CSUN Matador Baseball – Team Facilities, Batting Cage, and Field Lighting

Initial Study – Mitigated Negative Declaration

prepared by

California State University, Northridge
18111 Nordhoff Street
Northridge, California 91330-8219

prepared with the assistance of

Rincon Consultants, Inc.
250 East 1st Street, Suite 301
Los Angeles, California 90012

April 2019

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Table of Contents

Tables

Figures

Appendices

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Initial Study

1. Project Title

CSUN Matador Baseball Team Facilities, Batting Cage, and Field Lighting

2. Lead Agency Name and Address

Board of Trustees of the California State University
California State University, Northridge
Facilities Planning, Design & Construction
18111 Nordhoff Street
Northridge, California 91330-8219

Contact
California State University, Northridge
Mary Clare Smithson, P.E., Capital Programs Manager
(818) 677-2561
mary.smithson@csun.edu

3. Project Location

The project site is part of the California State University, Northridge (CSUN) campus, located at 18111 Nordhoff Street in the City of Los Angeles. The 4-acre site is located in the central portion of the campus in assessor's parcel number 2764-016-913. Currently, the project site is developed with the Matador Field ballpark. The site is bounded by the Matador Practice Soccer Field to the north, Northridge Academy High School and the CSUN Softball Diamond to the east, Lindley Avenue to the west, and North Field to the south. See Figure 1 for the regional location, Figure 2 for the project site location, and Figure 3 through Figure 9 for existing site conditions.

4. Surrounding Land Uses and Setting

The entire CSUN campus comprises 353 acres located between Darby Avenue to the west, Zelzah Avenue to the east, Nordhoff Street to the south and Devonshire Street to the north. The 4-acre project site is part of the Matador Field ballpark, which is bounded by the Matador Practice Soccer Field to the north, Northridge Academy High School and the CSUN Softball Diamond to the east, Lindley Avenue to the west, and North Field to the south. The site is predominately surrounded by other CSUN recreational facilities, campus buildings, and parking lots to the north, east, and south, as well as single-family residential uses across Lindley Avenue to the west.

Figure 1 Regional Location

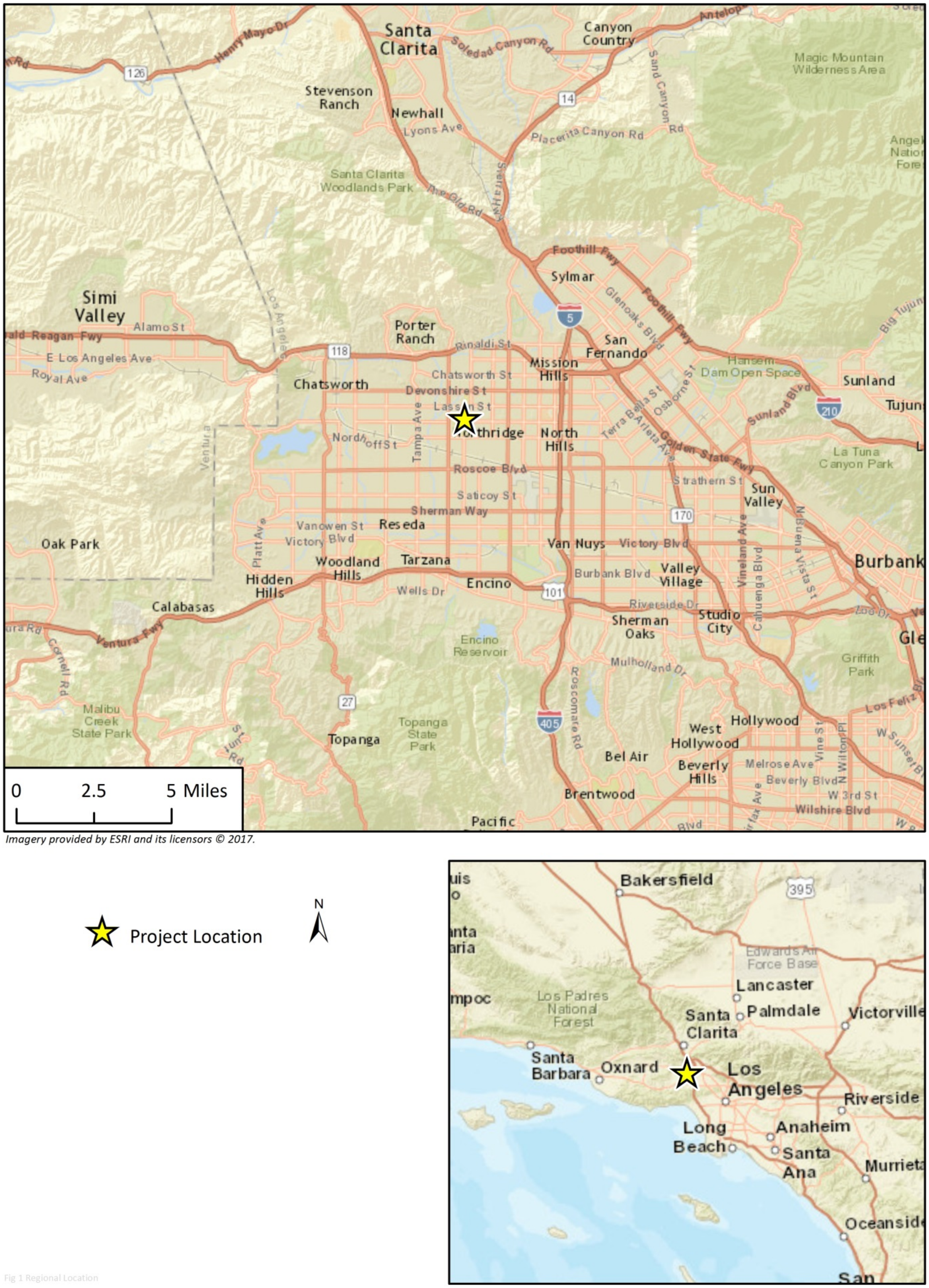

Figure 2 Project Site Location and Proposed Facilities

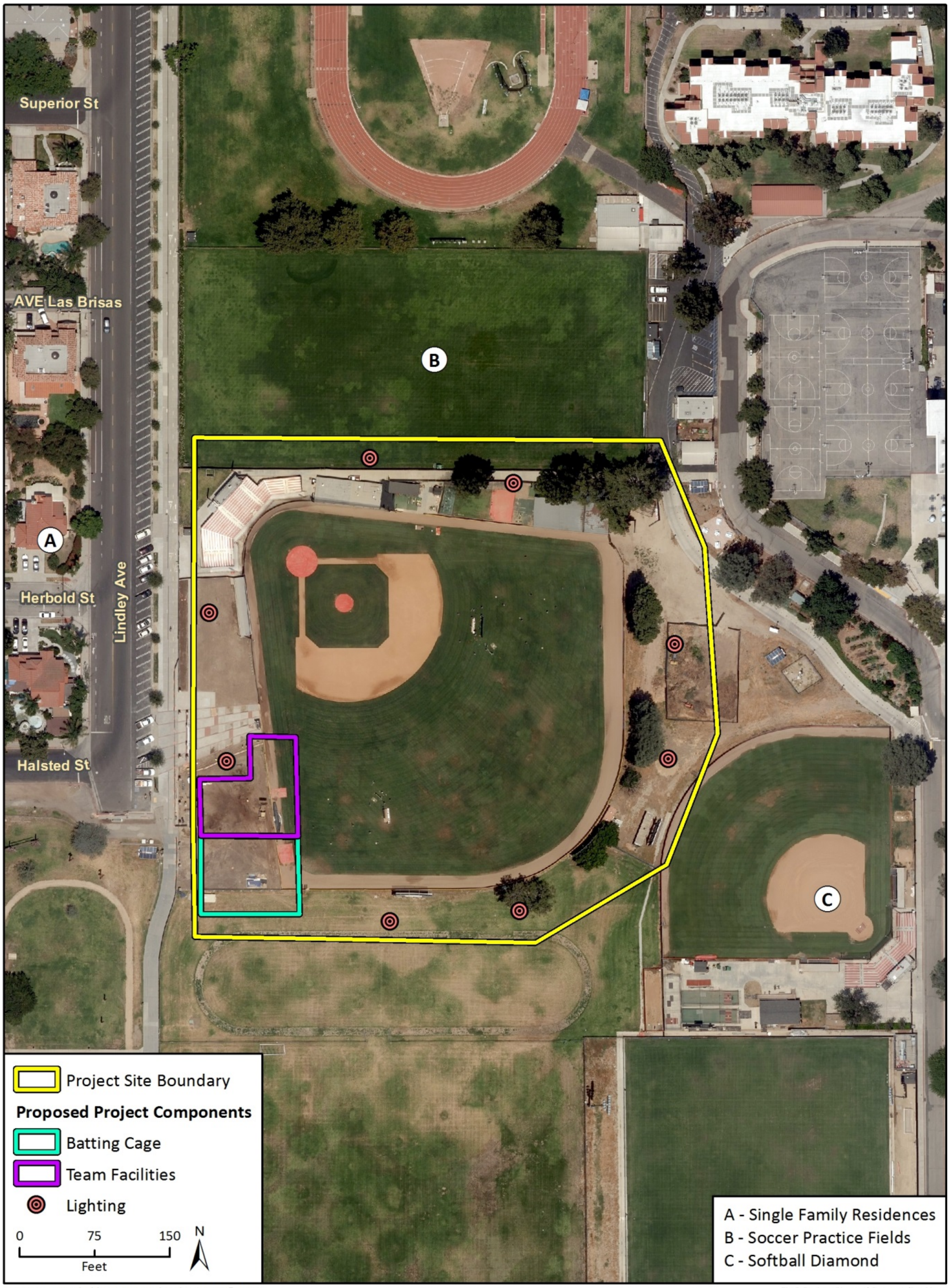

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Figure 3 Existing Site Conditions Photograph Locations Map

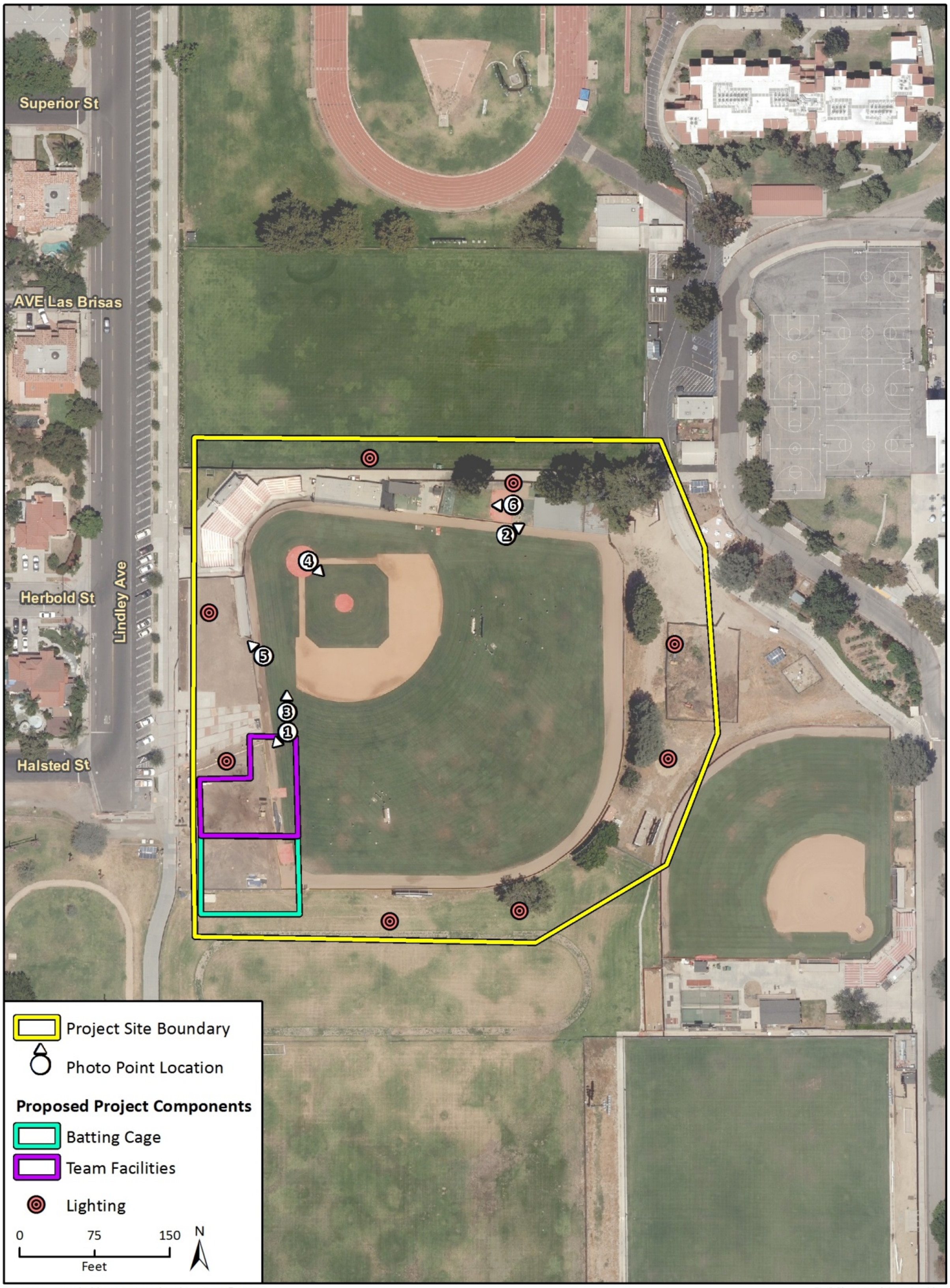

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Figure 4 Existing Site Conditions – Location of Proposed Team Facilities Building and Batting Cage (Photograph 1)

Figure 5 Existing Site Conditions – Batting Cage (Photograph 2)

Figure 6 Existing Site Conditions – View from Right Field Facing Infield (Photograph 3)

Figure 7 Existing Site Conditions – View from Home Plate Facing Infield and Outfield (Photograph 4)

Figure 8 Existing Site Conditions – Visiting Team Bullpen Facing Single Family Residences (Photograph 5)

Figure 9 Existing Site Conditions – View of Infield from Left Field (Photograph 6)

5. CSUN Master Plan Designation

Infrastructure/Athletic/Recreational

6. Description of Project

The proposed project involves replacement of team facilities, replacement of the batting cage facility, and new field lighting at the Matador Baseball Ballpark, an on-campus baseball field located at the corner of Lindley Avenue and Halsted Street. The proposed project also involves the removal of the existing batting cage. The proposed project would be implemented as part of the CSUN Baseball Master Plan, published in March 2017 (CSUN 2017). The Matador Baseball Ballpark currently has a seating capacity of 500 persons; no expansion of the ballpark seating capacity is proposed. See Figure 2 for the locations of the proposed structures and lighting and Figure 10 for a conceptual rendering of the team facilities building and batting cage.

Team Facilities

The team facilities building would be up to a two-story, approximately 13,000-square foot (sf) building located on the southwestern portion of the ballpark near right field. The team facility is anticipated to include a home team locker room, a training room, team room, coach locker rooms, administrative coach offices, umpire locker rooms, and a multipurpose room.

The exterior enclosure of the team facilities building is anticipated to consist of brick, limestone/concrete masonry unit (CMU), metal panel, and glass curtain wall and would align with the design guidelines outlined in the 2005 Campus Master Plan.

The existing team facilities building located on the northern portion of the ballpark along the third base line would not be demolished as part of the proposed project. Instead, the existing team facilities building would be repurposed and would remain in operation.

Batting Cage

The replacement batting cage would be located adjacent to the proposed team facility. The batting cage is anticipated to be approximately 7,500 sf and approximately 16 feet in height. The batting cage is anticipated to contain four batting tunnels, a multipurpose space, support spaces, and retractable netting. Similar to the existing facility, the batting cage would be covered to allow practice during inclement weather but would not be fully enclosed in order to allow fresh air to ventilate the space. The northern edge of the batting cage would be adjacent to and may be adjoined to the southern wall of the team facilities building with a solid wall constructed on the western, public-facing edge, and a fence constructed on the southern and eastern edges. In conjunction with construction of the batting cage, the existing batting cage (as shown in Figure 5) located on the northern portion of the project site would be removed. No new use of the area is anticipated at this time.

Field Lighting

The proposed project would include a new 8-pole, high efficiency LED field lighting system with two light poles on each of the four sides of the ballpark. The light poles would range from 80 to 100 feet in height and would provide light levels of 100 foot-candles on the infield, and 70 foot-candles on

Figure 10 Conceptual Rendering of Team Facilities Building and Batting Cage

Source: Hellmuth, Obata, Kassabaum, Inc.

the outfield. This would meet the lighting requirements for both NCAA Regional and National Broadcasts for baseball. The proposed project would also include lighting in the home and visiting teams' bullpens (pitcher warm-up areas) with light levels of 70 foot-candles.

Construction Schedule

Installation of the field lighting is anticipated to occur from June 2019 through September 2019. Construction of the team facilities building, and the batting cage is anticipated to occur between December 2019 and February 2021.

Sustainability Features

The following sustainability features are anticipated to be included to minimize water and energy use:

- High efficient packaged rooftop air heat pump with economizer for heating and cooling of the team facilities building
- Occupancy sensors in the team facilities building to reduce air flow to unoccupied zones
- High efficiency domestic hot water systems in the team facilities building
- High efficiency, dimmable LED lighting and controls, including manual override, occupancy sensing, and photocell controls in the team facilities building
- Low-flow toilets, urinals, and showerheads in the team facilities building
- High-bay, high-efficiency dimmable LED lighting and controls, including manual override, occupancy sensing, and photocell controls, in the batting cages
- High efficiency LED field lighting

Game Schedule and Lighting

Due to the lack of field lighting at the current baseball field, games can only commence in the early afternoon between 1:00 p.m. and 3:00 p.m. After installation of the proposed lighting, games could also commence in the evening between 3:00 p.m. and 7:00 p.m. Similar to other outdoor athletic areas on campus, (such as the North Field and Performance Soccer Field), lighting on the baseball field would be limited to only those hours when the ballpark is in use for games and practices. Practices would end no later than 9:00 p.m. and games would end no later than 10:00 p.m. (with the rare exception of extra-inning games). The ballpark could be used for up to a maximum of 106 evenings per year for events such as CSUN Baseball night practices (approximately 25 evenings), CSUN NCAA home games (approximately 24 to 35 evenings), alumni game (one evening), Campus Licensed Use (Approved 3rd Party Licensee of the University) games (approximately 35 evenings), and miscellaneous tournaments (approximately 10 evenings).

7. Required Approvals

The proposed project will require the following CSU review and approvals:

- CSU Board of Trustees Schematic Approval
- CSUN Master Plan Revision
- Other approvals as necessary

8. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The Fernandeño Tataviam Band of Mission Indians was consulted in accordance with California Public Resources Code § 21080.3.1 (Assembly Bill [AB] 52 of 2014). CSUN sent an invitation to the Fernandeño Tataviam Band of Mission Indians and the Native American Heritage Commission to consult on the proposed project on August 17, 2018. The Fernandeño Tataviam Band of Mission Indians tribe requested results of the Cultural Records Search and other project details in a letter to CSUN dated September 17, 2018. CSUN responded with a Cultural Resources Analysis Memorandum, including the requested project details and the results of the Cultural Resource Record Search obtained from the South Central Coastal Information Center (SCCIC). As described below in Section 18, *Tribal Cultural Resources*, no conference call or meeting was requested by the tribe for the proposed project, nor were additional requests made. As a result, CSUN contacted the tribe on January 11, 2019 with formal notice that the AB 52 consultation has concluded.

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

4/11/19
Date

KEN ROSENTHAL
Printed Name

AVP
Title

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	□	□	■	□
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	□	□	□	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	□	■	□
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	□	■	□	□

a. Would the project have a substantial adverse effect on a scenic vista?

The Santa Susana Mountains are visible from the CSUN campus at certain on-campus vantage points looking north, including from the project site, along the adjacent pedestrian and bicycle paths, and North Field. However, views of the mountains from the project site are mostly obstructed by the existing athletic bleachers, safety netting, and mature trees located on the northern portion of the project site. In addition, views from North Field are partially blocked by the existing eight-foot tall fence screen located around the perimeter of the baseball field. The mountains are also visible from off-campus vantage points west of the project site along Lindley Avenue.

The proposed project would involve construction of field lighting, a new two-story team facilities building, and a batting cage that would be 16 feet in height on the project site. These structures would be southeast of the Lindley Avenue and Halsted Street intersection, but due to the height and distance of the buildings, they would not obstruct views of the Santa Susana Mountains from off-campus vantage points south of the project site. Also, the proposed project would not obstruct any off-campus views of the mountains available along Lindley Avenue west of the project site. Because the project would not obstruct any public views of natural features, impacts to scenic vistas would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

State Route 118 (SR-118), located approximately two miles north of the campus, is not a state-designated scenic highway, but it is a designated scenic highway in the City of Los Angeles. However, due to the relatively flat topography of the San Fernando Valley, the campus is not visible from the highway, and the highway is not visible from the campus. Therefore, no impact to scenic resources within a State scenic highway would occur.

NO IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The four-acre project site is located on the CSUN campus in an urbanized area of the City of Los Angeles and is currently developed with a ballpark that includes an entry plaza, ticket booth, athletic bleachers with an announcer's booth, dugouts, a one-story team facilities building, and a batting cage. See Figure 2 for the project site location and Figure 3 through Figure 9 for photographs of existing site conditions. The project site is located in the Instruction/Athletics/Recreation Precinct of the CSUN Master Plan. According to the CSUN Master Plan, the Instructional/Athletics/Recreation precinct includes two academic/administrative buildings, athletic fields, small athletic support facilities, and parking structures. Surrounding uses adjacent to the project site include single-family residences across Lindley Avenue west of the site, soccer practice fields to the north of the site, North Field south of the site, and Northridge Academy High School and a softball diamond to the east of the site. Although the CSUN Master Plan does not include specific guidelines for the proposed project, the Master Plan does contain planning and design principles for future development projects not addressed in the Master Plan.

According to the CSUN Master Plan, existing campus buildings are predominantly constructed of brick, concrete, plaster, and architectural block, and some buildings incorporate surface ceramic tiles or metal component parts. Existing buildings are primarily warm colors with white or off-white detailing, and the signature campus brick color is a light, sandy terra cotta. The CSUN Master Plan states that new buildings and facilities should be light in color and warm in tone to harmonize with the existing campus and may add to the existing color palette sparingly by using a second color for detailing or accent where appropriate (CSUN 2005a). The team facilities building and batting cage would utilize materials that are consistent with the existing color palette on campus along with secondary colors that are reflective of the university's mascot.

The proposed project would be located along the edge of the campus that fronts Lindley Avenue. The proposed project would consist of high-quality architecture that would improve the visual quality of the existing ballpark. The CSUN Master Plan contains guidelines for buildings located along the campus's public frontages. These buildings should use articulation and façade modulation to reinforce pedestrian scale, screen buildings through the use of architectural elements and/or landscaping, use appropriate setbacks consistent with those of existing buildings (CSUN 2005a). The proposed project would include two-story buildings that would be designed to be consistent with the CSUN Master Plan's goal of maintaining pedestrian scale along public frontages. Furthermore, the proposed project would not remove the existing street trees along Lindley Avenue that currently serve to partially break the line-of-sight between the residential neighborhood and the baseball field.

The CSUN Master Plan states that buildings setbacks and build-to lines within the Instruction/ Athletics/Recreation Precinct should create a congenial campus edge. The proposed project would dismantle the existing batting cage and construct a two-story team facilities building and a batting cage that would be 16 feet in height, and field lighting that would range from 80 to 100 feet in height. See Figure 10 for a conceptual rendering of the proposed team facilities building and batting cage. The proposed batting cage would be of height similar to the existing batting cage, and the field lighting would be similar to other field lighting at the adjacent soccer practice fields in terms of height and visual character. The proposed two-story team facilities building would be similar to the existing athletic bleachers and announcer's booth located on the project site in terms of height, although it would be one story taller than the existing team facilities building. The team facilities building, and batting cage would be setback approximately 20 feet from the existing pedestrian and bicycle paths and approximately 40 feet from Lindley Avenue, which would be similar to the setbacks of existing development on the project site.

Shadow effects can also affect visual character and are dependent upon several factors, including the local topography, the height and bulk of a project's structural elements, sensitivity of adjacent land uses, the time of day, season, and duration of shadow projection. The project would incrementally increase shading and shadows in the project site vicinity due to the construction of the team facilities building and batting cage on-site. However, the L.A. CEQA Thresholds Guide states that structures less than 60 feet in height would not create a significant shadow effect (City of Los Angeles 2006). The proposed structures would be two stories in height and, therefore, would not substantially shade the nearby residences located across Lindley Avenue. Therefore, shadow impacts would be less than significant.

The proposed project would not degrade the existing visual character or quality of the site or its surroundings because it would upgrade the existing ballpark facilities, would be consistent with the CSUN Master Plan design guidelines, and would not cause any shadow impacts. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The baseball field does not currently have field lighting. The North Field and the Performance Soccer Field located immediately south and 200 feet southeast of the project site, respectively, are equipped with field lighting. Lighting at North Field normally remains on until 9:00 p.m., and lighting at the Performance Soccer Field is limited to those hours when the field is in use for games, which is normally not later than 10:00 p.m. However, lighting on the Performance Soccer Field can occasionally remain on past 10:00 p.m. in the event of overtime.

Lighting

The project would introduce new permanent lighting, which would result in an increase in lighting on the field when in use. The introduction of nighttime lighting to this athletic facility would allow CSUN to make more efficient use of the existing baseball field, host evening games, and meet NCAA Regional and National broadcast recommended light levels. The proposed type of lighting system (state-of-the-art LED system) is designed specifically to minimize light trespass and would be operated during restricted time frames that would generally be outside normal sleeping hours. The proposed stadium lights would be used approximately 106 evenings per year during the following events:

- Evening baseball practices (approximately 25 evenings per year)
- Evening NCAA home baseball games (approximately 24 to 35 evenings per year)
- Evening alumni baseball game (one evening per year)
- Campus Licensed Use (Approved 3rd Party Licensee of the University) evening games (approximately 35 evenings per year)
- Miscellaneous evening baseball tournaments (approximately 10 evenings per year)

The analysis of light impacts is based on quantitative standards for illumination, which is the quantity of incident light on a plane surface and is commonly measured in terms of foot-candles (Pennsylvania Outdoor Lighting Council n.d.). Light impacts can be analyzed by quantifying illumination from the spillover of light, or "light trespass," at property lines nearest to residences. Light trespass is measured on both the vertical plane (e.g., light shining through a window) and the horizontal plane (e.g., light falling on a bed), in terms of foot-candles.

CSUN has not adopted a specific threshold for lighting impacts; therefore, standards contained in the City of Los Angeles Municipal Code (LAMC) Section 93.0117 are used as the significance threshold. LAMC Section 93.0117 states that no person shall construct any stationary exterior light source that may cause a residential property to be illuminated by more than two foot-candles. The threshold is consistent with California school districts' standards for light trespass, such as Glendale Unified School District's applied standard of 2.5 foot-candles on adjacent properties (Glendale Unified School District 2012).

The proposed eight LED light poles would rise to 80 to 100 feet in height. Downward-facing luminaires would be affixed to each pole at various heights to illuminate the ballpark during baseball games, practices, and other events. The eight light poles would provide light levels of 100 foot-candles on the infield and 70 foot-candles on the outfield, which meets the lighting requirements for both NCAA Regional and National Broadcasts for baseball. In addition, lighting would be installed in the home and visiting teams' bullpens (pitcher warm-up areas) with light levels of 70 foot-candles. Luminaires would be shielded with state-of-the-art environmental light and glare control features that reduce light and glare and spillage by at least 50 percent.

A photometric study was prepared by Musco Lighting to evaluate lighting levels surrounding the project site (see Appendix A). According to the photometric study, the proposed field lighting would not increase illumination at nearby residences (see Appendix A). Also, ballpark lights would be turned off by 10:00 p.m. or earlier, with the rare exception of games that extend to extra innings, which could require the continued use of the ballpark lights beyond this cut-off time. This 10:00 p.m. cut-off time is consistent with the Illuminating Engineering Society of North America's identified "post-curfew" hours of 10:00 p.m. or later, which correspond to normal sleeping hours. Therefore, the proposed field lighting would not result in an increase in lighting of more than two foot-candles at the nearest residential property; therefore, lighting impacts would be less than significant.

Glare

Glare refers to the discomfort or impairment of vision experienced when a person is exposed to a direct or reflected view of a light source, causing objectionable brightness that is greater than that to which the eyes are adapted (Pennsylvania Outdoor Lighting Council n.d.). The intensity of glare ranges from the worst case of "disability glare," where visibility is lost, to "discomfort glare," where the light is distracting and uncomfortable. Discomfort glare, an annoying or painful sensation when people are exposed to a bright light in the field of view, is a subjective phenomenon and has not been directly linked to a physiological cause (Shuster 2014). The amount of glare depends on various factors such as the size of the source, the contrast between background light and the glare source, and the age of the viewer (Hiscocks 2011). General sources of glare at the existing baseball field include reflected sunlight from headlights on automobiles on adjacent streets and parking lots.

This analysis makes a reasonable assumption that light intensity is representative of the amount of discomfort glare that residents near the baseball field would experience because the visibility of a distant light source is proportional to its intensity (Hiscocks 2011). Discomfort glare is typically measured in terms of candelas. Candelas are the base unit of luminous intensity, and the number of candelas depends on the luminous power per unit solid angle emitted by a point light source in a particular direction. In layman's terms, the degree of discomfort glare decreases the further that a viewer is located from a light source, due to the dispersion of light across distance.

Field Lighting

RESIDENTIAL GLARE

A photometric study was prepared by Musco Lighting to evaluate potential glare levels for the area surrounding the ballpark (see Appendix A). The photometric study states that light intensity levels of 500 candelas or less is the equivalent of a 100-watt incandescent light bulb, which is considered minimal to no glare. Therefore, this analysis assumes that a light intensity of 500 candelas or less at residential properties would result in no discomfort glare. In addition, the International Commission on Illumination (CIE) has set limits on candelas from outdoor lighting installations for lighting zones from E1 to E4 (CIE 2003).[1] The E3 lighting zone, which applies to the ballpark site, denotes areas of medium ambient brightness, such as urban residential areas. In the E3 lighting zone, the CIE finds that light intensity from luminaires may not exceed 10,000 candelas during pre-curfew hours or 1,000 candelas during post-curfew hours (CIE 2003).[2] These limits apply to each light source in directions where views of bright light sources are likely to be troublesome to residents but not where momentary or short-term viewing is involved.

According to the photometric study, the proposed field lighting would result in glare levels up to 61 candelas at the residence located at 18101 Herbold Avenue (see Appendix A). As discussed above, glare levels of less than 500 candelas are considered minimal to no glare. The proposed field lighting would not result in glare at the nearest residential property in excess of the CIE's standard of 10,000 candelas during pre-curfew hours in the E3 lighting zone. Furthermore, because games would end

1 The E1 lighting zone denotes intrinsically dark environments, such as national parks. The E2 lighting zone denotes areas of low ambient brightness, such as residential rural areas. The E3 lighting zone denotes areas of medium ambient brightness, such as residential suburbs. The E4 lighting zone denotes areas of high ambient brightness, such as urban centers and commercial areas (CIE 2003).
2 Curfew hours are between 11:00 p.m. and 6:00 a.m. (CIE 2003).

no later than 10:00 p.m. (with the rare exception of extra-inning games) this glare level would not occur during post-curfew hours and would not cause discomfort to adjacent residents. In addition, the lights would not be directed laterally toward adjacent residences, which would prevent direct views of these light sources from sensitive receptors. Therefore, glare impacts to nearby residences would be less than significant.

ROADWAY GLARE

Exposure to ballpark lights could also potentially cause "disability glare," a reduction of visibility, resulting in a safety issue for pedestrians and motorists travelling next to the ballpark on Lindley Avenue. The proposed project would result in light-intensity levels of up to 1,000 candelas on Lindley Avenue and up to 5,000 candelas on as well as on approximately 12 parking spaces that line Lindley Avenue. Based on the photometric study's classification of glare levels, glare levels of 25,000 to 75,000 candelas are considered significant and are equivalent to the high beam headlights of a car (see Appendix A). Therefore, glare impacts to nearby roadways from the proposed field lighting would be less than significant.

Building Materials

Building materials for the proposed project have not yet been decided. Should materials be high reflectivity, the proposed team facilities building, and batting cage may create a substantial new source of glare on-site that may affect nearby residences or motorists along Lindley Avenue and Halsted Street. Therefore, glare impacts from the proposed buildings would be potentially significant, and implementation of Mitigation Measure AES-1 would be required to ensure that the proposed buildings are constructed with low-reflectivity materials.

AES-1 Low-Reflectivity Building Materials

A minimum of 90 percent of the glazing on the north- and west-facing exterior sides of the team facilities building shall be treated with a low-emissivity glazing treatment, such as a frit pattern. Project design shall only utilize low reflectivity glass. Paint used for exterior façades shall be of low reflectivity. Metal surfaces shall be brush-polished and not highly reflective.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

2 Agriculture and Forestry Resources

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

a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Result in the loss of forest land or conversion of forest land to non-forest use?

e. *Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

The project site is currently developed with the Matador Field ballpark. More specifically, the project site is designated "Infrastructure/Athletic/Recreational" by the CSUN 2035 Master Plan Update (CSUN 2005a). According to the California Department of Conservation's (CDOC) 2014 map of the Williamson Act Contract Land, the neighborhood of Northridge, along with most of the City of Los Angeles, is designated as "urban and built-up land" and is not within an area of "prime farmland" (CDOC 2015). Therefore, the project would not conflict with agricultural zoning and would not involve any development that would result in the conversion of designated farmland to non-agricultural use. Neither the project site nor the surrounding parcels are zoned for forest land or timberland, and there is no timberland production at the project site. Therefore, the project would have no impact on such resources.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	■	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	■

The project site is in the South Coast Air Basin (the Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). As the local air quality management agency, the SCAQMD is required to monitor air pollutant levels to ensure that State and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether or not air quality standards are met or exceeded, the Basin is classified as being in “attainment” or “nonattainment.” The health effects associated with criteria pollutants are described in Table 1.

Table 1 Health Effects Associated with Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: pulmonary function decrements and localized lung edema in humans and animals and risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Carbon monoxide (CO)	(1) Aggravation of angina pectoris and other aspects of coronary heart disease; (2) decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (3) impairment of central nervous system functions; and (4) possible increased risk to fetuses.
Nitrogen dioxide (NO_2)	(1) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (2) risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (3) contribution to atmospheric discoloration.
Sulfur dioxide (SO_2)	(1) Bronchoconstriction accompanied by symptoms that may include wheezing, shortness of breath, and chest tightness during exercise or physical activity in persons with asthma.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[1]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.[a]

[1] Detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents:

- Office of Environmental Health Hazard Assessment (OEHHA). "2001 Particulate Matter Health Effects and Standard Recommendations" (2001): https://oehha.ca.gov/air/criteria-pollutant/2001-particulate-matter-health-effects-and-standard-recommendations#may
- United States Environmental Protection Agency (U.S. EPA). "Health and Environmental Effects of Particulate Matter (PM)" (2018a): https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm

Source: U.S. EPA 2017b

According to the California Air Resources Board (CARB), the project site is located in a nonattainment area for both the federal and State standards for ozone and small particulate matter with a diameter between 2.5 and 10 micrometers (PM_{10}), and the State standard for fine particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$). This nonattainment status is a result of several factors, the primary ones being the naturally adverse meteorological conditions that limit the dispersion and diffusion of pollutants, the limited capacity of the local airshed to eliminate pollutants from the air, and the number, type, and density of emission sources in the Basin. The regional climate in the Basin is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Air quality in the Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, substantial vehicular traffic, and industry. Due to its nonattainment status, the Basin is required to implement strategies to reduce pollutant levels to recognized acceptable standards. Accordingly, the SCAQMD has adopted an Air Quality Management Plan (AQMP) that provides a strategy for the attainment of State and federal air quality standards.

The SCAQMD recommends the use of quantitative thresholds to determine the significance of temporary construction-related pollutant emissions and project operations. These thresholds are shown in Table 2.

Table 2 SCAQMD Air Quality Significance Thresholds

	Mass Daily Thresholds	
Pollutant	Operation Thresholds (lbs/day)	Construction Thresholds (lbs/day)
NO_X	55	100
ROG[1]	55	75
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550
Lead	3	3

[1] Reactive Organic Gases (ROG) are formed during combustion and evaporation of organic solvents. ROG are also referred to as Volatile Organic Compounds (VOC).

Source: SCAQMD 2015

The SCAQMD has also developed Localized Significance Thresholds (LST) in response to concerns regarding the exposure of individuals to criteria pollutants in local communities. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, and distance to the sensitive receptor. LSTs have been developed for nitrogen oxides (NO_X), carbon monoxide (CO), PM_{10}, and $PM_{2.5}$. However, LSTs only apply to emissions in a fixed stationary location, including idling emissions during both project construction and operation. As a result, LSTs are not applied to mobile sources, such as cars on a roadway (SCAQMD 2008).

LSTs have been developed for emissions in areas up to five acres in size, with air pollutant modeling recommended for activity in larger areas. The SCAQMD provides lookup tables for project sites that measure one, two, or five acres (SCAQMD 2009). Although the project site encompasses approximately four acres, construction would be limited to the southwestern corner and the eight sites of the field light poles on the perimeter of the baseball field. As such, construction would only occur on approximately 0.5 acre of the project site. Therefore, LSTs for a one-acre site were used. The project site is located in Source Receptor Area 7 (SRA-7, East San Fernando Valley), and the LSTs for construction on a one-acre site in SRA-7 are shown in Table 3. The nearest sensitive receptors are single-family residences located approximately 100 feet west of the project site across Lindley Avenue and Northridge Academy High School (a campus facility with an outdoor recreational area) located approximately 115 feet east of the project site. LSTs are provided for receptors at a distance of 82 to 1,640 feet (25 to 500 meters) from the project site boundary. Construction activity would occur approximately 100 feet from the closest sensitive receptor (the single-family residences west of the construction site). As show in Table 3, allowable emissions for a one-acre site in SRA-7 at a distance of 82 feet were used to provide a conservative analysis.

Table 3 SCAQMD LSTs for Construction

Pollutant	Allowable Emissions from a 1-acre Site in SRA-7 for a Receptor 82 Feet Away (lbs/day)
Gradual Conversion of NO_X to NO_2	80
CO	498
PM_{10}	4
$PM_{2.5}$	3

Source: SCAMQD 2009

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

A significant air quality impact may occur if the proposed project is not consistent with the applicable AQMP or would in some way represent a substantial hindrance to employing the polices or obtaining the goals of that plan. According to the SCAQMD, to be consistent with the AQMP, a project must conform to the local General Plan and must not result in or contribute to an exceedance of the City's projected population, housing, or employment growth forecast. The 2016 AQMP, adopted in March 2017, is a regional and multi-agency effort between SCAQMD, CARB, Southern California Association of Governments (SCAG), and the United States Environmental Protection Agency (U.S. EPA). State and federal planning requirements include developing control strategies, attainment demonstrations, reasonable further progress, and maintenance plans. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, Regional Transportation Plan/Sustainable Communities Strategy, and updated emission inventory methodologies for various source categories.

The 2016 AQMP was developed using SCAG's population forecasts. According to the California Department of Finance (DOF), the city of Los Angeles has a current population of 4,054,400 with an average household size of 2.86 persons (DOF 2018). SCAG forecasts that the population of Los Angeles will grow to 4,609,400 by 2040, which is an increase of 555,000, or 14 percent (SCAG 2016).

Development of the project would involve the removal of the existing batting cage and construction of new team facilities, batting cages, and field lighting on the CSUN campus. As discussed in Section 13, Population and Housing, the proposed project would not directly generate population growth in the project vicinity. In addition, the proposed project would not generate substantially more employment opportunities beyond those currently offered by the existing CSUN baseball program. The team facilities building would include a small team store, which may generate a few additional employment opportunities; however, these opportunities would be filled by the existing labor force and student population and would not indirectly induce population growth. Implementation of the project would not exceed SCAG growth forecasts or generate emissions outside AQMP forecasts.

The project would not conflict with the population forecasts contained in the 2016 AQMP, and this impact would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Project construction would generate diesel emissions and dust. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. The project's construction emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2016.3.2. It is assumed that all construction equipment used would be diesel-powered. Model defaults were used for the types and number of pieces of equipment that would be used on-site during each of the construction phases. The default construction schedule was adjusted based on applicant-provided information, and the architectural coating phase was changed to overlap with the building construction phase, representing more realistic construction practices. For the demolition phase, the amount of material to be removed was estimated based on the square footage of the existing batting cage on the project site.

Operational emissions associated with the proposed project were also estimated using CalEEMod. Operational emissions include energy emissions and area source emissions. Emissions attributed to energy use include natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coating. Because the proposed project would not change the ballpark's seating capacity, no increase in vehicle trips to the project site would occur and mobile source emissions would not increase above existing levels.

The project would not involve the demolition of the existing team facilities building, and it is anticipated that this building would be repurposed and would remain in operation. Therefore, this analysis assumes that all emissions generated by the team facilities building and batting cage would be new emissions.

The project would comply with applicable regulatory standards. In particular, the project would comply with the 2016 California Green Building Standards Code (CALGreen Code). CALGreen standards include indoor water usage reduction, regulation of outdoor water usage, and construction waste reduction. For the purposes of construction emissions modeling, it was assumed that the project would comply with the SCAQMD Rule 403, which identifies measures to reduce fugitive dust and is required to be implemented at all construction sites located in the Basin. The architectural coating phase involves the greatest release of ROG. The emissions modeling also includes the use of low-VOC paint (50 g/L for non-flat coatings) as required by SCAQMD Rule 1113. Rules 403 and 1113 were added as "mitigation" in CalEEMod. See Appendix B for CalEEMod output sheets and project emissions.

Construction Emissions

Table 4 summarizes the estimated maximum daily construction emissions. As shown in Table 4, project-generated emissions would not exceed SCAQMD regional thresholds or LSTs for ROG, NO_x, CO, PM_{10}, or $PM_{2.5}$. Therefore, impacts associated with construction of the project would be less than significant.

Table 4 Construction Emissions

	Maximum Daily Emissions (lbs/day)				
Construction Phase	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	2.4	11.1	10.1	1.4	0.7
SCAQMD Thresholds	75	100	550	150	55
Threshold Exceeded?	No	No	No	No	No
Maximum On-site Emissions[1]	1.4	9.8	7.7	1.2	0.6
Localized Significance Thresholds (LST)[2]	N/A	80	498	4	3
Threshold Exceeded?	N/A	No	No	No	No

Notes: All numbers have been rounded to the nearest tenth. Emission data is pulled from "mitigated" results, which account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

See Appendix B for CalEEMod model output.

[1] LSTs only apply to on-site emissions and do not apply to mobile emissions (the majority of operational emissions). Therefore, only on-site construction emissions are compared to LSTs.

[2.] LSTs for a 1-acre site in SRA-7 (Table 3).

Operational Emissions

Table 5 shows estimated emissions associated with operation of the proposed project. As shown in Table 5, emissions would be well below SCAQMD thresholds for all pollutants, and operational air quality impacts would be less than significant.

Table 5 Operational Emissions

	Estimated Emissions (lbs/day)					
Operational Phase	**ROG**	**NO_x**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Energy[1]	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
Mobile	0	0	0	0	0	0
Total	0.5	0.1	0.1	< 0.1	< 0.1	< 0.1
SCAQMD Thresholds	55	55	550	150	150	55
Threshold Exceeded?	No	No	No	No	No	No

[1] The field lighting component of the project would indirectly produce criteria pollutant emissions from the use of electricity; however, electricity suppliers are regulated separately by the SCAQMD as stationary sources. As such, no air quality impacts from the field lighting are included in this analysis.

Notes: All numbers have been rounded to the nearest tenth. Emission data is pulled from “mitigated” results, which account for compliance with regulations and project design features. Emissions presented are the highest of the winter and summer modeled emissions.

See Appendix B for CalEEMod model output.

According to the SCAQMD, a project’s potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project-specific impacts (SCAQMD 2003). As such, a project would result in a cumulatively considerable net increase if an individual project exceeds the SCAQMD’s recommended daily regional thresholds for project-specific impacts, or if a project would conflict with or obstruct implementation of the AQMP. As discussed above under item *a*, the project would not conflict with the AQMP. In addition, the proposed project would not generate emissions exceeding SCAQMD significance thresholds. Per SCAQMD’s cumulative air quality impact methodology, the project’s air quality impacts would not be cumulatively considerable. Therefore, the project’s short-term and long-term impacts to local and regional air quality would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as land uses that are more likely to be used by these population groups and include health care facilities, retirement homes, school and playground facilities, and residential areas. The nearest sensitive receptors to the project site are single-family residences located approximately 100 feet west of the project site across Lindley Avenue and Northridge Academy High School (a high school with outdoor recreation areas located approximately 115 feet east of the project site). However, as indicated in Table 4 and Table 5, construction and operational emissions would be below the SCAQMD regional thresholds as well as LSTs. Furthermore, the proposed project would construct athletic facilities and would not introduce new stationary sources of toxic air contaminants (TAC) near sensitive receptors.

Elevated CO levels can occur at or near intersections that experience severe traffic congestion. Given the low background CO levels in the area and the fact that project emissions are well under SCAQMD thresholds, it is not anticipated that project-related traffic would create or contribute to any exceedances of state or federal CO standards. Additionally, as discussed in Section 16, *Transportation/Traffic*, the transportation study conducted by Fehr & Peers found that the project would not result in significant impacts at study intersections in the project vicinity (F&P 2018, Appendix C). Therefore, no quantitative CO analysis is warranted since the project would not result in CO hotspots. Therefore, the project would not generate substantial pollutant concentrations that would impact nearby sensitive receptors.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

A project-related significant adverse effect could occur if construction or operation of the project would result in generation of odors that would be perceptible in adjacent sensitive areas. Substantial objectionable odors are typically associated with such uses as agriculture, wastewater treatment, industrial facilities, or landfills. The project would involve the removal of a batting cage and construction of a team facilities building, batting cages, and field lighting on the CSUN campus. Construction activities could create temporary odors associated with diesel fuel combustion. However, due to the short-term and temporary nature of construction activity, odor impacts would not be significant. Further, athletic and recreational uses are not identified as land uses typically associated with odor complaints in the CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (2005). Therefore, the project would not generate objectionable odors affecting a substantial number of people, and no impact would occur.

NO IMPACT

4 Biological Resources

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

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

The project site is located in an urban setting and is currently developed with a baseball field and athletic facilities. The project site includes several mature trees on the southern, eastern, and northern edges of the existing ballpark. In addition, a new entry gate and plaza are currently under construction adjacent to the proposed team facilities, and several young trees have been recently planted. Because the project site is in an urbanized area, it does not contain native biological habitats or habitat for special status species. However, on-site trees could provide nesting habitat for a variety of bird species that are afforded protection under the federal Migratory Bird Treaty Act (MBTA – 16 United State Code Section 703-711). The removal of trees is not anticipated at this time; however, tree removal is a possibility. In the event that tree removal is necessary, the proposed project would have the potential to impact migratory and other bird species during construction activities that would occur during the nesting season, which is typically February 15 through September 15. Construction-related disturbances could result in nest abandonment or premature fledging of the young. Therefore, the following mitigation measure would be required to reduce potential impacts to on-site nesting birds to a less than significant level by requiring the provision of buffers from any identified active bird nests during construction.

BIO-1 Habitat Modification – Nesting Birds

To avoid disturbance of nesting and special-status birds, including raptor species protected by the MBTA and the California Fish and Game Commission, tree removal shall occur outside of the bird breeding season (typically February 15 through September 15). If tree removal must occur during the breeding season, then a pre-construction nesting bird survey shall be conducted no more than seven days prior to initiation of vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot inside the project boundary, including a 300-foot buffer (500-foot for raptors). The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in southern California natural communities. If nests are found, tree removal shall not occur until the avian biologist has confirmed that breeding/nesting is completed, and the young have fledged the nest. Tree removal shall occur only at the discretion of the qualified biologist.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

c. *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

The project site is located in an urban setting, and no habitat of quality to support native riparian plant/wildlife species or other sensitive natural community is present. No state or federally protected wetlands or waters occur on-site or in the immediate vicinity (United States Fish and Wildlife Service 2017). In addition, the project site and surrounding area are not mapped as an Essential Connectivity Area for wildlife movement by the California Department of Fish and Wildlife (CDFW; CDFW 2010). Therefore, the proposed project would not impact riparian habitats, sensitive natural communities, wetlands, or the movement of any native resident or migratory fish or wildlife species. No impact would occur.

NO IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Landscape Master Plan in the CSUN 2005 Master Plan Update recommends relandscaping the pedestrian route along Lindley Avenue, designated at East Promenade, which runs along the project site's western boundary. The Landscape Master Plan proposes a double row of canopy trees with signature grass plantings. No landscaping recommendations are made for the project site itself, and the East Promenade recommendations have not yet been implemented. Therefore, construction of the proposed project would not interfere with implementation of the Landscaping Master Plan. No impact would occur.

NO IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project site is not located within the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or state habitat conservation plan (CDFW 2017). Thus, no impact would occur.

NO IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	□	□	□	■
b. Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	□	■	□	□
c. Disturb any human remains, including those interred outside of formal cemeteries?	□	■	□	□

The California Environmental Quality Act (CEQA) requires that a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource shall be considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The proposed project would involve the removal of the existing batting cage on the northeastern portion of the project site and construction of a new team facilities building and batting cage on the southwestern portion of the project site. The CSUN campus was established on its present site in 1956. Neither the CSUN Master Plan nor the CSUN Master Plan Final EIR recognizes the existing ballpark and associated facilities as historic structures (CSUN 2005a and 2005b). A records search of the Native American Heritage Commission Sacred Lands File was completed on October 16, 2018. Search results were negative and therefore, no known tribal cultural resources are located on the project site. Also, the project site is not listed in the National Register of Historical Places or the CRHR and does not appear to meet the criteria that would make it eligible for listing in either register. Therefore, the proposed project would have no impact to historical resources.

NO IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

The project site is flat, does not contain unique geologic features, and has been previously disturbed in conjunction with construction of the existing baseball field. Therefore, the likelihood that intact archaeological resources are present is low (CSUN 2005b). Nevertheless, the proposed project may require excavation below the surficial soil layers for the construction of the team facilities building and installation of the field lighting. Excavation could potentially uncover previously undetected archaeological resources or human remains. Therefore, impacts would be potentially significant. Compliance with the following mitigation measures would reduce impacts to unanticipated cultural resources and human remains to a less than significant level by providing a process for evaluating and, as necessary, avoiding impacts to any identified resources.

CR-1 Cultural Resources (Archaeological)

If potential cultural resources are encountered during ground-disturbing activities, work in the immediate area shall be halted and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology shall be contacted immediately to evaluate the find. If necessary, the evaluation may require preparation of a treatment plan and archaeological testing for CRHR eligibility. If the discovery proves to be significant under CEQA and cannot be avoided by the project, additional work such as data recovery excavation may be warranted to mitigate any significant impacts to cultural resources.

In the event that archaeological resources of Native American origin are identified during project construction, a qualified archaeologist will consult with appropriate Native American groups to determine an appropriate course of action. As part of this process, it may be determined that a Native American monitor must be present during any remaining ground disturbance.

CR-2 Cultural Resources (Human Remains)

If any human remains are found as a result of construction activities, adherence to California Health and Safety Code Section 7050.5 would avoid significant impacts to such resources. Section 7050.5 requires that if human remains are discovered, the County Coroner shall be notified to make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner will notify the Native American Heritage Commission immediately. Once the Native American Heritage Commission identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	■	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	■	☐

Energy consumption accounts for energy consumed during construction and operation of the proposed project, such as fuel consumed by vehicles, natural gas consumed for heating and/or power, and electricity consumed for power. The analysis of energy consumption herein involves the quantification of anticipated vehicle and equipment fuel, natural gas, and electricity consumption during construction and operation of the proposed project, to the extent feasible, as well as a qualitative discussion of the efficiency, necessity, and wastefulness of that energy consumption.

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Replacement of the team facilities building and batting cage at the Matador Baseball Ballpark would result in short-term consumption of energy from the use of construction equipment and processes. The California Green Building Standards Code includes specific requirements related to recycling, construction materials, and energy efficiency standards that would apply to construction of the proposed project to minimize wasteful, inefficient, and unnecessary energy consumption.

The proposed project would involve the use of energy during construction and operation. Energy use during construction would be primarily from fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators. Temporary grid power may also be provided to construction trailers or electric construction equipment. Table 6 illustrates the anticipated energy consumption from construction equipment and vehicles, including construction worker trips to and from the project site. As shown therein, construction of the proposed project, which would last nine months, would require approximately 42 gallons of gasoline and 23,385 gallons of diesel fuel.

Table 6 Proposed Project Construction Energy Use

	Fuel Consumption (Gallons)	
Source	**Gasoline**	**Diesel**
Construction Equipment & Hauling Trips	–	23,385.28
Worker Vehicle Trips	42.26	–

See Appendix A for CalEEMod default values for fleet mix and average distance of travel, and Appendix E for energy calculation sheets.

Operation of the proposed project would generate energy demand in the form of transportation fuel from vehicle trips; however, the proposed project would not involve an increase in capacity at the baseball park and would result in a comparable volume of daily vehicle trips to existing conditions. Therefore, the proposed project would not substantially increase demand for transportation fuel compared to existing conditions.

In addition to transportation energy use, operation of the project would require permanent grid connections for electricity to power eight light poles with two light poles on each of the four sides of the ballpark. Light poles would be fitted with high-efficiency LED bulbs, which allow for longer replacement intervals than traditional light bulbs. While the light poles would generate additional operational energy demand as compared to existing conditions, the minimal amount of electricity required to power the light poles would serve to improve security and safety for people using the sports field.

The proposed project includes several sustainability features to minimize energy use in the new facilities such as a highly efficient package rooftop air heat pump for heating and cooling the team facilities building, high efficiency LED lighting and controls, and occupancy sensors in the team facilities building to reduce air flow to unoccupied zones. These design elements would ensure that the proposed project would not result in unnecessary consumption of energy. The additional energy use would therefore only include the minimal electricity required to power the additional high efficiency LED lighting for the baseball field.

Overall, operation of the proposed project would result in electricity use lighting and use of the team facilities building and batting cage. Project energy consumed would represent an incremental increase in energy usage compared to existing conditions, and the proposed project would implement energy-efficient components to reduce energy demand. Therefore, construction and operation of the proposed project would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

CSUN projects are required to be consistent with the California State University's (CSU) Sustainability Plan (2017). The CSU's Sustainability Plan contains university sustainability goals and climate action goals that directly relate to energy efficiency and conservation. Goals applicable to the proposed project include:

- The CSU will pursue sustainable practices in all areas of the university, including: business operations such as procurement; information technology; student services; food services; facilities operations; design and construction.
- The CSU will strive to reduce systemwide facility GHG emissions to 1990 levels, or below, by 2020 consistent with Assembly Bill 32.
- The CSU will strive to reduce facility GHG emissions to 80 percent below 1990 levels by 2040.
- The CSU will encourage and promote the use of alternative transportation and/or alternative fuels to reduce GHG emissions related to university-associated transportation, including commuter and business travel that generates GHG; reducing energy usage will inherently reduce GHG emissions.

The proposed project involves the installation of eight light poles utilizing high efficiency LED light bulbs instead of traditional lighting methods; therefore, the proposed project would be more energy efficient than if the project implemented traditional lighting methods. In addition, as described above, the design of the new structures on the project site would include several sustainability features to minimize energy use. Use of LED features, high efficiency heating and cooling systems, and high efficiency hot water systems would result in reduced energy consumption and thus reduced project GHG emissions, consistent with the CSU Sustainability Plan, and the goal for implementing sustainable practices in the design of the proposed project. Potential impacts associated with renewable energy and energy efficiency would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	□	□	■	□
2. Strong seismic ground shaking?	□	□	■	□
3. Seismic-related ground failure, including liquefaction?	□	□	■	□
4. Landslides?	□	□	□	■
b. Result in substantial soil erosion or the loss of topsoil?	□	□	■	□
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	□	□	■	□
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	□	□	■	□
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	□	□	□	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	□	■	□	□

a.1. Directly or indirectly cause potential adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

a.2. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

a.3. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The project site is part of the CSUN campus and is relatively level, with no pronounced topographic highs or lows. However, similar to all of Southern California, the City of Los Angeles is underlain by local faults with detectable rupture areas, as well as blind thrust faults, which do not show signs at Earth's surface. According to the City of Los Angeles General Plan Safety Element, there have been 60 damaging seismic events in the Los Angeles region since 1800 (City of Los Angeles 1996).

Ground rupture is defined as surface displacement which occurs along the surface trace of faults during an earthquake. The project site is not located in an Alquist-Priolo Earthquake Fault Zone, and the closest active faults to the project site are the Northridge Hills fault, approximately three miles north, and the Sierra Madre-San Fernando fault, approximately ten miles east. No known active faults pass through or are immediately adjacent to the project site (CSUN 2006). Based on these considerations, the potential for surface ground rupture at the project site is low, and impacts related to ground rupture would be less than significant.

All of southern California is a seismically active region, and the project site would be subject to strong ground motion during a significant earthquake on faults in the vicinity of the campus, including the Northridge Hills Fault. For example, the 1994 Northridge earthquake, a magnitude 6.7 earthquake, produced substantial structural damage throughout the local area (Taylor 2014). However, the project site would not be exposed to a greater than normal seismic risk, and all new structures would be designed and constructed in conformance with the California Building Code (CDC) standards for earthquake safety. Impacts related to ground shaking would be less than significant.

Liquefaction is a phenomenon in which saturated, silty-to-cohesionless soils below the groundwater table are subject to a temporary loss of strength induced by an earthquake. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures. The project site is not in an area of shallow groundwater; therefore, the possibility of liquefaction occurring on-site is low (CSUN 2006). Impacts related to liquefaction would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.4. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Exhibit C of the City's Safety Element, *Landslide Inventory & Hillside Areas*, indicates that the project site lies in a relatively flat area of Los Angeles without hillside areas and without identified potential for landslides (City of Los Angeles 1996). Because there is no documented risk of landslides on the project site and the area is flat, no impact would occur.

NO IMPACT

b. *Would the project result in substantial soil erosion or the loss of topsoil?*

The proposed project would involve the construction of a team facilities building and batting cage, the installation of poles to support new field lighting, and the installation of conduit to provide power to those systems. The proposed project would be constructed on a flat site that has been previously disturbed in conjunction with development of the existing baseball field. Soil erosion may occur at the site during site preparation and grading activities associated with project construction, which would involve soil disturbance. However, ground disturbance during construction would be limited to minimal site preparation and grading for the team facilities building and batting cage as well as excavation for light pole foundations and either trenching or boring to install the conduit. As discussed in Section 3, *Air Quality*, dust control measures would be implemented during construction as required by SCAQMD Rule 403 to minimize fugitive dust emissions. Measures to minimize fugitive dust emissions may include watering exposed surfaces and covering soil stockpiles. These measures are also effective for reducing soil erosion. Ground surfaces above trenching locations for the field lighting conduit would be restored to pre-construction conditions after installation of the conduit, and no areas of bare or disturbed soil would remain after completion of project construction. As discussed in Section 10, *Hydrology and Water Quality*, during operation, the proposed project would be required to comply with CSUN's Non-Traditional Municipal Separate Storm Sewer Systems (MS4) permit and implement a Post-Construction Storm Water Management Program (SWMP), which includes a combination of structural and non-structural Best Management Practices (BMP) that control surface runoff, erosion, and sedimentation. Therefore, impacts related to erosion and the loss of topsoil would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?*

d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

As discussed in impact discussions *a.1* through *a.4*, the project site is in a flat area that has not been identified as at risk of liquefaction, landslides, lateral spreading, or collapse. In addition, according to the CSUN Final Environmental Impact Report (FEIR) for the 2005 Master Plan Update, there are no significant geological hazards anticipated from on-campus development, and construction activities have occurred on the campus for over 40 years without the incidence of expansive soils or subsidence (CSUN 2006). Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The neighborhood of Northridge is served by an existing sewer system. The project would not involve the use of septic tanks or any other alternative waste water disposal systems. No impact would occur.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site is flat, does not contain unique geologic features, and has been previously disturbed in conjunction with construction of the existing baseball field. Therefore, the likelihood that intact paleontological resources are present is low (CSUN 2005b). Nevertheless, the proposed project may require excavation below the surficial soil layers for the construction of the team facilities building and installation of the field lighting. Excavation could potentially uncover previously undetected paleontological resources. Therefore, impacts would be potentially significant. Compliance with the following mitigation measures would reduce impacts to unanticipated paleontological resources to a less than significant level by providing a process for evaluating and, as necessary, avoiding impacts to any identified resources.

GEO-1 Paleontological Resources

In the event that a previously unknown fossil is uncovered during project construction, all work shall cease until a certified paleontologist can investigate the find and make appropriate recommendations. Any artifacts uncovered shall be recorded and removed for storage at a location to be determined by the monitor.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	□	□	■	□
b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?	□	□	■	□

The accumulation of greenhouse gases (GHG) in the atmosphere naturally regulates Earth's temperature. However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of naturally-occurring concentrations. Carbon dioxide (CO_2) and methane (CH_4) are the GHGs that are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills.

Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. Some of the potential impacts in California of global warming may include loss of snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. While these potential impacts identify the possible effects of climate change at a global and potentially statewide level, in general, scientific modeling tools are currently unable to predict what impacts would occur locally.

In response to an increase in man-made GHG concentrations over the past 150 years, California has implemented Assembly Bill (AB) 32, the "California Global Warming Solutions Act of 2006." AB 32 requires achievement by 2020 of a statewide GHG emissions limit equivalent to 1990 emissions (essentially a 25 percent reduction below 2005 emission levels) and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the governor signed Senate Bill (SB) 32, which requires CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. Based upon CARB's *California Greenhouse Gas Inventory – 2018 Edition*, California produced about 429 metric tons (MT) of carbon dioxide equivalent (CO_2e) in 2016 (CARB 2018).

In 2014, CSUN completed and reported its first Greenhouse Gas Emissions Inventory, covering the period from 1990 to 2013 in preparation for the development of its Climate Action Plan (CAP). The CSUN CAP was released in 2016 with the goal of achieving 1990 greenhouse gas levels by 2020 and net-zero emissions (carbon neutrality) by 2040. This plan addresses greenhouse gas (carbon) emissions generated by energy use on the CSUN campus (Scope 1 and 2 emissions) and from activities related, but not directly controlled by the campus, such as commuting and business travel (Scope 3 emissions). The CAP is based on a Strategic Energy Plan that establishes a clear path towards eliminating Scope 1 and 2 emissions by 2040 through a number of defined energy conservation and efficiency projects combined with increased use of renewable energy by both CSUN and the local utility company. Scope 3 emissions will be reduced through a number of strategies that alter the mode mix of transportation used by CSUN students and employees, combined with increased use of electric and hybrid vehicles, and improved vehicle fuel economy standards established by the U.S. EPA (CSUN 2016). The CSUN CAP does not meet the streamlining requirements of CEQA Guidelines Section 15183.5 because it has not yet been adopted in a public process; therefore, this analysis does not utilize the CSUN CAP to evaluate the proposed project's GHG emissions.

The adopted CEQA Guidelines provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The 2008 SCAQMD threshold considers emissions of over 10,000 MT of CO_2e per year to be significant. However, the SCAQMD's threshold applies only to stationary sources and is expressly intended to apply only when the SCAQMD is the CEQA lead agency.

In the latest guidance provided by the SCAQMD's GHG CEQA Significance Threshold Working Group in September 2010, SCAQMD considered a tiered approach to determine the significance of residential and commercial projects. The draft tiered approach is outlined in the meeting minutes, dated September 29, 2010 (SCAQMD 2010).

- **Tier 1.** If the project is exempt from further environmental analysis under existing statutory or categorical exemptions, there is a presumption of less than significant impacts with respect to climate change. If not, then the Tier 2 threshold should be considered.
- **Tier 2.** Consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing concept of consistency in CEQA Guidelines section 15064(h)(3), 15125(d) or 15152(a). Under this Tier, if the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If there is not an adopted plan, then a Tier 3 approach would be appropriate.
- **Tier 3.** Establishes a screening significance threshold level to determine significance. The Working Group has provided two recommendations for lead agencies other than SCAQMD to use. The first operation is to use separate numerical thresholds for residential projects (3,500 MT of CO_2e per year), commercial projects (1,400 MT of CO_2e per year), and mixed use projects (3,000 MT of CO_2e per year). The second option, which is SCAQMD's recommended/preferred option, is to use a threshold of 3,000 MT of CO_2e per year for all non-industrial projects.
- **Tier 4.** Establishes a service population threshold to determine significance. The Working Group has provided a recommendation of 4.8 MT of CO_2e per year for land use projects.

Because CSUN does not have project-specific GHG thresholds and the CAP is not certified, the proposed project is evaluated based on the SCAQMD's Tier 3 recommended/preferred option threshold for all land use types of 3,000 metric tons of CO_2e per year (SCAQMD 2010). The SCAQMD threshold was designed to achieve regional GHG reductions consistent with the AB 32 statewide target of 1990 emission levels by 2020. It has not been updated to reflect the more stringent SB 32 statewide reduction target that went into effect in January 2016. However, the AEP white paper, *Beyond Newhall and 2020*, recommends that for projects with a horizon of 2020 or earlier, a threshold based on meeting AB 32 targets should continue to be used (AEP 2016). Therefore, the SCAQMD Tier 3 threshold remains the most applicable threshold for evaluating the proposed project's GHG impacts.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction activities, energy use, and daily operational activities due to the proposed project would generate GHG emissions. As discussed in Section 3, *Air Quality*, CalEEMod version 2016.3.2 was used to calculate emissions resulting from project construction and long-term operation.

Construction GHG Emissions

Although construction activity is addressed in this analysis, the California Air Pollution Control Officers Association (CAPCOA) does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. The *CEQA and Climate Change* white paper states that additional study is needed to make such an assessment or to develop separate thresholds for construction activity (CAPCOA 2008). Nevertheless, the SCAQMD has recommended amortizing construction-related emissions over a 30-year period in conjunction with the proposed project's operational emissions.

Construction activity would occur over a period of approximately two years beginning in June 2019, with completion and opening of the project expected by February 2021. Based on CalEEMod results, construction of the project would generate an estimated 248 MT of CO_2e, as shown in Table 7. Amortized over a 30-year period (the assumed life of the project), construction of the proposed project would generate approximately 8 MT of CO_2e per year.

Table 7 Estimated Construction GHG Emissions

Year	Project Emissions (MT of CO_2e)
2019	69.6
2020	172.1
2021	5.9
Total	247.6
Total Amortized over 30 Years	**8.3 MT per year**

See Appendix B for CalEEMod model output.

Operational GHG Emissions

Operational emissions include area sources (consumer products, landscape maintenance equipment, and painting), energy use (electricity and natural gas), and solid waste emissions. Operational emissions were also estimated using CalEEMod. Because the proposed project would not change the ballpark's existing 500-person seating capacity or function, no increase in vehicle trips to the project site would occur, and mobile source emissions would not increase above existing uses. The project would not involve the demolition of the existing team facilities building and it is anticipated that this building would be repurposed and would remain in operation. Therefore, this analysis assumes that all GHG emissions generated by the proposed team facilities building and batting cage would be new emissions. In addition, GHG modeling accounts for the use of low-flow toilets, urinals, and showerheads in the proposed team facilities building and batting cage. The proposed project would also include sustainability features in its design and construction, such as high efficiency heating and cooling systems, high efficiency hot water systems, and energy efficient LED lighting, which would further reduce operational GHG emissions. However, these sustainability features were not included in the GHG model due to a lack of necessary data. Therefore, this analysis provides a conservative estimate of GHG emissions. As shown in Table 8, the proposed project would result in combined annual GHG emissions of approximately 266 MT of CO_2e per year, which would not exceed the SCAQMD emissions threshold. Impacts would be less than significant.

Table 8 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT of CO_2e)
Construction	8.3
Operational	
Area	< 0.1
Energy	162.9
Solid Waste	46.3
Water	22.8
Field Lighting[1]	25.5
Total for Proposed Project	**265.8**
SCAQMD Tier 3 Threshold	3,000
Threshold Exceeded?	No

See Appendix B for CalEEMod model output.
[1] Because CalEEMod does not provide an appropriate proxy for field lighting, these energy emissions were calculated separately using CalEEMod energy emissions factors for Los Angeles Department of Water and Power. Conversions of CH_4 and NO_2 to CO_2e were made using U.S. EPA's Greenhouse Gas Equivalencies Calculator (2018c). See Appendix B for calculations.

LESS THAN SIGNIFICANT IMPACT

b. *Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

As discussed above in the background portion of this section, a number of plans and policies have been adopted to reduce GHG emissions in the Southern California region, including AB 32, SB 32, and SB 375. GHG reduction plans that address these regulations and apply to CSUN include the CSUN CAP and SCAG RTP/SCS. Therefore, the following is an analysis of how the project would be consistent with regional and local goals and policies to reduce GHG emissions.

CSUN Climate Action Plan (CAP)

The CSUN CAP was prepared in 2016 with the goal of achieving 1990 GHG levels by 2020 and net-zero emissions by 2040. This plan addresses GHG emissions generated by energy use on the CSUN campus (Scope 1 and 2 emissions) and from activities related, but not directly controlled by the campus, such as commuting and business travel (Scope 3 emissions). Because electricity is used in every building on campus, CSUN developed a Strategic Energy Plan (SEP) to identify energy conservation measures associated with the CAP. The SEP evaluated electricity on the main campus to determine current efficiencies, identify opportunities for improvement, and list energy efficiency measures for implementation. The SEP revealed that on average 47 percent of the electricity consumed in campus buildings was from lighting, with HVAC load consuming 32 percent, and plug loads making up the remaining 21 percent. Buildout of the proposed project would increase on-campus emissions when compared to current conditions. However, the project would include sustainability design features to reduce on-site electricity use and achieve compatibility with the CSUN CAP.

Electricity for the proposed project would be used in a variety of applications to support the normal operations of the team facility, batting cage, and field lighting. The project would include energy-conservation strategies consistent with the CSUN CAP, such as energy-efficient cooling and heating systems, LED lighting, lighting occupancy sensors, and daylighting. In addition, the project site is along bicycle and pedestrian routes and within 0.4 mile of the nearest bus stop along Zelzah Avenue, which would encourage use of public transit and active transportation to and from the project site. In addition, as demonstrated above in Table 8, project emissions would fall below SCAQMD's recommended GHG threshold of 3,000 MT of CO_2e per year and, consequently, would not conflict with AB 32.

SCAG RTP/SCS

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from vehicles for 2020 and 2035. In addition, SB 375 directs each of the State's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). In April 2016, SCAG adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). SCAG's RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375.

The proposed project includes facility improvements to an existing playfield. The project would not alter the existing transportation system, including roadways, parking along Lindley Avenue, and adjacent bicycle lanes and pedestrian paths. The proposed project would be consistent with the goal of promoting infill development and would not conflict with SCAG's RTP/SCS or any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the project would not conflict with applicable GHG reduction policies, goals, or plans and would have a less than significant impact with respect to GHG emissions.

LESS THAN SIGNIFICANT IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	☐	☐	■	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	■	☐
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	■

a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

The project site is currently developed with the Matador Field ballpark. The proposed project would involve removal of the existing batting cage and construction of a new team facilities building, batting cage, and field lighting. The proposed project which would not use, dispose of, or transport hazardous materials typically associated with industrial projects and operations. Therefore, the proposed project would not create a significant hazard to the public or environment through the routine handling of hazardous materials.

Potentially hazardous materials such as fuels, lubricants, and solvents would be used by heavy machinery during construction of the project. However, the transport, use, and storage of hazardous materials during construction of the project would be conducted in accordance with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

The proposed project involves construction of new athletic facilities on the CSUN campus. Given that the proposed project would be part of the CSUN campus, the project would be located within 0.25 mile of other CSUN facilities. The nearest off-campus school is Northridge Academy High School, located approximately 115 feet east of the project site. Because the proposed project would include athletic facilities, operation of the project would not emit hazardous emissions or handle hazardous materials typically associated with industrial operations. In addition, potentially hazardous materials utilized during construction, such as oil or fuel utilized by heavy-duty construction equipment, would be required to comply with local, State, and federal policies for handling such materials and equipment properly. As discussed in Section 3, *Air Quality*, emissions generated by construction and operation of the proposed project would be below SCAQMD thresholds and LSTs and therefore would not significantly impact the local community, including other CSUN campus facilities or off-campus schools. Given that construction activities would be temporary and operational emission would be below SCAQMD threshold levels, impacts associated with potential hazardous emissions would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. *Would the project be located on a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

The following databases compiled pursuant to Government Code Section 65962.5 were checked on July 31, 2018 for known hazardous materials contamination at the project site:

- **United States Environmental Protection Agency (U.S. EPA)**
  - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)/Superfund Enterprise Management System (SEMS)/Envirofacts database search
- **State Water Resources Control Board (SWRCB)**
  - GeoTracker search for leaking underground storage tanks (LUST) and other cleanup sites
- **California Department of Toxic Substances Control (DTSC)**
  - EnviroStor database for hazardous waste facilities or known contamination sites
  - Cortese List of Hazardous Waste and Substances Sites

The project site is not located on or directly adjacent to any known hazardous or contaminated sites. The U.S. EPA is retiring the CERCLIS database and is replacing it with SEMS. The SEMS database search did not produce any results associated with the project site, indicating that the site is free of known hazards and contaminants (U.S. EPA 2018d).

A search on the EnviroStor database identified one hazardous waste facility or other cleanup site within 0.25 mile of the project site. Northridge Academy High School, approximately 115 feet east of the project site, is listed as a DTSC School Cleanup site (Valley Area High School No. 1; 19010027) for potential DDE and toxaphene soil contamination due to historic agricultural uses. However, a Focused Site Investigation Report submitted in 2001 determined that the site does not pose an unacceptable risk to human health, and DTSC issued a “No Further Action” determination as of January 18, 2002 (California Environmental Protection Agency 2001; DTSC 2018). Therefore, this cleanup site would not pose a hazard to construction workers, athletes, staff, or visitors at the project site. Based on the results of the database searches, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The project site is located approximately 2.6 miles northwest of Van Nuys Airport, which is the public airport nearest to the site. The site is not in a designated airport hazard area and would not result in a safety hazard for people residing or working in the project area (Los Angeles County n.d.). Therefore, no impact from airport operations would occur.

NO IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No roads would be closed as a result of the construction or operation of the project, and the project would not involve the development of structures that could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No new access points are proposed as part of the project. Consequently, no impact would occur.

NO IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The neighborhood of Northridge is an urbanized community, and there are no wildlands in the project vicinity. In addition, the proposed project is not located in a wildfire hazard area as identified in the City of Los Angeles General Plan Safety Element, Exhibit D, *Selected Wildfire Hazard Areas in the City of Los Angeles*. The project site is not located in a fire buffer zone, a mountain fire district, or an area of known shallow methane accumulation (City of Los Angeles 1996). The project site is also not located in a Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL FIRE; CAL FIRE 2007). Construction of the proposed project would involve removal of the existing batting cage and the construction of new athletic facilities. There would be no risk of exposing people or structures to a significant risk of loss, injury, or death involving wildland fires. As such, no impact would occur.

NO IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	□	□	■	□
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	□	□	■	□
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	□	□	■	□
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	□	□	■	□
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	□	□	■	□
(iv) Impede or redirect flood flows?	□	□	□	■
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	□	□	□	■
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	□	□	■	□

The project site is located in the Los Angeles Watershed, and the nearest water body to the project site is the Aliso Canyon Wash, located approximately 0.75 mile west of the project site (United States Geological Survey 2018). The project site overlies the San Fernando Valley Groundwater Basin, which is bound by the Santa Susana Mountains, the San Gabriel Mountains, the San Rafael Hills, the Simi Hills, the Chalk Hills, and the Santa Monica Mountains. The San Fernando Valley Groundwater Basin was adjudicated in 1979, and water levels have been fairly stable since the basin's adjudication. Groundwater recharge comes from a variety of sources, including the spreading of imported water and runoff in the Pacoima, Tujunga, and Hansen Spreading Grounds (California Department of Water Resources 2004).

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The proposed project would involve the construction of a team facilities building and batting cage, the installation of poles to support new field lighting, and the installation of conduit to provide power to those systems. Ground disturbance would be limited to minimal site preparation and grading for the team facilities building and batting cage as well as excavation for the light pole foundations and either trenching or boring to install the conduit. Construction activities would require the limited use of heavy construction equipment, such as a backhoe, grader, small drill rig, and a small crane. Use of this heavy construction equipment would involve the use and handling of hazardous materials, such as gasoline, engine oil, coolants, and lubricants. These hazardous materials could leak or be spilled onto the ground surface during construction of the project. However, due to the relatively short construction period, the small number of heavy construction vehicles that would be used, the generally flat topography of the project site, and the lack of any streams, wetlands, or other water bodies at or adjacent to the baseball field, the likelihood that spilled or leaked hazardous material would contaminate a water body is very low. Leaks or accidental spills would be quickly cleaned up and disposed of in accordance with applicable regulations.

The proposed project would be located in an urbanized area that is already largely developed with impervious surfaces. The proposed project would increase impervious area on the project site by constructing two structures that would cover approximately 0.33 acre of previously-disturbed, vacant land. In addition, support poles for the field lighting would incrementally increase impervious surfaces by approximately 226 square feet, assuming a six-foot diameter circle foundation and eight poles. Ground surfaces above trenching locations would be restored to pre-construction conditions after installation of the conduit, and no areas of bare or disturbed soil would remain after completion of project construction. Therefore, construction of the proposed project would not substantially increase the amount of runoff from the project site.

In February 2013, the SWRCB adopted a renewed Phase II General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), since Phase II Small MS4s are not regulated under the municipal Phase I regulations. The permit designated most California

State University (CSU) campuses, including CSUN, as “Non-Traditional” MS4s. Non-Traditional MS4s are operators of substantial storm drain systems that are owned by State or federal government entities. According to the CSU Post-Construction BMPs Guidance Document, requirements in the Phase II General Permit for Small MS4s are phased in by year over the term of the permit, which is five years. During year two of the Phase II General Permit, Non-Traditional MS4s are required to implement a Post-Construction Storm Water Management Program (SWMP), which includes a combination of structural and non-structural Best Management Practices (BMP) that control surface runoff, erosion, and sedimentation. Structural BMP functions include mechanisms that store or detain runoff such that stormwater constituents settle out or are filtered and trapped by underlying soil or media. Non-structural BMPs are measures such as literature and signage that encourage facility users to eliminate non-stormwater discharges into the storm drain system and include maintenance programs, spill prevention plans, and street sweeping (CSU 2014).

The CSU Post-Construction BMPs Guidance Document provides CSU campuses with system-wide guidance for design, implementation, operation, and maintenance of post-construction BMP elements in order to provide permit compliance with the SWRCB Phase II General Permit for Small MS4s (CSU 2014). The proposed project would be required to control pollutant discharge by implementing a combination of structural and non-structural BMPs during general operation of the project to ensure that stormwater runoff meets the established water quality standards and waste discharge requirements. As such, the proposed project would not substantially degrade surface or groundwater quality and would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Conformance with the requirements of the Phase II General Permit for Small MS4s would ensure that the proposed project does not violate any water quality standards or waste discharge requirements. Additionally, implementation of these requirements would ensure the proposed project does not contribute runoff water that would exceed the capacity of the existing stormwater drainage system or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

NO IMPACT

b. *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The Los Angeles Department of Water and Power (LADWP) supplies Northridge with potable and recycled water. Due to limited local water resources, LADWP depends heavily on imported water purchased from the Metropolitan Water District. However, local groundwater supplies are an important piece of LADWP’s water portfolio, providing nearly 30 percent of total supply in drought years (LADWP 2013).

As discussed under items *a*, *c(iii),* and *e*, construction of the project would increase the amount of impervious surface area on the project site by placing a team facilities building, batting cage, and light pole foundations on portions of the ballpark that are currently not developed with impervious surfaces. However, the increase in impervious surface area on the project site would be incremental and would no substantially interfere with groundwater recharge in the project vicinity. In addition, construction of the project would involve minimal excavation for the light pole foundations, which would not substantially interfere with the local groundwater table. Project operation would not involve direct groundwater pumping, and indirect use of groundwater resources via the provision of water by the LADWP to the project site would be subject to approval by the Upper Los Angeles River Area Watermaster. Therefore, impacts related to the depletion of groundwater supplies and groundwater recharge would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

The project involves the construction of a team facilities building, batting cage, and field lighting on a flat, predominantly pervious site. Ground disturbance during construction would be limited to minimal site preparation and grading for the team facilities building and batting cage as well as excavation for the pole foundations and either trenching or boring to install the conduit. Therefore, construction of the proposed project would not result in substantial erosion or siltation on- or off-site.

Operation of the project would increase the amount of impervious surface area on the project site due to construction of a team facilities building and batting cage. However, the project would not cause an alteration of streams or rivers since there are no existing water resources located on or near the project site. In addition, per the SWRCB Phase II General Permit for Small MS4s and CSU Post-Construction BMPs Guidance document, the proposed project would be required to control pollutant discharge by implementing a combination of structural and non-structural BMPs during general operation of the project to ensure that stormwater runoff meets established water quality standards and waste discharge requirements. Compliance with MS4 permit requirements would reduce potential impacts associated with erosion, siltation, or flooding on- and off-site to a less than significant level.

LESS THAN SIGNIFICANT IMPACT

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would impede or redirect flood flows?

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is located in Zone X, which is characterized as an area of minimal flood hazard and having a less than 0.2 percent annual chance for a flood (FEMA 2008). In addition, Exhibit F, *100-Year & 500-Year Flood Plains*, and Exhibit G, *Inundation & Tsunami Hazard Areas*, of the City of Los Angeles General Plan Safety Element indicate that the project site is not within a 100- or 500-year flood plain area, inundation area, or flood control basin (City of Los Angeles 1996). Therefore, the proposed project would not have the potential to impede or redirect flood flows or place housing or structures in a 100-year flood hazard area, and no impact would occur.

NO IMPACT

d. Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As indicated in City of Los Angeles General Plan Safety Element Exhibit G, *Inundation & Tsunami Hazard Areas*, the project site lies outside of potential tsunami and inundation hazard areas (City of Los Angeles 1996). The project site is not located within 100- or 500-year flood plain area. In addition, the project site does not lie near a large body of water that could experience a seiche, nor is the project located in hillside area that would be vulnerable to mudflow. Therefore, the proposed project would have no impact or risk of pollutant release due to inundation caused by flood hazards, tsunami or seiche.

NO IMPACT

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	■
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐

a. Would the project physically divide an established community?

The site is predominately surrounded by other CSUN campus buildings and parking lots to the north, east, and south as well as Northridge Academy High School to the east and single-family residential uses across Lindley Avenue to the west. The proposed project would construct new athletic facilities at the existing Matador Field ballpark on the CSUN campus. The proposed use would be compatible with surrounding university-related CSUN facilities and would not involve construction of any new infrastructure (such as a new road) that would divide the surrounding area. Therefore, the proposed project would not have any impacts related to physically dividing an established community.

NO IMPACT

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project would require a minor revision to the CSUN 2035 Master Plan Update. The project site is currently designated "Instructional, Athletic, and Recreation Fields" by the CSUN 2035 Master Plan Update (CSUN 2005a). According to the Master Plan Update Exhibit 41, *Campus Land Use Plan*, the project site is located within the Instructional/Athletics/Recreation precinct and is designated "Infrastructure/Athletic/Recreational" for future development on the project site. According to the CSUN Master Plan, the Instructional/Athletics/Recreation precinct includes two academic/administrative buildings, athletic fields, small athletic support facilities, and parking structures. Development envisioned for this precinct includes one-story athletic buildings, two-story academic buildings, and six-story parking structures (CSUN 2005a). Therefore, despite the requisite revision to the CSUN 2035 Master Plan Update, the proposed team facilities building, batting cage, and field lighting would be consistent with the type of development envisioned in the Instructional/Athletics/Recreation Precinct of the CSUN Master Plan.

Although the CSUN Master Plan does not include specific guidelines for the proposed project, it contains planning and design principles for future development projects not addressed in the Master Plan. The CSUN Master Plan states that new buildings and facilities should be sited in a manner that encloses and defines open space and makes use of underutilized and vacant lands

(CSUN 2005a). The proposed project would be located on the perimeter of the existing baseball field primarily on vacant land. Although part of the batting cage would be located on open space that is part of North Field, the amount of land that would be developed would be incremental compared to the overall size of North Field, and impacts would be less than significant.

As discussed in Section 1, *Aesthetics*, the proposed project would be consistent with the design guidelines of the CSUN Master Plan. As discussed in Section 17, *Transportation,* the proposed project would not interfere with the CSUN Master Plan's goals for bicycle and pedestrian circulation along East Promenade, which is located adjacent to the project site's western boundary. Furthermore, as discussed in Section 4, *Biological Resources*, the proposed project would not conflict with the Landscape Master Plan contained in the CSUN Master Plan.

As such, the proposed project would be consistent with applicable land use plans and policies, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

a. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

According to the City of Los Angeles General Plan Conservation Element, potential mineral deposit sites in the city lie along the flood plain from the San Fernando Valley through Downtown Los Angeles. However, as shown in in Exhibit A*, Mineral Resources,* of the City's General Plan Conservation Element, the project site not located in a mineral deposit zone (City of Los Angeles 2001). In addition, the project site is located in an urbanized setting that is predominately developed with residential, commercial, and institutional uses with no mineral resource extraction activities occurring on-site or in adjacent areas.

According to the CGS mineral land classification maps, the project site is not in an MRZ-2 zone or other known or potential mineral resource area (CDOC 1979). Because there are no known mineral resources or mineral resource extraction on or near the project site and the proposed project does not involve the use or mining of mineral resources, the project would have no impact on the availability or recovery of mineral resources.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	■	☐	■

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called "A weighting" is used to filter noise frequencies that are not audible to the human ear. A weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the "A-weighted" levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A weighted, and "dB(A)" is understood to identify the A weighted decibel.

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. A 10 dB increase represents a 10-fold increase in sound intensity, a 20 dB change is a 100-fold difference, 30 dB is a 1,000-fold increase, etc. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3 dB decrease.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dB(A) or in terms of acoustical energy. Two equivalent noise sources combined do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dB(A), increase or decrease; that a change of 5 dB(A) is readily perceptible; and that an increase (decrease) of 10 dB(A) sounds twice (half) as loud (California Department of Transportation [Caltrans] 2013).

Noise Descriptors

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this analysis are the one-hour equivalent noise level (L_{eq}).

- The L_{eq} is the level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time-varying sound. For example, $L_{eq(1h)}$ is the equivalent noise level over a 1-hour period and $L_{eq(8h)}$ is the equivalent noise level over an 8-hour period. $L_{eq(1h)}$ is a common metric for limiting nuisance noise whereas $L_{eq(8h)}$ is a common metric for evaluating construction noise.

Noise Propagation

Sound from a small, localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance.

Traffic noise is not a single, stationary point source of sound. Over some time interval, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is 3 dB(A) for each doubling of distance.

Vibration

Vibration levels are usually expressed as single-number measure of vibration magnitude, in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable. The peak particle velocity (ppv) is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second. Since it is related to the stresses that are experienced by buildings, ppv is often used in monitoring of blasting vibration. Although ppv is appropriate for evaluating the potential of building damage, it is not suitable for evaluating human response. It takes some time for the human body to respond to vibrations. In a sense, the human body responds to an average vibration amplitude (FTA 2018). Because vibration waves are oscillatory, the net average of a vibration signal is zero. Thus, the root mean square (rms) amplitude is used to describe the "smoothed" vibration amplitude (FTA 2018). The rms of a signal is the square root of the average of the squared amplitude of the signal, usually measured in inches per second. The average is typically calculated over a 1-second period. The rms amplitude is always less than the ppv and is always positive. Decibel notation is used to compress the range of numbers required to describe vibration. The abbreviation VdB is used in this analysis for vibration decibels to reduce the potential for confusion with sound decibels.

Continued vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hertz), or when foundations or utilities, such as sewer and water pipes, connect the structure and the vibration source.

Project Site Noise Conditions

The primary noise sources in the project area are motor vehicles (e.g., automobiles, buses, and trucks) along Lindley Avenue. Motor vehicle noise is a concern because it is characterized by a high number of individual events that often create sustained noise levels. Ambient noise levels would be expected to be highest during the daytime and rush hour unless congestion slows speeds substantially. Secondary noise sources include athletic events, including games and team practices, held at the existing baseball field and the adjacent soccer practice field. This noise is intermittent and confined to the portions of the day when games or practices are being held.

To determine ambient noise levels at the project site, five 10-15 minute sound measurements were taken using an Extech ANSI Type II sound level meter. Four were taken between 2:11 p.m. and 3:18 p.m. on August 10, 2018 and one was taken between 8:02p.m. and 8:17p.m. on March 26, 2019 (refer to Appendix D for sound measurement data). As shown in Table 9, noise levels in the immediate vicinity of the project site range from 55.4 dBA Leq to 64.1 dBA Leq.

Table 9 Ambient Sound Level Monitoring Results

Measurement Number	Measurement Location	Sample Time	Distance to Noise Source	Primary Noise Source	Leq[10] (dBA)[1]
1	Outside batting cage in left field[2,3]	2:11 – 2:21 p.m.	40 ft.	Batting Practice	56.6
2	Right field near the proposed site of the team facilities building[3]	3:08 – 3:18 p.m.	60 ft.	Roadway Traffic	55.4
3	Inside batting cage[2]	2:25 – 2:35 p.m.	10 ft.	Batting Practice	64.2
4	Lindley Avenue between Herbold Street and Avenida Las Brisas	3:08 – 3:18 p.m.	40 ft.	Roadway Traffic	64.1
5	Lindley Avenue adjacent to La Villanueva Residential Complex entrance	1:32 – 1:47 p.m. (Early afternoon)	20 ft.	Roadway Traffic	64.6
		8:02 – 8:17 p.m. (Early evening)	20 ft.	Roadway Traffic	60.2

See Appendix D for noise monitoring data. See Figure 11 for a map of the sound measurement locations.

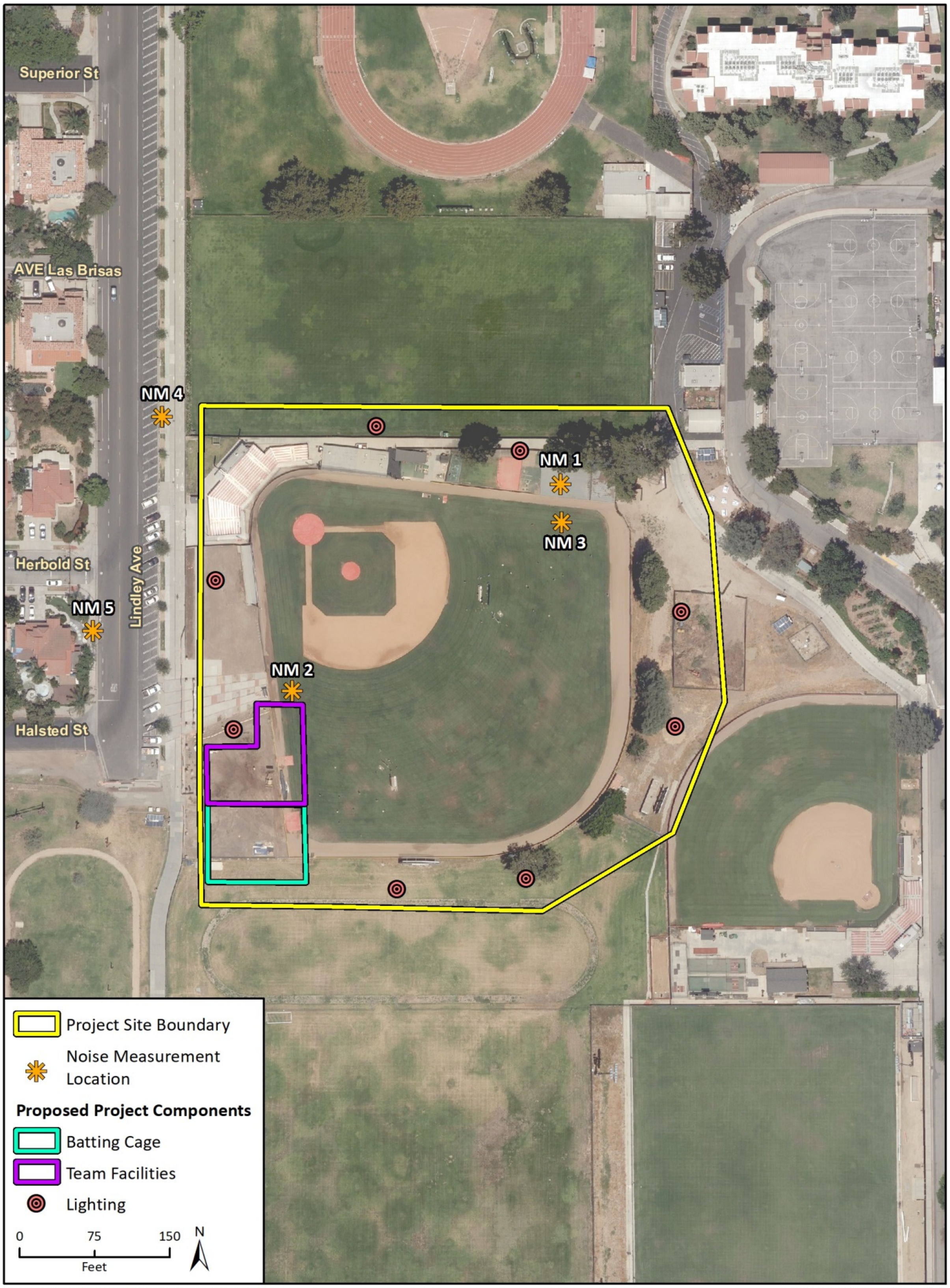
[1] The equivalent noise level (Leq) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the Leq was over a 10-minute period (Leq[10]).

[2] One player was in the batting cage conducting batting practice for the entire 10-minute noise measurement.

[3] A children's baseball camp was being held during the entire 10-minute noise measurement.

Source: Rincon Consultants, field measurements on August 9, 2018 and March 26, 2019 using an ANSI Type II Integrating sound level meter

Figure 11 Noise Measurement Locations



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Regulatory Setting

The CSUN 2005 Master Plan does not contain guidelines for regulating noise levels and is not subject to City of Los Angeles standards. However, because CSUN does not have noise standards and is located within the City of Los Angeles, the City of Los Angeles standards may be used as guidance to evaluate potential noise impacts. The City of Los Angeles implements and enforces construction and operational noise regulations through the Los Angeles Municipal Code (LAMC). LAMC Section 112.05 limits noise from construction equipment located within 500 feet of a residential zone to a maximum noise level of 75 dBA between 7:00 a.m. and 10:00 p.m., as measured at a distance of 50 feet from the source, unless compliance is technically infeasible. Technical infeasibility means that noise limitations cannot be met despite the use of mufflers, shields, sound barriers and/or other noise reduction devices or techniques during the operation of construction equipment. LAMC Section 41.40 also restricts construction activity to the hours below:

- Monday through Friday between 7:00 a.m. and 9:00 p.m.
- Saturdays and national holidays between 8:00 a.m. and 6:00 p.m.
- No construction on Sundays except for residents

LAMC Section 111.03 identifies presumed ambient noise levels for different zoning designations, as shown in Table 10. The noise levels shown in Table 10 are to be used in place of measured ambient noise levels when the measured ambient noise levels are less than those identified in Table 10. An increase of more than 5 dB above presumed or measured ambient noise levels, whichever is greater, is prohibited (Sections 114.02(a)3 and 112.04(b)).

Table 10 City of Los Angeles Presumed Ambient Noise Levels (Leq)

Zone	Daytime 7:00 a.m. – 10:00 p.m.	Nighttime 10:00 p.m. – 7:00 a.m.
Residential – A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50	40
Commercial – P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60	55
Manufacturing – M1, MR1, and MR2 60 55 Heavy Manufacturing M2 and M3	65	65

Source: City of Los Angeles Municipal Code Chapter 11, section 111.03

LAMC Section 112.01 prohibits noise from radios, musical instruments, television sets, and other sound-amplifying devices from being audible at a distance in excess of 150 feet from the property line of the noise source within 500 feet of any residential zone or from exceeding the ambient noise level on the premises of any other occupied property. LAMC Section 112.02 prohibits the operation of air conditioning, refrigeration, heating, pumping, and filtering equipment associated with any residence or other structure from exceeding the ambient noise level of any other occupied property by more than 5 dBA.

LAMC Section 115.02(b) states "[t]he operation or use of sound amplifying equipment for noncommercial purposes in all residential zones and within 500 feet thereof, except when used for regularly scheduled operative functions by any school or for the usual and customary purposes of any church, is prohibited between the hours of 4:30 p.m. and 9:00 a.m. of the following day." This section effectively exempts normal school functions, such as scheduled sporting games, from compliance with the requirements of LAMC Chapter 11.

Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. According to the City's Noise Element, the following land uses are considered noise-sensitive: single-family and multi-unit dwellings; long-term care facilities (including convalescent and retirement facilities); dormitories; motels; hotels; transient lodgings and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves, and parks (City of Los Angeles 1999).

On-campus noise-sensitive receptors in the project site vicinity include Bougainvillea Hall (student dormitory) 360 feet to the northeast and Rose Crown Hall (student dormitory) 515 feet to the northeast of the project site. Off-campus noise-sensitive receptors include single-family residences 100 feet to the west and Northridge Academy High School 115 feet to the east of the project site.

The ambient noise level at the nearest residence, located 100 feet west of the existing baseball field, was measured at 64.6 during the early afternoon and 60.2 during the early evening (See Table 11). Table 11 shows the distance between the nearest residence and proposed and existing noise sources on-site.

Table 11 Distance between Nearest Residence and Proposed and Existing Noise Sources

Noise Source	Distance to Residences (feet)
Existing Home Plate	225
Existing Batting Cage	475
Existing Speaker System	150
Proposed Team Facilities Building	175
Proposed Batting Cage	185
Project Site Boundary (Construction Site)	100

a. Would the project result generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed project would replace athletic facilities on the site. Existing sensitive uses near the project site would be subject to temporary construction noise as well as on-site recreational noise and off-site traffic noise associated with operation of the proposed project.

Construction Noise

Temporary noise levels caused by construction activity would be a function of the noise generated by construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of noise-generating activities. Nearest receivers include single-family residences located across Lindley Avenue west of the project site and Northridge Academy High School located east of the project site. While the project site is near existing residential and institutional land uses, construction equipment would be continuously moving across the site, coming near and then moving further away from individual receivers. Due to the dynamic nature of construction, maximum hourly noise levels are calculated from the center of construction activities at a distance of at least 50 feet, per LAMC Section 112.05. Construction noise levels at receivers to the west and east were analyzed at distances of 100 feet and 115 feet, respectively, from the center of construction activity.

Construction noise was estimated using the FHWA Roadway Construction Noise Model (RCNM) (2006). RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. Using RCNM, construction noise levels were estimated at noise-sensitive receivers near the project site. RCNM provides reference noise levels for standard construction equipment, with an attenuation of 6 dBA per doubling of distance for stationary equipment.

For construction noise assessment, construction equipment can be considered to operate in two modes: stationary and mobile. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around the construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts from mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site).

Variation in power imposes additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle, or percent of operational time, of the activity to determine the L_{eq} of the operation (FTA 2018).

Each phase of construction has a specific equipment mix, depending on the work to be accomplished during that phase. Each phase also has its own noise characteristics; some will have higher continuous noise levels than others, and some may have high-impact noise levels. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that phase (FTA 2018). In typical construction projects, grading activities generate the highest noise levels because grading involves the largest equipment and covers the greatest area.

Construction phases would include demolition, site preparation, grading, building construction, and architectural coating. Construction would not require any blasting or pile driving. The construction equipment analyzed was informed by the equipment listed in the CalEEMod modeling used in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions* (see Appendix B for CalEEMod model output). It is assumed that diesel engines would power all construction equipment. For assessment purposes, and to be conservative, the loudest hour has been used for assessment. Noise levels are based on a loader, a dozer, and a concrete saw operating simultaneously during the demolition and grading phases. Using the FHWA Roadway Construction Noise Model (RCNM) to estimate noise associated with construction equipment maximum hourly noise levels are calculated to be 85 dBA L_{eq} at 50 feet, measured from the center of the construction site or activity. RCNM calculations are included in Appendix D.

At noise sensitive uses located approximately 100 feet west of the project site boundary, maximum hourly noise levels would attenuate to 79 dBA L_{eq}. At noise sensitive uses located approximately 115 feet east of the center of the project site boundary, maximum hourly noise levels would attenuate to 78 dBA L_{eq}.

Given the above analysis, maximum hourly construction noise levels at residential and institutional receivers would exceed the City's maximum construction noise level limit of 75 dBA. Compliance with LAMC Section 41.40 would restrict construction activity to daytime hours between 7:00 a.m. and 9:00 p.m. Monday through Friday, and between 8:00 a.m. and 6:00 p.m. on Saturday. As such, construction noise would not impact nearby residential and institutional receivers during sensitive nighttime hours of sleep. However, construction noise would still result in noise levels in exceedance of the City's maximum construction noise level limit of 75 dBA during permitted construction hours. Therefore, construction noise impacts would be potentially significant. Implementation of the following mitigation measure would reduce construction noise impacts to nearby noise-sensitive receptors to a less than significant level.

N-1 Construction Noise Abatement

To reduce construction nose to a less than significant level, the project shall incorporate one of the following measures into project construction activities:

1. An industrial grade muffler or muffler of similar capacity capable of reducing engine noise by at least 15 dBA shall be installed on all mobile construction equipment, including but not limited to the following: cranes, backhoes, tractors, dozers, graders, scrapers, forklifts, pavers, and rollers (see Appendix D); or,
2. Noise barriers with a minimum height of 7 feet capable of reducing construction noise by at least 10 dBA shall be erected along the western and eastern boundaries of the project site (see Appendix D). The noise barriers shall be constructed of material with a minimum weight of two pounds per square foot with no gaps or perforations. Noise barriers may be constructed of, but not limited to, 5/8-inch plywood, 5/8-inch oriented strand board, and hay bales.

As discussed above, maximum hourly construction noise levels would be 79 dBA L_{eq} at the nearest residential receivers to the west and 78 dBA L_{eq} at Northridge Academy High School to the east. Implementation of mitigation measure N-1 would reduce construction noise by at least 10 dBA, which would result in maximum hourly construction noise levels of approximately 69 dBA L_{eq} at the residential receivers to the west and 68 dBA L_{eq} at Northridge Academy High School to the east. This analysis conservatively assumes that a number of pieces of construction equipment would be operating simultaneously during each phase of construction and that there would not be any obstructions to line-of-sight that would further attenuate construction noise. Staggered operation of equipment would further reduce construction related noise.

On-site Noise Sources

New on-site noise sources associated with operation of the proposed project would include heating ventilation air conditioning (HVAC) noise as well as recreational noise from evening games. In addition, the proposed project would also relocate the batting cage from the northern portion of the baseball field to the western portion of the baseball field, which may result in higher noise levels at nearby residences along Halsted Street and Herbold Street.

Team Facilities Building

The proposed team facilities building would include an HVAC system that includes a packaged rooftop air heat pump with an economizer. Operational noise from HVAC equipment is a common noise source associated with new development. The design of the equipment would be required to comply with LAMC Section 112.02, which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of any other occupied property by more than 5 dBA. Compliance with this section of the LAMC would ensure that operation of on-site HVAC equipment would not result in a significant noise impact.

Evening Baseball Games

Installation of field lighting would allow for some games to be held in the evening at the existing baseball field. Evening games would shift existing crowd and baseball game noise from daytime hours (7:00 a.m. to 7:00 p.m.) to evening hours (7:00 p.m. to 10:00 p.m.). In the rare occasion, evening games result in extra innings crowd and baseball game noise could extend into nighttime hours (10:00 p.m. to 11:00 p.m.). Noise levels from the existing baseball field were modeled with SoundPLAN Essential, version 4.0 (SoundPLAN), a three-dimensional acoustical modeling software package, using noise measurements that were taken on-site on February 26, 2019 during a baseball game (Appendix D). Table 12 and Figure 4 show the predicted baseball noise levels and modeled noise level contours resulting from a typical game.

Table 13 shows that according to the modeled noise level contours, predicted noise levels at the nearest sensitive uses (single-family homes) are 61 and 63 dBA L_{eq} during a typical baseball game. According to the City of Los Angeles Municipal Code (even though CSUN is not subject to compliance with City of Los Angeles standards), noise levels resulting in an increase of more than 5 dB above presumed or measured ambient noise levels, would be considerable. Because measured ambient noise levels at the residential uses were 64.6 (measured in early afternoon) and 60.2 (measured in early evening) dBA L_{eq}, noise levels during the baseball game would not exceed the 5 dB threshold. Additionally, as discussed above, according to LAMC Section 115.02(b), baseball game noise is exempt from the City noise ordinance because baseball games are considered regularly scheduled operative functions of the school.

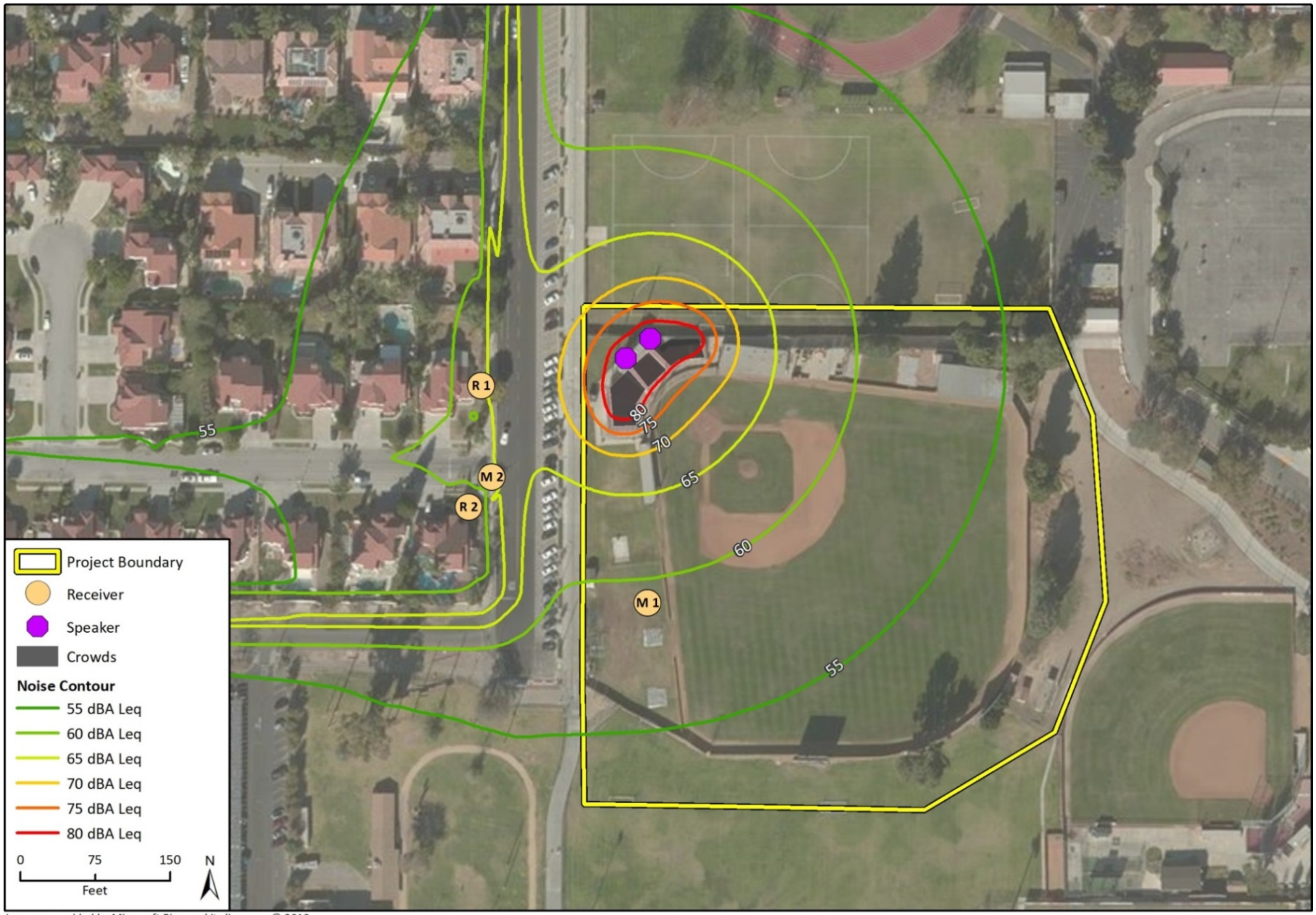
Table 12 Predicted Baseball Game Noise Levels

Receiver	Description	Land Use Zone	Noise Level (dBA L_{eq})
R1	18100 Herbold Street	Residential	61
R2	18101 Herbold Street	Residential	63

Source: Appendix D; ; See Figure 12 for diagram of locations.

On the rare occasion that baseball games require extra innings, noise could extend to nighttime hours (10:00 p.m. to 11:00 p.m.), which could also be more noticeable than noise during daytime and evening hours due to the lower ambient noise levels during these hours. The evening noise measurement taken after 8 p.m. recorded a noise level at 60.2 dBA L_{eq}. Assuming this noise level is characteristic of nighttime hours (after 10 p.m.), baseball game noise would not increase the ambient noise levels by more than 5 dB (the City of Los Angeles standard). Therefore, by adding baseball park lighting and extending the time by which baseball games are held, noise impacts resulting from these evening baseball games would not be considered significant.

Figure 12 Baseball Game Noise Contours



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Batting Cage

The proposed project would include removal of the existing batting cage with two tunnels on the northern portion of the project site and construction of a new batting cage with four tunnels on the western portion of the project site. Noise Measurement 3 (NM 3), which is representative of noise generated by a single player using the batting cage, was used to estimate noise generated by batting practices currently conducted on-site. Because the existing batting cage contains two tunnels, the Leq and Lmax measures from NM 3 were doubled logarithmically to represent noise from the batting cage when in use by two players at the same time. The noise level was attenuated by 6 dBA over a distance of 475 feet to nearest residence at the northwest corner of Lindley Avenue and Halsted Street (Table 11). As shown in Table 13, batting practice at the existing two-tunnel batting cage generates a noise level of approximately 33.7 dBA Leq, or 57.6 dBA Lmax, at the nearest residence. When added to the existing ambient noise level of approximately 64.1 dBA Leq, noise from the batting cage would result in a noise level of approximately 64.1 dBA Leq.

The proposed batting would contain four tunnels; therefore, the Leq and Lmax measurements from NM 3 were quadrupled logarithmically to represent noise from the batting cage when in use by four players at the same time. This noise level was attenuated by 6 dBA over a distance of 185 feet to nearest residence (Table 11). As shown in Table 13, batting practice at the proposed four-tunnel batting cage, which would include approximately four tunnels, would result in a noise level of approximately 44.9 dBA Leq, or 68.8 dBA Lmax, at the nearest residence on the northwest corner of Lindley Avenue and Halsted Street. When added to the existing ambient noise level of 64.2 dBA Leq, noise from the batting cage would result in an average noise level of 64.2 dBA Leq.

Table 13 Comparison of Existing and Proposed Batting Cage Noise

	Distance from Residences (feet)	Ambient Noise Level at Residences dBA Leq [10][1]	Batting Cage Noise Level at Residences		Batting Cage Noise Plus Ambient Noise at Residences dBA Leq [10][1]
			dBA Leq [10][1]	dBA Lmax	
Existing	475	64.1	33.7[2]	57.6[2]	64.1
Proposed	185	64.1	44.9[3]	68.8[3]	64.2
Net Change					0.1

See Appendix D for summed noise calculations. See Figure 11 for a map of the sound measurement locations.

[1] The equivalent noise level (Leq) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the Leq was over a 10-minute period (Leq[10]).

[2] The Leq and Lmax measurements from NM 3, which is representative of a single player using the batting cage, were doubled logarithmically to represent the existing two-tunnel batting cage and attenuated over a distance of 475 feet to the nearest residence.

[3] The Leq and Lmax measurements from NM 3, which is representative of a single player using the batting cage, were quadrupled logarithmically to represent the proposed four-tunnel batting cage and attenuated over a distance of 185 feet to the nearest residence.

Source: Rincon Consultants, field measurements on August 9, 2018 using an ANSI Type II Integrating sound level meter

Relocation and expansion of the batting cage under the proposed project would result in an increase of 0.1 dBA Leq at nearby residences, which would not be perceptible. However, when the batting cage is in use, the maximum noise level (Lmax) at nearby residences would be 11.2 dBA Lmax greater than that produced by the existing batting cage. Although the maximum noise level would be intermittent, the increase in maximum noise levels would be noticeable and would have a potentially significant impact on nearby sensitive receptors. Implementation of mitigation measure N-2 would reduce batting cage noise on nearby noise-sensitive receptors to a less than significant level by requiring the design of the proposed wall to provide a transmission loss of at least 25 dBA.

N-2 Design of Western Batting Cage Wall

The western wall of the proposed batting cage shall be constructed of building materials that provide a transmission loss (TL) of at least 25 dBA, or other sound attenuation steps must be taken to mitigate the noise from the batting cage by at least 25 dBA. Any materials used must be consistent with the CSUN Master Plan, which prohibits the use of industrial materials for buildings with public visibility.

Off-site Traffic Noise

The proposed project would construct new athletic facilities at the existing baseball field. Because the project would not expand the ballpark's current seating capacity, no increase in the total number of vehicle trips to the project site would occur. However, the installation of field lighting would permit baseball games to begin later in the evening (between 3:00 p.m. to 7:00 p.m.), which would consequently shift the timing of vehicle trips related to on-site baseball games to later in the day. Under existing conditions, spectators arrive between 1:00 p.m. and 3:00 p.m. and depart between 4:00 p.m. and 8:00 p.m., assuming an average three-hour game. Under existing plus project conditions, spectators would arrive between 3:00 p.m. to 7:00 p.m. and depart between 7:00 p.m. to 11:00 p.m., assuming an average three-hour game. In addition, if extra innings are required for evening games, spectators may depart between 11:00 p.m. to 12:00 a.m., assuming that games with extra innings last until 11:00 p.m. Evening and nighttime hours are more sensitive to noise than daytime hours, and the CNEL metric, which is used by the City of Los Angeles, assigns a 5 dBA penalty to noise occurring during evening hours (7:00 p.m. to 10:00 p.m.) and a 10 dBA penalty to noise occurring during nighttime hours (10:00 p.m. to 11:00 p.m.).

As discussed in the LA CEQA Thresholds Guide, a significant off-site roadway noise impact would occur if the project causes the ambient noise level measured at the property line of affected uses to increase by 3 dBA CNEL to or within the "normally unacceptable" or "clearly unacceptable" categories as shown in Table 10, or by 5 dBA CNEL or more if the ambient noise level remains in the normally acceptable or conditionally acceptable ranges. To determine project impacts to roadway noise, the Department of Housing and Urban Development (HUD) Day/ Night Noise Level Electronic Assessment Tool (DNL Calculator) was used to model roadway noise from Lindley Avenue under existing and existing plus project conditions. This location was chosen for modelling because it would be most affected by project-related traffic and is adjacent to sensitive receptors in nearby neighborhoods. Based on the nature of the roadway, it was assumed that the vehicle mix on Lindley Avenue consists of 99 percent cars and 1 percent medium trucks. Additional model assumptions include vehicle speeds consistent with posted speed limits on Lindley Avenue.

Daily traffic along Lindley Avenue was estimated via PM peak traffic counts taken by Fehr & Peers (F&P) in October 2018 (F&P 2018, Appendix C). According to the transportation study, approximately 579 vehicle trips occur on Lindley Avenue during the PM peak hour under existing conditions (F&P 2018, Appendix C). The hourly traffic counts were multiplied by 10 to estimate daily traffic; therefore, ADT on Lindley Avenue is approximately 5,790 vehicles. Under existing plus project conditions, ADT on Lindley Avenue would not change because the project would not result in an increase in the total number of trips to the project site. However, the timing of vehicle trips would shift to noise-sensitive evening and nighttime hours. According to the transportation study, approximately 793 PM peak hour trips would occur on Lindley Avenue under existing plus project conditions; therefore, the project would shift the timing of approximately 214 passenger vehicle trips (793 trips – 579 trips) to evening hours (F&P 2018, Appendix C). Assuming conservatively that all 214 passenger vehicle trips are net new trips during evening hours, the project would add 214 passenger vehicle trips to noise-sensitive evening and nighttime hours as spectators depart from the project site.[3]

Assuming a standard estimate of 15 percent of ADT occurring at night, approximately 860 passenger vehicle trips occur on Lindley Avenue at night under existing conditions (5,790 ADT * 0.99 * 0.15). The project would add 214 passenger vehicle trips to evening and nighttime hours; therefore, approximately 1,074 passenger vehicle trips would occur at night on Lindley Avenue (869 trips + 214 trips). As a result, under existing plus project conditions, approximately 19 percent of passenger vehicle trips would occur on Lindley Avenue at night. This change in the night fraction of trips was modeled in the HUD DNL Calculator to determine the project's impacts to roadway noise that would result from the shift in the timing of vehicle trips to noise-sensitive evening and nighttime hours.

As shown in Table 14, the project would result in an increase of approximately 0.3 dBA Ldn on Lindley Avenue due to the shift in the timing of project-related trips to noise-sensitive evening and nighttime hours. As discussed above, in practice, CNEL and Ldn are often used interchangeably. Therefore, the project would result in an increase of approximately 0.3 dBA CNEL, which would not increase the ambient noise level at single-family residences along Lindley Avenue to within the "normally unacceptable" noise level of 70 to 75 dBA CNEL nor result in an increase of 5 dBA or more. As such, the proposed project would not exceed the City's significance thresholds for off-site roadway noise, and impacts would be less than significant.

Table 14 Roadway Traffic Noise

	Roadway Noise (dBA Ldn)[1]		
Modeled Location	**Existing [1]**	**Existing + Project [2]**	**Noise Level Increase [2]-[1]**
Residences west of Lindley Avenue	66.9	67.2	0.3

[1] Does not account for the 5-dBA reduction in noise levels provided by the existing sound wall along the western edge of Lindley Avenue.

See Attachment C for HUD DNL worksheets.

LESS THAN SIGNIFICANT IMPACT

b. *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

The proposed project does not include any substantial vibration sources associated with operation. Thus, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers, especially during grading of the project site. The greatest vibratory sources during construction would be bulldozers and loaded trucks. Neither blasting nor pile driving would be required for construction of the proposed project. Construction vibration estimates are based on vibration levels reported by Caltrans and the FTA (Caltrans 2013b, FTA 2018).

3 Under existing conditions, spectators sometimes depart after 7:00 p.m. during noise-sensitive hours depending on the start time of the baseball game.

A quantitative assessment of potential vibration impacts from construction activities, such as blasting, pile-driving, vibratory compaction, demolition, drilling, or excavation, may be conducted using the equations developed by Caltrans and the FTA (Caltrans 2013b, FTA 2018). Table 15 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 15 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 ft. (in/sec)	Approximate L_v VdB at 25 ft.
Large Bulldozer	0.089	87
Loaded Trucks	0.076	86
Small Bulldozer	0.003	58

Source: FTA 2018

Neither CSUN nor the City of Los Angeles has adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the FTA guidelines set forth in the FTA Transit Noise and Vibration Impact Assessment Manual (2018) are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance. Based on the FTA criteria, construction vibration impacts would be significant if vibration levels exceed 100 VdB, which is the general threshold where damage can occur to typical buildings, 75 VdB at institutional land uses with primary daytime use (e.g., churches and schools), or 72 VdB at residences during nighttime hours (FTA 2018).

Certain types of construction equipment can generate high levels of groundborne vibration. Construction of the proposed project would potentially utilize loaded trucks and a bulldozer during most construction phases. Vibration impacts are assessed from the center of construction activity. Therefore, equipment was assumed to operate at an average distance of 100 feet from residential receivers west of the project site and 115 feet from Northridge Academy High School (east of the project site). As shown in Table 16, groundborne vibration from construction equipment would not exceed 100 VdB, the threshold at which damage can occur to typical buildings. Vibration levels would also not exceed the 75 VdB threshold for institutional land uses with primary daytime uses at Northridge Academy High School. If construction occurs during nighttime hours, groundborne vibration at adjacent residences would exceed the 72 VdB threshold for residences during nighttime hours. However, in accordance with LAMC Section 41.40, project construction would be required to occur during daytime hours and would not disturb residences during sensitive hours of sleep.

Table 16 Vibration Levels at Sensitive Receptors

Equipment	Estimated VdB at Nearest Sensitive Receptors: Residences (100 feet)	Northridge Academy High School (115 feet)
Large Bulldozer	74	72
Small Bulldozer	66	65
Loaded Trucks	70	68
Threshold	**100**	**75**
Threshold Exceeded?	No	No

See Appendix D for vibration analysis worksheets.
Source: FTA 2018

As a recreational use, the proposed project would not generate significant stationary sources of vibration, such as heavy equipment operations. Therefore, operational vibration impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As discussed in Section 9, *Hazards and Hazardous Materials*, the project site is located approximately 2.6 miles northwest of the nearest airport, which is the Van Nuys Airport. However, the project site is not within an airport land use plan or noise contour boundaries (City Los Angeles 1999). No private airstrips are in the project vicinity. Therefore, noise impacts related to airports and private airstrips would not occur.

NO IMPACT

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14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	□	□	□	■
b. Displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere?	□	□	□	■

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The city of Los Angeles has a current population of 4,054,400 with an average household size of 2.86 persons (DOF 2018). SCAG forecasts that the population of Los Angeles will grow to 4,609,400 by 2040, which is an increase of 555,000, or 14 percent (SCAG 2016). Development of the project would involve the removal of the existing batting cage and construction of a new team facilities building, batting cage, and field lighting on the CSUN campus. The proposed project does not include any housing and would therefore not directly generate population growth in the project vicinity. Furthermore, the proposed project would not generate substantially more employment opportunities above those currently offered by the existing CSUN baseball program. The team facilities building may include a small team store, which may generate a few additional employment opportunities on the CSUN campus; however, these opportunities would be filled by the existing labor force and student population and would not indirectly induce population growth in the Northridge neighborhood. Therefore, the project would not directly or indirectly cause a substantial increase in population. No impact would occur.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project involves the removal of an existing batting cage, and there are no housing units or people residing on the project site. Therefore, the project would not displace any existing housing units or people, necessitating construction of replacement housing elsewhere. No impact would occur.

NO IMPACT

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15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:				
1 Fire protection?	☐	☐	■	☐
2 Police protection?	☐	☐	■	☐
3 Schools?	☐	☐	☐	■
4 Parks?	☐	☐	☐	■
5 Other public facilities?	☐	☐	■	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the 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?

According to the CSUN FEIR for the 2005 Master Plan Update, the Los Angeles Fire Department (LAFD) provides fire prevention, fire protection, and emergency medical services (EMS) for the campus. Fire Station No. 103 provides primary fire protection for the south campus and Fire Station No. 70 provides fire protection for the north campus (CSUN 2006). The project site is located in the northern portion of the CSUN campus. Currently, the average response times for Fire Station No. 70 are approximately six minutes for emergency medical services (EMS) and non-emergency medical services (NON-EMS), and five minutes for structure fires (LAFD 2018). The proposed project may increase the usage of the baseball field during the nighttime but would not increase LAFD's service population because the proposed project would not cause direct growth in the Northridge population and would not expand the existing seating capacity.

With respect to expansion of fire protection services, the LAFD works with the City of Los Angeles to review plans for new development. In addition, the proposed project would comply with standard design requirements in accordance with the CBC, which include fire sprinklers and fire alarm devices. New building construction would also be required to install backflow preventers, post indicator valves, and LAFD connections for new building sprinkler systems (CSUN 2006). Because the project site is in the LAFD's existing service area and would comply with applicable LAFD and CBC requirements, it would not require new or expanded fire protection facilities. Therefore, the project would result in a less than significant impact related to fire protection services.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

According to the CSUN FEIR for the 2005 Master Plan Update, first-response police protection services for the campus are provided by the University Police Department, which is a division of the University Department of Public Safety. Off-campus police protection services and on-campus calls for felony offenses are provided by the Los Angeles Police Department (LAPD). The University Police Department has a Memorandum of Agreement (MOA) with the LAPD for mutual aid, jurisdictional issues, and any other relevant mutual assistance. As such, the University Police Department only has a limited jurisdiction and authority with regard to off-campus incidents that occur within a one-mile radius of campus (CSUN 2006).

The University Police Department Patrol Operations Division provides 24-hour patrol of University property, buildings, parking lots, and residence halls. All laws and codes of the state and the United States are enforced on the campus, including regulations the University establishes to administer the campus community (CSUN 2006). The proposed project would construct new athletic facilities at the existing baseball field and would not expand the ballpark's current seating capacity; therefore, the project would not increase the need for police protection services at the project site. In addition, because the University Police Department is limited to campus incidents, response times to the project site would be adequate, and the proposed project would not require new or expanded police protection facilities. Therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The proposed project involves the removal of the existing batting cage and construction of new athletic facilities on the CSUN campus. The goal of the proposed project is to upgrade the baseball program's athletic facilities in order to improve its ability to broadcast games and recruit new players. Because the proposed project would include athletic and recreational uses, operation of the project would not generate additional students at the Los Angeles Unified School District, and no impact would occur.

NO IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As discussed in Section 16, *Recreation*, the proposed project would construct athletic facilities to support on-site recreational uses that currently exist at the ballpark. The project would have no direct impact to any existing parks, nor would it add resident population that would increase demand for parks. Therefore, no significant impacts to existing parks would occur.

NO IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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 other public facilities?

Development of the proposed project would result in incremental impacts to the City's public services and facilities. Impacts to the storm drain system (discussed in Section 10, *Hydrology and Water Quality*) and public parks (discussed in this section), as well as solid waste disposal, water usage, and wastewater disposal (discussed in Section 19, *Utilities and Service Systems*) would be less than significant. As discussed in Section 14, *Population and Housing*, the proposed athletic facilities would not directly or indirectly generate significant population growth. Therefore, the proposed project would not generate significant impacts to other public facilities, such as libraries and hospitals. Impacts to public facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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16 Recreation

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

a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

As discussed in Section 14, *Population and Housing*, the proposed athletic facilities would not generate a direct increase in population growth on the CSUN campus. In addition, the proposed project would not directly affect any existing parks. The proposed project includes a team facilities building, a batting cage, and field lighting for the existing ballpark. Impacts of these recreational facilities have been addressed throughout this document and have been found to be less than significant or less than significant with mitigation incorporated. Therefore, the proposed project would not have an adverse physical effect on the environment related to the construction and expansion of recreational facilities.

Installation of field lighting as part of the proposed project may temporarily limit the use of other CSUN athletic and recreational facilities located adjacent to the project site, including the practice soccer fields located to the north and North Field located to the south. However, such impacts would be temporary and confined to a four-month period from June to September 2019. Therefore, impacts to existing parks and recreational facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	□	□	■	□
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	□	□	■	□
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	□	□	■	□
d. Result in inadequate emergency access?	□	□	■	□

Fehr & Peers (F&P) prepared the transportation study in November 2018 for the proposed project (F&P 2018). The transportation study documents the assumptions, methodologies, and findings of the study conducted by F&P to evaluate the potential traffic impacts of the proposed project. This analysis is based on the findings of the transportation study, which is included as Appendix C.

a. Would the project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction Traffic

According to the transportation study, the LADOT generally considers construction-related traffic impacts to be adverse but not significant due to the temporary nature of construction. LADOT requires implementation of worksite traffic control plans to minimize construction-related traffic impacts to the greatest extent possible. The City of Los Angeles provides four categories to be considered in regard to in-street construction-related traffic impacts: temporary traffic impacts, temporary loss of access, temporary loss of bus stops or rerouting of bus lines, and temporary loss of on-street parking (F&P 2018, Appendix C).

As discussed in the transportation study, the project would not require hauling activity and would require up to 3 equipment/delivery trucks per day during the construction of the team facilities building and batting cage. Construction would require approximately 10 construction workers per day. No significant construction worker parking needs are anticipated. All construction activity would be contained within the CSUN campus, and no street, lane, or sidewalk closures within the LADOT right-of-way are expected as part of the proposed project. The project is not located in immediate proximity to any existing campus vehicular access points. Construction staging would be contained on the project site, and any temporary loss of access would occur entirely within the

CSUN campus (F&P 2018, Appendix C). Therefore, construction-related traffic impacts would be less than significant.

Operational Traffic

The project would not result in a net increase in vehicle trips to the site because the proposed project would not expand the seating capacity of the existing ballpark. However, the installation of field lighting would permit baseball games to begin later in the evening (between 3:00 p.m. to 7:00 p.m.), which would consequently shift the timing of vehicle trips related to on-site baseball games to later in the day. As a result, more vehicle trips would potentially occur during PM peak hour traffic (4:00 p.m. to 6:00 p.m.), thereby contributing to peak hour congestion. The transportation study identifies the following seven signalized intersections, which provide local access to the area, for traffic analysis:

1. Devonshire Street and Lindley Avenue
2. Lassen Street and Zelzah Avenue
3. Lassen Street and Lindley Avenue
4. Lassen Street and Reseda Boulevard
5. Superior Street and Reseda Boulevard
6. Plummer Street and Reseda Boulevard
7. Nordhoff Street and Lindley Avenue

According to the transportation study, weekday PM peak hour turning movement counts were collected at the study intersections in October 2018 to determine existing operating conditions. Existing weekday afternoon peak hour traffic volumes and count sheets of the study intersections are provided in Appendix C. The following traffic scenarios are those for which volume-to-capacity (V/C) ratios and levels of service (LOS) calculations have been performed at the study intersections for near-term and long-term conditions:

- Existing (2018) conditions
- Existing (2018) plus Project conditions
- Cumulative (2021) conditions
- Cumulative (2021) plus Project conditions

The City of Los Angeles has established threshold criteria to determine significant traffic impacts of a proposed project in its jurisdiction. Under the Los Angeles Department of Transportation (LADOT) guidelines, an intersection would be significantly impacted if project-related traffic results in an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, or equal to or greater than 0.01 for intersections operating at LOS E or F. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following traffic impact analysis evaluates the projected LOS at each study intersection under the Existing plus Project and Cumulative (2021) plus Project conditions to estimate the incremental increase in the V/C ratio caused by the proposed project.

Existing Conditions

The existing PM peak hour traffic volumes at the study area intersections were collected by F&P in October 2018. Existing LOS for the study area intersections were calculated using the "Intersection Capacity Utilization" (ICU) methodology. Worksheets illustrating the LOS calculations are contained in Appendix C of the transportation study (Appendix C). Table 17 below lists the existing LOS for the study area intersections during the PM peak hour period.

Table 17 Existing Peak Hour Levels of Service

	PM Peak Hour	
Intersection	**V/C**	**LOS**
Devonshire Street/Lindley Avenue	0.587	A
Lassen Street/Zelzah Avenue	0.925	E
Lassen Street/Lindley Avenue	0.669	B
Lassen Street/Reseda Boulevard	1.329	F
Superior Street/Reseda Boulevard	0.560	A
Plummer Street/Reseda Boulevard	1.082	F
Nordhoff Street/Lindley Avenue	0.880	D

Notes: V/C = volume-to-capacity ratio, LOS = Level of Service
Source: F&P 2018 (Appendix C)

Ballpark Trip Generation and Distribution

Trip generation estimates were prepared by F&P using data provided by CSUN staff about seating capacity, internal trip making by spectators already on campus prior to a game, and employee trips. Reflective of existing attendance patterns at afternoon games at the ballpark, the transportation analysis incorporated a 30% credit for trips internal to the CSUN campus. The transportation analysis also assumed that the average vehicle occupancy (AVO) of vehicles arriving to the ballpark was 2.0; therefore, a 50% AVO credit was applied to the trip generation estimate. As shown in Table 18, the ballpark currently generates approximately 350 automobile trips, which would shift from arriving during the early afternoon to arriving during the afternoon peak hour as a result of the installation of field lighting under the proposed project. The project-related PM peak hour traffic volumes were distributed and assigned to the adjacent street network based on the characteristics of the street system serving the project site, the level of accessibility of routes to and from the project site, and the locations of employment/commercial centers and residential areas from which spectators may be drawn (Appendix C).

Table 18 CSUN Ballpark Trip Generation

Land Use	Credit	Estimated Vehicle Trips
Matador Ballpark		1,000[1]
Less Internal Capture	30%	(300)
Vehicle Occupancy Factor	50%	(350)
Total Vehicle Trips		**350**

( ) denotes a negative number

[1] Based on stadium seating capacity.

Source: F&P 2018 (Appendix C)

Existing plus Project Conditions

Project-related traffic that would shift to the PM peak hour was added to existing traffic volumes and assigned to the study intersections to determine Existing plus Project traffic volumes. As shown in Table 19, four of seven intersections are projected to operate at LOS D or better during the PM peak hour under Existing (2018) plus Project conditions. The Lassen Street/Zelzah Avenue intersection is projected to continue operating at LOS E during the PM peak hour, and two intersections, Lassen Street/Reseda Boulevard and Plummer Street/Reseda Boulevard, are projected to continue operating at LOS F during the PM peak period. The shift of project-related traffic to the PM peak hour would degrade the existing LOS at the Devonshire Street/Lindley Avenue intersection from LOS A to LOS B. However, none of the increases in the V/C ratios at the study intersections would exceed the City’s thresholds of significance, and operational traffic impacts under Existing (2018) plus Project conditions would be less than significant.

Table 19 Existing (2018) plus Project PM Peak Hour Levels of Service

Intersection	Existing (2018)		Existing (2018) + Project		Increase in V/C	Impact?
	V/C	LOS	V/C	LOS		
Devonshire Street/Lindley Avenue	0.587	A	0.627	B	0.040	No
Lassen Street/Zelzah Avenue	0.925	E	0.925	E	0.000	No
Lassen Street/Lindley Avenue	0.669	B	0.690	B	0.021	No
Lassen Street/Reseda Boulevard	1.329	F	1.338	F	0.009	No
Superior Street/Reseda Boulevard	0.560	A	0.573	A	0.013	No
Plummer Street/Reseda Boulevard	1.082	F	1.090	F	0.008	No
Nordhoff Street/Lindley Avenue	0.880	D	0.883	D	0.003	No

Notes: V/C = volume-to-capacity ratio, LOS = Level of Service

Source: F&P 2018 (Appendix C)

Cumulative (2021) Conditions

Cumulative (2021) plus Project peak hour traffic volumes were analyzed to determine the projected future operating conditions given the shift of project-related traffic to the PM peak hour. To project future (year 2021) conditions, the transportation study applied an ambient growth factor of one percent per year to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by 2021. In addition, the transportation study included the effects of planned developments expected to be implemented in the vicinity of the project site prior to project buildout. The list of developments was provided by LADOT and CSUN staff. Table 20 summarizes the average daily and PM peak hour trip generation for the cumulative projects.

Table 20 Cumulative Development Projects Trip Generation

				PM Peak Hour		
Project	**Land Use**	**Size**	**ADT**	**Total**	**In**	**Out**
18401 Nordhoff Street	Mixed Use	N/A	687	61	48	13
9900 Balboa Boulevard	Retail	2.2 KSF	850	88	44	44
CSUN Hotel	Hotel	150 rooms	1,684	127	71	56
CSUN G6 Parking Garage	Parking Garage	1,500 spaces	3,985	580	178	402
Total Trips			**7,206**	**856**	**341**	**515**

N/A = not applicable, KSF = thousand square feet, ADT = Average Daily Trips
Source: F&P 2018 (Appendix C)

The data presented in Table 20 indicate that the planned developments would generate a total of 7,206 ADT, including 856 PM peak hour trips. The traffic generated by planned developments was distributed and assigned to the study area intersections based on the proposed land uses, the geographic distribution of potential employees and patrons of proposed commercial developments, the locations of employment and commercial centers to which future residents may visit, and the location of the projects in relation to the surrounding street system. The Cumulative (2021) and Cumulative (2021) plus Project LOS for the study area intersections are shown below in Table 21. Three of the seven study intersections are projected to operate at LOS D or better during the PM peak hour under Cumulative (2021) plus Project conditions. The following four intersections are projected to operate at LOS E or worse during the PM peak hour under Cumulative (2021) plus Project conditions:

- Lassen Street/Zelzah Avenue (LOS E)
- Lassen Street/Reseda Boulevard (LOS F)
- Plummer Street/Reseda Boulevard (LOS F)
- Nordhoff Street/Lindley Avenue (LOS E)

As shown in Table 21, based on the City's significance thresholds, the proposed project would not result in significant impacts under Cumulative (2021) plus Project conditions. Operational traffic impacts under Cumulative (2021) plus Project conditions would be less than significant.

Table 21 Cumulative (2021) and Cumulative (2021) plus Project PM Peak Hour Levels of Service

Intersection	Cumulative (2021)		Cumulative (2021) + Project		Increase in V/C	Impact?
	V/C	LOS	V/C	LOS		
Devonshire Street/Lindley Avenue	0.608	B	0.648	B	0.040	No
Lassen Street/Zelzah Avenue	1.008	F	1.009	F	0.001	No
Lassen Street/Lindley Avenue	0.713	C	0.735	C	0.022	No
Lassen Street/Reseda Boulevard	1.420	F	1.4271	F	0.007	No
Superior Street/Reseda Boulevard	0.585	A	0.598	A	0.013	No
Plummer Street/Reseda Boulevard	1.128	F	1.136	F	0.008	No
Nordhoff Street/Lindley Avenue	0.945	E	0.949	E	0.004	No

Notes: V/C = volume-to-capacity ratio, LOS = Level of Service
Source: F&P 2018 (Appendix C)

Alternative Transit

The project site is served by LA Metro local bus lines 167 and 239, and the closest bus stop is the Zelzah/Plummer intersection located approximately 0.4 mile (walking distance) southeast of the project site. The CSUN campus as a whole is served by several bus routes including Los Angeles Metropolitan Transportation Authority (Metro) local and rapid bus service, LADOT DASH bus service, Antelope Valley express bus service, and CSUN shuttle service. Because the proposed project would not increase the ballpark's seating capacity, no increase in the use of transit service to access the project site would occur.

Existing bicycle infrastructure in the project site vicinity includes a Class I protected bicycle lane along the East Promenade on the project site's western boundary and a Class II on-street bicycle lane on Lindley Avenue. The project is located adjacent to the East Promenade pedestrian route that connects the campus core and the northern student and faculty/staff residential areas. The Los Angeles Mobility Plan 2035 identifies corridors for bicycle and pedestrian enhancements, including a Tier II bicycle lane along Lindley Avenue. Construction of the proposed project may temporarily restrict bicycle and pedestrian use of the East Promenade route; however, such impacts would be temporary, and CSUN would provide alternative routes for students, employees, and visitors that would be affected by the potential changes in campus accessibility. Following the completion of construction, the East Promenade bicycle and pedestrian route would return to its original pre-construction state, and no long-term impacts to bicycle or pedestrian facilities would occur. Therefore, the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities. Impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts. This includes using an applicable threshold of significance regarding additional vehicle miles travelled (VMT) produced by a proposed project to indicate a significant impact to transportation. Section

15064.3(c) states that the requirement to use these criteria only applies on and after July 1, 2020. The proposed project would not increase capacity of the baseball park and would therefore have similar trips and VMT to existing conditions. Although this requirement for VMT significance thresholds is not yet in effect, the proposed project would be consistent with Section 15064.3, subdivision (b). The proposed project would not increase VMT and would have a less than significant impact to transportation.

LESS THAN SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The project site is entirely within the CSUN campus, and all construction activity would be contained within the CSUN campus. The proposed project is not located in immediate proximity to any existing campus vehicular access points. As discussed in Section 1, *Aesthetics*, glare from the proposed field lighting on Lindley Avenue would not result in light intensity levels that would be potentially hazardous to motorists and pedestrians. The proposed project would not construct any roadways or driveways that would increase hazards due to a design feature or incompatible use; therefore, impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Would the project result in inadequate emergency access?

No street, lane, or sidewalk closures within the LADOT right-of-way are expected as part of the proposed project. In addition, there are no emergency services located in the immediate vicinity of affected streets. Construction staging would be contained on the project site and any temporary loss of access would occur entirely within the CSUN campus. Since the project construction would not block any vehicle or pedestrian access to the nearby neighborhood or the rest of the CSUN campus, potential hazards or inadequate emergency access associated with construction activities would be less than significant. The project would also not result in inadequate emergency access because it would be subject to review by the LAFD for the site plans, site construction, and the actual structures prior to occupancy to ensure that required fire protection safety features, including building sprinklers and emergency access, are implemented. Overall, the project would not increase hazards due to a dangerous intersection or inadequate emergency access. Impacts to emergency access would be less than significant.

LESS THAN SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	■	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	☐	■	☐	☐

As of July 1, 2015, California Assembly Bill 52 of 2014 (AB 52) was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and is:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

On August 16, 2018, CSUN sent out notification regarding the proposed project to the Fernandeño Tataviam Band of Mission Indians and to the Native American Heritage Commission. On September 17, 2018, CSUN received a request for consultation from Jairo Avila, Tribal Historic and Cultural Preservation Officer of the Fernandeño Tataviam Band of Mission Indians. On October 29, 2018, as requested, CSUN sent a Cultural Resources Analysis Memorandum, including the results of the Cultural Resource Record Search obtained from the South Central Coastal Information Center (SCCIC). Search results were negative and therefore, no known tribal cultural resources are located on the project site. As no further consultation was requested, a letter was sent to the Fernandeño Tataviam Band of Mission Indians on January 11, 2019 to provide a summary of the consultation and to conclude the consultation.

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 2024.1?

The site has been previously graded in conjunction with construction of the existing baseball field and associated facilities. Therefore, the likelihood that intact archaeological or paleontological resources are present is low (CSUN 2005b). However, the proposed project would require ground-disturbing activities during construction, which could potentially uncover previously unknown tribal cultural resources. Mitigation measure CR-1 Cultural Resources (Archaeological) described in section 5, *Cultural Resources*, and TCR-1 Unanticipated Discovery of Tribal Cultural Resources below, would reduce potential impacts to a less than significant level by providing for a monitor and, as necessary, avoiding impacts to any identified resources.

TCR-1 Unanticipated Discovery of Tribal Cultural Resources

In the event that resources of Native American origin are identified during project construction, a qualified archaeologist will consult with the CSUN to begin Native American consultation procedures. As part of this process, it may be determined that archaeological monitoring may be required; a Native American monitor may also be required in addition to the archaeologist.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	□	□	■	□
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	□	□	■	□
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	□	■	□
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	□	■	□
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	□	■	□

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The Los Angeles Bureau of Sanitation (LASAN) operates and maintains the City's wastewater infrastructure. The City's wastewater collection system serves over four million residential and business customers in a 600-square mile service area that includes Los Angeles and 29 contracting cities and agencies. Over 6,700 miles of public sewers connect to the City's four wastewater treatment and water reclamation plants, which have a combined capacity to treat an average of 580 million gallons per day (mgd) of wastewater (LASAN 2018a). The Hyperion Treatment Plant (HTP) serves the project site and is located in Playa del Rey. According to LASAN, the HTP is designed to treat up to 450 mgd and currently treats an average of 275 mgd, with a remaining capacity of 175 mgd (LASAN 2018b).

The proposed project would include a two-story team facilities building, batting cage, and field lighting. According to CalEEMod (Appendix B), the project would demand approximately 3,647 gallons of water per day (gpd). Assuming that wastewater generation is 80 percent of total water demand, the proposed project would generate approximately 2,918 gpd of wastewater. The project's estimated wastewater generation would be less than 0.01 percent of the remaining capacity at the HTP. As such, the proposed project would not generate wastewater such that the HTP would become constrained. Therefore, impacts to wastewater facilities would be less than significant.

The proposed project would increase the amount of impervious area on the project site by constructing a two-story team facilities building and batting cage on a currently undeveloped, pervious project site. The proposed project would be located in a largely urbanized area and would incrementally increase the amount of impervious surface as compared to surrounding uses. Therefore, the increase in stormwater runoff as a result of the project would be incremental. As discussed in Section 10, *Hydrology and Water Quality*, the proposed project would comply with current Phase II General Permit for Small MS4s regulations pertaining to the detention of site runoff into storm drains and receiving waters. Compliance with these requirements would reduce potential impacts to local stormwater drainage facilities to a less than significant level.

As described in Section 10, *Hydrology and Water Quality* and below under threshold b, the proposed project would be accommodated by existing and planned water supplies. The proposed project would not induce population growth in the project vicinity that would require additional water supplies beyond those planned for future development. Therefore, the proposed project would not result in the relocation or need for construction of new or expanded water facilities such that adverse impacts related to water supply requirements would not occur.

Section 6, *Energy*, concludes that the proposed project would not require new or substantially revised electrical power facilities. In addition, neither construction nor operation and maintenance of the proposed team facilities building, and batting cage would require new or revised natural gas or telecommunications facilities.

LESS THAN SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The Los Angeles Department of Water and Power (LADWP) supplies water inside the city limits. LADWP water sources between 2010 and 2014 included the Los Angeles Aqueducts (LAA) (average of 29 percent), local groundwater (average of 12 percent), the Metropolitan Water District (MWD) (average of 57 percent) and recycled water (two percent) (LADWP 2016). As discussed under impact discussions *a* and *c*, the proposed project would increase water demand by approximately 3,647 gpd, or approximately 4 acre-feet per year (AFY). Table 22 shows the service area reliability assessment for a potential multiple dry year period 2020 to 2040, such as what was experienced from the years 2010 to 2015, according to the City's 2015 Urban Water Management Plan (UWMP) (LADWP 2016).

Table 22 Multiple Dry Years Water Supply and Demand

	2020	2025	2030	2035	2040
Total Demand (AFY)	642,400	676,900	685,500	694,900	709,500
Supply (AFY)					
Existing/Planned	323,470	369,470	380,470	396,670	398,970
MWD Water Purchases	318,930	307,430	305,030	298,230	310,530
Total Supply	642,400	676,900	685,500	694,900	709,500

Source: LADWP 2016

LADWP anticipates that through various measures, such as conservation and rebalancing the proportions of existing and future water supply sources, adequate water supplies will be available even in the multi-dry year scenario. Total demand in Table 22 was calculated based on the LADWP's service area population, which is expected to increase from 3,987,622 in 2015 to 4,441,545 in 2040 (LADWP 2016).

As discussed in Section 14, *Population and Housing,* the proposed project would not directly generate population growth in the project vicinity. However, the general CSUN campus uses water for drinking, sanitation, fire protection, heating, cooling, utility systems, research, classrooms, cleaning, restrooms, showers, laundry, and landscape irrigation. As referenced in the CSUN Master Plan Final EIR, water demand at CSUN was 1,808 AFY in 2003 and campus growth is projected to increase water demand to 4,299 AFY in 2035, which is an increase of 2,497 AFY (CSUN 2005b). As such, the 4 AFY of water demand associated with the proposed project would only consist of 0.2 percent of the total increase from 2003 to 2035. Therefore, the proposed project water demand could be accommodated within planned water supplies as the demand forecast for CSUN accounts for future development. Therefore, the LADWP water supplies for the proposed project would be adequate during normal, dry and multiple dry years, and impacts would be less than significant.

LESS THAN SIGNIFICANT IMPACT

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed project has two components (construction and operation) that would result in the generation of solid waste. For purposes of this analysis, the estimated operational waste is used to determine the net increase in solid waste from the proposed project. Construction of the proposed project would also involve site preparation activities that would generate waste materials. However, construction solid waste generation would be temporary and would not be substantial. According to the CSUN FEIR for the 2005 Master Plan Update, solid waste generated in the city and at CSUN is currently disposed of at the Sunshine Canyon Landfill. Table 23 summarizes the permitted daily throughput, estimated average waste quantities disposed, remaining capacity, and closure date for the Sunshine Canyon Landfill.

Table 23 Solid Waste Disposal Facilities

Facility	Permitted Daily Throughput (tons/day)	Average Daily Waste Quantities Disposed (tons/day)	Estimated Remained Daily Capacity (tons/day)[1]	Estimated Closure Date
Sunshine Canyon Landfill	12,100	8,300	3,800	2037

[1] Estimated remaining daily capacity was calculated by subtracting the average daily waste quantities disposed from the permitted daily throughput.

Sources: Los Angeles County 2017; CalRecycle 2012

According to CalEEMod (Appendix B), the proposed project would generate an increase of 0.1 ton of solid waste per day. This estimate is conservative since it does not factor in any recycling or waste diversion programs. The estimated 0.1 ton of solid waste generated by the project would be less than 0.01 percent of the remaining daily capacity at the Sunshine Canyon Landfill listed in Table 23. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste, such as AB 939 and the Solid Waste Management Policy Plan. In addition, there is adequate landfill capacity in the region to accommodate project-generated waste. Impacts related to solid waste and waste facilities would be less than significant.

LESS THAN SIGNIFICANT IMPACT

20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	□	□	□	■
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	□	□	□	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	□	□	□	■
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	□	□	□	■

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project site is located on the existing CSUN campus, which is within the urbanized Northridge neighborhood of the City of Los Angeles. Undeveloped wildland areas are not located within proximity to the project site. According to the City of Los Angeles General Plan Safety Element, Exhibit D, *Selected Wildfire Hazard Areas in the City of Los Angeles*, the proposed project is not located in a wildfire hazard area. The project site is not located in a fire buffer zone, a mountain fire district, or an area of known shallow methane accumulation (City of Los Angeles 1996). The project site is also not located in a Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL FIRE; CAL FIRE 2007). Therefore, the project site is not located near a state responsibility area or classified as having a high fire hazard.

As discussed in Section 15, *Public Services*, the LAFD provides fire prevention, fire protection, and emergency medical services for the project site and the CSUN campus. According to the CSUN

Master Plan EIR, the CSUN Department of Public Safety and Environmental Health and Safety Office have prepared and adopted campus emergency procedures (CSUN 2005b). In order to comply with these procedures, all development including the proposed project, on the CSUN campus would take into account existing emergency routes, response procedures and action plans. Construction of the proposed project would maintain emergency access to the site and on area roadways and would not interfere with any emergency response plan or evacuation route as described in the CSUN Master Plan. No impact would occur.

NO IMPACT

b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project site is located in an urbanized area and is not located in a high fire hazard severity zone (CAL FIRE 2007). The nearest state responsibility areas or lands classified as very high fire hazard severity is approximately 10 miles northeast of the project site. Also the project involves replacement of team facilities, replacement of the batting cage facility, and new field lighting at the Matador Baseball Ballpark, an on-campus baseball field. Therefore, questions (b) and (d) are not applicable and no impact would occur.

NO IMPACT

c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The project site is located in an urbanized area and is not located in or near a state responsibility area or land classified as a very high fire hazard severity zone (CAL FIRE 2007). The project includes the installation of field lighting and baseball facilities and would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. The project site would be adequately served by existing facilities and utilities. Therefore, the proposed project would not require additional roads, fuel breaks, emergency water sources, power lines or other utilities that would exacerbate fire risk and no temporary or ongoing impacts to the environment would occur.

NO IMPACT

21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	□	■	□	□
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	□	□	■	□
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	□	□	■	□

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As discussed in Section 4, *Biological Resources*, the project does not include any mapped essential habitat connectivity areas in the immediate vicinity of the project site. Regional wildlife movement is restricted due to the urbanized nature of the city in which the project site is located. As such, no native resident or migratory fish or wildlife species, established native resident or migratory wildlife corridors, or native wildlife nursery sites exist on the project site. However, the project site currently has existing trees that would be removed for project construction, which may contain nesting or breeding birds. Therefore, implementation of mitigation measure BIO-1 would require nesting bird surveys to be completed prior to construction activities and, therefore, would reduce potential impacts to a less than significant level. In addition, as discussed in Section 5, *Cultural Resources*, Section 7, *Geology and Soils*, and Section 18, *Tribal Cultural Resources*, the proposed project would have a less than significant impact on unanticipated cultural and tribal cultural resources with implementation of mitigation measures CR-1, CR-3, GEO-1 and TCR-1. These mitigation measures would require adherence to existing local, State and federal regulations related to the discovery of any unanticipated cultural resources, tribal cultural resources, and human remains during construction activity.

NO IMPACT

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the discussion of environmental checklist Sections 1 through 19, the project would have no impact, a less than significant impact, or a less than significant impact with mitigation incorporated, with respect to all environmental issues. No known planned or pending projects are located in the immediate site vicinity that would substantially contribute to any additive effects in conjunction with the project with respect to issues such as aesthetics, land use, and construction-related impacts (i.e. traffic, air quality, and noise). The project's contribution to cumulative regional and global impacts with respect to such issues as air quality, climate change, and noise would not be substantial due to the project size, location, and design. Some of the other resource areas (agricultural and mineral) were determined to have no impact in comparison to existing conditions. Therefore, the project would not contribute to cumulative impacts related to these issues. In addition, as discussed in Section 17, *Transportation*, the transportation study analyzes potential cumulative traffic impacts for Cumulative (2021) plus Project conditions, which were found to be less than significant. As such, with implementation of the mitigation measures included in this Initial Study and compliance with applicable rules and regulations, cumulative impacts would be less than significant.

NO IMPACT

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the project would not result, either directly or indirectly, in adverse hazards related to air quality, hazardous materials, or noise. Compliance with applicable rules and regulations would reduce potential impacts on human beings to a less than significant level.

NO IMPACT

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Appendix A

Photometric Analysis

CSU Northridge Baseball Matador Field

Northridge, CA

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

Lighting System

Pole / Fixture Summary

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
A1-A2	90'	25'	2	TLC-BT-575	1.15 kW	A
		90'	12	TLC-LED-1150	13.80 kW	A
		60'	2	TLC-LED-400	0.80 kW	B
B1-B2	100'	20'	2	TLC-BT-575	1.15 kW	A
		100'	20	TLC-LED-1150	23.00 kW	A
C1	80'	16'	2	TLC-BT-575	1.15 kW	A
		80'	8	TLC-LED-1150	9.20 kW	A
		60'	1	TLC-LED-1150	1.15 kW	A
C2	80'	16'	2	TLC-BT-575	1.15 kW	A
		80'	8	TLC-LED-1150	9.20 kW	A
		60'	2	TLC-LED-1150	2.30 kW	A
D1-D2	80'	16'	2	TLC-BT-575	1.15 kW	A
		80'	8	TLC-LED-1150	9.20 kW	A
8			*119*		*124.65 kW*	

Circuit Summary

Circuit	Description	Load	Fixture Qty
A	Baseball	123.05 kW	115
B	Egress	1.6 kW	4

Fixture Type Summary

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1150	LED 5700K - 75 CRI	1150W	121,000	>81,000	>81,000	>81,000	99
TLC-BT-575	LED 5700K - 75 CRI	575W	52,000	>81,000	>81,000	>81,000	16
TLC-LED-400	LED 5700K - 75 CRI	400W	46,500	>81,000	>81,000	>81,000	4

Light Level Summary

Calculation Grid Summary

Grid Name	Calculation Metric	Illumination					Circuits	Fixture Qty
		Ave	Min	Max	Max/Min	Ave/Min		
Baseball (Infield)	1st Base Camera	82	16	132	8.26	5.13	A	115
Baseball (Infield)	3rd Base Camera	79.1	13.9	129	9.27	5.69	A	115
Baseball (Infield)	High Home Camera	103	59.6	142	2.39	1.72	A	115
Baseball (Infield)	Horizontal Illuminance	120	103	142	1.38	1.16	A	115
Baseball (Outfield)	1st Base Camera	41.7	6.50	120	18.31	6.42	A	115
Baseball (Outfield)	3rd Base Camera	42	7.60	111	14.60	5.53	A	115
Baseball (Outfield)	High Home Camera	48.4	15.2	109	7.18	3.18	A	115
Baseball (Outfield)	Horizontal Illuminance	71.5	56.7	99.6	1.76	1.26	A	115
Bullpen 1	Horizontal	72.3	45.1	104	2.31	1.60	A	115
Bullpen 2	Horizontal	71.1	46.2	89.9	1.95	1.54	A	115
Resedentail Spill	Horizontal	0	0	0	2757.36		A,B	119
Resedentail Spill	Max Candela (by Fixture)	8.80	0.27	61.5	228.89	32.73	A,B	119
Resedentail Spill	Max Vertical Illuminance Metric	0	0	0	617.85		A,B	119

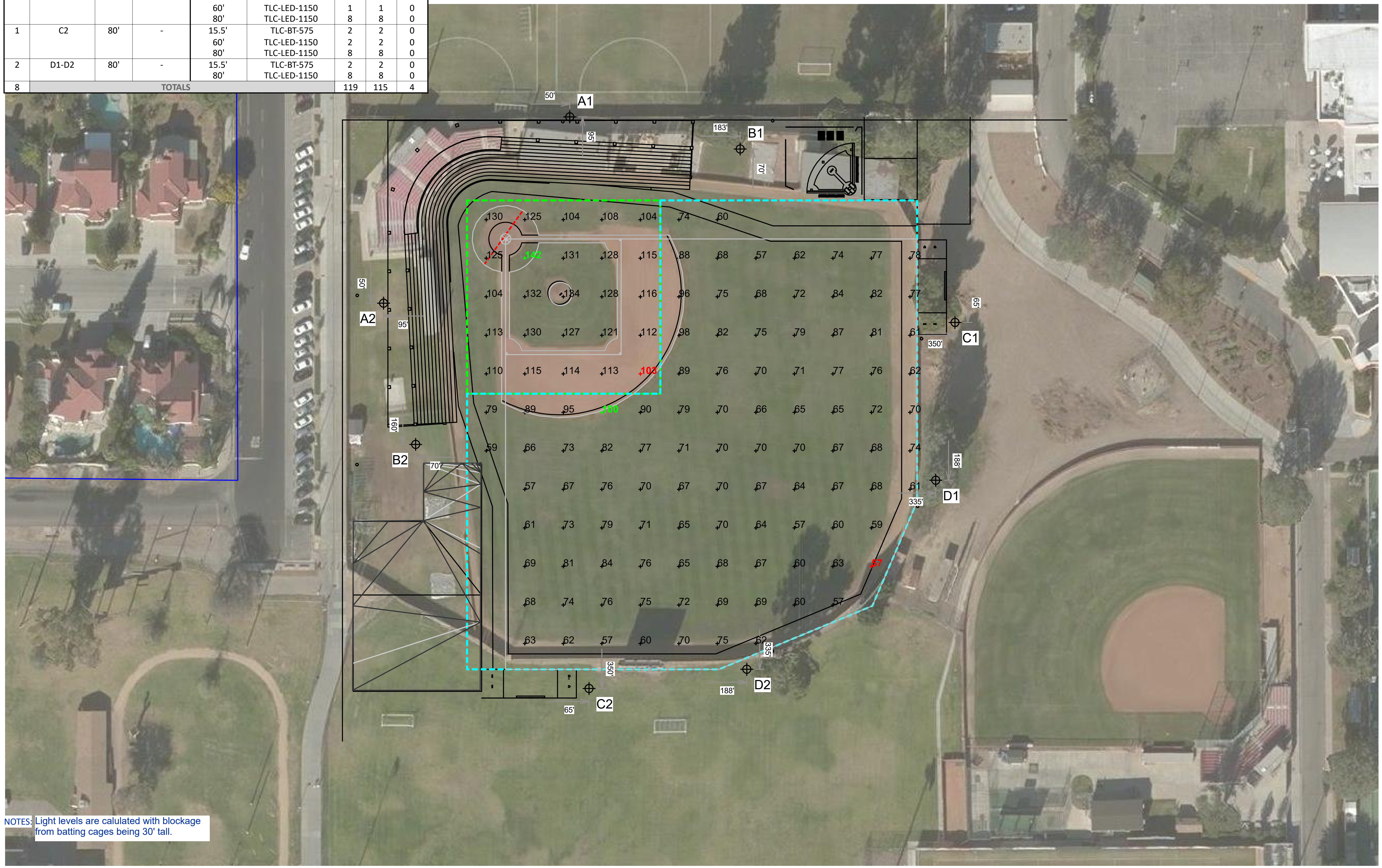
From Hometown to Professional

MUSCO Lighting

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4



NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 80

0' 80' 160'

ENGINEERED DESIGN By: CTemaat • File #183123B • 27-Dec-18

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	**Baseball**
Size:	Irregular 320' / 404' / 335'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Infield	Outfield
Guaranteed Average:	**100**	**70**
Scan Average:	119.5	71.5
Maximum:	142.1	99.6
Minimum:	103.1	56.7
Avg / Min:	1.16	1.26
Guaranteed Max / Min:	**1.5**	**2**
Max / Min:	1.38	1.76
UG (adjacent pts):	1.27	1.34
CU:	0.71	
No. of Points:	25	101

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	**115**
Total Load:	123.05 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

ENGINEERED DESIGN By: CTemaat • File #183123B • 27-Dec-18

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	**Baseball**
Size:	Irregular 320' / 404' / 335'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED TV FOOTCANDLES: 1st Base Camera

	Infield	Outfield
Guaranteed Average:	**70**	**40**
Scan Average:	82.0	41.7
Maximum:	132.0	119.6
Minimum:	16.0	6.5
Avg / Min:	5.13	6.38
Max / Min:	**8.26**	**18.31**
UG (adjacent pts):	2.03	2.38
CU:	0.71	
No. of Points:	25	101

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	**115**
Total Load:	123.05 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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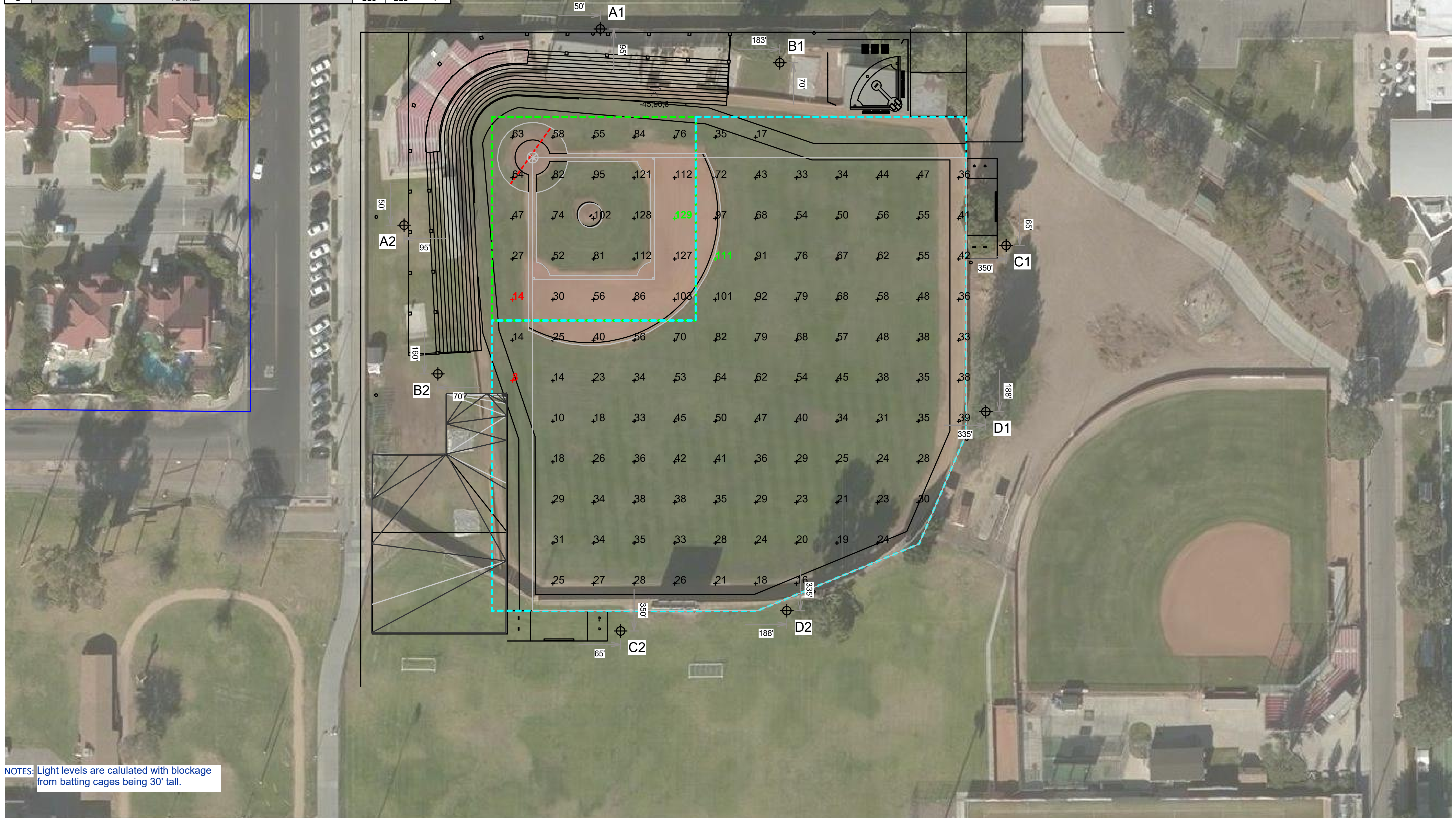
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4



NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	Baseball
Size:	Irregular 320' / 404' / 335'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED TV FOOTCANDLES: 3rd Base Camera

	Infield	Outfield
Guaranteed Average:	70	40
Scan Average:	79.1	42.0
Maximum:	129.0	111.1
Minimum:	13.9	7.6
Avg / Min:	5.69	5.52
Max / Min:	9.27	14.60
UG (adjacent pts):	2.12	2.52
CU:	0.71	
No. of Points:	25	101

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	115
Total Load:	123.05 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	**Baseball**
Size:	Irregular 320' / 404' / 335'
Spacing:	30.0' x 30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED TV FOOTCANDLES: High Home Camera

	Infield	Outfield
Guaranteed Average:	**70**	**40**
Scan Average:	102.8	48.4
Maximum:	142.3	109.1
Minimum:	59.6	15.2
Avg / Min:	1.72	3.18
Max / Min:	**2.39**	**7.18**
UG (adjacent pts):	1.64	2.19
CU:	0.71	
No. of Points:	25	101

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	**115**
Total Load:	123.05 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 80

0' 80' 160'

Pole location(s) ⌖ dimensions are relative to 0,0 reference point(s) ⊗

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 40

0' 40' 80'

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	Bullpen 1
Size:	Irregular 320' / 404' / 335'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	**70**
Scan Average:	72.3
Maximum:	104.0
Minimum:	45.1
Avg / Min:	1.60
Max / Min:	**2.31**
UG (adjacent pts):	1.43
CU:	0.01
No. of Points:	14
LUMINAIRE INFORMATION	
Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	**115**
Total Load:	123.05 kW

	Lumen Maintenance		
Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

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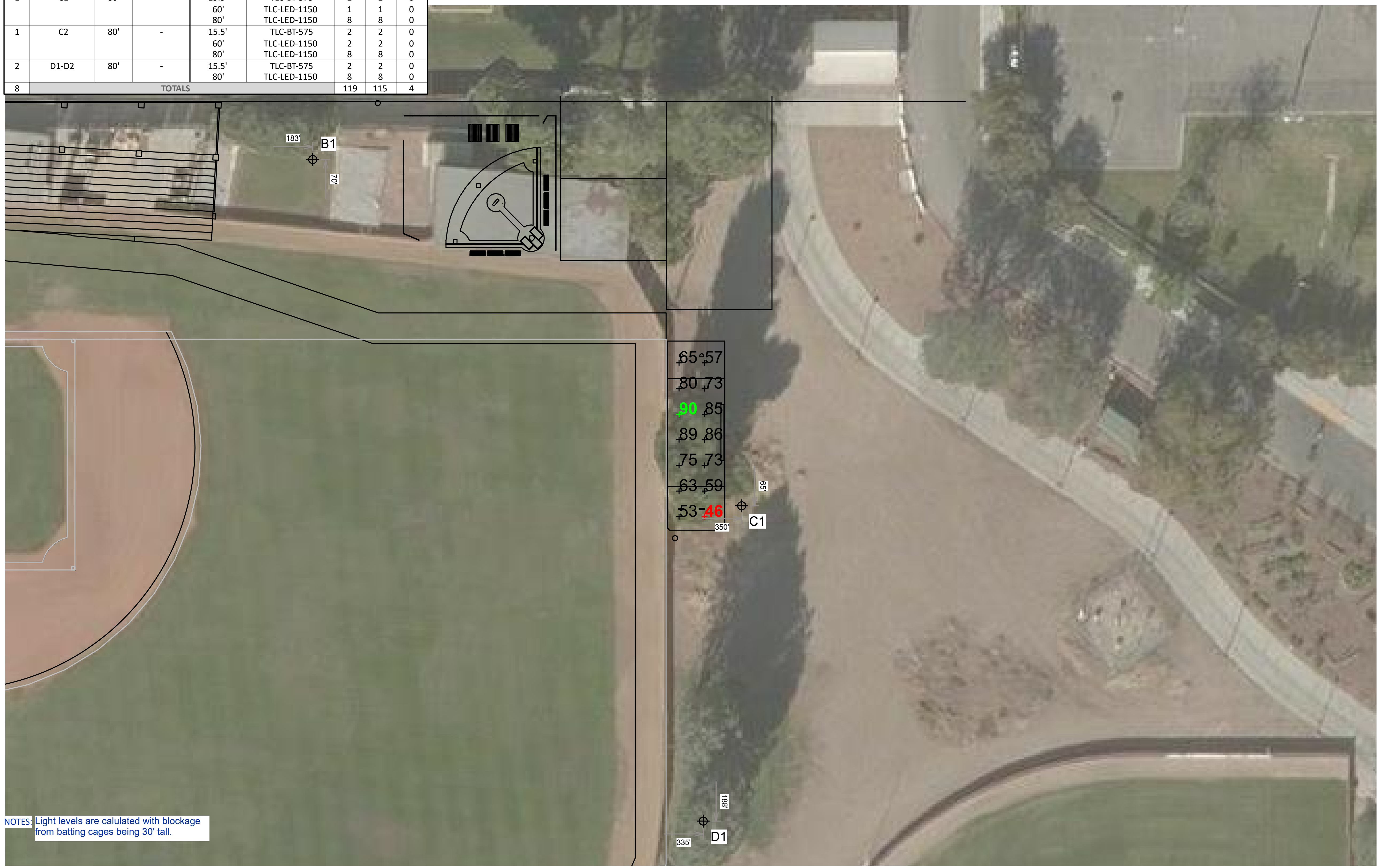
EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	0	2
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	115	4



SCALE IN FEET 1 : 40

0' 40' 80'

ENGINEERED DESIGN By: CTemaat • File #183123B • 27-Dec-18

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	**Bullpen 2**
Size:	Irregular 320' / 404' / 335'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES	
	Entire Grid
Guaranteed Average:	**70**
Scan Average:	71.1
Maximum:	89.9
Minimum:	46.2
Avg / Min:	1.54
Max / Min:	**1.95**
UG (adjacent pts):	1.29
CU:	0.01
No. of Points:	14
LUMINAIRE INFORMATION	
Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 lumens
No. of Luminaires:	**115**
Total Load:	123.05 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole location(s) ✛ dimensions are relative to 0,0 reference point(s) ⊗

We Make It Happen.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	0	2
				60'	TLC-LED-400	2	2	0
				90'	TLC-LED-1150	12	0	12
2	TOTALS					32	4	28

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	**Bleacher**
Size:	Irregular 320' / 404' / 335'
Spacing:	10.0' x 10.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

INITIAL HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	6.3
Maximum:	10.7
Guaranteed Minimum:	1
Minimum:	1.6
Avg / Min:	3.93
Max / Min:	6.71
UG (adjacent pts):	2.04
CU:	0.50
No. of Points:	146

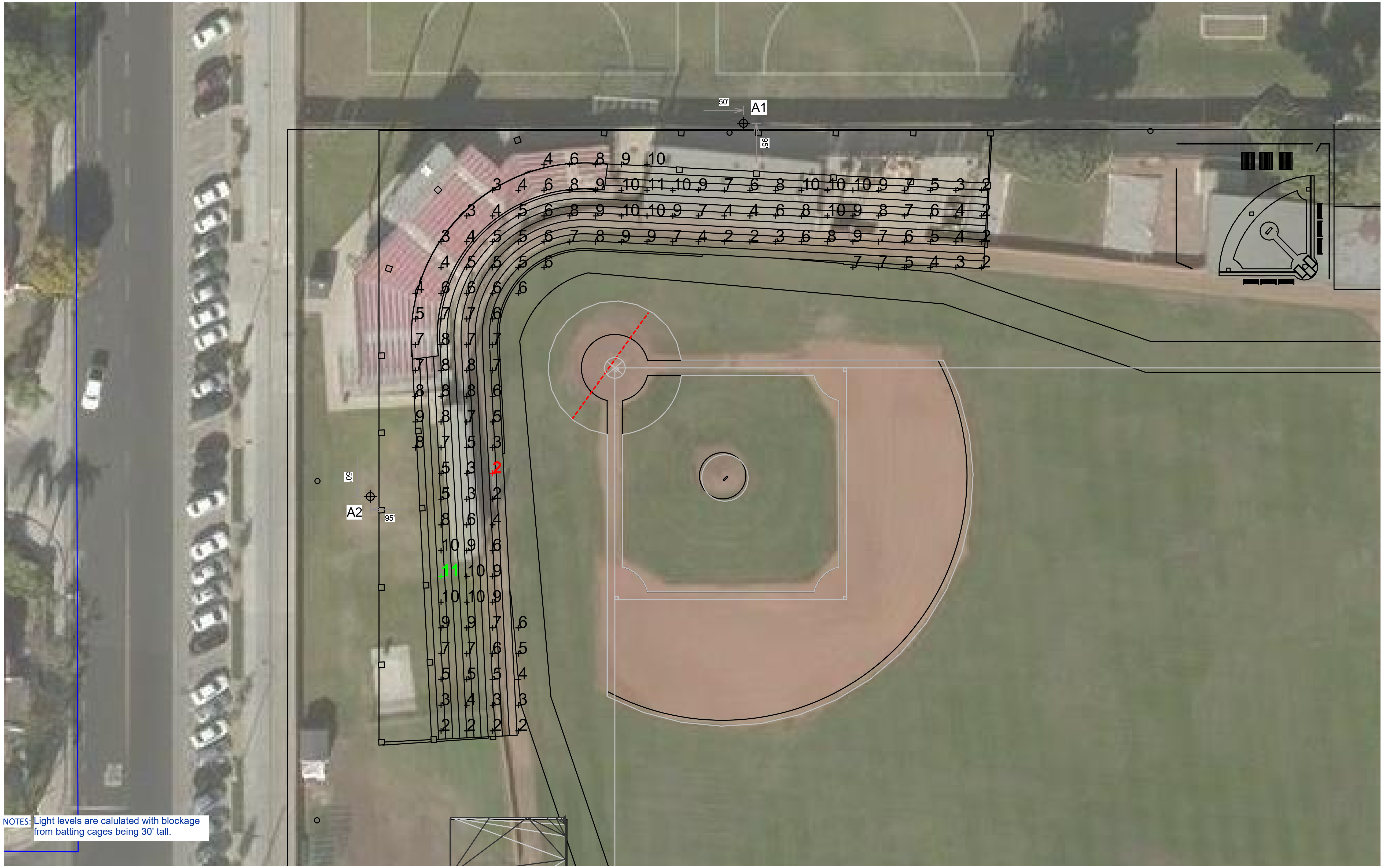
LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	46,500 lumens
No. of Luminaires:	4
Total Load:	1.6 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-400	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.



SCALE IN FEET 1 : 40
0' 40' 80'

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

Pole location(s) ✛ dimensions are relative to 0,0 reference point(s) ⊗

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	2	0
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	119	0

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	Resedentail Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED HORIZONTAL FOOTCANDLES

	Entire Grid
Scan Average:	0.000
Maximum:	0.000
Minimum:	0.000
No. of Points:	54

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 / 46,500 lumens
No. of Luminaires:	119
Total Load:	124.65 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-400	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ⌖ dimensions are relative to 0,0 reference point(s) ⊗

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	2	0
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	119	0

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	Resedentail Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED MAX VERTICAL FOOTCANDLES

	Entire Grid
Scan Average:	0.000
Maximum:	0.001
Minimum:	0.000
No. of Points:	54

LUMINAIRE INFORMATION

Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 / 46,500 lumens
No. of Luminaires:	**119**
Total Load:	124.65 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-400	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗

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MUSCO Lighting

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EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	A1-A2	90'	-	25'	TLC-BT-575	2	2	0
				60'	TLC-LED-400	2	2	0
				90'	TLC-LED-1150	12	12	0
2	B1-B2	100'	-	20'	TLC-BT-575	2	2	0
				100'	TLC-LED-1150	20	20	0
1	C1	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	1	1	0
				80'	TLC-LED-1150	8	8	0
1	C2	80'	-	15.5'	TLC-BT-575	2	2	0
				60'	TLC-LED-1150	2	2	0
				80'	TLC-LED-1150	8	8	0
2	D1-D2	80'	-	15.5'	TLC-BT-575	2	2	0
				80'	TLC-LED-1150	8	8	0
8	TOTALS					119	119	0

CSU Northridge Baseball Matador Field
Northridge, CA

GRID SUMMARY

Name:	Resedentail Spill
Spacing:	30.0'
Height:	3.0' above grade

ILLUMINATION SUMMARY

MAINTAINED CANDELA (PER FIXTURE)	
	Entire Grid
Scan Average:	8.804
Maximum:	61.492
Minimum:	0.269
No. of Points:	54
LUMINAIRE INFORMATION	
Color / CRI:	5700K - 75 CRI
Luminaire Output:	121,000 / 52,000 / 46,500 lumens
No. of Luminaires:	**119**
Total Load:	124.65 kW

Lumen Maintenance

Luminaire Type	L90 hrs	L80 hrs	L70 hrs
TLC-LED-1150	>81,000	>81,000	>81,000
TLC-BT-575	>81,000	>81,000	>81,000
TLC-LED-400	>81,000	>81,000	>81,000

Reported per TM-21-11. See luminaire datasheet for details.

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 200

0' 200' 400'

Pole location(s) ⌖ dimensions are relative to 0,0 reference point(s) ⊗

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NOTES: Light levels are calulated with blockage from batting cages being 30' tall.

SCALE IN FEET 1 : 60

0' 60' 120'

Pole location(s) ⌖ dimensions are relative to 0,0 reference point(s) ⊗

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CSU Northridge Baseball Matador Field
Northridge, CA

EQUIPMENT LAYOUT

INCLUDES:
· Baseball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the **"Musco Control System Summary"** for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

Pole				Luminaires		
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LUMINAIRE TYPE	QTY / POLE
2	A1-A2	90'	-	25' 60' 90'	TLC-BT-575 TLC-LED-400 TLC-LED-1150	2 2 12
2	B1-B2	100'	-	20' 100'	TLC-BT-575 TLC-LED-1150	2 20
1	C1	80'	-	15.5' 60' 80'	TLC-BT-575 TLC-LED-1150 TLC-LED-1150	2 1 8
1	C2	80'	-	15.5' 60' 80'	TLC-BT-575 TLC-LED-1150 TLC-LED-1150	2 2 8
2	D1-D2	80'	-	15.5' 80'	TLC-BT-575 TLC-LED-1150	2 8
8	TOTALS					119

SINGLE LUMINAIRE AMPERAGE DRAW CHART

Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1150	6.8	6.5	5.9	5.1	4.1	3.7	3.0
TLC-BT-575	3.4	3.2	2.9	2.5	2.0	1.8	1.5
TLC-LED-400	2.3	2.2	2.0	1.7	1.4	1.3	1.0

We Make It Happen.

CSU Northridge Baseball Matador Field
Northridge, CA

GLARE IMPACT

Summary

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

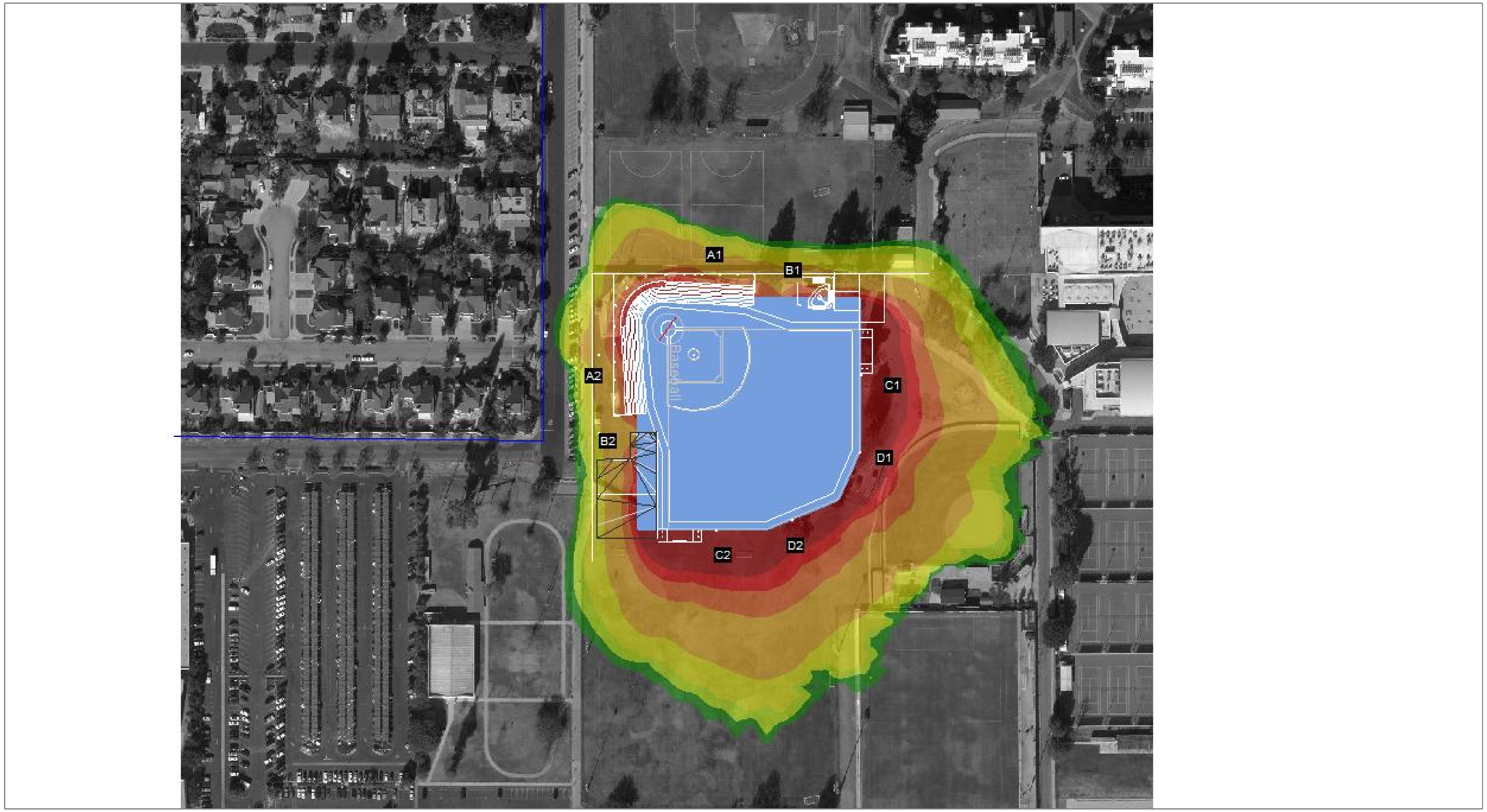
GLARE

Candela Levels

High Glare: 150,000 or more candela
Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

Significant Glare: 25,000 to 75,000 candela
Equivalent to high beam headlights of a car.

Minimal to No Glare: 500 or less candela
Equivalent to 100W incandescent light bulb.



Candelas: + | 150,000 | 100,000 | 50,000 | 5,000 | 1,000 | 500 | 250

We Make It Happen.

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Appendix B

Air Quality/Greenhouse Gas Emissions Modeling Results

CSUN Team Facilities, Batting Cage, and Field Lighting

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	5.81	1000sqft	0.00	5,812.00	0
City Park	0.24	Acre	0.24	10,454.40	0
Health Club	15.05	1000sqft	0.33	15,055.00	0
Strip Mall	0.80	1000sqft	0.00	800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Health club = athletic facilities and batting cage, office park = offices and conference space, strip mall = store and box office, city park = field lighting
All team facility acreage allocated to health club

Construction Phase - Phases adjusted to match applicant provided construction schedule.

Off-road Equipment - Removal of batting cages.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - No change in stadium capacity or trips to site as compared to existing uses.

Energy Use -

Water And Wastewater - City park = field lighting

Solid Waste - City park = field lighting

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	NumDays	100.00	81.00
tblConstructionPhase	NumDays	100.00	281.00
tblConstructionPhase	NumDays	5.00	85.00
tblLandUse	LandUseSquareFeet	5,810.00	5,812.00
tblLandUse	LandUseSquareFeet	15,050.00	15,055.00
tblLandUse	LotAcreage	0.13	0.00
tblLandUse	LotAcreage	0.35	0.33
tblLandUse	LotAcreage	0.02	0.00
tblSolidWaste	SolidWasteGenerationRate	0.02	0.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblWater	OutdoorWaterUseRate	285,955.52	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0560	0.5602	0.4440	7.6000e-004	0.0126	0.0325	0.0451	3.5700e-003	0.0300	0.0335	0.0000	69.1552	69.1552	0.0178	0.0000	69.5992
2020	0.1548	1.2743	1.1001	1.9200e-003	0.0235	0.0714	0.0949	6.3400e-003	0.0659	0.0722	0.0000	171.0360	171.0360	0.0444	0.0000	172.1468
2021	0.0290	0.0315	0.0396	7.0000e-005	6.7000e-004	1.9300e-003	2.6100e-003	1.8000e-004	1.9300e-003	2.1100e-003	0.0000	5.8424	5.8424	3.8000e-004	0.0000	5.8518
Maximum	**0.1548**	**1.2743**	**1.1001**	**1.9200e-003**	**0.0235**	**0.0714**	**0.0949**	**6.3400e-003**	**0.0659**	**0.0722**	**0.0000**	**171.0360**	**171.0360**	**0.0444**	**0.0000**	**172.1468**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0560	0.5602	0.4440	7.6000e-004	0.0107	0.0325	0.0432	2.9700e-003	0.0300	0.0329	0.0000	69.1551	69.1551	0.0178	0.0000	69.5992
2020	0.1548	1.2743	1.1001	1.9200e-003	0.0235	0.0714	0.0949	6.3400e-003	0.0659	0.0722	0.0000	171.0358	171.0358	0.0444	0.0000	172.1466
2021	0.0290	0.0315	0.0396	7.0000e-005	6.7000e-004	1.9300e-003	2.6100e-003	1.8000e-004	1.9300e-003	2.1100e-003	0.0000	5.8424	5.8424	3.8000e-004	0.0000	5.8518
Maximum	**0.1548**	**1.2743**	**1.1001**	**1.9200e-003**	**0.0235**	**0.0714**	**0.0949**	**6.3400e-003**	**0.0659**	**0.0722**	**0.0000**	**171.0358**	**171.0358**	**0.0444**	**0.0000**	**172.1466**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	5.11	0.00	1.32	5.95	0.00	0.56	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	0.3675	0.3675
2	9-3-2019	12-2-2019	0.1184	0.1184
3	12-3-2019	3-2-2020	0.3476	0.3476
4	3-3-2020	6-2-2020	0.3407	0.3407
5	6-3-2020	9-2-2020	0.3406	0.3406
6	9-3-2020	12-2-2020	0.3719	0.3719
7	12-3-2020	3-2-2021	0.2000	0.2000
		Highest	0.3719	0.3719

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0885	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Energy	1.7800e-003	0.0162	0.0136	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	162.5415	162.5415	3.7600e-003	1.0300e-003	162.9429
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	18.6813	0.0000	18.6813	1.1040	0.0000	46.2820
Water						0.0000	0.0000		0.0000	0.0000	0.6288	21.8906	22.5194	0.0651	1.6300e-003	24.6333
Total	**0.0902**	**0.0162**	**0.0139**	**1.0000e-004**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**19.3101**	**184.4327**	**203.7427**	**1.1729**	**2.6600e-003**	**233.8588**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0885	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Energy	1.7800e-003	0.0162	0.0136	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	162.5415	162.5415	3.7600e-003	1.0300e-003	162.9429
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	18.6813	0.0000	18.6813	1.1040	0.0000	46.2820
Water						0.0000	0.0000		0.0000	0.0000	0.5596	20.3095	20.8691	0.0580	1.4600e-003	22.7521
Total	**0.0902**	**0.0162**	**0.0139**	**1.0000e-004**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**0.0000**	**1.2300e-003**	**1.2300e-003**	**19.2409**	**182.8515**	**202.0924**	**1.1658**	**2.4900e-003**	**231.9777**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.36**	**0.86**	**0.81**	**0.61**	**6.39**	**0.80**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	BC Demolition	Demolition	6/3/2019	6/4/2019	5	2	
2	FL Site Preparation	Site Preparation	6/5/2019	6/5/2019	5	1	
3	FL Grading	Grading	6/6/2019	6/7/2019	5	2	
4	FL Building Construction	Building Construction	6/10/2019	9/30/2019	5	81	
5	TF Site Preparation	Site Preparation	12/2/2019	12/2/2019	5	1	
6	TF Grading	Grading	12/3/2019	12/4/2019	5	2	
7	TF Building Construction	Building Construction	12/5/2019	12/31/2020	5	281	
8	TF Architectural Coating	Architectural Coating	11/2/2020	2/26/2021	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,501; Non-Residential Outdoor: 10,834; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
BC Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
BC Demolition	Rubber Tired Dozers	1	1.00	247	0.40
BC Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Site Preparation	Graders	1	8.00	187	0.41
FL Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
FL Grading	Concrete/Industrial Saws	1	8.00	81	0.73
FL Grading	Rubber Tired Dozers	1	1.00	247	0.40
FL Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Building Construction	Cranes	1	4.00	231	0.29
FL Building Construction	Forklifts	2	6.00	89	0.20
FL Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Site Preparation	Graders	1	8.00	187	0.41
TF Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TF Grading	Concrete/Industrial Saws	1	8.00	81	0.73
TF Grading	Rubber Tired Dozers	1	1.00	247	0.40
TF Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
TF Building Construction	Cranes	1	4.00	231	0.29
TF Building Construction	Forklifts	2	6.00	89	0.20
TF Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Architectural Coating	Air Compressors	1	6.00	78	0.48

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
BC Demolition	4	10.00	0.00	13.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 BC Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3800e-003	0.0000	1.3800e-003	2.1000e-004	0.0000	2.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**1.3800e-003**	**5.4000e-004**	**1.9200e-003**	**2.1000e-004**	**5.1000e-004**	**7.2000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.2 BC Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.0600e-003	4.4000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5062	0.5062	4.0000e-005	0.0000	0.5070
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	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**1.1000e-004**	**2.1000e-003**	**8.9000e-004**	**1.0000e-005**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**6.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**0.6115**	**0.6115**	**4.0000e-005**	**0.0000**	**0.6125**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.2000e-004	0.0000	6.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**6.2000e-004**	**5.4000e-004**	**1.1600e-003**	**9.0000e-005**	**5.1000e-004**	**6.0000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.2 BC Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	2.0600e-003	4.4000e-004	1.0000e-005	1.1000e-004	1.0000e-005	1.2000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.5062	0.5062	4.0000e-005	0.0000	0.5070
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	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**1.1000e-004**	**2.1000e-003**	**8.9000e-004**	**1.0000e-005**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**6.0000e-005**	**1.0000e-005**	**7.0000e-005**	**0.0000**	**0.6115**	**0.6115**	**4.0000e-005**	**0.0000**	**0.6125**

3.3 FL Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**2.7000e-004**	**1.8000e-004**	**4.5000e-004**	**3.0000e-005**	**1.7000e-004**	**2.0000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 FL Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0263	0.0263	0.0000	0.0000	0.0264
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0000**	**0.0264**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**1.2000e-004**	**1.8000e-004**	**3.0000e-004**	**1.0000e-005**	**1.7000e-004**	**1.8000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.3 FL Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0263	0.0263	0.0000	0.0000	0.0264
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0000**	**0.0264**

3.4 FL Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**7.5000e-004**	**5.4000e-004**	**1.2900e-003**	**4.1000e-004**	**5.1000e-004**	**9.2000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 FL Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**5.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1053**	**0.1053**	**0.0000**	**0.0000**	**0.1054**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**3.4000e-004**	**5.4000e-004**	**8.8000e-004**	**1.9000e-004**	**5.1000e-004**	**7.0000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.4 FL Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**5.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1053**	**0.1053**	**0.0000**	**0.0000**	**0.1054**

3.5 FL Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3977	0.3055	4.6000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	41.4317	41.4317	0.0131	0.0000	41.7594
Total	**0.0388**	**0.3977**	**0.3055**	**4.6000e-004**		**0.0245**	**0.0245**		**0.0226**	**0.0226**	**0.0000**	**41.4317**	**41.4317**	**0.0131**	**0.0000**	**41.7594**

3.5 FL Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0239	6.5400e-003	5.0000e-005	1.2800e-003	1.5000e-004	1.4300e-003	3.7000e-004	1.4000e-004	5.1000e-004	0.0000	5.0638	5.0638	3.4000e-004	0.0000	5.0723
Worker	2.6400e-003	2.2000e-003	0.0239	6.0000e-005	5.7700e-003	5.0000e-005	5.8200e-003	1.5300e-003	5.0000e-005	1.5800e-003	0.0000	5.5459	5.5459	1.9000e-004	0.0000	5.5507
Total	**3.5000e-003**	**0.0261**	**0.0304**	**1.1000e-004**	**7.0500e-003**	**2.0000e-004**	**7.2500e-003**	**1.9000e-003**	**1.9000e-004**	**2.0900e-003**	**0.0000**	**10.6097**	**10.6097**	**5.3000e-004**	**0.0000**	**10.6230**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0388	0.3977	0.3055	4.6000e-004		0.0245	0.0245		0.0226	0.0226	0.0000	41.4316	41.4316	0.0131	0.0000	41.7594
Total	**0.0388**	**0.3977**	**0.3055**	**4.6000e-004**		**0.0245**	**0.0245**		**0.0226**	**0.0226**	**0.0000**	**41.4316**	**41.4316**	**0.0131**	**0.0000**	**41.7594**

3.5 FL Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0239	6.5400e-003	5.0000e-005	1.2800e-003	1.5000e-004	1.4300e-003	3.7000e-004	1.4000e-004	5.1000e-004	0.0000	5.0638	5.0638	3.4000e-004	0.0000	5.0723
Worker	2.6400e-003	2.2000e-003	0.0239	6.0000e-005	5.7700e-003	5.0000e-005	5.8200e-003	1.5300e-003	5.0000e-005	1.5800e-003	0.0000	5.5459	5.5459	1.9000e-004	0.0000	5.5507
Total	**3.5000e-003**	**0.0261**	**0.0304**	**1.1000e-004**	**7.0500e-003**	**2.0000e-004**	**7.2500e-003**	**1.9000e-003**	**1.9000e-004**	**2.0900e-003**	**0.0000**	**10.6097**	**10.6097**	**5.3000e-004**	**0.0000**	**10.6230**

3.6 TF Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**2.7000e-004**	**1.8000e-004**	**4.5000e-004**	**3.0000e-005**	**1.7000e-004**	**2.0000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.6 TF Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0263	0.0263	0.0000	0.0000	0.0264
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0000**	**0.0264**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	4.4600e-003	2.0700e-003	0.0000		1.8000e-004	1.8000e-004		1.7000e-004	1.7000e-004	0.0000	0.4378	0.4378	1.4000e-004	0.0000	0.4413
Total	**3.6000e-004**	**4.4600e-003**	**2.0700e-003**	**0.0000**	**1.2000e-004**	**1.8000e-004**	**3.0000e-004**	**1.0000e-005**	**1.7000e-004**	**1.8000e-004**	**0.0000**	**0.4378**	**0.4378**	**1.4000e-004**	**0.0000**	**0.4413**

3.6 TF Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.1000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0263	0.0263	0.0000	0.0000	0.0264
Total	**1.0000e-005**	**1.0000e-005**	**1.1000e-004**	**0.0000**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0263**	**0.0263**	**0.0000**	**0.0000**	**0.0264**

3.7 TF Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.5000e-004	0.0000	7.5000e-004	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**7.5000e-004**	**5.4000e-004**	**1.2900e-003**	**4.1000e-004**	**5.1000e-004**	**9.2000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.7 TF Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**5.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1053**	**0.1053**	**0.0000**	**0.0000**	**0.1054**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4000e-004	0.0000	3.4000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	8.6000e-003	7.6900e-003	1.0000e-005		5.4000e-004	5.4000e-004		5.1000e-004	5.1000e-004	0.0000	1.0520	1.0520	2.0000e-004	0.0000	1.0570
Total	**9.5000e-004**	**8.6000e-003**	**7.6900e-003**	**1.0000e-005**	**3.4000e-004**	**5.4000e-004**	**8.8000e-004**	**1.9000e-004**	**5.1000e-004**	**7.0000e-004**	**0.0000**	**1.0520**	**1.0520**	**2.0000e-004**	**0.0000**	**1.0570**

3.7 TF Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.5000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1053	0.1053	0.0000	0.0000	0.1054
Total	**5.0000e-005**	**4.0000e-005**	**4.5000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.1053**	**0.1053**	**0.0000**	**0.0000**	**0.1054**

3.8 TF Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1000e-003	0.0933	0.0717	1.1000e-004		5.7500e-003	5.7500e-003		5.2900e-003	5.2900e-003	0.0000	9.7185	9.7185	3.0700e-003	0.0000	9.7954
Total	**9.1000e-003**	**0.0933**	**0.0717**	**1.1000e-004**		**5.7500e-003**	**5.7500e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**9.7185**	**9.7185**	**3.0700e-003**	**0.0000**	**9.7954**

3.8 TF Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	5.6100e-003	1.5300e-003	1.0000e-005	3.0000e-004	4.0000e-005	3.3000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.1878	1.1878	8.0000e-005	0.0000	1.1898
Worker	6.2000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.3009	1.3009	4.0000e-005	0.0000	1.3020
Total	**8.2000e-004**	**6.1300e-003**	**7.1400e-003**	**2.0000e-005**	**1.6500e-003**	**5.0000e-005**	**1.7000e-003**	**4.5000e-004**	**4.0000e-005**	**4.9000e-004**	**0.0000**	**2.4887**	**2.4887**	**1.2000e-004**	**0.0000**	**2.4918**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.1000e-003	0.0933	0.0717	1.1000e-004		5.7500e-003	5.7500e-003		5.2900e-003	5.2900e-003	0.0000	9.7185	9.7185	3.0700e-003	0.0000	9.7954
Total	**9.1000e-003**	**0.0933**	**0.0717**	**1.1000e-004**		**5.7500e-003**	**5.7500e-003**		**5.2900e-003**	**5.2900e-003**	**0.0000**	**9.7185**	**9.7185**	**3.0700e-003**	**0.0000**	**9.7954**

3.8 TF Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.0000e-004	5.6100e-003	1.5300e-003	1.0000e-005	3.0000e-004	4.0000e-005	3.3000e-004	9.0000e-005	3.0000e-005	1.2000e-004	0.0000	1.1878	1.1878	8.0000e-005	0.0000	1.1898
Worker	6.2000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.3009	1.3009	4.0000e-005	0.0000	1.3020
Total	**8.2000e-004**	**6.1300e-003**	**7.1400e-003**	**2.0000e-005**	**1.6500e-003**	**5.0000e-005**	**1.7000e-003**	**4.5000e-004**	**4.0000e-005**	**4.9000e-004**	**0.0000**	**2.4887**	**2.4887**	**1.2000e-004**	**0.0000**	**2.4918**

3.8 TF Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1129	1.1597	0.9678	1.4900e-003		0.0684	0.0684		0.0630	0.0630	0.0000	131.0792	131.0792	0.0424	0.0000	132.1391
Total	**0.1129**	**1.1597**	**0.9678**	**1.4900e-003**		**0.0684**	**0.0684**		**0.0630**	**0.0630**	**0.0000**	**131.0792**	**131.0792**	**0.0424**	**0.0000**	**132.1391**

3.8 TF Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3800e-003	0.0710	0.0192	1.7000e-004	4.1300e-003	3.3000e-004	4.4600e-003	1.1900e-003	3.2000e-004	1.5100e-003	0.0000	16.2719	16.2719	1.0300e-003	0.0000	16.2978
Worker	7.8600e-003	6.3400e-003	0.0701	1.9000e-004	0.0187	1.6000e-004	0.0188	4.9600e-003	1.5000e-004	5.1000e-003	0.0000	17.3936	17.3936	5.5000e-004	0.0000	17.4073
Total	**0.0102**	**0.0773**	**0.0893**	**3.6000e-004**	**0.0228**	**4.9000e-004**	**0.0233**	**6.1500e-003**	**4.7000e-004**	**6.6100e-003**	**0.0000**	**33.6655**	**33.6655**	**1.5800e-003**	**0.0000**	**33.7051**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1129	1.1597	0.9678	1.4900e-003		0.0684	0.0684		0.0630	0.0630	0.0000	131.0791	131.0791	0.0424	0.0000	132.1389
Total	**0.1129**	**1.1597**	**0.9678**	**1.4900e-003**		**0.0684**	**0.0684**		**0.0630**	**0.0630**	**0.0000**	**131.0791**	**131.0791**	**0.0424**	**0.0000**	**132.1389**

3.8 TF Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3800e-003	0.0710	0.0192	1.7000e-004	4.1300e-003	3.3000e-004	4.4600e-003	1.1900e-003	3.2000e-004	1.5100e-003	0.0000	16.2719	16.2719	1.0300e-003	0.0000	16.2978
Worker	7.8600e-003	6.3400e-003	0.0701	1.9000e-004	0.0187	1.6000e-004	0.0188	4.9600e-003	1.5000e-004	5.1000e-003	0.0000	17.3936	17.3936	5.5000e-004	0.0000	17.4073
Total	**0.0102**	**0.0773**	**0.0893**	**3.6000e-004**	**0.0228**	**4.9000e-004**	**0.0233**	**6.1500e-003**	**4.7000e-004**	**6.6100e-003**	**0.0000**	**33.6655**	**33.6655**	**1.5800e-003**	**0.0000**	**33.7051**

3.9 TF Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.0370	0.0403	7.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6280
Total	**0.0313**	**0.0370**	**0.0403**	**7.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6280**

3.9 TF Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.5000e-004	2.7200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6741	0.6741	2.0000e-005	0.0000	0.6746
Total	**3.0000e-004**	**2.5000e-004**	**2.7200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6741**	**0.6741**	**2.0000e-005**	**0.0000**	**0.6746**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0260					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.0370	0.0403	7.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6280
Total	**0.0313**	**0.0370**	**0.0403**	**7.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6280**

3.9 TF Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.5000e-004	2.7200e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6741	0.6741	2.0000e-005	0.0000	0.6746
Total	**3.0000e-004**	**2.5000e-004**	**2.7200e-003**	**1.0000e-005**	**7.2000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6741**	**0.6741**	**2.0000e-005**	**0.0000**	**0.6746**

3.9 TF Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4900e-003	0.0313	0.0373	6.0000e-005		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	5.2342	5.2342	3.6000e-004	0.0000	5.2432
Total	**0.0287**	**0.0313**	**0.0373**	**6.0000e-005**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**5.2342**	**5.2342**	**3.6000e-004**	**0.0000**	**5.2432**

3.9 TF Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.3300e-003	1.0000e-005	6.7000e-004	1.0000e-005	6.8000e-004	1.8000e-004	1.0000e-005	1.8000e-004	0.0000	0.6082	0.6082	2.0000e-005	0.0000	0.6086
Total	**2.6000e-004**	**2.1000e-004**	**2.3300e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.8000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6082**	**0.6082**	**2.0000e-005**	**0.0000**	**0.6086**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.4900e-003	0.0313	0.0373	6.0000e-005		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	5.2342	5.2342	3.6000e-004	0.0000	5.2431
Total	**0.0287**	**0.0313**	**0.0373**	**6.0000e-005**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**5.2342**	**5.2342**	**3.6000e-004**	**0.0000**	**5.2431**

3.9 TF Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.3300e-003	1.0000e-005	6.7000e-004	1.0000e-005	6.8000e-004	1.8000e-004	1.0000e-005	1.8000e-004	0.0000	0.6082	0.6082	2.0000e-005	0.0000	0.6086
Total	**2.6000e-004**	**2.1000e-004**	**2.3300e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**6.8000e-004**	**1.8000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.6082**	**0.6082**	**2.0000e-005**	**0.0000**	**0.6086**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Office Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	144.8937	144.8937	3.4200e-003	7.1000e-004	145.1903
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	144.8937	144.8937	3.4200e-003	7.1000e-004	145.1903
NaturalGas Mitigated	1.7800e-003	0.0162	0.0136	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	17.6478	17.6478	3.4000e-004	3.2000e-004	17.7527
NaturalGas Unmitigated	1.7800e-003	0.0162	0.0136	1.0000e-004		1.2300e-003	1.2300e-003		1.2300e-003	1.2300e-003	0.0000	17.6478	17.6478	3.4000e-004	3.2000e-004	17.7527

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	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
Health Club	272496	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5414	14.5414	2.8000e-004	2.7000e-004	14.6278
Office Park	56899.5	3.1000e-004	2.7900e-003	2.3400e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0364	3.0364	6.0000e-005	6.0000e-005	3.0544
Strip Mall	1312	1.0000e-005	6.0000e-005	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0700	0.0700	0.0000	0.0000	0.0704
Total		**1.7900e-003**	**0.0162**	**0.0136**	**1.0000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**17.6478**	**17.6478**	**3.4000e-004**	**3.3000e-004**	**17.7527**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	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
Health Club	272496	1.4700e-003	0.0134	0.0112	8.0000e-005		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	14.5414	14.5414	2.8000e-004	2.7000e-004	14.6278
Office Park	56899.5	3.1000e-004	2.7900e-003	2.3400e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	3.0364	3.0364	6.0000e-005	6.0000e-005	3.0544
Strip Mall	1312	1.0000e-005	6.0000e-005	5.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0700	0.0700	0.0000	0.0000	0.0704
Total		**1.7900e-003**	**0.0162**	**0.0136**	**1.0000e-004**		**1.2300e-003**	**1.2300e-003**		**1.2300e-003**	**1.2300e-003**	**0.0000**	**17.6478**	**17.6478**	**3.4000e-004**	**3.3000e-004**	**17.7527**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Health Club	167111	93.0741	2.2000e-003	4.5000e-004	93.2646
Office Park	82239.8	45.8044	1.0800e-003	2.2000e-004	45.8982
Strip Mall	10800	6.0152	1.4000e-004	3.0000e-005	6.0275
Total		**144.8937**	**3.4200e-003**	**7.0000e-004**	**145.1903**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Health Club	167111	93.0741	2.2000e-003	4.5000e-004	93.2646
Office Park	82239.8	45.8044	1.0800e-003	2.2000e-004	45.8982
Strip Mall	10800	6.0152	1.4000e-004	3.0000e-005	6.0275
Total		**144.8937**	**3.4200e-003**	**7.0000e-004**	**145.1903**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0885	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Unmitigated	0.0885	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Total	**0.0885**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**0.0000**	**5.8000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0100					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0784					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.8000e-004
Total	**0.0885**	**0.0000**	**2.8000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**0.0000**	**5.8000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Toilet

Install Low Flow Shower

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	20.8691	0.0580	1.4600e-003	22.7521
Unmitigated	22.5194	0.0651	1.6300e-003	24.6333

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	0.890104 / 0.545548	10.1134	0.0292	7.3000e-004	11.0627
Office Park	1.03263 / 0.632904	11.7328	0.0339	8.5000e-004	12.8341
Strip Mall	0.059258 / 0.0363194	0.6733	1.9500e-003	5.0000e-005	0.7365
Total		**22.5194**	**0.0651**	**1.6300e-003**	**24.6333**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
Health Club	0.792193 / 0.545548	9.3722	0.0260	6.5000e-004	10.2179
Office Park	0.919043 / 0.632904	10.8730	0.0302	7.6000e-004	11.8540
Strip Mall	0.0527396 / 0.0363194	0.6240	1.7300e-003	4.0000e-005	0.6803
Total		**20.8691**	**0.0580**	**1.4500e-003**	**22.7521**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.6813	1.1040	0.0000	46.2820
Unmitigated	18.6813	1.1040	0.0000	46.2820

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Health Club	85.79	17.4146	1.0292	0.0000	43.1439
Office Park	5.4	1.0962	0.0648	0.0000	2.7157
Strip Mall	0.84	0.1705	0.0101	0.0000	0.4224
Total		**18.6813**	**1.1040**	**0.0000**	**46.2820**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Health Club	85.79	17.4146	1.0292	0.0000	43.1439
Office Park	5.4	1.0962	0.0648	0.0000	2.7157
Strip Mall	0.84	0.1705	0.0101	0.0000	0.4224
Total		**18.6813**	**1.1040**	**0.0000**	**46.2820**

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

CSUN Team Facilities, Batting Cage, and Field Lighting

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	5.81	1000sqft	0.00	5,812.00	0
City Park	0.24	Acre	0.24	10,454.40	0
Health Club	15.05	1000sqft	0.33	15,055.00	0
Strip Mall	0.80	1000sqft	0.00	800.00	0

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Precipitation Freq (Days)** 33

Climate Zone 12 **Operational Year** 2022

Utility Company Los Angeles Department of Water & Power

CO2 Intensity (lb/MWhr) 1227.89 **CH4 Intensity (lb/MWhr)** 0.029 **N2O Intensity (lb/MWhr)** 0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Health club = athletic facilities and batting cage, office park = offices and conference space, strip mall = store and box office, city park = field lighting
All team facility acreage allocated to health club

Construction Phase - Phases adjusted to match applicant provided construction schedule.

Off-road Equipment - Removal of batting cages.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - No change in stadium capacity or trips to site as compared to existing uses.

Energy Use -

Water And Wastewater - City park = field lighting

Solid Waste - City park = field lighting

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	NumDays	100.00	81.00
tblConstructionPhase	NumDays	100.00	281.00
tblConstructionPhase	NumDays	5.00	85.00
tblLandUse	LandUseSquareFeet	5,810.00	5,812.00
tblLandUse	LandUseSquareFeet	15,050.00	15,055.00
tblLandUse	LotAcreage	0.13	0.00
tblLandUse	LotAcreage	0.35	0.33
tblLandUse	LotAcreage	0.02	0.00
tblSolidWaste	SolidWasteGenerationRate	0.02	0.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblWater	OutdoorWaterUseRate	285,955.52	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	1.0710	10.6620	8.5874	0.0182	1.6035	0.6104	2.1490	0.4434	0.5617	0.9568	0.0000	1,826.2724	1,826.2724	0.3714	0.0000	1,832.9026
2020	2.3858	11.1259	10.0142	0.0174	0.2109	0.6373	0.8482	0.0567	0.5953	0.6520	0.0000	1,696.3379	1,696.3379	0.3931	0.0000	1,706.1657
2021	1.4147	1.5366	1.9280	3.2900e-003	0.0335	0.0944	0.1279	8.8900e-003	0.0944	0.1032	0.0000	313.6156	313.6156	0.0203	0.0000	314.1221
Maximum	**2.3858**	**11.1259**	**10.0142**	**0.0182**	**1.6035**	**0.6373**	**2.1490**	**0.4434**	**0.5953**	**0.9568**	**0.0000**	**1,826.2724**	**1,826.2724**	**0.3931**	**0.0000**	**1,832.9026**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	1.0710	10.6620	8.5874	0.0182	0.8456	0.6104	1.3911	0.2158	0.5617	0.7292	0.0000	1,826.2724	1,826.2724	0.3714	0.0000	1,832.9026
2020	2.3858	11.1259	10.0142	0.0174	0.2109	0.6373	0.8482	0.0567	0.5953	0.6520	0.0000	1,696.3379	1,696.3379	0.3931	0.0000	1,706.1657
2021	1.4147	1.5366	1.9280	3.2900e-003	0.0335	0.0944	0.1279	8.8900e-003	0.0944	0.1032	0.0000	313.6156	313.6156	0.0203	0.0000	314.1221
Maximum	**2.3858**	**11.1259**	**10.0142**	**0.0182**	**0.8456**	**0.6373**	**1.3911**	**0.2158**	**0.5953**	**0.7292**	**0.0000**	**1,826.2724**	**1,826.2724**	**0.3931**	**0.0000**	**1,832.9026**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**41.02**	**0.00**	**24.25**	**44.71**	**0.00**	**13.29**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Energy	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4946**	**0.0889**	**0.0769**	**5.3000e-004**	**0.0000**	**6.7600e-003**	**6.7600e-003**	**0.0000**	**6.7600e-003**	**6.7600e-003**		**106.5985**	**106.5985**	**2.0500e-003**	**1.9500e-003**	**107.2323**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Energy	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4946**	**0.0889**	**0.0769**	**5.3000e-004**	**0.0000**	**6.7600e-003**	**6.7600e-003**	**0.0000**	**6.7600e-003**	**6.7600e-003**		**106.5985**	**106.5985**	**2.0500e-003**	**1.9500e-003**	**107.2323**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	BC Demolition	Demolition	6/3/2019	6/4/2019	5	2	
2	FL Site Preparation	Site Preparation	6/5/2019	6/5/2019	5	1	
3	FL Grading	Grading	6/6/2019	6/7/2019	5	2	
4	FL Building Construction	Building Construction	6/10/2019	9/30/2019	5	81	
5	TF Site Preparation	Site Preparation	12/2/2019	12/2/2019	5	1	
6	TF Grading	Grading	12/3/2019	12/4/2019	5	2	
7	TF Building Construction	Building Construction	12/5/2019	12/31/2020	5	281	
8	TF Architectural Coating	Architectural Coating	11/2/2020	2/26/2021	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,501; Non-Residential Outdoor: 10,834; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
BC Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
BC Demolition	Rubber Tired Dozers	1	1.00	247	0.40
BC Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Site Preparation	Graders	1	8.00	187	0.41
FL Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
FL Grading	Concrete/Industrial Saws	1	8.00	81	0.73
FL Grading	Rubber Tired Dozers	1	1.00	247	0.40
FL Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Building Construction	Cranes	1	4.00	231	0.29
FL Building Construction	Forklifts	2	6.00	89	0.20
FL Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Site Preparation	Graders	1	8.00	187	0.41
TF Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TF Grading	Concrete/Industrial Saws	1	8.00	81	0.73
TF Grading	Rubber Tired Dozers	1	1.00	247	0.40
TF Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
TF Building Construction	Cranes	1	4.00	231	0.29
TF Building Construction	Forklifts	2	6.00	89	0.20
TF Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Architectural Coating	Air Compressors	1	6.00	78	0.48

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
BC Demolition	4	10.00	0.00	13.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 BC Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3781	0.0000	1.3781	0.2087	0.0000	0.2087			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**1.3781**	**0.5371**	**1.9152**	**0.2087**	**0.5125**	**0.7211**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 BC Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0626	2.0174	0.4532	5.1100e-003	0.1136	7.4400e-003	0.1211	0.0312	7.1200e-003	0.0383		552.4023	552.4023	0.0402		553.4067
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.1180**	**2.0581**	**0.8956**	**6.2600e-003**	**0.2254**	**8.4000e-003**	**0.2338**	**0.0608**	**8.0100e-003**	**0.0688**		**666.6154**	**666.6154**	**0.0441**		**667.7180**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6201	0.0000	0.6201	0.0939	0.0000	0.0939			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.6201**	**0.5371**	**1.1572**	**0.0939**	**0.5125**	**0.6064**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 BC Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0626	2.0174	0.4532	5.1100e-003	0.1136	7.4400e-003	0.1211	0.0312	7.1200e-003	0.0383		552.4023	552.4023	0.0402		553.4067
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	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.1180**	**2.0581**	**0.8956**	**6.2600e-003**	**0.2254**	**8.4000e-003**	**0.2338**	**0.0608**	**8.0100e-003**	**0.0688**		**666.6154**	**666.6154**	**0.0441**		**667.7180**

3.3 FL Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5303**	**0.3672**	**0.8975**	**0.0573**	**0.3378**	**0.3951**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 FL Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0203	0.2212	5.7000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		57.1065	57.1065	1.9600e-003		57.1557
Total	**0.0277**	**0.0203**	**0.2212**	**5.7000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**57.1065**	**57.1065**	**1.9600e-003**		**57.1557**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.2386**	**0.3672**	**0.6058**	**0.0258**	**0.3378**	**0.3636**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 FL Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0203	0.2212	5.7000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		57.1065	57.1065	1.9600e-003		57.1557
Total	**0.0277**	**0.0203**	**0.2212**	**5.7000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**57.1065**	**57.1065**	**1.9600e-003**		**57.1557**

3.4 FL Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 FL Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0554**	**0.0407**	**0.4425**	**1.1500e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**114.2131**	**114.2131**	**3.9300e-003**		**114.3113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.3387**	**0.5371**	**0.8758**	**0.1862**	**0.5125**	**0.6987**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 FL Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0554**	**0.0407**	**0.4425**	**1.1500e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**114.2131**	**114.2131**	**3.9300e-003**		**114.3113**

3.5 FL Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.5 FL Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.0937**	**0.6323**	**0.7445**	**2.7600e-003**	**0.1773**	**5.0000e-003**	**0.1823**	**0.0478**	**4.7400e-003**	**0.0525**		**284.1156**	**284.1156**	**0.0146**		**284.4815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.669 6	1,127.669 6	0.3568		1,136.589 2
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.669 6**	**1,127.669 6**	**0.3568**		**1,136.589 2**

3.5 FL Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.0937**	**0.6323**	**0.7445**	**2.7600e-003**	**0.1773**	**5.0000e-003**	**0.1823**	**0.0478**	**4.7400e-003**	**0.0525**		**284.1156**	**284.1156**	**0.0146**		**284.4815**

3.6 TF Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5303**	**0.3672**	**0.8975**	**0.0573**	**0.3378**	**0.3951**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.6 TF Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0203	0.2212	5.7000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		57.1065	57.1065	1.9600e-003		57.1557
Total	**0.0277**	**0.0203**	**0.2212**	**5.7000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**57.1065**	**57.1065**	**1.9600e-003**		**57.1557**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.2386**	**0.3672**	**0.6058**	**0.0258**	**0.3378**	**0.3636**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.6 TF Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0277	0.0203	0.2212	5.7000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		57.1065	57.1065	1.9600e-003		57.1557
Total	**0.0277**	**0.0203**	**0.2212**	**5.7000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**57.1065**	**57.1065**	**1.9600e-003**		**57.1557**

3.7 TF Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.7 TF Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0554**	**0.0407**	**0.4425**	**1.1500e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**114.2131**	**114.2131**	**3.9300e-003**		**114.3113**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.3387**	**0.5371**	**0.8758**	**0.1862**	**0.5125**	**0.6987**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.7 TF Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0554	0.0407	0.4425	1.1500e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		114.2131	114.2131	3.9300e-003		114.3113
Total	**0.0554**	**0.0407**	**0.4425**	**1.1500e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**114.2131**	**114.2131**	**3.9300e-003**		**114.3113**

3.8 TF Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.8 TF Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.0937**	**0.6323**	**0.7445**	**2.7600e-003**	**0.1773**	**5.0000e-003**	**0.1823**	**0.0478**	**4.7400e-003**	**0.0525**		**284.1156**	**284.1156**	**0.0146**		**284.4815**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.8 TF Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.5794	0.1692	1.2700e-003	0.0320	3.7500e-003	0.0358	9.2200e-003	3.5900e-003	0.0128		135.6386	135.6386	9.5300e-003		135.8768
Worker	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	**0.0937**	**0.6323**	**0.7445**	**2.7600e-003**	**0.1773**	**5.0000e-003**	**0.1823**	**0.0478**	**4.7400e-003**	**0.0525**		**284.1156**	**284.1156**	**0.0146**		**284.4815**

3.8 TF Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.8 TF Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0186	0.5318	0.1537	1.2600e-003	0.0320	2.5400e-003	0.0346	9.2200e-003	2.4300e-003	0.0117		134.7245	134.7245	9.0100e-003		134.9498
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	**0.0850**	**0.5789**	**0.6750**	**2.7100e-003**	**0.1773**	**3.7500e-003**	**0.1811**	**0.0478**	**3.5500e-003**	**0.0513**		**278.6892**	**278.6892**	**0.0136**		**279.0279**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.978 1	1,102.978 1	0.3567		1,111.896 2
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.978 1**	**1,102.978 1**	**0.3567**		**1,111.896 2**

3.8 TF Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0186	0.5318	0.1537	1.2600e-003	0.0320	2.5400e-003	0.0346	9.2200e-003	2.4300e-003	0.0117		134.7245	134.7245	9.0100e-003		134.9498
Worker	0.0664	0.0471	0.5213	1.4500e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		143.9647	143.9647	4.5400e-003		144.0781
Total	**0.0850**	**0.5789**	**0.6750**	**2.7100e-003**	**0.1773**	**3.7500e-003**	**0.1811**	**0.0478**	**3.5500e-003**	**0.0513**		**278.6892**	**278.6892**	**0.0136**		**279.0279**

3.9 TF Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**1.4237**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.9 TF Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0153**	**0.0109**	**0.1203**	**3.3000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**33.2226**	**33.2226**	**1.0500e-003**		**33.2488**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**1.4237**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.9 TF Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0153**	**0.0109**	**0.1203**	**3.3000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**33.2226**	**33.2226**	**1.0500e-003**		**33.2488**

3.9 TF Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.4004**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.9 TF Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0143**	**9.7800e-003**	**0.1105**	**3.2000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**32.1675**	**32.1675**	**9.5000e-004**		**32.1912**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.4004**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.9 TF Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0143**	**9.7800e-003**	**0.1105**	**3.2000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**32.1675**	**32.1675**	**9.5000e-004**		**32.1912**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Office Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
NaturalGas Unmitigated	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
Health Club	746.563	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8309	87.8309	1.6800e-003	1.6100e-003	88.3529
Office Park	155.889	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3399	18.3399	3.5000e-004	3.4000e-004	18.4489
Strip Mall	3.59452	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4229	0.4229	1.0000e-005	1.0000e-005	0.4254
Total		**9.7700e-003**	**0.0888**	**0.0746**	**5.3000e-004**		**6.7500e-003**	**6.7500e-003**		**6.7500e-003**	**6.7500e-003**		**106.5937**	**106.5937**	**2.0400e-003**	**1.9600e-003**	**107.2272**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
Health Club	0.746563	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8309	87.8309	1.6800e-003	1.6100e-003	88.3529
Office Park	0.155889	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3399	18.3399	3.5000e-004	3.4000e-004	18.4489
Strip Mall	0.00359452	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4229	0.4229	1.0000e-005	1.0000e-005	0.4254
Total		**9.7700e-003**	**0.0888**	**0.0746**	**5.3000e-004**		**6.7500e-003**	**6.7500e-003**		**6.7500e-003**	**6.7500e-003**		**106.5937**	**106.5937**	**2.0400e-003**	**1.9600e-003**	**107.2272**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Unmitigated	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Total	**0.4848**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7900e-003**	**4.7900e-003**	**1.0000e-005**		**5.1100e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Total	**0.4848**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7900e-003**	**4.7900e-003**	**1.0000e-005**		**5.1100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Toilet

Install Low Flow Shower

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

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

CSUN Team Facilities, Batting Cage, and Field Lighting

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Office Park	5.81	1000sqft	0.00	5,812.00	0
City Park	0.24	Acre	0.24	10,454.40	0
Health Club	15.05	1000sqft	0.33	15,055.00	0
Strip Mall	0.80	1000sqft	0.00	800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Health club = athletic facilities and batting cage, office park = offices and conference space, strip mall = store and box office, city park = field lighting
All team facility acreage allocated to health club

Construction Phase - Phases adjusted to match applicant provided construction schedule.

Off-road Equipment - Removal of batting cages.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Trips and VMT -

Demolition -

Grading -

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - No change in stadium capacity or trips to site as compared to existing uses.

Energy Use -

Water And Wastewater - City park = field lighting

Solid Waste - City park = field lighting

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Mobile Land Use Mitigation -

Water Mitigation -

CSUN Team Facilities, Batting Cage, and Field Lighting - Los Angeles-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblConstructionPhase	NumDays	10.00	2.00
tblConstructionPhase	NumDays	100.00	81.00
tblConstructionPhase	NumDays	100.00	281.00
tblConstructionPhase	NumDays	5.00	85.00
tblLandUse	LandUseSquareFeet	5,810.00	5,812.00
tblLandUse	LandUseSquareFeet	15,050.00	15,055.00
tblLandUse	LotAcreage	0.13	0.00
tblLandUse	LotAcreage	0.35	0.33
tblLandUse	LotAcreage	0.02	0.00
tblSolidWaste	SolidWasteGenerationRate	0.02	0.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	ST_TR	20.87	0.00
tblVehicleTrips	ST_TR	1.64	0.00
tblVehicleTrips	ST_TR	42.04	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	SU_TR	26.73	0.00
tblVehicleTrips	SU_TR	0.76	0.00
tblVehicleTrips	SU_TR	20.43	0.00
tblVehicleTrips	WD_TR	1.89	0.00
tblVehicleTrips	WD_TR	32.93	0.00
tblVehicleTrips	WD_TR	11.42	0.00
tblVehicleTrips	WD_TR	44.32	0.00
tblWater	OutdoorWaterUseRate	285,955.52	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	1.0641	10.6315	8.5984	0.0184	1.6035	0.6103	2.1489	0.4434	0.5616	0.9568	0.0000	1,842.8850	1,842.8850	0.3711	0.0000	1,849.4842
2020	2.3768	11.1204	10.0588	0.0176	0.2109	0.6373	0.8482	0.0567	0.5953	0.6519	0.0000	1,711.1165	1,711.1165	0.3929	0.0000	1,720.9391
2021	1.4133	1.5357	1.9384	3.3100e-003	0.0335	0.0944	0.1279	8.8900e-003	0.0944	0.1032	0.0000	315.6112	315.6112	0.0203	0.0000	316.1192
Maximum	**2.3768**	**11.1204**	**10.0588**	**0.0184**	**1.6035**	**0.6373**	**2.1489**	**0.4434**	**0.5953**	**0.9568**	**0.0000**	**1,842.8850**	**1,842.8850**	**0.3929**	**0.0000**	**1,849.4842**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	1.0641	10.6315	8.5984	0.0184	0.8456	0.6103	1.3909	0.2158	0.5616	0.7292	0.0000	1,842.8850	1,842.8850	0.3711	0.0000	1,849.4842
2020	2.3768	11.1204	10.0588	0.0176	0.2109	0.6373	0.8482	0.0567	0.5953	0.6519	0.0000	1,711.1165	1,711.1165	0.3929	0.0000	1,720.9391
2021	1.4133	1.5357	1.9384	3.3100e-003	0.0335	0.0944	0.1279	8.8900e-003	0.0944	0.1032	0.0000	315.6112	315.6112	0.0203	0.0000	316.1192
Maximum	**2.3768**	**11.1204**	**10.0588**	**0.0184**	**0.8456**	**0.6373**	**1.3909**	**0.2158**	**0.5953**	**0.7292**	**0.0000**	**1,842.8850**	**1,842.8850**	**0.3929**	**0.0000**	**1,849.4842**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	41.02	0.00	24.26	44.71	0.00	13.29	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Energy	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4946**	**0.0889**	**0.0769**	**5.3000e-004**	**0.0000**	**6.7600e-003**	**6.7600e-003**	**0.0000**	**6.7600e-003**	**6.7600e-003**		**106.5985**	**106.5985**	**2.0500e-003**	**1.9500e-003**	**107.2323**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Energy	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.4946**	**0.0889**	**0.0769**	**5.3000e-004**	**0.0000**	**6.7600e-003**	**6.7600e-003**	**0.0000**	**6.7600e-003**	**6.7600e-003**		**106.5985**	**106.5985**	**2.0500e-003**	**1.9500e-003**	**107.2323**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	BC Demolition	Demolition	6/3/2019	6/4/2019	5	2	
2	FL Site Preparation	Site Preparation	6/5/2019	6/5/2019	5	1	
3	FL Grading	Grading	6/6/2019	6/7/2019	5	2	
4	FL Building Construction	Building Construction	6/10/2019	9/30/2019	5	81	
5	TF Site Preparation	Site Preparation	12/2/2019	12/2/2019	5	1	
6	TF Grading	Grading	12/3/2019	12/4/2019	5	2	
7	TF Building Construction	Building Construction	12/5/2019	12/31/2020	5	281	
8	TF Architectural Coating	Architectural Coating	11/2/2020	2/26/2021	5	85	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,501; Non-Residential Outdoor: 10,834; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
BC Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
BC Demolition	Rubber Tired Dozers	1	1.00	247	0.40
BC Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Site Preparation	Graders	1	8.00	187	0.41
FL Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
FL Grading	Concrete/Industrial Saws	1	8.00	81	0.73
FL Grading	Rubber Tired Dozers	1	1.00	247	0.40
FL Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
FL Building Construction	Cranes	1	4.00	231	0.29
FL Building Construction	Forklifts	2	6.00	89	0.20
FL Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Site Preparation	Graders	1	8.00	187	0.41
TF Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
TF Grading	Concrete/Industrial Saws	1	8.00	81	0.73
TF Grading	Rubber Tired Dozers	1	1.00	247	0.40
TF Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
TF Building Construction	Cranes	1	4.00	231	0.29
TF Building Construction	Forklifts	2	6.00	89	0.20
TF Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
TF Architectural Coating	Air Compressors	1	6.00	78	0.48

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
BC Demolition	4	10.00	0.00	13.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
FL Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
TF Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 BC Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3781	0.0000	1.3781	0.2087	0.0000	0.2087			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**1.3781**	**0.5371**	**1.9152**	**0.2087**	**0.5125**	**0.7211**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 BC Demolition - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0611	1.9908	0.4245	5.1900e-003	0.1136	7.3100e-003	0.1210	0.0312	6.9900e-003	0.0381		561.9326	561.9326	0.0387		562.9001
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.1110**	**2.0276**	**0.9066**	**6.4100e-003**	**0.2254**	**8.2700e-003**	**0.2337**	**0.0608**	**7.8800e-003**	**0.0687**		**683.2279**	**683.2279**	**0.0429**		**684.2996**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6201	0.0000	0.6201	0.0939	0.0000	0.0939			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.6201**	**0.5371**	**1.1572**	**0.0939**	**0.5125**	**0.6064**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.2 BC Demolition - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0611	1.9908	0.4245	5.1900e-003	0.1136	7.3100e-003	0.1210	0.0312	6.9900e-003	0.0381		561.9326	561.9326	0.0387		562.9001
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	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.1110**	**2.0276**	**0.9066**	**6.4100e-003**	**0.2254**	**8.2700e-003**	**0.2337**	**0.0608**	**7.8800e-003**	**0.0687**		**683.2279**	**683.2279**	**0.0429**		**684.2996**

3.3 FL Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5303**	**0.3672**	**0.8975**	**0.0573**	**0.3378**	**0.3951**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 FL Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0250	0.0184	0.2411	6.1000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		60.6476	60.6476	2.0800e-003		60.6997
Total	**0.0250**	**0.0184**	**0.2411**	**6.1000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**60.6476**	**60.6476**	**2.0800e-003**		**60.6997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.2386**	**0.3672**	**0.6058**	**0.0258**	**0.3378**	**0.3636**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.3 FL Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0250	0.0184	0.2411	6.1000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		60.6476	60.6476	2.0800e-003		60.6997
Total	**0.0250**	**0.0184**	**0.2411**	**6.1000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**60.6476**	**60.6476**	**2.0800e-003**		**60.6997**

3.4 FL Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 FL Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0500**	**0.0367**	**0.4822**	**1.2200e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**121.2953**	**121.2953**	**4.1700e-003**		**121.3995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.3387**	**0.5371**	**0.8758**	**0.1862**	**0.5125**	**0.6987**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.4 FL Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0500**	**0.0367**	**0.4822**	**1.2200e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**121.2953**	**121.2953**	**4.1700e-003**		**121.3995**

3.5 FL Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.5 FL Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.0857**	**0.6264**	**0.7804**	**2.8900e-003**	**0.1773**	**4.9400e-003**	**0.1823**	**0.0478**	**4.6800e-003**	**0.0524**		**297.0912**	**297.0912**	**0.0144**		**297.4499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.5 FL Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.0857**	**0.6264**	**0.7804**	**2.8900e-003**	**0.1773**	**4.9400e-003**	**0.1823**	**0.0478**	**4.6800e-003**	**0.0524**		**297.0912**	**297.0912**	**0.0144**		**297.4499**

3.6 TF Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378		965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.5303**	**0.3672**	**0.8975**	**0.0573**	**0.3378**	**0.3951**		**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.6 TF Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0250	0.0184	0.2411	6.1000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		60.6476	60.6476	2.0800e-003		60.6997
Total	**0.0250**	**0.0184**	**0.2411**	**6.1000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**60.6476**	**60.6476**	**2.0800e-003**		**60.6997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.7195	8.9170	4.1407	9.7500e-003		0.3672	0.3672		0.3378	0.3378	0.0000	965.1690	965.1690	0.3054		972.8032
Total	**0.7195**	**8.9170**	**4.1407**	**9.7500e-003**	**0.2386**	**0.3672**	**0.6058**	**0.0258**	**0.3378**	**0.3636**	**0.0000**	**965.1690**	**965.1690**	**0.3054**		**972.8032**

3.6 TF Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0250	0.0184	0.2411	6.1000e-004	0.0559	4.8000e-004	0.0564	0.0148	4.4000e-004	0.0153		60.6476	60.6476	2.0800e-003		60.6997
Total	**0.0250**	**0.0184**	**0.2411**	**6.1000e-004**	**0.0559**	**4.8000e-004**	**0.0564**	**0.0148**	**4.4000e-004**	**0.0153**		**60.6476**	**60.6476**	**2.0800e-003**		**60.6997**

3.7 TF Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125		1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.7528**	**0.5371**	**1.2898**	**0.4138**	**0.5125**	**0.9263**		**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.7 TF Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0500**	**0.0367**	**0.4822**	**1.2200e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**121.2953**	**121.2953**	**4.1700e-003**		**121.3995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3387	0.0000	0.3387	0.1862	0.0000	0.1862			0.0000			0.0000
Off-Road	0.9530	8.6039	7.6917	0.0120		0.5371	0.5371		0.5125	0.5125	0.0000	1,159.6570	1,159.6570	0.2211		1,165.1847
Total	**0.9530**	**8.6039**	**7.6917**	**0.0120**	**0.3387**	**0.5371**	**0.8758**	**0.1862**	**0.5125**	**0.6987**	**0.0000**	**1,159.6570**	**1,159.6570**	**0.2211**		**1,165.1847**

3.7 TF Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0500	0.0367	0.4822	1.2200e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		121.2953	121.2953	4.1700e-003		121.3995
Total	**0.0500**	**0.0367**	**0.4822**	**1.2200e-003**	**0.1118**	**9.6000e-004**	**0.1127**	**0.0296**	**8.9000e-004**	**0.0305**		**121.2953**	**121.2953**	**4.1700e-003**		**121.3995**

3.8 TF Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569		1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**		**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.8 TF Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.0857**	**0.6264**	**0.7804**	**2.8900e-003**	**0.1773**	**4.9400e-003**	**0.1823**	**0.0478**	**4.6800e-003**	**0.0524**		**297.0912**	**297.0912**	**0.0144**		**297.4499**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9576	9.8207	7.5432	0.0114		0.6054	0.6054		0.5569	0.5569	0.0000	1,127.6696	1,127.6696	0.3568		1,136.5892
Total	**0.9576**	**9.8207**	**7.5432**	**0.0114**		**0.6054**	**0.6054**		**0.5569**	**0.5569**	**0.0000**	**1,127.6696**	**1,127.6696**	**0.3568**		**1,136.5892**

3.8 TF Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0208	0.5787	0.1535	1.3100e-003	0.0320	3.6900e-003	0.0357	9.2200e-003	3.5300e-003	0.0128		139.4073	139.4073	8.9300e-003		139.6307
Worker	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	**0.0857**	**0.6264**	**0.7804**	**2.8900e-003**	**0.1773**	**4.9400e-003**	**0.1823**	**0.0478**	**4.6800e-003**	**0.0524**		**297.0912**	**297.0912**	**0.0144**		**297.4499**

3.8 TF Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.8 TF Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0178	0.5319	0.1394	1.3000e-003	0.0320	2.5000e-003	0.0345	9.2200e-003	2.3900e-003	0.0116		138.5124	138.5124	8.4500e-003		138.7237
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	**0.0776**	**0.5744**	**0.7086**	**2.8400e-003**	**0.1773**	**3.7100e-003**	**0.1810**	**0.0478**	**3.5100e-003**	**0.0513**		**291.4070**	**291.4070**	**0.0133**		**291.7388**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.8 TF Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0178	0.5319	0.1394	1.3000e-003	0.0320	2.5000e-003	0.0345	9.2200e-003	2.3900e-003	0.0116		138.5124	138.5124	8.4500e-003		138.7237
Worker	0.0598	0.0426	0.5692	1.5400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		152.8947	152.8947	4.8200e-003		153.0152
Total	**0.0776**	**0.5744**	**0.7086**	**2.8400e-003**	**0.1773**	**3.7100e-003**	**0.1810**	**0.0478**	**3.5100e-003**	**0.0513**		**291.4070**	**291.4070**	**0.0133**		**291.7388**

3.9 TF Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**1.4237**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.9 TF Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0138**	**9.8200e-003**	**0.1314**	**3.5000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**35.2834**	**35.2834**	**1.1100e-003**		**35.3112**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**1.4237**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.9 TF Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0138**	**9.8200e-003**	**0.1314**	**3.5000e-004**	**0.0335**	**2.8000e-004**	**0.0338**	**8.8900e-003**	**2.6000e-004**	**9.1500e-003**		**35.2834**	**35.2834**	**1.1100e-003**		**35.3112**

3.9 TF Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**1.4004**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.9 TF Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0129**	**8.8400e-003**	**0.1208**	**3.4000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**34.1631**	**34.1631**	**1.0100e-003**		**34.1883**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1.1815					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**1.4004**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.9 TF Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0129**	**8.8400e-003**	**0.1208**	**3.4000e-004**	**0.0335**	**2.7000e-004**	**0.0338**	**8.8900e-003**	**2.5000e-004**	**9.1400e-003**		**34.1631**	**34.1631**	**1.0100e-003**		**34.1883**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Health Club	0.00	0.00	0.00		
Office Park	0.00	0.00	0.00		
Strip Mall	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	66	28	6
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Office Park	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Health Club	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Office Park	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876
Strip Mall	0.546501	0.044961	0.204016	0.120355	0.015740	0.006196	0.020131	0.030678	0.002515	0.002201	0.005142	0.000687	0.000876

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271
NaturalGas Unmitigated	9.7700e-003	0.0888	0.0746	5.3000e-004		6.7500e-003	6.7500e-003		6.7500e-003	6.7500e-003		106.5937	106.5937	2.0400e-003	1.9500e-003	107.2271

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
Health Club	746.563	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8309	87.8309	1.6800e-003	1.6100e-003	88.3529
Office Park	155.889	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3399	18.3399	3.5000e-004	3.4000e-004	18.4489
Strip Mall	3.59452	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4229	0.4229	1.0000e-005	1.0000e-005	0.4254
Total		**9.7700e-003**	**0.0888**	**0.0746**	**5.3000e-004**		**6.7500e-003**	**6.7500e-003**		**6.7500e-003**	**6.7500e-003**		**106.5937**	**106.5937**	**2.0400e-003**	**1.9600e-003**	**107.2272**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
Health Club	0.746563	8.0500e-003	0.0732	0.0615	4.4000e-004		5.5600e-003	5.5600e-003		5.5600e-003	5.5600e-003		87.8309	87.8309	1.6800e-003	1.6100e-003	88.3529
Office Park	0.155889	1.6800e-003	0.0153	0.0128	9.0000e-005		1.1600e-003	1.1600e-003		1.1600e-003	1.1600e-003		18.3399	18.3399	3.5000e-004	3.4000e-004	18.4489
Strip Mall	0.00359452	4.0000e-005	3.5000e-004	3.0000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.4229	0.4229	1.0000e-005	1.0000e-005	0.4254
Total		**9.7700e-003**	**0.0888**	**0.0746**	**5.3000e-004**		**6.7500e-003**	**6.7500e-003**		**6.7500e-003**	**6.7500e-003**		**106.5937**	**106.5937**	**2.0400e-003**	**1.9600e-003**	**107.2272**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Unmitigated	0.4848	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Total	**0.4848**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7900e-003**	**4.7900e-003**	**1.0000e-005**		**5.1100e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0550					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.4296					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.1000e-004	2.0000e-005	2.2400e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		4.7900e-003	4.7900e-003	1.0000e-005		5.1100e-003
Total	**0.4848**	**2.0000e-005**	**2.2400e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**4.7900e-003**	**4.7900e-003**	**1.0000e-005**		**5.1100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Toilet

Install Low Flow Shower

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

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

Field Lighting Energy Calculations

Group	Activity	# of Events	Hours per Event	Yearly Hours	Average Load (kW)	Total
A	Baseball	106	3.5	371	123.05	**45,651.6**
						45.65155

	Emissions Factors (lbs/MWh)	Emissions (lbs)	Emissions (MT)	MT CO2e	
CO2	1227.89	56055.082	25.42615737	25.42615737	
CH4	0.029	1.323895	0.000600509	0.015	
N2O	0.006	0.2739093	0.000124243	0.037	
			Total	**25.47815737**	**MT CO2e**

Number of baseball games in a season based on client-provided information.

Average hours per event based on average length of nine-inning collegiate baseball games, according to the NCA/
https://www.ncaa.com/news/baseball/article/2015-10-14/baseball-rules-committee-withdraws-division-i-pitch-c
Emissions factors based on CalEEMod intensity factors for Los Angeles Department of Power and Water.
Greenhouse gas conversions performed using the U.S. EPA's Greenhouse Gas Equivalencies Calculator. Available a
https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Method based on GHG emissions calculations performed for the Draft Environmental Impact Report for Norwalk
New Stadium and Athletic Fields Improvement Project (2018), which included baseball field lighting for a new hig
DEIR available at: https://1.cdn.edl.io/e80zanNOQm1NmUh0RiLVFhRFmmr3SSIWV1dPL0XYLOOstWS3.pdf and DI
at: https://1.cdn.edl.io/SAljbIgIuQSVkpVO8IDbQPV8cYfQX8mRSdfngE57wEmhHmJt.pdf

kWh/year
MWh/year

A (2015). Available at:
clock-proposal

at:

High School Proposed
h school baseball field.
EIR Appendices available

Appendix C

Transportation Study

PREPARED FOR

CSUN® CALIFORNIA STATE UNIVERSITY NORTHRIDGE

PREPARED BY

FEHR & PEERS
600 Wilshire Blvd, Suite 1050
Los Angeles, CA

Transportation Study for

CSUN Matador Field Ballpark Field Lighing Project

NOVEMBER 2018

TABLE OF CONTENTS

APPENDICES

Appendix A: Lane Configurations and Traffic Volumes

Appendix B: Count Sheets

Appendix C: LOS Analysis Sheets

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

This report documents the assumptions, methodologies, and findings of a study conducted by Fehr & Peers to evaluate the potential traffic impacts of the proposed California State University, Northridge (CSUN) Matador Field Ballpark Field Lighting project (Project). The CSUN Ballpark is located on Lindley Avenue near Halsted Street, on the CSUN campus in Northridge, California. This study was conducted as part of an environmental document being prepared for the proposed Project.

PROJECT DESCRIPTION

The proposed Project is located on Lindley Avenue between Lassen Street and Halsted Street, on the north end of the CSUN campus. Adjacent land uses include other university uses, particularly the soccer field and the track stadium to the north and the Matadome to the south, a high school to the east, and a residential neighborhood to the west. Figure 1 illustrates the location of the proposed Project in relation to the surrounding street system. Regional access to the project site is provided by the San Diego Freeway, Interstate 405 (I-405) with access ramps approximately 3.3 miles to the east, the Ronald Reagan Freeway, State Route 118 (SR-118) with access ramps approximately 2.2 miles to the north, and the Ventura Freeway, United States 101 (US-101) with access ramps approximately 5 miles to the south.

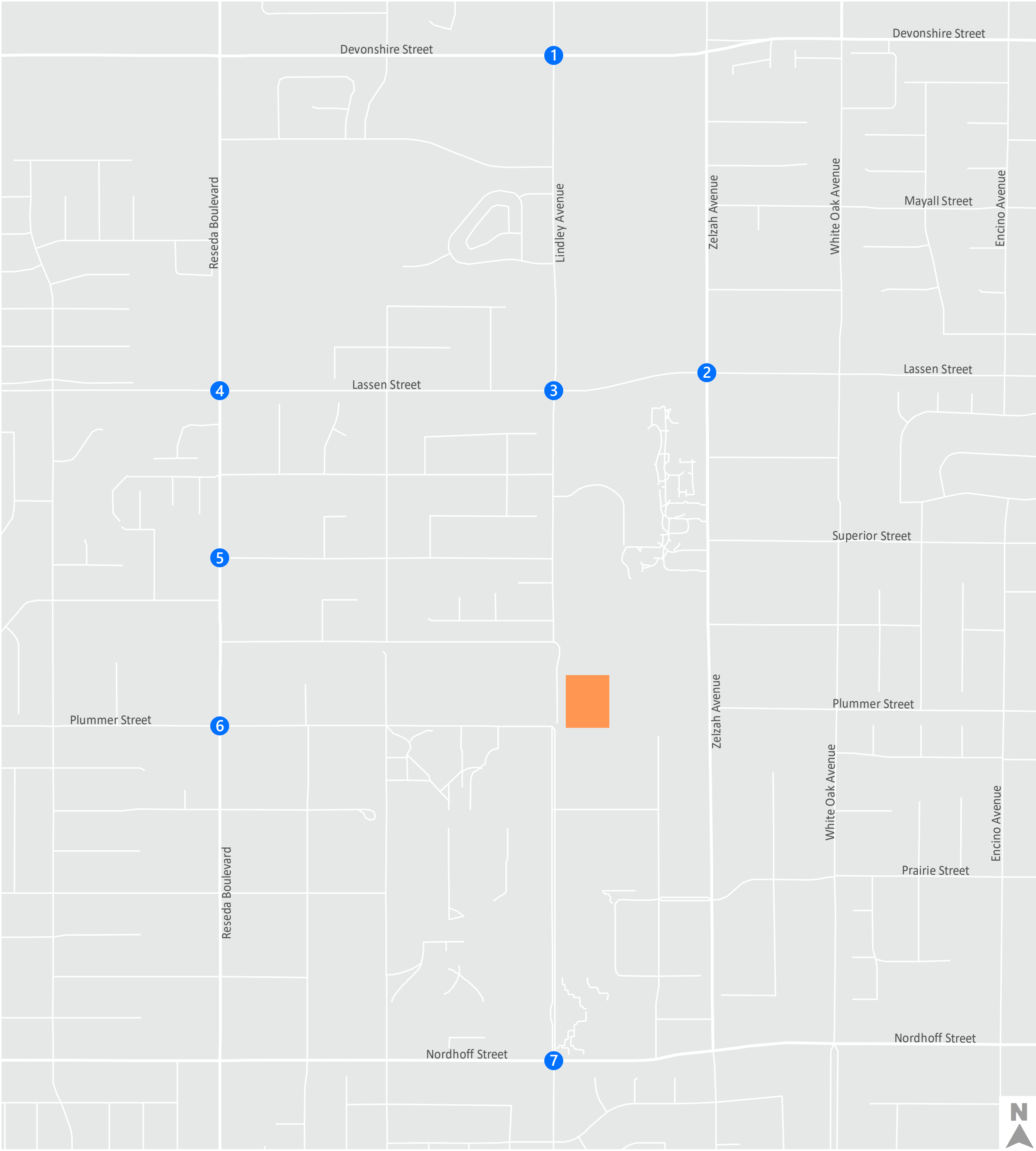
The 4-acre Project site is the existing site of the CSUN Matador Field ballpark. The proposed Project entails replacement of team facilities, replacement of the batting cage facility, and new field lighting. No other changes are planned for the ballpark. Visitors to the ballpark may park in any eligible CSUN facility. Convenient parking is located in angled spaces on the east side of Lindley Avenue adjacent to the ballpark, in Lot E6 located between Halsted Street and North University Drive, and in the Matadome parking lot, accessible from Zelzah Avenue.

New field lighting includes installation of a new 8-pole, high-efficiency LED field lighting system with two light poles on each of the four sides of the ballpark. The field lighting would provide light levels of 100 foot-candles on the infield and 70 foot-candles on the outfield, meeting the lighting requirements for both NCAA Regional and National broadcasts for baseball. Due to the existing lack of field lighting, Matador games are limited to early afternoons, with game commencements occurring by 3:00 PM at the latest. After installation of the proposed field lighting, games can also commence in the evening between 3:00 and 7:00 PM. This Project as analyzed in this study involves the shift of games from the early afternoon to also include games in the evening. Due to the fact that visitor seating is not being improved or expanded in any way, the proposed Project is assumed to generate no new trips.

A site plan of the project site is presented in Figure 2.

STUDY SCOPE

The scope of work for this study was determined in consultation with CSUN staff and based on Los Angeles Department of Transportation (LADOT) traffic study guidelines as described in *Traffic Study Policies and Procedures* (LADOT, August 2014).



Study Intersections

Project Site

Figure 1

Location of Proposed Project and Study Intersections

CSUN BALLPARK

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE

SITE PLAN

Figure 2

Site Plan

TRAFFIC SCENARIOS

The study assumes that the Project would be completed by year 2021 and is directed at analyzing the potential Project-generated traffic impacts on the local street system under both existing (2018) and future year (2021) traffic conditions. The following traffic scenarios have been developed and analyzed as part of this study:

- Existing Conditions – The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes a description of the transportation system serving the project site, existing traffic volumes, and an assessment of the operating conditions at the study analysis locations described below.

- Existing plus Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of Project-generated traffic. The impacts of the proposed Project on existing traffic operating conditions were then identified.

- Future Base (Year 2021) Conditions – Future traffic projections without the proposed Project were developed for the year 2021. The objective of this analysis was to project future traffic growth and operating conditions that could be expected to result from regional growth, related projects, and transportation network changes in the vicinity of the project site by the year 2021.

- Future (Year 2021) plus Project Conditions – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under future conditions with the addition of Project-generated traffic. The impacts of the proposed Project on future traffic operating conditions were then identified.

STUDY LOCATIONS

Seven signalized intersections were selected for analysis.

Signalized Intersections

The following seven signalized intersections, illustrated in Figure 1, were identified to be analyzed as part of the scope of work for this Project:

1. Lindley Avenue & Devonshire Street
2. Zelzah Avenue & Lassen Street
3. Lindley Avenue & Lassen Street
4. Reseda Avenue & Lassen Street
5. Reseda Boulevard & Superior Street
6. Reseda Boulevard & Plummer Street
7. Lindley Avenue & Nordhoff Street

Freeway Analysis

The *Congestion Management Program for Los Angeles* County (CMP) (Metro, 2010) requires that all CMP mainline freeway monitoring locations where a proposed project will add 150 or more trips, in either direction, during either the AM or PM peak hours be analyzed. The proposed Project is not expected to add 150 or more vehicle trips during any peak hour on nearby freeways (see Chapter 5). Therefore, no analysis of freeway segments is required for CMP purposes.

ORGANIZATION OF REPORT

This report is divided into eight chapters, including this introduction. Chapter 2 describes the existing conditions including an inventory of the streets, highways, and transit services in the study area, a summary of existing traffic volumes, and an assessment of existing operating conditions. The methodologies used to develop traffic forecasts for the Existing, Existing plus Project, Future Base, and Future plus Project scenarios and the forecasts themselves are included in Chapter 3. Chapter 4 presents an assessment of potential intersection traffic impacts of the proposed Project under both existing and future conditions. Chapter 5 summarizes the construction impact analysis. Chapter 6 provides the summary and conclusions.

2. EXISTING CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the study area. The assessment of conditions relevant to this study includes a description of the study area, an inventory of the local street system in the vicinity of the project site, a review of traffic volumes on these facilities, an assessment of the resulting operating conditions, and the current transit service in the study area. A detailed description of these elements is presented in this chapter.

STUDY AREA

The project site is within the Northridge Community Plan area of the City of Los Angeles. The study area selected for analysis extends to include Reseda Boulevard to the west, Zelzah Avenue to the east, Devonshire Street to the north, and Nordhoff Street to the south. All of the streets in the study area are under the jurisdiction of the City of Los Angeles.

EXISTING STREET SYSTEM

Major arterials serving the study area include Reseda Boulevard and Zelzah Avenue in the north/south direction and Devonshire Street, Lassen Street, Plummer Street, and Nordhoff Street in the east/west direction.

Interstate 405 lies approximately three miles east of the site, SR-118 lies approximately two miles north of the site, and US-101 lies approximately five miles south of the site. Each of these interstates provides regional access to and from the study area.

The characteristics of the major roadways serving the study area are described below. The street descriptions include the designation of the roadway under the *Mobility Plan 2035* (Los Angeles Department of Planning, General Plan Mobility Element) approved by the Los Angeles City Council in January 2016.

FREEWAYS

- **Interstate 405** runs in an north/south direction and extends from the Golden State Freeway, Interstate 5, in the Sylmar area to the northeast of the Project site to Orange County. In the vicinity of the study area, the freeway provides four general purpose lanes and one carpool lane in each direction, plus auxiliary lanes. Ramps are provided at Devonshire Street and Nordhoff Street.

- **SR-118** runs in an east/west direction across the North Valley, extending from the Foothill Freeway, Interstate 210, in the east to Ventura County in the west. In the vicinity of the study area, the freeway provides four general purpose lanes in the eastbound direction and five general purpose lanes in the westbound direction, as well as one carpool lane in each direction. Ramps are provided at Rinaldi Street and Balboa Boulevard.

- **US-101** runs in the southeast/northwest direction, extending from downtown Los Angeles through Hollywood and the San Fernando Valley and beyond. In the vicinity of the study area, the

Hollywood Freeway provides five lanes in each direction. Ramps are provided at Reseda Boulevard and White Oak Avenue.

EAST/WEST STREETS

- **Devonshire Street** is designated as an Avenue I in the City of Los Angles' *Mobility Plan 2035*. It is also included in the Bicycle Enhanced Network. It runs north of the project site with two vehicle travel lanes and a bicycle lane in each direction within the project study area. Parking is permitted along portions of the roadway on both sides of the street. Left-turn pockets are present at major intersections.

- **Lassen Street** is designated as an Avenue II. It runs north of the Project site with two vehicle travel lanes in each direction within the project study area. Parking is permitted along portions of the roadway on both sides of the street. Left-turn pockets are present at major intersections.

- **Plummer Street** is designated as an Avenue II and is also on the Neighborhood Enhanced Network. It runs south of the Project site with two vehicle travel lanes and a bicycle lane in each direction within the project study area. Parking is permitted along portions of the roadway on both sides of the street. Left-turn pockets are present at major intersections. Plummer Street is bisected by the CSUN campus and is discontinuous between Zelzah Avenue and Lindley Street.

- **Nordhoff Street** is designated as a Boulevard II, is also on the Vehicle Enhanced Network, and has been identified as a Moderate Transit Enhanced Street. It runs south of the Project site with three vehicle travel lanes each direction within the project study area. Parking is not permitted. Left-turn pockets are present at major intersections.

- **Kinzie Street** is designated as a Local Street. The roadway is undivided. Parking is permitted on both sides of the street.

- **Superior Street** is designated as a Collector Street. The roadway is undivided. Parking is permitted on both sides of the street.

- **Halsted Street** is designated as a Local Street. The roadway is undivided. Parking is prohibited on both sides of the street from Lindley Avenue until immediately east of Etiwanda Avenue. West of Etiwanda Avenue, parking is permitted on the north side of the street.

NORTH/SOUTH STREETS

- **Reseda Boulevard** is designated as a Boulevard II. It is included on the Transit Enhanced Network as a Moderate Plus Transit Enhanced Street, and is also on the Bicycle Enhanced Network. It runs west of the Project site with two vehicle travel lanes and a bicycle lane in each direction within the project study area. Parking is permitted along portions of the roadway on both sides of the street. Left-turn pockets are present at major intersections.

- **Zelzah Avenue** is designated as a Boulevard II. It runs east of the Project site with two vehicle travel lanes in each direction within the project study area. Parking is permitted along portions of the roadway on both sides of the street. Left-turn pockets are present at major intersections.

- **Lindley Avenue** is designated as a Collector Street and is also on the Neighborhood Enhanced Network. One travel lane is provided in each direction. Angled parking is provided on the east side of the street, adjacent to the ballpark, and prohibited on the west side of the street. A southbound only bicycle lane is provided on the west side of the street.

- **Etiwanda Avenue** is designated as a Collector Street. The roadway is undivided. Speed is managed by speed humps. Parking is permitted on both sides of the street.

Lane configurations of the study intersections are provided in Appendix A.

EXISTING PUBLIC TRANSIT SERVICE

The project site is served by multiple Metro bus routes. Rapid bus service is provided on Reseda Boulevard via the Metro Rapid 744. Local bus service is provided on Devonshire Street by Metro Line 158, on Plummer Street by Metro Line 167, on Nordhoff Street by Metro Lines 166/364, on Zelzah Avenue by Line 239, and on Reseda Boulevard on Metro Line 240. Regional transit service is provided by Metrolink via the Northridge station on the Ventura County Line, located approximately 2.4 miles from the ballpark.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bicycle lanes are provided in the area on Devonshire Street, Plummer Street, Reseda Boulevard, and Lindley Avenue. The study area generally has a mature network of pedestrian facilities along major streets including sidewalks, crosswalks and pedestrian safety features. Approximately 8-foot sidewalks are provided on major streets throughout the study area. Residential streets generally lack pedestrian facilities. The *Mobility Plan 2035* identifies corridors proposed to receive improved bicycle, pedestrian and vehicle infrastructure improvements. Tier 1 Protected Bicycle Lanes are bicycle facilities that are separated from vehicular traffic. Tier 2 and Tier 3 Bicycle Lanes are facilities on roadways with striped separation. Tier 2 Bicycle Lanes are those which are more likely to be built by 2035. The Neighborhood Enhanced Network is the network of locally-serving streets planned to contain traffic calming measures that close the gaps between streets containing bicycle facilities. The *Mobility Plan 2035* identifies Devonshire Street and Reseda Boulevard as part of the Tier 1 Bicycle Lane Network. Several roadways near the Project are designated as part of the Neighborhood Enhanced Network such as Plummer Street and Lindley Avenue.

EXISTING TRAFFIC VOLUMES AND LEVEL OF SERVICE

This section presents existing base peak hour traffic volumes, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each, indicating volume-to-capacity (V/C) ratios and levels of service (LOS).

EXISTING TRAFFIC VOLUMES

As this study aims to evaluate the effect of the addition of evening games at the ballpark to the local transportation network, the morning peak hour was not considered. New weekday afternoon peak hour turning movement counts were collected at the study intersections on Tuesday, October 16, 2018. Existing weekday afternoon peak hour volumes at the study intersections are provided in Appendix A. Count sheets for these intersections are contained in Appendix B.

LEVEL OF SERVICE METHODOLOGY

A variety of standard methodologies are available to analyze LOS. According to *Traffic Study Policies and Procedures*, this study is required to use the Critical Movement Analysis (CMA) method of intersection capacity calculation (Transportation Research Board, 1980) to analyze signalized intersections in the City of Los Angeles. The V/C ratio is then used to find the corresponding LOS based on the definitions in Table 1. Under the CMA methodology, a V/C ratio is generated for each study intersection based on factors such as the volume of traffic and the number of lanes provided for such vehicle movement and an LOS grade.

The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC-operations to manage signal timing to improve traffic flow conditions. The Adaptive Traffic Control System (ATCS) is an enhancement to ATSAC and provides fully traffic-adaptive signal control based on real-time traffic conditions. All of the study intersections located in the City of Los Angeles are currently operating under the City's ATSAC system and ATCS control. ATSAC and ATCS provide improved operating conditions. Therefore, in accordance with City of Los Angeles procedures, a credit of 0.07 V/C reduction was applied at each intersection where ATSAC is implemented and an additional 0.03 V/C reduction was applied at each intersection where ATCS is implemented.

TABLE 1 – LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat what restricted within groups of vehicles.
C	>0.700 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>0.800 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	>0.900 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: Transportation Research Circulation No. 212, Interim Materials on Highway Capacity, Transportation Research Board, 1980.

EXISTING LEVELS OF SERVICE

Existing year traffic volumes presented in Appendix A were analyzed using the intersection capacity analysis methodology described above to determine the existing operating conditions at the study intersections. Table 2 summarizes the results of the analysis of the existing weekday afternoon peak hour V/C ratio and corresponding LOS at each of the analyzed intersections. As indicated, four of the seven signalized intersections analyzed for impacts operate at LOS D or better during the afternoon peak period. Three intersections operate at LOS E or F, and are identified below. Analysis sheets are provided in Appendix C.

2. Zelzah Avenue & Lassen Street (LOS E)
4. Reseda Boulevard & Lassen Street (LOS F)
6. Reseda Boulevard & Plummer Street (LOS F)

TABLE 2 – EXISTING (2018) CONDITIONS INTERSECTION LEVELS OF SERVICE

ID	N/S Street Name	E/W Street Name	Analyzed Period	Existing 2018 V/C	LOS
1	Lindley Avenue	Devonshire Street	PM	0.587	A
2	Zelzah Avenue	Lassen Street	PM	0.925	E
3	Lindley Avenue	Lassen Street	PM	0.669	B
4	Reseda Boulevard	Lassen Street	PM	1.329	F
5	Reseda Boulevard	Superior Street	PM	0.560	A
6	Reseda Boulevard	Plummer Street	PM	1.082	F
7	Lindley Avenue	Nordhoff Street	PM	0.880	D

3. TRAFFIC PROJECTIONS

PROJECT TRAFFIC

The development of trip generation estimates for the proposed Project involves the use of a 3-step process including trip generation, trip distribution, and traffic assignment. As discussed in Chapter 1, the proposed Project consists solely of upgrades to the existing Matador Field Ballpark. Germaine to this analysis, the upgrades include the installation of field lighting which will allow the addition of evening games to the current schedule which consists exclusively of early afternoon games. The proposed Project would not result in the generation of any new trips, but trips now occurring during the early afternoon will shift to the afternoon peak hour. The process utilized to develop estimates of that trip-making are described below.

Project Trip Generation

Current accepted trip generation methodologies, such as the Institute of Transportation Engineers (ITE) Trip Generation methodology, are primarily based on data collected at suburban, single-use, freestanding sites. *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) includes a rate for professional baseball stadiums (Land Use Code 462), but the rate is based on just two surveys conducted at a professional spring training baseball stadium in Arizona. The Project site is located on a university campus, and it is likely that a large proportion of spectators would come from within the university community as opposed to a professional baseball game which may draw regional attendees. A substantial number of CSUN ballpark spectators are likely to walk or bike to games from another campus location. Given the unique characteristics of a campus ballpark, trip generation estimates were prepared using data provided by CSUN staff about seating capacity, internal trip making by spectators already on campus prior to a game, and employee trips.

Internal trip credits can be defined as a reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site. These are trips usually made via walking within the site. Reflective of existing attendance patterns at afternoon games at the ballpark, a 30% internal credit was incorporated in the trip generation analysis.

Lastly, a credit was applied to account for spectator vehicle occupancy. A spectator may either drive alone (single occupancy) to the event or ride with others as part of a carpool (multiple occupancy). A spectator could also be dropped off or picked up. Due to the recreational nature of ballpark attendance, visitors arriving by car are more likely to carpool to the site than they are to their workplace or for shopping trips. Average Vehicle Occupancy (AVO) is defined as the number of people traveling by private passenger vehicles divided by the number of vehicles used, and it accounts for the total number of automobile trips rather than the total number of people arriving by car. AVO to sporting events may be as high as 3.0 on a weekend. To be conservative, it was assumed that the average vehicle occupancy of vehicles arriving to the ballpark was 2.0. A 50% AVO credit was applied to account for an AVO of 2.0.

As shown in Table 3, 350 automobile trips would shift from arriving during the early afternoon to arriving during the afternoon peak hour. Based on information provided by CSUN staff, all ballpark-related trips during that time period would be inbound trips.

PROJECT TRAFFIC DISTRIBUTION

The geographic distribution of trips generated by the proposed Project is dependent on characteristics of the street system serving the project site; the level of accessibility of routes to and from the proposed project site; locations of employment and commercial centers and residential areas from which spectators may be drawn. Considering those factors, a trip distribution pattern was developed for the Project. Figure 3 illustrates the Project's trip distribution pattern.

PROJECT TRAFFIC ASSIGNMENT

The traffic to be generated by the proposed Project was assigned to the street network using the distribution pattern described in Figure 3. Appendix A provides the assignment of the proposed Project-generated peak hour traffic volumes at the analyzed intersections during the afternoon peak hour. The assignment of traffic volumes took into consideration likely spectator parking locations.

PROJECT VEHICULAR ACCESS

The Project site has no dedicated driveway or parking facility. Angled street parking is located adjacent to the Project site on the east side of Lindley Avenue. Other parking facilities are located within a short distance, in Lot E6 accessible via Halsted Street or North University Drive, or at the Matadome, accessible via Zelzah Avenue near Plummer Street.

TABLE 3 – CSUN BALLPARK PROJECT TRIP GENERATION

Land Use	Credit	Estimated Car Trips
Matador Ballpark		1000 [a]
Less Internal Capture	30%	*(300.00)*
Vehicle Occupancy Factor	50%	*(350.00)*
Total Vehicle Trips		**350**

[a] Based on stadium seating capacity

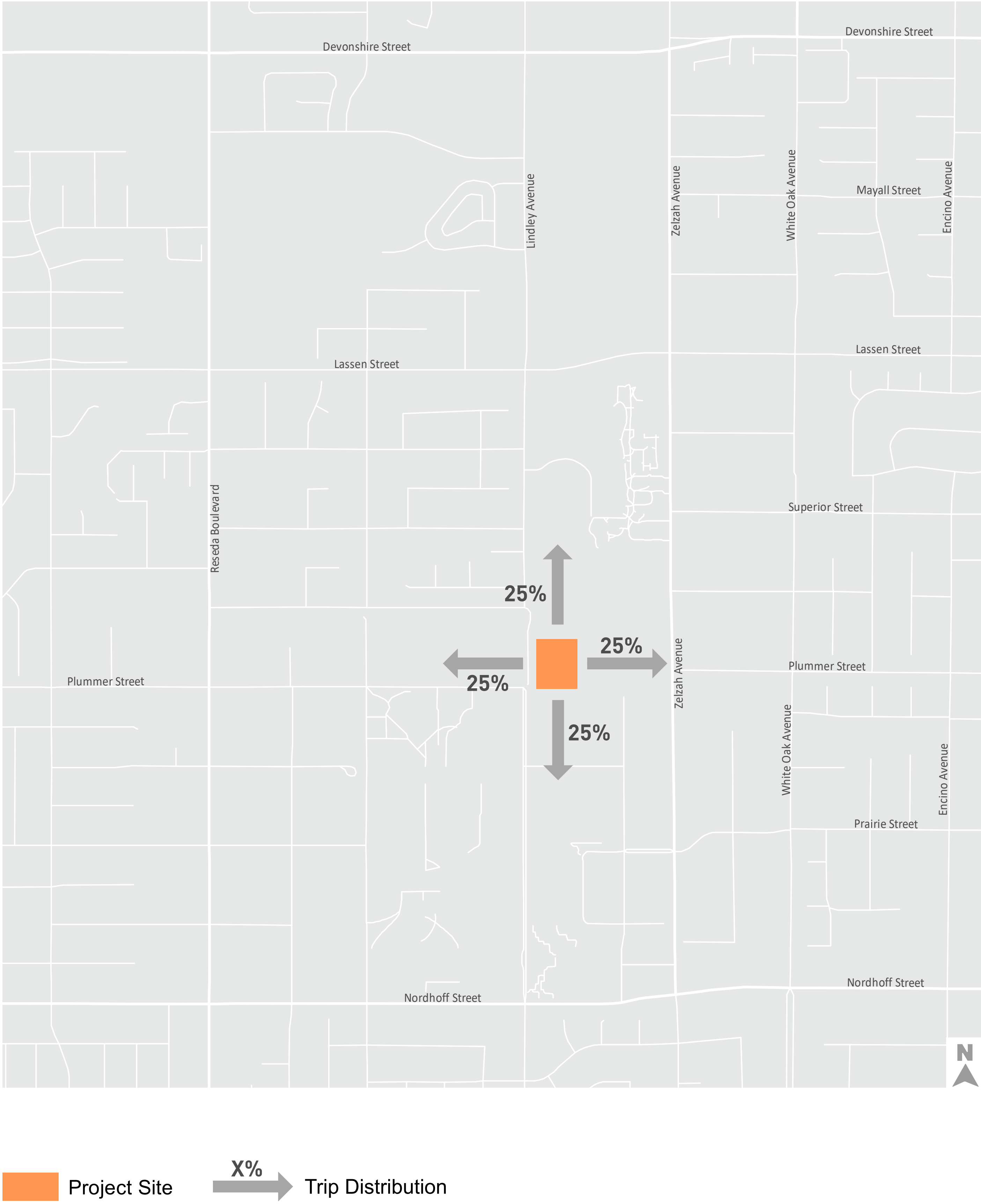


Figure 3

Trip Distribution

EXISTING PLUS PROJECT TRAFFIC CONDITIONS

The project traffic estimated and assigned to the study intersections was added to the existing traffic volumes to estimate Existing plus Project traffic volumes. Turning movement traffic volumes for the Existing plus Project scenario are provided in Appendix A. Analysis sheets are provided in Appendix C.

FUTURE YEAR 2021 TRAFFIC CONDITIONS

To evaluate the potential impacts of the proposed Project on Future (Year 2021) conditions, it was necessary to develop estimates of future traffic conditions in the area both without and with Project traffic. First, estimates of traffic growth were developed for the study area to forecast future conditions without the Project. These forecasts included traffic increases as a result of both regional ambient traffic growth and traffic generated by specific developments in the vicinity of the Project (Related Projects).

These projected traffic volumes, identified herein as the Future Base conditions, represent the future conditions without the proposed Project. The traffic generated by the proposed Project was then estimated and assigned to the surrounding street system. Project traffic was added to the Future Base conditions to form Future (year 2021) plus Project traffic conditions, which were analyzed to determine the incremental traffic impacts attributable to the Project itself. The assumptions and analysis methodology used to develop each of the future year scenarios discussed above are described in more detail in the following sections.

BACKGROUND OR AMBIENT GROWTH

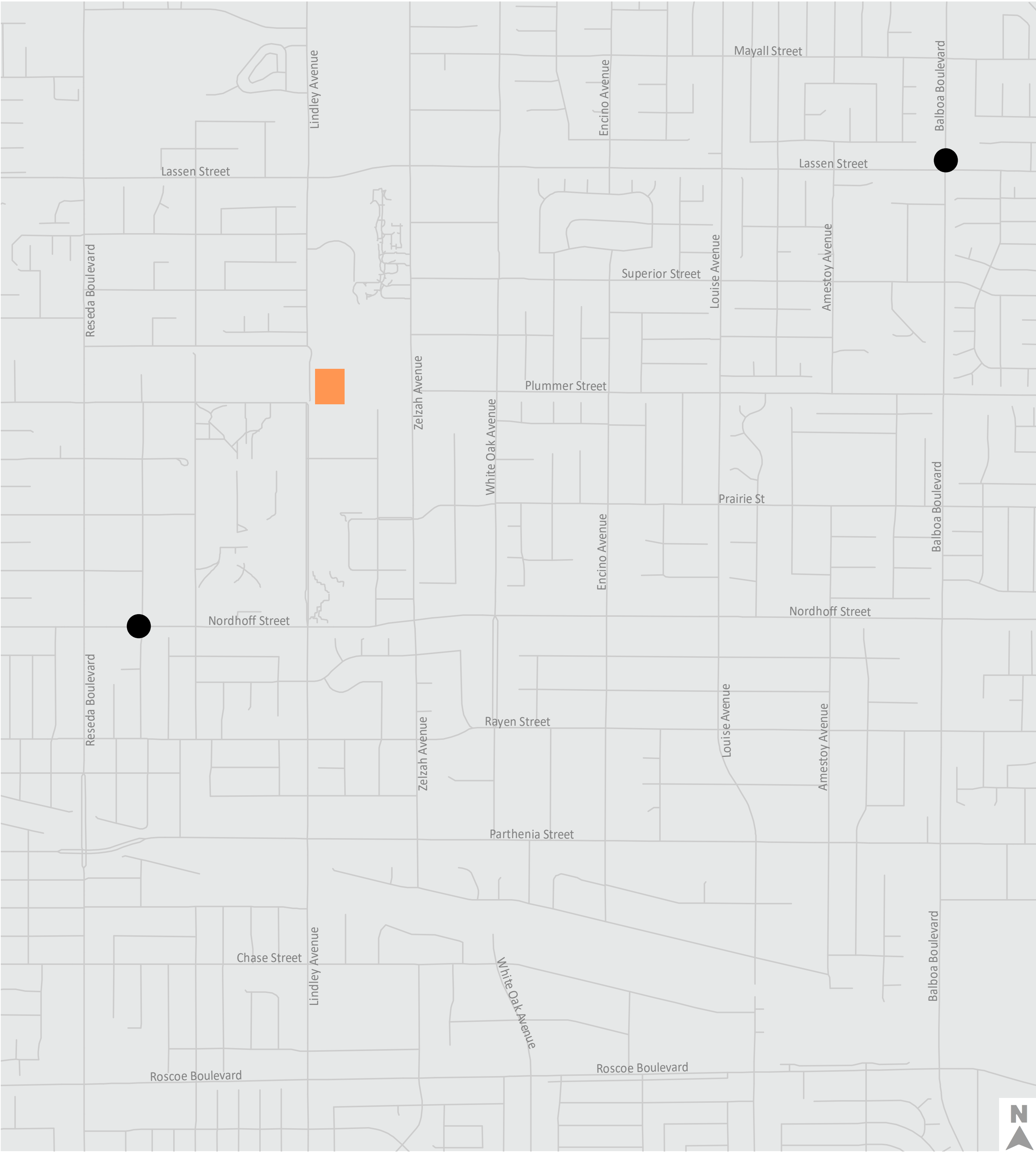
Based on historic trends and at the direction of LADOT, it was established that an ambient growth factor of 1% per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by year 2021. This adjustment was applied to the existing (year 2018) traffic volume data to reflect the effect of ambient growth by the year 2021.

RELATED PROJECT TRAFFIC GENERATION AND ASSIGNMENT

Future Base traffic forecasts include the effects of known specific projects, called related projects, expected to be implemented in the vicinity of the project site prior to the buildout date of the proposed Project. The list of related projects was prepared based on data from LADOT. A total of two cumulative projects were identified in the study area; these projects are listed in Table 4 and illustrated in Figure 4.

TABLE 4 – RELATED PROJECTS TRIP GENERATION ESTIMATES

Location	Land Use	Intensity	Units	Weekday			
				Daily Total	PM Peak Hour		
					Total	In	Out
City of Northridge							
18401 Nordhoff Street	Mixed Use			687	61	48	13
9900 Balboa Boulevard	Retail	2.2	KSF	850	88	44	44



Related Projects

Project Site

Figure 4

Related Projects

Trip Generation

Trip generation estimates for the related projects were provided by LADOT. Table 4 presents the resulting trip generation estimates for these related projects.

Trip Distribution

The geographic distribution of the traffic generated by the related projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which employees and potential patrons of proposed commercial developments may be drawn, the locations of employment and commercial centers to which residents of residential projects may be drawn, and the location of the projects in relation to the surrounding street system. Additionally, if the traffic study or environmental document for a related project was available, the trip distribution from that study was used.

Traffic Assignment

Using the estimated trip generation and trip distribution patterns described above, traffic generated by the related projects was assigned to the street network.

TRANSPORTATION INFRASTRUCTURE PROJECTS

There are no infrastructure changes in the study area planned for implementation by year 2021 per confirmation by city staff. Therefore, network changes were not included in the analysis.

FUTURE YEAR 2021 BASE TRAFFIC VOLUMES

Future year 2021 base weekday afternoon peak hour traffic volumes and lane geometries for the analyzed intersections are provided in Appendix A. The Future Base traffic conditions represent an estimate of future conditions without the proposed Project inclusive of the ambient background growth and related projects traffic.

FUTURE PLUS PROJECT TRAFFIC PROJECTIONS

The proposed Project traffic volumes were added to the year 2021 Future Base traffic projections, resulting in Future (year 2021) plus Project afternoon peak hour traffic volumes. As provided in Appendix A, the Future (year 2021) plus Project scenario presents future traffic conditions with the completion of the proposed Project.

4. INTERSECTION TRAFFIC IMPACT ANALYSIS

The traffic impact analysis evaluates the projected LOS at each study intersection under the Existing plus Project and Future (year 2021) plus Project conditions to estimate the incremental increase in the V/C ratio caused by the proposed Project. This provides the information needed to assess the potential impact of the Project using significance criteria established by LADOT.

CRITERIA FOR DETERMINATION OF SIGNIFICANT TRAFFIC IMPACT

The City of Los Angeles has established threshold criteria to determine significant traffic impact of a proposed project in its jurisdiction. Under the LADOT guidelines, an intersection would be significantly impacted with an increase in V/C ratio equal to or greater than 0.04 for intersections operating at LOS C, equal to or greater than 0.02 for intersections operating at LOS D, and equal to or greater than 0.01 for intersections operating at LOS E or F after the addition of project traffic. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in V/C ratio. The following summarizes the impact criteria:

LOS	Final V/C Ratio	Project-Related Increase in V/C
C	> 0.700 - 0.800	equal to or greater than 0.040
D	> 0.800 - 0.900	equal to or greater than 0.020
E or F	> 0.900	equal to or greater than 0.010

EXISTING PLUS PROJECT IMPACT ANALYSIS

EXISTING PLUS PROJECT TRAFFIC LEVEL OF SERVICE

The Existing plus Project traffic volumes presented in Appendix A were analyzed to determine the projected V/C ratios and LOS for each of the analyzed intersections under this scenario. Table 5 summarizes the Existing plus Project LOS. Analysis sheets are provided in Appendix C. As indicated in Table 5, four of the seven signalized intersections are projected to operate at LOS D or better during the afternoon peak hour. The following three signalized intersections are projected to operate at LOS E or worse during the afternoon peak hour:

2. Zelzah Avenue & Lassen Street (LOS E)

4. Reseda Boulevard & Lassen Street (LOS F)

6. Reseda Boulevard & Plummer Street (LOS F)

EXISTING PLUS PROJECT INTERSECTION IMPACTS

As shown in Table 5, after applying the aforementioned City of Los Angeles significant impact criteria, it is determined that the proposed Project would not result in significant impacts under Existing plus Project conditions at any of the study intersections.

TABLE 5
EXISTING (2018) PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Analyzed Periods	Existing 2018		E+P 2018		Project Increase	Significant
				V/C	LOS	V/C	LOS	In V/C	Impact
1	Lindley Avenue	Devonshire Street	PM	0.587	A	0.627	B	0.040	NO
2	Zelzah Avenue	Lassen Street	PM	0.925	E	0.925	E	0.000	NO
3	Lindley Avenue	Lassen Street	PM	0.669	B	0.690	B	0.021	NO
4	Reseda Boulevard	Lassen Street	PM	1.329	F	1.338	F	0.009	NO
5	Reseda Boulevard	Superior Street	PM	0.560	A	0.573	A	0.013	NO
6	Reseda Boulevard	Plummer Street	PM	1.082	F	1.090	F	0.008	NO
7	Lindley Avenue	Nordhoff Street	PM	0.880	D	0.883	D	0.003	NO

FUTURE PLUS PROJECT IMPACT ANALYSIS

FUTURE BASE TRAFFIC CONDITIONS

The year Future (2021) Base peak hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. Table 6 summarizes the future LOS. Three of the seven signalized intersections analyzed for impacts are projected to operate at LOS D or better during the morning and afternoon peak hours under Future Base conditions. The following four intersections are projected to operate at LOS E or worse during one or both of the peak hours under Future (2021) Base conditions:

2. Zelzah Avenue & Lassen Street (LOS E)
4. Reseda Boulevard & Lassen Street (LOS F)
6. Reseda Boulevard & Plummer Street (LOS F)
7. Nordhoff Street & Lindley Avenue (LOS E)

FUTURE PLUS PROJECT TRAFFIC CONDITIONS

The resulting Future (2021) plus Project peak hour traffic volumes, provided in Appendix A, were analyzed to determine the projected future operating conditions with the addition of the proposed project traffic. The results of the Future (2021) plus Project analysis are also presented in Table 6, with analysis sheets provided in Appendix C. Three of the seven signalized intersections analyzed for impacts are projected to operate at LOS D or better during the afternoon peak hour under Future (2021) plus Project conditions. The following four intersections are projected to operate at LOS E or worse during the peak hour under Future (2021) plus Project conditions:

2. Zelzah Avenue & Lassen Street (LOS E)
4. Reseda Boulevard & Lassen Street (LOS F)
6. Reseda Boulevard & Plummer Street (LOS F)
7. Nordhoff Street & Lindley Avenue (LOS E)

FUTURE (YEAR 2021) PLUS PROJECT INTERSECTION IMPACTS

As shown in Table 6, using the criteria for determination of significant impacts, it is determined that the proposed Project would not result in significant impacts under Future (year 2021) plus Project conditions at any of the study intersections.

TABLE 6
FUTURE (2021) PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

ID	N/S Street Name	E/W Street Name	Analyzed Periods	Future 2021		F+P 2021		Project Increase	Significant Impact
				V/C	LOS	V/C	LOS	In V/C	
1	Lindley Avenue	Devonshire Street	PM	0.607	B	0.647	B	0.040	NO
2	Zelzah Avenue	Lassen Street	PM	0.973	E	0.974	E	0.001	NO
3	Lindley Avenue	Lassen Street	PM	0.708	C	0.729	C	0.021	NO
4	Reseda Boulevard	Lassen Street	PM	1.403	F	1.411	F	0.008	NO
5	Reseda Boulevard	Superior Street	PM	0.584	A	0.597	A	0.013	NO
6	Reseda Boulevard	Plummer Street	PM	1.125	F	1.133	F	0.008	NO
7	Lindley Avenue	Nordhoff Street	PM	0.913	E	0.917	E	0.004	NO

5. CONSTRUCTION PERIOD IMPACT ANALYSIS

CONSTRUCTION IMPACT CRITERIA

LADOT generally considers construction-related traffic to cause adverse but not significant impacts because, while sometimes inconvenient, construction-related traffic effects are temporary. LADOT requires implementation of worksite traffic control plans to ensure that any construction-related effects are minimized to the greatest extent possible.

The LA CEQA Thresholds Guide provides four categories to be considered in regards to in-street construction impacts: temporary traffic impacts, temporary loss of access, temporary loss of bus stops or rerouting of bus lines, and temporary loss of on-street parking (LA CEQA Threshold Guide, pages L.8-2 through L.8-4). The factors to be considered in each of these categories as established in the LA CEQA Threshold Guide are as follows:

- Temporary Traffic Impacts:
    - The length of time of temporary street closures or closures of two or more traffic lanes;
    - The classification of the street (major arterial, state highway) affected;
    - The existing traffic levels and LOS on the affected street segments and intersections;
    - Whether the affected street directly leads to a freeway on- or off-ramp or other state highway;
    - Potential safety issues involved with street or lane closures;
    - The presence of emergency services (fire, hospital, etc.) located nearby that regularly use the affected street.
- Temporary Loss of Access:
    - The length of time of any loss of vehicular or pedestrian access to a parcel fronting the construction area;
    - The availability of alternative vehicular or pedestrian access within ¼ mile of the lost access;
    - The type of land uses affected, and related safety, convenience, and/or economic issues.
- Temporary Loss of Bus Stops or Rerouting of Bus Lines:
    - The length of time that an existing bus stop would be unavailable or that existing service would be interrupted;
    - The availability of a nearby location (within ¼ mile) to which the bus stop or route can be temporarily relocated;
    - The existence of other bus stops or routes with similar routes/destinations within a ¼mile radius of the affected stops or routes;
    - Whether the interruption would occur on a weekday, weekend or holiday, and whether the existing bus route typically provides service that/those day(s).
- Temporary Loss of On-Street Parking:
    - The current utilization of existing on-street parking;
    - The availability of alternative parking locations or public transit options (e.g. bus, train) within ¼ mile of the project site;
    - The length of time that existing parking spaces would be unavailable.

The LAMC provides that construction activities are limited to the hours from 7:00 AM to 9:00 PM on weekdays and from 8:00 AM to 6:00 PM on Saturdays and holidays. No construction is permitted on Sundays.

CONSTRUCTION TRAFFIC

Construction of the Project is anticipated to begin in June 2019, with completion and opening of the Project by February 2021. It will be constructed in three phases:

- Phase I – Batting Cage Removal (June 2019)
- Phase II – Field Lighting Installation (June 2019)
- Phase III – Team Facilities and Batting Cage Construction (December 2019 – February 2021)

The total duration of construction at the site is expected to take a total of approximately 20 months, or just over 1.5 years, to complete.

CONSTRUCTION TRUCKS

Haul Trucks

No hauling activity is expected to occur. All soil will be balanced on-site without substantial grading or excavation.

Equipment and Delivery Trucks

No delivery/equipment trucks are expected to be needed during Phase I. During Phases II and III, there may be up to 3 equipment/delivery trucks per day on peak activity days. Materials to be delivered include lighting equipment for Phase II and fencing and batting cage machinery for Phase III.

CONSTRUCTION EMPLOYEES

Construction will require approximately 10 workers per peak day during all phases of the project.

CONSTRUCTION WORKER PARKING

The Project is not expected to feature significant construction worker parking needs. The location of construction worker parking is yet to be determined.

CONSTRUCTION IMPACT ASSESSMENT

The *LA CEQA Thresholds Guide* provides four categories to be considered in regard to in-street construction impacts: temporary traffic impacts, temporary loss of access, temporary loss of bus stops or rerouting of bus lines, and temporary loss of on-street parking (*LA CEQA Threshold Guide*, pages L.8-2 through L.8-4).

The project site is entirely within the CSUN campus, and all construction activity would be contained within the CSUN campus. The proposed project is not located in immediate proximity to any existing campus vehicular access points. No street, lane, or sidewalk closures within the Los Angeles Department of Transportation (LADOT) right-of-way are expected as part of the proposed project. Construction staging would be contained on the project site and any temporary loss of access would occur entirely within the CSUN campus. Since the project construction would not block any vehicle or pedestrian access to the nearby neighborhood or the rest of the CSUN campus, potential hazards or inadequate emergency access associated with construction activities would be less than significant.

6. SUMMARY AND CONCLUSIONS

This study was undertaken to analyze the potential traffic impacts of the proposed upgrades to the existing CSUN Matador Field Ballpark, including installation of field lighting which would allow evening games where the team is currently limited to early afternoon games. The following summarizes the results of this analysis:

No additional changes are planned for the ballpark. Visitors to the ballpark may park in any eligible CSUN facility. Convenient parking is located in angled spaces on the east side of Lindley Avenue adjacent to the ballpark, in Lot E6 located between Halsted Street and North University Drive, and in the Matadome parking lot, accessible from Zelzah Avenue.

New field lighting includes installation of a new 8-pole, high-efficiency LED field lighting system with two light poles on each of the four sides of the ballpark. The field lighting would provide light levels of 100 foot-candles on the infield and 70 foot-candles on the outfield, meeting the lighting requirements for both NCAA Regional and National broadcasts for baseball. Due to the existing lack of field lighting, Matador games are limited to early afternoons, with game commencements occurring by 3:00 PM at the latest. After installation of the proposed field lighting, games can also commence in the evening between 3:00 and 7:00 PM. This Project as analyzed in this study involves the shift in games from the early afternoon to also include games in the evening. Due to the fact that visitor seating is not being improved or expanded in any way, the proposed Project is assumed to generate no new trips.

- The proposed Project is at the CSUN Matador Field ballpark, located on Lindley Avenue on the north side of the CSUN campus.
- The Project entails replacement of CSUN Matador baseball team facilities, replacement of the batting cage facility, and new ballpark field lighting. The field lighting will allow for evening games where currently the team is limited to early afternoon games.
- The Project is not trip generating.
- The project will result in 350 vehicle trips currently being made to the ballpark outside of a peak hour to occur during the afternoon peak hour.
- The LOS analysis for the existing plus project scenario determined that the Project would not result in significant impacts at any study area intersections.
- The LOS analysis for the Future plus Project scenario determined that the Project would not result in significant impacts at any study area intersections. Impacts related to construction traffic were found to be less than significant.

REFERENCES

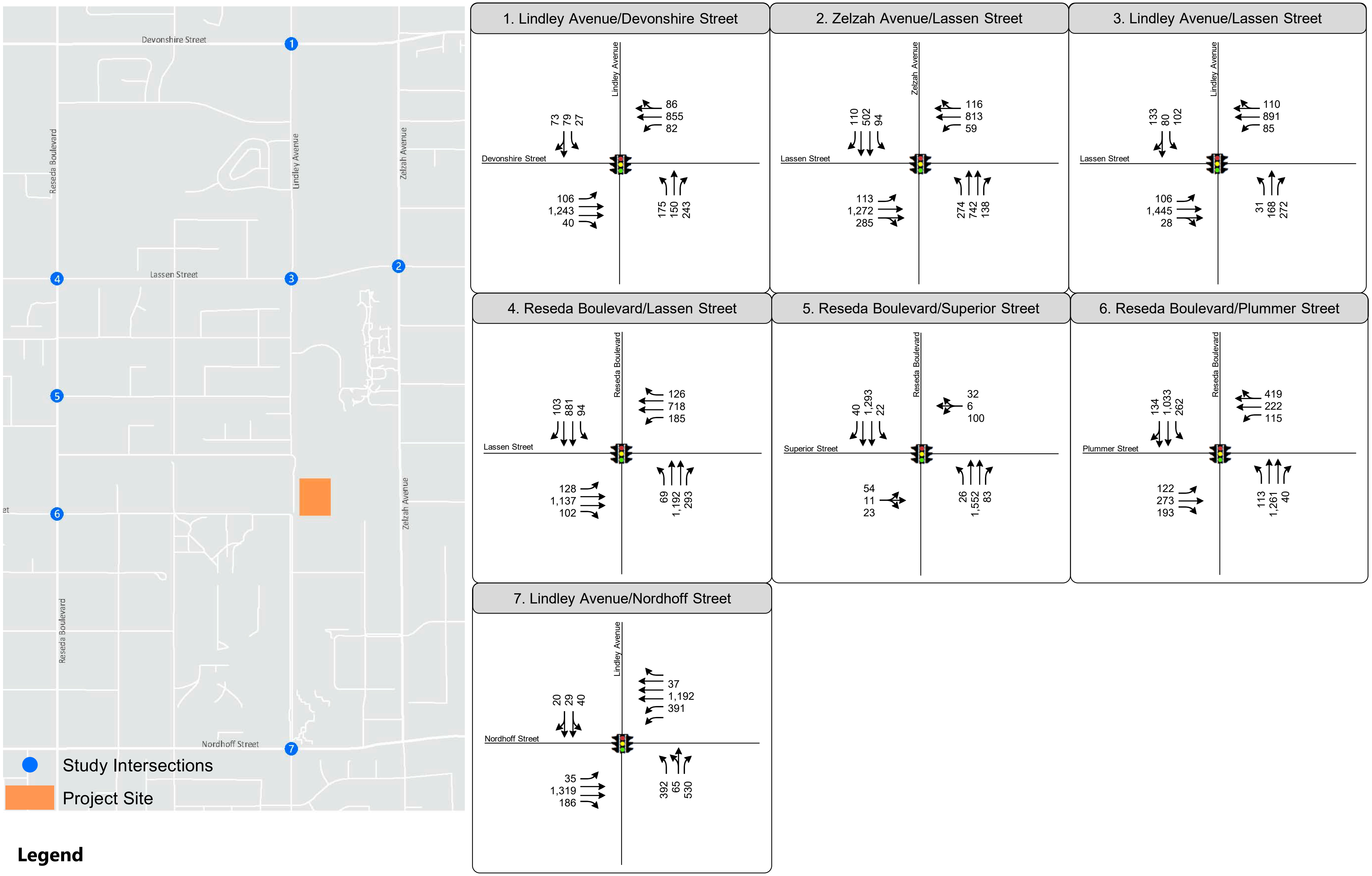
2010 Highway Capacity Manual, Transportation Research Board, 2010.

Traffic Study Policies and Procedures, LADOT, August 2014.

Trip Generation, 10th Edition, ITE, 2017.

APPENDIX A:

LANE CONFIGURATIONS AND TRAFFIC VOLUMES



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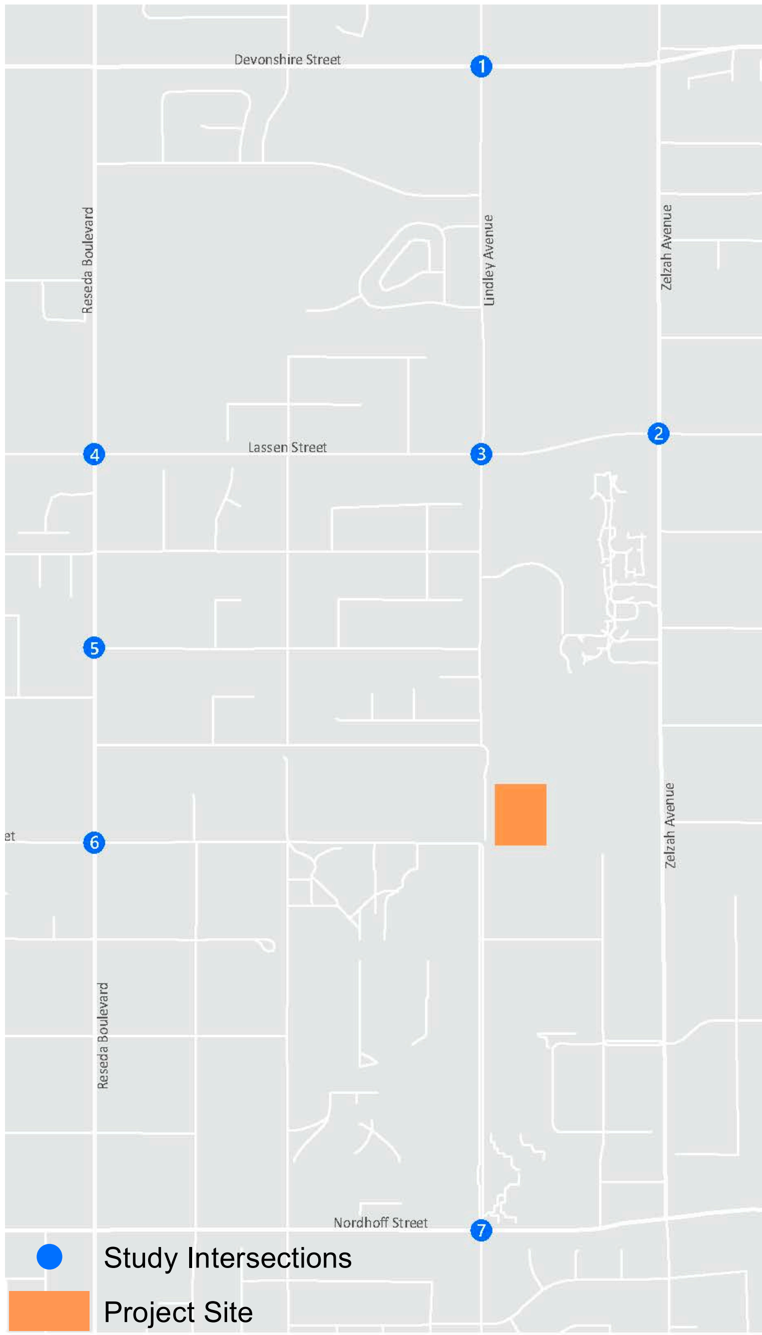
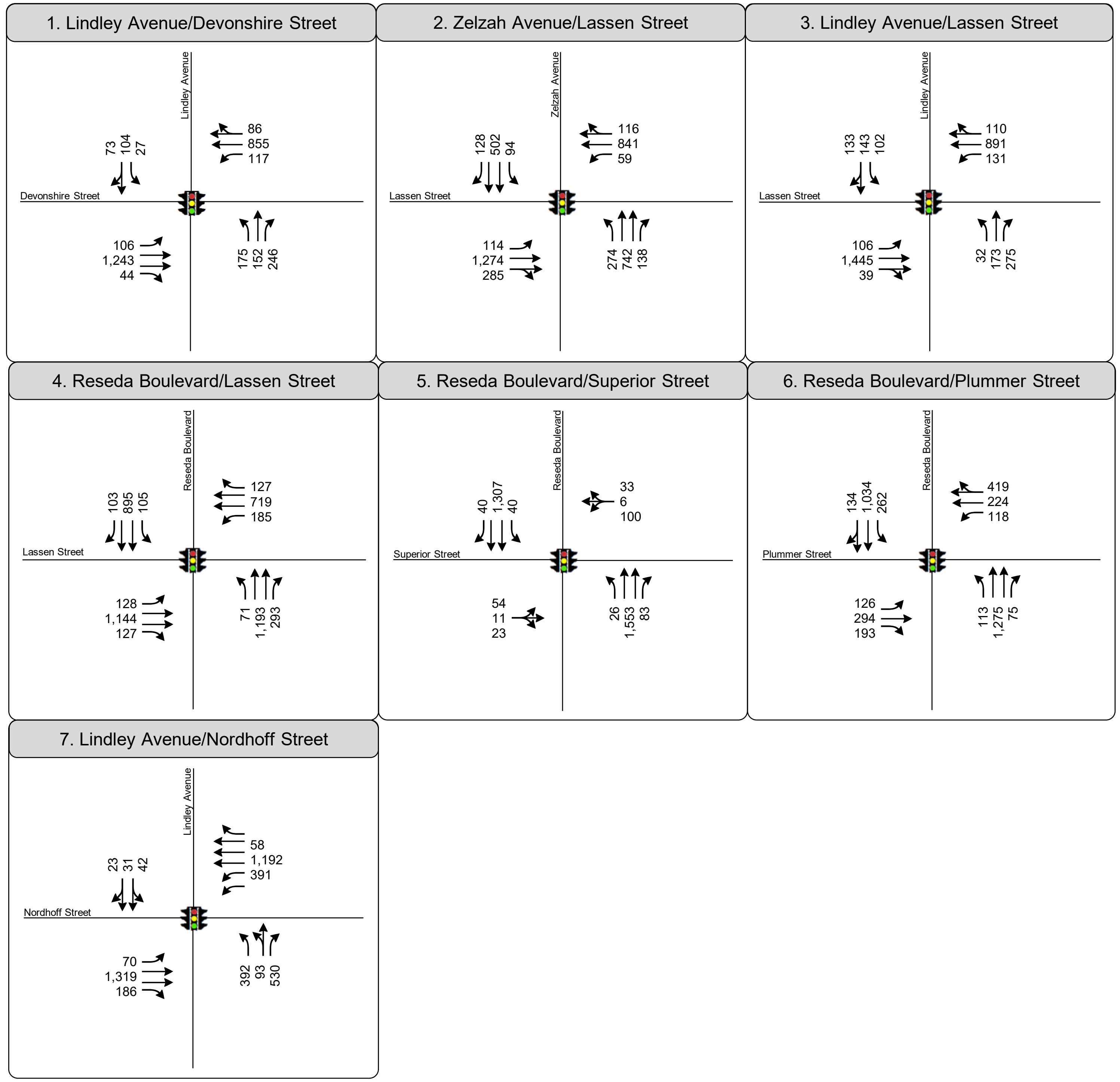
PM Peak Hour Volumes

Appendix A - 1

Peak Hour Traffic Volumes and Lane Configurations

Existing Volumes - PM Peak Hour





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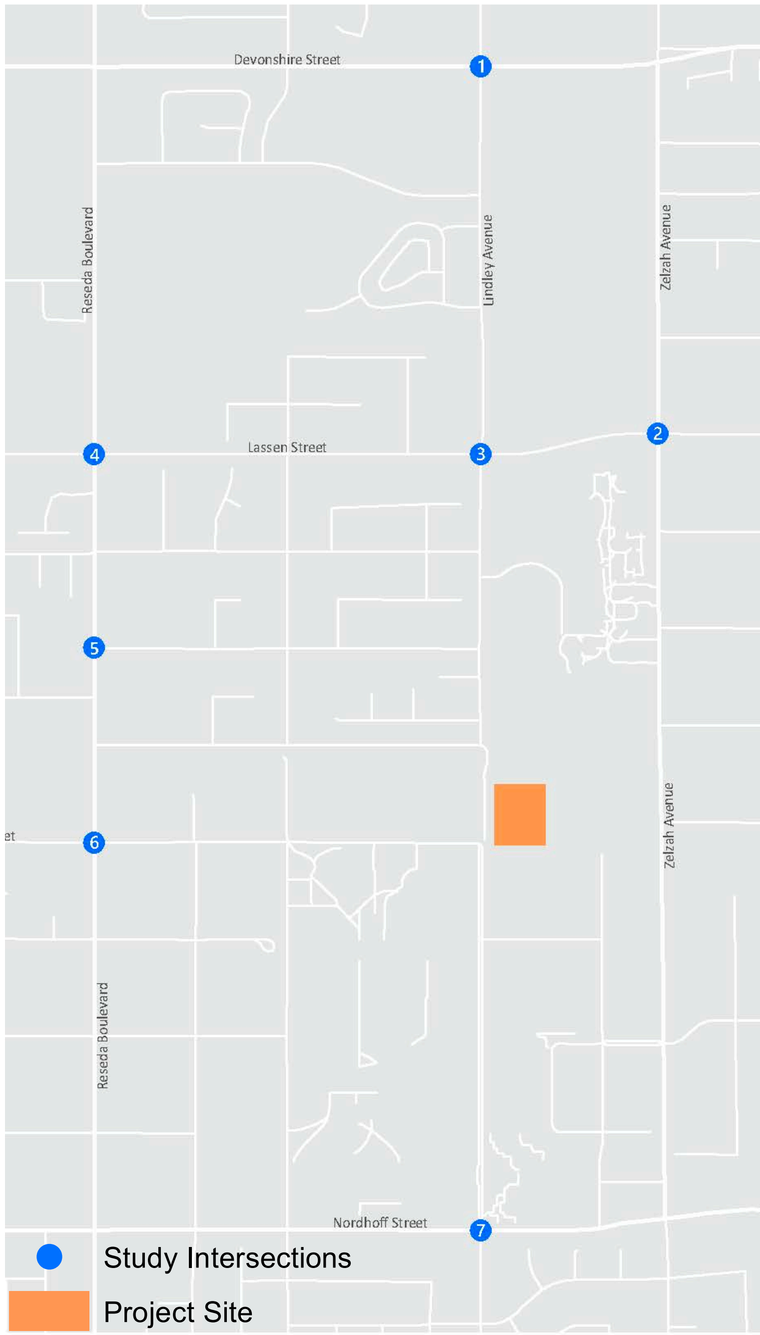
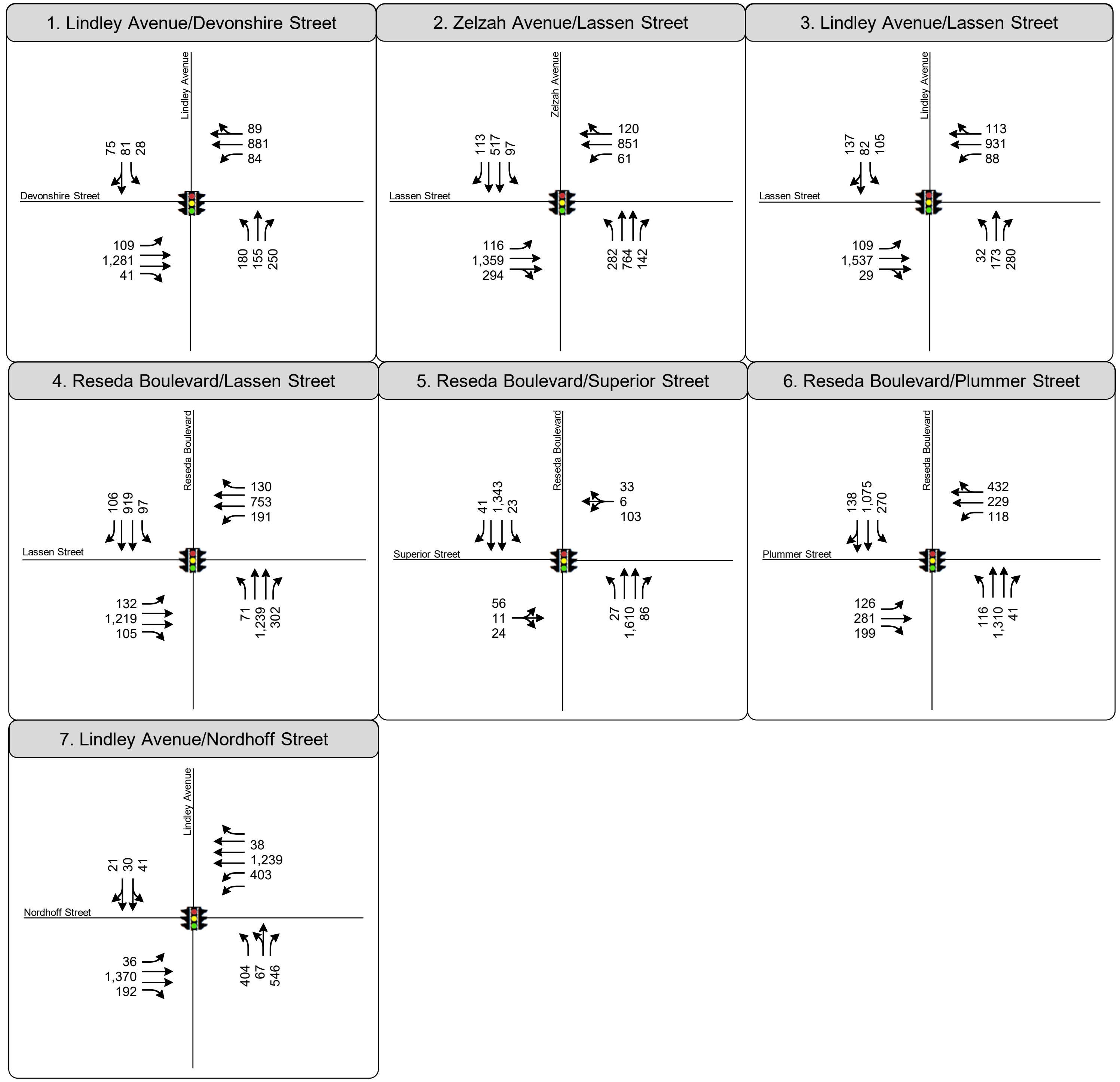
PM Peak Hour Volumes

Appendix A - 2

Peak Hour Traffic Volumes and Lane Configurations

Existing Plus Project Volumes - PM Peak Hour





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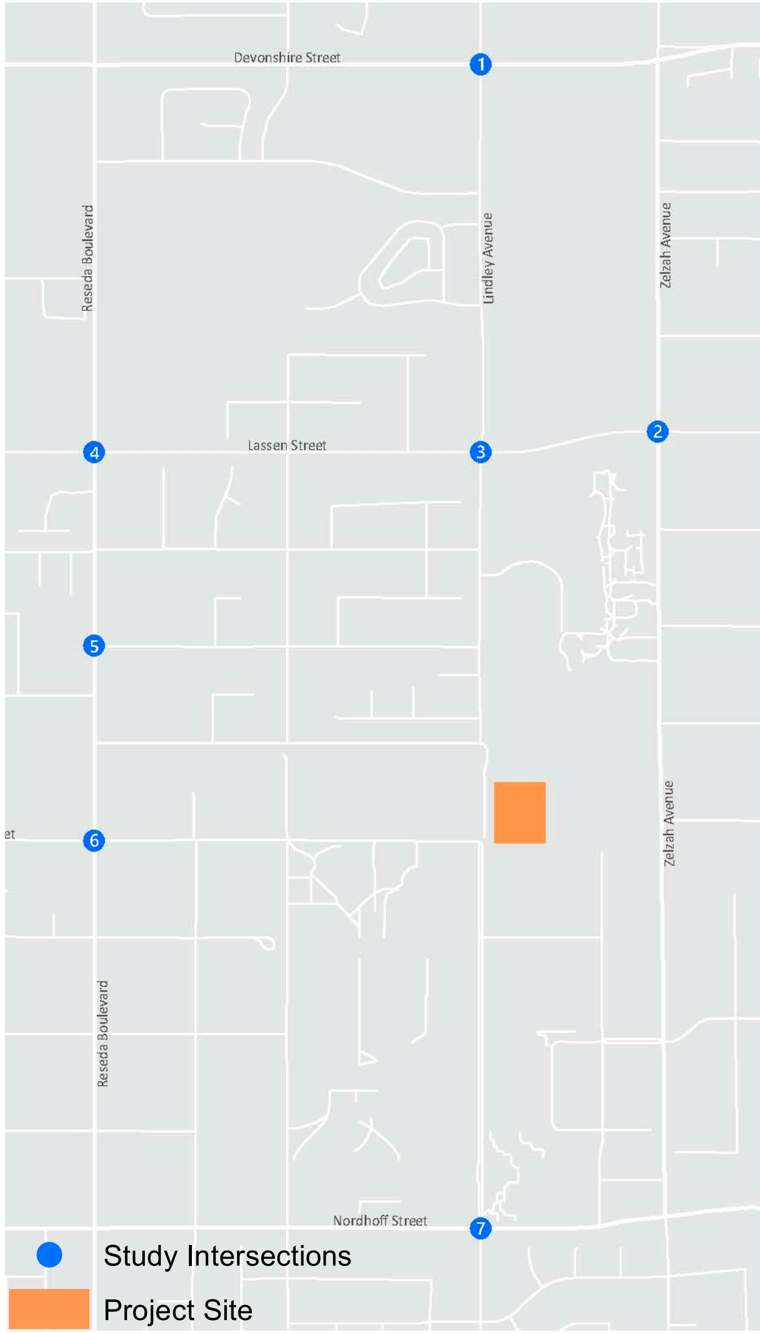
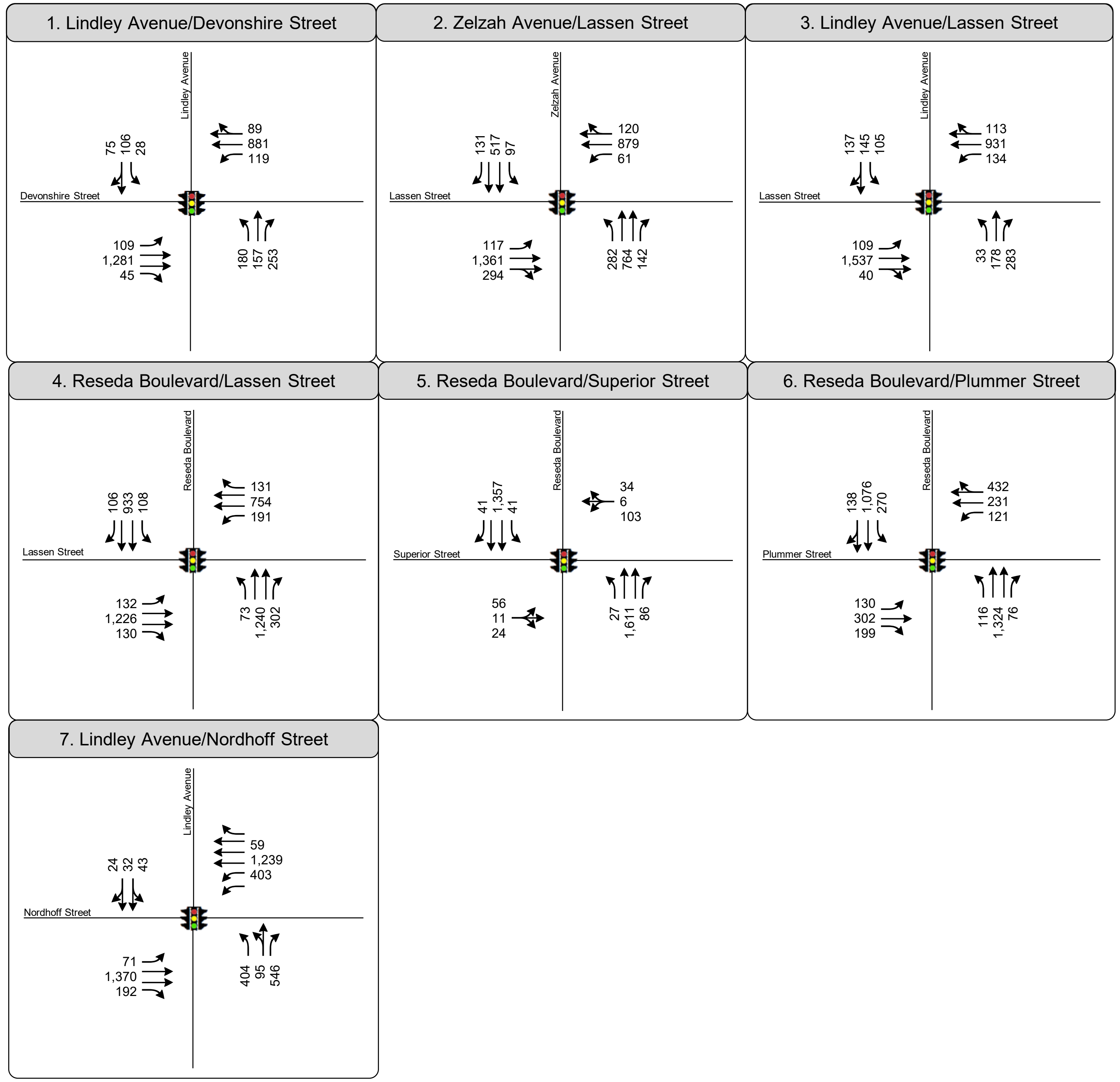
PM Peak Hour Volumes

Appendix A - 3

Peak Hour Traffic Volumes and Lane Configurations

Cumulative Volumes - PM Peak Hour





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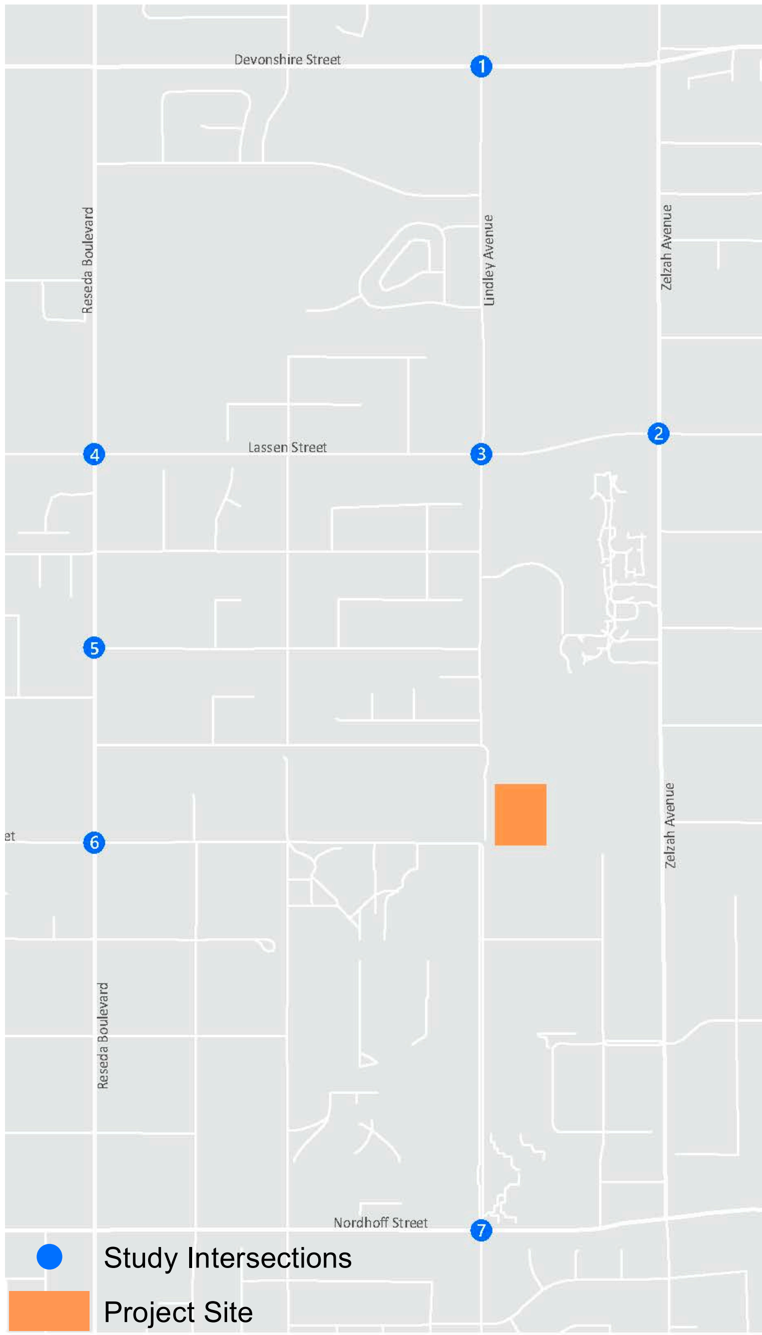
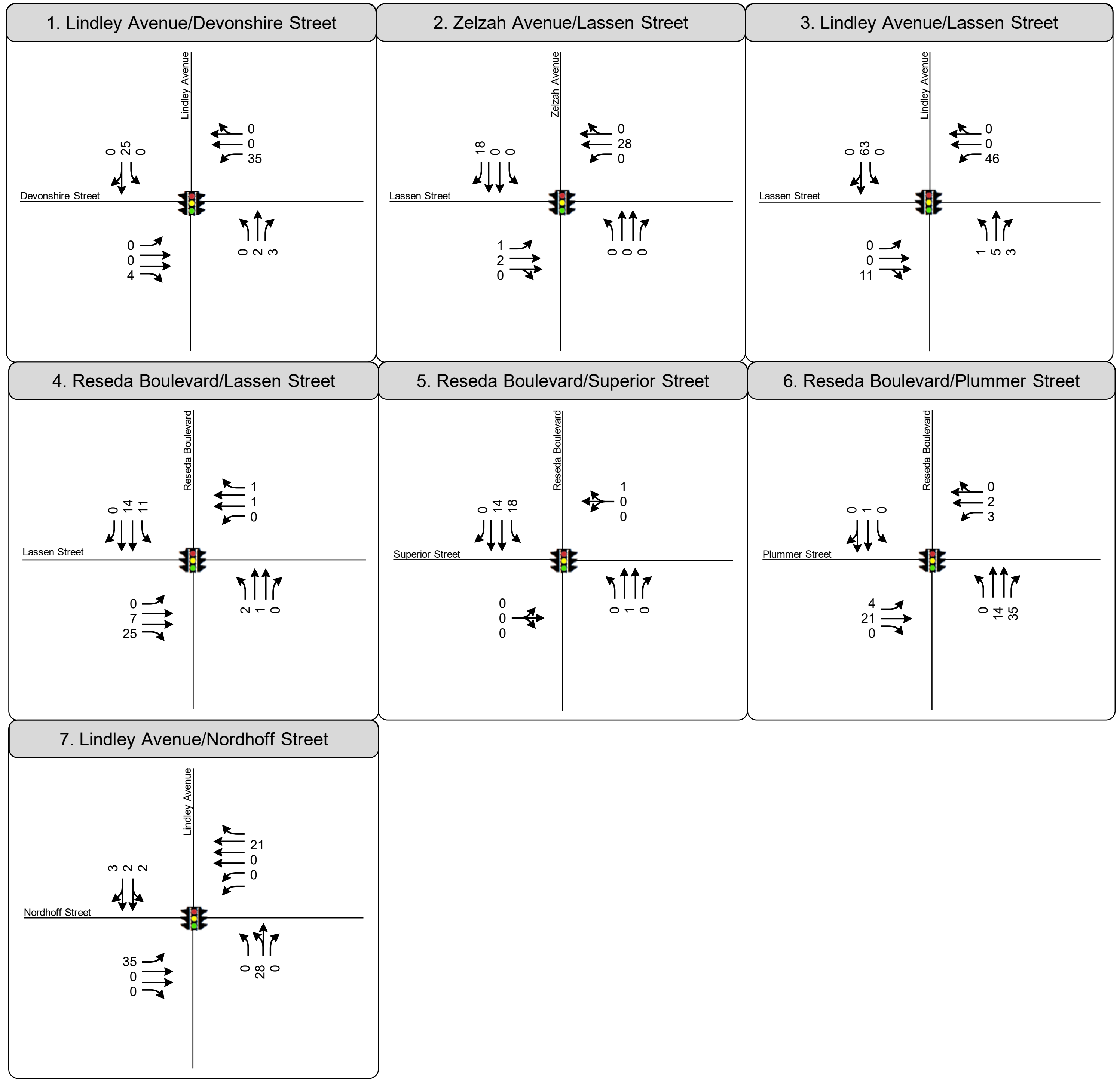
PM Peak Hour Volumes

Appendix A - 4

Peak Hour Traffic Volumes and Lane Configurations

Cumulative Plus Project Volumes - PM Peak Hour





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PM Peak Hour Volumes

Appendix A - 5

Peak Hour Traffic Volumes and Lane Configurations

Project Only Volumes - PM Peak Hour

APPENDIX B:
COUNT SHEETS

Prepared by National Data & Surveying Services

Lindley Ave & Devonshire St

Peak Hour Turning Movement Count

ID: 18-05691-001
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

Lindley Ave — SOUTHBOUND

	U-turn	Right	Thru	Left	Departing
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	73	79	27	0	342
Lanes	0	1	1	0	

Devonshire St — EASTBOUND

	AM	NOON	PM	Lanes
Departing	0	0	1104	
U-turn	0	0	1	0
Left	0	0	106	1
Thru	0	0	1243	3
Right	0	0	40	0

Devonshire St — WESTBOUND

	PM	NOON	AM	Lanes
Left	86	0	0	0
Thru	855	0	0	3
Right	82	0	0	1
U-turn	0	0	0	0
Departing	1513	0	0	

Lindley Ave — NORTHBOUND

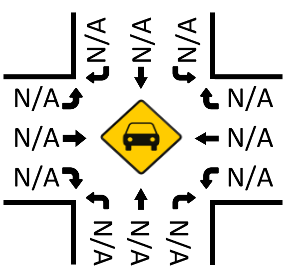
	Departing	U-turn	Left	Thru	Right
PM	201	0	175	150	243
NOON	0	0	0	0	0
AM	0	0	0	0	0
Lanes		0	1	1	1

CONTROL

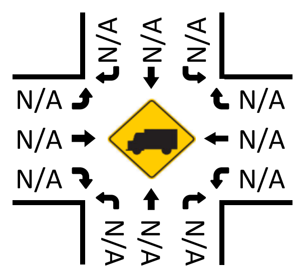
Signalized

	AM	NOON	PM
TEV	0	0	3160
PHF			0.93

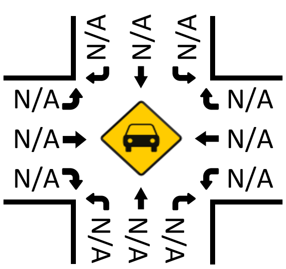
Cars (AM)



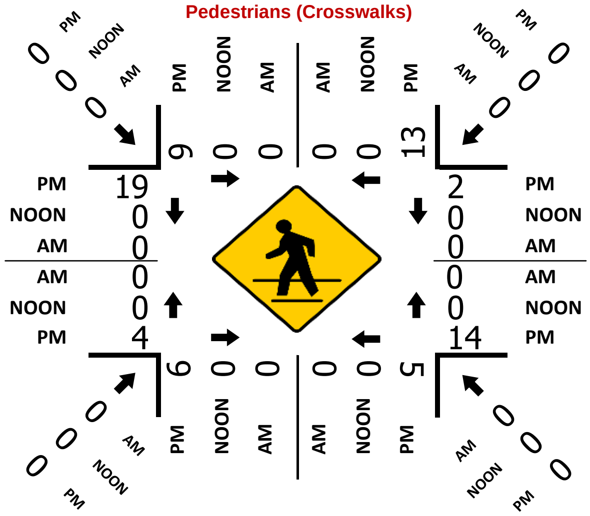
HT (AM)



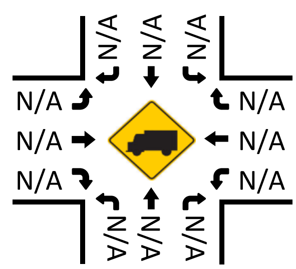
Cars (NOON)



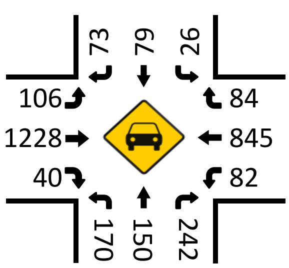
Pedestrians (Crosswalks)



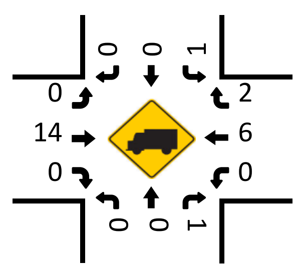
HT (NOON)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Zelzah Ave & Lassen St

Peak Hour Turning Movement Count

ID: 18-05691-002
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

Zelzah Ave — SOUTHBOUND

	Right	Through	Left	U-Turn	Exiting
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	110	502	94	0	971
(red)	0	3	1	0	

Lassen St — EASTBOUND

	AM	NOON	PM	(red)
Exiting	0	0	1197	
U-Turn	0	0	0	0
Left	0	0	113	1
Through	0	0	1272	2
Right	0	0	285	0

Lassen St — WESTBOUND

	PM	NOON	AM	(red)
Right	116	0	0	0
Through	813	0	0	2
Left	59	0	0	1
U-Turn	1	0	0	0
Exiting	1505	0	0	

Zelzah Ave — NORTHBOUND

	Exiting	U-Turn	Left	Through	Right
(red)		0	1	2	1
PM	847	1	274	742	138
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	0	0	4520
PHF			0.96

Cars (AM)

All movements: N/A

HT (AM)

All movements: N/A

Cars (NOON)

All movements: N/A

HT (NOON)

All movements: N/A

Cars (PM)

Approach	Left / U	Through	Right
Southbound	93	498	110
Eastbound	113	1254	284
Westbound	58	812	115
Northbound	272	739	138

HT (PM)

Approach	Left / U	Through	Right
Southbound	1	3	0
Eastbound	0	18	1
Westbound	1	1	1
Northbound	2	2	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west half)	0	0	26
North leg (east half)	0	0	4
West leg (north half)	0	0	11
West leg (south half)	0	0	12
East leg (north half)	0	0	13
East leg (south half)	0	0	8
South leg (west half)	0	0	29
South leg (east half)	0	0	15
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Lindley Ave & Lassen St

Peak Hour Turning Movement Count

ID: 18-05691-003
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

Lindley Ave — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departure
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	133	80	102	0	384
Lanes	0	1	1	0	

Lassen St — EASTBOUND

	AM	NOON	PM	Lanes
Departure	0	0	1055	
U-Turn	0	0	0	0
Left	0	0	106	1
Thru	0	0	1445	2
Right	0	0	28	0

Lassen St — WESTBOUND

	PM	NOON	AM	Lanes
Right	110	0	0	0
Thru	891	0	0	2
Left	85	0	0	1
U-Turn	1	0	0	0
Departure	1820	0	0	

Lindley Ave — NORTHBOUND

	Departure	U-Turn	Left	Thru	Right
Lanes		0	1	1	1
PM	193	0	31	168	272
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	0	0	3452
PHF			0.99

Cars (AM)

All movements: N/A

Cars (NOON)

All movements: N/A

Cars (PM)

Approach	Left	Thru	Right
Southbound	101	71	133
Eastbound	100	1432	28
Westbound	85	891	106
Northbound	31	159	270

HT (AM)

All movements: N/A

HT (NOON)

All movements: N/A

HT (PM)

Approach	Left	Thru	Right
Southbound	1	9	0
Eastbound	1	13	0
Westbound	0	0	4
Northbound	0	9	2

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg, west side	0	0	1
North leg, east side	0	0	5
West leg, north side	0	0	6
West leg, south side	0	0	12
East leg, north side	0	0	24
East leg, south side	0	0	36
South leg, west side	0	0	7
South leg, east side	0	0	10
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Reseda Blvd & Lassen St

Peak Hour Turning Movement Count

ID: 18-05691-004
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	03:00 PM - 06:00 PM

Reseda Blvd — SOUTHBOUND

	Right	Through	Left	U-Turn	Total
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	103	881	94	0	1446
Red count	0	3	1	0	

Lassen St — WESTBOUND

Movement	PM	NOON	AM	Red count
Right	126	0	0	0
Through	718	0	0	2
Left	185	0	0	1
U-Turn	0	0	0	0
Total	1524	0	0	

Lassen St — EASTBOUND

Movement	AM	NOON	PM	Red count
Total	0	0	890	
U-Turn	0	0	0	0
Left	0	0	128	1
Through	0	0	1137	2
Right	0	0	102	0

Reseda Blvd — NORTHBOUND

	Total	U-Turn	Left	Through	Right
Red count		0	1	3	0
PM	1168	0	69	1192	293
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL: Signalized

	AM	NOON	PM
TEV	0	0	5028
PHF			0.98

Cars (AM)

All movements: N/A

Cars (NOON)

All movements: N/A

Cars (PM)

Approach	Left	Through	Right
Southbound	94	873	102
Eastbound	127	1124	102
Westbound	185	718	126
Northbound	69	118.	286

HT (AM)

All movements: N/A

HT (NOON)

All movements: N/A

HT (PM)

Approach	Left	Through	Right
Southbound	0	3	0
Eastbound	1	13	0
Westbound	0	0	0
Northbound	0	6	2

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North (west half)	0	0	1
North (east half)	0	0	1
West (north half)	0	0	2
West (south half)	0	0	13
East (north half)	0	0	4
East (south half)	0	0	5
South (west half)	0	0	7
South (east half)	0	0	2

Prepared by National Data & Surveying Services

Reseda Blvd & Superior St

Peak Hour Turning Movement Count

ID: 18-05691-005
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	03:00 PM - 04:00 PM	03:00 PM - 06:00 PM

Reseda Blvd – SOUTHBOUND

	Right	Through	Left	U-Turn	Departing
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	40	1293	22	2	1640
Bikes	0	3	1	0	

Superior St – EASTBOUND

	AM	NOON	PM	Bikes
Departing	0	0	72	
U-Turn	0	0	0	0
Left	0	0	54	0
Through	0	0	11	1
Right	0	0	23	0

Superior St – WESTBOUND

	Bikes	PM	NOON	AM
Right	0	32	0	0
Through	1	6	0	0
Left	0	100	0	0
U-Turn	0	0	0	0
Departing		116	0	0

Reseda Blvd – NORTHBOUND

	Departing	U-Turn	Left	Through	Right
Bikes		0	1	3	0
PM	1418	2	26	1552	83
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL: Signalized

	AM	NOON	PM
TEV	0	0	3246
PHF			0.96

Cars (AM)

All movements: N/A

HT (AM)

All movements: N/A

Cars (NOON)

All movements: N/A

HT (NOON)

All movements: N/A

Cars (PM)

	Right	Through	Left
Southbound	40	1269	22
Eastbound	23	11	54
Westbound	32	6	98
Northbound	83	152	26

HT (PM)

	Right	Through	Left
Southbound	0	19	0
Eastbound	0	0	0
Westbound	0	0	2
Northbound	0	23	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	5
North	Westbound	0	0	1
West	Southbound	0	0	7
West	Northbound	0	0	5
East	Southbound	0	0	6
East	Northbound	0	0	5
South	Eastbound	0	0	5
South	Westbound	0	0	3
Diagonal NW		0	0	0
Diagonal NE		0	0	0
Diagonal SW		0	0	0
Diagonal SE		0	0	0

Prepared by National Data & Surveying Services

Reseda Blvd & Plummer St

Peak Hour Turning Movement Count

ID: 18-05691-006
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	03:15 PM - 04:15 PM	03:00 PM - 06:00 PM

Reseda Blvd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Exit
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	134	1033	262	2	1804
	0	3	1	0	

Plummer St — EASTBOUND

	AM	NOON	PM	
Exit	0	0	469	
U-Turn	0	0	0	0
Left	0	0	122	1
Thru	0	0	273	1
Right	0	0	193	1

Plummer St — WESTBOUND

		PM	NOON	AM
Right	0	419	0	0
Thru	2	222	0	0
Left	1	115	0	0
U-Turn	0	0	0	0
Exit		575	0	0

Reseda Blvd — NORTHBOUND

	Exit	U-Turn	Left	Thru	Right
		0	1	2	1
PM	1342	1	113	1261	40
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	0	0	4190
PHF			0.96

Cars (AM)

	SB	EB	WB	NB
Right / Left / Thru	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

Cars (NOON)

	SB	EB	WB	NB
All movements	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

Cars (PM)

	Left	Thru	Right
SB	262	1014	131
EB	120	272	185
WB	115	220	418
NB	111	123	38

HT (AM)

	SB	EB	WB	NB
All movements	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

HT (NOON)

	SB	EB	WB	NB
All movements	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A	N/A N/A N/A

HT (PM)

	Left	Thru	Right
SB	0	14	3
EB	2	1	7
WB	0	2	1
NB	0	20	2

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North (westward)	0	0	18
North (eastward)	0	0	28
West (southward)	0	0	24
West (northward)	0	0	27
East (southward)	0	0	28
East (northward)	0	0	43
South (westward)	0	0	33
South (eastward)	0	0	44
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

Prepared by National Data & Surveying Services

Lindley Ave/University Dr & Nordhoff St/Frontage Rd

Peak Hour Turning Movement Count

ID: 18-05691-007
City: Northridge

Day: Tuesday
Date: 10/16/2018

	PEAK HOURS	COUNT PERIODS
AM	NONE	NONE
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	03:00 PM - 06:00 PM

Lindley Ave/University Dr — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departure (Total)
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	20	29	40	0	137
HT %	0	2	0	0	

Nordhoff St/Frontage Rd — EASTBOUND

Movement	AM	NOON	PM	HT %
Departure	0	0	1604	
U-Turn	0	0	0	0
Left	0	0	35	1
Thru	0	0	1319	3
Right	0	0	186	0

Nordhoff St/Frontage Rd — WESTBOUND

Movement	PM	NOON	AM	HT %
Right	37	0	0	1
Thru	1192	0	0	3
Left	391	0	0	2
U-Turn	0	0	0	0
Departure	1889	0	0	

Lindley Ave/University Dr — NORTHBOUND

	Departure	U-Turn	Left	Thru	Right
HT %		0	1.5	0.5	1
PM	606	0	392	65	530
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	0	0	4236
PHF			0.98

Cars (AM)

All movements: N/A

Cars (NOON)

All movements: N/A

Cars (PM)

Approach	Left	Thru	Right
Southbound	38	29	20
Eastbound	35	1305	185
Westbound	386	1180	37
Northbound	389	65	524

HT (AM)

All movements: N/A

HT (NOON)

All movements: N/A

HT (PM)

Approach	Left	Thru	Right
Southbound	2	0	0
Eastbound	0	5	1
Westbound	3	7	0
Northbound	3	0	6

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North leg	→ (eastbound)	0	0	8
North leg	← (westbound)	0	0	4
West leg	↓ (southbound)	0	0	1
West leg	↑ (northbound)	0	0	0
East leg	↓ (southbound)	0	0	136
East leg	↑ (northbound)	0	0	25
South leg	→ (eastbound)	0	0	18
South leg	← (westbound)	0	0	52
Diagonal (each corner)		0	0	0

APPENDIX C:

LOS ANALYSIS SHEETS

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lindley Avenue	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
1	East-West Street:	Devonshire Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	Existing Condition				Existing Plus Project				Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	175	1	175	0	175	175	0	180	1	180	0	180	1	180	0	180	1	180
	Left-Through		0							0				0				0	
	Through	150	1	150	2	152	152	0	155	1	155	2	157	1	157	0	157	1	157
	Through-Right		0							0				0				0	
	Right	243	1	202	3	246	188	0	250	1	208	3	253	1	194	0	253	1	194
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	1	27	0	27	27	0	28	1	28	0	28	1	28	0	28	1	28
	Left-Through		0							0				0				0	
	Through	79	0	152	25	104	177	0	81	0	156	25	106	0	181	0	106	0	181
	Through-Right		1							1				1				1	
	Right	73	0	0	0	73	0	0	75	0	0	0	75	0	0	0	75	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	106	0	106	106	0	109	1	109	0	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	1243	2	622	0	1243	622	0	1281	2	641	0	1281	2	641	0	1281	2	641
	Through-Right		0							0				0				0	
	Right	40	1	0	4	44	0	0	41	1	0	4	45	1	0	0	45	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	82	1	82	35	117	117	0	84	1	84	35	119	1	119	0	119	1	119
	Left-Through		0							0				0				0	
	Through	855	1	471	0	855	471	0	881	1	485	0	881	1	485	0	881	1	485
	Through-Right		1							1				1				1	
	Right	86	0	86	0	86	86	0	89	0	89	0	89	0	89	0	89	0	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition		Existing Plus Project		Future Condition W/O Project		Future Condition W/ Project		Future W/ Project W/ Mitigation	
CRITICAL VOLUMES	*North-South:*	327	*North-South:*	352	*North-South:*	336	*North-South:*	361	*North-South:*	361
	East-West:	704	*East-West:*	739	*East-West:*	725	*East-West:*	760	*East-West:*	760
	SUM:	1031	*SUM:*	1091	*SUM:*	1061	*SUM:*	1121	*SUM:*	1121
VOLUME/CAPACITY (*V/C*) RATIO:		0.687		0.727		0.707		0.747		0.747
V/C LESS ATSAC/ATCS ADJUSTMENT:		0.587		0.627		0.607		0.647		0.647
LEVEL OF SERVICE (LOS):		A		B		B		B		B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.040	Δ*v/c* after mitigation:	0.040
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

LADOT Moving LA Forward

I/S #:	North-South Street:	Zelzah Avenue	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
2	East-West Street:	Lassen Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	3	3	3	3	3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	274	1	274	0	274	274	0	282	1	282	0	282	1	282	0	282	1	282
Left-Through		0							0				0				0	
Through	742	2	**371**	0	742	**371**	0	764	2	**382**	0	764	2	**382**	0	764	2	**382**
Through-Right		0							0				0				0	
Right	138	1	109	0	138	109	0	142	1	112	0	142	1	112	0	142	1	112
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	94	1	94	0	94	94	0	97	1	97	0	97	1	97	0	97	1	97
Left-Through		0							0				0				0	
Through	502	2	**251**	0	502	**251**	0	517	2	**259**	0	517	2	**259**	0	517	2	**259**
Through-Right		0							0				0				0	
Right	110	1	54	18	128	71	0	113	1	55	18	131	1	73	0	131	1	73
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	113	1	113	1	114	114	0	116	1	116	1	117	1	117	0	117	1	117
Left-Through		0							0				0				0	
Through	1272	1	**779**	2	1274	**780**	48	1359	1	**827**	2	1361	1	**828**	0	1361	1	**828**
Through-Right		1							1				1				1	
Right	285	0	285	0	285	285	0	294	0	294	0	294	0	294	0	294	0	294
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	59	1	**59**	0	59	**59**	0	61	1	**61**	0	61	1	**61**	0	61	1	**61**
Left-Through		0							0				0				0	
Through	813	1	465	28	841	479	13	851	1	486	28	879	1	500	0	879	1	500
Through-Right		1							1				1				1	
Right	116	0	116	0	116	116	0	120	0	120	0	120	0	120	0	120	0	120
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	622	622	641	641	641
East-West:	838	839	888	889	889
SUM:	1460	1461	1529	1530	1530
VOLUME/CAPACITY *(V/C)* RATIO:	1.025	1.025	1.073	1.074	1.074
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.925	0.925	0.973	0.974	0.974
LEVEL OF SERVICE (LOS):	E	E	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lindley Avenue	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
3	East-West Street:	Lassen Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
No. of Phases	2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	31	1	31	1	32	32	0	32	1	32	1	33	1	33	0	33	1	33
	Left-Through		0							0				0				0	
	Through	168	1	168	5	173	173	0	173	1	173	5	178	1	178	0	178	1	178
	Through-Right		0							0				0				0	
	Right	272	1	**230**	3	275	**210**	0	280	1	**236**	3	283	1	**216**	0	283	1	**216**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	102	1	**102**	0	102	**102**	0	105	1	**105**	0	105	1	**105**	0	105	1	**105**
	Left-Through		0							0				0				0	
	Through	80	0	213	63	143	276	0	82	0	219	63	145	0	282	0	145	0	282
	Through-Right		1							1				1				1	
	Right	133	0	0	0	133	0	0	137	0	0	0	137	0	0	0	137	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	106	1	106	0	106	106	0	109	1	109	0	109	1	109	0	109	1	109
	Left-Through		0							0				0				0	
	Through	1445	1	**737**	0	1445	**742**	48	1537	1	**783**	0	1537	1	**789**	0	1537	1	**789**
	Through-Right		1							1				1				1	
	Right	28	0	28	11	39	39	0	29	0	29	11	40	0	40	0	40	0	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	85	1	**85**	46	131	**131**	0	88	1	**88**	46	134	1	**134**	0	134	1	**134**
	Left-Through		0							0				0				0	
	Through	891	1	501	0	891	501	13	931	1	522	0	931	1	522	0	931	1	522
	Through-Right		1							1				1				1	
	Right	110	0	110	0	110	110	0	113	0	113	0	113	0	113	0	113	0	113
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	EXISTING CONDITION	EXISTING PLUS PROJECT	FUTURE CONDITION W/O PROJECT	FUTURE CONDITION W/ PROJECT	FUTURE W/ PROJECT W/ MITIGATION
CRITICAL VOLUMES — *North-South:*	332	312	341	321	321
East-West:	822	873	871	923	923
SUM:	1154	1185	1212	1244	1244
VOLUME/CAPACITY *(V/C)* RATIO:	0.769	0.790	0.808	0.829	0.829
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.669	0.690	0.708	0.729	0.729
LEVEL OF SERVICE (LOS):	B	B	C	C	C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.021	Δ*v/c* after mitigation:	0.021
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Reseda Boulevard	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
4	East-West Street:	Lassen Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	3	3	3	3	3
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0	NB-- 0 SB-- 0 EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	69	1	69	2	71	71	0	71	1	71	2	73	1	73	0	73	1	73
	Left-Through		0							0				0				0	
	Through	1192	2	**596**	1	1193	**597**	11	1239	2	**620**	1	1240	2	**620**	0	1240	2	**620**
	Through-Right		0							0				0				0	
	Right	293	1	201	0	293	201	0	302	1	207	0	302	1	207	0	302	1	207
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	94	1	94	11	105	105	0	97	1	97	11	108	1	108	0	108	1	108
	Left-Through		0							0				0				0	
	Through	881	2	**441**	14	895	**448**	11	919	2	**460**	14	933	2	**467**	0	933	2	**467**
	Through-Right		0							0				0				0	
	Right	103	1	39	0	103	39	0	106	1	40	0	106	1	40	0	106	1	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	128	1	128	0	128	128	0	132	1	132	0	132	1	132	0	132	1	132
	Left-Through		0							0				0				0	
	Through	1137	2	**569**	7	1144	**572**	48	1219	2	**610**	7	1226	2	**613**	0	1226	2	**613**
	Through-Right		0							0				0				0	
	Right	102	1	68	25	127	92	0	105	1	70	25	130	1	94	0	130	1	94
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	185	1	185	0	185	185	0	191	1	191	0	191	1	191	0	191	1	191
	Left-Through		0							0				0				0	
	Through	718	2	**359**	1	719	**360**	13	753	2	**377**	1	754	2	**377**	0	754	2	**377**
	Through-Right		0							0				0				0	
	Right	126	1	79	1	127	75	0	130	1	82	1	131	1	77	0	131	1	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition w/o Project	Future Condition w/ Project	Future w/ Project w/ Mitigation
CRITICAL VOLUMES — *North-South:*	1037	1045	1080	1087	1087
East-West:	928	932	987	990	990
SUM:	1965	1977	2067	2077	2077
VOLUME/CAPACITY *(V/C)* RATIO:	1.429	1.438	1.503	1.511	1.511
V/C LESS ATSAC/ATCS ADJUSTMENT:	1.329	1.338	1.403	1.411	1.411
LEVEL OF SERVICE (LOS):	F	F	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Reseda Boulevard	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
5	East-West Street:	Superior Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	Existing Condition				Existing Plus Project				Future Condition W/O Project				Future Condition W/ Project				Future W/ Project W/ Mitigation			
No. of Phases				2				2				2				2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	26	1	26	0	26	26	0	27	1	27	0	27	1	27	0	27	1	27
	Left-Through		0							0				0				0	
	Through	1552	2	776	1	1553	777	11	1610	2	805	1	1611	2	806	0	1611	2	806
	Through-Right		0							0				0				0	
	Right	83	1	83	0	83	83	0	86	1	86	0	86	1	86	0	86	1	86
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	22	1	22	18	40	40	0	23	1	23	18	41	1	41	0	41	1	41
	Left-Through		0							0				0				0	
	Through	1293	2	647	14	1307	654	11	1343	2	672	14	1357	2	679	0	1357	2	679
	Through-Right		0							0				0				0	
	Right	40	1	40	0	40	40	0	41	1	41	0	41	1	41	0	41	1	41
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	54	0	54	0	54	54	0	56	0	56	0	56	0	56	0	56	0	56
	Left-Through		0							0				0				0	
	Through	11	0	88	0	11	88	0	11	0	91	0	11	0	91	0	11	0	91
	Through-Right		0							0				0				0	
	Right	23	0	0	0	23	0	0	24	0	0	0	24	0	0	0	24	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	100	0	100	0	100	100	0	103	0	103	0	103	0	103	0	103	0	103
	Left-Through		0							0				0				0	
	Through	6	0	138	0	6	139	0	6	0	142	0	6	0	143	0	6	0	143
	Through-Right		0							0				0				0	
	Right	32	0	0	1	33	0	0	33	0	0	1	34	0	0	0	34	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	798		*North-South:*	817			*North-South:*	828			*North-South:*	847			*North-South:*	847
			East-West:	192		*East-West:*	193			*East-West:*	198			*East-West:*	199			*East-West:*	199
			SUM:	990		*SUM:*	1010			*SUM:*	1026			*SUM:*	1046			*SUM:*	1046
VOLUME/CAPACITY *(V/C)* RATIO:				0.660			0.673				0.684				0.697				0.697
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.560			0.573				0.584				0.597				0.597
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.013	Δ*v/c* after mitigation:	0.013
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Reseda Boulevard	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
6	East-West Street:	Plummer Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0	NB-- 0 SB-- 0 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	113	1	113	0	113	113	0	116	1	116	0	116	1	116	0	116	1	116
	Left-Through		0							0				0				0	
	Through	1261	2	**631**	14	1275	**638**	11	1310	2	**655**	14	1324	2	**662**	0	1324	2	**662**
	Through-Right		0							0				0				0	
	Right	40	1	0	35	75	16	0	41	1	0	35	76	1	16	0	76	1	16
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	262	1	262	0	262	262	0	270	1	270	0	270	1	270	0	270	1	270
	Left-Through		0							0				0				0	
	Through	1033	1	**584**	1	1034	**584**	11	1075	1	**607**	1	1076	1	**607**	0	1076	1	**607**
	Through-Right		1							1				1				1	
	Right	134	0	134	0	134	134	0	138	0	138	0	138	0	138	0	138	0	138
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	122	1	**122**	4	126	**126**	0	126	1	**126**	4	130	1	**130**	0	130	1	**130**
	Left-Through		0							0				0				0	
	Through	273	1	273	21	294	294	0	281	1	281	21	302	1	302	0	302	1	302
	Through-Right		0							0				0				0	
	Right	193	1	137	0	193	137	0	199	1	141	0	199	1	141	0	199	1	141
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	1	115	3	118	118	0	118	1	118	3	121	1	121	0	121	1	121
	Left-Through		0							0				0				0	
	Through	222	1	222	2	224	224	0	229	1	229	2	231	1	231	0	231	1	231
	Through-Right		1							1				1				1	
	Right	419	0	**288**	0	419	**288**	0	432	0	**297**	0	432	0	**297**	0	432	0	**297**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

		Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES	*North-South:*	1215	1222	1262	1269	1269
	East-West:	410	414	423	427	427
	SUM:	1625	1636	1685	1696	1696
VOLUME/CAPACITY *(V/C)* RATIO:		1.182	1.190	1.225	1.233	1.233
V/C LESS ATSAC/ATCS ADJUSTMENT:		1.082	1.090	1.125	1.133	1.133
LEVEL OF SERVICE (LOS):		F	F	F	F	F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.008
Significant impacted?	NO	Fully mitigated?	N/A

LADOT Moving LA Forward

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Lindley Avenue	Year of Count:	2018	Ambient Growth: (%):	1	Conducted by:	FP	Date:	11/16/2018
7	East-West Street:	Nordhoff Street	Projection Year:	2021	Peak Hour:	PM	Reviewed by:		Project:	CSUN

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
No. of Phases	4	4	4	4	4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	1	1	1	1	1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 2 / EB-- 0 WB-- 0	NB-- 0 SB-- 2 / EB-- 0 WB-- 0	NB-- 0 SB-- 2 / EB-- 0 WB-- 0	NB-- 0 SB-- 2 / EB-- 0 WB-- 0	NB-- 0 SB-- 2 / EB-- 0 WB-- 0
ATSAC-1 or ATSAC+ATCS-2?	2	2	2	2	2
Override Capacity	0	0	0	0	0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	392	1	229	0	392	243	0	404	1	236	0	404	1	250	0	404	1	250
	Left-Through		1							1				1				1	
	Through	65	0	229	28	93	243	0	67	0	236	28	95	0	250	0	95	0	250
	Through-Right		0							0				0				0	
	Right	530	1	**423**	0	530	**423**	0	546	1	**435**	0	546	1	**435**	0	546	1	**435**
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	40	0	40	2	42	42	0	41	0	41	2	43	0	43	0	43	0	43
	Left-Through		1							1				1				1	
	Through	29	0	**49**	2	31	**54**	0	30	0	**51**	2	32	0	**56**	0	32	0	**56**
	Through-Right		1							1				1				1	
	Right	20	0	0	3	23	0	0	21	0	0	3	24	0	0	0	24	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	35	35	70	70	0	36	1	36	35	71	1	71	0	71	1	71
	Left-Through		0							0				0				0	
	Through	1319	2	**660**	0	1319	**660**	11	1370	2	**685**	0	1370	2	**685**	0	1370	2	**685**
	Through-Right		0							0				0				0	
	Right	186	1	72	0	186	65	0	192	1	74	0	192	1	67	0	192	1	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	391	2	**215**	0	391	**215**	0	403	2	**222**	0	403	2	**222**	0	403	2	**222**
	Left-Through		0							0				0				0	
	Through	1192	3	397	0	1192	397	11	1239	3	413	0	1239	3	413	0	1239	3	413
	Through-Right		0							0				0				0	
	Right	37	1	17	21	58	37	0	38	1	18	21	59	1	38	0	59	1	38
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	

	Existing Condition	Existing Plus Project	Future Condition W/O Project	Future Condition W/ Project	Future W/ Project W/ Mitigation
CRITICAL VOLUMES — *North-South:*	472	477	486	491	491
East-West:	875	875	907	907	907
SUM:	1347	1352	1393	1398	1398
VOLUME/CAPACITY (*V/C*) RATIO:	0.980	0.983	1.013	1.017	1.017
V/C LESS ATSAC/ATCS ADJUSTMENT:	0.880	0.883	0.913	0.917	0.917
LEVEL OF SERVICE (LOS):	D	D	E	E	E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Appendix D

Noise Data and Analyses

Noise Measurement Data

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 77.8 - 2018/08/09 14:13:42
- Level Range : 40-100
- SEL : 84.3
- Leq : 56.6
-

No.s	Date Time	(dB)				
1	2018/08/09 14:11:16	50.4	48.5	65.5	49.1	57.6
6	2018/08/09 14:11:21	50.6	52.9	52.7	45.1	47.6
11	2018/08/09 14:11:26	48.1	52.1	51.2	53.1	51.5
16	2018/08/09 14:11:31	50.9	52.6	53.9	51.8	55.1
21	2018/08/09 14:11:36	54.1	56.7	56.5	51.3	51.9
26	2018/08/09 14:11:41	70.6	57.1	54.2	59.5	58.3
31	2018/08/09 14:11:46	54.3	56.0	56.8	50.1	53.5
36	2018/08/09 14:11:51	58.3	51.9	52.5	57.8	50.2
41	2018/08/09 14:11:56	53.3	52.8	51.1	57.7	53.9
46	2018/08/09 14:12:01	56.2	52.9	64.5	51.6	50.4
51	2018/08/09 14:12:06	49.3	55.0	52.2	61.0	52.5
56	2018/08/09 14:12:11	50.4	53.3	54.3	49.1	51.4
61	2018/08/09 14:12:16	50.1	49.5	50.6	48.6	49.5
66	2018/08/09 14:12:21	48.4	47.7	50.4	60.2	46.7
71	2018/08/09 14:12:26	47.7	48.6	48.2	51.8	47.5
76	2018/08/09 14:12:31	51.5	70.1	55.5	47.6	50.3
81	2018/08/09 14:12:36	49.0	52.8	48.8	47.3	49.5
86	2018/08/09 14:12:41	50.6	49.2	52.2	49.6	62.5
91	2018/08/09 14:12:46	49.6	48.0	49.5	47.8	50.1
96	2018/08/09 14:12:51	48.5	49.7	50.2	52.4	59.7
101	2018/08/09 14:12:56	48.9	48.3	53.2	54.6	55.1
106	2018/08/09 14:13:01	52.2	54.0	56.9	56.3	58.2
111	2018/08/09 14:13:06	63.2	59.4	58.6	58.8	57.5
116	2018/08/09 14:13:11	57.0	58.3	58.2	55.4	55.0
121	2018/08/09 14:13:16	57.5	57.7	53.9	53.3	55.6
126	2018/08/09 14:13:21	54.9	48.6	48.2	48.9	51.8
131	2018/08/09 14:13:26	50.7	53.0	53.8	70.2	71.6
136	2018/08/09 14:13:31	48.0	48.8	48.1	49.5	46.9
141	2018/08/09 14:13:36	47.6	46.7	47.5	46.1	46.0
146	2018/08/09 14:13:41	64.3	52.6	47.5	46.3	46.9
151	2018/08/09 14:13:46	47.6	46.8	59.6	47.4	45.5
156	2018/08/09 14:13:51	46.4	61.7	47.6	46.6	46.8
161	2018/08/09 14:13:56	46.0	45.6	45.7	46.1	46.2
166	2018/08/09 14:14:01	46.5	45.3	44.8	45.0	45.7
171	2018/08/09 14:14:06	46.1	45.4	46.0	70.2	48.7
176	2018/08/09 14:14:11	46.5	46.2	45.7	47.6	49.5
181	2018/08/09 14:14:16	49.8	46.8	47.2	47.2	45.7
186	2018/08/09 14:14:21	45.2	46.3	46.3	46.0	45.6
191	2018/08/09 14:14:26	46.1	57.6	60.8	45.8	47.4
196	2018/08/09 14:14:31	45.2	45.1	45.6	47.1	44.6
201	2018/08/09 14:14:36	45.2	45.2	46.7	46.4	46.3
206	2018/08/09 14:14:41	47.4	45.9	55.5	46.3	46.7
211	2018/08/09 14:14:46	47.2	48.1	49.0	45.6	46.4
216	2018/08/09 14:14:51	45.2	44.8	45.2	45.0	45.4
221	2018/08/09 14:14:56	45.3	58.7	52.0	44.1	44.9
226	2018/08/09 14:15:01	43.2	44.4	45.1	43.9	44.5
231	2018/08/09 14:15:06	43.8	44.7	44.1	44.9	45.7
236	2018/08/09 14:15:11	45.8	46.1	45.3	44.2	45.6
241	2018/08/09 14:15:16	44.4	44.1	43.5	44.0	44.0
246	2018/08/09 14:15:21	43.7	43.8	43.9	44.6	43.7
251	2018/08/09 14:15:26	60.1	46.4	54.5	53.8	48.8
256	2018/08/09 14:15:31	62.4	51.9	46.0	47.6	45.6
261	2018/08/09 14:15:36	45.3	48.7	48.0	46.5	44.9
266	2018/08/09 14:15:41	45.0	45.0	44.8	45.7	73.4
271	2018/08/09 14:15:46	51.5	46.4	45.0	45.0	44.4
276	2018/08/09 14:15:51	46.2	44.9	45.3	45.7	48.9
281	2018/08/09 14:15:56	44.8	46.4	44.1	44.2	44.3
286	2018/08/09 14:16:01	60.4	46.5	46.1	44.7	44.7
291	2018/08/09 14:16:06	45.9	45.4	45.0	47.2	48.2
296	2018/08/09 14:16:11	46.6	48.0	44.4	45.8	71.3
301	2018/08/09 14:16:16	48.9	45.2	45.2	43.4	43.4
306	2018/08/09 14:16:21	44.6	44.7	47.4	43.5	47.8
311	2018/08/09 14:16:26	44.1	46.0	44.4	44.5	46.0
316	2018/08/09 14:16:31	69.9	52.5	44.2	45.1	44.2
321	2018/08/09 14:16:36	44.0	44.4	43.8	44.7	45.9
326	2018/08/09 14:16:41	44.3	45.2	46.6	44.7	44.4
331	2018/08/09 14:16:46	73.4	53.5	48.7	45.4	46.2
336	2018/08/09 14:16:51	46.1	44.6	44.6	49.3	45.5
341	2018/08/09 14:16:56	44.5	45.5	45.3	48.2	66.8
346	2018/08/09 14:17:01	53.8	46.9	45.4	47.1	47.1
351	2018/08/09 14:17:06	52.6	45.4	49.6	45.8	54.5
356	2018/08/09 14:17:11	54.0	49.7	48.0	47.0	47.2
361	2018/08/09 14:17:16	48.0	48.5	49.0	47.5	58.4
366	2018/08/09 14:17:21	47.6	47.3	46.0	46.6	48.0
371	2018/08/09 14:17:26	46.7	46.1	46.8	46.1	46.1
376	2018/08/09 14:17:31	66.7	48.5	46.7	46.5	48.0
381	2018/08/09 14:17:36	46.1	46.8	47.5	47.3	45.6
386	2018/08/09 14:17:41	63.5	54.6	50.1	48.6	50.7
391	2018/08/09 14:17:46	50.5	48.1	46.1	45.7	47.5
396	2018/08/09 14:17:51	44.3	45.7	66.0	52.1	44.6
401	2018/08/09 14:17:56	47.8	47.6	45.5	47.3	47.5
406	2018/08/09 14:18:01	47.1	59.5	50.7	46.6	45.9
411	2018/08/09 14:18:06	46.7	47.8	46.6	44.6	57.4
416	2018/08/09 14:18:11	46.9	45.6	45.9	46.1	45.3
421	2018/08/09 14:18:16	45.2	58.6	45.3	44.9	44.5

426	2018/08/09	14:18:21	45.6	46.5	45.0	49.7	46.6
431	2018/08/09	14:18:26	47.4	63.0	47.7	47.1	45.8
436	2018/08/09	14:18:31	48.6	46.0	46.7	51.6	48.7
441	2018/08/09	14:18:36	46.5	59.2	46.1	47.7	52.6
446	2018/08/09	14:18:41	52.2	59.0	59.8	51.3	51.5
451	2018/08/09	14:18:46	47.7	51.7	47.5	50.2	46.4
456	2018/08/09	14:18:51	47.2	46.2	70.6	52.7	49.9
461	2018/08/09	14:18:56	44.7	50.5	45.5	46.7	48.3
466	2018/08/09	14:19:01	50.4	45.4	47.5	45.1	46.6
471	2018/08/09	14:19:06	70.9	49.3	48.0	44.8	45.1
476	2018/08/09	14:19:11	49.7	46.9	46.7	47.3	46.4
481	2018/08/09	14:19:16	48.1	45.2	46.0	48.0	47.1
486	2018/08/09	14:19:21	47.4	45.5	45.9	45.7	45.4
491	2018/08/09	14:19:26	46.0	45.7	57.5	47.9	51.4
496	2018/08/09	14:19:31	50.3	45.8	49.4	47.4	47.6
501	2018/08/09	14:19:36	48.4	48.8	46.9	51.7	49.1
506	2018/08/09	14:19:41	50.4	52.6	53.2	59.9	51.8
511	2018/08/09	14:19:46	53.6	53.7	54.4	54.2	53.6
516	2018/08/09	14:19:51	56.6	50.5	51.1	59.2	60.8
521	2018/08/09	14:19:56	54.9	57.4	68.6	54.9	58.7
526	2018/08/09	14:20:01	56.1	57.9	57.6	54.4	58.1
531	2018/08/09	14:20:06	55.6	55.5	52.4	54.7	52.6
536	2018/08/09	14:20:11	55.1	51.6	51.5	53.0	64.3
541	2018/08/09	14:20:16	50.8	50.8	54.4	51.3	53.7
546	2018/08/09	14:20:21	54.2	51.0	48.4	53.2	51.3
551	2018/08/09	14:20:26	52.9	50.8	49.3	49.8	51.4
556	2018/08/09	14:20:31	47.3	48.6	52.2	52.3	64.7
561	2018/08/09	14:20:36	62.0	49.7	47.1	46.4	48.3
566	2018/08/09	14:20:41	47.3	47.7	47.5	45.3	45.4
571	2018/08/09	14:20:46	49.3	47.7	70.2	51.7	48.6
576	2018/08/09	14:20:51	49.1	45.3	45.9	46.6	45.7
581	2018/08/09	14:20:56	46.9	45.8	46.7	46.5	46.0
586	2018/08/09	14:21:01	45.4	69.1	51.9	44.8	45.0
591	2018/08/09	14:21:06	44.9	46.8	46.7	46.7	45.6
596	2018/08/09	14:21:11	46.7	46.5	45.8	48.0	47.5

- Freq Weight : A
- Time Weight : FAST
- Level Range : 40-100
- Max dB : 75.6 - 2018/08/09 14:56:09
- Level Range : 40-100
- SEL : 83.1
- Leq : 55.4
-

No.s	Date Time	(dB)				
1	2018/08/09 14:49:01	57.2	49.8	49.1	51.0	51.3
6	2018/08/09 14:49:06	56.7	51.3	57.0	55.4	53.6
11	2018/08/09 14:49:11	49.9	52.7	55.3	61.6	63.4
16	2018/08/09 14:49:16	63.7	66.3	55.6	56.4	54.8
21	2018/08/09 14:49:21	60.4	53.3	59.8	63.4	57.4
26	2018/08/09 14:49:26	52.8	50.5	60.2	52.4	51.2
31	2018/08/09 14:49:31	50.2	47.5	61.0	48.6	48.7
36	2018/08/09 14:49:36	46.7	46.0	51.4	57.5	59.0
41	2018/08/09 14:49:41	49.4	57.5	50.1	53.5	52.5
46	2018/08/09 14:49:46	60.0	67.5	49.8	47.3	67.2
51	2018/08/09 14:49:51	52.4	51.5	50.8	48.8	53.9
56	2018/08/09 14:49:56	48.2	48.0	50.7	51.1	57.6
61	2018/08/09 14:50:01	59.5	52.6	52.1	48.5	61.9
66	2018/08/09 14:50:06	52.8	49.9	53.7	60.1	60.3
71	2018/08/09 14:50:11	49.5	66.8	52.4	50.8	47.5
76	2018/08/09 14:50:16	48.8	50.8	49.2	53.7	54.4
81	2018/08/09 14:50:21	48.2	66.7	48.0	53.4	56.7
86	2018/08/09 14:50:26	52.4	52.1	49.7	49.9	50.7
91	2018/08/09 14:50:31	49.0	51.1	53.9	58.2	58.2
96	2018/08/09 14:50:36	47.6	54.3	56.6	54.4	49.1
101	2018/08/09 14:50:41	47.4	57.4	48.7	55.8	50.4
106	2018/08/09 14:50:46	51.8	55.6	54.6	55.0	48.3
111	2018/08/09 14:50:51	52.6	48.9	63.4	52.6	62.0
116	2018/08/09 14:50:56	63.7	63.4	66.4	67.7	66.6
121	2018/08/09 14:51:01	50.4	53.1	51.9	62.6	52.4
126	2018/08/09 14:51:06	50.5	47.9	49.7	49.8	49.4
131	2018/08/09 14:51:11	52.7	48.0	49.0	51.8	48.9
136	2018/08/09 14:51:16	48.7	50.2	54.0	50.8	52.9
141	2018/08/09 14:51:21	50.0	47.4	52.7	48.0	48.5
146	2018/08/09 14:51:26	47.9	46.3	54.8	52.6	50.3
151	2018/08/09 14:51:31	50.1	47.6	55.6	51.4	55.0
156	2018/08/09 14:51:36	48.6	57.4	57.3	51.6	49.8
161	2018/08/09 14:51:41	56.7	58.1	51.9	47.6	50.8
166	2018/08/09 14:51:46	50.7	48.7	54.8	50.4	52.4
171	2018/08/09 14:51:51	51.0	48.9	50.9	49.3	49.0
176	2018/08/09 14:51:56	51.5	51.3	50.3	55.5	51.0
181	2018/08/09 14:52:01	62.3	50.1	53.6	48.8	50.4
186	2018/08/09 14:52:06	48.0	63.6	51.0	50.6	49.0
191	2018/08/09 14:52:11	51.7	52.4	50.6	51.4	49.8
196	2018/08/09 14:52:16	53.9	49.2	47.2	45.7	53.0
201	2018/08/09 14:52:21	47.1	49.2	48.7	49.4	51.5
206	2018/08/09 14:52:26	46.7	61.4	47.4	47.1	51.1
211	2018/08/09 14:52:31	50.3	48.2	49.7	46.7	46.9
216	2018/08/09 14:52:36	46.8	47.1	47.6	47.4	46.9
221	2018/08/09 14:52:41	48.5	49.2	50.8	55.2	48.4
226	2018/08/09 14:52:46	51.6	53.4	52.5	50.3	59.4
231	2018/08/09 14:52:51	59.5	50.2	52.1	49.5	62.7
236	2018/08/09 14:52:56	57.8	50.4	47.9	47.2	51.8
241	2018/08/09 14:53:01	48.1	48.8	51.7	51.2	51.4
246	2018/08/09 14:53:06	47.8	49.2	50.5	48.7	49.8
251	2018/08/09 14:53:11	49.9	48.4	47.8	49.0	47.7
256	2018/08/09 14:53:16	49.0	49.4	49.0	48.0	48.4
261	2018/08/09 14:53:21	50.1	48.3	52.0	47.6	48.4
266	2018/08/09 14:53:26	47.3	47.0	47.3	48.3	49.6
271	2018/08/09 14:53:31	49.8	47.8	48.6	54.3	52.0
276	2018/08/09 14:53:36	50.1	52.2	49.5	50.5	47.9
281	2018/08/09 14:53:41	49.8	48.2	49.3	50.1	49.3
286	2018/08/09 14:53:46	49.9	49.3	50.5	50.7	49.7
291	2018/08/09 14:53:51	49.4	47.2	50.4	49.6	50.6
296	2018/08/09 14:53:56	49.2	50.7	48.8	49.4	48.4
301	2018/08/09 14:54:01	49.4	48.5	48.0	50.2	49.9
306	2018/08/09 14:54:06	49.4	48.5	48.2	47.3	48.0
311	2018/08/09 14:54:11	50.7	48.1	49.3	53.0	56.9
316	2018/08/09 14:54:16	50.3	50.8	50.8	48.1	50.2
321	2018/08/09 14:54:21	51.7	63.2	67.7	56.7	47.9
326	2018/08/09 14:54:26	48.8	70.8	59.0	47.8	51.8
331	2018/08/09 14:54:31	63.4	48.7	52.6	56.0	47.9
336	2018/08/09 14:54:36	48.5	48.7	48.3	49.8	51.6
341	2018/08/09 14:54:41	52.0	51.0	50.8	49.8	52.1
346	2018/08/09 14:54:46	49.7	51.4	55.7	53.5	50.7
351	2018/08/09 14:54:51	51.8	52.2	50.2	56.6	62.2
356	2018/08/09 14:54:56	52.2	54.4	51.2	52.5	55.9
361	2018/08/09 14:55:01	59.2	55.1	51.3	52.5	52.5
366	2018/08/09 14:55:06	51.4	52.3	49.4	48.3	48.7
371	2018/08/09 14:55:11	47.8	50.5	49.1	51.9	49.0
376	2018/08/09 14:55:16	48.6	50.6	52.3	52.5	52.9
381	2018/08/09 14:55:21	52.4	54.0	55.3	54.9	52.9
386	2018/08/09 14:55:26	49.5	50.3	59.9	51.6	48.7
391	2018/08/09 14:55:31	47.0	47.2	49.5	52.5	53.0
396	2018/08/09 14:55:36	48.4	53.9	57.0	54.9	50.9
401	2018/08/09 14:55:41	52.5	48.9	49.1	50.0	50.0
406	2018/08/09 14:55:46	51.2	47.9	46.9	49.0	47.8
411	2018/08/09 14:55:51	47.6	47.4	49.4	51.1	52.7
416	2018/08/09 14:55:56	51.8	52.2	51.0	50.8	49.9
421	2018/08/09 14:56:01	51.4	50.7	49.4	50.8	52.5

426	2018/08/09	14:56:06	51.8	52.1	52.3	66.9	49.8
431	2018/08/09	14:56:11	50.5	48.6	48.1	47.6	48.9
436	2018/08/09	14:56:16	49.4	48.9	47.6	47.7	48.9
441	2018/08/09	14:56:21	48.1	49.0	54.7	52.8	51.8
446	2018/08/09	14:56:26	50.1	51.6	48.1	48.0	48.7
451	2018/08/09	14:56:31	49.7	50.0	48.4	48.3	54.4
456	2018/08/09	14:56:36	48.6	48.1	47.8	46.5	49.1
461	2018/08/09	14:56:41	51.9	50.8	49.1	48.5	51.4
466	2018/08/09	14:56:46	48.8	48.9	47.7	48.4	51.4
471	2018/08/09	14:56:51	46.6	47.8	47.7	53.3	48.3
476	2018/08/09	14:56:56	50.1	47.6	49.3	50.4	49.9
481	2018/08/09	14:57:01	48.3	49.1	54.5	47.4	49.9
486	2018/08/09	14:57:06	49.6	48.1	46.7	47.3	47.3
491	2018/08/09	14:57:11	51.9	51.0	48.4	47.6	48.5
496	2018/08/09	14:57:16	48.4	49.0	48.3	48.4	49.5
501	2018/08/09	14:57:21	49.5	49.1	49.7	49.9	49.5
506	2018/08/09	14:57:26	50.2	49.9	50.6	49.5	48.9
511	2018/08/09	14:57:31	48.7	50.4	49.8	50.6	50.1
516	2018/08/09	14:57:36	50.9	50.3	48.3	49.2	50.8
521	2018/08/09	14:57:41	50.3	52.2	49.9	51.0	53.1
526	2018/08/09	14:57:46	60.0	50.6	52.1	52.1	51.8
531	2018/08/09	14:57:51	50.3	50.5	51.7	52.2	51.7
536	2018/08/09	14:57:56	49.1	49.2	49.1	49.1	48.9
541	2018/08/09	14:58:01	49.0	47.7	47.8	48.0	49.6
546	2018/08/09	14:58:06	48.8	50.1	50.0	48.7	47.4
551	2018/08/09	14:58:11	49.6	51.7	52.2	49.3	48.9
556	2018/08/09	14:58:16	48.8	48.6	50.2	51.2	49.7
561	2018/08/09	14:58:21	47.4	47.6	47.2	47.6	47.1
566	2018/08/09	14:58:26	47.6	47.6	47.8	47.7	47.7
571	2018/08/09	14:58:31	47.4	47.4	47.5	52.1	51.5
576	2018/08/09	14:58:36	51.5	50.8	51.0	51.3	50.3
581	2018/08/09	14:58:41	50.5	47.8	47.1	47.1	47.3
586	2018/08/09	14:58:46	47.5	46.5	49.5	48.7	47.0
591	2018/08/09	14:58:51	47.1	47.9	47.5	48.8	47.4
596	2018/08/09	14:58:56	48.2	47.3	48.6	48.4	50.9

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 83.2 - 2019/03/26 19:13:22
- Level Range : 40-100
- SEL : 89.7
- Leq : 60.2
-

No.s	Date Time	(dB)
1	2019/03/26 19:00:50	52.0
2	2019/03/26 19:00:51	50.4
3	2019/03/26 19:00:52	49.3
4	2019/03/26 19:00:53	48.7
5	2019/03/26 19:00:54	49.1
6	2019/03/26 19:00:55	51.2
7	2019/03/26 19:00:56	52.2
8	2019/03/26 19:00:57	52.8
9	2019/03/26 19:00:58	52.7
10	2019/03/26 19:00:59	52.7
11	2019/03/26 19:01:00	52.9
12	2019/03/26 19:01:01	52.7
13	2019/03/26 19:01:02	54.5
14	2019/03/26 19:01:03	56.8
15	2019/03/26 19:01:04	54.7
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463	2019/03/26	19:08:32	48.9
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871	2019/03/26	19:15:20	53.4
872	2019/03/26	19:15:21	61.1
873	2019/03/26	19:15:22	58.7
874	2019/03/26	19:15:23	56.9
875	2019/03/26	19:15:24	53.8
876	2019/03/26	19:15:25	50.4
877	2019/03/26	19:15:26	47.9

878	2019/03/26	19:15:27	46.1
879	2019/03/26	19:15:28	43.9
880	2019/03/26	19:15:29	42.7
881	2019/03/26	19:15:30	42.0
882	2019/03/26	19:15:31	41.5
883	2019/03/26	19:15:32	41.7
884	2019/03/26	19:15:33	41.9
885	2019/03/26	19:15:34	42.2
886	2019/03/26	19:15:35	44.3
887	2019/03/26	19:15:36	46.0
888	2019/03/26	19:15:37	49.9
889	2019/03/26	19:15:38	53.7
890	2019/03/26	19:15:39	56.9
891	2019/03/26	19:15:40	59.1
892	2019/03/26	19:15:41	62.7
893	2019/03/26	19:15:42	67.9
894	2019/03/26	19:15:43	67.2
895	2019/03/26	19:15:44	63.7
896	2019/03/26	19:15:45	60.1
897	2019/03/26	19:15:46	56.6
898	2019/03/26	19:15:47	53.2
899	2019/03/26	19:15:48	60.9
900	2019/03/26	19:15:49	57.6

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

Project Name: CSUN Baseball Field **Job Number:** 18-05919

Date: 8/9/18 **Operator Name:** Lexi Journey and Annaliese Miller

Measurement #1

Location: outside batting cage **Begin time:** 2:11 pm **Finish time:** 2:21 pm

Measurement No.: 1 **Wind (mph):** **Direction:** N

Cloud Cover Class: Overcast (>80%) ◯ Light (20-80%) ◯ Sunny (<20%) ◯

Calibration (dB): Start: 94.0 End: 94.2

Primary Noise Sources: batting cage **Distance:** 40 ft

Secondary Noise Sources: kids on field, people talking inside batting cage

Notes: Airplane (at 2 minute mark)
10-minute measurement

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 56.6 **SEL:** 84.3 **Lmax:** 77.8 **Lmin:** 42.5 **PK:** 97.6

L(05): 59.9 **L(10):** 57.5 **L(50):** 47.7 **L(90):** 44.8 **L(95):** 44.3

Response: Slow ◯ Fast ◯ Peak ◯ Impulse ◯

Measurement #2

Location: right field near entry plaza **Begin time:** 3:08 pm **Finish time:** 3:18 pm

Measurement No.: 2 **Wind (mph):** **Direction:** N

Cloud Cover Class: Overcast (>80%) ◯ Light (20-80%) ◯ Sunny (<20%) ◯

Calibration (dB): Start: 94.0 End: 94.0

Primary Noise Sources: kids on field, coach yelling **Distance:** 60 ft

Secondary Noise Sources: traffic on Lindley Ave.

Notes: occasional airplane flying overhead
10-minute measurement

Traffic Count: Passenger Cars:

Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq: 55.4 **SEL:** 83.1 **Lmax:** 75.6 **Lmin:** 454.4 **PK:** 78.5

L(05): 59.9 **L(10):** 56.0 **L(50):** 50.1 **L(90):** 47.6 **L(95):** 47.2

Response: Slow ◯ Fast ◯ Peak ◯ Impulse ◯

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Ambient Noise Survey Data Sheet

Instructions: Document noise measurement locations with a photo of the site, including the noise meter. Additionally, take notes on general and secondary noise sources, including the instantaneous noise level if possible. As a reminder, A/C weighting should be set to "A" and generally response time should be set to "fast." For additional information, please review the *Noise Measurement Protocol* in the pelican case.

Project Name: CSUN Baseball Field **Job Number:** 18-05919

Date: 8/9/18 **Operator Name:** Lexi Journey and Annaliese Miller

Measurement #1

Location: outside batting cage **Begin time:** 2:11 pm **Finish time:** 2:21 pm

Measurement No.: 1 **Wind (mph):** **Direction:** N

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94.0 End: 94.2

Primary Noise Sources: batting cage **Distance:** 40 ft

Secondary Noise Sources: kids on field, people talking inside batting cage

Notes: Airplane (at 2 minute mark)
10-minute measurement

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq:	56.6	**SEL:**	84.3	**Lmax:**	77.8	**Lmin:**	42.5	**PK:**	97.6
L(05):	59.9	**L(10):**	57.5	**L(50):**	47.7	**L(90):**	44.8	**L(95):**	44.3

Response: Slow Fast Peak Impulse

Measurement #2

Location: right field near entry plaza **Begin time:** 3:08 pm **Finish time:** 3:18 pm

Measurement No.: 2 **Wind (mph):** **Direction:** N

Cloud Cover Class: Overcast (>80%) Light (20-80%) Sunny (<20%)

Calibration (dB): Start: 94.0 End: 94.0

Primary Noise Sources: kids on field, coach yelling **Distance:** 60 ft

Secondary Noise Sources: traffic on Lindley Ave.

Notes: occasional airplane flying overhead
10-minute measurement

Traffic Count: Passenger Cars:
Medium to Heavy Duty Trucks (3 axles): Heavy Duty Trucks (4+ axles):

Instantaneous Noise Sources/Levels (e.g., airplane, bus airbrake, etc.):

Leq:	55.4	**SEL:**	83.1	**Lmax:**	75.6	**Lmin:**	454.4	**PK:**	78.5
L(05):	59.9	**L(10):**	56.0	**L(50):**	50.1	**L(90):**	47.6	**L(95):**	47.2

Response: Slow Fast Peak Impulse

Summed Noise Calculations

CSUN Baseball Field

Leq
Existing Two-Tunnel Batting Cage at Residences (475 Feet)

	dB Value	Conversion Value		
Player 1	30.7	1.17E+03	Sum =	33.7
Player 2	30.7	1.17E+03		

CSUN Baseball Field

Leq

Existing Two-Tunnel Batting Cage Plus Ambient Noise at Residences (475 Feet)

	dB Value	Conversion Value		
Batting Cage	33.7	2.34E+03	Sum =	65.3
Ambient Noise	65.3	3.39E+06		

CSUN Baseball Field

Lmax

Existing Two-Tunnel Batting Cage at Residences (475 Feet)

	dB Value	Conversion Value		
Player 1	54.6	2.88E+05	Sum =	57.6
Player 2	54.6	2.88E+05		

CSUN Baseball Field

Leq

Proposed Four-Tunnel Batting Cage at Residences (185 Feet)

	dB Value	Conversion Value		
Player 1	38.9	7.76E+03	Sum =	44.9
Player 2	38.9	7.76E+03		
Player 3	38.9	7.76E+03		
Player 4	38.9	7.76E+03		

CSUN Baseball Field

Leq

Proposed Four-Tunnel Batting Cage Plus Ambient Noise at Residenced (185 Feet)

	dB Value	Conversion Value		
Batting Cage	44.9	3.09E+04	Sum =	65.3
Ambient Noise	65.3	3.39E+06		

CSUN Baseball Field

Lmax

Proposed Four-Tunnel Batting Cage at Residences (185 Feet)

	dB Value	Conversion Value		
Player 1	62.8	1.91E+06	Sum =	68.8
Player 2	62.8	1.91E+06		
Player 3	62.8	1.91E+06		
Player 4	62.8	1.91E+06		

CSUN Baseball Field

Leq

Baseball Game Noise at 25 Feet from Home Plate

	dB Value	Conversion Value		
100 Spectators	84	2.51E+08	Sum =	91.0
100 Spectators	84	2.51E+08		
100 Spectators	84	2.51E+08		
100 Spectators	84	2.51E+08		
100 Spectators	84	2.51E+08		

CSUN Baseball Field

Leq

Baseball Game Noise Plus Daytime Ambient Noise at Nearest Residence (225 Feet)

	dB Value	Conversion Value		
Baseball Game	71.9	1.55E+07	Sum =	72.6
Ambient Daytime Noise	64.1	2.57E+06		

NoiseMeters Inc.

Tel. 888-206-4377
info@noisemeters.com

Ldn, Lden, CNEL - Community Noise Calculators

Ldn and Lden Calculator

Start Time	Hourly Leq
00:00	40 dB
01:00	40 dB
02:00	40 dB
03:00	40 dB
04:00	40 dB
05:00	40 dB
06:00	40 dB
07:00	64.1 dB
08:00	64.1 dB
09:00	64.1 dB
10:00	64.1 dB
11:00	64.1 dB
12:00	64.1 dB
13:00	64.1 dB
14:00	64.1 dB
15:00	72.6 dB
16:00	72.6 dB
17:00	72.6 dB
18:00	72.6 dB
19:00	64.1 dB
20:00	64.1 dB
21:00	40 dB
22:00	40 dB
23:00	40 dB

Calculate

Leq

66.1 dB

Ldn

66.2 dB

Lden

66.6 dB

Ldn and Lden Calculator

Calculators

Calculation of the Ldn (day, night) and the Lden (day, evening, night) based on 1-hour Leq measurements.

Ldn - Day Night Average Sound Level

The Ldn is the average equivalent sound level over a 24 hour period, with a penalty added for noise during the nighttime hours of 22:00 to 07:00. During the nighttime period 10 dB is added to reflect the impact of the noise.

Ldn measurements are useful for assessing the impact that road, rail, air and general industry has on the local population.

The NoiseMeters Ldn calculator accepts hourly Leq measurements and calculates the Ldn accordingly.

Lden or CNEL

The Lden (Day Evening Night Sound Level) or CNEL (Community Noise Equivalent Level) is the average sound level over a 24 hour period, with a penalty of 5 dB added for the evening hours or 19:00 to 22:00, and a penalty of 10 dB added for the nighttime hours of 22:00 to 07:00.

It is very similar in nature (and in results) to the Ldn, but with the added penalty for the evening period.

Our Lden or CNEL calculator takes the hourly Leq measurements and calculates the Lden (which is the same as the CNEL).

< Noise Applications

Telephone 888-206-4377
info@noisemeters.com

Ldn, Lden, CNEL - Community Noise Calculators

Ldn and Lden Calculator

Calculate

Start Time	Hourly Leq
00:00	40 dB
01:00	40 dB
02:00	40 dB
03:00	40 dB
04:00	40 dB
05:00	40 dB
06:00	40 dB
07:00	64.1 dB
08:00	64.1 dB
09:00	64.1 dB
10:00	64.1 dB
11:00	64.1 dB
12:00	64.1 dB
13:00	64.1 dB
14:00	64.1 dB
15:00	64.1 dB
16:00	64.1 dB
17:00	64.1 dB
18:00	72.6 dB
19:00	72.6 dB
20:00	72.6 dB
21:00	72.6 dB
22:00	40 dB
23:00	40 dB

Leq
66.2 dB

Ldn
66.3 dB

Lden
69.6 dB

Ldn and Lden Calculator

Calculators

Calculation of the Ldn (day, night) and the Lden (day, evening, night) based on 1-hour Leq measurements.

Ldn - Day Night Average Sound Level

The Ldn is the average equivalent sound level over a 24 hour period, with a penalty added for noise during the nighttime hours of 22:00 to 07:00. During the nighttime period 10 dB is added to reflect the impact of the noise.

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The Lden (Day Evening Night Sound Level) or CNEL (Community Noise Equivalent Level) is the average sound level over a 24 hour period, with a penalty of 5 dB added for the evening hours or 19:00 to 22:00, and a penalty of 10 dB added for the nighttime hours of 22:00 to 07:00.

It is very similar in nature (and in results) to the Ldn, but with the added penalty for the evening period.

Our Lden or CNEL calculator takes the hourly Leq measurements and calculates the Lden (which is the same as the CNEL).

< Noise Applications

Vibration Analysis Data Sheets

Vibration Analysis - CSUN Team Facilities/Batting Cage/Field Lighting

PPV (in/sec) = PPV {ref} * (25/D)^1.5
Where PPV = Peak Particle Velocity
{ref} = PPV at the reference distance of 25 feet
D = distance to the receptor

Equipment = Large Dozer

PPV{ref} = 0.089 in/sec
D = 25 feet
PPV at receptor = 0.089 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.022 in/sec
Residential Receptor Lv = 87 VdB

Equipment = Large Dozer
PPV{ref} = 0.089 in/sec
D = 100 feet
PPV at receptor = 0.011 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.003 in/sec
Residential Receptor Lv = 69 VdB

Equipment = Large Dozer

PPV{ref} = 0.089 in/sec
D = 115 feet
PPV at receptor = 0.009 in/sec

PPV is 1.7x to 6x larger than RMS velocity
Assume typical conversion factor of 4 PPV:RMS

Therefore estimated RMS velocity = 0.002 in/sec
Residential Receptor Lv = 67 VdB

Source: Chapter 12 Noise and Vibration During Construction in
Transit Noise and Vibration Assessment, May 2006
Harris Miller Miller & Hanson, Inc.
Prepared For: USDOT Federal Transit Administration

* RMS Velocity in decibels VdB with Vref of 1E-6 in/sec and PPV:RMS of ~4

Criterion

US Bureau of Mines, 1971	
PPV, in/sec	Degree of Damage
<2	Safe
2 - 4	Plaster Cracking
4 - 7	Minor Damage
>7	Major Damage

Canmet, Bauer, and Calder, 1977		
Equipment	PPV Threshold, in/sec	Type of Damage
Rigid Mercury Switches	0.5	Trip Out
House	2	Cracked Plaster
Concrete Block	8	Crack in Block
Cased Drill Holes	15	Horizontol Offset
Pumps, Compressors	40	Shaft Misalignment

Human Response Criteria

Level, Lv in VdB	Equivalent Noise Level, dBA Low freq (30Hz)	Equivalent Noise Level, dBA Hi Freq (60 Hz)	Human Response
65	25	40	Approximate threshold of perception, low-freq inaudible, but mid-freq excessive for sleeping
75	35	50	Approx. dividing line between barely perceptible and clearly perceptible. Annoying vibration for most people. Low-freq acceptable for sleeping areas.
85	45	60	Vibration acceptable only if no more than 2 events/day for residential uses. Low-freq annoying in sleeping areas; mid-freq unacceptable for sensitive uses, including schools and churches.
90	50	65	Difficulty with tasks such as reading computer screens. Generally annoying for commercial uses.

Impact Criteria

Land Use	Lv in VdB Frequent Events (70+/day)	Lv in VdB Occasional Events (30-70)	Lv in VdB Infrequent (<30 events/day)
Category 1: Vibration Sensitive	65	65	65
Concert Halls	65	65	65
TV Studios	65	65	65
Recording Studios	65	65	65
Category 2: Residences, hotels, sleeping areas	72	75	80
Auditoriums	72	80	80
Theaters	72	80	80
Category 3: Institutional with primarily daytime use only	75	78	83

Vibration Source Levels For Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate Lv at 25 feet *
Impact Pile Driver	upper range	1.518	112
	typical	0.644	104
Sonic Pile Driver	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall construction)		0.202	94
	in soil	0.008	66
Hydromill (slurry wall construction)	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
	large	0.089	87
Bulldozer	small	0.003	58
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79

RCNM Data Sheets

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/20/2018
Case Description: CSUN Team Facilities - Demolition

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences	Residential	65.3	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	100.0	0.0
Dozer	No	40		81.7	100.0	0.0
Tractor	No	40	84.0		100.0	0.0
Tractor	No	40	84.0		100.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Noise Limits (dBA) Evening		Noise Limits (dBA) Night		Noise Limit Exceedance (dBA) Day		Noise Limit Exceedance (dBA) Evening		Noise Limit Exceedance (dBA) Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	83.6	76.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.6	80.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Northridge Academy High School	Residential	65.0	45.0	45.0

Equipment

Spec Actual Receptor Estimated

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	115.0	0.0
Dozer	No	40		81.7	115.0	0.0
Tractor	No	40	84.0		115.0	0.0
Tractor	No	40	84.0		115.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Concrete Saw	82.3	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	74.4	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.3	79.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 Feet	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq

Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	86.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/15/2018
Case Description: CSUN Team Facilities - Site Preparation

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences	Residential	65.3	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		100.0	0.0
Tractor	No	40	84.0		100.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	79.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	79.0	77.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Northridge Academy High School	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		115.0	0.0
Tractor	No	40	84.0		115.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	77.8	73.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.8	76.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 Feet	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	83.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/15/2018
Case Description: CSUN Team Facilities - Grading

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences	Residential	65.3	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	100.0	0.0
Dozer	No	40		81.7	100.0	0.0
Tractor	No	40	84.0		100.0	0.0
Tractor	No	40	84.0		100.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	83.6	76.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	75.6	71.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	83.6	80.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Northridge Academy High School	Residential	65.0	45.0	45.0

Equipment

Spec Actual Receptor Estimated

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	115.0	0.0
Dozer	No	40		81.7	115.0	0.0
Tractor	No	40	84.0		115.0	0.0
Tractor	No	40	84.0		115.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	82.3	75.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	74.4	70.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.3	79.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 Feet	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq

----------------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	86.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/15/2018
Case Description: CSUN Team Facilities - Building Construction

**** Receptor #1 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences	Residential	65.3	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	100.0	0.0
Man Lift	No	20		74.7	100.0	0.0
Man Lift	No	20		74.7	100.0	0.0
Tractor	No	40	84.0		100.0	0.0
Tractor	No	40	84.0		100.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	74.5	66.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	68.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	68.7	61.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	78.0	74.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	78.0	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Northridge Academy High School	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	115.0	0.0
Man Lift	No	20		74.7	115.0	0.0
Man Lift	No	20		74.7	115.0	0.0
Tractor	No	40	84.0		115.0	0.0
Tractor	No	40	84.0		115.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	73.3	65.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	67.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	67.5	60.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	76.8	72.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.8	76.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
50 Feet	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Crane	No	16		80.6	50.0	0.0
Man Lift	No	20		74.7	50.0	0.0
Man Lift	No	20		74.7	50.0	0.0
Tractor	No	40	84.0		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

Equipment	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	83.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/15/2018
Case Description: CSUN Team Facilities - Architectural Coating

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65.3	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	100.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	71.6	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	71.6	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #2 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Northridge Academy High School	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	115.0	0.0

Results

Noise Limits (dBA) Noise Limit Exceedance (dBA)

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	70.4	66.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	70.4	66.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**** Receptor #3 ****

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
50 Feet	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

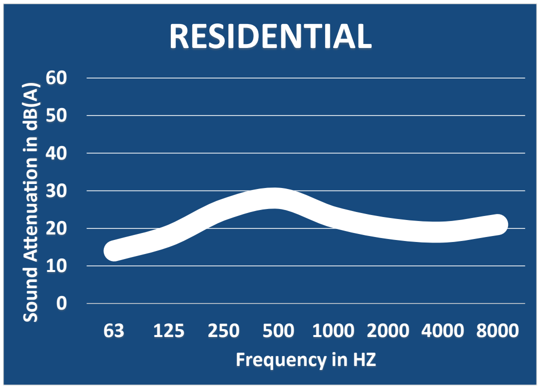
Manufacturers' Specifications

NETT TECHNOLOGIES INC.
www.nettinc.com sales@nettinc.com +1 (905) 672-5453

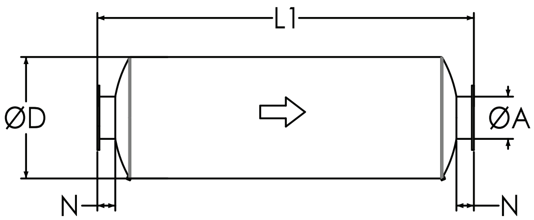
Residential Grade Silencers

Model NTRS-C (Cylindrical), 20-25 dBA

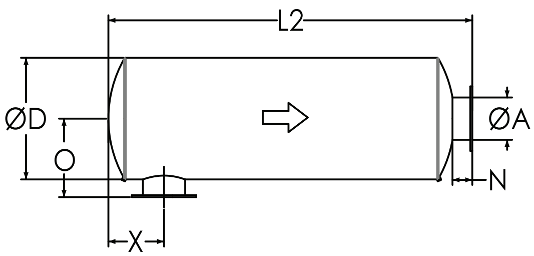
TYPICAL ATTENUATION CURVE



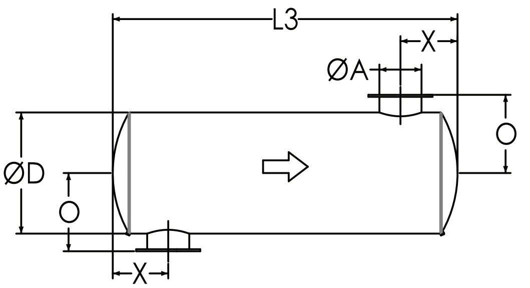
TYPICAL CONFIGURATIONS



END IN END OUT (EI-EO)



SIDE IN END OUT (SI-EO)



SIDE IN SIDE OUT (SI-SO)

Nett Technologies' Residential Grade Silencers are designed to achieve maximum performance with the least amount of backpressure. The silencers are Reactive Silencers and are typically used for reciprocating or positive displacement engines where noise level regulations are medium-low.

FEATURES & BENEFITS

- Over 25 years of excellence in manufacturing noise and emission control solutions
- Compact modular designs providing ease of installations, less weight and less foot-print
- Responsive lead time for both standard and custom designs to meet your needs
- Customized engineered systems solutions to meet challenging integration and engine requirements

Contact Nett Technologies with your projects design requirements and specifications for optimized noise control solutions.

OPTIONS

- Versatile connections including ANSI pattern flanges, NPT, slip-on, engine flange, schedule 40 and others
- Aluminized Steel, Stainless Steel 304 or 316 construction
- Horizontal or vertical mounting brackets and lifting lugs

ACCESSORIES

- Hardware Kits
- Flexible connectors and expansion joints
- Elbows
- Thimbles
- Raincaps
- Thermal insulation: integrated or with thermal insulation blankets
- Please see our accessories catalog for a complete listing

PRODUCT DIMENSIONS (in)

Model*	A	D	L1	L2	L3	X**	X	N	O
	Outlet	Dia	EI-EO	SI-EO	SI-SO	Min	Max	Nipple	O
NTRS-C1	1	4	20	18	16	3	10	2	4
NTRS-C1.5	1.5	6	28	26	24	3	12	2	5
NTRS-C2	2	6	28	25	22	4	12	3	6
NTRS-C2.5	2.5	6	32	29	26	4	14	3	6
NTRS-C3	3	6	34	31	28	5	15	3	6
NTRS-C3.5	3.5	9	36	33	30	5	16	3	8
NTRS-C4	4	10	40	37	34	5	17	3	8
NTRS-C5	5	12	42	39	36	6	18	3	9
NTRS-C6	6	14	44	40	36	7	19	4	11
NTRS-C8	8	16	56	52	48	9	24	4	12
NTRS-C10	10	20	58	54	50	11	24	4	14
NTRS-C12	12	24	70	66	62	13	31	4	16
NTRS-C14	14	30	80	75	70	17	35	5	20
NTRS-C16	16	36	90	85	80	17	40	5	23
NTRS-C18	18	40	102	97	92	18	47	5	25
NTRS-C20	20	42	108	103	98	21	50	5	26
NTRS-C22	22	48	116	111	106	23	54	5	29
NTRS-C24	24	48	130	125	120	26	61	5	29

* Other models and custom designs are available upon request. Dimensions subject to change without notice. All silencers are equipped with drain ports on inlet side. The silencer is all welded construction and coated with high heat black paint for maximum durability.

** Standard inlet/outlet position.

HUD DNL Calculator Results

DNL Calculator

WARNING: HUD recommends the use of Microsoft Internet Explorer for performing noise calculations. The HUD Noise Calculator has an error when using Google Chrome unless the cache is cleared before each use of the calculator. HUD is aware of the problem and working to fix it in the programming of the calculator.

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	CSUN Ballpark
Record Date	12/4/2018
User's Name	Rincon Consultants

Road # 1 Name:	**Lindley Avenue (Existing)**

Road #1

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☐
Effective Distance	30	30	
Distance to Stop Sign	600	600	
Average Speed	30	30	
Average Daily Trips (ADT)	5732	58	
Night Fraction of ADT	15	15	
Road Gradient (%)			
Vehicle DNL	63.8793	63.9306	
Calculate Road #1 DNL	66.905	Reset	

Road # 2 Name:	**Lindley Avenue (Existing plus Project)**

Road #2

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☐

Effective Distance	50	50	
Distance to Stop Sign	600	600	
Average Speed	30	30	
Average Daily Trips (ADT)	5732	58	
Night Fraction of ADT	19	15	
Road Gradient (%)			
Vehicle DNL	64.4984	63.9306	
Calculate Road #2 DNL	67.2145	Reset	

Add Road Source Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	◯**Yes** ◯**No**

Combined DNL for all Road and Rail sources	**0**
Combined DNL including Airport	
Site DNL with Loud Impulse Sound	

Calculate

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
    - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
    - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
    - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
    - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
    - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Appendix E

Energy Calculation Worksheets

CSUN Matador Baseball Project

Last Updated: 1/28/2019

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saws	1	8	81	0.73	BC Demo	55.60
Rubber Tired Dozer	1	1	247	0.40	BC Demo	10.44
Tractors/Loaders/Backhoes	2	6	97	0.37	BC Demo	50.62
Graders	1	8	187	0.41	FL Site Prep	32.42
Tractors/Loaders/Backhoes	1	8	97	0.37	FL Site Prep	16.87
Concrete/Industrial Saws	1	8	81	0.73	FL Grading	55.60
Rubber Tired Dozer	1	1	247	0.40	FL Grading	10.44
Tractors/Loaders/Backhoes	2	6	97	0.37	FL Grading	50.62
Cranes	1	4	231	0.29	FL Building	1,147.29
Forklifts	2	6	89	0.20	FL Building	1,016.72
Tractors/Loaders/Backhoes	2	8	97	0.37	FL Building	2,733.33
Graders	1	8	187	0.41	TF Site Prep	32.42
Tractors/Loaders/Backhoes	1	8	97	0.37	TF Site Prep	16.87
Concrete/Industrial Saws	1	8	81	0.73	TF Grading	55.60
Rubber Tired Dozer	1	1	247	0.40	TF Grading	10.44
Tractors/Loaders/Backhoes	2	6	97	0.37	TF Grading	50.62
Cranes	1	4	231	0.29	TF Building	3,980.11
Forklifts	2	6	89	0.20	TF Building	3,527.12
Tractors/Loaders/Backhoes	2	8	97	0.37	TF Building	9,482.28
Air Compressors	1	6	78	0.48	TF Arch Coating	1,122.07
					Total Fuel Used	**23,340.82**
						(Gallons)

Construction Phase	Days of Operation
BC Demo Phase	2
FL Site Preparation Phase	1
FL Grading Phase	2
FL Building Phase	81
TF Site Preparation Phase	1
TF Grading	2
TF Building Phase	281
TF Arch Coating Phase	85

WORKER TRIPS				
Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
BC Demolition Phase	24.0	10	14.7	6.125
FL Site Prep Phase	24.0	5	14.7	3.063
FL Grading Phase	24.0	10	14.7	6.125
FL Building Phase	24.0	13	14.7	7.963
TF Site Prep Phase	24.0	5	14.7	3.063
TF Grading Phase	24.0	10	14.7	6.125
TF Building Phase	24.0	13	14.7	7.963
TF Arch Coating Phase	24.0	3	14.7	1.838
			Total Fuel Used	**42.26**

HAULING AND VENDOR TRIPS				
Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Vendor Trips	7.4	10	6.9	9.324
Hauling Trips	7.4	13	20	35.135
			Total Fuel Used	**44.46**

Gasoline Total	42.26
Diesel Total	23,385.28
GRAND TOTAL	**23,427.54**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.