	11.4201	2.3163	2.6785	4.9948	0.0000	28,853.0773	28,853.0773	4.4917	0.0000	28,965.3708
2023	56.5142	53.7670	57.7925	0.2109	8.5994	1.7993	10.3987	2.3162	1.6559	3.9722	0.0000	21,134.4669	21,134.4669	3.2149	0.0000	21,214.8387
Maximum	56.5142	133.4468	93.3297	0.2945	20.5416	5.0233	25.5648	7.7925	4.6228	12.4154	0.0000	29,147.8005	29,147.8005	5.8842	0.0000	29,261.4613





Riverside Arena Construction - Riverside-South Coast County, Summer

**2.2 Overall Operational**

**Unmitigated Operational**

Category	lb/day															
	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
Area	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	0.7222	0.7222	0.7222	1.8900e-003		0.7696
Energy	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	0	3,089.299	3,089.299	0.0592	0.0566	3,107.657
Mobile	5.8913	34.8738	56.1486	0.2499	18.0732	0.1334	18.2066	4.8350	0.1243	4.9593	25,563.57	48	25,563.57	1,2150		25,593.94
<b>Total</b>	<b>13.3132</b>	<b>37.4513</b>	<b>58.6480</b>	<b>0.2654</b>	<b>18.0732</b>	<b>0.3303</b>	<b>18.4035</b>	<b>4.8350</b>	<b>0.3211</b>	<b>5.1561</b>		<b>28,653.59</b>	<b>28,653.59</b>	<b>1.2761</b>	<b>0.0566</b>	<b>28,702.37</b>

**Mitigated Operational**

Category	lb/day															
	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
Area	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	0.7222	0.7222	0.7222	1.8900e-003		0.7696
Energy	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	0	3,089.299	3,089.299	0.0592	0.0566	3,107.657
Mobile	5.8913	34.8738	56.1486	0.2499	18.0732	0.1334	18.2066	4.8350	0.1243	4.9593	25,563.57	48	25,563.57	1,2150		25,593.94
<b>Total</b>	<b>13.3132</b>	<b>37.4513</b>	<b>58.6480</b>	<b>0.2654</b>	<b>18.0732</b>	<b>0.3303</b>	<b>18.4035</b>	<b>4.8350</b>	<b>0.3211</b>	<b>5.1561</b>		<b>28,653.59</b>	<b>28,653.59</b>	<b>1.2761</b>	<b>0.0566</b>	<b>28,702.37</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

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
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	Grading	Grading	7/24/2021	10/22/2021	5	65	
2	Building Construction - Concrete	Building Construction	10/23/2021	4/27/2022	5	133	
3	Building Construction - Steel	Building Construction	4/28/2022	11/1/2022	5	134	
4	Building Construction - Interior/Exterior	Building Construction	11/2/2022	5/8/2023	5	134	
5	Paving	Paving	5/9/2023	7/24/2023	5	55	
6	Architectural Coating	Architectural Coating	7/25/2023	10/9/2023	5	55	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 422.5

Acres of Paving: 27.04

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,500; Non-Residential Outdoor: 147,500; Striped Parking Area: 72,120 (Architectural Coating – sqft)

OffRoad Equipment



Riverside Arena Construction - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Concrete	Bore/Drill Rigs	2	8.00	221	0.50
Building Construction - Concrete	Forklifts	4	8.00	89	0.20
Building Construction - Concrete	Generator Sets	7	8.00	84	0.74
Building Construction - Concrete	Off-Highway Trucks	2	8.00	402	0.38
Building Construction - Concrete	Off-Highway Trucks	4	8.00	402	0.38
Building Construction - Concrete	Rollers	1	8.00	80	0.38
Building Construction - Concrete	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction - Steel	Cranes	4	7.00	231	0.29
Building Construction - Steel	Forklifts	3	8.00	89	0.20
Building Construction - Steel	Generator Sets	8	8.00	84	0.74
Building Construction - Interior/Exterior	Cranes	2	7.00	231	0.29
Building Construction - Interior/Exterior	Forklifts	16	8.00	89	0.20
Building Construction - Interior/Exterior	Off-Highway Trucks	4	8.00	402	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Dozers	4	8.00	247	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37



Riverside Arena Construction - Riverside-South Coast County, Summer

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
Grading	19	48.00	0.00	3,750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Concrete	26	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Steel	19	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Interior/Exterior Architectural Coating	27	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2021

Unmitigated Construction On-Site

Category	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
Fugitive Dust					18.9959	0.0000	18.9959	7.3736	0.0000	7.3736			0.0000			0.0000
Off-Road	11.2996	120.7774	74.5697	0.1789	4.9819	4.9819	4.9819	4.5834	4.5834	4.5834	17,327.9275	17,327.9275	17,327.9275	5.6042		17,468.0326
<b>Total</b>	<b>11.2996</b>	<b>120.7774</b>	<b>74.5697</b>	<b>0.1789</b>	<b>18.9959</b>	<b>4.9819</b>	<b>23.9778</b>	<b>7.3736</b>	<b>4.5834</b>	<b>11.9570</b>		<b>17,327.9275</b>	<b>17,327.9275</b>	<b>5.6042</b>		<b>17,468.0326</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.2 Grading - 2021**  
**Unmitigated Construction Off-Site**

Category	lb/day															
	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
Hauling	0.2808	12.5398	1.6490	0.0435	1.0092	0.0382	1.0474	0.2766	0.0365	0.3132		4,611.548 <sub>3</sub>	4,611.548 <sub>3</sub>	0.2679		4,618,244 <sub>7</sub>
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	0.2276	0.1296	1.7746	5.1300e-003	0.5365	3.1600e-003	0.5397	0.1423	2.9100e-003	0.1452		511.0804	511.0804	0.0122		511.3851
<b>Total</b>	<b>0.5084</b>	<b>12.6694</b>	<b>3.4236</b>	<b>0.0486</b>	<b>1.5457</b>	<b>0.0413</b>	<b>1.5870</b>	<b>0.4189</b>	<b>0.0394</b>	<b>0.4584</b>		<b>5,122.628<sub>8</sub></b>	<b>5,122.628<sub>8</sub></b>	<b>0.2800</b>		<b>5,129,629<sub>8</sub></b>

**Mitigated Construction On-Site**

Category	lb/day															
	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
Fugitive Dust					18.9959	0.0000	18.9959	7.3736	0.0000	7.3736			0.0000			0.0000
Off-Road	11.2996	120.7774	74.5697	0.1789	4.9819	4.9819	4.9819	4.5634	4.5634	4.5634	0.0000	17,327.92 <sub>75</sub>	17,327.92 <sub>75</sub>	5.6042		17,468.03 <sub>26</sub>
<b>Total</b>	<b>11.2996</b>	<b>120.7774</b>	<b>74.5697</b>	<b>0.1789</b>	<b>18.9959</b>	<b>4.9819</b>	<b>23.9778</b>	<b>7.3736</b>	<b>4.5634</b>	<b>11.9570</b>	<b>0.0000</b>	<b>17,327.92<sub>75</sub></b>	<b>17,327.92<sub>75</sub></b>	<b>5.6042</b>		<b>17,468.03<sub>26</sub></b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.2 Grading - 2021**

**Mitigated Construction Off-Site**

Category	lb/day															
	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
Hauling	0.2808	12.5398	1.6490	0.0435	1.0092	0.0382	1.0474	0.2766	0.0365	0.3132		4,611.548 3	4,611.548 3	0.2679		4,618.244 7
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	0.2276	0.1296	1.7746	5.1300e-003	0.5365	3.1600e-003	0.5397	0.1423	2.9100e-003	0.1452		511.0804	511.0804	0.0122		511.3851
<b>Total</b>	<b>0.5084</b>	<b>12.6694</b>	<b>3.4236</b>	<b>0.0486</b>	<b>1.5457</b>	<b>0.0413</b>	<b>1.5870</b>	<b>0.4189</b>	<b>0.0394</b>	<b>0.4584</b>		<b>5,122.628 8</b>	<b>5,122.628 8</b>	<b>0.2800</b>		<b>5,129.629 8</b>

**3.3 Building Construction - Concrete - 2021**

**Unmitigated Construction On-Site**

Category	lb/day															
	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
Off-Road	8.0158	73.0649	66.0297	0.1638		3.3594	3.3594		3.1846	3.1846		15,755.86 72	15,755.86 72	3.9078		15,853.56 24
<b>Total</b>	<b>8.0158</b>	<b>73.0649</b>	<b>66.0297</b>	<b>0.1638</b>		<b>3.3594</b>	<b>3.3594</b>		<b>3.1846</b>	<b>3.1846</b>		<b>15,755.86 72</b>	<b>15,755.86 72</b>	<b>3.9078</b>		<b>15,853.56 24</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.3 Building Construction - Concrete - 2021**  
**Unmitigated Construction Off-Site**

Category	lb/day																
	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	
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	0.0000
Vendor	0.5720	22.6721	4.0451	0.0635	1.5688	0.0431	1.6120	0.4517	0.0413	0.4929	6.694.650	0	6.694.650	0.4789	0	6.706.623	5
Worker	2.9821	1.6989	23.2549	0.0672	7.0307	0.0414	7.0722	1.8646	0.0382	1.9027	6.697.283	2	6.697.283	0.1597	2	6.701.275	5
<b>Total</b>	<b>3.5540</b>	<b>24.3710</b>	<b>27.3000</b>	<b>0.1307</b>	<b>8.5996</b>	<b>0.0846</b>	<b>8.6841</b>	<b>2.3163</b>	<b>0.0794</b>	<b>2.3957</b>	<b>13,391.93</b>	<b>33</b>	<b>13,391.93</b>	<b>0.6386</b>	<b>33</b>	<b>13,407.89</b>	<b>90</b>

**Mitigated Construction On-Site**

Category	lb/day																
	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	
Off-Road	8.0158	73.0649	66.0297	0.1638	3.3594	3.3594	3.3594	3.1846	3.1846	3.1846	0.0000	72	15,755.86	3.9078	72	15,853.56	23
<b>Total</b>	<b>8.0158</b>	<b>73.0649</b>	<b>66.0297</b>	<b>0.1638</b>	<b>3.3594</b>	<b>3.3594</b>	<b>3.3594</b>	<b>3.1846</b>	<b>3.1846</b>	<b>3.1846</b>	<b>0.0000</b>	<b>72</b>	<b>15,755.86</b>	<b>3.9078</b>	<b>72</b>	<b>15,853.56</b>	<b>23</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.3 Building Construction - Concrete - 2021**

**Mitigated Construction Off-Site**

Category	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
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	0.0000	0.0000
Vendor	0.5720	22.6721	4.0451	0.0635	1.5688	0.0431	1.6120	0.4517	0.0413	0.4929	0	6,694.650	6,694.650	0.4789		6,706.623
Worker	2.9821	1.6989	23.2549	0.0672	7.0307	0.0414	7.0722	1.8646	0.0382	1.9027	2	6,697.283	6,697.283	0.1597		6,701.275
<b>Total</b>	<b>3.5540</b>	<b>24.3710</b>	<b>27.3000</b>	<b>0.1307</b>	<b>8.5996</b>	<b>0.0846</b>	<b>8.6641</b>	<b>2.3163</b>	<b>0.0794</b>	<b>2.3957</b>	<b>13,391.93</b>	<b>13,391.93</b>	<b>13,391.93</b>	<b>0.6386</b>		<b>13,407.89</b>
90																

**3.3 Building Construction - Concrete - 2022**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	7.1258	60.9231	64.2744	0.1638	2.7440	2.7440	2.7440	2.6067	2.6067	2.6067	15,762.83	89	15,762.83	3.8947		15,860.20
<b>Total</b>	<b>7.1258</b>	<b>60.9231</b>	<b>64.2744</b>	<b>0.1638</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.6067</b>	<b>2.6067</b>	<b>2.6067</b>	<b>15,762.83</b>	<b>89</b>	<b>15,762.83</b>	<b>3.8947</b>		<b>15,860.20</b>
66																

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.3 Building Construction - Concrete - 2022**  
**Unmitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.4517	0.0347	0.4863	6.637.666	9	6.637.666	0.4536		6.649.006
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	6.452.571	6	6.452.571	0.1434		6.456.157
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>2.3163</b>	<b>0.0718</b>	<b>2.3881</b>	<b>13,090.23</b>	<b>85</b>	<b>13,090.23</b>	<b>0.5970</b>		<b>13,105.16</b>
42																

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	7.1258	60.9231	64.2744	0.1638	2.7440	2.7440	2.7440	2.6067	2.6067	2.6067	0.0000	15,762.83	15,762.83	3.8947		15,860.20
<b>Total</b>	<b>7.1258</b>	<b>60.9231</b>	<b>64.2744</b>	<b>0.1638</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.6067</b>	<b>2.6067</b>	<b>2.6067</b>	<b>0.0000</b>	<b>15,762.83</b>	<b>15,762.83</b>	<b>3.8947</b>		<b>15,860.20</b>
66																



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.3 Building Construction - Concrete - 2022**

**Mitigated Construction Off-Site**

Category	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
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	0.0000	0.0000
Vendor	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.4517	0.0347	0.4863	6,637.6669	6,637.6669	6,637.6669	0.4536		6,649.0066
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	6,452.5716	6,452.5716	6,452.5716	0.1434		6,456.1576
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>2.3163</b>	<b>0.0718</b>	<b>2.3881</b>	<b>13,090.2385</b>	<b>13,090.2385</b>	<b>13,090.2385</b>	<b>0.5970</b>		<b>13,105.1642</b>

**3.4 Building Construction - Steel - 2022**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.2862	41.2357	39.4920	0.0774		1.9930	1.9930		1.9275	1.9275			7,384.2753	1.0130		7,409.6006
<b>Total</b>	<b>4.2862</b>	<b>41.2357</b>	<b>39.4920</b>	<b>0.0774</b>		<b>1.9930</b>	<b>1.9930</b>		<b>1.9275</b>	<b>1.9275</b>			<b>7,384.2753</b>	<b>1.0130</b>		<b>7,409.6006</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.4 Building Construction - Steel - 2022**  
**Unmitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.4517	0.0347	0.4863	6,637.6669	6,637.6669	6,637.6669	0.4536		6,649.0066
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.9403	7.0711	1.8646	0.0371	1.9017	6,452.5716	6,452.5716	6,452.5716	0.1434		6,456.1576
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>2.3163</b>	<b>0.0718</b>	<b>2.3881</b>	<b>13,090.2385</b>	<b>13,090.2385</b>	<b>13,090.2385</b>	<b>0.5970</b>		<b>13,105.1642</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.2862	41.2357	39.4920	0.0774	1.9930	1.9930	1.9930	1.9275	1.9275	1.9275	0.0000	7,384.2753	7,384.2753	1.0130		7,409.6006
<b>Total</b>	<b>4.2862</b>	<b>41.2357</b>	<b>39.4920</b>	<b>0.0774</b>	<b>1.9930</b>	<b>1.9930</b>	<b>1.9930</b>	<b>1.9275</b>	<b>1.9275</b>	<b>1.9275</b>	<b>0.0000</b>	<b>7,384.2753</b>	<b>7,384.2753</b>	<b>1.0130</b>		<b>7,409.6006</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.4 Building Construction - Steel - 2022**

**Mitigated Construction Off-Site**

Category	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
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	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.4517	0.0347	0.4863		6,637.6669	6,637.6669	0.4536		6,649.0066
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017		6,452.5716	6,452.5716	0.1434		6,456.1576
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>2.3163</b>	<b>0.0718</b>	<b>2.3881</b>		<b>13,090.2385</b>	<b>13,090.2385</b>	<b>0.5970</b>		<b>13,105.1642</b>

**3.5 Building Construction - Interior/Exterior - 2022**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.5839	40.2557	35.2064	0.0874		2.0059	2.0059		1.8455	1.8455		8,462.3876	8,462.3876	2.7369		8,530.8103
<b>Total</b>	<b>4.5839</b>	<b>40.2557</b>	<b>35.2064</b>	<b>0.0874</b>		<b>2.0059</b>	<b>2.0059</b>		<b>1.8455</b>	<b>1.8455</b>		<b>8,462.3876</b>	<b>8,462.3876</b>	<b>2.7369</b>		<b>8,530.8103</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.5 Building Construction - Interior/Exterior - 2022**

**Unmitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.0947	0.0347	0.4863	6,637.6669	6,637.6669	6,637.6669	0.4536		6,649.0066
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	6,452.5716	6,452.5716	6,452.5716	0.1434		6,456.1576
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>0.0718</b>	<b>0.0718</b>	<b>2.3881</b>		<b>13,090.2385</b>	<b>13,090.2385</b>	<b>0.5970</b>		<b>13,105.1642</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.5839	40.2557	35.2064	0.0874	2.0059	2.0059	2.0059	1.8455	1.8455	1.8455	0.0000	8,462.3876	8,462.3876	2.7369		8,530.8103
<b>Total</b>	<b>4.5839</b>	<b>40.2557</b>	<b>35.2064</b>	<b>0.0874</b>	<b>2.0059</b>	<b>2.0059</b>	<b>2.0059</b>	<b>1.8455</b>	<b>1.8455</b>	<b>1.8455</b>	<b>0.0000</b>	<b>8,462.3876</b>	<b>8,462.3876</b>	<b>2.7369</b>		<b>8,530.8103</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.5 Building Construction - Interior/Exterior - 2022**

**Mitigated Construction Off-Site**

Category	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
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	0.5333	21.3905	3.7624	0.0629	1.5688	0.0363	1.6050	0.4517	0.0347	0.4863		6,637.6669	6,637.6669	0.4536		6,649.0066
Worker	2.7893	1.5289	21.4495	0.0648	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017		6,452.5716	6,452.5716	0.1434		6,456.1576
<b>Total</b>	<b>3.3227</b>	<b>22.9193</b>	<b>25.2119</b>	<b>0.1277</b>	<b>8.5995</b>	<b>0.0766</b>	<b>8.6761</b>	<b>2.3163</b>	<b>0.0718</b>	<b>2.3881</b>		<b>13,090.2385</b>	<b>13,090.2385</b>	<b>0.5970</b>		<b>13,105.1642</b>

**3.5 Building Construction - Interior/Exterior - 2023**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.2711	36.3036	34.6809	0.0875	1.7437	1.7437	1.7437	1.6042	1.6042	1.6042		8,465.9810	8,465.9810	2.7381		8,534.4327
<b>Total</b>	<b>4.2711</b>	<b>36.3036</b>	<b>34.6809</b>	<b>0.0875</b>	<b>1.7437</b>	<b>1.7437</b>	<b>1.7437</b>	<b>1.6042</b>	<b>1.6042</b>	<b>1.6042</b>		<b>8,465.9810</b>	<b>8,465.9810</b>	<b>2.7381</b>		<b>8,534.4327</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.5 Building Construction - Interior/Exterior - 2023**

**Unmitigated Construction Off-Site**

Category	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	
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			0.0000
Vendor	0.4091	16.0847	3.3162	0.0612	1.5687	0.0162	1.5849	0.4516	0.0155	0.4671	6,461.1289	6,461.1289	6,461.1289	0.3481			6,469.8302
Worker	2.6153	1.3787	19.7954	0.0623	7.0307	0.0394	7.0701	1.8646	0.0363	1.9008	6,207.3570	6,207.3570	6,207.3570	0.1288			6,210.5758
<b>Total</b>	<b>3.0244</b>	<b>17.4634</b>	<b>23.1116</b>	<b>0.1235</b>	<b>8.5994</b>	<b>0.0556</b>	<b>8.6550</b>	<b>2.3162</b>	<b>0.0517</b>	<b>2.3680</b>	<b>12,668.4859</b>	<b>12,668.4859</b>	<b>12,668.4859</b>	<b>0.4768</b>			<b>12,680.4060</b>

**Mitigated Construction On-Site**

Category	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	
lb/day																	
Off-Road	4.2711	36.3036	34.6809	0.0875	1.7437	1.7437	1.7437	1.6042	1.6042	1.6042	0.0000	8,465.9810	8,465.9810	2.7381			8,534.4327
<b>Total</b>	<b>4.2711</b>	<b>36.3036</b>	<b>34.6809</b>	<b>0.0875</b>	<b>1.7437</b>	<b>1.7437</b>	<b>1.7437</b>	<b>1.6042</b>	<b>1.6042</b>	<b>1.6042</b>	<b>0.0000</b>	<b>8,465.9810</b>	<b>8,465.9810</b>	<b>2.7381</b>			<b>8,534.4327</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.5 Building Construction - Interior/Exterior - 2023**  
**Mitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.4091	16.0847	3.3162	0.0612	1.5687	0.0162	1.5849	0.4516	0.0155	0.4671	6,461.1289	6,461.1289	0.3481	6,469.8302		6,469.8302
Worker	2.6153	1.3787	19.7954	0.0623	7.0307	0.0394	7.0701	1.8646	0.0363	1.9008	6,207.3570	6,207.3570	0.1288	6,210.5758		6,210.5758
<b>Total</b>	<b>3.0244</b>	<b>17.4634</b>	<b>23.1116</b>	<b>0.1235</b>	<b>8.5994</b>	<b>0.0556</b>	<b>8.6550</b>	<b>2.3162</b>	<b>0.0517</b>	<b>2.3680</b>	<b>12,668.4859</b>	<b>12,668.4859</b>	<b>0.4768</b>	<b>12,680.4060</b>		<b>12,680.4060</b>

**3.6 Paving - 2023**  
**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	3.5408	36.6830	23.4756	0.0503	1.7011	1.7011	1.7011	1.5650	1.5650	1.5650	4,874.5885	4,874.5885	1.5765	4,914.0020		4,914.0020
Paving	1.2881				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>4.8289</b>	<b>36.6830</b>	<b>23.4756</b>	<b>0.0503</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.5650</b>	<b>1.5650</b>	<b>1.5650</b>	<b>4,874.5885</b>	<b>4,874.5885</b>	<b>1.5765</b>	<b>4,914.0020</b>		<b>4,914.0020</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

3.6 Paving - 2023

Unmitigated Construction Off-Site

Category	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	
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	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	0.0000
Worker	0.1164	0.0614	0.8812	2.7700e-003	0.3130	1.7500e-003	0.3147	0.0830	1.6100e-003	0.0846	276.3211	276.3211	276.3211	5.7300e-003		276.4644	
<b>Total</b>	<b>0.1164</b>	<b>0.0614</b>	<b>0.8812</b>	<b>2.7700e-003</b>	<b>0.3130</b>	<b>1.7500e-003</b>	<b>0.3147</b>	<b>0.0830</b>	<b>1.6100e-003</b>	<b>0.0846</b>	<b>276.3211</b>	<b>276.3211</b>	<b>276.3211</b>	<b>5.7300e-003</b>		<b>276.4644</b>	

Mitigated Construction On-Site

Category	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
lb/day																
Off-Road	3.5408	36.6830	23.4756	0.0503	1.7011	1.7011	1.7011	1.5650	1.5650	1.5650	0.0000	4,874.5885	4,874.5885	1.5765		4,914.0020
Paving	1.2881				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.8289</b>	<b>36.6830</b>	<b>23.4756</b>	<b>0.0503</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.5650</b>	<b>1.5650</b>	<b>1.5650</b>	<b>0.0000</b>	<b>4,874.5885</b>	<b>4,874.5885</b>	<b>1.5765</b>		<b>4,914.0020</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.6 Paving - 2023**

**Mitigated Construction Off-Site**

Category	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
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	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	0.1164	0.0614	0.8812	2.7700e-003	0.3130	1.7500e-003	0.3147	0.0830	1.6100e-003	0.0846	276.3211	276.3211	276.3211	5.7300e-003		276.4644
<b>Total</b>	<b>0.1164</b>	<b>0.0614</b>	<b>0.8812</b>	<b>2.7700e-003</b>	<b>0.3130</b>	<b>1.7500e-003</b>	<b>0.3147</b>	<b>0.0830</b>	<b>1.6100e-003</b>	<b>0.0846</b>	<b>276.3211</b>	<b>276.3211</b>	<b>276.3211</b>	<b>5.7300e-003</b>		<b>276.4644</b>

**3.7 Architectural Coating - 2023**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Archit. Coating	55.7987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708			281.4481	0.0168		281.8690
<b>Total</b>	<b>55.9903</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>		<b>0.0708</b>	<b>0.0708</b>			<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

**3.7 Architectural Coating - 2023**  
**Unmitigated Construction Off-Site**

Category	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
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	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	0.5239	0.2762	3.9654	0.0125	1.4084	7.8900e-003	1.4163	0.3735	7.2600e-003	0.3808	1.243.445	1.243.445	1.243.445	0.0258	1.244.089	9
<b>Total</b>	<b>0.5239</b>	<b>0.2762</b>	<b>3.9654</b>	<b>0.0125</b>	<b>1.4084</b>	<b>7.8900e-003</b>	<b>1.4163</b>	<b>0.3735</b>	<b>7.2600e-003</b>	<b>0.3808</b>	<b>1.243.445</b>	<b>1.243.445</b>	<b>1.243.445</b>	<b>0.0258</b>	<b>1.244.089</b>	<b>9</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Archit. Coating	55.7987				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003	0.0708	0.0708	0.0708	0.0708	0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>55.9903</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>



Riverside Arena Construction - Riverside-South Coast County, Summer

**3.7 Architectural Coating - 2023  
 Mitigated Construction Off-Site**

Category	lb/day															
	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
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	0.5239	0.2762	3.9654	0.0125	1.4084	7.8900e-003	1.4163	0.3735	7.2600e-003	0.3808		1,243.445	1,243.445	0.0258		1,244.089
<b>Total</b>	<b>0.5239</b>	<b>0.2762</b>	<b>3.9654</b>	<b>0.0125</b>	<b>1.4084</b>	<b>7.8900e-003</b>	<b>1.4163</b>	<b>0.3735</b>	<b>7.2600e-003</b>	<b>0.3808</b>		<b>1,243.445</b>	<b>1,243.445</b>	<b>0.0258</b>		<b>1,244.089</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Riverside Arena Construction - Riverside-South Coast County, Summer

Category	lb/day															
	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
Mitigated	5.8913	34.8738	56.1486	0.2499	18.0732	0.1334	18.2066	4.8350	0.1243	4.9593		25,563.57	25,563.57	1,2150		25,593.94
Unmitigated	5.8913	34.8738	56.1486	0.2499	18.0732	0.1334	18.2066	4.8350	0.1243	4.9593		25,563.57	25,563.57	1,2150		25,593.94

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Arena	2,784.60	2,784.60	2,784.60	6,010,564	6,010,564
Health Club	1,152.55	730.45	935.55	2,269,771	2,269,771
Parking Lot	0.00	0.00	0.00		
<b>Total</b>	<b>3,937.15</b>	<b>3,515.05</b>	<b>3,720.15</b>	<b>8,280,335</b>	<b>8,280,335</b>

4.3 Trip Type Information

Land Use	Miles						Trip %			Trip Purpose %		
	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	Primary	Diverted	Pass-by
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6			
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9			
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0			

4.4 Fleet Mix



Riverside Arena Construction - Riverside-South Coast County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Health Club	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	lb/day					lb/day					CO2e
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	
Natural Gas Mitigated	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	0.0592	0.0566	3.107.657		
Natural Gas Unmitigated	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	0.0592	0.0566	3.107.657		

Riverside Arena Construction - Riverside-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

Land Use	NaturalGas Use kBTU/yr	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
Arena	231436	0.2496	2.2690	1.9059	0.0136	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724		2,722.772 0	2,722.772 0	0.0522	0.0499	2,738.952 0
Health Club	3115.48	0.0336	0.3054	0.2566	1.8300e-003	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232		366.5270	366.5270	7.0300e-003	6.7200e-003	368.7051
Parking Lot	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	0.0000
<b>Total</b>		<b>0.2832</b>	<b>2.5744</b>	<b>2.1625</b>	<b>0.0154</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>		<b>3,089.299 0</b>	<b>3,089.299 0</b>	<b>0.0592</b>	<b>0.0566</b>	<b>3,107.657 1</b>

Mitigated

Land Use	NaturalGas Use kBTU/yr	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
Arena	231436	0.2496	2.2690	1.9059	0.0136	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724		2,722.772 0	2,722.772 0	0.0522	0.0499	2,738.952 0
Health Club	3115.48	0.0336	0.3054	0.2566	1.8300e-003	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232		366.5270	366.5270	7.0300e-003	6.7200e-003	368.7051
Parking Lot	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	0.0000
<b>Total</b>		<b>0.2832</b>	<b>2.5744</b>	<b>2.1625</b>	<b>0.0154</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>		<b>3,089.299 0</b>	<b>3,089.299 0</b>	<b>0.0592</b>	<b>0.0566</b>	<b>3,107.657 1</b>

6.0 Area Detail



Riverside Arena Construction - Riverside-South Coast County, Summer

**6.1 Mitigation Measures Area**

Category	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
lb/day																
Mitigated	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
Unmitigated	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696

**6.2 Area by SubCategory**

Unmitigated

SubCategory	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
lb/day																
Architectural Coating	0.8408					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2668					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0312	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
<b>Total</b>	<b>7.1388</b>	<b>3.0700e-003</b>	<b>0.3369</b>	<b>3.0000e-005</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>		<b>0.7222</b>	<b>0.7222</b>	<b>1.8900e-003</b>		<b>0.7696</b>

Riverside Arena Construction - Riverside-South Coast County, Summer

6.2 Area by SubCategory

**Mitigated**

SubCategory	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
	lb/day															
Architectural Coating	0.8408				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2668				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0312	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
<b>Total</b>	<b>7.1388</b>	<b>3.0700e-003</b>	<b>0.3369</b>	<b>3.0000e-005</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>		<b>0.7222</b>	<b>0.7222</b>	<b>1.8900e-003</b>		<b>0.7696</b>

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
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators



Riverside Arena Construction - Riverside-South Coast County, Summer

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
----------------	--------

**11.0 Vegetation**

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Riverside Arena Construction - Riverside-South Coast County, Winter

**Riverside Arena Construction**  
**Riverside-South Coast County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	3,005.00	Space	27.04	1,202,000.00	0
Arena	260.00	1000sqft	14.40	260,000.00	0
Health Club	35.00	1000sqft	0.00	35,000.00	0

**1.2 Other Project Characteristics**

Urbanization Urban Wind Speed (m/s) 2.4 Precipitation Freq (Days) 28  
 Climate Zone 10 Operational Year 2023

Utility Company Imperial Irrigation District

CO2 Intensity (lb/MWhr) 1270.9 CH4 Intensity (lb/MWhr) 0.029 N2O Intensity (lb/MWhr) 0.006

**1.3 User Entered Comments & Non-Default Data**



Riverside Arena Construction - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - See SWAPE comment about health club and parking land uses.

Construction Phase - See SWAPE comment about individual construction phase lengths.

Off-road Equipment -

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Off-road Equipment - Consistent with Addendum's model.

Trips and VMT -

Grading - Consistent with Addendum's model.

Vehicle Trips - Construction run only.

Construction Off-road Equipment Mitigation - Consistent with Addendum's model.

Mobile Land Use Mitigation -

Area Mitigation - Construction run only.

Energy Mitigation - Construction run only.

Water Mitigation - Construction run only.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	740.00	133.00
tblConstructionPhase	NumDays	740.00	134.00
tblConstructionPhase	NumDays	740.00	134.00
tblConstructionPhase	NumDays	75.00	65.00
tblGrading	MaterialExported	0.00	30,000.00
tblLandUse	LotAcreage	83.57	14.40

Riverside Arena Construction - Riverside-South Coast County, Winter

tblLandUse	LotAcreage			
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.80	0.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	16.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	7.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	6.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00	
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00	
tblOffRoadEquipment	PhaseName		Building Construction - Concrete	
tblOffRoadEquipment	PhaseName		Grading	
tblOffRoadEquipment	PhaseName		Grading	
tblOffRoadEquipment	PhaseName		Building Construction - Concrete	
tblOffRoadEquipment	PhaseName		Building Construction - Concrete	
tblOffRoadEquipment	PhaseName		Building Construction - Interior/Exterior	



Riverside Arena Construction - Riverside-South Coast County, Winter

tblOffRoadEquipment	PhaseName	Grading
tblOffRoadEquipment	PhaseName	Building Construction - Concrete
tblOffRoadEquipment	PhaseName	Paving
tblOffRoadEquipment	PhaseName	Paving

**2.0 Emissions Summary**

Riverside Arena Construction - Riverside-South Coast County, Winter

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

Year	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
2021	11.8184	133.5362	89.5860	0.2851	20.5416	5.0238	25.5654	7.7925	4.6234	12.4159	0.0000	28,206.87	28,206.87	5.9078	0.0000	28,321.38
2022	10.4384	83.6799	86.0289	0.2825	8.5995	2.8217	11.4212	2.3163	2.6796	4.9959	0.0000	27,938.36	27,938.36	4.5255	0.0000	28,051.49
2023	56.5076	53.5943	54.4421	0.2022	8.5994	1.7998	10.3993	2.3162	1.6565	3.9727	0.0000	20,255.83	20,255.83	3.2361	0.0000	20,336.73
<b>Maximum</b>	<b>56.5076</b>	<b>133.5362</b>	<b>89.5860</b>	<b>0.2851</b>	<b>20.5416</b>	<b>5.0238</b>	<b>25.5654</b>	<b>7.7925</b>	<b>4.6234</b>	<b>12.4159</b>	<b>0.0000</b>	<b>28,206.87</b>	<b>28,206.87</b>	<b>5.9078</b>	<b>0.0000</b>	<b>28,321.38</b>

**Mitigated Construction**

Year	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
2021	11.8184	133.5362	89.5860	0.2851	20.5416	5.0238	25.5654	7.7925	4.6234	12.4159	0.0000	28,206.87	28,206.87	5.9078	0.0000	28,321.38
2022	10.4384	83.6799	86.0289	0.2825	8.5995	2.8217	11.4212	2.3163	2.6796	4.9959	0.0000	27,938.36	27,938.36	4.5255	0.0000	28,051.49
2023	56.5076	53.5943	54.4421	0.2022	8.5994	1.7998	10.3993	2.3162	1.6565	3.9727	0.0000	20,255.83	20,255.83	3.2361	0.0000	20,336.73
<b>Maximum</b>	<b>56.5076</b>	<b>133.5362</b>	<b>89.5860</b>	<b>0.2851</b>	<b>20.5416</b>	<b>5.0238</b>	<b>25.5654</b>	<b>7.7925</b>	<b>4.6234</b>	<b>12.4159</b>	<b>0.0000</b>	<b>28,206.87</b>	<b>28,206.87</b>	<b>5.9078</b>	<b>0.0000</b>	<b>28,321.38</b>





Riverside Arena Construction - Riverside-South Coast County, Winter

**2.2 Overall Operational**  
Unmitigated Operational

Category	lb/day															
	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
Area	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
Energy	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957		3.089,299	3,089,299	0.0592	0.0566	3,107.657
Mobile	4.8770	34.5089	49.7876	0.2301	18.0732	0.1346	18.2078	4.8350	0.1254	4.9604		23.559,03	23,559.03	1.2702		23,590.79
<b>Total</b>	<b>12.2989</b>	<b>37.0864</b>	<b>52.2870</b>	<b>0.2455</b>	<b>18.0732</b>	<b>0.3315</b>	<b>18.4047</b>	<b>4.8350</b>	<b>0.3223</b>	<b>5.1573</b>		<b>26.649,06</b>	<b>26,649.06</b>	<b>1.3313</b>	<b>0.0566</b>	<b>26,699.22</b>

Mitigated Operational

Category	lb/day															
	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
Area	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
Energy	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957		3.089,299	3,089,299	0.0592	0.0566	3,107.657
Mobile	4.8770	34.5089	49.7876	0.2301	18.0732	0.1346	18.2078	4.8350	0.1254	4.9604		23.559,03	23,559.03	1.2702		23,590.79
<b>Total</b>	<b>12.2989</b>	<b>37.0864</b>	<b>52.2870</b>	<b>0.2455</b>	<b>18.0732</b>	<b>0.3315</b>	<b>18.4047</b>	<b>4.8350</b>	<b>0.3223</b>	<b>5.1573</b>		<b>26.649,06</b>	<b>26,649.06</b>	<b>1.3313</b>	<b>0.0566</b>	<b>26,699.22</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

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
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	Grading	Grading	7/24/2021	10/22/2021	5	65	
2	Building Construction - Concrete	Building Construction	10/23/2021	4/27/2022	5	133	
3	Building Construction - Steel	Building Construction	4/28/2022	11/1/2022	5	134	
4	Building Construction - Interior/Exterior	Building Construction	11/2/2022	5/8/2023	5	134	
5	Paving	Paving	5/9/2023	7/24/2023	5	55	
6	Architectural Coating	Architectural Coating	7/25/2023	10/9/2023	5	55	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 422.5**

**Acres of Paving: 27.04**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 442,500; Non-Residential Outdoor: 147,500; Striped Parking Area: 72,120 (Architectural Coating – sqft)**

OffRoad Equipment

Riverside Arena Construction - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	6	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction - Concrete	Bore/Drill Rigs	2	8.00	221	0.50
Building Construction - Concrete	Forklifts	4	8.00	89	0.20
Building Construction - Concrete	Generator Sets	7	8.00	84	0.74
Building Construction - Concrete	Off-Highway Trucks	2	8.00	402	0.38
Building Construction - Concrete	Off-Highway Trucks	4	8.00	402	0.38
Building Construction - Concrete	Rollers	1	8.00	80	0.38
Building Construction - Concrete	Tractors/Loaders/Backhoes	4	7.00	97	0.37
Building Construction - Steel	Cranes	4	7.00	231	0.29
Building Construction - Steel	Forklifts	3	8.00	89	0.20
Building Construction - Steel	Generator Sets	8	8.00	84	0.74
Building Construction - Interior/Exterior	Cranes	2	7.00	231	0.29
Building Construction - Interior/Exterior	Forklifts	16	8.00	89	0.20
Building Construction - Interior/Exterior	Off-Highway Trucks	4	8.00	402	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Paving	Rubber Tired Dozers	4	8.00	247	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37

Trips and VMT



Riverside Arena Construction - Riverside-South Coast County, Winter

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
Grading	19	48.00	0.00	3,750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Concrete	26	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Steel	19	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction - Interior/Exterior	27	629.00	245.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	126.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area  
 Reduce Vehicle Speed on Unpaved Roads

**3.2 Grading - 2021**

**Unmitigated Construction On-Site**

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBto- CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					18.9959	0.0000	18.9959	7.3736	0.0000	7.3736			0.0000			0.0000
Off-Road	11.2996	120.7774	74.5697	0.1789	4.9819	4.9819	4.9819	4.5834	4.5834	4.5834	17,327.9275	17,327.9275	5.604275	5.604275		17,468.0326
<b>Total</b>	<b>11.2996</b>	<b>120.7774</b>	<b>74.5697</b>	<b>0.1789</b>	<b>18.9959</b>	<b>4.9819</b>	<b>23.9778</b>	<b>7.3736</b>	<b>4.5834</b>	<b>11.9570</b>		<b>17,327.9275</b>	<b>17,327.9275</b>	<b>5.604275</b>		<b>17,468.0326</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.2 Grading - 2021**  
**Unmitigated Construction Off-Site**

Category	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
	lb/day															
Hauling	0.2955	12.6248	1.9235	0.0424	1.0092	0.0387	1.0479	0.2766	0.0371	0.3137		4,495.684 7	4,495.684 7	0.2930		4,503.010 6
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	0.2233	0.1341	1.4325	4.6000e-003	0.5365	3.1600e-003	0.5397	0.1423	2.9100e-003	0.1452		458.4929	458.4929	0.0106		458.7578
<b>Total</b>	<b>0.5188</b>	<b>12.7588</b>	<b>3.3560</b>	<b>0.0470</b>	<b>1.5457</b>	<b>0.0419</b>	<b>1.5876</b>	<b>0.4189</b>	<b>0.0400</b>	<b>0.4589</b>		<b>4,954.177 6</b>	<b>4,954.177 6</b>	<b>0.3036</b>		<b>4,961.768 4</b>

**Mitigated Construction On-Site**

Category	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
	lb/day															
Fugitive Dust					18.9959	0.0000	18.9959	7.3736	0.0000	7.3736			0.0000			0.0000
Off-Road	11.2996	120.7774	74.5697	0.1789	4.9819	4.9819	4.9819	4.5834	4.5834	4.5834	0.0000	17,327.92 75	17,327.92 75	5.6042		17,468.03 26
<b>Total</b>	<b>11.2996</b>	<b>120.7774</b>	<b>74.5697</b>	<b>0.1789</b>	<b>18.9959</b>	<b>4.9819</b>	<b>23.9778</b>	<b>7.3736</b>	<b>4.5834</b>	<b>11.9570</b>	<b>0.0000</b>	<b>17,327.92 75</b>	<b>17,327.92 75</b>	<b>5.6042</b>		<b>17,468.03 26</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.2 Grading - 2021**

**Mitigated Construction Off-Site**

Category	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
lb/day																
Hauling	0.2955	12.6248	1.9235	0.0424	1.0092	0.0387	1.0479	0.2766	0.0371	0.3137		4,495,684.7	4,495,684.7	0.2930		4,503,010.6
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	0.2233	0.1341	1.4325	4.6000e-003	0.5365	3.1600e-003	0.5397	0.1423	2.9100e-003	0.1452		458,4929	458,4929	0.0106		458,7578
<b>Total</b>	<b>0.5188</b>	<b>12.7588</b>	<b>3.3560</b>	<b>0.0470</b>	<b>1.5457</b>	<b>0.0419</b>	<b>1.5876</b>	<b>0.4189</b>	<b>0.0400</b>	<b>0.4589</b>		<b>4,954,177.6</b>	<b>4,954,177.6</b>	<b>0.3036</b>		<b>4,961,768.4</b>

**3.3 Building Construction - Concrete - 2021**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	8.0158	73.0649	66.0297	0.1638		3.3594	3.3594		3.1846	3.1846		15,755.8672	15,755.8672	3.9078		15,853.5624
<b>Total</b>	<b>8.0158</b>	<b>73.0649</b>	<b>66.0297</b>	<b>0.1638</b>		<b>3.3594</b>	<b>3.3594</b>		<b>3.1846</b>	<b>3.1846</b>		<b>15,755.8672</b>	<b>15,755.8672</b>	<b>3.9078</b>		<b>15,853.5624</b>

Riverside Arena Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - Concrete - 2021**  
**Unmitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.6075	22.4769	4.7851	0.0611	1.5688	0.0444	1.6132	0.4517	0.0425	0.4942	6.442.843	9	6,442.843	0.5337		6,456.185
Worker	2.9265	1.7569	18.7712	0.0603	7.0307	0.0414	7.0722	1.8646	0.0382	1.9027	6,008.167	4	6,008.167	0.1388		6,011.638
<b>Total</b>	<b>3.5339</b>	<b>24.2338</b>	<b>23.5563</b>	<b>0.1214</b>	<b>8.5996</b>	<b>0.0859</b>	<b>8.6854</b>	<b>2.3163</b>	<b>0.0806</b>	<b>2.3969</b>	<b>12,451.01</b>	<b>13</b>	<b>12,451.01</b>	<b>0.6725</b>		<b>12,467.82</b>
lb/day																

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	8.0158	73.0649	66.0297	0.1638	3.3594	3.3594	3.3594	3.1846	3.1846	3.1846	0.0000	15,755.86	15,755.86	3.9078		15,853.56
<b>Total</b>	<b>8.0158</b>	<b>73.0649</b>	<b>66.0297</b>	<b>0.1638</b>	<b>3.3594</b>	<b>3.3594</b>	<b>3.3594</b>	<b>3.1846</b>	<b>3.1846</b>	<b>3.1846</b>	<b>0.0000</b>	<b>15,755.86</b>	<b>15,755.86</b>	<b>3.9078</b>		<b>15,853.56</b>
lb/day																



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - Concrete - 2021**

**Mitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.6075	22.4769	4.7851	0.0611	1.5688	0.0444	1.6132	0.4517	0.0425	0.4942	6,442.843 9	6,442.843 9	6,442.843 9	0.5337		6,456.185 2
Worker	2.9265	1.7569	18.7712	0.0603	7.0307	0.0414	7.0722	1.8646	0.0382	1.9027	6,008.167 4	6,008.167 4	6,008.167 4	0.1388		6,011.638 3
<b>Total</b>	<b>3.5339</b>	<b>24.2338</b>	<b>23.5563</b>	<b>0.1214</b>	<b>8.5996</b>	<b>0.0859</b>	<b>8.6854</b>	<b>2.3163</b>	<b>0.0806</b>	<b>2.3969</b>	<b>12,451.01 13</b>	<b>12,451.01 13</b>	<b>12,451.01 13</b>	<b>0.6725</b>		<b>12,467.82 36</b>

**3.3 Building Construction - Concrete - 2022**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	7.1258	60.9231	64.2744	0.1638	2.7440	2.7440	2.7440	2.6067	2.6067	2.6067	15,762.83 89	15,762.83 89	15,762.83 89	3.8947		15,860.20 66
<b>Total</b>	<b>7.1258</b>	<b>60.9231</b>	<b>64.2744</b>	<b>0.1638</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.7440</b>	<b>2.6067</b>	<b>2.6067</b>	<b>2.6067</b>	<b>15,762.83 89</b>	<b>15,762.83 89</b>	<b>15,762.83 89</b>	<b>3.8947</b>		<b>15,860.20 66</b>

Riverside Arena Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - Concrete - 2022**

Unmitigated Construction Off-Site

Category	lb/day																
	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	
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	0.0000
Vendor	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875	6.386.589 9	6.386.589 9	6.386.589 9	0.5059		6,399.238 0	
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	5.788.931 6	5.788.931 6	5.788.931 6	0.1249		5,792.052 8	
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>	<b>12,175.52 15</b>	<b>12,175.52 15</b>	<b>12,175.52 15</b>	<b>0.6308</b>		<b>12,191.29 08</b>	

Mitigated Construction On-Site

Category	lb/day																
	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	
Off-Road	7.1258	60.9231	64.2744	0.1638		2.7440	2.7440		2.6067	2.6067	0.0000	15,762.83 88	15,762.83 88	3.8947		15,860.20 66	
<b>Total</b>	<b>7.1258</b>	<b>60.9231</b>	<b>64.2744</b>	<b>0.1638</b>		<b>2.7440</b>	<b>2.7440</b>		<b>2.6067</b>	<b>2.6067</b>	<b>0.0000</b>	<b>15,762.83 88</b>	<b>15,762.83 88</b>	<b>3.8947</b>		<b>15,860.20 66</b>	



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - Concrete - 2022**

**Mitigated Construction Off-Site**

Category	lb/day																
	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	
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	0.0000
Vendor	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875	6,386,589	6,386,589	9	0.5059		6,399,238	0
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	5,788,931	5,788,931	6	0.1249		5,792,052	8
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>	<b>12,175.52</b>	<b>12,175.52</b>	<b>15</b>	<b>0.6308</b>		<b>12,191.29</b>	<b>08</b>

**3.4 Building Construction - Steel - 2022**

**Unmitigated Construction On-Site**

Category	lb/day																
	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	
Off-Road	4.2862	41.2357	39.4920	0.0774	1.9930	1.9930	1.9930	1.9275	1.9275	1.9275	7,384,275	7,384,275	3	1.0130		7,409,600	6
<b>Total</b>	<b>4.2862</b>	<b>41.2357</b>	<b>39.4920</b>	<b>0.0774</b>	<b>1.9930</b>	<b>1.9930</b>	<b>1.9930</b>	<b>1.9275</b>	<b>1.9275</b>	<b>1.9275</b>	<b>7,384,275</b>	<b>7,384,275</b>	<b>3</b>	<b>1.0130</b>		<b>7,409,600</b>	<b>6</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.4 Building Construction - Steel - 2022**  
**Unmitigated Construction Off-Site**

Category	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
	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		0.0000
Vendor	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875	6,386.5899	6,386.5899	6,386.5899	0.5059		6,399.2380
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	5,788.9316	5,788.9316	5,788.9316	0.1249		5,792.0528
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>	<b>12,175.5215</b>	<b>12,175.5215</b>	<b>12,175.5215</b>	<b>0.6308</b>		<b>12,191.2908</b>

**Mitigated Construction On-Site**

Category	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
	lb/day															
Off-Road	4.2862	41.2357	39.4920	0.0774		1.9930	1.9930		1.9275	1.9275	0.0000	7,384.2753	7,384.2753	1.0130		7,409.6006
<b>Total</b>	<b>4.2862</b>	<b>41.2357</b>	<b>39.4920</b>	<b>0.0774</b>		<b>1.9930</b>	<b>1.9930</b>		<b>1.9275</b>	<b>1.9275</b>	<b>0.0000</b>	<b>7,384.2753</b>	<b>7,384.2753</b>	<b>1.0130</b>		<b>7,409.6006</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.4 Building Construction - Steel - 2022**

**Mitigated Construction Off-Site**

Category	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
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	0.0000	0.0000
Vendor	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875	6.386.589	6.386.589	6.386.589	0.5059		6,399,238
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	5,788.931	5,788.931	5,788.931	0.1249		5,792,052
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>	<b>12,175.52</b>	<b>12,175.52</b>	<b>12,175.52</b>	<b>0.6308</b>		<b>12,191.29</b>
lb/day																

**3.5 Building Construction - Interior/Exterior - 2022**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.5839	40.2557	35.2064	0.0874	2.0059	2.0059	2.0059	1.8455	1.8455	1.8455	8,462.387	8,462.387	8,462.387	2.7369		8,530.810
<b>Total</b>	<b>4.5839</b>	<b>40.2557</b>	<b>35.2064</b>	<b>0.0874</b>	<b>2.0059</b>	<b>2.0059</b>	<b>2.0059</b>	<b>1.8455</b>	<b>1.8455</b>	<b>1.8455</b>	<b>8,462.387</b>	<b>8,462.387</b>	<b>8,462.387</b>	<b>2.7369</b>		<b>8,530.810</b>
lb/day																

Riverside Arena Construction - Riverside-South Coast County, Winter

**3.5 Building Construction - Interior/Exterior - 2022**

**Unmitigated Construction Off-Site**

Category	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
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		0.0000
Vendor	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875	6.386.589	6.386.589	6.386.589	0.5059		6.399.238
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017	5.788.931	5.788.931	5.788.931	0.1249		5.792.052
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>	<b>12,175.52</b>	<b>12,175.52</b>	<b>12,175.52</b>	<b>0.6308</b>		<b>12,191.29</b>
lb/day																

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.5839	40.2557	35.2064	0.0874		2.0059	2.0059	1.8455	1.8455	1.8455	0.0000	8,462.387	8,462.387	2.7369		8,530.810
<b>Total</b>	<b>4.5839</b>	<b>40.2557</b>	<b>35.2064</b>	<b>0.0874</b>	<b>2.0059</b>	<b>2.0059</b>	<b>2.0059</b>	<b>1.8455</b>	<b>1.8455</b>	<b>1.8455</b>	<b>0.0000</b>	<b>8,462.387</b>	<b>8,462.387</b>	<b>2.7369</b>		<b>8,530.810</b>
lb/day																



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.5 Building Construction - Interior/Exterior - 2022**

**Mitigated Construction Off-Site**

Category	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
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	0.5672	21.1762	4.4668	0.0606	1.5688	0.0374	1.6062	0.4517	0.0358	0.4875		6,386.589	6,386.589	0.5059		6,399.238
Worker	2.7454	1.5805	17.2877	0.0581	7.0307	0.0403	7.0711	1.8646	0.0371	1.9017		5,788.931	5,788.931	0.1249		5,792.052
<b>Total</b>	<b>3.3126</b>	<b>22.7567</b>	<b>21.7545</b>	<b>0.1186</b>	<b>8.5995</b>	<b>0.0778</b>	<b>8.6773</b>	<b>2.3163</b>	<b>0.0729</b>	<b>2.3892</b>		<b>12,175.52</b>	<b>12,175.52</b>	<b>0.6308</b>		<b>12,191.29</b>

**3.5 Building Construction - Interior/Exterior - 2023**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	4.2711	36.3036	34.6809	0.0875		1.7437	1.7437		1.6042	1.6042		8,465.981	8,465.981	2.7381		8,534.432
<b>Total</b>	<b>4.2711</b>	<b>36.3036</b>	<b>34.6809</b>	<b>0.0875</b>		<b>1.7437</b>	<b>1.7437</b>		<b>1.6042</b>	<b>1.6042</b>		<b>8,465.981</b>	<b>8,465.981</b>	<b>2.7381</b>		<b>8,534.432</b>





Riverside Arena Construction - Riverside-South Coast County, Winter

**3.5 Building Construction - Interior/Exterior - 2023**  
**Mitigated Construction Off-Site**

Category	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
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	0.4334	15.8661	3.8300	0.0590	1.5687	0.0167	1.5854	0.4516	0.0160	0.4676		6,220.614	6,220.614	0.3858		6,230.259
Worker	2.5823	1.4246	15.9313	0.0558	7.0307	0.0394	7.0701	1.8646	0.0363	1.9008		5,569.241	5,569.241	0.1122		5,572.047
<b>Total</b>	<b>3.0156</b>	<b>17.2907</b>	<b>19.7612</b>	<b>0.1148</b>	<b>8.5994</b>	<b>0.0561</b>	<b>8.6555</b>	<b>2.3162</b>	<b>0.0522</b>	<b>2.3685</b>		<b>11,789.85</b>	<b>11,789.85</b>	<b>0.4980</b>		<b>11,802.30</b>
lb/day																

**3.6 Paving - 2023**  
**Unmitigated Construction On-Site**

Category	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
lb/day																
Off-Road	3.5408	36.6830	23.4756	0.0503		1.7011	1.7011		1.5650	1.5650		4,874.588	4,874.588	1.5765		4,914.002
Paving	1.2881					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>4.8289</b>	<b>36.6830</b>	<b>23.4756</b>	<b>0.0503</b>		<b>1.7011</b>	<b>1.7011</b>		<b>1.5650</b>	<b>1.5650</b>		<b>4,874.588</b>	<b>4,874.588</b>	<b>1.5765</b>		<b>4,914.002</b>
lb/day																

Riverside Arena Construction - Riverside-South Coast County, Winter

**3.6 Paving - 2023**

**Unmitigated Construction Off-Site**

Category	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
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	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	0.1150	0.0634	0.7092	2.4900e-003	0.3130	1.7500e-003	0.3147	0.0830	1.6100e-003	0.0846	247.9154	247.9154	247.9154	5.0000e-003	248.0403	248.0403
<b>Total</b>	<b>0.1150</b>	<b>0.0634</b>	<b>0.7092</b>	<b>2.4900e-003</b>	<b>0.3130</b>	<b>1.7500e-003</b>	<b>0.3147</b>	<b>0.0830</b>	<b>1.6100e-003</b>	<b>0.0846</b>	<b>247.9154</b>	<b>247.9154</b>	<b>247.9154</b>	<b>5.0000e-003</b>	<b>248.0403</b>	<b>248.0403</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Off-Road	3.5408	36.6830	23.4756	0.0503	1.7011	1.7011	1.7011	1.5650	1.5650	1.5650	0.0000	4.874.588	4.874.588	1.5765	4.914.002	4.914.002
Paving	1.2881				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.8289</b>	<b>36.6830</b>	<b>23.4756</b>	<b>0.0503</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.7011</b>	<b>1.5650</b>	<b>1.5650</b>	<b>1.5650</b>	<b>0.0000</b>	<b>4.874.588</b>	<b>4.874.588</b>	<b>1.5765</b>	<b>4.914.002</b>	<b>4.914.002</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.6 Paving - 2023**

**Mitigated Construction Off-Site**

Category	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
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	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	0.1150	0.0634	0.7092	2.4900e-003	0.3130	1.7500e-003	0.3147	0.0830	1.6100e-003	0.0846	247.9154	247.9154	247.9154	5.0000e-003		248.0403
<b>Total</b>	<b>0.1150</b>	<b>0.0634</b>	<b>0.7092</b>	<b>2.4900e-003</b>	<b>0.3130</b>	<b>1.7500e-003</b>	<b>0.3147</b>	<b>0.0830</b>	<b>1.6100e-003</b>	<b>0.0846</b>	<b>247.9154</b>	<b>247.9154</b>	<b>247.9154</b>	<b>5.0000e-003</b>		<b>248.0403</b>

**3.7 Architectural Coating - 2023**

**Unmitigated Construction On-Site**

Category	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
lb/day																
Archit. Coating	55.7987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708	0.0708	0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>55.9903</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>		<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>

Riverside Arena Construction - Riverside-South Coast County, Winter

**3.7 Architectural Coating - 2023**  
**Unmitigated Construction Off-Site**

Category	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
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	0.5173	0.2854	3.1913	0.0112	1.4084	7.8900e-003	1.4163	0.3735	7.2600e-003	0.3808		1,115.619 2	1,115.619 2	0.0225		1,116.181 2
<b>Total</b>	<b>0.5173</b>	<b>0.2854</b>	<b>3.1913</b>	<b>0.0112</b>	<b>1.4084</b>	<b>7.8900e-003</b>	<b>1.4163</b>	<b>0.3735</b>	<b>7.2600e-003</b>	<b>0.3808</b>		<b>1,115.619 2</b>	<b>1,115.619 2</b>	<b>0.0225</b>		<b>1,116.181 2</b>

**Mitigated Construction On-Site**

Category	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
lb/day																
Archit. Coating	55.7987					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003	0.0708	0.0708	0.0708	0.0708	0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
<b>Total</b>	<b>55.9903</b>	<b>1.3030</b>	<b>1.8111</b>	<b>2.9700e-003</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0708</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0168</b>		<b>281.8690</b>



Riverside Arena Construction - Riverside-South Coast County, Winter

**3.7 Architectural Coating - 2023**  
**Mitigated Construction Off-Site**

Category	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
	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	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	0.5173	0.2854	3.1913	0.0112	1.4084	7.8900e-003	1.4163	0.3735	7.2600e-003	0.3808	1,115.6192	1,115.6192	0.0225			1,116.1812
<b>Total</b>	<b>0.5173</b>	<b>0.2854</b>	<b>3.1913</b>	<b>0.0112</b>	<b>1.4084</b>	<b>7.8900e-003</b>	<b>1.4163</b>	<b>0.3735</b>	<b>7.2600e-003</b>	<b>0.3808</b>	<b>1,115.6192</b>	<b>1,115.6192</b>	<b>0.0225</b>			<b>1,116.1812</b>

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

Riverside Arena Construction - Riverside-South Coast County, Winter

Category	lb/day															
	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
Mitigated	4,8770	34,5089	49,7876	0,2301	18,0732	0,1346	18,2078	4,8350	0,1254	4,9604	23,559,03	94	23,559,03	1,2702		23,590,79
Unmitigated	4,8770	34,5089	49,7876	0,2301	18,0732	0,1346	18,2078	4,8350	0,1254	4,9604	23,559,03	94	23,559,03	1,2702		23,590,79

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Arena	2,784.60	2,784.60	2,784.60	6,010,564	6,010,564
Health Club	1,152.55	730.45	935.55	2,269,771	2,269,771
Parking Lot	0.00	0.00	0.00		
Total	3,937.15	3,515.05	3,720.15	8,280,335	8,280,335

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix



Riverside Arena Construction - Riverside-South Coast County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Arena	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Health Club	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
lb/day																
Natural Gas Mitigated	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	3,089,299	0	3,089,299	0.0592	0.0566	3,107,657
Natural Gas Unmitigated	0.2832	2.5744	2.1625	0.0155	0.1957	0.1957	0.1957	0.1957	0.1957	0.1957	3,089,299	0	3,089,299	0.0592	0.0566	3,107,657

Riverside Arena Construction - Riverside-South Coast County, Winter

**5.2 Energy by Land Use - Natural Gas**

**Unmitigated**

Land Use	Natural Gas Use kBTU/yr	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	
Arena	23143.6	0.2496	2.2690	1.9059	0.0136	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724		2.722.772 0	2.722.772 0	0.0522	0.0499	2.738.952 0	
Health Club	3115.48	0.0336	0.3054	0.2566	1.8300e-003	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232		366.5270	366.5270	7.0300e-003	6.7200e-003	368.7051	
Parking Lot	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	0.0000	
<b>Total</b>		<b>0.2832</b>	<b>2.5744</b>	<b>2.1625</b>	<b>0.0154</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>		<b>3,089.299 0</b>	<b>3,089.299 0</b>	<b>0.0592</b>	<b>0.0566</b>	<b>3,107.657 1</b>	

**Mitigated**

Land Use	Natural Gas Use kBTU/yr	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
Arena	23.1436	0.2496	2.2690	1.9059	0.0136	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724		2.722.772 0	2.722.772 0	0.0522	0.0499	2.738.952 0
Health Club	3.11548	0.0336	0.3054	0.2566	1.8300e-003	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232		366.5270	366.5270	7.0300e-003	6.7200e-003	368.7051
Parking Lot	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	0.0000
<b>Total</b>		<b>0.2832</b>	<b>2.5744</b>	<b>2.1625</b>	<b>0.0154</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>	<b>0.1957</b>		<b>3,089.299 0</b>	<b>3,089.299 0</b>	<b>0.0592</b>	<b>0.0566</b>	<b>3,107.657 1</b>

**6.0 Area Detail**



Riverside Arena Construction - Riverside-South Coast County, Winter

**6.1 Mitigation Measures Area**

Category	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
Mitigated	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
Unmitigated	7.1388	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	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
Architectural Coating	0.8408				0.0000	0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2668				0.0000	0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0312	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003		0.7222	0.7222	1.8900e-003		0.7696
<b>Total</b>	<b>7.1388</b>	<b>3.0700e-003</b>	<b>0.3369</b>	<b>3.0000e-005</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>		<b>0.7222</b>	<b>0.7222</b>	<b>1.8900e-003</b>		<b>0.7696</b>

Riverside Arena Construction - Riverside-South Coast County, Winter

6.2 Area by SubCategory

Mitigated

SubCategory	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
	lb/day															
Architectural Coating	0.8408				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2666				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Landscaping	0.0312	3.0700e-003	0.3369	3.0000e-005	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	1.2000e-003	0.7222	0.7222	0.7222	1.8900e-003		0.7696
<b>Total</b>	<b>7.1388</b>	<b>3.0700e-003</b>	<b>0.3369</b>	<b>3.0000e-005</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>1.2000e-003</b>	<b>0.7222</b>	<b>0.7222</b>	<b>0.7222</b>	<b>1.8900e-003</b>		<b>0.7696</b>

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 Stationary Equipment

Fire Pumps and Emergency Generators



Riverside Arena Construction - Riverside-South Coast County, Winter

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**

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Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Annual

**Proposed NorthStar Specific Plan - Operation**  
**Riverside-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	230.00	1000sqft	16.00	230,000.00	0
Industrial Park	381.04	1000sqft	28.20	381,035.00	0
Parking Lot	3,005.00	Space	27.04	1,202,000.00	0
Arena	260.00	1000sqft	41.40	260,000.00	0
Golf Course	18.00	Hole	245.90	0.00	0
Health Club	35.00	1000sqft	0.00	35,000.00	0
Hotel	350.00	Room	17.60	508,200.00	0
Apartments Low Rise	216.00	Dwelling Unit	9.95	216,000.00	618
Apartments Mid Rise	550.00	Dwelling Unit	33.20	550,000.00	1573
Single Family Housing	54.00	Dwelling Unit	7.30	97,200.00	154
Regional Shopping Center	400.00	1000sqft	36.20	400,000.00	0
Regional Shopping Center	100.00	1000sqft	20.00	100,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MW/hr)	1270.9	CH4 Intensity (lb/MW/hr)	0.029	N2O Intensity (lb/MW/hr)	0.006



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Annual

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - See SWAPE comment about golf course, arena, and parking land uses.

Construction Phase - Consistent with Addendum's model.

Vehicle Trips - Consistent with Addendum's model.

Woodstoves - See SWAPE comment about gas fireplaces.

Mobile Land Use Mitigation - See SWAPE comment about operational mitigation measures.

Area Mitigation - See SWAPE comment about operational mitigation measures.

Water Mitigation - See SWAPE comment about operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	PhaseEndDate	3/3/2023	4/4/2021
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	10.80	0.00
tblFireplaces	NumberWood	27.50	0.00
tblFireplaces	NumberWood	2.70	0.00
tblLandUse	LotAcreage	5.28	16.00
tblLandUse	LotAcreage	8.75	28.20
tblLandUse	LotAcreage	83.57	41.40
tblLandUse	LotAcreage	125.66	245.90
tblLandUse	LotAcreage	0.80	0.00
tblLandUse	LotAcreage	11.67	17.60
tblLandUse	LotAcreage	13.50	9.95



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Annual

tblLandUse	LotAcreage	14.47	33.20
tblLandUse	LotAcreage	17.53	7.30
tblLandUse	LotAcreage	2.30	20.00
tblLandUse	LotAcreage	9.18	36.20
tblVehicleTrips	ST_TR	7.16	7.34
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	ST_TR	10.71	33.35
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	40.63	19.89
tblVehicleTrips	ST_TR	20.87	33.35
tblVehicleTrips	ST_TR	49.97	46.12
tblVehicleTrips	ST_TR	2.49	2.54
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	6.07	6.01
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	SU_TR	10.71	33.35
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	39.53	18.89
tblVehicleTrips	SU_TR	26.73	33.35
tblVehicleTrips	SU_TR	25.24	21.10
tblVehicleTrips	SU_TR	0.73	1.24
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	6.59	8.63
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	10.71	33.35
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	35.74	30.38



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tblVehicleTrips	WD_TR	32.93	33.35
tblVehicleTrips	WD_TR	8.17	8.36
tblVehicleTrips	WD_TR	42.70	37.75
tblVehicleTrips	WD_TR	6.83	3.37
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	10.80	0.00
tblWoodstoves	NumberCatalytic	27.50	0.00
tblWoodstoves	NumberCatalytic	2.70	0.00
tblWoodstoves	NumberNoncatalytic	10.80	0.00
tblWoodstoves	NumberNoncatalytic	27.50	0.00
tblWoodstoves	NumberNoncatalytic	2.70	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary





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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

**2.2 Overall Operational  
 Unmitigated Operational**

Category	tons/yr										MT/yr					
	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
Area	11.8948	0.2426	8.5808	1.3700e-003		0.0587	0.0587		0.0587	0.0587	0.0000	181.3075	181.3075	0.0168	3.0700e-003	182.6420
Energy	0.3045	2.7292	2.0413	0.0166		0.2104	0.2104		0.2104	0.2104	0.0000	19,614.6705	19,614.6705	0.4366	0.1336	19,665.4031
Mobile	9.1955	66.0111	101.6285	0.4763	36.6302	0.2703	36.9005	9.8129	0.2519	10.0648	0.0000	44,228.8343	44,228.8343	2.1394	0.0000	44,282.3182
Waste						0.0000	0.0000		0.0000	0.0000	411.5804	411.5804	24.3237	0.0000	0.0000	1,019.6731
Water						0.0000	0.0000		0.0000	0.0000	108.6295	4,219.4996	11.2511	0.2829	0.0000	4,585.0672
<b>Total</b>	<b>21.3948</b>	<b>68.9829</b>	<b>112.2505</b>	<b>0.4943</b>	<b>36.6302</b>	<b>0.5394</b>	<b>37.1696</b>	<b>9.8129</b>	<b>0.5210</b>	<b>10.3338</b>	<b>520.2099</b>	<b>68,135.6819</b>	<b>68,655.8918</b>	<b>38.1675</b>	<b>0.4196</b>	<b>69,735.1036</b>

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**2.2 Overall Operational  
 Mitigated Operational**

Category	tons/yr										MT/yr					
	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
Area	11.8948	0.2426	8.5808	1.3700e-003	0.0587	0.0587	0.0587	0.0587	0.0587	0.0587	0.0000	181.3075	181.3075	0.0168	3.0700e-003	182.6420
Energy	0.3045	2.7292	2.0413	0.0166	0.2104	0.2104	0.2104	0.2104	0.2104	0.2104	0.0000	19.614.67	19.614.67	0.4366	0.1336	19.665.40
Mobile	9.1955	66.0111	101.6285	0.4763	36.6302	0.2703	36.9005	9.8129	10.0648	10.0648	0.0000	44,228.83	44,228.83	2.1394	0.0000	44,282.31
Waste					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	411.5804	0.0000	411.5804	24.3237	0.0000	1,019.673
Water					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	108.6295	4,110.869	4,219.499	11.2511	0.2829	4,585.067
<b>Total</b>	<b>21.3948</b>	<b>68.9829</b>	<b>112.2505</b>	<b>0.4943</b>	<b>36.6302</b>	<b>0.5394</b>	<b>37.1696</b>	<b>9.8129</b>	<b>10.3338</b>	<b>10.3338</b>	<b>520.2099</b>	<b>68,135.68</b>	<b>68,655.89</b>	<b>38.1675</b>	<b>0.4196</b>	<b>69,735.10</b>

Percent Reduction	tons/yr										MT/yr					
	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
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	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	Demolition	Demolition	4/5/2021	4/4/2021	5	0	

Acres of Grading (Site Preparation Phase): 0



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Acres of Grading (Grading Phase): 0

Acres of Paving: 27.04

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

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
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction





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**3.2 Demolition - 2021**

**Mitigated Construction On-Site**

Category	tons/yr										MT/yr					
	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
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction Off-Site**

Category	tons/yr										MT/yr					
	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
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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

Improve Pedestrian Network

Category	tons/yr										MT/yr					
	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
Mitigated	9.1955	66.0111	101.6285	0.4763	36.6302	0.2703	36.9005	9.8129	0.2519	10.0648	0.0000	44,228.83 43	44,228.83 43	2.1394	0.0000	44,282.31 82
Unmitigated	9.1955	66.0111	101.6285	0.4763	36.6302	0.2703	36.9005	9.8129	0.2519	10.0648	0.0000	44,228.83 43	44,228.83 43	2.1394	0.0000	44,282.31 82

**4.2 Trip Summary Information**



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Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartments Low Rise	1,864.08	1,585.44	1,298.16	5,957,560	5,957,560
Apartments Mid Rise	2,992.00	2,700.50	2,249.50	9,719,356	9,719,356
Arena	8,671.00	8,671.00	8,671.00	18,716,369	18,716,369
General Office Building	2,240.20	508.30	161.00	5,462,815	5,462,815
Golf Course	546.84	358.02	340.02	1,194,180	1,194,180
Health Club	1,167.25	1,167.25	1,167.25	2,496,480	2,496,480
Hotel	2,926.00	2,866.50	2,082.50	6,674,120	6,674,120
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,100.00	18,448.00	8,440.00	31,635,610	31,635,610
Regional Shopping Center	3,775.00	4,612.00	2,110.00	7,908,902	7,908,902
Industrial Park	1,284.09	967.83	472.48	4,465,903	4,465,903
Single Family Housing	509.76	515.16	461.70	1,721,102	1,721,102
Total	41,076.22	42,400.00	27,453.61	95,952,399	95,952,399

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Apartments Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Golf Course	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LH-D1	LHD2	MH-D	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Apartments Mid Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Arena	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
General Office Building	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Golf Course	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Health Club	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Hotel	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Regional Shopping Center	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Industrial Park	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Single Family Housing	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy



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Category	ROG	NOx	CO	SO2	tons/yr			MT/yr					CO2e			
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16,601.48 57	16,601.48 57	0.3788	0.0784	16,634.31 24
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16,601.48 57	16,601.48 57	0.3788	0.0784	16,634.31 24
Natural Gas Mitigated	0.3045	2.7292	2.0413	0.0166		0.2104	0.2104		0.2104	0.2104	0.0000	3,013.184 9	3,013.184 9	0.0578	0.0552	3,031.090 7
Natural Gas Unmitigated	0.3045	2.7292	2.0413	0.0166		0.2104	0.2104		0.2104	0.2104	0.0000	3,013.184 9	3,013.184 9	0.0578	0.0552	3,031.090 7



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5.2 Energy by Land Use - Natural Gas

Unmitigated

Land Use	Natural Gas Use kBTU/yr	tons/yr										MT/yr					
		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
Apartments Low Rise	3.36409e+006	0.0181	0.1550	0.0660	9.9000e-004	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0000	179.5208	179.5208	3.4400e-003	3.2900e-003	180.5876
Apartments Mid Rise	8.13674e+006	0.0439	0.3749	0.1595	2.3900e-003	0.0303	0.0303	0.0303	0.0303	0.0303	0.0000	434.2077	434.2077	8.3200e-003	7.9600e-003	436.7879	
Arena	8.4474e+006	0.0456	0.4141	0.3478	2.4800e-003	0.0315	0.0315	0.0315	0.0315	0.0315	0.0000	450.7854	450.7854	8.6400e-003	8.2600e-003	453.4642	
General Office Building	798100	4.3000e-003	0.0391	0.0329	2.3000e-004	2.9700e-003	2.9700e-003	2.9700e-003	2.9700e-003	2.9700e-003	0.0000	42.5897	42.5897	8.2000e-004	7.8000e-004	42.8427	
Golf Course	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	0.0000	0.0000
Health Club	1.13715e+006	6.1300e-003	0.0557	0.0468	3.3000e-004	4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003	0.0000	60.6827	60.6827	1.1600e-003	1.1100e-003	61.0433	
Hotel	3.04977e+007	0.1645	1.4950	1.2558	8.9700e-003	0.1136	0.1136	0.1136	0.1136	0.1136	0.0000	1,627.4404	1,627.4404	0.0312	0.0298	1,637.1115	
Industrial Park	1.32219e+006	7.1300e-003	0.0648	0.0544	3.9000e-004	4.9300e-003	4.9300e-003	4.9300e-003	4.9300e-003	4.9300e-003	0.0000	70.5572	70.5572	1.3500e-003	1.2900e-003	70.9765	
Parking Lot	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	0.0000	0.0000
Regional Shopping Center	222000	1.2000e-003	0.0109	9.1400e-003	7.0000e-005	8.3000e-004	8.3000e-004	8.3000e-004	8.3000e-004	8.3000e-004	0.0000	11.8468	11.8468	2.3000e-004	2.2000e-004	11.9172	
Regional Shopping Center	888000	4.7900e-003	0.0435	0.0366	2.6000e-004	3.3100e-003	3.3100e-003	3.3100e-003	3.3100e-003	3.3100e-003	0.0000	47.3871	47.3871	9.1000e-004	8.7000e-004	47.6687	
Single Family Housing	1.65219e+006	8.9100e-003	0.0761	0.0324	4.9000e-004	6.1600e-003	6.1600e-003	6.1600e-003	6.1600e-003	6.1600e-003	0.0000	88.1673	88.1673	1.6900e-003	1.6200e-003	88.6912	
<b>Total</b>		<b>0.3045</b>	<b>2.7292</b>	<b>2.0413</b>	<b>0.0166</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.0000</b>	<b>3,013.1849</b>	<b>3,013.1849</b>	<b>0.0578</b>	<b>0.0552</b>	<b>3,031.0907</b>	



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**5.2 Energy by Land Use - NaturalGas**  
**Mitigated**

Land Use	NaturalGas Use kBTU/yr	tons/yr										MT/yr					CO2e
		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	
Apartments Low Rise	3.36409e+006	0.0181	0.1550	0.0660	9.9000e-004	0.0125	0.0125	0.0125	0.0125	0.0125	0.0125	0.0000	179.5208	179.5208	3.4400e-003	3.2900e-003	180.5876
Apartments Mid Rise	8.13674e+006	0.0439	0.3749	0.1595	2.3900e-003	0.0303	0.0303	0.0303	0.0303	0.0303	0.0303	0.0000	434.2077	434.2077	8.3200e-003	7.9600e-003	436.7879
Arena	8.4474e+006	0.0456	0.4141	0.3478	2.4800e-003	0.0315	0.0315	0.0315	0.0315	0.0315	0.0000	450.7854	450.7854	8.6400e-003	8.2600e-003	453.4642	
General Office Building	798100	4.3000e-003	0.0391	0.0329	2.3000e-004	2.9700e-003	2.9700e-003	2.9700e-003	2.9700e-003	2.9700e-003	0.0000	42.5897	42.5897	8.2000e-004	7.8000e-004	42.8427	
Golf Course	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	0.0000	0.0000
Health Club	1.13715e+006	6.1300e-003	0.0557	0.0468	3.3000e-004	4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003	4.2400e-003	0.0000	60.6827	60.6827	1.1600e-003	1.1100e-003	61.0433	
Hotel	3.04971e+007	0.1645	1.4950	1.2558	8.9700e-003	0.1136	0.1136	0.1136	0.1136	0.1136	0.0000	1,627.440	1,627.440	0.0312	0.0298	1,637.115	
Industrial Park	1.32219e+006	7.1300e-003	0.0648	0.0544	3.9000e-004	4.9300e-003	4.9300e-003	4.9300e-003	4.9300e-003	4.9300e-003	0.0000	70.5572	70.5572	1.3500e-003	1.2900e-003	70.9765	
Parking Lot	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	0.0000	
Regional Shopping Center	222000	1.2000e-003	0.0109	9.1400e-003	7.0000e-005	8.3000e-004	8.3000e-004	8.3000e-004	8.3000e-004	8.3000e-004	0.0000	11.8468	11.8468	2.3000e-004	2.2000e-004	11.9172	
Regional Shopping Center	888000	4.7900e-003	0.0435	0.0366	2.6000e-004	3.3100e-003	3.3100e-003	3.3100e-003	3.3100e-003	3.3100e-003	0.0000	47.3871	47.3871	9.1000e-004	8.7000e-004	47.6687	
Single Family Housing	1.65219e+006	8.9100e-003	0.0761	0.0324	4.9000e-004	6.1600e-003	6.1600e-003	6.1600e-003	6.1600e-003	6.1600e-003	0.0000	88.1673	88.1673	1.6900e-003	1.6200e-003	88.6912	
<b>Total</b>		<b>0.3045</b>	<b>2.7292</b>	<b>2.0413</b>	<b>0.0166</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.2104</b>	<b>0.0000</b>	<b>3,013.184</b>	<b>3,013.184</b>	<b>0.0578</b>	<b>0.0552</b>	<b>3,031.090</b>	

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
Apartments Low Rise	1.04982e+006	605.1881	0.0138	2.8600e-003	606.3848
Apartments Mid Rise	2.51224e+006	1,448,232	0.0331	6.8400e-003	1,451,096
Arena	2.639e+006	1,521,305	0.0347	7.1800e-003	1,524,313
General Office Building	2.1886e+006	1,262,239	0.0288	5.9600e-003	1,264,735
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Health Club	355250	204,7912	4.6700e-003	9.7000e-004	205,1961
Hotel	9.21875e+006	5,314,336	0.1213	0.0251	5,324,844
Industrial Park	3.62745e+006	2,091,119	0.0477	9.8700e-003	2,095,254
Parking Lot	420700	242,5212	5.5300e-003	1.1400e-003	243,0007
Regional Shopping Center	1.263e+006	728,0823	0.0166	3.4400e-003	729,5220
Regional Shopping Center	5.052e+006	2,912,329	0.0665	0.0138	2,918,087
Single Family Housing	470690	271,3389	6.1900e-003	1.2800e-003	271,8754
<b>Total</b>		<b>16,601.48</b>	<b>0.3788</b>	<b>0.0784</b>	<b>16,634.31</b>
		<b>57</b>		<b>24</b>	



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**5.3 Energy by Land Use - Electricity**

**Mitigated**

Land Use	Electricity Use	Total CO2	CH4	N2O	CO2e
	kWh/yr	MT/yr			
Apartments Low Rise	1,049,826 +006	605,1881	0,0138	2,860,000e-003	606,3848
Apartments Mid Rise	2,512,246 +006	1,448,2327	0,0331	6,840,000e-003	1,451,0963
Arena	2,639e +006	1,521,3058	0,0347	7,180,000e-003	1,524,3139
General Office Building	2,189e +006	1,262,2399	0,0288	5,960,000e-003	1,264,7358
Golf Course	0	0,0000	0,0000	0,0000	0,0000
Health Club	355,250	204,7912	4,670,000e-003	9,700,000e-004	205,1961
Hotel	9,218,756 +006	5,314,3367	0,1213	0,0251	5,324,8449
Industrial Park	3,627,456 +006	2,091,1199	0,0477	9,870,000e-003	2,095,2548
Parking Lot	420,700	242,5212	5,530,000e-003	1,140,000e-003	243,0007
Regional Shopping Center	1,263e +006	728,0823	0,0166	3,440,000e-003	729,5220
Regional Shopping Center	5,052e +006	2,912,3292	0,0665	0,0138	2,918,0879
Single Family Housing	470,690	271,3389	6,190,000e-003	1,280,000e-003	271,8754
<b>Total</b>		<b>16,601,4857</b>	<b>0,3786</b>	<b>0,0784</b>	<b>16,634,3124</b>

**6.0 Area Detail**

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Annual

**6.1 Mitigation Measures Area**

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

Category	tons/yr											MT/yr				
	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
Mitigated	11.8948	0.2426	8.5808	1.3700e-003	0.0587	0.0587	0.0587	0.0587	0.0587	0.0587	0.0000	181.3075	181.3075	0.0168	3.0700e-003	182.6420
Unmitigated	11.8948	0.2426	8.5808	1.3700e-003	0.0587	0.0587	0.0587	0.0587	0.0587	0.0587	0.0000	181.3075	181.3075	0.0168	3.0700e-003	182.6420



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**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	tons/yr										MT/yr					
	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
Architectural Coating	1.2116					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	10.4059					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0169	0.1445	0.0615	9.2000e-004	0.0117	0.0117	0.0117	0.0117	0.0117	0.0117	0.0000	167.3756	167.3756	3.2100e-003	3.0700e-003	168.3702
Landscaping	0.2605	0.0981	8.5193	4.5000e-004	0.0470	0.0470	0.0470	0.0470	0.0470	0.0470	0.0000	13.9320	13.9320	0.0136	0.0000	14.2718
<b>Total</b>	<b>11.8948</b>	<b>0.2426</b>	<b>8.5808</b>	<b>1.3700e-003</b>		<b>0.0587</b>	<b>0.0587</b>		<b>0.0587</b>	<b>0.0587</b>	<b>0.0000</b>	<b>181.3075</b>	<b>181.3075</b>	<b>0.0168</b>	<b>3.0700e-003</b>	<b>182.6420</b>

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**6.2 Area by SubCategory**  
**Mitigated**

SubCategory	ROG	NOx	CO	SO2	PM10 tons/yr			PM2.5 Total			MT/yr				CO2e		
					Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4		N2O	
Architectural Coating	1.2116					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Consumer Products	10.4059					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Hearth	0.0169	0.1445	0.0615	9.2000e-004	0.0117	0.0117	0.0117	0.0117	0.0117	0.0117	0.0117	0.0000	167.3756	167.3756	3.2100e-003	3.0700e-003	168.3702
Landscaping	0.2605	0.0981	8.5193	4.5000e-004	0.0470	0.0470	0.0470	0.0470	0.0470	0.0470	0.0470	0.0000	13.9320	13.9320	0.0136	0.0000	14.2718
<b>Total</b>	<b>11.8948</b>	<b>0.2426</b>	<b>8.5808</b>	<b>1.3700e-003</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0587</b>	<b>0.0000</b>	<b>181.3075</b>	<b>181.3075</b>	<b>0.0168</b>	<b>3.0700e-003</b>	<b>182.6420</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**



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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4,219,499	11,2511	0,2829	4,585,067
	0			2
Unmitigated	4,219,499	11,2511	0,2829	4,585,067
	0			2

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**7.2 Water by Land Use**

**Unmitigated**

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
	Mgal	MT/yr			
Apartments Low Rise	14.0733 / 8.87228	166.9252	0.4623	0.0116	181.9376
Apartments Mid Rise	35.8347 / 22.5915	425.0410	1.1771	0.0295	463.2671
Arena	112 / 7.14895	922.0173	3.6698	0.0904	1,040.6880
General Office Building	40.8788 / 25.0547	480.2792	1.3427	0.0337	523.8769
Golf Course	0 / 149.721	958.9033	0.0219	4.5300e-003	960.7993
Health Club	2.07001 / 1.26872	24.3203	0.0680	1.7000e-003	26.5280
Hotel	8.87837 / 0.986486	75.7778	0.2910	7.1800e-003	85.1902
Industrial Park	88.1155 / 0	689.3696	2.8863	0.0709	782.6618
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	37.0363 / 22.6996	435.1342	1.2165	0.0305	474.6338
Single Family Housing	3.51832 / 2.21807	41.7313	0.1156	2.9000e-003	45.4844
<b>Total</b>		<b>4,219,499</b> <b>0</b>	<b>11.2511</b>	<b>0.2829</b>	<b>4,585,067</b> <b>2</b>



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7.2 Water by Land Use

Mitigated

Land Use	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Mgal	MT/yr	MT/yr	MT/yr	MT/yr	MT/yr
Apartments Low Rise	14.0733 / 8.87228	166.9252	0.4623	0.0116	181.9376
Apartments Mid Rise	35.8347 / 22.5915	425.0410	1.1771	0.0295	463.2671
Arena	112 / 7.14895	922.0173	3.6698	0.0904	1,040.6880
General Office Building	40.8788 / 25.0547	480.2792	1.3427	0.0337	523.8769
Golf Course	0 / 149.721	958.9033	0.0219	4.5300e-003	960.7993
Health Club	2.07001 / 1.26872	24.3203	0.0680	1.7000e-003	26.5280
Hotel	8.87837 / 0.986486	75.7778	0.2910	7.1800e-003	85.1902
Industrial Park	88.1155 / 0	689.3696	2.8863	0.0709	782.6618
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	37.0363 / 22.6996	435.1342	1.2165	0.0305	474.6338
Single Family Housing	3.51832 / 2.21807	41.7313	0.1156	2.9000e-003	45.4844
<b>Total</b>		<b>4,219,499<sub>0</sub></b>	<b>11,2511</b>	<b>0.2829</b>	<b>4,585,067<sub>2</sub></b>

8.0 Waste Detail

8.1 Mitigation Measures Waste

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**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	411.5804	24.3237	0.0000	1,019.673
Unmitigated	411.5804	24.3237	0.0000	1,019.673



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**8.2 Waste by Land Use**

Unmitigated

Land Use	Waste Disposed	Total CO2	CH4	N2O	CO2e
	tons	MT/yr			
Apartments Low Rise	99.36	20.1692	1.1920	0.0000	49.9683
Apartments Mid Rise	253	51.3567	3.0351	0.0000	127.2341
Arena	7.16	1.4534	0.0859	0.0000	3.6008
General Office Building	213.9	43.4198	2.5660	0.0000	107.5706
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070
Health Club	199.5	40.4967	2.3933	0.0000	100.3289
Hotel	191.63	38.8992	2.2989	0.0000	96.3710
Industrial Park	472.49	95.9112	5.6682	0.0000	237.6159
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	525	106.5703	6.2981	0.0000	264.0233
Single Family Housing	63.14	12.8169	0.7575	0.0000	31.7532
<b>Total</b>		<b>411.5804</b>	<b>24.3237</b>	<b>0.0000</b>	<b>1,019.6730</b>

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**8.2 Waste by Land Use**

**Mitigated**

Land Use	Waste Disposed tons	MT/yr				CO2e
		Total CO2	CH4	N2O	CO2e	
Apartments Low Rise	99.36	20.1692	1.1920	0.0000	49.9683	
Apartments Mid Rise	253	51.3567	3.0351	0.0000	127.2341	
Arena	7.16	1.4534	0.0859	0.0000	3.6008	
General Office Building	213.9	43.4198	2.5660	0.0000	107.5706	
Golf Course	2.4	0.4872	0.0288	0.0000	1.2070	
Health Club	199.5	40.4967	2.3933	0.0000	100.3289	
Hotel	191.63	38.8992	2.2989	0.0000	96.3710	
Industrial Park	472.49	95.9112	5.6682	0.0000	237.6159	
Parking Lot	0	0.0000	0.0000	0.0000	0.0000	
Regional Shopping Center	525	106.5703	6.2981	0.0000	264.0233	
Single Family Housing	63.14	12.8169	0.7575	0.0000	31.7532	
<b>Total</b>		<b>411.5804</b>	<b>24.3237</b>	<b>0.0000</b>	<b>1,019.6730</b>	

**9.0 Operational Offroad**

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



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### 10.0 Stationary Equipment

#### Fire Pumps and Emergency Generators

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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#### User Defined Equipment

Equipment Type	Number
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### 11.0 Vegetation

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**Proposed NorthStar Specific Plan - Operation  
 Riverside-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	230.00	1000sqft	16.00	230,000.00	0
Industrial Park	381.04	1000sqft	28.20	381,035.00	0
Parking Lot	3,005.00	Space	27.04	1,202,000.00	0
Arena	260.00	1000sqft	41.40	260,000.00	0
Golf Course	18.00	Hole	245.90	0.00	0
Health Club	35.00	1000sqft	0.00	35,000.00	0
Hotel	350.00	Room	17.60	508,200.00	0
Apartments Low Rise	216.00	Dwelling Unit	9.95	216,000.00	618
Apartments Mid Rise	550.00	Dwelling Unit	33.20	550,000.00	1573
Single Family Housing	54.00	Dwelling Unit	7.30	97,200.00	154
Regional Shopping Center	400.00	1000sqft	36.20	400,000.00	0
Regional Shopping Center	100.00	1000sqft	20.00	100,000.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2023
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	1270.9	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - See SWAPE comment about golf course, arena, and parking land uses.

Construction Phase - Consistent with Addendum's model.

Vehicle Trips - Consistent with Addendum's model.

Woodstoves - See SWAPE comment about gas fireplaces.

Mobile Land Use Mitigation - See SWAPE comment about operational mitigation measures.

Area Mitigation - See SWAPE comment about operational mitigation measures.

Water Mitigation - See SWAPE comment about operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	500.00	0.00
tblConstructionPhase	PhaseEndDate	3/3/2023	4/4/2021
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	10.80	0.00
tblFireplaces	NumberWood	27.50	0.00
tblFireplaces	NumberWood	2.70	0.00
tblLandUse	LotAcreage	5.28	16.00
tblLandUse	LotAcreage	8.75	28.20
tblLandUse	LotAcreage	83.57	41.40
tblLandUse	LotAcreage	125.66	245.90
tblLandUse	LotAcreage	0.80	0.00
tblLandUse	LotAcreage	11.67	17.60
tblLandUse	LotAcreage	13.50	9.95

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

tblLandUse	LotAcreage	14.47	33.20
tblLandUse	LotAcreage	17.53	7.30
tblLandUse	LotAcreage	2.30	20.00
tblLandUse	LotAcreage	9.18	36.20
tblVehicleTrips	ST_TR	7.16	7.34
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	ST_TR	10.71	33.35
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	40.63	19.89
tblVehicleTrips	ST_TR	20.87	33.35
tblVehicleTrips	ST_TR	49.97	46.12
tblVehicleTrips	ST_TR	2.49	2.54
tblVehicleTrips	ST_TR	9.91	9.54
tblVehicleTrips	SU_TR	6.07	6.01
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	SU_TR	10.71	33.35
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	SU_TR	39.53	18.89
tblVehicleTrips	SU_TR	26.73	33.35
tblVehicleTrips	SU_TR	25.24	21.10
tblVehicleTrips	SU_TR	0.73	1.24
tblVehicleTrips	SU_TR	8.62	8.55
tblVehicleTrips	WD_TR	6.59	8.63
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	10.71	33.35
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	35.74	30.38



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

tblVehicleTrips	WD_TR	32.93	33.35
tblVehicleTrips	WD_TR	8.17	8.36
tblVehicleTrips	WD_TR	42.70	37.75
tblVehicleTrips	WD_TR	6.83	3.37
tblVehicleTrips	WD_TR	9.52	9.44
tblWoodstoves	NumberCatalytic	10.80	0.00
tblWoodstoves	NumberCatalytic	27.50	0.00
tblWoodstoves	NumberCatalytic	2.70	0.00
tblWoodstoves	NumberNoncatalytic	10.80	0.00
tblWoodstoves	NumberNoncatalytic	27.50	0.00
tblWoodstoves	NumberNoncatalytic	2.70	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary





Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**2.2 Overall Operational**  
**Unmitigated Operational**

Category	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
lb/day																
Area	67.0941	12.3464	73.0740	0.0774	1.3111	1.3111	1.3111	1.3111	1.3111	1.3111	0.0000	14,882.85	14,882.85	0.4028	0.2706	14,973.56
Energy	1.6683	14.9545	11.1854	0.0910	1.1527	1.1527	1.1527	1.1527	1.1527	1.1527	18,199.82	18,199.82	18,199.82	0.3488	0.3337	18,307.97
Mobile	69.7687	413.7496	710.7832	3.1810	234.7312	1.7009	236.4321	62.7961	1.5849	64.3810	325,265.9	325,265.9	325,265.9	14.7845	0.6043	325,635.5
<b>Total</b>	<b>138.5310</b>	<b>441.0506</b>	<b>795.0426</b>	<b>3.3494</b>	<b>234.7312</b>	<b>4.1647</b>	<b>238.8958</b>	<b>62.7961</b>	<b>4.0486</b>	<b>66.8447</b>	<b>0.0000</b>	<b>358,348.6</b>	<b>358,348.6</b>	<b>15.5361</b>	<b>0.6043</b>	<b>358,917.1</b>
lb/day																

**Mitigated Operational**

Category	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
lb/day																
Area	67.0941	12.3464	73.0740	0.0774	1.3111	1.3111	1.3111	1.3111	1.3111	1.3111	0.0000	14,882.85	14,882.85	0.4028	0.2706	14,973.56
Energy	1.6683	14.9545	11.1854	0.0910	1.1527	1.1527	1.1527	1.1527	1.1527	1.1527	18,199.82	18,199.82	18,199.82	0.3488	0.3337	18,307.97
Mobile	69.7687	413.7496	710.7832	3.1810	234.7312	1.7009	236.4321	62.7961	1.5849	64.3810	325,265.9	325,265.9	325,265.9	14.7845	0.6043	325,635.5
<b>Total</b>	<b>138.5310</b>	<b>441.0506</b>	<b>795.0426</b>	<b>3.3494</b>	<b>234.7312</b>	<b>4.1647</b>	<b>238.8958</b>	<b>62.7961</b>	<b>4.0486</b>	<b>66.8447</b>	<b>0.0000</b>	<b>358,348.6</b>	<b>358,348.6</b>	<b>15.5361</b>	<b>0.6043</b>	<b>358,917.1</b>
lb/day																

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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
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	Demolition	Demolition	4/5/2021	4/4/2021	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 27.04

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

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

**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
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHTD







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**3.2 Demolition - 2021**  
**Mitigated Construction On-Site**

Category	lb/day																
	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	
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**Mitigated Construction Off-Site**

Category	lb/day																
	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	
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	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	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	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**4.1 Mitigation Measures Mobile**

Improve Pedestrian Network

Category	lb/day																
	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	
Mitigated	69.7687	413.7496	710.7832	3.1810	234.7312	1.7009	236.4321	62.7961	1.5849	64.3810		325,265.9	325,265.9	14.7845			325,635.5
Unmitigated	69.7687	413.7496	710.7832	3.1810	234.7312	1.7009	236.4321	62.7961	1.5849	64.3810		656	656	14.7845			768
												656	656	14.7845			768

**4.2 Trip Summary Information**

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

Land Use	Average Daily Trip Rate			Unmitigated Annual VMT	Mitigated Annual VMT
	Weekday	Saturday	Sunday		
Apartment Low Rise	1,864.08	1,585.44	1,298.16	5,957,560	5,957,560
Apartment Mid Rise	2,992.00	2,700.50	2,249.50	9,719,356	9,719,356
Arena	8,671.00	8,671.00	8,671.00	18,716,369	18,716,369
General Office Building	2,240.20	508.30	161.00	5,462,815	5,462,815
Golf Course	546.84	358.02	340.02	1,194,180	1,194,180
Health Club	1,167.25	1,167.25	1,167.25	2,496,480	2,496,480
Hotel	2,926.00	2,866.50	2,082.50	6,674,120	6,674,120
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	15,100.00	18,448.00	8,440.00	31,635,610	31,635,610
Regional Shopping Center	3,775.00	4,612.00	2,110.00	7,908,902	7,908,902
Industrial Park	1,284.09	967.83	472.48	4,465,903	4,465,903
Single Family Housing	509.76	515.16	461.70	1,721,102	1,721,102
<b>Total</b>	<b>41,076.22</b>	<b>42,400.00</b>	<b>27,453.61</b>	<b>95,952,399</b>	<b>95,952,399</b>

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Apartment Low Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartment Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Arena	16.60	8.40	6.90	0.00	81.00	19.00	66	28	6
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Golf Course	16.60	8.40	6.90	33.00	48.00	19.00	52	39	9
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Industrial Park	16.60	8.40	6.90	59.00	28.00	13.00	79	19	2
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix



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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Apartments Mid Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Arena	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
General Office Building	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Golf Course	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Health Club	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Hotel	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Regional Shopping Center	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Industrial Park	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Single Family Housing	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

Category	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
lb/day																
Natural Gas Mitigated	1.6683	14.9545	11.1854	0.0910	1.1527	1.1527	1.1527	1.1527	1.1527	1.1527	18,199.82	32	18,199.82	0.3488	0.3337	18,307.97
Natural Gas Unmitigated	1.6683	14.9545	11.1854	0.0910	1.1527	1.1527	1.1527	1.1527	1.1527	1.1527	18,199.82	32	18,199.82	0.3488	0.3337	18,307.97



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**5.2 Energy by Land Use - NaturalGas**  
**Unmitigated**

Land Use	NaturalGas Use kBtu/yr	lb/day										lb/day				CO2e				
		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			
Apartments Low Rise	9216.69	0.0994	0.8494	0.3614	5.4200e-003		0.0687	0.0687	0.0687	0.0687	0.0687	0.0687	0.0687	0.0687	0.0208	0.0199	1,084.316 5	1,084.316 5	0.0199	1,090.760 1
Apartments Mid Rise	22292.4	0.2404	2.0544	0.8742	0.0131		0.1661	0.1661	0.1661	0.1661	0.1661	0.1661	0.1661	0.1661	0.0503	0.0481	2,622.641 1	2,622.641 1	0.0481	2,638.226 1
Arena	23143.6	0.2496	2.2690	1.9059	0.0136		0.1724	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724	0.0522	0.0499	2,722.772 0	2,722.772 0	0.0499	2,738.952 0
General Office Building	2186.58	0.0236	0.2144	0.1801	1.2900e-003		0.0163	0.0163	0.0163	0.0163	0.0163	0.0163	0.0163	0.0163	0.003	0.003	257.2442 4.9300e-003	257.2442 4.9300e-003	0.003	258.7728 0.003
Golf Course	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	0.0000	0.0000	0.0000	0.0000
Health Club	3115.48	0.0336	0.3054	0.2566	1.8300e-003		0.0232	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232	0.003	0.003	366.5270 7.0300e-003	366.5270 7.0300e-003	0.003	368.7051 0.003
Hotel	83553.6	0.9011	8.1915	6.8809	0.0492		0.6226	0.6226	0.6226	0.6226	0.6226	0.6226	0.6226	0.6226	0.1884	0.1802	9,829.841 1	9,829.841 1	0.1802	9,888.254 9
Industrial Park	3622.44	0.0391	0.3551	0.2983	2.1300e-003		0.0270	0.0270	0.0270	0.0270	0.0270	0.0270	0.0270	0.0270	0.003	0.003	426.1697 8.1700e-003	426.1697 8.1700e-003	0.003	428.7022 0.003
Parking Lot	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	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	2432.88	0.0262	0.2385	0.2004	1.4300e-003		0.0181	0.0181	0.0181	0.0181	0.0181	0.0181	0.0181	0.0181	0.003	0.003	286.2208 5.4900e-003	286.2208 5.4900e-003	0.003	287.9217 0.003
Regional Shopping Center	608.219	6.5600e-003	0.0596	0.0501	3.6000e-004		4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	0.003	0.003	71.5552 1.3700e-003	71.5552 1.3700e-003	0.003	71.9804 1.3100e-003
Single Family Housing	4526.55	0.0488	0.4172	0.1775	2.6600e-003		0.0337	0.0337	0.0337	0.0337	0.0337	0.0337	0.0337	0.0337	0.0102	0.003	532.5357 9.7600e-003	532.5357 9.7600e-003	0.003	535.7003 0.003
<b>Total</b>		<b>1.6683</b>	<b>14.9545</b>	<b>11.1854</b>	<b>0.0910</b>		<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>0.3489</b>	<b>0.3337</b>	<b>18,199.82 32</b>	<b>18,199.82 32</b>	<b>0.3337</b>	<b>18,307.97 57</b>

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**5.2 Energy by Land Use - NaturalGas**  
**Mitigated**

Land Use	NaturalGas Use kBTU/yr	lb/day															
		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
Apartments Low Rise	9,21669	0.0994	0.8494	0.3614	5.4200e-003	0.0687	0.0687	0.0687	0.0687	0.0687	0.0687	1,084,316.5	1,084,316.5	0.0208	0.0199	0.0199	1,090,760.1
Apartments Mid Rise	22,2924	0.2404	2.0544	0.8742	0.0131	0.1661	0.1661	0.1661	0.1661	0.1661	0.1661	2,622,641.1	2,622,641.1	0.0503	0.0481	0.0481	2,638,226.1
Arena	23,1436	0.2496	2.2690	1.9059	0.0136	0.1724	0.1724	0.1724	0.1724	0.1724	0.1724	2,722,772.0	2,722,772.0	0.0522	0.0499	0.0499	2,738,952.0
General Office Building	2,18658	0.0236	0.2144	0.1801	1.2900e-003	0.0163	0.0163	0.0163	0.0163	0.0163	0.0163	257,2442	257,2442	4.9300e-003	4.7200e-003	4.7200e-003	258,7728
Golf Course	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	0.0000	0.0000
Health Club	3,11548	0.0336	0.3054	0.2566	1.8300e-003	0.0232	0.0232	0.0232	0.0232	0.0232	0.0232	366,5270	366,5270	7.0300e-003	6.7200e-003	6.7200e-003	368,7051
Hotel	83,5536	0.9011	8.1915	6.8809	0.0492	0.6226	0.6226	0.6226	0.6226	0.6226	0.6226	9,829,841.1	9,829,841.1	0.1884	0.1802	0.1802	9,888,254.9
Industrial Park	3,62244	0.0391	0.3551	0.2983	2.1300e-003	0.0270	0.0270	0.0270	0.0270	0.0270	0.0270	426,1697	426,1697	8.1700e-003	7.8100e-003	7.8100e-003	428,7022
Parking Lot	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	0.0000	0.0000
Regional Shopping Center	0,608219	6.5600e-003	0.0596	0.0501	3.6000e-004	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	4.5300e-003	71,5552	71,5552	1.3700e-003	1.3100e-003	1.3100e-003	71,9804
Regional Shopping Center	2,43288	0.0262	0.2385	0.2004	1.4300e-003	0.0181	0.0181	0.0181	0.0181	0.0181	0.0181	286,2208	286,2208	5.4900e-003	5.2500e-003	5.2500e-003	287,9217
Single Family Housing	4,52655	0.0488	0.4172	0.1775	2.6600e-003	0.0337	0.0337	0.0337	0.0337	0.0337	0.0337	532,5357	532,5357	0.0102	9.7600e-003	9.7600e-003	535,7003
<b>Total</b>		<b>1.6683</b>	<b>14.9545</b>	<b>11.1654</b>	<b>0.0910</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>1.1527</b>	<b>18,199.8232</b>	<b>18,199.8232</b>	<b>0.3489</b>	<b>0.3337</b>	<b>0.3337</b>	<b>18,307.9757</b>

**6.0 Area Detail**



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**6.1 Mitigation Measures Area**

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior

Category	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
Mitigated	67.0941	12.3464	73.0740	0.0774	1.3111	1.3111	1.3111	1.3111	1.3111	1.3111	0.0000	14,882.8588	14,882.8588	0.4028	0.2706	14,973.5671
Unmitigated	67.0941	12.3464	73.0740	0.0774	1.3111	1.3111	1.3111	1.3111	1.3111	1.3111	0.0000	14,882.8588	14,882.8588	0.4028	0.2706	14,973.5671

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**6.2 Area by SubCategory**

**Unmitigated**

SubCategory	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
	lb/day															
Architectural Coating	6.6387					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	57.0186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.3530	11.5620	4.9200	0.0738		0.9348	0.9348		0.9348	0.9348	0.0000	14,760.00	14,760.00	0.2829	0.2706	14,847.71
Landscaping	2.0837	0.7844	68.1540	3.6100e-003		0.3763	0.3763		0.3763	0.3763		122.8588	122.8588	0.1199		125.8558
<b>Total</b>	<b>67.0941</b>	<b>12.3464</b>	<b>73.0740</b>	<b>0.0774</b>		<b>1.3111</b>	<b>1.3111</b>		<b>1.3111</b>	<b>1.3111</b>	<b>0.0000</b>	<b>14,882.8588</b>	<b>14,882.8588</b>	<b>0.4028</b>	<b>0.2706</b>	<b>14,973.5671</b>



Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

6.2 Area by SubCategory

Mitigated

SubCategory	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
	lb/day															
Architectural Coating	6.6387				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Consumer Products	57.0186				0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Health	1.3530	11.5620	4.9200	0.3738	0.9348	0.9348	0.9348	0.9348	0.9348	0.9348	0.0000	14,760.00	14,760.00	0.2829	0.2706	14,847.71
Landscaping	2.0837	0.7844	68.1540	3.6100e-003	0.3763	0.3763	0.3763	0.3763	0.3763	0.3763		122.8588	122.8588	0.1199		125.8558
<b>Total</b>	<b>67.0941</b>	<b>12.3464</b>	<b>73.0740</b>	<b>0.0774</b>	<b>1.3111</b>	<b>1.3111</b>	<b>1.3111</b>	<b>1.3111</b>	<b>1.3111</b>	<b>1.3111</b>	<b>0.0000</b>	<b>14,882.85</b>	<b>14,882.85</b>	<b>0.4028</b>	<b>0.2706</b>	<b>14,973.56</b>

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 Stationary Equipment

Proposed NorthStar Specific Plan - Operation - Riverside-South Coast County, Summer

**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**11.0 Vegetation**