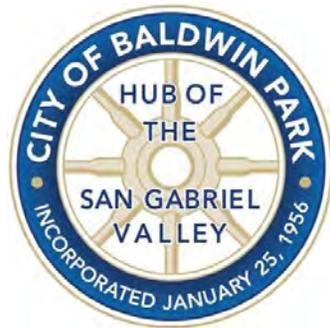


# Initial Study and Mitigated Negative Declaration

## Barnes Park Multi-Benefit Stormwater Capture Project

### Appendix

Prepared for:



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Prepared by:



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Appendix A  
Barnes Park Geotechnical Engineering Report





# Geotechnical Engineering Report

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**Barnes Park Multi-Benefit Stormwater Capture  
Baldwin Park, LA County, California**

September 7, 2021

Updated January 27, 2022

Terracon Project No. 60215111

**Prepared for:**

CWE Corp.  
Fullerton, California

**Prepared by:**

Terracon Consultants, Inc.  
Tustin, California



September 7, 2021  
Updated January 27, 2022



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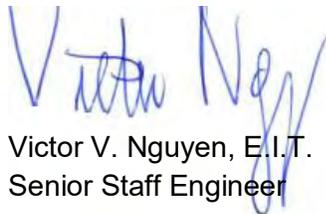
Re: Geotechnical Engineering Report  
Barnes Park Multi-Benefit Stormwater Capture  
3251 Patritti Avenue  
Baldwin Park, LA County, California  
Terracon Project No. 60215111

Dear Mr. Bapna:

We have completed the Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with CWE Work Order No. 21411W02s dated June 16, 2021, amended on August 31, 2021 and December 20, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations for diversion structures and park expansion and amenities, pipeline, pavements, and infiltration systems for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,  
**Terracon Consultants, Inc.**



Victor V. Nguyen, E.I.T.  
Senior Staff Engineer



S. Raj Pirathiviraj, P.E., G.E.  
Senior Engineer

APR review by F. Fred Buhamdan, P.E.

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Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the [GeoReport](#) logo will bring you back to this page. For more interactive features, please view your project online at [client.terracon.com](http://client.terracon.com).

## ATTACHMENTS

**EXPLORATION AND TESTING PROCEDURES**

**SITE LOCATION AND EXPLORATION PLANS**

**EXPLORATION RESULTS** (Boring Logs and Laboratory Data)

**SUPPORTING INFORMATION** (Horticulture Exerts, Liquefaction Analysis, General Notes, and Unified Soil Classification System)

**Geotechnical Engineering Report**  
**Barnes Park Multi-Benefit Stormwater Capture**  
**3251 Patritti Avenue**  
**Baldwin Park, LA County, California**  
**Terracon Project No. 60215111**  
**September 7, 2021**  
**Updated January 27, 2022**

**INTRODUCTION**

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed diversion structure, park expansion and amenities, pipeline, pavements, and infiltration systems to be located at Barnes Park at 3251 Patritti Avenue in Baldwin Park, LA County, California. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Infiltration design and considerations
- Foundation design and construction
- Lateral earth pressures
- Seismic site classification per CBC
- Pavement design and construction

The geotechnical engineering Scope of Services for this project included the advancement of seven test borings to depths ranging from approximately 6½ to 50.8 feet below existing site grades (bgs) on August 18, 2021 and an additional six test borings December 30, 2021.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

**SITE CONDITIONS**

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

| Item                      | Description   |
|---------------------------|---|
| <b>Parcel Information</b> | The project is located at the existing Barnes Park at 3251 Patritti Avenue in Baldwin Park, LA County, California.<br><br>Approximate coordinates for the center of the regional park are 34.0696°N, 117.9997°W |

| Item                         | Description   |
|------------------------------|---|
| <b>Existing Improvements</b> | Current improvements at Barnes Park consists of a recreation building, solar carport canopies, parking and drive areas, shade structures and picnic areas, landscaping and hardscaping, sports fields, and basketball courts.   |
| <b>Current Ground Cover</b>  | Asphalt concrete, earthen cover, and grass field.   |
| <b>Existing Topography</b>   | The site is relatively flat. Approximate elevations within the park, expansion area, and Patriitti Avenue range from 297 feet at the south end to 304 feet above mean sea level (MSL) at the north end. Approximate elevations along Torch Street and Syracuse Avenue range from 297 to 300 feet MSL. |

## PROJECT DESCRIPTION

| Item                            | Description  |
|---------------------------------|--|
| <b>Proposed Additions</b>       | <p>The following additions are proposed for the project:</p> <ul style="list-style-type: none"> <li>■ Addition of infiltration galleries underneath the existing grass field within Barnes Park. The invert of infiltration galleries are anticipated to be an approximate depth of 20 feet bgs.</li> <li>■ Addition of a diversion structure.</li> <li>■ Replacement of the grass on the existing soccer field with new sod.</li> <li>■ Addition of pipeline along Patriitti Avenue, Torch Street, and Syracuse Avenue connecting to the proposed infiltration galleries and diversion structure.</li> <li>■ Expansion of Barnes Park at the north end. New improvements at expansion area will consist of bioswales/dry riverbeds, new parking area, playground area, and soccer field with associated bleachers, benches, and concrete walkway. Based on discussion with the client, considerations are still being made regarding infiltration through bioswales/dry riverbeds. As such, infiltration testing was not performed at these areas. Furthermore, we understand that the proposed expansion is in preliminary stages and details regarding the expansion may change. As such, Terracon should be notified should the conceptual site plan changes as further exploration and/or analyses may be required to confirm or modify the conclusions and recommendations provided herein.</li> </ul> |
| <b>Construction</b>             | <p>We anticipate the following construction:</p> <ul style="list-style-type: none"> <li>■ Diversion structure will consist of a pre-fabricated concrete structure supported on a shallow foundation system consisting of a mat or spread footings.</li> <li>■ Park bleachers will be supported on a shallow foundation system consisting of a mat or spread footings.</li> <li>■ New playground area and equipment will be supported by concrete support slabs.</li> </ul>   |
| <b>Finished Grade Elevation</b> | Assumed to be within one foot of existing grade.   |
| <b>Grading</b>                  | The grading will involve excavation for proposed infiltration galleries, diversion structure, pipeline, and foundations. Based on our understanding of the project, we anticipate cut/fill up to 20 feet bgs.  |

| Item                    | Description  |
|-------------------------|--|
| <p><b>Pavements</b></p> | <p>We assume both rigid (concrete) and flexible (asphalt) pavement sections should be considered in the parking areas.</p> <p>Anticipated traffic is as follows:</p> <ul style="list-style-type: none"> <li>■ Automobile Parking Area: Traffic Index of 4.5</li> <li>■ Driving Lanes: Traffic Index of 5.5</li> </ul> <p>Actual traffic indices should be verified by the civil designer based on anticipated traffic loading.</p> |

## GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface soil and groundwater conditions based upon our review of the data and our understanding of the geologic setting and planned construction.

The geotechnical characterization forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. As noted in **General Comments**, the characterization is based upon widely spaced exploration points across the site, and variations are likely.

### Subsurface Conditions

Surface cover within the field at Barnes Park field consisted of grass cover. Surface cover along Patriiti Avenue consisted of a 4-inch thick layer of asphalt concrete overlying a 3½-inch thick layer of aggregate base course. Surface cover within the expansion area consisted of earthen cover and asphalt concrete. Asphalt concrete at the expansion area was measured to be approximately 3-inches thick. Subsurface soils encountered at the site generally consisted of loose to very dense sand with varying amounts of silt, clay, and gravel.

Conditions encountered at each boring location are indicated on the individual boring logs shown in the **Exploration Results** section and are attached to this report. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual.

### Lab Results

Laboratory tests were conducted on selected soil samples and the test results are presented in the **Exploration Results** section and on the boring logs. Atterberg limit test results indicate that the on-site soils generally are non-plastic. A collapse test performed on on-site soils encountered at an approximate depth of 2½ feet bgs indicated that these soils have a negligible collapse potential when saturated under normal footing loads of 2,000 psf. Direct Shear testing performed on samples taken at approximate depth of 5, 10, and 15 feet bgs indicate these soils have an effective cohesion of ranging from 230 to 530 psf and an effective friction angle ranging from 29° to 30°. A modified proctor test conducted on on-site near surface soils resulted in a maximum dry

density of 124.2 pounds per cubic foot (pcf) and corresponding optimum moisture content of 9.6 percent.

Horticulture testing was performed in samples collected from HA-1 and HA-3 within the proposed sod replacement area. The test report is presented in the **Exploration Results** section.

## **Groundwater Conditions**

Groundwater was not observed in the borings while drilling, or for the short duration the boring remained open. These observations represent groundwater conditions at the time of the field exploration and may not be indicative of other times, or at other locations.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

According to data collected from the Los Angeles County Public Works Water Data Library for the State of California from well number 3003A, located approximately 0.43 mile southeast of the site, the highest groundwater elevation level, between March 20, 2000 and October 18, 2020, was recorded at greater than 50 feet bgs.<sup>1</sup> The most recent groundwater elevation recorded on October 18, 2020 was recorded at approximately 101 feet bgs.

## **SEISMIC CONSIDERATIONS**

The 2019 California Building Code (CBC) Seismic Design Parameters have been generated using the SEAOC/OSHPD Seismic Design Maps Tool. This web-based software application calculates seismic design parameters in accordance with ASCE 7-16 and 2019 CBC. The 2019 CBC requires that a site-specific ground motion study be performed in accordance with Section 11.4.8 of ASCE 7-16 for Site Class D sites with a mapped  $S_1$  value greater than or equal 0.2.

However, Section 11.4.8 of ASCE 7-16 includes an exception from such analysis for specific structures on Site Class D sites. The commentary for Section 11 of ASCE 7-16 (Page 534 of Section C11 of ASCE 7-16) states that "In general, this exception effectively limits the requirements for site-specific hazard analysis to very tall and or flexible structures at Site Class D sites." Based on our understanding of the proposed structures, it is our assumption that the exception in Section 11.8.4 applies to the proposed structure. However, the structural engineer should verify the applicability of this exception.

---

<sup>1</sup> Groundwater elevation was obtained from a monitoring well (well id: 3003A) located at a distance of approximately 0.43 mile southeast of the project site ([www.dpw.lacounty.gov/general/wells#](http://www.dpw.lacounty.gov/general/wells#)).

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Based on this exception, the spectral response accelerations presented below were calculated using the site coefficients ( $F_a$  and  $F_v$ ) from Tables 1613.2.3(1) and 1613.2.3(2) presented in Section 16.4.4 of the 2019 CBC.

| Description   | Value          |
|---|----------------|
| <b>2019 California Building Code Site Classification (CBC)</b> <sup>1</sup> | D <sup>2</sup> |
| <b>Site Latitude (°N)</b>   | 34.0696        |
| <b>Site Longitude (°W)</b>  | 117.9997       |
| <b><math>S_s</math> Spectral Acceleration for a 0.2-Second Period</b>       | 1.745          |
| <b><math>S_1</math> Spectral Acceleration for a 1-Second Period</b>         | 0.636          |
| <b><math>F_a</math> Site Coefficient for a 0.2-Second Period</b>            | 1.000          |
| <b><math>F_v</math> Site Coefficient for a 1-Second Period</b>              | 1.700          |

1. Seismic site classification in general accordance with the 2019 California Building Code.

2. The 2019 California Building Code (CBC) requires a site soil profile determination extending to a depth of 100 feet for seismic site classification. The current scope does not include the required 100-foot soil profile determination. Borings were extended to a maximum depth of 50.8 feet in the existing borings, and this seismic site class definition considers that similar soils continue below the maximum depth of the subsurface exploration. Additional exploration to deeper depths would be required to confirm the conditions below the current depth of exploration.

A site-specific ground motion study may reduce design values and consequently construction costs. We recommend consulting with a structural engineer to evaluate the need for such study and its potential impact on construction costs. Terracon should be contacted if a site-specific ground motion study is desired.

## Faulting and Estimated Ground Motions

The site is located in southern California, which is a seismically active area. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. As calculated using the USGS Unified Hazard Tool, the Puente Hills Fault which is considered to have the most significant effect at the site from a design standpoint has a maximum credible earthquake magnitude of 7.3 and is located approximately 11.3 kilometers from the site.

Based on the USGS Design Maps Summary Report, using the American Society of Civil Engineers (ASCE 7-16) standard, the modified peak ground acceleration ( $PGA_M$ ) at the project site is expected to be 0.819 g. Based on the USGS Unified Hazard Tool, the project site has a

mean magnitude of 6.92. Furthermore, the site is not located within an Alquist-Priolo Earthquake Fault Zone based on our review of the State Fault Hazard Maps.<sup>2</sup>

## **LIQUEFACTION POTENTIAL**

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils exist below groundwater. The California Geological Survey (CGS) has designated certain areas as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table.

The project site is located within a liquefaction hazard zone as designated by the CGS. However, based on the anticipated depth to groundwater, liquefaction hazard potential at the site is considered low. Other geologic hazards related to liquefaction, such as lateral spreading, are therefore also considered low.

## **DRY SEISMIC SETTLEMENT ANALYSIS**

Subsurface soils encountered at the site generally consisted of medium dense to very dense sand with varying amounts of silt and gravel.

The dry seismic settlement analysis for the site was performed in general accordance with the DMG Special Publication 117. The seismic settlement analysis utilized the software “LiquefyPro” by CivilTech Software and boring B-1. A Peak Ground Acceleration (PGA) of 0.819 g and the mean magnitude of 6.92 for the project site were used. Calculations utilized the historical high groundwater depth based on the available data. Settlement analysis used the Tokimatsu, M-correction method and the fines percentage were corrected for liquefaction using the Stark/Olson method.

Based on calculation results, seismically induced settlement of unsaturated sands is estimated to be on the order of 0.4 inch. Differential seismic settlement is anticipated to be between 0.1 to 0.3 inch. The detailed analysis and results are attached to this report in **Supporting Documents** section of the **Appendix**.

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<sup>2</sup> California Department of Conservation Division of Mines and Geology (CDMG), “*Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region*”, CDMG Compact Disc 2000-003, 2000.

## CORROSIVITY

The table below lists the results of laboratory soluble sulfate, soluble chloride, electrical resistivity, and pH testing. The values may be used to estimate potential corrosive characteristics of the on-site soils with respect to contact with the various underground materials which will be used for project construction.

| Corrosivity Test Results Summary |                   |  |                     |                |                 |                       |                               |                   |      |
|----------------------------------|-------------------|--|---------------------|----------------|-----------------|-----------------------|-------------------------------|-------------------|------|
| Boring                           | Sample Depth (ft) | Soil Description                             | Soluble Sulfate (%) | Sulfides (ppm) | Chlorides (ppm) | Red-Ox Potential (mV) | Electrical Resistivity (Ω-cm) | Total Salts (ppm) | pH   |
| B-1                              | 20                | Poorly graded sand with gravel               | 0.01                | Nil            | 45              | +691                  | 19,400                        | 284               | 7.74 |
| B-5                              | 0-5               | Sand with varying amounts of silt and gravel | <0.01               | Nil            | 133             | +688                  | 1,989                         | 754               | 8.17 |

Results of soluble sulfate testing indicate samples of the on-site soils tested possess negligible sulfate concentrations when classified in accordance with Table 19.3.1.1 of the ACI Design Manual. Concrete should be designed in accordance with the exposure class S0 provisions of the ACI Design Manual, Section 318, Chapter 19.

## STORMWATER MANAGEMENT

Two (2) in-situ percolation tests were performed from approximate depths of 20 to 25 feet bgs. A 2-inch thick layer of gravel was placed in the bottom of each boring after the borings were drilled to investigate the soil profile. A 3-inch diameter perforated pipe was installed on top of the gravel layer in each boring. Gravel was used to backfill between the perforated pipes and the boring sidewall. The borings were then filled with water for a pre-soak period of 1 hour. Testing began after a pre-soak period. At the beginning of the test, the pipes were refilled with water and readings were taken at standardized time intervals. Percolation rates are provided in the following table:

| TEST RESULTS                    |  |  |  |                 |
|---------------------------------|--|--|--|-----------------|
| Test Location (depth, feet bgs) | Soil Classification  | Slowest Measured Percolation Rate (in/hr.) | Correlated Infiltration Rate <sup>1</sup> (in/hr.) | Water Head (in) |
| P-1 (20 to 25 ft)               | Poorly graded sand with varying amounts of silt and gravel | 345  | 39.3   | 60              |
| P-2 (20 to 25 ft)               | Poorly graded sand, trace gravel                           | >500                                       | >200   | 60              |

<sup>1</sup>If proposed infiltration system will mainly rely on vertical downward seepage, the correlated infiltration rates should be used.

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The field test results are not intended to be design rates. They represent the result of our tests, at the depths and locations indicated, as described above. The design rate should be determined by the designer by applying an appropriate factor of safety. Based on the County of Los Angeles Department of Public Works GS200.1 document, the following reduction factors are recommended:

| LA County Reduction Factor  | Value          |
|---|----------------|
| Test-specific correction factor $RF_t$                                  | 2              |
| Site variability correction factor $RF_v$                               | 1              |
| Long Term siltation, plugging, and maintenance correction factor $RF_s$ | 2 <sup>1</sup> |
| Total Reduction Factor $RF=RF_t \times RF_v \times RF_s$                | 4              |

1. This factor may be reduced to 1 if stormwater will be clear and filtered of silts and sediments prior to infiltration.

With time, the bottoms of infiltration systems tend to plug with organics, sediments, and other debris. Long term maintenance will likely be required to remove these deleterious materials to help reduce decreases in actual percolation rates.

The percolation tests were performed with clear water, whereas the storm water will likely not be clear, but may contain organics, fines, and grease/oil. The presence of these deleterious materials will tend to decrease the rate that water percolates from the infiltration systems. Design of the storm water infiltration systems should account for the presence of these materials and should incorporate structures/devices to remove these deleterious materials.

Based on the soils encountered in our borings, we expect the percolation rates of the soils could be different than measured in the field due to variations in fines and gravel content. The design elevation and size of the proposed infiltration system should account for this expected variability in infiltration rates.

Infiltration testing should be performed after construction of the infiltration system to verify the design infiltration rates. It should be noted that siltation and vegetation growth along with other factors may affect the infiltration rates of the infiltration areas. The actual infiltration rate may vary from the values reported here. Infiltration systems should be located a minimum of 10 feet from any existing or proposed foundation system.

## **GEOTECHNICAL OVERVIEW**

The site appears suitable for the proposed construction based upon geotechnical conditions encountered in the test borings, provided that the recommendations provided in this report are implemented in the design and construction phases of this project.

The proposed additions may be supported by a shallow foundation system bearing on engineered fill. Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater. Grading for the proposed improvements should incorporate the limits of the shallow foundations plus a lateral distance of 2 feet beyond the outside edge of perimeter footings.

Based on the findings summarized in this report, it is our professional opinion that the proposed construction will not be subjected to a hazard from settlement, slippage, or landslide, provided the recommendations of our report are incorporated into the proposed construction. It is also our opinion that the proposed construction will not adversely affect the geologic stability of the site or adjacent properties provided the recommendations contained in our report are incorporated into the proposed construction.

The recommendations contained in this report are based upon the results of field and laboratory testing (presented in the **Exploration Results** section), engineering analyses, and our current understanding of the proposed project.

The **General Comments** section provides an understanding of the report limitations.

## **EARTHWORK**

The following recommendations include site preparation, excavation, subgrade preparation and placement of engineered fills on the project. The recommendations presented for design and construction of earth supported elements, including foundations, and pavements, are contingent upon following the recommendations outlined in this section.

Subgrade preparation recommendations for new sod should follow installation instructions provided by the landscaper.

Earthwork on the project should be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of engineered fill, subgrade preparation, foundation bearing soils, and other geotechnical conditions exposed during the construction of the project.

### **Site Preparation**

Strip and remove existing debris, pavements, and other deleterious materials from foundation areas. Exposed surfaces should be free of mounds and depressions which could prevent uniform

compaction. The site should be initially graded to create a relatively level surface to receive fill and provide for a relatively uniform thickness of fill beneath proposed improvements.

Although no evidence of fills or underground facilities such as septic tanks, cesspools, basements, and utilities was observed during the site reconnaissance, such features could be encountered during construction. If unexpected fills or underground facilities are encountered, such features should be removed, and the excavation thoroughly cleaned prior to backfill placement and/or construction.

### **Subgrade Preparation**

The proposed structures may be supported by a shallow foundation system bearing on engineered fill. Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater. Grading for the proposed improvements should incorporate the limits of the shallow foundations plus a lateral distance of 2 feet beyond the outside edge of perimeter footings, where possible.

Exposed areas which will receive fill, once properly cleared and benched where necessary, should be scarified to a minimum depth of 10 inches, moisture conditioned, and compacted per the compaction requirements in this report.

Subgrade soils beneath pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. The moisture content and compaction of subgrade soils should be maintained until pavement construction.

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable. However, the workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying.

### **Excavation**

It is anticipated that excavations for the proposed construction can be accomplished with conventional earthmoving equipment. The bottom of excavations should be thoroughly cleaned of loose soils and disturbed materials prior to backfill placement and/or construction.

Onsite soils consist of cohesionless sandy soils. Therefore, OSHA Soil Type C should be utilized for sloping considerations and on-site soils shall be sloped at a minimum of 1.5H:1V. Furthermore, benching is not permitted.

In addition, such soils have the tendency to cave and slough during excavations. As such, formwork may be needed for foundation excavations.

We recommend that the underground chambers be over-excavated by about 2 feet in plan area to provide adequate access around the excavation for chamber construction. The walls of the

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proposed excavation should be shored or sloped in conformance with OSHA excavation and trench safety standards. If any excavation is extended to a depth of more than 20 feet, it will be necessary to have the side slopes designed by a professional engineer.

Soils from the excavation should not be stockpiled higher than six 6 feet or within ten 10 feet of the edge of an open trench. Construction of open cuts adjacent to existing structures, including underground pipes, is not recommended within a 1½ H:1V plane extending beyond and down from the perimeter of the structure. Cuts that are proposed within five 5 feet of light standards, other utilities, underground structures, and pavement should be provided with temporary shoring.

It may be necessary for the contractor to retain a geotechnical engineer to monitor the soils exposed in all excavations and provide engineering services for slopes. This will provide an opportunity to monitor the soils encountered and to modify the excavation slopes as necessary. It also offers an opportunity to verify the stability of the excavation slopes during construction

Individual contractors are responsible for designing and constructing stable, temporary excavations. Excavations should be sloped or shored in the interest of safety following local, and federal regulations, including current OSHA excavation and trench safety standards.

### Fill Materials and Placement

All fill materials should be inorganic soils free of vegetation, debris, and fragments larger than 6 inches in size. Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without the prior approval of the geotechnical engineer.

Clean on-site soils or approved imported materials may be used as fill material for the following:

- general site grading
- foundation areas
- exterior slabs
- foundation backfill
- pavement areas
- sod replacement areas

Imported soils for use as fill material within structural areas should conform to low volume change materials as indicated in the following specifications:

| <u>Gradation</u>                 | <u>Percent Finer by Weight<br/>(ASTM C 136)</u> |
|----------------------------------|---|
| 3" .....                         | 100   |
| No. 4 Sieve .....                | 50-100  |
| No. 200 Sieve .....              | 10-40   |
| ■ Liquid Limit .....             | 30 (max)  |
| ■ Plasticity Index .....         | 15 (max)  |
| ■ Maximum expansion index* ..... | 20 (max)  |

\*ASTM D 4829

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The contractor shall notify the Geotechnical Engineer of import sources sufficiently ahead of their use so that the sources can be observed and approved as to the physical characteristic of the import material. For all import material, the contractor shall also submit current verified reports from a recognized analytical laboratory indicating that the import has a "not applicable" (Class S0) potential for sulfate attack based upon current ACI criteria and is "mildly corrosive" to ferrous metal and copper. The reports shall be accompanied by a written statement from the contractor that the laboratory test results are representative of all import material that will be brought to the job.

Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the lift. Fill lifts should not exceed 10 inches loose thickness.

### Compaction Requirements

Recommended compaction and moisture content criteria for engineered fill materials are as follows:

| Material Type and Location                         | Per the Modified Proctor Test (ASTM D 1557) |   |         |
|--|---|---|---------|
|  | Minimum Compaction Requirement (%)          | Range of Moisture Contents for Compaction Above Optimum |         |
|  |   | Minimum   | Maximum |
| On-site soils and low volume change imported fill: |   |   |         |
| Beneath foundations:                               | 90  | 0%  | +3%     |
| Beneath exterior slabs:                            | 90  | 0%  | 3%      |
| Fill greater than 5 feet in depth                  | 95  | 0%  | +3%     |
| Miscellaneous backfill:                            | 90  | 0%  | +3%     |
| Beneath pavements:                                 | 95  | -1%   | +3%     |
| Below new sod:                                     | <i>per manufacturer guidelines</i>          |   |         |
| Utility Trenches*:                                 | 90  | 0%  | +3%     |
| Bottom of excavation receiving fill:               | 90  | 0%  | +3%     |
| Aggregate base (beneath pavements):                | 95  | -1%   | +3%     |

\* Upper 12 inches should be compacted to 95% within structural areas.

### Grading and Drainage

Positive drainage should be provided during construction and maintained throughout the life of the development. Infiltration of water into utility trenches or foundation excavations should be prevented during construction. In areas where sidewalks or paving do not immediately adjoin the structure, we recommend that protective slopes be provided with a minimum grade of approximately 5 percent for at least 10 feet from perimeter walls. Backfill against footings and in utility and sprinkler line trenches should be well compacted and free of all construction debris to reduce the possibility of moisture infiltration.

We recommend a minimum horizontal setback distance of 10 feet from the perimeter of any building and the high-water elevation of the nearest storm-water infiltration system.

## **Utility Trenches**

It is anticipated that the on-site soils and fill materials will provide suitable support for underground utilities and piping that may be installed. Any soft and/or unsuitable material encountered at the bottom of excavations should be removed and be replaced with an adequate bedding material. A non-expansive granular material with a sand equivalent greater than 30 should be used for bedding and shading of utilities, unless allowed or specified otherwise by the utility manufacturer.

On-site materials are considered suitable for backfill of utility and pipe trenches from one foot above the top of the pipe to the final ground surface, provided the material is free of organic matter and deleterious substances.

Trench backfill should be mechanically placed and compacted as discussed earlier in this report. Compaction of initial lifts should be accomplished with hand-operated tampers or other lightweight compactors. Where trenches are placed beneath slabs or footings, the backfill should satisfy the gradation and expansion index requirements of engineered fill discussed in this report. Flooding or jetting for placement and compaction of backfill is not recommended.

## **Exterior Slab Design and Construction**

Exterior slabs-on-grade, exterior architectural features, and utilities founded on, or in backfill may experience some movement due to the volume change of the backfill. To reduce the potential for damage caused by movement, we recommend:

- minimizing moisture increases in the backfill;
- controlling moisture-density during placement of backfill;
- using designs which allow vertical movement between the exterior features and adjoining structural elements;
- placing effective control joints on relatively close centers

## **Construction Considerations**

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content prior to construction. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed, or these materials should be scarified, moisture conditioned, and recompacted prior to construction.

## Construction Observation and Testing

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation, proof-rolling, placement and compaction of controlled compacted fills, backfilling of excavations to the completed subgrade.

The exposed subgrade and each lift of compacted fill should be tested, evaluated, and reworked as necessary until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the structural areas and 5,000 square feet in pavement and sod replacement areas. One density and water content test for every 50 linear feet of compacted utility trench backfill. This testing frequency criteria may be adjusted during construction as specified by the geotechnical engineer of record.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. In the event that unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer's evaluation of subsurface conditions, including assessing variations and associated design changes.

## SHALLOW FOUNDATIONS

Proposed additions may be supported on conventional spread footings or a structural mat bearing on engineered fill. Recommendations for foundations for the proposed improvements and related structural elements are presented in the following paragraphs.

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

### Shallow Foundation Design Recommendations

| DESCRIPTION                                | RECOMENDATION   |
|--|---|
| Foundation Type                            | Reinforced mat foundations or conventional spread foundations   |
| Bearing Material                           | Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater |
| Design Modulus of Subgrade Reaction, $k^*$ | 200 pci   |

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| DESCRIPTION                              | RECOMENDATION  |
|--|--|
| <b>Modulus Correction Factor*</b>        | $k_c = k [(B+1)/2B]^2$   |
| <b>Allowable Bearing Capacity</b>        | 2,500 psf  |
| <b>Minimum Width</b>                     | 18 inches  |
| <b>Minimum Depth</b>                     | 18 inches for spread footings<br>12 inches for mat foundations |
| <b>Total Estimated Static Settlement</b> | 1 inch or less   |
| <b>Estimated Differential Settlement</b> | ½ inch   |

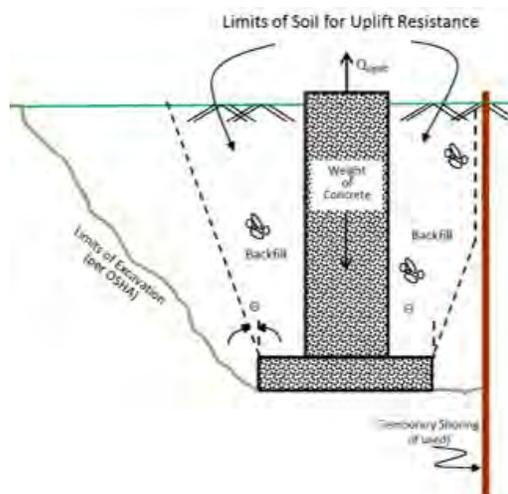
\*K values should be reduced to account for dimensional effects of large loaded areas. Where  $k_c$  is the corrected or design modulus value and B is the mat width in feet.

Finished grade is defined as the lowest adjacent grade within five feet of the foundation. The allowable foundation bearing pressure applies to dead loads plus design live load conditions. The design bearing pressure may be increased by one-third when considering total loads that include wind or seismic conditions. The weight of the foundation concrete below grade may be neglected in dead load computations.

Foundations should be reinforced as necessary to reduce the potential for distress caused by differential foundation movement. Foundation excavations should be observed by the geotechnical engineer. If the soil conditions encountered differ significantly from those presented in this report, supplemental recommendations will be required.

### Design Parameters - Uplift Loads

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. As illustrated on the subsequent figure, the effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle,  $\theta$ , of 20 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 120 pcf should be used for the backfill.



## CONCRETE SUPPORT SLAB

| DESCRIPTION                         | RECOMMENDATION  |
|-------------------------------------|---|
| <b>Slab support</b>                 | Engineered fill should extend to a minimum depth of 2 feet below the bottom of foundations, or 4 feet below existing grades, whichever is greater   |
| <b>Modulus of subgrade reaction</b> | 200 pounds per square inch per inch (psi/in) (The modulus was obtained based on estimates obtained from NAVFAC 7.1 design charts). This value is for a small loaded area (1 Sq. ft or less) such as for forklift wheel loads or point loads and should be adjusted for larger loaded areas. |

Saw-cut control joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Joints or cracks should be sealed with a water-proof, non-extruding compressible compound specifically recommended for heavy duty concrete pavement and wet environments.

The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

## LATERAL EARTH PRESSURES AND TEMPORARY SHORING

### Cantilevered Shoring Recommendations

Recommended equivalent fluid pressures for cantilever shoring are as follows:

| ITEM                    | VALUE <sup>a</sup> |
|-------------------------|--------------------|
| Active Case             | 42 psf/ft          |
| Passive Case            | 350 psf/ft         |
| Surcharge Pressure      | 0.35 x (Surcharge) |
| Coefficient of Friction | 0.40               |

<sup>a</sup>Note: The values are based on engineered fill materials with an average total unit weight of 120 pcf.

The lateral earth pressures herein do not include any factor of safety and are not applicable for submerged soils/hydrostatic loading. Additional recommendations may be necessary if such conditions are to be included in the design.

The design of any shoring system should consider surcharge loads imposed by the existing structures and vehicular loads in the vicinity of the shoring. In general, surcharge loads should be considered where they are located within a horizontal distance behind the shoring equal to the height of the shoring.

Surcharge loads acting at the top of the shoring should be applied to the shoring over the backfill as a uniform pressure over the entire shoring height and should be added to the static earth

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pressures. Surcharge stresses due to point loads, line loads, and those of limited extent, such as compaction equipment, should be evaluated using elastic theory.

### **Braced Shoring Recommendations**

For the design of braced shoring, we recommend such shoring be designed using a rectangular-shaped distribution of lateral earth pressure of  $27H$  (in psf) ( $H$  is the total height of excavation).

The design of the shored excavation should be performed by an engineer knowledgeable and experienced with the on-site soil conditions. The contractor should be aware that slope height, slope inclination or excavation depths should in no case exceed those specified in local, state or federal safety regulations, e.g. OSHA Health and Safety Standards for Excavation, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if not followed, the owner or the contractor could be liable for substantial penalties.

## PAVEMENTS

### General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

### Pavement Design Parameters

An estimated design R-Value was used to calculate the asphalt concrete pavement thickness sections and the Portland cement concrete pavement sections. R-value testing should be completed prior to pavement construction to verify the design R-value.

Assuming the pavement subgrades will be prepared as recommended within this report, the following pavement sections should be considered minimums for this project for the traffic indices assumed in the table below. As more specific traffic information becomes available, we should be contacted to reevaluate the pavement calculations.

### Pavement Section Thicknesses

The following table provides options for AC and PCC Sections:

|  | Recommended Minimum Pavement Section Thickness (inches) <sup>1</sup> |   |
|--|--|---|
|  | Light (Automobile) Parking Assumed Traffic Index (TI) = 4.5          | On-site Driveways and Delivery Areas Assumed TI = 5.5 |
| <u>Section I</u><br>Portland Cement Concrete (600 psi Flexural Strength) | 5.0-inches PCC over 4-inches Class II AB                             | 6.0-inches PCC over 4-inches Class II AB              |
| <u>Section II</u><br>Asphaltic Concrete                                  | 3-inches AC over 4-inches Class II AB                                | 3-inches AC over 6-inches Class II AB                 |

1. All materials should meet the CALTRANS Standard Specifications for Highway Construction.

AC: Asphalt Concrete

AB: Aggregate Base

These pavement sections are considered minimal sections based upon the expected traffic and the existing subgrade conditions. However, they are expected to function with periodic maintenance and overlays if good drainage is provided and maintained.

Subsequent to clearing, grubbing, and removal of topsoil, subgrade soils beneath all pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. All materials should meet the CALTRANS Standard Specifications for Highway Construction. Aggregate base materials should meet the gradation and quality requirement of Class 2 Aggregate Base (¾ inch maximum) in Caltrans Standard Specifications, latest edition, Sections 25 through 29.

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All concrete for rigid pavements should have a minimum flexural strength of 600 psi (4,250 psi Compressive Strength) and be placed with a maximum slump of four inches. Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

Preventative maintenance should be planned and provided for through an on-going pavement management program in order to enhance future pavement performance. Preventative maintenance activities are intended to slow the rate of pavement deterioration, and to preserve the pavement investment.

Preventative maintenance consists of both localized maintenance (e.g. crack sealing and patching) and global maintenance (e.g. surface sealing). Preventative maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the highest return on investment for pavements.

### **Pavement Construction Considerations**

Materials and construction of pavements for the project should be in accordance with the requirements and specifications of the State of California Department of Transportation, or other approved local governing specifications.

Base course or pavement materials should not be placed when the surface is wet. Surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade.

## **GENERAL COMMENTS**

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

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Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

## **ATTACHMENTS**

## EXPLORATION AND TESTING PROCEDURES

### Field Exploration

| Boring ID     | Boring Depth (feet) | Planned Location                       |
|---------------|---------------------|--|
| B-1, P-1, P-2 | 24.4 to 50.8        | Infiltration Gallery Area              |
| B-2, B-6      | 11½ to 16½          | Patritti Avenue                        |
| B-3 to B-5    | 6½ to 16½           | Diversion Structure and Expansion Area |
| B-7           | 11½                 | Torch Street                           |
| B-8           | 11½                 | Syracuse Avenue                        |
| HA-1 to HA-3  | 3                   | Sod Replacement Area                   |

**Boring Layout and Elevations:** Boring locations were determined by Terracon and approved by CWE. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet) and approximate elevations were obtained from the Google Earth. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

**Subsurface Exploration Procedures:** We advanced the borings with a track-mounted drill rig August 18, 2021 and a truck-mounted drill rig on December 30, 2021. Drill rigs utilized continuous flight augers (solid stem and/or hollow stem as necessary depending on soil conditions). Samples were obtained at intervals of 5 feet at the infiltration gallery area borings. Four samples were obtained in the upper 10 feet and at intervals of 5 feet thereafter in all other borings. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon is driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. A 3-inch O.D. split-barrel sampling spoon with 2.5-inch I.D. ring lined sampler was used for sampling in alternation with the 2-inch O.D split-barrel sampling spoon. Ring-lined, split-barrel sampling procedures are similar to standard split spoon sampling procedure. We did not encounter groundwater in our borings during drilling and sampling. As required by Los Angeles County, all borings extending beyond 10 feet or entering into groundwater were backfilled with cement grout slurry. All other borings were backfilled with auger cuttings. Surfaces were patched cold asphalt concrete where appropriate.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the

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materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

### Laboratory Testing

The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D7263 Standard Test Methods for Laboratory Determination of Dry Density (Unit Weight) of Soil Specimens
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than 75- $\mu\text{m}$  (No. 200) Sieve in Soils by Washing
- ASTM D3080 Standard Test Method for Direct Shear Test of Soils Under Consolidated Drained Conditions
- ASTM D4546 Standard Test Methods for One-Dimensional Consolidation Properties of Soils Using Incremental Loading
- Corrosivity Testing will include pH, chlorides, sulfates, sulfides, Redox potential, and electrical lab resistivity

Additionally, samples from HA-1 and HA-3 collected in the proposed sod replacement area was analyzed for nutrient levels and soil suitability for a new landscape installation.

The laboratory testing program included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

## **SITE LOCATION AND EXPLORATION PLANS**

**SITE LOCATION**

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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY QUADRANGLES INCLUDE: EL MONTE, CA (1/1/1994) and BALDWIN PARK, CA (1/1/1981).

# EXPLORATION PLAN

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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

**EXPLORATION PLAN**

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DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

AERIAL PHOTOGRAPHY PROVIDED BY MICROSOFT BING MAPS

## EXPLORATION RESULTS

# BORING LOG NO. B-1

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patritti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111\_CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT\_1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a>   | DEPTH (Ft.)   | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|---|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | DEPTH   |   |                          |             |                    |                   |                       | LL-PL-PI         |               |
|             | Latitude: 34.0694° Longitude: -117.9997°  |   |                          |             |                    |                   |                       |                  |               |
|             | <b>SILTY SAND (SM)</b> , trace gravel and mica, light brown to light gray-brown                       |   |                          |             |                    |                   |                       |                  |               |
|             | 5.0   | <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , trace silt, light brown to light gray-brown, dense | 5                        |             |                    | 33-28-35          | 12.4                  | 98               | 3             |
|             | medium dense  |   | 10                       |             |                    | 11-11-12<br>N=23  |                       |                  |               |
|             | very dense, no recovery   |   | 15                       |             |                    | 50/4"             |                       |                  |               |
| dense       |   | 20  |                          |             | 10-21-29<br>N=50   |                   |                       | 3                |               |
| 25.0        | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light brown to light gray-brown medium dense | 25  |                          |             | 9-26-26            | 2.2               | 126                   | NP               | 8             |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

Groundwater not encountered



1421 Edinger Ave, Ste C  
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-1

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patritti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0694° Longitude: -117.9997°                                       | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | DEPTH   |             |                          |             |                    |                   |                       | LL-PL-PI         |               |
|             | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light brown to light gray-brown ( <i>continued</i> )<br><br>very dense | 30          |                          |             | 17-31-27<br>N=58   |                   |                       |                  |               |
|             | <b>SILTY SAND WITH GRAVEL (SM)</b> , light brown to light gray-brown, dense<br><br>very dense                                   | 35          |                          |             | 14-26-34           | 24.6              | 98                    |                  | 25            |
|             | <b>POORLY GRADED SAND (SP)</b> , trace silt, light brown to light gray-brown, very dense  | 45          |                          |             | 30-30-50/5"        | 7.1               | 101                   |                  | 3             |
|             | <b>Boring Terminated at 50.8 Feet</b>   | 50          |                          |             | 41-50/4"           |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*

1421 Edinger Ave, Ste C  
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-2

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111\_CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0705° Longitude: -117.9990°              | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS |               |
|-------------|--|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             |  |             |                          |             |                    |                   |                       | LL-PL-PI         | PERCENT FINES |
| 0.3         | <b>ASPHALT</b> , 4" thickness  |             |                          |             |                    |                   |                       |                  |               |
| 0.6         | <b>AGGREGATE BASE COURSE</b> , 3.5" thickness  |             |                          |             |                    |                   |                       |                  |               |
| 2.5         | <b>SILTY SAND (SM)</b> , trace mica, light gray brown to light olive-brown                             |             |                          |             |                    |                   |                       |                  |               |
| 5.0         | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light brown to light gray-brown, medium dense |             |                          |             | 10-17-24           | 2.0               | 110                   |                  |               |
| 5.0         | <b>POORLY GRADED SAND (SP)</b> , trace silt and gravel, medium dense                                   | 5           |                          |             | 13-19-25           | 3.1               | 95                    |                  | 3             |
|             | very dense, no recovery  |             |                          |             | 50/3"              |                   |                       |                  |               |
| 10.0        | <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , trace silt, light brown, medium dense                     | 10          |                          |             | 9-20-30            | 2.3               | 118                   |                  | 2             |
| 15.0        | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light gray-brown, medium dense                | 15          |                          |             | 11-17-31           | 6.2               | 97                    |                  |               |
| 16.5        | <b>Boring Terminated at 16.5 Feet</b>  |             |                          |             |                    |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion. Surface capped with cold asphalt concrete.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

Groundwater not encountered



1421 Edinger Ave, Ste C  
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-3

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT\_1/19/22

| GRAPHIC LOG                           | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0713° Longitude: -117.9989°                         | DEPTH (Ft.)  | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS |   | PERCENT FINES |
|---------------------------------------|---|--------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---|---------------|
|                                       |   |              |                          |             |                    |                   |                       | LL-PL-PI         |   |               |
|                                       | 0.3' <b>ASPHALT</b> , 3" thickness  |              |                          |             |                    |                   |                       |                  |   |               |
|                                       | <b>SILTY SAND WITH GRAVEL (SM)</b> , trace clay, brown<br><br>medium dense  |              |                          |             | 3-10-14            | 7.1               | 110                   |                  |   |               |
|                                       | <b>POORLY GRADED SAND WITH SILT (SP-SM)</b> , trace gravel, light gray,<br>medium dense                           | 5            |                          |             | 4-14-23            | 2.4               | 113                   |                  |   |               |
|                                       |   |              |                          |             | 12-15-16           | 1.1               |                       |                  |   |               |
|                                       | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light brown,<br>medium dense<br><br>grayish brown, dense | 10<br><br>15 |                          |             | 10-25-23           | 2.7               | 115                   | NP               | 7 |               |
| <b>Boring Terminated at 16.5 Feet</b> |   |              |                          |             | 16-29-37           | 2.7               | 103                   |                  |   |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion. Surface capped with cold asphalt concrete.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-4

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0715° Longitude: -117.9990°                     | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | LL-PL-PI  |             |                          |             |                    |                   |                       |                  |               |
|             | <b>SILTY SAND (SM)</b> , trace gravel, grayish brown  |             |                          |             |                    |                   |                       |                  |               |
|             | 2.5<br><b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light gray, medium dense<br><br>grayish brown | 5           |                          |             | 22-28-29           | 1.0               |                       |                  | 8             |
|             | 6.5<br><b>Boring Terminated at 6.5 Feet</b>   |             |                          |             | 9-19-23            | 2.6               | 91                    |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111\_CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# BORING LOG NO. B-5

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0713° Longitude: -117.9991°               | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | LL-PL-PI  |             |                          |             |                    |                   |                       |                  |               |
| DEPTH       |   |             |                          |             |                    |                   |                       |                  |               |
| 0.3         | <b>ASPHALT</b> , 3" thickness   |             |                          |             |                    |                   |                       |                  |               |
|             | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , grayish brown<br><br>medium dense, no recovery |             |                          |             | 24-26-24           |                   |                       |                  |               |
| 5.0         | <b>SILTY SAND (SM)</b> , trace clay, dark ash brown, medium dense                                       | 5           |                          |             |                    |                   |                       |                  |               |
| 6.5         | <b>Boring Terminated at 6.5 Feet</b>  |             |                          |             | 3-6-17             | 2.6               | 105                   |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion. Surface capped with cold asphalt concrete

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



1421 Edinger Ave, Ste C  
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-6

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT\_1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0683° Longitude: -117.9997° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS |   | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---|---------------|
|             |   |             |                          |             |                    |                   |                       | LL-PL-PI         |   |               |
|             | 0.3' <b>ASPHALT</b> , 3.5" thickness  |             |                          |             |                    |                   |                       |                  |   |               |
|             | 0.6' <b>AGGREGATE BASE COURSE</b> , 4" thickness  |             |                          |             |                    |                   |                       |                  |   |               |
|             | <b>SILTY SAND WITH GRAVEL (SM)</b> , tan  |             |                          | Hand        |                    |                   |                       |                  |   |               |
|             | 5.0' <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , tan, medium dense           |             | 5                        | X           |                    | 12-18-17          | 1.6                   | 111              |   | 6             |
|             | very dense  |             |                          | X           | 50/6"              | 1.3               | 107                   |                  |   |               |
|             | 10.0' <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , tan, medium dense                      |             |                          | X           | 11-16-19           | 2.5               | 116                   | NP               | 2 |               |
|             | 11.5' <b>Boring Terminated at 11.5 Feet</b>   |             |                          |             |                    |                   |                       |                  |   |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with Auger Cuttings  
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. B-7

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0686° Longitude: -117.9990° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | LL-PL-PI  |             |                          |             |                    |                   |                       |                  |               |
|             | 0.4 <b>ASPHALT</b> , 5" thickness   |             |                          |             |                    |                   |                       |                  |               |
|             | <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , tan  |             |                          | ✎           |                    |                   |                       | NP               |               |
|             | loose   | 5           |                          | ✎           | 5-7-7              | 5.2               | 107                   |                  | 3             |
|             | medium dense, sample disturbed  | 10          |                          | ✎           | 20-24-17           |                   |                       |                  |               |
|             | 11.5 <b>Boring Terminated at 11.5 Feet</b>  |             |                          | ✎           | 7-13-13            | 1.7               | 99                    |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with Auger Cuttings  
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# BORING LOG NO. B-8

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0675° Longitude: -117.9988° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             |   |             |                          |             |                    |                   |                       | LL-PL-PI         |               |
|             | 0.3 <b>ASPHALT</b> , 3.5" thickness   |             |                          |             |                    |                   |                       |                  |               |
|             | 0.6 <b>AGGREGATE BASE COURSE</b> , 4" thickness   |             |                          |             |                    |                   |                       |                  |               |
|             | <b>POORLY GRADED SAND (SP)</b> , trace gravel, tan  |             |                          | ✋           |                    |                   |                       |                  |               |
|             | 5.0 <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , tan, medium dense, sample disturbed      |             | 5                        |             | X                  | 9-12-23           |                       |                  | 2             |
|             | trace cobbles   |             |                          |             |                    |                   |                       |                  |               |
|             | 11.5 <b>Boring Terminated at 11.5 Feet</b>  |             |                          |             |                    |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with Auger Cuttings  
Surface capped with asphalt

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT\_1/19/22

# BORING LOG NO. HA-1

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG   | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0695° Longitude: -117.9996° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS<br>LL-PL-PI | PERCENT FINES |
|---|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------------------|---------------|
| DEPTH   |   |             |                          |             |                    |                   |                       |                              |               |
|  | <b>SILTY CLAYEY SAND (SC-SM)</b> , brown  |             |                          | ☞           |                    | 18.3              |                       |                              |               |
| 3.0   | <b>Boring Terminated at 3 Feet</b>  |             |                          |             |                    |                   |                       |                              |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111\_CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# BORING LOG NO. HA-2

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG   | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0692° Longitude: -117.9997° | DEPTH (Ft) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE   | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|---|---|------------|--------------------------|---|--------------------|-------------------|-----------------------|------------------|---------------|
|   | DEPTH   |            |                          |   |                    |                   |                       | LL-PL-PI         |               |
|  | <p><b>SILTY SAND WITH GRAVEL (SM)</b>, brown</p>  | <p>3.0</p> |                          |  |                    | 21.8              |                       |                  |               |
|   | <p><b>Boring Terminated at 3 Feet</b></p>   |            |                          |   |                    |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# BORING LOG NO. HA-3

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

| GRAPHIC LOG   | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0690° Longitude: -117.9997° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS<br>LL-PL-PI | PERCENT FINES |
|---|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------------------|---------------|
| DEPTH   |   |             |                          |             |                    |                   |                       |                              |               |
|  | <b>SILTY CLAYEY SAND (SC-SM)</b> , brown  |             |                          | ✎           |                    | 29.0              |                       |                              |               |
| 3.0   | <b>Boring Terminated at 3 Feet</b>  |             |                          |             |                    |                   |                       |                              |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with auger cuttings upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 12-30-2021

Boring Completed: 12-30-2021

Drill Rig: CME 75

Driller: 2R Drilling

Project No.: 60215111

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# BORING LOG NO. P-1

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111\_CWE-BARNES PARK.GPJ TERRACON.DATATEMPLATE.GDT 1/19/22

| GRAPHIC LOG                           | LOCATION See <a href="#">Exploration Plan</a>  | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|---------------------------------------|--|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|                                       | DEPTH  |             |                          |             |                    |                   |                       | LL-PL-PI         |               |
| 2.5                                   | <b>SILTY SAND (SM)</b> , trace gravel, gray-brown to olive-brown                         |             |                          |             |                    |                   |                       |                  |               |
| 15.0                                  | <b>POORLY GRADED SAND WITH SILT (SP-SM)</b> , trace gravel, light olive-brown            |             |                          |             |                    |                   |                       |                  |               |
| 20.0                                  | <b>SILTY SAND WITH GRAVEL (SM)</b> , light brown to gray, very dense                     |             |                          | X           | 16-40-50/5"        | 1.8               | 112                   |                  | 26            |
| 23.5                                  | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , light brown to gray, dense      |             |                          | X           | 15-35-43           | 3.3               | 107                   |                  | 5             |
| 24.4                                  | <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , trace silt, light brown to gray, very dense |             |                          | X           | 34-50/5"           | 2.9               | 117                   |                  | 2             |
| <b>Boring Terminated at 24.4 Feet</b> |  |             |                          |             |                    |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**

*Groundwater not encountered*



1421 Edinger Ave, Ste C  
Tustin, CA

Boring Started: 08-18-2021

Boring Completed: 08-18-2021

Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111

# BORING LOG NO. P-2

**PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture**

**CLIENT: CWE Corp  
Fullerton, CA**

**SITE: 3251 Patriitti Ave  
Baldwin Park, CA**

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL\_60215111 CWE-BARNES PARK.GPJ TERRACON DATATEMPLATE.GDT 1/19/22

| GRAPHIC LOG | LOCATION See <a href="#">Exploration Plan</a><br>Latitude: 34.0696° Longitude: -117.9996° | DEPTH (Ft.) | WATER LEVEL OBSERVATIONS | SAMPLE TYPE | FIELD TEST RESULTS | WATER CONTENT (%) | DRY UNIT WEIGHT (pcf) | ATTERBERG LIMITS | PERCENT FINES |
|-------------|---|-------------|--------------------------|-------------|--------------------|-------------------|-----------------------|------------------|---------------|
|             | DEPTH   |             |                          |             |                    |                   |                       | LL-PL-PI         |               |
|             | <b>POORLY GRADED SAND WITH GRAVEL (SP)</b> , light brown to light gray                    | 0           |                          |             |                    |                   |                       |                  |               |
|             | <b>POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM)</b> , dark brown                       | 2.5         |                          |             |                    |                   |                       |                  |               |
|             | dense, no recovery  | 15          |                          | X           | 14-41-44           |                   |                       |                  |               |
|             | <b>POORLY GRADED SAND (SP)</b> , trace gravel and silt, light brown to gray-brown, dense  | 20.0        |                          |             | 16-25-37           | 4.3               | 98                    |                  | 2             |
|             | medium dense  | 25          |                          |             | 8-9-12<br>N=21     |                   |                       |                  |               |
|             | <b>Boring Terminated at 25 Feet</b>   | 25          |                          |             |                    |                   |                       |                  |               |

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:  
Hollow Stem Auger

See [Exploration and Testing Procedures](#) for a description of field and laboratory procedures used and additional data (if any).

Notes:

Abandonment Method:  
Boring backfilled with cement grout upon completion.

See [Supporting Information](#) for explanation of symbols and abbreviations.

**WATER LEVEL OBSERVATIONS**  
*Groundwater not encountered*



Boring Started: 08-18-2021

Boring Completed: 08-18-2021

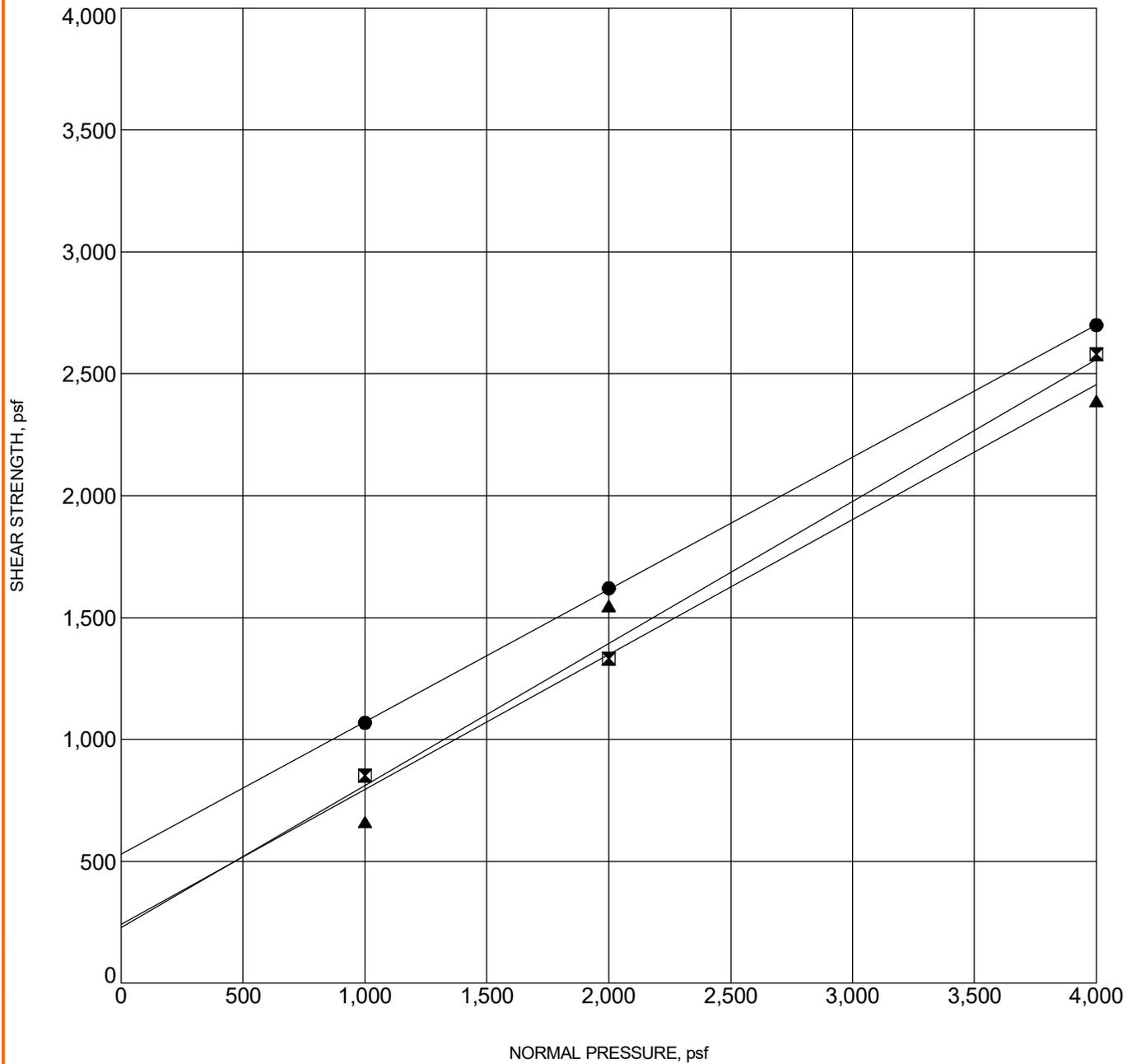
Drill Rig: CME 75 Track

Driller: 2R Drilling

Project No.: 60215111



## DIRECT SHEAR TEST ASTM D3080



| Specimen Identification | Classification                                  |  |  | $\gamma_d$ , pcf | WC, % | c, psf | $\phi^\circ$ |
|-------------------------|---|--|--|------------------|-------|--------|--------------|
| ● B-2      15.0ft       | POORLY GRADED SAND with SILT and GRAVEL (SP-SM) |  |  | 97               | 6     | 528    | 29           |
| ◻ B-6      10.0ft       | POORLY GRADED SAND with GRAVEL (SP)             |  |  | 116              | 2     | 228    | 30           |
| ▲ B-7      5.0ft        | POORLY GRADED SAND with GRAVEL (SP)             |  |  | 107              | 5     | 240    | 29           |
|                         |   |  |  |                  |       |        |              |
|                         |   |  |  |                  |       |        |              |

PROJECT: CWE - Baldwin Park Barnes Park  
Multi-Benefit Stormwater Capture

SITE: 3251 Patritti Ave  
Baldwin Park, CA



PROJECT NUMBER: 60215111

CLIENT: CWE Corp  
Fullerton, CA

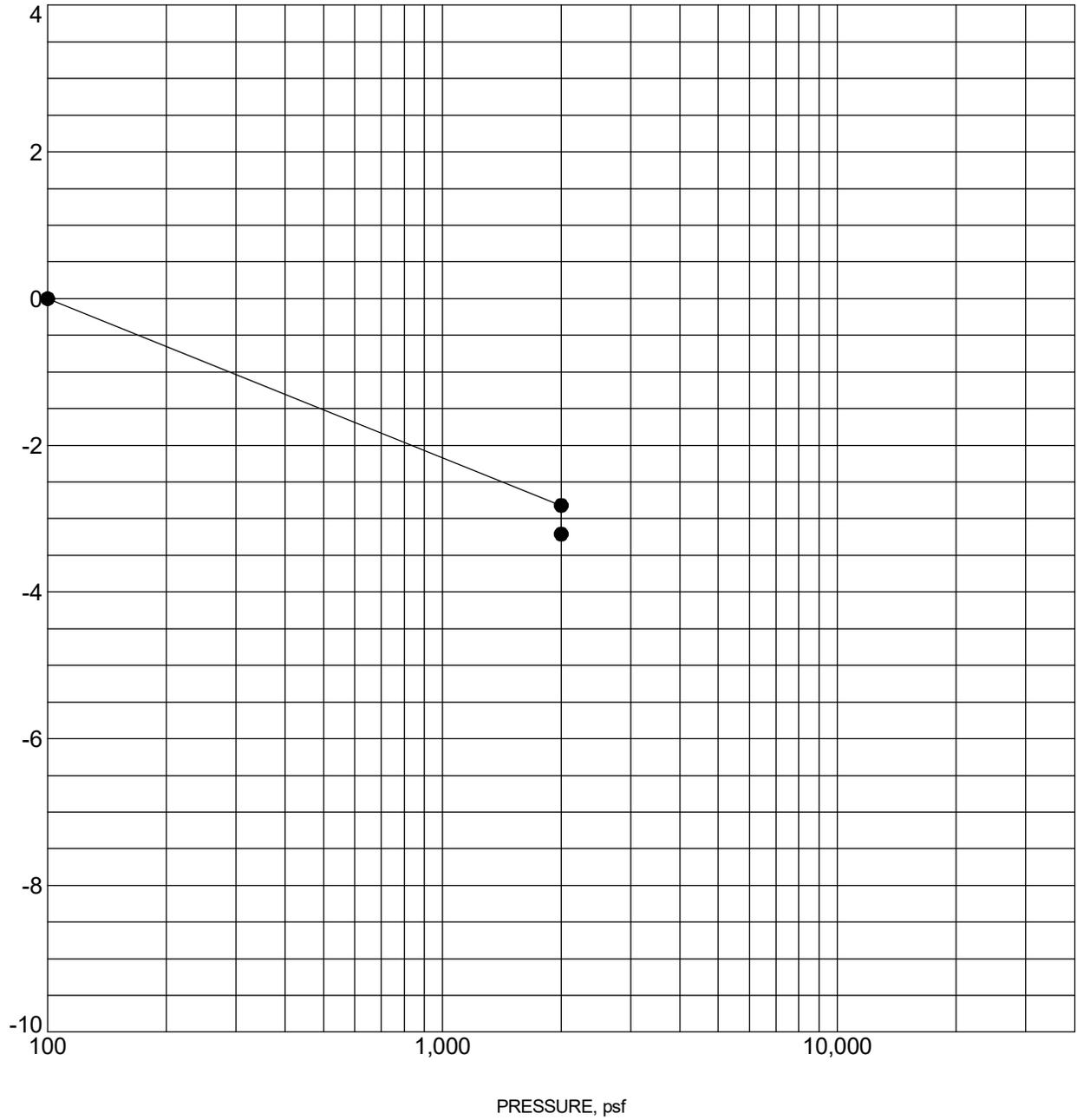
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. TC\_DIRECT\_SHEAR\_60215111\_CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 1/19/22

# SWELL CONSOLIDATION TEST

ASTM D4546

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. TC\_CONSOL\_STRAIN-USCS 60215111 CWE-BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 9/7/21

AXIAL STRAIN, %



| Specimen Identification | Classification         | $\gamma_d$ , pcf | WC, % |
|-------------------------|------------------------|------------------|-------|
| ● B-3      2.5 - 4 ft   | SILTY SAND with GRAVEL | 110              | 7.1   |

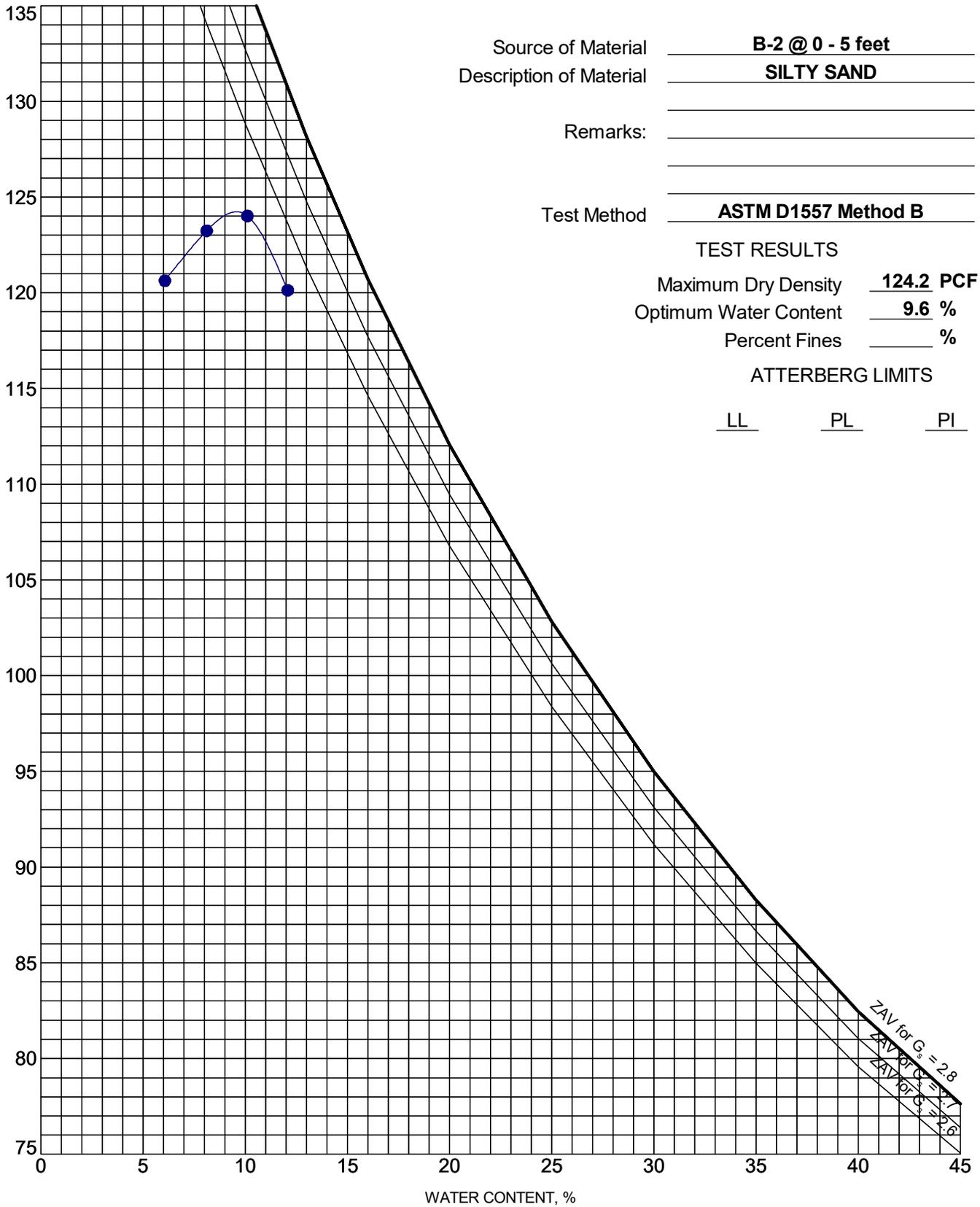
NOTES: Water added at 2,000 psf

|   |   |                                   |
|---|---|-----------------------------------|
| PROJECT: CWE - Baldwin Park Barnes Park<br>Multi-Benefit Stormwater Capture | <br>1421 Edinger Ave, Ste C<br>Tustin, CA | PROJECT NUMBER: 60215111          |
| SITE: 3251 Patriitti Ave<br>Baldwin Park, CA                                |   | CLIENT: CWE Corp<br>Fullerton, CA |

# MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTON - V2 60215111 CWE- BARNES PARK.GPJ TERRACON\_DATATEMPLATE.GDT 9/7/21



Source of Material B-2 @ 0 - 5 feet  
 Description of Material SILTY SAND  
 Remarks: \_\_\_\_\_  
 Test Method ASTM D1557 Method B

### TEST RESULTS

Maximum Dry Density 124.2 PCF  
 Optimum Water Content 9.6 %  
 Percent Fines \_\_\_\_\_ %

### ATTERBERG LIMITS

LL      PL      PI

PROJECT: CWE - Baldwin Park Barnes Park  
 Multi-Benefit Stormwater Capture

SITE: 3251 Patriitti Ave  
 Baldwin Park, CA



PROJECT NUMBER: 60215111

CLIENT: CWE Corp  
 Fullerton, CA

**Client**  
CWE Corp

**Project**  
CWE- Barnes Park Project - Baldwin Park

**Sample Submitted By:** Terracon (60)

**Date Received:** 8/30/2021

**Lab No.:** 21-0632

### Results of Corrosion Analysis

| Sample Number  | --    | --    |
|--|-------|-------|
| Sample Location  | B-1   | B-5   |
| Sample Depth (ft.)   | 20.0  | 0-5.0 |
| pH Analysis, ASTM G 51   | 7.74  | 8.17  |
| Water Soluble Sulfate (SO <sub>4</sub> ), ASTM C 1580<br>(percent %) | 0.01  | <0.01 |
| Sulfides, AWWA 4500-S D, (mg/kg)                                     | Nil   | Nil   |
| Chlorides, ASTM D 512, (mg/kg)                                       | 45    | 133   |
| Red-Ox, ASTM G 200, (mV)   | +691  | +688  |
| Total Salts, AWWA 2540, (mg/kg)                                      | 284   | 754   |
| Saturated Minimum Resistivity, ASTM G 57,<br>(ohm-cm)                | 19400 | 1989  |

**Analyzed By:**



Trisha Campo  
Chemist

## SUPPORTING INFORMATION



Anaheim Office  
Lab No: 22-011-0018  
January 18, 2022

Terracon Consulting, Inc.  
1421 Edinger Avenue, Suite C  
Tustin, CA 92780

Attn: Victor Nguyen

**Project: CWE - Barnes Park - Baldwin Park Job #: 60215111**

Attached are the results of the analysis performed on two soil samples that were collected from the above mentioned project site from a depth of 0-3' by the client and received by our laboratory on 01/11/2022. These samples were analyzed for nutrient levels, agricultural suitability, and physical characteristics in preparation for a new landscape installation.

Analytical Results and Comments

The samples are moderately alkaline in reaction (pH 7.7-7.8). These levels could cause some plants to show yellowing of foliage beginning with the younger growth. Qualitative lime is favorably low allowing for downward pH adjustment. Incorporating soil sulfur to a depth of 6 inches will adjust the pH downward to the depth of incorporation. That change will happen slowly and plants that are selected for this project should be tolerant of alkaline soil conditions.

Salinity (ECe) and soluble sodium are safely low. The sodium adsorption ratios (SAR) are favorably low indicating that the sodium present is properly balanced by calcium and magnesium with regard to soil structure and water infiltration.

Boron is safely low for general ornamental plants and may be below optimum for plant nutritional purposes in both samples. Irrigation water in Southern California often supplies sufficient boron to meet plant nutritional requirements for that nutrient. However, if boron is low in the irrigation water and/or plants show symptoms of boron deficiency after they are well established, consider an application of a product containing boron at the manufacturer's label rate. Boron deficiency symptoms often include stunted or deformed younger growth and "tight" internodes.

In terms of fertility, nitrogen is low in HA-1 and low optimum in HA-3. Phosphorus is low in both. In the minor element group, manganese is fair in HA-1 and very low in HA-3. Iron is fair in HA-3. The remaining nutrient elements except for sulfate are in sufficient supply.

The texture of the less than 2mm fraction of the samples is classified as 'loamy sand' and 'sand' according to the USDA soil classification standards. The over 15% gravel present in the HA-3 sample classifies the soil as 'gravelly'. The estimated water infiltration rate of the 'loamy sand' material is 0.41 inch per hour. The estimated water infiltration rate of the 'gravelly sand' material is 0.50 inch per hour. The actual rates of infiltration may vary depending on the degree of soil compaction on site. Organic content is slightly higher than average for unamended soils (1.01-1.33% on a dry weight basis).

## Recommendations

### Surface Soil Preparation for Groundcover and Mass Planting

If feasible, prior to amending the areas where severe compaction exists, the surface soil should be ripped or tilled to a 9-inch depth. Uniformly broadcast and blend the following with existing soil to a 6-inch depth.

| <u>Materials</u>   | <u>Amount per 1000 sq. ft.</u> |
|--|--------------------------------|
| Nitrogen fortified organic amendment<br>(compost* or redwood or fir sawdust) | 4 cu. yards                    |
| Soil Sulfur  | 12 lbs.                        |
| Ammonium Phosphate (16-20-0)   | 9 lbs.                         |

\*Rates and fertilizers may have to be adjusted depending on analysis of selected compost.

### Tree and Shrub Planting Guidelines

1. Excavate planting pits at least twice the diameter of the rootball.
2. The top of the rootball should be at or slightly above final grade.
3. To improve soil chemistry, uniformly blend 1.5 lbs. of iron sulfate per cubic yard of backfill in both locations. Handle iron sulfate with caution since it will severely stain moist concrete.
4. Organic material is not required in the backfill; however, if you wish, the amended surface soil or a soil blend consisting of no more than 20% by volume organic matter can be placed in the upper 12 inches of backfill only. Soil below this depth should not contain any added organic matter because of the threat of plant disease and/or anaerobic soil conditions developing.
5. Place slow release fertilizer tablets in the upper 12 inches of backfill at manufacturer's recommended rates. If fertilizer amended soil is used as a backfill the addition of slow release fertilizer tablets is not necessary.
6. Do not cover the original rootball with other soil. Ideally, a temporary soil berm is often constructed around the outer edge of the rootball to help channel water into the rootball and then into surrounding soil until roots are established in the backfill and the rootball is no longer the sole source of water for the plant.
7. Ideally, a weed and turf free zone, preferably 2-3 ft. in diameter, should be maintained just beyond the diameter of the planting hole. A 2-4 inch deep layer of coarse mulch can be placed around the tree or shrub; mulch should be kept a minimum 4-6 inches from the trunk.

Page 3

Terracon Consulting, Inc.

January 18, 2022

Maintenance Fertilization

For groundcover and mass planting areas, uniformly broadcast sulfur coated urea at a rate of 5 lbs. per 1000 sq. ft.. The first application should occur approximately 45 days after installation, with repeat applications every 60-90 days or as growth and color dictate. In early fall and spring, substitute a complete fertilizer such as 15-15-15, or equal, for the sulfur coated urea at the rate of 6 lbs. per 1000 sq. ft. to ensure continuing supplies of phosphorus and potassium. Follow each fertilization with a thorough irrigation. When plants have become well established, fertilizer applications can be less frequent.

As noted above, iron is low in HA-3 and manganese is low in both samples. When these nutrients are low, especially in an alkaline soil, deficiencies can sometimes show in the plants. If deficiencies show once plants have become established, they may be addressed upon the first sign of deficiency. Symptoms of manganese deficiency may be seen as a general loss of color in the young leaves, followed by yellowing between veins and brownish-black spots appearing. Iron deficiency symptoms are often characterized by yellow, almost white, interveinal chlorosis on the youngest growth. If these symptoms are apparent once plants are established, then application of iron and/or manganese chelate at the manufacturer's label rate may improve appearance. Chelates are generally more effective on alkaline soils than some of the other forms of trace elements.

If we can be of any further assistance, please feel free to contact us.



Joe Kiefer, CCA

Project : CWE - Barnes Park - Baldwin Park  
Job #: 60215111

Report No : **22-011-0018**  
Purchase Order :  
Date Recd : 01/11/2022  
Date Printed : 01/14/2022  
Page : 1 of 1

## COMPREHENSIVE SOIL ANALYSIS

| Sample Description - Sample ID | Half Sat % | pH        | ECe dS/m | NO <sub>3</sub> -N ppm | NH <sub>4</sub> -N ppm | PO <sub>4</sub> -P ppm | K ppm | Ca ppm | Mg ppm | Cu ppm | Zn ppm | Mn ppm | Fe ppm | Organic % dry wt. | Lab No. |
|--------------------------------|------------|-----------|----------|------------------------|------------------------|------------------------|-------|--------|--------|--------|--------|--------|--------|-------------------|---------|
|                                | TEC        | Qual Lime |          | Sufficiency Factors    |                        |                        |       |        |        |        |        |        |        |                   |         |
| HA-1 @ 0'-3'                   | 13         | 7.8       | 0.3      | 2                      | 11                     | 5                      | 77    | 829    | 103    | 1.0    | 5.6    | 3      | 23     | 1.33              | 30793   |
|                                | 52         | Low       |          | 0.5                    | 0.3                    | 0.9                    | 1.0   | 0.9    | 1.5    | 2.2    | 0.5    | 0.9    |        |                   |         |
| HA-3 @ 0'-3'                   | 14         | 7.7       | 0.3      | 6                      | 14                     | 10                     | 100   | 689    | 81     | 0.7    | 1.7    | 0      | 11     | 1.01              | 30794   |
|                                | 43         | Low       |          | 0.7                    | 0.6                    | 1.2                    | 0.9   | 0.8    | 1.2    | 0.8    | 0      | 0.5    |        |                   |         |

| Saturation Extract Values |          |          |         |       |                       | SAR | Gravel %      |            | Percent of Sample Passing 2 mm Screen |                |                              |               |             | USDA Soil Classification | Lab No. |
|---------------------------|----------|----------|---------|-------|-----------------------|-----|---------------|------------|---------------------------------------|----------------|------------------------------|---------------|-------------|--------------------------|---------|
| Ca meq/L                  | Mg meq/L | Na meq/L | K meq/L | B ppm | SO <sub>4</sub> meq/L |     | Coarse 5 - 12 | Fine 2 - 5 | Very Coarse 1 - 2                     | Coarse 0.5 - 1 | Med. to Very Fine 0.05 - 0.5 | Silt .002-.05 | Clay 0-.002 |                          |         |
| 1.7                       | 0.7      | 0.3      | 0.2     | 0.04  | 0.3                   | 0.3 | 4.3           | 3.6        | 6.8                                   | 25.8           | 51.1                         | 10.5          | 5.6         | Loamy Sand               | 30793   |
| 2.1                       | 0.8      | 0.3      | 0.2     | 0.06  | 0.4                   | 0.3 | 11.8          | 8.7        | 10.2                                  | 39.6           | 41.9                         | 4.5           | 3.6         | Gravelly Sand            | 30794   |

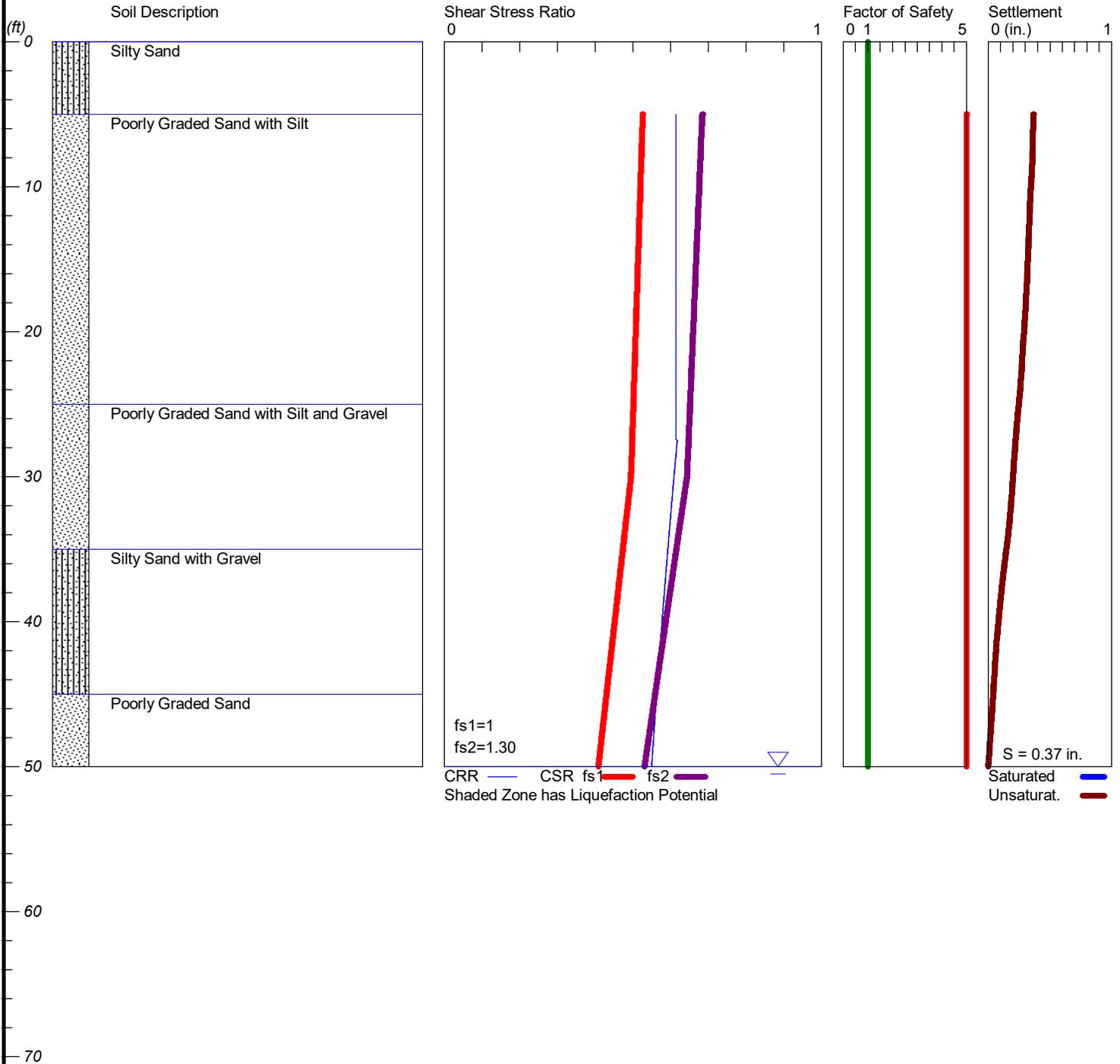
Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m), Boron (B), Sulfate(SO<sub>4</sub>), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

# LIQUEFACTION ANALYSIS

## CWE Barnes Park Multi-Benefit Stormwater Capture

Hole No.=B-1 Water Depth=50 ft

Magnitude=6.92  
Acceleration=0.819g



LiquefyPro CivilTech Software USA www.civiltech.com

\*\*\*\*\*  
\*\*\*\*\*

LIQUEFACTION ANALYSIS SUMMARY

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Font: Courier New, Regular, Size 8 is recommended for this report.  
Licensed to , 9/1/2021 12:12:32 PM

Input File Name: C:\Users\vvnnguyen\OneDrive - Terracon Consultants  
Inc\Desktop\Liquefaction\60215111\B-1.lig  
Title: CWE Barnes Park Multi-Benefit Stormwater Capture  
Subtitle: 60215111

Surface Elev. =  
Hole No. =B-1  
Depth of Hole= 50.00 ft  
Water Table during Earthquake= 50.00 ft  
Water Table during In-Situ Testing= 50.00 ft  
Max. Acceleration= 0.82 g  
Earthquake Magnitude= 6.92

Input Data:

Surface Elev. =  
Hole No. =B-1  
Depth of Hole=50.00 ft  
Water Table during Earthquake= 50.00 ft  
Water Table during In-Situ Testing= 50.00 ft  
Max. Acceleration=0.82 g  
Earthquake Magnitude=6.92  
No-Liquefiable Soils: Based on Analysis

1. SPT or BPT Calculation.
  2. Settlement Analysis Method: Tokimatsu, M-correction
  3. Fines Correction for Liquefaction: Stark/Olson et al.\*
  4. Fine Correction for Settlement: During Liquefaction\*
  5. Settlement Calculation in: All zones\*
  6. Hammer Energy Ratio,  $C_e = 1.45$
  7. Borehole Diameter,  $C_b = 1.15$
  8. Sampling Method,  $C_s = 1.2$
  9. User request factor of safety (apply to CSR) , User= 1.3  
Plot two CSR ( $f_{s1}=1$ ,  $f_{s2}=User$ )
  10. Use Curve Smoothing: Yes\*
- \* Recommended Options

In-Situ Test Data:  
Depth SPT gamma Fines

| ft    |       | pcf    | %     |
|-------|-------|--------|-------|
| 5.00  | 32.00 | 110.00 | 3.00  |
| 10.00 | 23.00 | 115.00 | 3.00  |
| 15.00 | 50.00 | 120.00 | 3.00  |
| 20.00 | 50.00 | 125.00 | 3.00  |
| 25.00 | 26.00 | 129.00 | 8.00  |
| 30.00 | 58.00 | 115.00 | 8.00  |
| 35.00 | 30.00 | 115.00 | 25.00 |
| 40.00 | 50.00 | 115.00 | 25.00 |
| 45.00 | 50.00 | 115.00 | 3.00  |
| 50.00 | 50.00 | 115.00 | 3.00  |

Output Results:

Settlement of Saturated Sands=0.00 in.  
Settlement of Unsaturated Sands=0.37 in.  
Total Settlement of Saturated and Unsaturated Sands=0.37 in.  
Differential Settlement=0.183 to 0.241 in.

| Depth<br>ft | CRRm | CSRfs | F. S. | S_sat.<br>in. | S_dry<br>in. | S_all<br>in. |
|-------------|------|-------|-------|---------------|--------------|--------------|
| 5.00        | 0.61 | 0.53  | 5.00  | 0.00          | 0.37         | 0.37         |
| 5.50        | 0.61 | 0.53  | 5.00  | 0.00          | 0.36         | 0.36         |
| 6.00        | 0.61 | 0.52  | 5.00  | 0.00          | 0.36         | 0.36         |
| 6.50        | 0.61 | 0.52  | 5.00  | 0.00          | 0.36         | 0.36         |
| 7.00        | 0.61 | 0.52  | 5.00  | 0.00          | 0.36         | 0.36         |
| 7.50        | 0.61 | 0.52  | 5.00  | 0.00          | 0.36         | 0.36         |
| 8.00        | 0.61 | 0.52  | 5.00  | 0.00          | 0.36         | 0.36         |
| 8.50        | 0.61 | 0.52  | 5.00  | 0.00          | 0.35         | 0.35         |
| 9.00        | 0.61 | 0.52  | 5.00  | 0.00          | 0.35         | 0.35         |
| 9.50        | 0.61 | 0.52  | 5.00  | 0.00          | 0.35         | 0.35         |
| 10.00       | 0.61 | 0.52  | 5.00  | 0.00          | 0.35         | 0.35         |
| 10.50       | 0.61 | 0.52  | 5.00  | 0.00          | 0.34         | 0.34         |
| 11.00       | 0.61 | 0.52  | 5.00  | 0.00          | 0.34         | 0.34         |
| 11.50       | 0.61 | 0.52  | 5.00  | 0.00          | 0.34         | 0.34         |
| 12.00       | 0.61 | 0.52  | 5.00  | 0.00          | 0.33         | 0.33         |
| 12.50       | 0.61 | 0.52  | 5.00  | 0.00          | 0.33         | 0.33         |
| 13.00       | 0.61 | 0.52  | 5.00  | 0.00          | 0.33         | 0.33         |
| 13.50       | 0.61 | 0.52  | 5.00  | 0.00          | 0.33         | 0.33         |
| 14.00       | 0.61 | 0.51  | 5.00  | 0.00          | 0.32         | 0.32         |
| 14.50       | 0.61 | 0.51  | 5.00  | 0.00          | 0.32         | 0.32         |
| 15.00       | 0.61 | 0.51  | 5.00  | 0.00          | 0.32         | 0.32         |
| 15.50       | 0.61 | 0.51  | 5.00  | 0.00          | 0.32         | 0.32         |
| 16.00       | 0.61 | 0.51  | 5.00  | 0.00          | 0.32         | 0.32         |
| 16.50       | 0.61 | 0.51  | 5.00  | 0.00          | 0.31         | 0.31         |
| 17.00       | 0.61 | 0.51  | 5.00  | 0.00          | 0.31         | 0.31         |
| 17.50       | 0.61 | 0.51  | 5.00  | 0.00          | 0.31         | 0.31         |
| 18.00       | 0.61 | 0.51  | 5.00  | 0.00          | 0.30         | 0.30         |
| 18.50       | 0.61 | 0.51  | 5.00  | 0.00          | 0.30         | 0.30         |

|       |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|
| 19.00 | 0.61 | 0.51 | 5.00 | 0.00 | 0.30 | 0.30 |
| 19.50 | 0.61 | 0.51 | 5.00 | 0.00 | 0.29 | 0.29 |
| 20.00 | 0.61 | 0.51 | 5.00 | 0.00 | 0.29 | 0.29 |
| 20.50 | 0.61 | 0.51 | 5.00 | 0.00 | 0.29 | 0.29 |
| 21.00 | 0.61 | 0.51 | 5.00 | 0.00 | 0.28 | 0.28 |
| 21.50 | 0.61 | 0.51 | 5.00 | 0.00 | 0.28 | 0.28 |
| 22.00 | 0.61 | 0.51 | 5.00 | 0.00 | 0.27 | 0.27 |
| 22.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.27 | 0.27 |
| 23.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.27 | 0.27 |
| 23.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.26 | 0.26 |
| 24.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.26 | 0.26 |
| 24.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.25 | 0.25 |
| 25.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.25 | 0.25 |
| 25.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.24 | 0.24 |
| 26.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.24 | 0.24 |
| 26.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.23 | 0.23 |
| 27.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.23 | 0.23 |
| 27.50 | 0.62 | 0.50 | 5.00 | 0.00 | 0.22 | 0.22 |
| 28.00 | 0.62 | 0.50 | 5.00 | 0.00 | 0.22 | 0.22 |
| 28.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.21 | 0.21 |
| 29.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.21 | 0.21 |
| 29.50 | 0.61 | 0.50 | 5.00 | 0.00 | 0.20 | 0.20 |
| 30.00 | 0.61 | 0.50 | 5.00 | 0.00 | 0.20 | 0.20 |
| 30.50 | 0.61 | 0.49 | 5.00 | 0.00 | 0.20 | 0.20 |
| 31.00 | 0.61 | 0.49 | 5.00 | 0.00 | 0.19 | 0.19 |
| 31.50 | 0.60 | 0.49 | 5.00 | 0.00 | 0.19 | 0.19 |
| 32.00 | 0.60 | 0.49 | 5.00 | 0.00 | 0.18 | 0.18 |
| 32.50 | 0.60 | 0.48 | 5.00 | 0.00 | 0.18 | 0.18 |
| 33.00 | 0.60 | 0.48 | 5.00 | 0.00 | 0.17 | 0.17 |
| 33.50 | 0.60 | 0.48 | 5.00 | 0.00 | 0.17 | 0.17 |
| 34.00 | 0.60 | 0.48 | 5.00 | 0.00 | 0.16 | 0.16 |
| 34.50 | 0.59 | 0.48 | 5.00 | 0.00 | 0.15 | 0.15 |
| 35.00 | 0.59 | 0.47 | 5.00 | 0.00 | 0.15 | 0.15 |
| 35.50 | 0.59 | 0.47 | 5.00 | 0.00 | 0.14 | 0.14 |
| 36.00 | 0.59 | 0.47 | 5.00 | 0.00 | 0.13 | 0.13 |
| 36.50 | 0.59 | 0.47 | 5.00 | 0.00 | 0.12 | 0.12 |
| 37.00 | 0.59 | 0.46 | 5.00 | 0.00 | 0.12 | 0.12 |
| 37.50 | 0.58 | 0.46 | 5.00 | 0.00 | 0.11 | 0.11 |
| 38.00 | 0.58 | 0.46 | 5.00 | 0.00 | 0.11 | 0.11 |
| 38.50 | 0.58 | 0.46 | 5.00 | 0.00 | 0.10 | 0.10 |
| 39.00 | 0.58 | 0.46 | 5.00 | 0.00 | 0.09 | 0.09 |
| 39.50 | 0.58 | 0.45 | 5.00 | 0.00 | 0.09 | 0.09 |
| 40.00 | 0.58 | 0.45 | 5.00 | 0.00 | 0.08 | 0.08 |
| 40.50 | 0.58 | 0.45 | 5.00 | 0.00 | 0.08 | 0.08 |
| 41.00 | 0.57 | 0.45 | 5.00 | 0.00 | 0.07 | 0.07 |
| 41.50 | 0.57 | 0.45 | 5.00 | 0.00 | 0.07 | 0.07 |
| 42.00 | 0.57 | 0.44 | 5.00 | 0.00 | 0.06 | 0.06 |
| 42.50 | 0.57 | 0.44 | 5.00 | 0.00 | 0.06 | 0.06 |
| 43.00 | 0.57 | 0.44 | 5.00 | 0.00 | 0.05 | 0.05 |
| 43.50 | 0.57 | 0.44 | 5.00 | 0.00 | 0.05 | 0.05 |
| 44.00 | 0.57 | 0.43 | 5.00 | 0.00 | 0.05 | 0.05 |

|       |      |      |      |      |      |      |
|-------|------|------|------|------|------|------|
| 44.50 | 0.56 | 0.43 | 5.00 | 0.00 | 0.04 | 0.04 |
| 45.00 | 0.56 | 0.43 | 5.00 | 0.00 | 0.04 | 0.04 |
| 45.50 | 0.56 | 0.43 | 5.00 | 0.00 | 0.04 | 0.04 |
| 46.00 | 0.56 | 0.43 | 5.00 | 0.00 | 0.03 | 0.03 |
| 46.50 | 0.56 | 0.42 | 5.00 | 0.00 | 0.03 | 0.03 |
| 47.00 | 0.56 | 0.42 | 5.00 | 0.00 | 0.02 | 0.02 |
| 47.50 | 0.56 | 0.42 | 5.00 | 0.00 | 0.02 | 0.02 |
| 48.00 | 0.55 | 0.42 | 5.00 | 0.00 | 0.02 | 0.02 |
| 48.50 | 0.55 | 0.41 | 5.00 | 0.00 | 0.01 | 0.01 |
| 49.00 | 0.55 | 0.41 | 5.00 | 0.00 | 0.01 | 0.01 |
| 49.50 | 0.55 | 0.41 | 5.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.55 | 0.41 | 5.00 | 0.00 | 0.00 | 0.00 |

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\* F. S. <1, Liquefaction Potential Zone  
(F. S. is limited to 5, CRR is limited to 2, CSR is limited to 2)

Units: Unit: qc, fs, Stress or Pressure = atm (1.0581tsf); Unit Weight = pcf; Depth = ft; Settlement = in.

---

|                    |  |
|--------------------|--|
| 1 atm (atmosphere) | = 1 tsf (ton/ft <sup>2</sup> )   |
| CRRm               | Cyclic resistance ratio from soils   |
| CSRsf              | Cyclic stress ratio induced by a given earthquake (with user request factor of safety) |
| F. S.              | Factor of Safety against Liquefaction, F. S. =CRRm/CSRsf                               |
| S_sat              | Settlement from saturated sands  |
| S_dry              | Settlement from Unsaturated Sands  |
| S_all              | Total Settlement from Saturated and Unsaturated Sands                                  |
| NoLiq              | No-Liquefy Soils   |

# GENERAL NOTES

## DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

|                 |  |  |  |   |   |                                 |  |
|-----------------|--|--|--|---|---|---------------------------------|--|
| <b>SAMPLING</b> | <br>Auger       | <br>Shelby Tube | <br>Split Spoon                         | <b>WATER LEVEL</b>  | <br>Water Initially Encountered                  | <b>FIELD TESTS</b>              | (HP) Hand Penetrometer                           |
|                 | <br>Rock Core   | <br>Macro Core  | <br>Modified Dames & Moore Ring Sampler |   | <br>Water Level After a Specified Period of Time |                                 | (T) Torvane                                      |
|                 | <br>Grab Sample | <br>No Recovery | <br>Modified California Ring Sampler    |   | <br>Water Level After a Specified Period of Time |                                 | (b/f) Standard Penetration Test (blows per foot) |
|                 |  |  |  | Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations. |   |                                 |  |
|                 |  |  |  |   |   | (N) N value                     |  |
|                 |  |  |  |   |   | (PID) Photo-Ionization Detector |  |
|                 |  |  |  |   |   | (OVA) Organic Vapor Analyzer    |  |
|                 |  |  |  |   |   | (WOH) Weight of Hammer          |  |

## DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

## LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

| <b>STRENGTH TERMS</b> | <b>RELATIVE DENSITY OF COARSE-GRAINED SOILS</b><br>(More than 50% retained on No. 200 sieve.)<br>Density determined by Standard Penetration Resistance<br>Includes gravels, sands and silts. |   |                        | <b>CONSISTENCY OF FINE-GRAINED SOILS</b><br>(50% or more passing the No. 200 sieve.)<br>Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance |  |   |                        |
|-----------------------|--|---|------------------------|--|--|---|------------------------|
|                       | Descriptive Term (Density)   | Standard Penetration or N-Value Blows/Ft. | Ring Sampler Blows/Ft. | Descriptive Term (Consistency)   | Unconfined Compressive Strength, Qu, psf | Standard Penetration or N-Value Blows/Ft. | Ring Sampler Blows/Ft. |
| Very Loose            | 0 - 3  | 0 - 6                                     | Very Soft              | less than 500  | 0 - 1                                    | < 3                                       |                        |
| Loose                 | 4 - 9  | 7 - 18                                    | Soft                   | 500 to 1,000   | 2 - 4                                    | 3 - 4                                     |                        |
| Medium Dense          | 10 - 29  | 19 - 58                                   | Medium-Stiff           | 1,000 to 2,000   | 4 - 8                                    | 5 - 9                                     |                        |
| Dense                 | 30 - 50  | 59 - 98                                   | Stiff                  | 2,000 to 4,000   | 8 - 15                                   | 10 - 18                                   |                        |
| Very Dense            | > 50   | ≥ 99                                      | Very Stiff             | 4,000 to 8,000   | 15 - 30                                  | 19 - 42                                   |                        |
|                       |  |   | Hard                   | > 8,000  | > 30                                     | > 42                                      |                        |

## RELATIVE PROPORTIONS OF SAND AND GRAVEL

| Descriptive Term(s) of other constituents | Percent of Dry Weight |
|---|-----------------------|
| Trace                                     | < 15                  |
| With                                      | 15 - 29               |
| Modifier                                  | > 30                  |

## GRAIN SIZE TERMINOLOGY

| Major Component of Sample | Particle Size                        |
|---------------------------|--------------------------------------|
| Boulders                  | Over 12 in. (300 mm)                 |
| Cobbles                   | 12 in. to 3 in. (300mm to 75mm)      |
| Gravel                    | 3 in. to #4 sieve (75mm to 4.75 mm)  |
| Sand                      | #4 to #200 sieve (4.75mm to 0.075mm) |
| Silt or Clay              | Passing #200 sieve (0.075mm)         |

## RELATIVE PROPORTIONS OF FINES

| Descriptive Term(s) of other constituents | Percent of Dry Weight |
|---|-----------------------|
| Trace                                     | < 5                   |
| With                                      | 5 - 12                |
| Modifier                                  | > 12                  |

## PLASTICITY DESCRIPTION

| Term        | Plasticity Index |
|-------------|------------------|
| Non-plastic | 0                |
| Low         | 1 - 10           |
| Medium      | 11 - 30          |
| High        | > 30             |

| Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup> |   |  |  | Soil Classification |                                   |                                    |
|--|---|--|--|---------------------|-----------------------------------|------------------------------------|
|  |   |  |  | Group Symbol        | Group Name <sup>B</sup>           |                                    |
| <b>Coarse-Grained Soils:</b><br>More than 50% retained on No. 200 sieve                  | <b>Gravels:</b><br>More than 50% of coarse fraction retained on No. 4 sieve | <b>Clean Gravels:</b><br>Less than 5% fines <sup>C</sup>       | $Cu \geq 4$ and $1 \leq Cc \leq 3$ <sup>E</sup>              | GW                  | Well-graded gravel <sup>F</sup>   |                                    |
|  |   |  | $Cu < 4$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ <sup>E</sup> | GP                  | Poorly graded gravel <sup>F</sup> |                                    |
|  |   | <b>Gravels with Fines:</b><br>More than 12% fines <sup>C</sup> | Fines classify as ML or MH                                   | GM                  | Silty gravel <sup>F, G, H</sup>   |                                    |
|  |   |  | Fines classify as CL or CH                                   | GC                  | Clayey gravel <sup>F, G, H</sup>  |                                    |
|  | <b>Sands:</b><br>50% or more of coarse fraction passes No. 4 sieve          | <b>Clean Sands:</b><br>Less than 5% fines <sup>D</sup>         | $Cu \geq 6$ and $1 \leq Cc \leq 3$ <sup>E</sup>              | SW                  | Well-graded sand <sup>I</sup>     |                                    |
|  |   |  | $Cu < 6$ and/or $[Cc < 1 \text{ or } Cc > 3.0]$ <sup>E</sup> | SP                  | Poorly graded sand <sup>I</sup>   |                                    |
|  |   | <b>Sands with Fines:</b><br>More than 12% fines <sup>D</sup>   | Fines classify as ML or MH                                   | SM                  | Silty sand <sup>G, H, I</sup>     |                                    |
|  |   |  | Fines classify as CL or CH                                   | SC                  | Clayey sand <sup>G, H, I</sup>    |                                    |
| <b>Fine-Grained Soils:</b><br>50% or more passes the No. 200 sieve                       | <b>Silts and Clays:</b><br>Liquid limit less than 50                        | <b>Inorganic:</b>  | $PI > 7$ and plots on or above "A" line                      | CL                  | Lean clay <sup>K, L, M</sup>      |                                    |
|  |   |  | $PI < 4$ or plots below "A" line <sup>J</sup>                | ML                  | Silt <sup>K, L, M</sup>           |                                    |
|  |   | <b>Organic:</b>  | Liquid limit - oven dried                                    | < 0.75              | OL                                | Organic clay <sup>K, L, M, N</sup> |
|  |   |  | Liquid limit - not dried                                     |                     |                                   | Organic silt <sup>K, L, M, O</sup> |
|  | <b>Silts and Clays:</b><br>Liquid limit 50 or more                          | <b>Inorganic:</b>  | $PI$ plots on or above "A" line                              | CH                  | Fat clay <sup>K, L, M</sup>       |                                    |
|  |   |  | $PI$ plots below "A" line                                    | MH                  | Elastic Silt <sup>K, L, M</sup>   |                                    |
|  |   | <b>Organic:</b>  | Liquid limit - oven dried                                    | < 0.75              | OH                                | Organic clay <sup>K, L, M, P</sup> |
|  |   |  | Liquid limit - not dried                                     |                     |                                   | Organic silt <sup>K, L, M, Q</sup> |
| <b>Highly organic soils:</b>   | Primarily organic matter, dark in color, and organic odor                   |  |  | PT                  | Peat                              |                                    |

<sup>A</sup> Based on the material passing the 3-inch (75-mm) sieve.

<sup>B</sup> If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

<sup>C</sup> Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

<sup>D</sup> Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

$$Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

<sup>F</sup> If soil contains  $\geq 15\%$  sand, add "with sand" to group name.

<sup>G</sup> If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

<sup>H</sup> If fines are organic, add "with organic fines" to group name.

<sup>I</sup> If soil contains  $\geq 15\%$  gravel, add "with gravel" to group name.

<sup>J</sup> If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

<sup>K</sup> If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

<sup>L</sup> If soil contains  $\geq 30\%$  plus No. 200 predominantly sand, add "sandy" to group name.

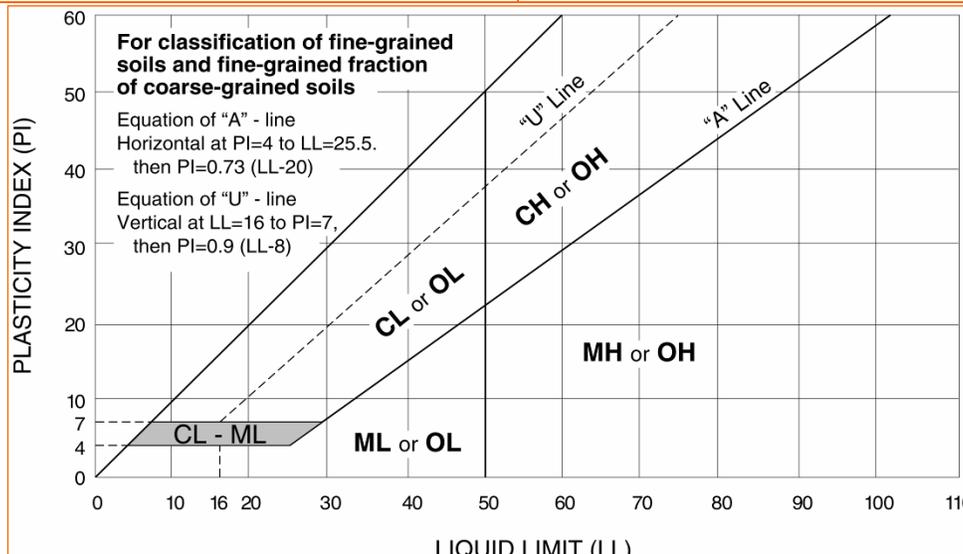
<sup>M</sup> If soil contains  $\geq 30\%$  plus No. 200, predominantly gravel, add "gravelly" to group name.

<sup>N</sup>  $PI \geq 4$  and plots on or above "A" line.

<sup>O</sup>  $PI < 4$  or plots below "A" line.

<sup>P</sup>  $PI$  plots on or above "A" line.

<sup>Q</sup>  $PI$  plots below "A" line.



Appendix B  
Barnes Park Air Quality & GHG Worksheets



City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

**City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project**  
**Los Angeles-South Coast County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses   | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------|------|--------|-------------|--------------------|------------|
| City Park   | 7.00 | Acre   | 7.00        | 304,920.00         | 0          |
| Parking Lot | 1.00 | Acre   | 1.00        | 43,560.00          | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>             | 9                          |                                 |       | <b>Operational Year</b>          | 2025  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - Expanded construction phases.

Off-road Equipment - This phase does not require excessive excavation.

Grading - Revised grading acreage

Off-road Equipment -

Trips and VMT - Revised # trips per worker per day, and number of vendor trips

Mobile Land Use Mitigation -

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| Table Name           | Column Name                | Default Value | New Value                 |
|----------------------|----------------------------|---------------|---------------------------|
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 30.00                     |
| tblConstructionPhase | NumDays                    | 20.00         | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 30.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 45.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | PhaseEndDate               | 11/21/2024    | 1/24/2024                 |
| tblConstructionPhase | PhaseEndDate               | 9/26/2024     | 12/7/2023                 |
| tblConstructionPhase | PhaseEndDate               | 11/9/2023     | 10/26/2023                |
| tblConstructionPhase | PhaseEndDate               | 10/24/2024    | 12/28/2023                |
| tblConstructionPhase | PhaseStartDate             | 10/25/2024    | 12/28/2023                |
| tblConstructionPhase | PhaseStartDate             | 11/10/2023    | 10/27/2023                |
| tblConstructionPhase | PhaseStartDate             | 9/27/2024     | 12/8/2023                 |
| tblGrading           | AcresOfGrading             | 5.00          | 7.00                      |
| tblOffRoadEquipment  | OffRoadEquipmentType       |               | Tractors/Loaders/Backhoes |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 2.00                      |
| tblTripsAndVMT       | VendorTripNumber           | 57.00         | 4.00                      |



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|                |                  |        |       |
|----------------|------------------|--------|-------|
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00  | 12.00 |

**2.0 Emissions Summary**

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City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 1       | 9-1-2023   | 11-30-2023 | 0.7042                                       | 0.7042                                     |
| 2       | 12-1-2023  | 2-29-2024  | 0.6232                                       | 0.6232                                     |
| 3       | 3-1-2024   | 5-31-2024  | 0.5182                                       | 0.5182                                     |
| 4       | 6-1-2024   | 8-31-2024  | 0.5182                                       | 0.5182                                     |
| 5       | 9-1-2024   | 9-30-2024  | 0.1691                                       | 0.1691                                     |
|         |            | Highest    | 0.7042                                       | 0.7042                                     |

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         | 6.3000e-003   | 0.0000        | 1.0000e-004   | 0.0000             |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 2.0000e-004    | 2.0000e-004    | 0.0000        | 0.0000             | 2.1000e-004    |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 4.8577         | 4.8577         | 2.0000e-004   | 4.0000e-005        | 4.8751         |
| Mobile       | 0.0116        | 0.0546        | 0.1491        | 6.0000e-004        | 0.0534        | 4.6000e-004        | 0.0539        | 0.0143         | 4.3000e-004        | 0.0148        | 0.0000        | 55.3833        | 55.3833        | 2.6100e-003   | 0.0000             | 55.4486        |
| Waste        |               |               |               |                    |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.1218        | 0.0000         | 0.1218         | 7.2000e-003   | 0.0000             | 0.3017         |
| Water        |               |               |               |                    |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 29.5239        | 29.5239        | 1.2200e-003   | 2.5000e-004        | 29.6296        |
| <b>Total</b> | <b>0.0179</b> | <b>0.0546</b> | <b>0.1492</b> | <b>6.0000e-004</b> | <b>0.0534</b> | <b>4.6000e-004</b> | <b>0.0539</b> | <b>0.0143</b>  | <b>4.3000e-004</b> | <b>0.0148</b> | <b>0.1218</b> | <b>89.7652</b> | <b>89.8869</b> | <b>0.0112</b> | <b>2.9000e-004</b> | <b>90.2552</b> |

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**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         | 6.3000e-003   | 0.0000        | 1.0000e-004   | 0.0000             |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 2.0000e-004    | 2.0000e-004    | 0.0000        | 0.0000             | 2.1000e-004    |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000             |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 4.8577         | 4.8577         | 2.0000e-004   | 4.0000e-005        | 4.8751         |
| Mobile       | 0.0116        | 0.0546        | 0.1491        | 6.0000e-004        | 0.0534        | 4.6000e-004        | 0.0539        | 0.0143         | 4.3000e-004        | 0.0148        | 0.0000        | 55.3833        | 55.3833        | 2.6100e-003   | 0.0000             | 55.4486        |
| Waste        |               |               |               |                    |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.1218        | 0.0000         | 0.1218         | 7.2000e-003   | 0.0000             | 0.3017         |
| Water        |               |               |               |                    |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        | 0.0000        | 29.5239        | 29.5239        | 1.2200e-003   | 2.5000e-004        | 29.6296        |
| <b>Total</b> | <b>0.0179</b> | <b>0.0546</b> | <b>0.1492</b> | <b>6.0000e-004</b> | <b>0.0534</b> | <b>4.6000e-004</b> | <b>0.0539</b> | <b>0.0143</b>  | <b>4.3000e-004</b> | <b>0.0148</b> | <b>0.1218</b> | <b>89.7652</b> | <b>89.8869</b> | <b>0.0112</b> | <b>2.9000e-004</b> | <b>90.2552</b> |

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 0.00         | 0.00       | 0.00           | 0.00          | 0.00        | 0.00     | 0.00     | 0.00      | 0.00 | 0.00 | 0.00 |

**3.0 Construction Detail**

**Construction Phase**

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| Phase Number | Phase Name                                   | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|--|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition                                   | Demolition            | 9/1/2023   | 9/28/2023  | 5             | 20       |                   |
| 2            | Site Preparation                             | Site Preparation      | 9/29/2023  | 10/12/2023 | 5             | 10       |                   |
| 3            | Grading                                      | Grading               | 10/13/2023 | 10/26/2023 | 5             | 10       |                   |
| 4            | Infiltration Gallery Installation            | Building Construction | 10/27/2023 | 12/7/2023  | 5             | 30       |                   |
| 5            | BI 9705 Diversion Structure                  | Building Construction | 12/8/2023  | 12/28/2023 | 5             | 15       |                   |
| 6            | Diversion Pipeline to Pretreatment           | Building Construction | 12/28/2023 | 1/24/2024  | 5             | 20       |                   |
| 7            | Pretreatment Works                           | Building Construction | 1/25/2024  | 2/7/2024   | 5             | 10       |                   |
| 8            | Diversion Pipeline to SWS w/ Meter and Valve | Building Construction | 2/7/2024   | 2/20/2024  | 5             | 10       |                   |
| 9            | Park Expansion                               | Building Construction | 2/20/2024  | 4/1/2024   | 5             | 30       |                   |
| 10           | Catch Basins                                 | Building Construction | 4/1/2024   | 4/19/2024  | 5             | 15       |                   |
| 11           | Syracuse Ave Storm Drain (15-inch)           | Building Construction | 4/19/2024  | 5/9/2024   | 5             | 15       |                   |
| 12           | Patritti Ave Storm Drain (18-inch)           | Building Construction | 5/9/2024   | 6/5/2024   | 5             | 20       |                   |
| 13           | Basketball Courts                            | Building Construction | 6/5/2024   | 6/18/2024  | 5             | 10       |                   |
| 14           | Patritti Avenue Storm Drain (12 inch)        | Building Construction | 6/18/2024  | 7/1/2024   | 5             | 10       |                   |
| 15           | Parking Lot Expansion                        | Building Construction | 7/1/2024   | 7/19/2024  | 5             | 15       |                   |
| 16           | Park Improvements                            | Building Construction | 7/20/2024  | 9/20/2024  | 5             | 45       |                   |
| 17           | Dog Park                                     | Building Construction | 9/20/2024  | 10/17/2024 | 5             | 20       |                   |
| 18           | Paving                                       | Paving                | 10/18/2024 | 11/14/2024 | 5             | 20       |                   |
| 19           | Architectural Coating                        | Architectural Coating | 11/15/2024 | 12/12/2024 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 7**

**Acres of Paving: 1**

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**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name                                   | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|--|---------------------------|--------|-------------|-------------|-------------|
| Park Improvements                            | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Dog Park                                     | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| BI 9705 Diversion Structure                  | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Diversion Pipeline to Pretreatment           | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Pretreatment Works                           | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Diversion Pipeline to SWS w/ Meter and Valve | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Park Expansion                               | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Paving                                       | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                                       | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                                       | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Catch Basins                                 | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Syracuse Ave Storm Drain (15-inch)           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Patriitti Ave Storm Drain (18-inch)          | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Basketball Courts                            | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Patriitti Avenue Storm Drain (12 inch)       | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Parking Lot Expansion                        | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Park Improvements                            | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Dog Park                                     | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| BI 9705 Diversion Structure                  | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Diversion Pipeline to Pretreatment           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Pretreatment Works                           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Diversion Pipeline to SWS w/ Meter and Valve | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |

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|  |                           |   |      |     |      |
|--|---------------------------|---|------|-----|------|
| Park Expansion                               | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Catch Basins                                 | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Syracuse Ave Storm Drain (15-inch)           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Patriitti Ave Storm Drain (18-inch)          | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Basketball Courts                            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Patriitti Avenue Storm Drain (12 inch)       | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Parking Lot Expansion                        | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Park Improvements                            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Dog Park                                     | Welders                   | 1 | 8.00 | 46  | 0.45 |
| BI 9705 Diversion Structure                  | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Diversion Pipeline to Pretreatment           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Pretreatment Works                           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Diversion Pipeline to SWS w/ Meter and Valve | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Park Expansion                               | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Demolition                                   | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Diversion Pipeline to Pretreatment           | Air Compressors           | 1 | 6.00 | 78  | 0.48 |
| Demolition                                   | Excavators                | 2 | 8.00 | 158 | 0.38 |
| Demolition                                   | Concrete/Industrial Saws  | 1 | 8.00 | 81  | 0.73 |
| Grading                                      | Excavators                | 1 | 8.00 | 158 | 0.38 |
| Infiltration Gallery Installation            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Infiltration Gallery Installation            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Infiltration Gallery Installation            | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| BI 9705 Diversion Structure                  | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| BI 9705 Diversion Structure                  | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition                                   | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading                                      | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Infiltration Gallery Installation            | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |

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|  |                           |   |      |     |      |
|--|---------------------------|---|------|-----|------|
| Grading                                      | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Grading                                      | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| BI 9705 Diversion Structure                  | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Site Preparation                             | Tractors/Loaders/Backhoes | 4 | 8.00 | 97  | 0.37 |
| Site Preparation                             | Rubber Tired Dozers       | 3 | 8.00 | 247 | 0.40 |
| Infiltration Gallery Installation            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Architectural Coating                        | Air Compressors           | 1 | 6.00 | 78  | 0.48 |
| Catch Basins                                 | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Syracuse Ave Storm Drain (15-inch)           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Patritti Ave Storm Drain (18-inch)           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Basketball Courts                            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Patritti Avenue Storm Drain (12 inch)        | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Parking Lot Expansion                        | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Park Improvements                            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Dog Park                                     | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| BI 9705 Diversion Structure                  | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Diversion Pipeline to Pretreatment           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Pretreatment Works                           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Diversion Pipeline to SWS w/ Meter and Valve | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Park Expansion                               | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Catch Basins                                 | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Syracuse Ave Storm Drain (15-inch)           | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Patritti Ave Storm Drain (18-inch)           | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Basketball Courts                            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Patritti Avenue Storm Drain (12 inch)        | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Parking Lot Expansion                        | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Park Improvements                            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |

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|  |                |   |      |    |      |
|--|----------------|---|------|----|------|
| Dog Park                                     | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| BI 9705 Diversion Structure                  | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Diversion Pipeline to Pretreatment           | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Pretreatment Works                           | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Diversion Pipeline to SWS w/ Meter and Valve | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Park Expansion                               | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Catch Basins                                 | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Syracuse Ave Storm Drain (15-inch)           | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Patritti Ave Storm Drain (18-inch)           | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Basketball Courts                            | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Patritti Avenue Storm Drain (12 inch)        | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Parking Lot Expansion                        | Generator Sets | 1 | 8.00 | 84 | 0.74 |

**Trips and VMT**

## City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

| Phase Name                                 | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|--|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition                                 | 7                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation                           | 7                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading                                    | 6                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Infiltration Gallery Installation          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| BI 9705 Diversion Structure                | 15                      | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Diversion Pipeline to Pretreatment         | 10                      | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating                      | 1                       | 12.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Catch Basins                               | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Syracuse Ave Storm Drain (15-inch)         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Patritti Ave Storm Drain (18-inch)         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Basketball Courts                          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Patritti Avenue Storm Drain (12-inch)      | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Parking Lot Expansion                      | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Park Improvements                          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Dog Park                                   | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Pretreatment Works                         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Diversion Pipeline to SWS w/ Meter and Val | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Park Expansion                             | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                                     | 6                       | 12.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

## 3.1 Mitigation Measures Construction

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**3.2 Demolition - 2023**

**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     | 0.0235        | 0.2262        | 0.2029        | 3.9000e-004        |               | 0.0105        | 0.0105        |                | 9.8000e-003        | 9.8000e-003        | 0.0000        | 34.2429        | 34.2429        | 9.6000e-003        | 0.0000        | 34.4830        |
| <b>Total</b> | <b>0.0235</b> | <b>0.2262</b> | <b>0.2029</b> | <b>3.9000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>9.8000e-003</b> | <b>9.8000e-003</b> | <b>0.0000</b> | <b>34.2429</b> | <b>34.2429</b> | <b>9.6000e-003</b> | <b>0.0000</b> | <b>34.4830</b> |

**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       | 3.8000e-004        | 2.7000e-004        | 3.2000e-003        | 1.0000e-005        | 1.1000e-003        | 1.0000e-005        | 1.1000e-003        | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9192        | 0.9192        | 2.0000e-005        | 0.0000        | 0.9198        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.7000e-004</b> | <b>3.2000e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>2.9000e-004</b> | <b>1.0000e-005</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>0.9192</b> | <b>0.9192</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9198</b> |

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**3.2 Demolition - 2023**

**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     | 0.0235        | 0.2262        | 0.2029        | 3.9000e-004        |               | 0.0105        | 0.0105        |                | 9.8000e-003        | 9.8000e-003        | 0.0000        | 34.2429        | 34.2429        | 9.6000e-003        | 0.0000        | 34.4829        |
| <b>Total</b> | <b>0.0235</b> | <b>0.2262</b> | <b>0.2029</b> | <b>3.9000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>9.8000e-003</b> | <b>9.8000e-003</b> | <b>0.0000</b> | <b>34.2429</b> | <b>34.2429</b> | <b>9.6000e-003</b> | <b>0.0000</b> | <b>34.4829</b> |

**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       | 3.8000e-004        | 2.7000e-004        | 3.2000e-003        | 1.0000e-005        | 1.1000e-003        | 1.0000e-005        | 1.1000e-003        | 2.9000e-004        | 1.0000e-005        | 3.0000e-004        | 0.0000        | 0.9192        | 0.9192        | 2.0000e-005        | 0.0000        | 0.9198        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.7000e-004</b> | <b>3.2000e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>1.0000e-005</b> | <b>1.1000e-003</b> | <b>2.9000e-004</b> | <b>1.0000e-005</b> | <b>3.0000e-004</b> | <b>0.0000</b> | <b>0.9192</b> | <b>0.9192</b> | <b>2.0000e-005</b> | <b>0.0000</b> | <b>0.9198</b> |

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**3.3 Site Preparation - 2023**

**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 |               |               |               |                    | 0.0903        | 0.0000             | 0.0903        | 0.0497         | 0.0000             | 0.0497        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0133        | 0.1376        | 0.0912        | 1.9000e-004        |               | 6.3300e-003        | 6.3300e-003   |                | 5.8200e-003        | 5.8200e-003   | 0.0000        | 16.7254        | 16.7254        | 5.4100e-003        | 0.0000        | 16.8606        |
| <b>Total</b>  | <b>0.0133</b> | <b>0.1376</b> | <b>0.0912</b> | <b>1.9000e-004</b> | <b>0.0903</b> | <b>6.3300e-003</b> | <b>0.0967</b> | <b>0.0497</b>  | <b>5.8200e-003</b> | <b>0.0555</b> | <b>0.0000</b> | <b>16.7254</b> | <b>16.7254</b> | <b>5.4100e-003</b> | <b>0.0000</b> | <b>16.8606</b> |

**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       | 1.9000e-004        | 1.4000e-004        | 1.6000e-003        | 1.0000e-005        | 5.5000e-004        | 0.0000        | 5.5000e-004        | 1.5000e-004        | 0.0000        | 1.5000e-004        | 0.0000        | 0.4596        | 0.4596        | 1.0000e-005        | 0.0000        | 0.4599        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.4000e-004</b> | <b>1.6000e-003</b> | <b>1.0000e-005</b> | <b>5.5000e-004</b> | <b>0.0000</b> | <b>5.5000e-004</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>0.4596</b> | <b>0.4596</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.4599</b> |

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**3.3 Site Preparation - 2023**

**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 |               |               |               |                    | 0.0903        | 0.0000             | 0.0903        | 0.0497         | 0.0000             | 0.0497        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 0.0133        | 0.1376        | 0.0912        | 1.9000e-004        |               | 6.3300e-003        | 6.3300e-003   |                | 5.8200e-003        | 5.8200e-003   | 0.0000        | 16.7253        | 16.7253        | 5.4100e-003        | 0.0000        | 16.8606        |
| <b>Total</b>  | <b>0.0133</b> | <b>0.1376</b> | <b>0.0912</b> | <b>1.9000e-004</b> | <b>0.0903</b> | <b>6.3300e-003</b> | <b>0.0967</b> | <b>0.0497</b>  | <b>5.8200e-003</b> | <b>0.0555</b> | <b>0.0000</b> | <b>16.7253</b> | <b>16.7253</b> | <b>5.4100e-003</b> | <b>0.0000</b> | <b>16.8606</b> |

**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       | 1.9000e-004        | 1.4000e-004        | 1.6000e-003        | 1.0000e-005        | 5.5000e-004        | 0.0000        | 5.5000e-004        | 1.5000e-004        | 0.0000        | 1.5000e-004        | 0.0000        | 0.4596        | 0.4596        | 1.0000e-005        | 0.0000        | 0.4599        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.4000e-004</b> | <b>1.6000e-003</b> | <b>1.0000e-005</b> | <b>5.5000e-004</b> | <b>0.0000</b> | <b>5.5000e-004</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>0.4596</b> | <b>0.4596</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.4599</b> |

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**3.4 Grading - 2023**

**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 |                    |               |               |                    | 0.0338        | 0.0000             | 0.0338        | 0.0170         | 0.0000             | 0.0170        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 8.5500e-003        | 0.0897        | 0.0738        | 1.5000e-004        |               | 3.8700e-003        | 3.8700e-003   |                | 3.5600e-003        | 3.5600e-003   | 0.0000        | 13.0303        | 13.0303        | 4.2100e-003        | 0.0000        | 13.1357        |
| <b>Total</b>  | <b>8.5500e-003</b> | <b>0.0897</b> | <b>0.0738</b> | <b>1.5000e-004</b> | <b>0.0338</b> | <b>3.8700e-003</b> | <b>0.0377</b> | <b>0.0170</b>  | <b>3.5600e-003</b> | <b>0.0205</b> | <b>0.0000</b> | <b>13.0303</b> | <b>13.0303</b> | <b>4.2100e-003</b> | <b>0.0000</b> | <b>13.1357</b> |

**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       | 1.9000e-004        | 1.4000e-004        | 1.6000e-003        | 1.0000e-005        | 5.5000e-004        | 0.0000        | 5.5000e-004        | 1.5000e-004        | 0.0000        | 1.5000e-004        | 0.0000        | 0.4596        | 0.4596        | 1.0000e-005        | 0.0000        | 0.4599        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.4000e-004</b> | <b>1.6000e-003</b> | <b>1.0000e-005</b> | <b>5.5000e-004</b> | <b>0.0000</b> | <b>5.5000e-004</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>0.4596</b> | <b>0.4596</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.4599</b> |

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**3.4 Grading - 2023**

**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 |                    |               |               |                    | 0.0338        | 0.0000             | 0.0338        | 0.0170         | 0.0000             | 0.0170        | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| Off-Road      | 8.5500e-003        | 0.0897        | 0.0738        | 1.5000e-004        |               | 3.8700e-003        | 3.8700e-003   |                | 3.5600e-003        | 3.5600e-003   | 0.0000        | 13.0303        | 13.0303        | 4.2100e-003        | 0.0000        | 13.1357        |
| <b>Total</b>  | <b>8.5500e-003</b> | <b>0.0897</b> | <b>0.0738</b> | <b>1.5000e-004</b> | <b>0.0338</b> | <b>3.8700e-003</b> | <b>0.0377</b> | <b>0.0170</b>  | <b>3.5600e-003</b> | <b>0.0205</b> | <b>0.0000</b> | <b>13.0303</b> | <b>13.0303</b> | <b>4.2100e-003</b> | <b>0.0000</b> | <b>13.1357</b> |

**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       | 1.9000e-004        | 1.4000e-004        | 1.6000e-003        | 1.0000e-005        | 5.5000e-004        | 0.0000        | 5.5000e-004        | 1.5000e-004        | 0.0000        | 1.5000e-004        | 0.0000        | 0.4596        | 0.4596        | 1.0000e-005        | 0.0000        | 0.4599        |
| <b>Total</b> | <b>1.9000e-004</b> | <b>1.4000e-004</b> | <b>1.6000e-003</b> | <b>1.0000e-005</b> | <b>5.5000e-004</b> | <b>0.0000</b> | <b>5.5000e-004</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>1.5000e-004</b> | <b>0.0000</b> | <b>0.4596</b> | <b>0.4596</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.4599</b> |

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**3.5 Infiltration Gallery Installation - 2023**

**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     | 0.0236        | 0.2158        | 0.2437        | 4.0000e-004        |               | 0.0105        | 0.0105        |                | 9.8800e-003        | 9.8800e-003        | 0.0000        | 34.7707        | 34.7707        | 8.2700e-003        | 0.0000        | 34.9775        |
| <b>Total</b> | <b>0.0236</b> | <b>0.2158</b> | <b>0.2437</b> | <b>4.0000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>9.8800e-003</b> | <b>9.8800e-003</b> | <b>0.0000</b> | <b>34.7707</b> | <b>34.7707</b> | <b>8.2700e-003</b> | <b>0.0000</b> | <b>34.9775</b> |

**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       | 1.3000e-004        | 4.2500e-003        | 1.3600e-003        | 1.0000e-005        | 3.8000e-004        | 0.0000             | 3.8000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 1.4201        | 1.4201        | 8.0000e-005        | 0.0000        | 1.4220        |
| Worker       | 6.8000e-004        | 4.9000e-004        | 5.7700e-003        | 2.0000e-005        | 1.9700e-003        | 2.0000e-005        | 1.9900e-003        | 5.2000e-004        | 1.0000e-005        | 5.4000e-004        | 0.0000        | 1.6546        | 1.6546        | 4.0000e-005        | 0.0000        | 1.6557        |
| <b>Total</b> | <b>8.1000e-004</b> | <b>4.7400e-003</b> | <b>7.1300e-003</b> | <b>3.0000e-005</b> | <b>2.3500e-003</b> | <b>2.0000e-005</b> | <b>2.3700e-003</b> | <b>6.3000e-004</b> | <b>1.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>3.0747</b> | <b>3.0747</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>3.0777</b> |

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**3.5 Infiltration Gallery Installation - 2023**

**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     | 0.0236        | 0.2158        | 0.2437        | 4.0000e-004        |               | 0.0105        | 0.0105        |                | 9.8800e-003        | 9.8800e-003        | 0.0000        | 34.7707        | 34.7707        | 8.2700e-003        | 0.0000        | 34.9775        |
| <b>Total</b> | <b>0.0236</b> | <b>0.2158</b> | <b>0.2437</b> | <b>4.0000e-004</b> |               | <b>0.0105</b> | <b>0.0105</b> |                | <b>9.8800e-003</b> | <b>9.8800e-003</b> | <b>0.0000</b> | <b>34.7707</b> | <b>34.7707</b> | <b>8.2700e-003</b> | <b>0.0000</b> | <b>34.9775</b> |

**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       | 1.3000e-004        | 4.2500e-003        | 1.3600e-003        | 1.0000e-005        | 3.8000e-004        | 0.0000             | 3.8000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 1.4201        | 1.4201        | 8.0000e-005        | 0.0000        | 1.4220        |
| Worker       | 6.8000e-004        | 4.9000e-004        | 5.7700e-003        | 2.0000e-005        | 1.9700e-003        | 2.0000e-005        | 1.9900e-003        | 5.2000e-004        | 1.0000e-005        | 5.4000e-004        | 0.0000        | 1.6546        | 1.6546        | 4.0000e-005        | 0.0000        | 1.6557        |
| <b>Total</b> | <b>8.1000e-004</b> | <b>4.7400e-003</b> | <b>7.1300e-003</b> | <b>3.0000e-005</b> | <b>2.3500e-003</b> | <b>2.0000e-005</b> | <b>2.3700e-003</b> | <b>6.3000e-004</b> | <b>1.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>3.0747</b> | <b>3.0747</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>3.0777</b> |

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**3.6 BI 9705 Diversion Structure - 2023**

**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     | 0.0118        | 0.1079        | 0.1218        | 2.0000e-004        |               | 5.2500e-003        | 5.2500e-003        |                | 4.9400e-003        | 4.9400e-003        | 0.0000        | 17.3854        | 17.3854        | 4.1400e-003        | 0.0000        | 17.4888        |
| Off-Road     | 7.7500e-003   | 0.0764        | 0.1094        | 1.7000e-004        |               | 3.8300e-003        | 3.8300e-003        |                | 3.5200e-003        | 3.5200e-003        | 0.0000        | 15.0202        | 15.0202        | 4.8600e-003        | 0.0000        | 15.1416        |
| <b>Total</b> | <b>0.0196</b> | <b>0.1843</b> | <b>0.2312</b> | <b>3.7000e-004</b> |               | <b>9.0800e-003</b> | <b>9.0800e-003</b> |                | <b>8.4600e-003</b> | <b>8.4600e-003</b> | <b>0.0000</b> | <b>32.4055</b> | <b>32.4055</b> | <b>9.0000e-003</b> | <b>0.0000</b> | <b>32.6304</b> |

**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       | 6.0000e-005        | 2.1300e-003        | 6.8000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7101        | 0.7101        | 4.0000e-005        | 0.0000        | 0.7110        |
| Worker       | 3.4000e-004        | 2.5000e-004        | 2.8800e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8273        | 0.8273        | 2.0000e-005        | 0.0000        | 0.8279        |
| <b>Total</b> | <b>4.0000e-004</b> | <b>2.3800e-003</b> | <b>3.5600e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5374</b> | <b>1.5374</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5389</b> |

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**3.6 BI 9705 Diversion Structure - 2023**

**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     | 0.0118        | 0.1079        | 0.1218        | 2.0000e-004        |               | 5.2500e-003        | 5.2500e-003        |                | 4.9400e-003        | 4.9400e-003        | 0.0000        | 17.3853        | 17.3853        | 4.1400e-003        | 0.0000        | 17.4887        |
| Off-Road     | 7.7500e-003   | 0.0764        | 0.1094        | 1.7000e-004        |               | 3.8300e-003        | 3.8300e-003        |                | 3.5200e-003        | 3.5200e-003        | 0.0000        | 15.0201        | 15.0201        | 4.8600e-003        | 0.0000        | 15.1416        |
| <b>Total</b> | <b>0.0196</b> | <b>0.1843</b> | <b>0.2312</b> | <b>3.7000e-004</b> |               | <b>9.0800e-003</b> | <b>9.0800e-003</b> |                | <b>8.4600e-003</b> | <b>8.4600e-003</b> | <b>0.0000</b> | <b>32.4055</b> | <b>32.4055</b> | <b>9.0000e-003</b> | <b>0.0000</b> | <b>32.6303</b> |

**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       | 6.0000e-005        | 2.1300e-003        | 6.8000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7101        | 0.7101        | 4.0000e-005        | 0.0000        | 0.7110        |
| Worker       | 3.4000e-004        | 2.5000e-004        | 2.8800e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8273        | 0.8273        | 2.0000e-005        | 0.0000        | 0.8279        |
| <b>Total</b> | <b>4.0000e-004</b> | <b>2.3800e-003</b> | <b>3.5600e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5374</b> | <b>1.5374</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5389</b> |

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**3.7 Diversion Pipeline to Pretreatment - 2023**

**Unmitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 1.7600e-003        | 0.0157        | 0.0181        | 3.0000e-005        |               | 7.7000e-004        | 7.7000e-004        |                | 7.3000e-004        | 7.3000e-004        | 0.0000        | 2.5734        | 2.5734        | 5.7000e-004        | 0.0000        | 2.5875        |
| <b>Total</b> | <b>1.7600e-003</b> | <b>0.0157</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>7.7000e-004</b> | <b>7.7000e-004</b> |                | <b>7.3000e-004</b> | <b>7.3000e-004</b> | <b>0.0000</b> | <b>2.5734</b> | <b>2.5734</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>2.5875</b> |

**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       | 1.0000e-005        | 2.8000e-004        | 9.0000e-005        | 0.0000        | 3.0000e-005        | 0.0000        | 3.0000e-005        | 1.0000e-005        | 0.0000        | 1.0000e-005        | 0.0000        | 0.0947        | 0.0947        | 1.0000e-005        | 0.0000        | 0.0948        |
| Worker       | 5.0000e-005        | 3.0000e-005        | 3.8000e-004        | 0.0000        | 1.3000e-004        | 0.0000        | 1.3000e-004        | 3.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1103        | 0.1103        | 0.0000             | 0.0000        | 0.1104        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>3.1000e-004</b> | <b>4.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>0.2050</b> | <b>0.2050</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.2052</b> |

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**3.7 Diversion Pipeline to Pretreatment - 2023**

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2     | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |               |               |                    |               |               |
| Off-Road     | 1.7600e-003        | 0.0157        | 0.0181        | 3.0000e-005        |               | 7.7000e-004        | 7.7000e-004        |                | 7.3000e-004        | 7.3000e-004        | 0.0000        | 2.5734        | 2.5734        | 5.7000e-004        | 0.0000        | 2.5875        |
| <b>Total</b> | <b>1.7600e-003</b> | <b>0.0157</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>7.7000e-004</b> | <b>7.7000e-004</b> |                | <b>7.3000e-004</b> | <b>7.3000e-004</b> | <b>0.0000</b> | <b>2.5734</b> | <b>2.5734</b> | <b>5.7000e-004</b> | <b>0.0000</b> | <b>2.5875</b> |

**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       | 1.0000e-005        | 2.8000e-004        | 9.0000e-005        | 0.0000        | 3.0000e-005        | 0.0000        | 3.0000e-005        | 1.0000e-005        | 0.0000        | 1.0000e-005        | 0.0000        | 0.0947        | 0.0947        | 1.0000e-005        | 0.0000        | 0.0948        |
| Worker       | 5.0000e-005        | 3.0000e-005        | 3.8000e-004        | 0.0000        | 1.3000e-004        | 0.0000        | 1.3000e-004        | 3.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.1103        | 0.1103        | 0.0000             | 0.0000        | 0.1104        |
| <b>Total</b> | <b>6.0000e-005</b> | <b>3.1000e-004</b> | <b>4.7000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>0.0000</b> | <b>1.6000e-004</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>5.0000e-005</b> | <b>0.0000</b> | <b>0.2050</b> | <b>0.2050</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>0.2052</b> |

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**3.7 Diversion Pipeline to Pretreatment - 2024**

**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     | 0.0149        | 0.1320        | 0.1618        | 2.7000e-004        |               | 6.0700e-003        | 6.0700e-003        |                | 5.7400e-003        | 5.7400e-003        | 0.0000        | 23.1644        | 23.1644        | 5.0600e-003        | 0.0000        | 23.2909        |
| <b>Total</b> | <b>0.0149</b> | <b>0.1320</b> | <b>0.1618</b> | <b>2.7000e-004</b> |               | <b>6.0700e-003</b> | <b>6.0700e-003</b> |                | <b>5.7400e-003</b> | <b>5.7400e-003</b> | <b>0.0000</b> | <b>23.1644</b> | <b>23.1644</b> | <b>5.0600e-003</b> | <b>0.0000</b> | <b>23.2909</b> |

**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       | 8.0000e-005        | 2.5400e-003        | 7.9000e-004        | 1.0000e-005        | 2.3000e-004        | 0.0000             | 2.3000e-004        | 7.0000e-005        | 0.0000             | 7.0000e-005        | 0.0000        | 0.8487        | 0.8487        | 5.0000e-005        | 0.0000        | 0.8498        |
| Worker       | 3.9000e-004        | 2.7000e-004        | 3.2200e-003        | 1.0000e-005        | 1.1800e-003        | 1.0000e-005        | 1.1900e-003        | 3.1000e-004        | 1.0000e-005        | 3.2000e-004        | 0.0000        | 0.9620        | 0.9620        | 2.0000e-005        | 0.0000        | 0.9626        |
| <b>Total</b> | <b>4.7000e-004</b> | <b>2.8100e-003</b> | <b>4.0100e-003</b> | <b>2.0000e-005</b> | <b>1.4100e-003</b> | <b>1.0000e-005</b> | <b>1.4200e-003</b> | <b>3.8000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.8107</b> | <b>1.8107</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>1.8124</b> |

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**3.7 Diversion Pipeline to Pretreatment - 2024**

**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     | 0.0149        | 0.1320        | 0.1618        | 2.7000e-004        |               | 6.0700e-003        | 6.0700e-003        |                | 5.7400e-003        | 5.7400e-003        | 0.0000        | 23.1643        | 23.1643        | 5.0600e-003        | 0.0000        | 23.2909        |
| <b>Total</b> | <b>0.0149</b> | <b>0.1320</b> | <b>0.1618</b> | <b>2.7000e-004</b> |               | <b>6.0700e-003</b> | <b>6.0700e-003</b> |                | <b>5.7400e-003</b> | <b>5.7400e-003</b> | <b>0.0000</b> | <b>23.1643</b> | <b>23.1643</b> | <b>5.0600e-003</b> | <b>0.0000</b> | <b>23.2909</b> |

**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       | 8.0000e-005        | 2.5400e-003        | 7.9000e-004        | 1.0000e-005        | 2.3000e-004        | 0.0000             | 2.3000e-004        | 7.0000e-005        | 0.0000             | 7.0000e-005        | 0.0000        | 0.8487        | 0.8487        | 5.0000e-005        | 0.0000        | 0.8498        |
| Worker       | 3.9000e-004        | 2.7000e-004        | 3.2200e-003        | 1.0000e-005        | 1.1800e-003        | 1.0000e-005        | 1.1900e-003        | 3.1000e-004        | 1.0000e-005        | 3.2000e-004        | 0.0000        | 0.9620        | 0.9620        | 2.0000e-005        | 0.0000        | 0.9626        |
| <b>Total</b> | <b>4.7000e-004</b> | <b>2.8100e-003</b> | <b>4.0100e-003</b> | <b>2.0000e-005</b> | <b>1.4100e-003</b> | <b>1.0000e-005</b> | <b>1.4200e-003</b> | <b>3.8000e-004</b> | <b>1.0000e-005</b> | <b>3.9000e-004</b> | <b>0.0000</b> | <b>1.8107</b> | <b>1.8107</b> | <b>7.0000e-005</b> | <b>0.0000</b> | <b>1.8124</b> |

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**3.8 Pretreatment Works - 2024**

**Unmitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5925        | 11.5925        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5925</b> | <b>11.5925</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.8 Pretreatment Works - 2024**

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5924        | 11.5924        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5924</b> | <b>11.5924</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024**

**Unmitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5925        | 11.5925        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5925</b> | <b>11.5925</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024**

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5924        | 11.5924        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5924</b> | <b>11.5924</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.10 Park Expansion - 2024**

**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     | 0.0221        | 0.2017        | 0.2425        | 4.0000e-004        |               | 9.2000e-003        | 9.2000e-003        |                | 8.6500e-003        | 8.6500e-003        | 0.0000        | 34.7774        | 34.7774        | 8.2200e-003        | 0.0000        | 34.9830        |
| <b>Total</b> | <b>0.0221</b> | <b>0.2017</b> | <b>0.2425</b> | <b>4.0000e-004</b> |               | <b>9.2000e-003</b> | <b>9.2000e-003</b> |                | <b>8.6500e-003</b> | <b>8.6500e-003</b> | <b>0.0000</b> | <b>34.7774</b> | <b>34.7774</b> | <b>8.2200e-003</b> | <b>0.0000</b> | <b>34.9830</b> |

**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       | 1.3000e-004        | 4.2300e-003        | 1.3200e-003        | 1.0000e-005        | 3.8000e-004        | 0.0000             | 3.8000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 1.4144        | 1.4144        | 8.0000e-005        | 0.0000        | 1.4163        |
| Worker       | 6.5000e-004        | 4.5000e-004        | 5.3700e-003        | 2.0000e-005        | 1.9700e-003        | 2.0000e-005        | 1.9900e-003        | 5.2000e-004        | 1.0000e-005        | 5.4000e-004        | 0.0000        | 1.6033        | 1.6033        | 4.0000e-005        | 0.0000        | 1.6043        |
| <b>Total</b> | <b>7.8000e-004</b> | <b>4.6800e-003</b> | <b>6.6900e-003</b> | <b>3.0000e-005</b> | <b>2.3500e-003</b> | <b>2.0000e-005</b> | <b>2.3700e-003</b> | <b>6.3000e-004</b> | <b>1.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>3.0178</b> | <b>3.0178</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>3.0206</b> |

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**3.10 Park Expansion - 2024**

**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     | 0.0221        | 0.2017        | 0.2425        | 4.0000e-004        |               | 9.2000e-003        | 9.2000e-003        |                | 8.6500e-003        | 8.6500e-003        | 0.0000        | 34.7773        | 34.7773        | 8.2200e-003        | 0.0000        | 34.9829        |
| <b>Total</b> | <b>0.0221</b> | <b>0.2017</b> | <b>0.2425</b> | <b>4.0000e-004</b> |               | <b>9.2000e-003</b> | <b>9.2000e-003</b> |                | <b>8.6500e-003</b> | <b>8.6500e-003</b> | <b>0.0000</b> | <b>34.7773</b> | <b>34.7773</b> | <b>8.2200e-003</b> | <b>0.0000</b> | <b>34.9829</b> |

**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       | 1.3000e-004        | 4.2300e-003        | 1.3200e-003        | 1.0000e-005        | 3.8000e-004        | 0.0000             | 3.8000e-004        | 1.1000e-004        | 0.0000             | 1.1000e-004        | 0.0000        | 1.4144        | 1.4144        | 8.0000e-005        | 0.0000        | 1.4163        |
| Worker       | 6.5000e-004        | 4.5000e-004        | 5.3700e-003        | 2.0000e-005        | 1.9700e-003        | 2.0000e-005        | 1.9900e-003        | 5.2000e-004        | 1.0000e-005        | 5.4000e-004        | 0.0000        | 1.6033        | 1.6033        | 4.0000e-005        | 0.0000        | 1.6043        |
| <b>Total</b> | <b>7.8000e-004</b> | <b>4.6800e-003</b> | <b>6.6900e-003</b> | <b>3.0000e-005</b> | <b>2.3500e-003</b> | <b>2.0000e-005</b> | <b>2.3700e-003</b> | <b>6.3000e-004</b> | <b>1.0000e-005</b> | <b>6.5000e-004</b> | <b>0.0000</b> | <b>3.0178</b> | <b>3.0178</b> | <b>1.2000e-004</b> | <b>0.0000</b> | <b>3.0206</b> |

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**3.11 Catch Basins - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.11 Catch Basins - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.12 Syracuse Ave Storm Drain (15-inch) - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.12 Syracuse Ave Storm Drain (15-inch) - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.13 Patritti Ave Storm Drain (18-inch) - 2024**

**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     | 0.0147        | 0.1344        | 0.1617        | 2.7000e-004        |               | 6.1300e-003        | 6.1300e-003        |                | 5.7700e-003        | 5.7700e-003        | 0.0000        | 23.1849        | 23.1849        | 5.4800e-003        | 0.0000        | 23.3220        |
| <b>Total</b> | <b>0.0147</b> | <b>0.1344</b> | <b>0.1617</b> | <b>2.7000e-004</b> |               | <b>6.1300e-003</b> | <b>6.1300e-003</b> |                | <b>5.7700e-003</b> | <b>5.7700e-003</b> | <b>0.0000</b> | <b>23.1849</b> | <b>23.1849</b> | <b>5.4800e-003</b> | <b>0.0000</b> | <b>23.3220</b> |

**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       | 8.0000e-005        | 2.8200e-003        | 8.8000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000             | 2.6000e-004        | 7.0000e-005        | 0.0000             | 8.0000e-005        | 0.0000        | 0.9430        | 0.9430        | 5.0000e-005        | 0.0000        | 0.9442        |
| Worker       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>3.1200e-003</b> | <b>4.4600e-003</b> | <b>2.0000e-005</b> | <b>1.5600e-003</b> | <b>1.0000e-005</b> | <b>1.5900e-003</b> | <b>4.2000e-004</b> | <b>1.0000e-005</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>2.0119</b> | <b>2.0119</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>2.0138</b> |

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**3.13 Patritti Ave Storm Drain (18-inch) - 2024**

**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     | 0.0147        | 0.1344        | 0.1617        | 2.7000e-004        |               | 6.1300e-003        | 6.1300e-003        |                | 5.7700e-003        | 5.7700e-003        | 0.0000        | 23.1849        | 23.1849        | 5.4800e-003        | 0.0000        | 23.3220        |
| <b>Total</b> | <b>0.0147</b> | <b>0.1344</b> | <b>0.1617</b> | <b>2.7000e-004</b> |               | <b>6.1300e-003</b> | <b>6.1300e-003</b> |                | <b>5.7700e-003</b> | <b>5.7700e-003</b> | <b>0.0000</b> | <b>23.1849</b> | <b>23.1849</b> | <b>5.4800e-003</b> | <b>0.0000</b> | <b>23.3220</b> |

**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       | 8.0000e-005        | 2.8200e-003        | 8.8000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000             | 2.6000e-004        | 7.0000e-005        | 0.0000             | 8.0000e-005        | 0.0000        | 0.9430        | 0.9430        | 5.0000e-005        | 0.0000        | 0.9442        |
| Worker       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>3.1200e-003</b> | <b>4.4600e-003</b> | <b>2.0000e-005</b> | <b>1.5600e-003</b> | <b>1.0000e-005</b> | <b>1.5900e-003</b> | <b>4.2000e-004</b> | <b>1.0000e-005</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>2.0119</b> | <b>2.0119</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>2.0138</b> |

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**3.14 Basketball Courts - 2024**

**Unmitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5925        | 11.5925        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5925</b> | <b>11.5925</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.14 Basketball Courts - 2024**

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5924        | 11.5924        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5924</b> | <b>11.5924</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.15 Patritti Avenue Storm Drain (12 inch) - 2024**

**Unmitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5925        | 11.5925        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5925</b> | <b>11.5925</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.15 Patritti Avenue Storm Drain (12 inch) - 2024**

**Mitigated Construction On-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |                    |                |                    |                    | MT/yr         |                |                |                    |               |                |
| Off-Road     | 7.3600e-003        | 0.0672        | 0.0808        | 1.3000e-004        |               | 3.0700e-003        | 3.0700e-003        |                | 2.8800e-003        | 2.8800e-003        | 0.0000        | 11.5924        | 11.5924        | 2.7400e-003        | 0.0000        | 11.6610        |
| <b>Total</b> | <b>7.3600e-003</b> | <b>0.0672</b> | <b>0.0808</b> | <b>1.3000e-004</b> |               | <b>3.0700e-003</b> | <b>3.0700e-003</b> |                | <b>2.8800e-003</b> | <b>2.8800e-003</b> | <b>0.0000</b> | <b>11.5924</b> | <b>11.5924</b> | <b>2.7400e-003</b> | <b>0.0000</b> | <b>11.6610</b> |

**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       | 4.0000e-005        | 1.4100e-003        | 4.4000e-004        | 0.0000             | 1.3000e-004        | 0.0000             | 1.3000e-004        | 4.0000e-005        | 0.0000        | 4.0000e-005        | 0.0000        | 0.4715        | 0.4715        | 3.0000e-005        | 0.0000        | 0.4721        |
| Worker       | 2.2000e-004        | 1.5000e-004        | 1.7900e-003        | 1.0000e-005        | 6.6000e-004        | 1.0000e-005        | 6.6000e-004        | 1.7000e-004        | 0.0000        | 1.8000e-004        | 0.0000        | 0.5344        | 0.5344        | 1.0000e-005        | 0.0000        | 0.5348        |
| <b>Total</b> | <b>2.6000e-004</b> | <b>1.5600e-003</b> | <b>2.2300e-003</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>1.0000e-005</b> | <b>7.9000e-004</b> | <b>2.1000e-004</b> | <b>0.0000</b> | <b>2.2000e-004</b> | <b>0.0000</b> | <b>1.0059</b> | <b>1.0059</b> | <b>4.0000e-005</b> | <b>0.0000</b> | <b>1.0069</b> |

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**3.16 Parking Lot Expansion - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.16 Parking Lot Expansion - 2024**

**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     | 0.0110        | 0.1008        | 0.1213        | 2.0000e-004        |               | 4.6000e-003        | 4.6000e-003        |                | 4.3300e-003        | 4.3300e-003        | 0.0000        | 17.3887        | 17.3887        | 4.1100e-003        | 0.0000        | 17.4915        |
| <b>Total</b> | <b>0.0110</b> | <b>0.1008</b> | <b>0.1213</b> | <b>2.0000e-004</b> |               | <b>4.6000e-003</b> | <b>4.6000e-003</b> |                | <b>4.3300e-003</b> | <b>4.3300e-003</b> | <b>0.0000</b> | <b>17.3887</b> | <b>17.3887</b> | <b>4.1100e-003</b> | <b>0.0000</b> | <b>17.4915</b> |

**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       | 6.0000e-005        | 2.1200e-003        | 6.6000e-004        | 1.0000e-005        | 1.9000e-004        | 0.0000             | 1.9000e-004        | 5.0000e-005        | 0.0000             | 6.0000e-005        | 0.0000        | 0.7072        | 0.7072        | 4.0000e-005        | 0.0000        | 0.7082        |
| Worker       | 3.2000e-004        | 2.2000e-004        | 2.6900e-003        | 1.0000e-005        | 9.9000e-004        | 1.0000e-005        | 9.9000e-004        | 2.6000e-004        | 1.0000e-005        | 2.7000e-004        | 0.0000        | 0.8017        | 0.8017        | 2.0000e-005        | 0.0000        | 0.8022        |
| <b>Total</b> | <b>3.8000e-004</b> | <b>2.3400e-003</b> | <b>3.3500e-003</b> | <b>2.0000e-005</b> | <b>1.1800e-003</b> | <b>1.0000e-005</b> | <b>1.1800e-003</b> | <b>3.1000e-004</b> | <b>1.0000e-005</b> | <b>3.3000e-004</b> | <b>0.0000</b> | <b>1.5089</b> | <b>1.5089</b> | <b>6.0000e-005</b> | <b>0.0000</b> | <b>1.5103</b> |

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**3.17 Park Improvements - 2024**

**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     | 0.0331        | 0.3025        | 0.3638        | 6.1000e-004        |               | 0.0138        | 0.0138        |                | 0.0130        | 0.0130        | 0.0000        | 52.1661        | 52.1661        | 0.0123        | 0.0000        | 52.4744        |
| <b>Total</b> | <b>0.0331</b> | <b>0.3025</b> | <b>0.3638</b> | <b>6.1000e-004</b> |               | <b>0.0138</b> | <b>0.0138</b> |                | <b>0.0130</b> | <b>0.0130</b> | <b>0.0000</b> | <b>52.1661</b> | <b>52.1661</b> | <b>0.0123</b> | <b>0.0000</b> | <b>52.4744</b> |

**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       | 1.9000e-004        | 6.3500e-003        | 1.9800e-003   | 2.0000e-005        | 5.7000e-004        | 1.0000e-005        | 5.7000e-004        | 1.6000e-004        | 1.0000e-005        | 1.7000e-004        | 0.0000        | 2.1217        | 2.1217        | 1.1000e-004        | 0.0000        | 2.1245        |
| Worker       | 9.7000e-004        | 6.7000e-004        | 8.0600e-003   | 3.0000e-005        | 2.9600e-003        | 2.0000e-005        | 2.9800e-003        | 7.9000e-004        | 2.0000e-005        | 8.1000e-004        | 0.0000        | 2.4050        | 2.4050        | 6.0000e-005        | 0.0000        | 2.4065        |
| <b>Total</b> | <b>1.1600e-003</b> | <b>7.0200e-003</b> | <b>0.0100</b> | <b>5.0000e-005</b> | <b>3.5300e-003</b> | <b>3.0000e-005</b> | <b>3.5500e-003</b> | <b>9.5000e-004</b> | <b>3.0000e-005</b> | <b>9.8000e-004</b> | <b>0.0000</b> | <b>4.5267</b> | <b>4.5267</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>4.5310</b> |

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**3.17 Park Improvements - 2024**

**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     | 0.0331        | 0.3025        | 0.3638        | 6.1000e-004        |               | 0.0138        | 0.0138        |                | 0.0130        | 0.0130        | 0.0000        | 52.1660        | 52.1660        | 0.0123        | 0.0000        | 52.4744        |
| <b>Total</b> | <b>0.0331</b> | <b>0.3025</b> | <b>0.3638</b> | <b>6.1000e-004</b> |               | <b>0.0138</b> | <b>0.0138</b> |                | <b>0.0130</b> | <b>0.0130</b> | <b>0.0000</b> | <b>52.1660</b> | <b>52.1660</b> | <b>0.0123</b> | <b>0.0000</b> | <b>52.4744</b> |

**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       | 1.9000e-004        | 6.3500e-003        | 1.9800e-003   | 2.0000e-005        | 5.7000e-004        | 1.0000e-005        | 5.7000e-004        | 1.6000e-004        | 1.0000e-005        | 1.7000e-004        | 0.0000        | 2.1217        | 2.1217        | 1.1000e-004        | 0.0000        | 2.1245        |
| Worker       | 9.7000e-004        | 6.7000e-004        | 8.0600e-003   | 3.0000e-005        | 2.9600e-003        | 2.0000e-005        | 2.9800e-003        | 7.9000e-004        | 2.0000e-005        | 8.1000e-004        | 0.0000        | 2.4050        | 2.4050        | 6.0000e-005        | 0.0000        | 2.4065        |
| <b>Total</b> | <b>1.1600e-003</b> | <b>7.0200e-003</b> | <b>0.0100</b> | <b>5.0000e-005</b> | <b>3.5300e-003</b> | <b>3.0000e-005</b> | <b>3.5500e-003</b> | <b>9.5000e-004</b> | <b>3.0000e-005</b> | <b>9.8000e-004</b> | <b>0.0000</b> | <b>4.5267</b> | <b>4.5267</b> | <b>1.7000e-004</b> | <b>0.0000</b> | <b>4.5310</b> |

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**3.18 Dog Park - 2024**

**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     | 0.0147        | 0.1344        | 0.1617        | 2.7000e-004        |               | 6.1300e-003        | 6.1300e-003        |                | 5.7700e-003        | 5.7700e-003        | 0.0000        | 23.1849        | 23.1849        | 5.4800e-003        | 0.0000        | 23.3220        |
| <b>Total</b> | <b>0.0147</b> | <b>0.1344</b> | <b>0.1617</b> | <b>2.7000e-004</b> |               | <b>6.1300e-003</b> | <b>6.1300e-003</b> |                | <b>5.7700e-003</b> | <b>5.7700e-003</b> | <b>0.0000</b> | <b>23.1849</b> | <b>23.1849</b> | <b>5.4800e-003</b> | <b>0.0000</b> | <b>23.3220</b> |

**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       | 8.0000e-005        | 2.8200e-003        | 8.8000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000             | 2.6000e-004        | 7.0000e-005        | 0.0000             | 8.0000e-005        | 0.0000        | 0.9430        | 0.9430        | 5.0000e-005        | 0.0000        | 0.9442        |
| Worker       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>3.1200e-003</b> | <b>4.4600e-003</b> | <b>2.0000e-005</b> | <b>1.5600e-003</b> | <b>1.0000e-005</b> | <b>1.5900e-003</b> | <b>4.2000e-004</b> | <b>1.0000e-005</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>2.0119</b> | <b>2.0119</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>2.0138</b> |

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**3.18 Dog Park - 2024**

**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     | 0.0147        | 0.1344        | 0.1617        | 2.7000e-004        |               | 6.1300e-003        | 6.1300e-003        |                | 5.7700e-003        | 5.7700e-003        | 0.0000        | 23.1849        | 23.1849        | 5.4800e-003        | 0.0000        | 23.3220        |
| <b>Total</b> | <b>0.0147</b> | <b>0.1344</b> | <b>0.1617</b> | <b>2.7000e-004</b> |               | <b>6.1300e-003</b> | <b>6.1300e-003</b> |                | <b>5.7700e-003</b> | <b>5.7700e-003</b> | <b>0.0000</b> | <b>23.1849</b> | <b>23.1849</b> | <b>5.4800e-003</b> | <b>0.0000</b> | <b>23.3220</b> |

**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       | 8.0000e-005        | 2.8200e-003        | 8.8000e-004        | 1.0000e-005        | 2.5000e-004        | 0.0000             | 2.6000e-004        | 7.0000e-005        | 0.0000             | 8.0000e-005        | 0.0000        | 0.9430        | 0.9430        | 5.0000e-005        | 0.0000        | 0.9442        |
| Worker       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>5.1000e-004</b> | <b>3.1200e-003</b> | <b>4.4600e-003</b> | <b>2.0000e-005</b> | <b>1.5600e-003</b> | <b>1.0000e-005</b> | <b>1.5900e-003</b> | <b>4.2000e-004</b> | <b>1.0000e-005</b> | <b>4.4000e-004</b> | <b>0.0000</b> | <b>2.0119</b> | <b>2.0119</b> | <b>8.0000e-005</b> | <b>0.0000</b> | <b>2.0138</b> |

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**3.19 Paving - 2024**

**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     | 9.8800e-003   | 0.0953        | 0.1463        | 2.3000e-004        |               | 4.6900e-003        | 4.6900e-003        |                | 4.3100e-003        | 4.3100e-003        | 0.0000        | 20.0265        | 20.0265        | 6.4800e-003        | 0.0000        | 20.1885        |
| Paving       | 1.3100e-003   |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0112</b> | <b>0.0953</b> | <b>0.1463</b> | <b>2.3000e-004</b> |               | <b>4.6900e-003</b> | <b>4.6900e-003</b> |                | <b>4.3100e-003</b> | <b>4.3100e-003</b> | <b>0.0000</b> | <b>20.0265</b> | <b>20.0265</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1885</b> |

**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       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.0000e-004</b> | <b>3.5800e-003</b> | <b>1.0000e-005</b> | <b>1.3100e-003</b> | <b>1.0000e-005</b> | <b>1.3300e-003</b> | <b>3.5000e-004</b> | <b>1.0000e-005</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>1.0689</b> | <b>1.0689</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.0695</b> |

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**3.19 Paving - 2024**

**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     | 9.8800e-003   | 0.0953        | 0.1463        | 2.3000e-004        |               | 4.6900e-003        | 4.6900e-003        |                | 4.3100e-003        | 4.3100e-003        | 0.0000        | 20.0265        | 20.0265        | 6.4800e-003        | 0.0000        | 20.1884        |
| Paving       | 1.3100e-003   |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000         | 0.0000         | 0.0000             | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0112</b> | <b>0.0953</b> | <b>0.1463</b> | <b>2.3000e-004</b> |               | <b>4.6900e-003</b> | <b>4.6900e-003</b> |                | <b>4.3100e-003</b> | <b>4.3100e-003</b> | <b>0.0000</b> | <b>20.0265</b> | <b>20.0265</b> | <b>6.4800e-003</b> | <b>0.0000</b> | <b>20.1884</b> |

**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       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.0000e-004</b> | <b>3.5800e-003</b> | <b>1.0000e-005</b> | <b>1.3100e-003</b> | <b>1.0000e-005</b> | <b>1.3300e-003</b> | <b>3.5000e-004</b> | <b>1.0000e-005</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>1.0689</b> | <b>1.0689</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.0695</b> |

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**3.20 Architectural Coating - 2024**

**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 | 6.0600e-003        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.8100e-003        | 0.0122        | 0.0181        | 3.0000e-005        |               | 6.1000e-004        | 6.1000e-004        |                | 6.1000e-004        | 6.1000e-004        | 0.0000        | 2.5533        | 2.5533        | 1.4000e-004        | 0.0000        | 2.5569        |
| <b>Total</b>    | <b>7.8700e-003</b> | <b>0.0122</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>6.1000e-004</b> | <b>6.1000e-004</b> |                | <b>6.1000e-004</b> | <b>6.1000e-004</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>2.5569</b> |

**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       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.0000e-004</b> | <b>3.5800e-003</b> | <b>1.0000e-005</b> | <b>1.3100e-003</b> | <b>1.0000e-005</b> | <b>1.3300e-003</b> | <b>3.5000e-004</b> | <b>1.0000e-005</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>1.0689</b> | <b>1.0689</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.0695</b> |

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**3.20 Architectural Coating - 2024**

**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 | 6.0600e-003        |               |               |                    |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| Off-Road        | 1.8100e-003        | 0.0122        | 0.0181        | 3.0000e-005        |               | 6.1000e-004        | 6.1000e-004        |                | 6.1000e-004        | 6.1000e-004        | 0.0000        | 2.5533        | 2.5533        | 1.4000e-004        | 0.0000        | 2.5568        |
| <b>Total</b>    | <b>7.8700e-003</b> | <b>0.0122</b> | <b>0.0181</b> | <b>3.0000e-005</b> |               | <b>6.1000e-004</b> | <b>6.1000e-004</b> |                | <b>6.1000e-004</b> | <b>6.1000e-004</b> | <b>0.0000</b> | <b>2.5533</b> | <b>2.5533</b> | <b>1.4000e-004</b> | <b>0.0000</b> | <b>2.5568</b> |

**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       | 4.3000e-004        | 3.0000e-004        | 3.5800e-003        | 1.0000e-005        | 1.3100e-003        | 1.0000e-005        | 1.3300e-003        | 3.5000e-004        | 1.0000e-005        | 3.6000e-004        | 0.0000        | 1.0689        | 1.0689        | 3.0000e-005        | 0.0000        | 1.0695        |
| <b>Total</b> | <b>4.3000e-004</b> | <b>3.0000e-004</b> | <b>3.5800e-003</b> | <b>1.0000e-005</b> | <b>1.3100e-003</b> | <b>1.0000e-005</b> | <b>1.3300e-003</b> | <b>3.5000e-004</b> | <b>1.0000e-005</b> | <b>3.6000e-004</b> | <b>0.0000</b> | <b>1.0689</b> | <b>1.0689</b> | <b>3.0000e-005</b> | <b>0.0000</b> | <b>1.0695</b> |

**4.0 Operational Detail - Mobile**

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**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   | 0.0116  | 0.0546 | 0.1491 | 6.0000e-004 | 0.0534        | 4.6000e-004  | 0.0539     | 0.0143         | 4.3000e-004   | 0.0148      | 0.0000   | 55.3833   | 55.3833   | 2.6100e-003 | 0.0000 | 55.4486 |
| Unmitigated | 0.0116  | 0.0546 | 0.1491 | 6.0000e-004 | 0.0534        | 4.6000e-004  | 0.0539     | 0.0143         | 4.3000e-004   | 0.0148      | 0.0000   | 55.3833   | 55.3833   | 2.6100e-003 | 0.0000 | 55.4486 |

**4.2 Trip Summary Information**

| Land Use    | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------|-------------------------|----------|--------|-------------|------------|
|             | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| City Park   | 13.23                   | 159.25   | 117.18 | 140,827     | 140,827    |
| Parking Lot | 0.00                    | 0.00     | 0.00   |             |            |
| Total       | 13.23                   | 159.25   | 117.18 | 140,827     | 140,827    |

**4.3 Trip Type Information**

| Land Use    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| City Park   | 16.60      | 8.40       | 6.90        | 33.00      | 48.00      | 19.00       | 66             | 28       | 6       |
| Parking Lot | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

**4.4 Fleet Mix**





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**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        |
| Parking Lot  | 15246           | 4.8577        | 2.0000e-004        | 4.0000e-005        | 4.8751        |
| <b>Total</b> |                 | <b>4.8577</b> | <b>2.0000e-004</b> | <b>4.0000e-005</b> | <b>4.8751</b> |

**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        |
| Parking Lot  | 15246           | 4.8577        | 2.0000e-004        | 4.0000e-005        | 4.8751        |
| <b>Total</b> |                 | <b>4.8577</b> | <b>2.0000e-004</b> | <b>4.0000e-005</b> | <b>4.8751</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

|             | ROG         | NOx    | CO          | SO2    | 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   | 6.3000e-003 | 0.0000 | 1.0000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2.0000e-004 | 2.0000e-004 | 0.0000 | 0.0000 | 2.1000e-004 |
| Unmitigated | 6.3000e-003 | 0.0000 | 1.0000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2.0000e-004 | 2.0000e-004 | 0.0000 | 0.0000 | 2.1000e-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 | 6.1000e-004        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 5.6800e-003        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 1.0000e-005        | 0.0000        | 1.0000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.0000e-004        | 2.0000e-004        | 0.0000        | 0.0000        | 2.1000e-004        |
| <b>Total</b>          | <b>6.3000e-003</b> | <b>0.0000</b> | <b>1.0000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.1000e-004</b> |

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**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 | 6.1000e-004        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 5.6800e-003        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 1.0000e-005        | 0.0000        | 1.0000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.0000e-004        | 2.0000e-004        | 0.0000        | 0.0000        | 2.1000e-004        |
| <b>Total</b>          | <b>6.3000e-003</b> | <b>0.0000</b> | <b>1.0000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.0000e-004</b> | <b>2.0000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.1000e-004</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

|             | Total CO2 | CH4         | N2O         | CO2e    |
|-------------|-----------|-------------|-------------|---------|
| Category    | MT/yr     |             |             |         |
| Mitigated   | 29.5239   | 1.2200e-003 | 2.5000e-004 | 29.6296 |
| Unmitigated | 29.5239   | 1.2200e-003 | 2.5000e-004 | 29.6296 |

**7.2 Water by Land Use**

**Unmitigated**

|              | Indoor/Outdoor Use | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|----------------|--------------------|--------------------|----------------|
| Land Use     | Mgal               | MT/yr          |                    |                    |                |
| City Park    | 0 / 8.34037        | 29.5239        | 1.2200e-003        | 2.5000e-004        | 29.6296        |
| Parking Lot  | 0 / 0              | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| <b>Total</b> |                    | <b>29.5239</b> | <b>1.2200e-003</b> | <b>2.5000e-004</b> | <b>29.6296</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

**7.2 Water by Land Use**

**Mitigated**

|              | Indoor/Outdoor Use | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|----------------|--------------------|--------------------|----------------|
| Land Use     | Mgal               | MT/yr          |                    |                    |                |
| City Park    | 0 / 8.34037        | 29.5239        | 1.2200e-003        | 2.5000e-004        | 29.6296        |
| Parking Lot  | 0 / 0              | 0.0000         | 0.0000             | 0.0000             | 0.0000         |
| <b>Total</b> |                    | <b>29.5239</b> | <b>1.2200e-003</b> | <b>2.5000e-004</b> | <b>29.6296</b> |

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

|             | Total CO2 | CH4         | N2O    | CO2e   |
|-------------|-----------|-------------|--------|--------|
|             | MT/yr     |             |        |        |
| Mitigated   | 0.1218    | 7.2000e-003 | 0.0000 | 0.3017 |
| Unmitigated | 0.1218    | 7.2000e-003 | 0.0000 | 0.3017 |

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**8.2 Waste by Land Use**

**Unmitigated**

|              | Waste Disposed | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|----------------|---------------|--------------------|---------------|---------------|
| Land Use     | tons           | MT/yr         |                    |               |               |
| City Park    | 0.6            | 0.1218        | 7.2000e-003        | 0.0000        | 0.3017        |
| Parking Lot  | 0              | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |                | <b>0.1218</b> | <b>7.2000e-003</b> | <b>0.0000</b> | <b>0.3017</b> |

**Mitigated**

|              | Waste Disposed | Total CO2     | CH4                | N2O           | CO2e          |
|--------------|----------------|---------------|--------------------|---------------|---------------|
| Land Use     | tons           | MT/yr         |                    |               |               |
| City Park    | 0.6            | 0.1218        | 7.2000e-003        | 0.0000        | 0.3017        |
| Parking Lot  | 0              | 0.0000        | 0.0000             | 0.0000        | 0.0000        |
| <b>Total</b> |                | <b>0.1218</b> | <b>7.2000e-003</b> | <b>0.0000</b> | <b>0.3017</b> |

**9.0 Operational Offroad**

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

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Annual

## 10.0 Stationary Equipment

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### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

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

## 11.0 Vegetation

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City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project**  
**Los Angeles-South Coast County, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses   | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------|------|--------|-------------|--------------------|------------|
| City Park   | 7.00 | Acre   | 7.00        | 304,920.00         | 0          |
| Parking Lot | 1.00 | Acre   | 1.00        | 43,560.00          | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 33    |
| <b>Climate Zone</b>             | 9                          |                                 |       | <b>Operational Year</b>          | 2025  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 702.44                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.029 | <b>N2O Intensity (lb/MW hr)</b>  | 0.006 |

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use -

Construction Phase - Expanded construction phases.

Off-road Equipment - This phase does not require excessive excavation.

Grading - Revised grading acreage

Off-road Equipment -

Trips and VMT - Revised # trips per worker per day, and number of vendor trips

Mobile Land Use Mitigation -

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

| Table Name           | Column Name                | Default Value | New Value                 |
|----------------------|----------------------------|---------------|---------------------------|
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 30.00                     |
| tblConstructionPhase | NumDays                    | 20.00         | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 30.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 10.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 15.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 45.00                     |
| tblConstructionPhase | NumDays                    | 230.00        | 20.00                     |
| tblConstructionPhase | PhaseEndDate               | 11/21/2024    | 1/24/2024                 |
| tblConstructionPhase | PhaseEndDate               | 9/26/2024     | 12/7/2023                 |
| tblConstructionPhase | PhaseEndDate               | 11/9/2023     | 10/26/2023                |
| tblConstructionPhase | PhaseEndDate               | 10/24/2024    | 12/28/2023                |
| tblConstructionPhase | PhaseStartDate             | 10/25/2024    | 12/28/2023                |
| tblConstructionPhase | PhaseStartDate             | 11/10/2023    | 10/27/2023                |
| tblConstructionPhase | PhaseStartDate             | 9/27/2024     | 12/8/2023                 |
| tblGrading           | AcresOfGrading             | 5.00          | 7.00                      |
| tblOffRoadEquipment  | OffRoadEquipmentType       |               | Tractors/Loaders/Backhoes |
| tblOffRoadEquipment  | OffRoadEquipmentUnitAmount | 3.00          | 2.00                      |
| tblTripsAndVMT       | VendorTripNumber           | 57.00         | 4.00                      |



City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|                |                  |        |       |
|----------------|------------------|--------|-------|
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 146.00 | 12.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00  | 12.00 |

**2.0 Emissions Summary**

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City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**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         | 0.0345        | 1.0000e-005   | 8.1000e-004   | 0.0000        |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        |          | 1.7500e-003       | 1.7500e-003       | 0.0000        |               | 1.8600e-003       |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Mobile       | 0.2196        | 0.9426        | 2.7633        | 0.0111        | 0.9742        | 8.1900e-003        | 0.9824        | 0.2607         | 7.6100e-003        | 0.2683        |          | 1,130.0630        | 1,130.0630        | 0.0517        |               | 1,131.3552        |
| <b>Total</b> | <b>0.2541</b> | <b>0.9426</b> | <b>2.7641</b> | <b>0.0111</b> | <b>0.9742</b> | <b>8.1900e-003</b> | <b>0.9824</b> | <b>0.2607</b>  | <b>7.6100e-003</b> | <b>0.2683</b> |          | <b>1,130.0647</b> | <b>1,130.0647</b> | <b>0.0517</b> | <b>0.0000</b> | <b>1,131.3570</b> |

**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         | 0.0345        | 1.0000e-005   | 8.1000e-004   | 0.0000        |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        |          | 1.7500e-003       | 1.7500e-003       | 0.0000        |               | 1.8600e-003       |
| Energy       | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000             | 0.0000        |                | 0.0000             | 0.0000        |          | 0.0000            | 0.0000            | 0.0000        | 0.0000        | 0.0000            |
| Mobile       | 0.2196        | 0.9426        | 2.7633        | 0.0111        | 0.9742        | 8.1900e-003        | 0.9824        | 0.2607         | 7.6100e-003        | 0.2683        |          | 1,130.0630        | 1,130.0630        | 0.0517        |               | 1,131.3552        |
| <b>Total</b> | <b>0.2541</b> | <b>0.9426</b> | <b>2.7641</b> | <b>0.0111</b> | <b>0.9742</b> | <b>8.1900e-003</b> | <b>0.9824</b> | <b>0.2607</b>  | <b>7.6100e-003</b> | <b>0.2683</b> |          | <b>1,130.0647</b> | <b>1,130.0647</b> | <b>0.0517</b> | <b>0.0000</b> | <b>1,131.3570</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|                   | ROG  | NOx  | CO   | SO2  | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4  | N2O  | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| 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

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Construction Phase

## City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

| Phase Number | Phase Name                                      | Phase Type            | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|---|-----------------------|------------|------------|---------------|----------|-------------------|
| 1            | Demolition                                      | Demolition            | 9/1/2023   | 9/28/2023  | 5             | 20       |                   |
| 2            | Site Preparation                                | Site Preparation      | 9/29/2023  | 10/12/2023 | 5             | 10       |                   |
| 3            | Grading   | Grading               | 10/13/2023 | 10/26/2023 | 5             | 10       |                   |
| 4            | Infiltration Gallery Installation               | Building Construction | 10/27/2023 | 12/7/2023  | 5             | 30       |                   |
| 5            | BI 9705 Diversion Structure                     | Building Construction | 12/8/2023  | 12/28/2023 | 5             | 15       |                   |
| 6            | Diversion Pipeline to Pretreatment              | Building Construction | 12/28/2023 | 1/24/2024  | 5             | 20       |                   |
| 7            | Pretreatment Works                              | Building Construction | 1/25/2024  | 2/7/2024   | 5             | 10       |                   |
| 8            | Diversion Pipeline to SWS w/<br>Meter and Valve | Building Construction | 2/7/2024   | 2/20/2024  | 5             | 10       |                   |
| 9            | Park Expansion                                  | Building Construction | 2/20/2024  | 4/1/2024   | 5             | 30       |                   |
| 10           | Catch Basins                                    | Building Construction | 4/1/2024   | 4/19/2024  | 5             | 15       |                   |
| 11           | Syracuse Ave Storm Drain (15-<br>inch)          | Building Construction | 4/19/2024  | 5/9/2024   | 5             | 15       |                   |
| 12           | Patritti Ave Storm Drain (18-inch)              | Building Construction | 5/9/2024   | 6/5/2024   | 5             | 20       |                   |
| 13           | Basketball Courts                               | Building Construction | 6/5/2024   | 6/18/2024  | 5             | 10       |                   |
| 14           | Patritti Avenue Storm Drain (12<br>inch)        | Building Construction | 6/18/2024  | 7/1/2024   | 5             | 10       |                   |
| 15           | Parking Lot Expansion                           | Building Construction | 7/1/2024   | 7/19/2024  | 5             | 15       |                   |
| 16           | Park Improvements                               | Building Construction | 7/20/2024  | 9/20/2024  | 5             | 45       |                   |
| 17           | Dog Park  | Building Construction | 9/20/2024  | 10/17/2024 | 5             | 20       |                   |
| 18           | Paving  | Paving                | 10/18/2024 | 11/14/2024 | 5             | 20       |                   |
| 19           | Architectural Coating                           | Architectural Coating | 11/15/2024 | 12/12/2024 | 5             | 20       |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 7**

**Acres of Paving: 1**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,614 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name                                   | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|--|---------------------------|--------|-------------|-------------|-------------|
| Park Improvements                            | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Dog Park                                     | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| BI 9705 Diversion Structure                  | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Diversion Pipeline to Pretreatment           | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Pretreatment Works                           | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Diversion Pipeline to SWS w/ Meter and Valve | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Park Expansion                               | Generator Sets            | 1      | 8.00        | 84          | 0.74        |
| Paving                                       | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                                       | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                                       | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Catch Basins                                 | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Syracuse Ave Storm Drain (15-inch)           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Patriitti Ave Storm Drain (18-inch)          | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Basketball Courts                            | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Patriitti Avenue Storm Drain (12 inch)       | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Parking Lot Expansion                        | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Park Improvements                            | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Dog Park                                     | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| BI 9705 Diversion Structure                  | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Diversion Pipeline to Pretreatment           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Pretreatment Works                           | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |
| Diversion Pipeline to SWS w/ Meter and Valve | Tractors/Loaders/Backhoes | 3      | 7.00        | 97          | 0.37        |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|  |                           |   |      |     |      |
|--|---------------------------|---|------|-----|------|
| Park Expansion                               | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |
| Catch Basins                                 | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Syracuse Ave Storm Drain (15-inch)           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Patriitti Ave Storm Drain (18-inch)          | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Basketball Courts                            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Patriitti Avenue Storm Drain (12 inch)       | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Parking Lot Expansion                        | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Park Improvements                            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Dog Park                                     | Welders                   | 1 | 8.00 | 46  | 0.45 |
| BI 9705 Diversion Structure                  | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Diversion Pipeline to Pretreatment           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Pretreatment Works                           | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Diversion Pipeline to SWS w/ Meter and Valve | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Park Expansion                               | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Demolition                                   | Tractors/Loaders/Backhoes | 2 | 7.00 | 97  | 0.37 |
| Diversion Pipeline to Pretreatment           | Air Compressors           | 1 | 6.00 | 78  | 0.48 |
| Demolition                                   | Excavators                | 2 | 8.00 | 158 | 0.38 |
| Demolition                                   | Concrete/Industrial Saws  | 1 | 8.00 | 81  | 0.73 |
| Grading                                      | Excavators                | 1 | 8.00 | 158 | 0.38 |
| Infiltration Gallery Installation            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Infiltration Gallery Installation            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Infiltration Gallery Installation            | Generator Sets            | 1 | 8.00 | 84  | 0.74 |
| BI 9705 Diversion Structure                  | Pavers                    | 2 | 8.00 | 130 | 0.42 |
| BI 9705 Diversion Structure                  | Rollers                   | 2 | 8.00 | 80  | 0.38 |
| Demolition                                   | Rubber Tired Dozers       | 2 | 8.00 | 247 | 0.40 |
| Grading                                      | Rubber Tired Dozers       | 1 | 8.00 | 247 | 0.40 |
| Infiltration Gallery Installation            | Tractors/Loaders/Backhoes | 3 | 7.00 | 97  | 0.37 |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|  |                           |   |      |     |      |
|--|---------------------------|---|------|-----|------|
| Grading                                      | Graders                   | 1 | 8.00 | 187 | 0.41 |
| Grading                                      | Tractors/Loaders/Backhoes | 3 | 8.00 | 97  | 0.37 |
| BI 9705 Diversion Structure                  | Paving Equipment          | 2 | 8.00 | 132 | 0.36 |
| Site Preparation                             | Tractors/Loaders/Backhoes | 4 | 8.00 | 97  | 0.37 |
| Site Preparation                             | Rubber Tired Dozers       | 3 | 8.00 | 247 | 0.40 |
| Infiltration Gallery Installation            | Welders                   | 1 | 8.00 | 46  | 0.45 |
| Architectural Coating                        | Air Compressors           | 1 | 6.00 | 78  | 0.48 |
| Catch Basins                                 | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Syracuse Ave Storm Drain (15-inch)           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Patritti Ave Storm Drain (18-inch)           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Basketball Courts                            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Patritti Avenue Storm Drain (12 inch)        | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Parking Lot Expansion                        | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Park Improvements                            | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Dog Park                                     | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| BI 9705 Diversion Structure                  | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Diversion Pipeline to Pretreatment           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Pretreatment Works                           | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Diversion Pipeline to SWS w/ Meter and Valve | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Park Expansion                               | Cranes                    | 1 | 7.00 | 231 | 0.29 |
| Catch Basins                                 | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Syracuse Ave Storm Drain (15-inch)           | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Patritti Ave Storm Drain (18-inch)           | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Basketball Courts                            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Patritti Avenue Storm Drain (12 inch)        | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Parking Lot Expansion                        | Forklifts                 | 3 | 8.00 | 89  | 0.20 |
| Park Improvements                            | Forklifts                 | 3 | 8.00 | 89  | 0.20 |

## City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|  |                |   |      |    |      |
|--|----------------|---|------|----|------|
| Dog Park                                     | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| BI 9705 Diversion Structure                  | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Diversion Pipeline to Pretreatment           | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Pretreatment Works                           | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Diversion Pipeline to SWS w/ Meter and Valve | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Park Expansion                               | Forklifts      | 3 | 8.00 | 89 | 0.20 |
| Catch Basins                                 | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Syracuse Ave Storm Drain (15-inch)           | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Patritti Ave Storm Drain (18-inch)           | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Basketball Courts                            | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Patritti Avenue Storm Drain (12 inch)        | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Parking Lot Expansion                        | Generator Sets | 1 | 8.00 | 84 | 0.74 |

**Trips and VMT**

## City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

| Phase Name                                 | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|--|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition                                 | 7                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Site Preparation                           | 7                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Grading                                    | 6                       | 10.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Infiltration Gallery Installation          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| BI 9705 Diversion Structure                | 15                      | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Diversion Pipeline to Pretreatment         | 10                      | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Architectural Coating                      | 1                       | 12.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Catch Basins                               | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Syracuse Ave Storm Drain (15-inch)         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Patritti Ave Storm Drain (18-inch)         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Basketball Courts                          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Patritti Avenue Storm Drain (12-inch)      | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Parking Lot Expansion                      | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Park Improvements                          | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Dog Park                                   | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Pretreatment Works                         | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Diversion Pipeline to SWS w/ Meter and Val | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Park Expansion                             | 9                       | 12.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                                     | 6                       | 12.00              | 0.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

## 3.1 Mitigation Measures Construction

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2023**

**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     | 2.3453        | 22.6232        | 20.2904        | 0.0391        |               | 1.0544        | 1.0544        |                | 0.9803        | 0.9803        |          | 3,774.637<br>2         | 3,774.637<br>2         | 1.0583        |     | 3,801.095<br>1         |
| <b>Total</b> | <b>2.3453</b> | <b>22.6232</b> | <b>20.2904</b> | <b>0.0391</b> |               | <b>1.0544</b> | <b>1.0544</b> |                | <b>0.9803</b> | <b>0.9803</b> |          | <b>3,774.637<br/>2</b> | <b>3,774.637<br/>2</b> | <b>1.0583</b> |     | <b>3,801.095<br/>1</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.2 Demolition - 2023**

**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     | 2.3453        | 22.6232        | 20.2904        | 0.0391        |               | 1.0544        | 1.0544        |                | 0.9803        | 0.9803        | 0.0000        | 3,774.637<br>2         | 3,774.637<br>2         | 1.0583        |     | 3,801.095<br>1         |
| <b>Total</b> | <b>2.3453</b> | <b>22.6232</b> | <b>20.2904</b> | <b>0.0391</b> |               | <b>1.0544</b> | <b>1.0544</b> |                | <b>0.9803</b> | <b>0.9803</b> | <b>0.0000</b> | <b>3,774.637<br/>2</b> | <b>3,774.637<br/>2</b> | <b>1.0583</b> |     | <b>3,801.095<br/>1</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.3 Site Preparation - 2023**

**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 |               |                |                |               | 18.0663        | 0.0000        | 18.0663        | 9.9307         | 0.0000        | 9.9307         |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6595        | 27.5242        | 18.2443        | 0.0381        |                | 1.2660        | 1.2660         |                | 1.1647        | 1.1647         |          | 3,687.3081        | 3,687.3081        | 1.1926        |     | 3,717.1219        |
| <b>Total</b>  | <b>2.6595</b> | <b>27.5242</b> | <b>18.2443</b> | <b>0.0381</b> | <b>18.0663</b> | <b>1.2660</b> | <b>19.3323</b> | <b>9.9307</b>  | <b>1.1647</b> | <b>11.0954</b> |          | <b>3,687.3081</b> | <b>3,687.3081</b> | <b>1.1926</b> |     | <b>3,717.1219</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.3 Site Preparation - 2023**

**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 |               |                |                |               | 18.0663        | 0.0000        | 18.0663        | 9.9307         | 0.0000        | 9.9307         |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 2.6595        | 27.5242        | 18.2443        | 0.0381        |                | 1.2660        | 1.2660         |                | 1.1647        | 1.1647         | 0.0000        | 3,687.3081        | 3,687.3081        | 1.1926        |     | 3,717.1219        |
| <b>Total</b>  | <b>2.6595</b> | <b>27.5242</b> | <b>18.2443</b> | <b>0.0381</b> | <b>18.0663</b> | <b>1.2660</b> | <b>19.3323</b> | <b>9.9307</b>  | <b>1.1647</b> | <b>11.0954</b> | <b>0.0000</b> | <b>3,687.3081</b> | <b>3,687.3081</b> | <b>1.1926</b> |     | <b>3,717.1219</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.4 Grading - 2023**

**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 |               |                |                |               | 6.7644        | 0.0000        | 6.7644        | 3.3904         | 0.0000        | 3.3904        |          |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 1.7109        | 17.9359        | 14.7507        | 0.0297        |               | 0.7749        | 0.7749        |                | 0.7129        | 0.7129        |          | 2,872.6910        | 2,872.6910        | 0.9291        |     | 2,895.9182        |
| <b>Total</b>  | <b>1.7109</b> | <b>17.9359</b> | <b>14.7507</b> | <b>0.0297</b> | <b>6.7644</b> | <b>0.7749</b> | <b>7.5394</b> | <b>3.3904</b>  | <b>0.7129</b> | <b>4.1033</b> |          | <b>2,872.6910</b> | <b>2,872.6910</b> | <b>0.9291</b> |     | <b>2,895.9182</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.4 Grading - 2023**

**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 |               |                |                |               | 6.7644        | 0.0000        | 6.7644        | 3.3904         | 0.0000        | 3.3904        |               |                   | 0.0000            |               |     | 0.0000            |
| Off-Road      | 1.7109        | 17.9359        | 14.7507        | 0.0297        |               | 0.7749        | 0.7749        |                | 0.7129        | 0.7129        | 0.0000        | 2,872.6910        | 2,872.6910        | 0.9291        |     | 2,895.9182        |
| <b>Total</b>  | <b>1.7109</b> | <b>17.9359</b> | <b>14.7507</b> | <b>0.0297</b> | <b>6.7644</b> | <b>0.7749</b> | <b>7.5394</b> | <b>3.3904</b>  | <b>0.7129</b> | <b>4.1033</b> | <b>0.0000</b> | <b>2,872.6910</b> | <b>2,872.6910</b> | <b>0.9291</b> |     | <b>2,895.9182</b> |

**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       | 0.0377        | 0.0241        | 0.3422        | 1.0600e-003        | 0.1118        | 8.5000e-004        | 0.1126        | 0.0296         | 7.8000e-004        | 0.0304        |          | 105.8482        | 105.8482        | 2.7300e-003        |     | 105.9166        |
| <b>Total</b> | <b>0.0377</b> | <b>0.0241</b> | <b>0.3422</b> | <b>1.0600e-003</b> | <b>0.1118</b> | <b>8.5000e-004</b> | <b>0.1126</b> | <b>0.0296</b>  | <b>7.8000e-004</b> | <b>0.0304</b> |          | <b>105.8482</b> | <b>105.8482</b> | <b>2.7300e-003</b> |     | <b>105.9166</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.5 Infiltration Gallery Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.5728        | 14.3849        | 16.2440        | 0.0269        |               | 0.6997        | 0.6997        |                | 0.6584        | 0.6584        |          | 2,555.2099        | 2,555.2099        | 0.6079        |     | 2,570.4061        |
| <b>Total</b> | <b>1.5728</b> | <b>14.3849</b> | <b>16.2440</b> | <b>0.0269</b> |               | <b>0.6997</b> | <b>0.6997</b> |                | <b>0.6584</b> | <b>0.6584</b> |          | <b>2,555.2099</b> | <b>2,555.2099</b> | <b>0.6079</b> |     | <b>2,570.4061</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.5 Infiltration Gallery Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.5728        | 14.3849        | 16.2440        | 0.0269        |               | 0.6997        | 0.6997        |                | 0.6584        | 0.6584        | 0.0000        | 2,555.2099        | 2,555.2099        | 0.6079        |     | 2,570.4061        |
| <b>Total</b> | <b>1.5728</b> | <b>14.3849</b> | <b>16.2440</b> | <b>0.0269</b> |               | <b>0.6997</b> | <b>0.6997</b> |                | <b>0.6584</b> | <b>0.6584</b> | <b>0.0000</b> | <b>2,555.2099</b> | <b>2,555.2099</b> | <b>0.6079</b> |     | <b>2,570.4061</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.6 BI 9705 Diversion Structure - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.5728        | 14.3849        | 16.2440        | 0.0269        |               | 0.6997        | 0.6997        |                | 0.6584        | 0.6584        |          | 2,555.2099        | 2,555.2099        | 0.6079        |     | 2,570.4061        |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| <b>Total</b> | <b>2.6055</b> | <b>24.5765</b> | <b>30.8282</b> | <b>0.0497</b> |               | <b>1.2099</b> | <b>1.2099</b> |                | <b>1.1278</b> | <b>1.1278</b> |          | <b>4,762.7941</b> | <b>4,762.7941</b> | <b>1.3218</b> |     | <b>4,795.8396</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.6 BI 9705 Diversion Structure - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.5728        | 14.3849        | 16.2440        | 0.0269        |               | 0.6997        | 0.6997        |                | 0.6584        | 0.6584        | 0.0000        | 2,555.2099        | 2,555.2099        | 0.6079        |     | 2,570.4061        |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| <b>Total</b> | <b>2.6055</b> | <b>24.5765</b> | <b>30.8282</b> | <b>0.0497</b> |               | <b>1.2099</b> | <b>1.2099</b> |                | <b>1.1278</b> | <b>1.1278</b> | <b>0.0000</b> | <b>4,762.7941</b> | <b>4,762.7941</b> | <b>1.3218</b> |     | <b>4,795.8396</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.7 Diversion Pipeline to Pretreatment - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.7644        | 15.6879        | 18.0551        | 0.0299        |               | 0.7706        | 0.7706        |                | 0.7293        | 0.7293        |          | 2,836.6580        | 2,836.6580        | 0.6247        |     | 2,852.2751        |
| <b>Total</b> | <b>1.7644</b> | <b>15.6879</b> | <b>18.0551</b> | <b>0.0299</b> |               | <b>0.7706</b> | <b>0.7706</b> |                | <b>0.7293</b> | <b>0.7293</b> |          | <b>2,836.6580</b> | <b>2,836.6580</b> | <b>0.6247</b> |     | <b>2,852.2751</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.7 Diversion Pipeline to Pretreatment - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.7644        | 15.6879        | 18.0551        | 0.0299        |               | 0.7706        | 0.7706        |                | 0.7293        | 0.7293        | 0.0000        | 2,836.6580        | 2,836.6580        | 0.6247        |     | 2,852.2751        |
| <b>Total</b> | <b>1.7644</b> | <b>15.6879</b> | <b>18.0551</b> | <b>0.0299</b> |               | <b>0.7706</b> | <b>0.7706</b> |                | <b>0.7293</b> | <b>0.7293</b> | <b>0.0000</b> | <b>2,836.6580</b> | <b>2,836.6580</b> | <b>0.6247</b> |     | <b>2,852.2751</b> |

**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       | 8.4700e-003   | 0.2802        | 0.0868        | 9.9000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.5630        | 105.5630        | 5.5400e-003        |     | 105.7015        |
| Worker       | 0.0453        | 0.0289        | 0.4107        | 1.2700e-003        | 0.1341        | 1.0200e-003        | 0.1352        | 0.0356         | 9.4000e-004        | 0.0365        |          | 127.0178        | 127.0178        | 3.2800e-003        |     | 127.0999        |
| <b>Total</b> | <b>0.0537</b> | <b>0.3091</b> | <b>0.4974</b> | <b>2.2600e-003</b> | <b>0.1597</b> | <b>1.3400e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2500e-003</b> | <b>0.0442</b> |          | <b>232.5808</b> | <b>232.5808</b> | <b>8.8200e-003</b> |     | <b>232.8014</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.7 Diversion Pipeline to Pretreatment - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.6523        | 14.6626        | 17.9769        | 0.0299        |               | 0.6742        | 0.6742        |                | 0.6378        | 0.6378        |          | 2,837.1470        | 2,837.1470        | 0.6202        |     | 2,852.6519        |
| <b>Total</b> | <b>1.6523</b> | <b>14.6626</b> | <b>17.9769</b> | <b>0.0299</b> |               | <b>0.6742</b> | <b>0.6742</b> |                | <b>0.6378</b> | <b>0.6378</b> |          | <b>2,837.1470</b> | <b>2,837.1470</b> | <b>0.6202</b> |     | <b>2,852.6519</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.7 Diversion Pipeline to Pretreatment - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.6523        | 14.6626        | 17.9769        | 0.0299        |               | 0.6742        | 0.6742        |                | 0.6378        | 0.6378        | 0.0000        | 2,837.1470        | 2,837.1470        | 0.6202        |     | 2,852.6519        |
| <b>Total</b> | <b>1.6523</b> | <b>14.6626</b> | <b>17.9769</b> | <b>0.0299</b> |               | <b>0.6742</b> | <b>0.6742</b> |                | <b>0.6378</b> | <b>0.6378</b> | <b>0.0000</b> | <b>2,837.1470</b> | <b>2,837.1470</b> | <b>0.6202</b> |     | <b>2,852.6519</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.8 Pretreatment Works - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.8 Pretreatment Works - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.9 Diversion Pipeline to SWS w/ Meter and Valve - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.10 Park Expansion - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.10 Park Expansion - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.11 Catch Basins - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.11 Catch Basins - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.12 Syracuse Ave Storm Drain (15-inch) - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.12 Syracuse Ave Storm Drain (15-inch) - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.13 Patritti Ave Storm Drain (18-inch) - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.13 Patritti Ave Storm Drain (18-inch) - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.14 Basketball Courts - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.14 Basketball Courts - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.15 Patritti Avenue Storm Drain (12 inch) - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.15 Patritti Avenue Storm Drain (12 inch) - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.16 Parking Lot Expansion - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.16 Parking Lot Expansion - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.17 Park Improvements - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.17 Park Improvements - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.18 Dog Park - 2024**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        |          | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> |          | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.18 Dog Park - 2024**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 1.4716        | 13.4438        | 16.1668        | 0.0270        |               | 0.6133        | 0.6133        |                | 0.5769        | 0.5769        | 0.0000        | 2,555.6989        | 2,555.6989        | 0.6044        |     | 2,570.8077        |
| <b>Total</b> | <b>1.4716</b> | <b>13.4438</b> | <b>16.1668</b> | <b>0.0270</b> |               | <b>0.6133</b> | <b>0.6133</b> |                | <b>0.5769</b> | <b>0.5769</b> | <b>0.0000</b> | <b>2,555.6989</b> | <b>2,555.6989</b> | <b>0.6044</b> |     | <b>2,570.8077</b> |

**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       | 8.2600e-003   | 0.2792        | 0.0841        | 9.8000e-004        | 0.0256        | 3.2000e-004        | 0.0259        | 7.3700e-003    | 3.1000e-004        | 7.6800e-003   |          | 105.1346        | 105.1346        | 5.4600e-003        |     | 105.2712        |
| Worker       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0511</b> | <b>0.3055</b> | <b>0.4669</b> | <b>2.2100e-003</b> | <b>0.1597</b> | <b>1.3300e-003</b> | <b>0.1611</b> | <b>0.0429</b>  | <b>1.2400e-003</b> | <b>0.0442</b> |          | <b>228.2160</b> | <b>228.2160</b> | <b>8.4700e-003</b> |     | <b>228.4278</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.19 Paving - 2024**

**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     | 0.9882        | 9.5246        | 14.6258        | 0.0228        |               | 0.4685        | 0.4685        |                | 0.4310        | 0.4310        |          | 2,207.547<br>2         | 2,207.547<br>2         | 0.7140        |     | 2,225.396<br>3         |
| Paving       | 0.1310        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.1192</b> | <b>9.5246</b> | <b>14.6258</b> | <b>0.0228</b> |               | <b>0.4685</b> | <b>0.4685</b> |                | <b>0.4310</b> | <b>0.4310</b> |          | <b>2,207.547<br/>2</b> | <b>2,207.547<br/>2</b> | <b>0.7140</b> |     | <b>2,225.396<br/>3</b> |

**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       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0428</b> | <b>0.0264</b> | <b>0.3828</b> | <b>1.2300e-003</b> | <b>0.1341</b> | <b>1.0100e-003</b> | <b>0.1351</b> | <b>0.0356</b>  | <b>9.3000e-004</b> | <b>0.0365</b> |          | <b>123.0814</b> | <b>123.0814</b> | <b>3.0100e-003</b> |     | <b>123.1566</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.19 Paving - 2024**

**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     | 0.9882        | 9.5246        | 14.6258        | 0.0228        |               | 0.4685        | 0.4685        |                | 0.4310        | 0.4310        | 0.0000        | 2,207.547<br>2         | 2,207.547<br>2         | 0.7140        |     | 2,225.396<br>3         |
| Paving       | 0.1310        |               |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                        | 0.0000                 |               |     | 0.0000                 |
| <b>Total</b> | <b>1.1192</b> | <b>9.5246</b> | <b>14.6258</b> | <b>0.0228</b> |               | <b>0.4685</b> | <b>0.4685</b> |                | <b>0.4310</b> | <b>0.4310</b> | <b>0.0000</b> | <b>2,207.547<br/>2</b> | <b>2,207.547<br/>2</b> | <b>0.7140</b> |     | <b>2,225.396<br/>3</b> |

**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       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0428</b> | <b>0.0264</b> | <b>0.3828</b> | <b>1.2300e-003</b> | <b>0.1341</b> | <b>1.0100e-003</b> | <b>0.1351</b> | <b>0.0356</b>  | <b>9.3000e-004</b> | <b>0.0365</b> |          | <b>123.0814</b> | <b>123.0814</b> | <b>3.0100e-003</b> |     | <b>123.1566</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.20 Architectural Coating - 2024**

**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 | 0.6058        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.1808        | 1.2188        | 1.8101        | 2.9700e-003        |               | 0.0609        | 0.0609        |                | 0.0609        | 0.0609        |          | 281.4481        | 281.4481        | 0.0159        |     | 281.8443        |
| <b>Total</b>    | <b>0.7866</b> | <b>1.2188</b> | <b>1.8101</b> | <b>2.9700e-003</b> |               | <b>0.0609</b> | <b>0.0609</b> |                | <b>0.0609</b> | <b>0.0609</b> |          | <b>281.4481</b> | <b>281.4481</b> | <b>0.0159</b> |     | <b>281.8443</b> |

**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       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0428</b> | <b>0.0264</b> | <b>0.3828</b> | <b>1.2300e-003</b> | <b>0.1341</b> | <b>1.0100e-003</b> | <b>0.1351</b> | <b>0.0356</b>  | <b>9.3000e-004</b> | <b>0.0365</b> |          | <b>123.0814</b> | <b>123.0814</b> | <b>3.0100e-003</b> |     | <b>123.1566</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**3.20 Architectural Coating - 2024**

**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 | 0.6058        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                 | 0.0000          |               |     | 0.0000          |
| Off-Road        | 0.1808        | 1.2188        | 1.8101        | 2.9700e-003        |               | 0.0609        | 0.0609        |                | 0.0609        | 0.0609        | 0.0000        | 281.4481        | 281.4481        | 0.0159        |     | 281.8443        |
| <b>Total</b>    | <b>0.7866</b> | <b>1.2188</b> | <b>1.8101</b> | <b>2.9700e-003</b> |               | <b>0.0609</b> | <b>0.0609</b> |                | <b>0.0609</b> | <b>0.0609</b> | <b>0.0000</b> | <b>281.4481</b> | <b>281.4481</b> | <b>0.0159</b> |     | <b>281.8443</b> |

**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       | 0.0428        | 0.0264        | 0.3828        | 1.2300e-003        | 0.1341        | 1.0100e-003        | 0.1351        | 0.0356         | 9.3000e-004        | 0.0365        |          | 123.0814        | 123.0814        | 3.0100e-003        |     | 123.1566        |
| <b>Total</b> | <b>0.0428</b> | <b>0.0264</b> | <b>0.3828</b> | <b>1.2300e-003</b> | <b>0.1341</b> | <b>1.0100e-003</b> | <b>0.1351</b> | <b>0.0356</b>  | <b>9.3000e-004</b> | <b>0.0365</b> |          | <b>123.0814</b> | <b>123.0814</b> | <b>3.0100e-003</b> |     | <b>123.1566</b> |

**4.0 Operational Detail - Mobile**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**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   | 0.2196 | 0.9426 | 2.7633 | 0.0111 | 0.9742        | 8.1900e-003  | 0.9824     | 0.2607         | 7.6100e-003   | 0.2683      |          | 1,130.0630 | 1,130.0630 | 0.0517 |     | 1,131.3552 |
| Unmitigated | 0.2196 | 0.9426 | 2.7633 | 0.0111 | 0.9742        | 8.1900e-003  | 0.9824     | 0.2607         | 7.6100e-003   | 0.2683      |          | 1,130.0630 | 1,130.0630 | 0.0517 |     | 1,131.3552 |

**4.2 Trip Summary Information**

| Land Use    | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|-------------|-------------------------|----------|--------|-------------|------------|
|             | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| City Park   | 13.23                   | 159.25   | 117.18 | 140,827     | 140,827    |
| Parking Lot | 0.00                    | 0.00     | 0.00   |             |            |
| Total       | 13.23                   | 159.25   | 117.18 | 140,827     | 140,827    |

**4.3 Trip Type Information**

| Land Use    | Miles      |            |             | Trip %     |            |             | Trip Purpose % |          |         |
|-------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
|             | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary        | Diverted | Pass-by |
| City Park   | 16.60      | 8.40       | 6.90        | 33.00      | 48.00      | 19.00       | 66             | 28       | 6       |
| Parking Lot | 16.60      | 8.40       | 6.90        | 0.00       | 0.00       | 0.00        | 0              | 0        | 0       |

**4.4 Fleet Mix**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

| Land Use    | LDA      | LDT1     | LDT2     | MDV      | LHD1     | LHD2     | MHD      | HHD      | OBUS     | UBUS     | MCY      | SBUS     | MH       |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| City Park   | 0.544880 | 0.044491 | 0.207704 | 0.117752 | 0.014693 | 0.006272 | 0.020732 | 0.032141 | 0.002572 | 0.001984 | 0.005239 | 0.000700 | 0.000841 |
| Parking Lot | 0.544880 | 0.044491 | 0.207704 | 0.117752 | 0.014693 | 0.006272 | 0.020732 | 0.032141 | 0.002572 | 0.001984 | 0.005239 | 0.000700 | 0.000841 |

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**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        |
| Parking Lot  | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**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        |
| Parking Lot  | 0              | 0.0000        | 0.0000        | 0.0000        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</b> |                | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> | <b>0.0000</b> |

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

|             | ROG    | NOx         | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O | CO2e        |
|-------------|--------|-------------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|-----|-------------|
| Category    | lb/day |             |             |        |               |              |            |                |               |             | lb/day   |             |             |        |     |             |
| Mitigated   | 0.0345 | 1.0000e-005 | 8.1000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.7500e-003 | 1.7500e-003 | 0.0000 |     | 1.8600e-003 |
| Unmitigated | 0.0345 | 1.0000e-005 | 8.1000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 1.7500e-003 | 1.7500e-003 | 0.0000 |     | 1.8600e-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 | 3.3200e-003   |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0311        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 8.0000e-005   | 1.0000e-005        | 8.1000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.7500e-003        | 1.7500e-003        | 0.0000        |     | 1.8600e-003        |
| <b>Total</b>          | <b>0.0345</b> | <b>1.0000e-005</b> | <b>8.1000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.7500e-003</b> | <b>1.7500e-003</b> | <b>0.0000</b> |     | <b>1.8600e-003</b> |

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

**6.2 Area by SubCategory**

**Mitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4           | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|---------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |               |     |                    |
| Architectural Coating | 3.3200e-003   |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Consumer Products     | 0.0311        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |               |     | 0.0000             |
| Landscaping           | 8.0000e-005   | 1.0000e-005        | 8.1000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 1.7500e-003        | 1.7500e-003        | 0.0000        |     | 1.8600e-003        |
| <b>Total</b>          | <b>0.0345</b> | <b>1.0000e-005</b> | <b>8.1000e-004</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>1.7500e-003</b> | <b>1.7500e-003</b> | <b>0.0000</b> |     | <b>1.8600e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

City of Baldwin Park Barnes Park Multibenefit Stormwater Capture Project - Los Angeles-South Coast County, Summer

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Appendix C  
Barnes Park Cultural Resources Report



## MEMORANDUM

**DATE:** January 13, 2022

**TO:** Katie Harrel, Special Projects Manager, CWE

**FROM:** Riordan Goodwin, RA, Senior Archaeologist

**SUBJECT:** Cultural Resources Records Search Results and AB 52 Consultation Assistance for the Barnes Park Multi-Benefit Stormwater Capture Project in the City of Baldwin Park, Los Angeles County, California (LSA Project No. CWE2107)

In June 2021, LSA, under contract to CWE, requested the results of a Sacred Lands File Search (SLF) from the Native American Heritage Commission and the results of a cultural resources records search for the Barnes Park Multi-Benefit Stormwater Capture Project in the City of Baldwin Park (City) in Los Angeles County, California. The project area is located in the southwestern portion of the City on 8.38 acres generally bound by the Interstate 605 right-of-way and vacant lots to the north, Patritti Avenue to the east, and Interstate 605 to the west and south (attached Figure 1). As part of the environmental review process for the proposed project, the City requires a cultural resources data review and assistance with Native American consultation. To accomplish this, LSA completed the following work.

### RECORDS SEARCH

Data from the records search conducted at the South Central Coastal Information Center (SCCIC) on August 26, 2021, indicate there have been 36 previous studies within one mile, one of which included a portion of the project area (LA-04880, see attached Records Search Bibliography). Although no resources were documented within or adjacent to the project area, 30 historic-period resources including two archaeological sites (refuse scatters), and 28 built environment properties (residences, a farm/ranch, school, restaurant, railroad route, and power transmission lines) are within a mile (see attached Resource Listing). The nearest is a historic period power transmission line (33-0192581, SCE Antelope-Mesa 220 kV line) approximately 250 feet west of the project area. No prehistoric resources are documented within a mile.

### AB 52 CONSULTATION ASSISTANCE

On June 29, 2021, LSA requested an SLF from the NAHC, which responded on July 21, 2021, with negative findings and a list of tribes designated for contact. The City contacted the Gabrieleno Band of Mission Indians—Kizh Nation, Gabrieleno Tongva Tribe, and Soboba Band of Luiseño Indians on October 18, 2021. No response has been received from any of the tribes to date.

## RECOMMENDATIONS

The foregoing has outlined the methods and results of the records search and assistance with AB 52 consultation. No resources are documented within the project area, the nearest resource is a power transmission line, no archaeological resources are documented within one-half mile, and no prehistoric resources at all are documented within or within one mile of the study area. Also, none of the tribes contacted has responded within the specified 30-day time frame. Therefore, based on the available information, the City may consider the project area to have low sensitivity for potential impacts to cultural resources. However, standard regulatory compliance measures regarding buried cultural resources are required in conformance with Section 15064.5(e) of the *CEQA Guidelines*, PRC Section 5097.98, and State Health and Safety Code Section 7050.5.

If buried cultural materials are encountered during earthmoving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds and determine appropriate treatment.

In the event human remains are encountered, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be Native American, the County Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD will have the opportunity to offer recommendations for the disposition of the remains.

## ATTACHMENTS

- Figure 1
- Records Search Bibliography
- Resource List

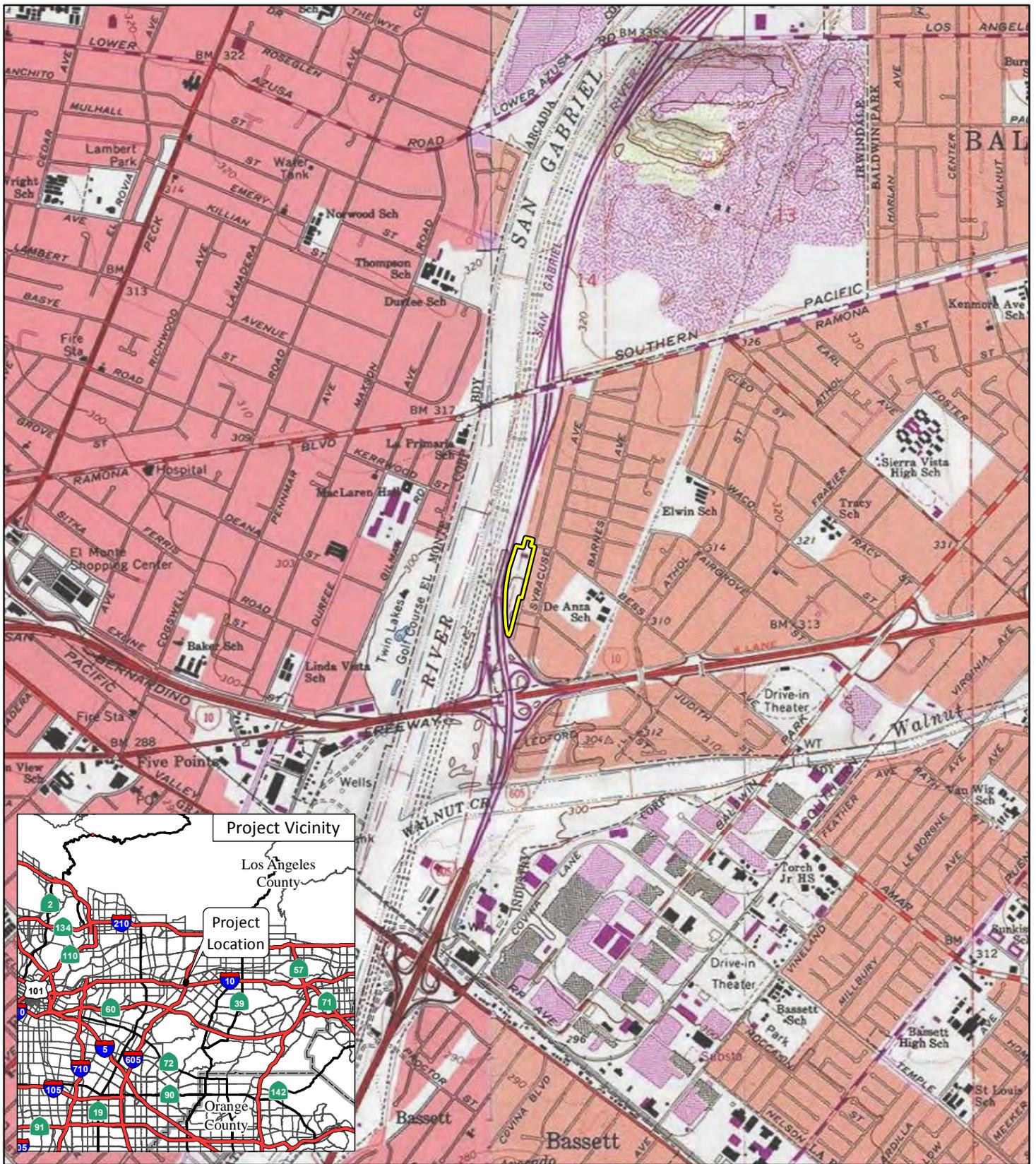


FIGURE 1

LSA

LEGEND

 Project Location



0 1000 2000  
FEET

SOURCE: USGS 7.5' Quad - Baldwin Park (1981); El Monte (1994), CA  
I:\CWE2107\GIS\MXD\ProjectLocation\_USGS.mxd (6/29/2021)

Barnes Park Multi-Benefit Project  
Project Location and Vicinity

## Report List

| Report No. | Other IDs | Year | Author(s)                                      | Title   | Affiliation   | Resources                       |
|------------|-----------|------|--|---|---|---------------------------------|
| LA-00637   |           | 1979 | Zahniser, Jack L.                              | Final Environmental Impact Report S & S Construction Company Twin Lakes Condominium Project Zone Change 8-78  | Chambers Group, Inc.  |                                 |
| LA-01220   |           | 1983 | Boxt, Matthew, Richard Aycock, and Susan Colby | An Archaeological Survey and Impact Assessment of the Valley Blvd. Redevelopment Project, Located in the City of Industry, Los Angeles County, California   | University of California, Los Angeles Archaeological Survey |                                 |
| LA-02412   |           | 1968 | Singer, Clay A.                                | Ucla Archaeological Survey Field Project Number Ucas-086.   | University of California, Los Angeles Archaeological Survey |                                 |
| LA-02871   |           | 1993 | Wlodarski, Robert J. and Dan Larson            | Department of Transportation Negative Archaeological Survey Report Dpd-ep-25 (revised 2/83) Interstate 10 (i-10) Between Baldwin Avenue in City of El Monte on the West and the Inbterchange Between I-10 and I-605 | Historical, Environmental, Archaeological, Research, Team   |                                 |
| LA-02894   |           | 1993 | De Barros, Phillip                             | Cultural Resources Survey of Area of Potential Effects of Proposed Dam Near Drop Structure No. 13 Within the San Gabriel River, Los Angeles County, California  | Chambers Group, Inc.  |                                 |
| LA-03056   |           | 1994 | Wlodarski, Robert J.                           | Negative Archaeological Survey Report Minor Widening for I-10 Malibu, California.   | Historical, Environmental, Archaeological, Research, Team   |                                 |
| LA-03823   |           | 1981 | Wlodarski, Robert J.                           | Literature Search for Property Located Along the South Side of Valley Boulevard, East of the San Gabriel Freeway, West of Turnbull Canyon Road, in the City of Industry, County of Los Angeles, California          | Pence Archaeological Consulting                             |                                 |
| LA-03834   |           | 1997 | Wlodarski, Robert J.                           | A Phase 1 Archaeological Study for Proposed Senior Housing Facilities Located at 3843-3849 Maxson Road, El Monte, California  | Historical, Environmental, Archaeological, Research, Team   |                                 |
| LA-04835   |           | 1999 | Ashkar, Shahira                                | Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties                          | Jones & Stokes Associates, Inc.                             | 19-186109, 19-186112, 19-187090 |
| LA-04880   |           | 2000 | Smith, Philomene and Siro, Adam                | Pavement Rehabilitation Along Route 605 Within the Cities of Long Beach, Lakewood, Cerritos, Downey, Pico Rivera, Santa Fe Springs, Whittier, City of Industry, Baldwin Park and Irwindale.                         | Caltrans  |                                 |

## Report List

| Report No. | Other IDs | Year | Author(s)                                    | Title  | Affiliation                 | Resources |
|------------|-----------|------|--|--|-----------------------------|-----------|
| LA-06114   |           | 2002 | Conkling, Steven W. and McLean, Deborah K.B. | Monitoring and Inadvertent Discovery Plan for Proposed Wells and Treated Water Pipelines for Treatment Plant B-6 and B-5, Cities of El Monte, Baldwin Park and Industry, Los Angeles County, California  | LSA Associates, Inc.        | 19-000136 |
| LA-06276   |           | 2001 | Duke, Curt                                   | Cultural Resource Assessment Cingular Wireless Facility No. Vy 126-01 Los Angeles County, California   | LSA Associates, Inc.        |           |
| LA-06281   |           | 2001 | Storey, Noelle                               | Highway Project Construction of Wheelchair Ramps at Ramona Blvd., Lower Azusa Road, Live Oak Avenue and Arrow Highway Along Route 605 in the City of Irwindale, Los Angeles County.                      | Caltran District 7          |           |
| LA-06282   |           | 2001 | Duke, Curt                                   | Cultural Resource Assessment for at & T Fixed Wireless Services Facility Number La_156_a, County of Los Angeles, California  | LSA Associates, Inc.        |           |
| LA-06310   |           | 2002 | Duke, Curt                                   | Cultural Resource Assessment at & T Wireless Services Facility No. 11015a-01 Los Angeles County, California  | LSA Associates, Inc.        |           |
| LA-08670   |           | 2007 | Bonner, Wayne H. and Kathleen A. Crawford    | Cultural Resources Records Search and Site Visit Results for Royal Street Communications, Llc Candidate La2314a (ramona Sce), Intersection of Ramona and I-605, El Monte, Los Angeles County, California | Michael Brandman Associates |           |
| LA-08697   |           | 2006 | Bonner, Wayne H.                             | Cultural Resources Records Search and Site Visit Results for Cingular Wireless Candidate Sv-0048-01 (moller Shopping Center) 12010 Ramona Boulevard, El Monte, Los Angeles County, California            | Michael Brandman Associates |           |
| LA-09134   |           | 2007 | Bonner, Wayne H.                             | Direct APE Historic Architectural Assessment for Royal Street Communications, LLC Candidate LA 2314A (Ramona SCE), Intersection of Ramona and I-605, El Monte, Los Angeles County, California            | Michael Brandman Associates |           |
| LA-09242   |           | 2007 | Bonner, Wayne H.                             | Cultural Resources Records Search and Site Visit Results for T-Mobile Candidate IE25751A (Rebuilt Engines and Parts Store), 12156 Ramona Boulevard, El Monte, Los Angeles County, California             | Michael Brandman Associates |           |

## Report List

| Report No. | Other IDs | Year | Author(s)                                 | Title  | Affiliation                                   | Resources  |
|------------|-----------|------|---|--|---|--|
| LA-09705   |           | 2007 | Anonymous                                 | Cultural Resources Inventory of the Southern California Edison Company Tehachapi Renewable Transmission Project, Kern, Los Angeles and San Bernardino Counties, California. ARR #05-01-01046 | Pacific Legacy, Inc.                          | 19-001128, 19-001299, 19-001300, 19-001315, 19-001359, 19-001382, 19-002131, 19-002206, 19-002212, 19-002350, 19-002363, 19-002411, 19-002412, 19-002998, 19-003018, 19-003025, 19-003031, 19-003032, 19-003136, 19-003141, 19-003152, 19-003720, 19-003721, 19-003722, 19-003723, 19-003727, 19-003728, 19-003729, 19-003730, 19-003731, 19-003732, 19-003733, 19-003734, 19-003735, 19-003736, 19-003737, 19-003738, 19-003739, 19-003740, 19-003741, 19-003742, 19-003990, 19-100631, 19-100806, 19-100807, 19-100808   |
| LA-10151   |           | 2008 | Cotterman, Cary D. and Evelyn N. Chandler | Cultural Resources Inventory of Proposed Pole Replacement in the City of Baldwin Park, Los Angeles County, CA  | ECORP Consulting, Inc.                        |  |
| LA-10175   |           | 2009 | Unknown                                   | Confidential Cultural Resources Specialist Report for the Tehachapi Transmission Project   | Applied Earthworks, Aspen Environmental Group | 19-000806, 19-001128, 19-001299, 19-001300, 19-001315, 19-001357, 19-001382, 19-001636, 19-001770, 19-001771, 19-001783, 19-001956, 19-001957, 19-002206, 19-002212, 19-002343, 19-002350, 19-002363, 19-002411, 19-002412, 19-003009, 19-003018, 19-003025, 19-003031, 19-003032, 19-003037, 19-003090, 19-003099, 19-003136, 19-003152, 19-003295, 19-003385, 19-003477, 19-003606, 19-003638, 19-003795, 19-003852, 19-003853, 19-003854, 19-100277, 19-100439, 19-100496, 19-100644, 19-120031, 19-120032, 19-120072, 19-120074, 19-180689, 19-186545, 19-186860, 19-186870, 19-186871, 19-186872, 19-186873, 19-186875, 19-186876, 19-186877, 19-186917, 19-186921, 19-186923, 19-186925, 19-187713 |

## Report List

| Report No. | Other IDs | Year | Author(s)                                      | Title   | Affiliation                       | Resources  |
|------------|-----------|------|--|---|-----------------------------------|--|
| LA-10189   | Paleo -   | 2003 | Gust, Sherri and Sara Alarcon                  | Archaeological and Paleontological Evaluation Report and Mitigation Plan for the Interstate 605 Soundwall Project, from Whittier to Baldwin Park, Los Angeles County, CA  | Cogstone Resource Management Inc. | 19-000136, 19-000182, 19-178611, 19-186112, 19-186571, 19-186804   |
| LA-10190   |           | 2002 | Harbert, Claudia                               | Supplemental Historic Property Survey Report for the I-10 HOV Lane Between I-605 and the SR-57/SR-71/I-210 Interchange in the Cities of Los Angeles, Baldwin Park, West Covina, Covina, San Dimas, and Pomona in Los Angeles County, CA | Caltrans                          | 19-188913, 19-188914, 19-188915, 19-188916, 19-188917, 19-188918, 19-188919, 19-188920, 19-188921, 19-188922, 19-188923, 19-188924, 19-188925, 19-188926, 19-188927, 19-188928, 19-188929, 19-188930, 19-188931, 19-188932, 19-188933, 19-188934, 19-188935, 19-188936, 19-188937, 19-188938, 19-188939, 19-188940, 19-188941, 19-188942, 19-188943, 19-188944, 19-188945, 19-188946, 19-188947, 19-188948, 19-188949, 19-188950, 19-188951, 19-188952, 19-188953, 19-188954, 19-188955, 19-188956, 19-188957, 19-188958, 19-188959, 19-188960, 19-188961, 19-188962, 19-188963, 19-188964, 19-188965, 19-188966, 19-188967, 19-188968, 19-188969, 19-188970, 19-188971, 19-188972, 19-188973, 19-188974, 19-188975, 19-188976, 19-188977, 19-188978, 19-188979, 19-188980, 19-188981, 19-188982 |
| LA-10501   |           | 1994 | Toren, George A.                               | Cultural Resource Survey of Three Segments of the Proposed San Gabriel Valley Water Reclamation Project, Los Angeles County, California   | Greenwood and Associates          | 19-002207  |
| LA-10502   |           | 2001 | Wrobleski, David E. and Richard A. Krautkramer | A Class III Archaeological Investigation for Proposed Wells and Treated Water Pipelines Adjoining the Plant B-6 and B-5 Treatment Facility Project, Los Angeles County, California  | Express Archaeological Solutions  | 19-000136  |
| LA-10532   |           | 1993 | Landis, Daniel G.                              | A Preliminary Cultural Resources Overview for the Proposed San Gabriel Valley Reclamation Program, Los Angeles County, California   | Greenwood & Associates            |  |

## Report List

| Report No. | Other IDs | Year | Author(s)  | Title   | Affiliation   | Resources  |
|------------|-----------|------|--|---|---|--|
| LA-10600   |           | 2007 | Strauss, Monica  | Draft - Cultural Resources Assessment for the Proposed Woodland Duck Farm Project, Avocado Heights, Los Angeles County, California  | EDAW, Inc.  | 19-004079  |
| LA-10641   |           | 2010 | Tang, Bai "Tom"  | Preliminary Historical/Archaeological Resources Study, San Bernadino Line Positive Train Control Project, Southern California Regional Rail Authority, Counties of Los Angeles and San Bernadino  | CRM Tech  |  |
| LA-10883   |           | 2008 | Stewart, Noah M.   | Finding of no adverse effect - Interstate Route 10-605 Interchange Improvement 07-LA-10/605 PM 31.2/20.9 EA:245400  | California Department of Transportation, District 7 | 19-188983  |
| LA-11784   |           | 2012 | Stewart, Noah  | Supplemental Finding of No Adverse Effect, Interstate Route 10-605 Interchange Improvement  | California Department of Transportation             |  |
| LA-11851   |           | 2010 | Long, Michelle and Holson, John                                | Archaeological Survey and National Register of Historic Places and California Register of Historical Resources Evaluation of 07-H-002 and 07-H-003, Starwberry Contractor Yard, for the Southern California Edison Company Tehachapi Renewable Transmission Pro | Pacific Legacy                                      | 19-003117, 19-003118   |
| LA-11989   |           | 2010 | Panich, Lee and Holson, John                                   | Supplemental Archaeological Survey Report, 66KV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments 7 and 8, Los Angeles and San Bernardino Counties, California   | Pacific Legacy                                      | 19-000858, 19-001009, 19-001311, 19-002583, 19-003121, 19-003551, 19-003813, 19-003814, 19-186112, 19-186889 |
| LA-11990   |           | 2010 | Wetherbee, Matthew, Jackson, Thomas, and Tinsley-Becker, Wendy | Supplemental Cultural Resources Survey Report for the Southern California Edison Tehachapi Renewable Transmission Project Segment 7 Rio Hondo-Amamdor-Jose-Mesa 66kv Line Relocation, Los Angeles County, California  | Pacific Legacy & Urbana Preservation and Planning   | 19-003814, 19-004079, 19-004117, 19-004118   |
| LA-11991   |           | 2010 | Schneider, Tsim and Holson, John                               | Supplemental Archaeological Survey Report #2, Tehachapi Renewable Transmission Project Segment 7, Los Angeles County, California  | Pacific Legacy                                      | 19-003813, 19-186917   |
| LA-12558   | Paleo -   | 2012 | Maxon, Patrick   | Cultural Resources Study for the Proposed Interstate 605/Valley Boulevard Interchange Improvement Project, City of Industry, Los Angeles County, California   | BonTerra Consulting                                 | 19-000136, 19-004079, 19-186112  |

## Resource List

| Primary No. | Trinomial      | Other IDs  | Type                                | Age      | Attribute codes                          | Recorded by  | Reports                      |
|-------------|----------------|--|-------------------------------------|----------|--|--|------------------------------|
| P-19-003117 | CA-LAN-003117H | Resource Name - 07-H-002   | Site                                | Historic | AH04                                     | 2010 (L. Schrader, W. Bischoff, Pacific Legacy, Inc)   | LA-11851, LA-13259           |
| P-19-003118 | CA-LAN-003118H | Resource Name - 07-H-003   | Site                                | Historic | AH04; AH10                               | 2010 (L. Schrader, W. Bischoff, Pacific Legacy, Inc)   | LA-11851, LA-13259           |
| P-19-004079 | CA-LAN-004079H | Resource Name - Woodland Duck Farms & Equestrian Center, Louise A. Ward Residence;<br>Other - Woodland Farm;<br>Other - Duck Farm;<br>Other - Louise A. Ward Residence | Building, Structure, Site, District | Historic | AH02; HP02; HP06; HP31; HP33; HP37; HP39 | 2010 (Wendy L. Tinsley Becker, AICP);<br>2010 (Lee Panich, Pacific Legacy, Inc.);<br>2018 (Christine Miller Cruieess, GPA) | LA-10600, LA-11990, LA-12558 |

## Resource List

| Primary No. | Trinomial | Other IDs   | Type      | Age      | Attribute codes  | Recorded by  | Reports   |
|-------------|-----------|---|-----------|----------|------------------|--|---|
| P-19-186112 |           | Resource Name - Union Pacific RR, Southern Pacific R R Los Angeles Division;<br>Other - C-Los Angeles-A-1;<br>Other - MetroLink Riverside Line;<br>Other - SPRR Los Angeles Division;<br>Other - SPRR Sunset Line;<br>Other - Map Reference #2-35 | Structure | Historic | AH07; HP11; HP39 | 1999 (S. Ashkar, Jones & Stokes);<br>2002 (Rand F. Herbert, JPR Historical Consulting Services);<br>2009 (R. Ramirez and F. Smith, SWCA Environmental Consultants);<br>2009 (F. Smith and J. Steely, SWCA Environmental Consultants);<br>2012 (Alyssa Newcomb, SWCA Environmental Consultants);<br>2018 (Audrey von Ahrens, GPA);<br>2019 (Jenna Kachour, GPA) | LA-04835, LA-05125, LA-05501, LA-05643, LA-07528, LA-07834, LA-07943, LA-07954, LA-08231, LA-08249, LA-08298, LA-08299, LA-08517, LA-08635, LA-08667, LA-08671, LA-08701, LA-08703, LA-08733, LA-08744, LA-08821, LA-08822, LA-08826, LA-08827, LA-08911, LA-09156, LA-09199, LA-09236, LA-09271, LA-09441, LA-09660, LA-09795, LA-09880, LA-09894, LA-10189, LA-10284, LA-10299, LA-10323, LA-10340, LA-10394, LA-10513, LA-10638, LA-10698, LA-10911, LA-10937, LA-10940, LA-10942, LA-10997, LA-10998, LA-11048, LA-11060, LA-11065, LA-11077, LA-11180, LA-11253, LA-11293, LA-11405, LA-11537, LA-11590, LA-11775, LA-11808, LA-11821, LA-11988, LA-11989, LA-12133, LA-12211, LA-12212, LA-12349, LA-12499, |

## Resource List

| Primary No. | Trinomial | Other IDs  | Type             | Age      | Attribute codes | Recorded by                                    | Reports  |
|-------------|-----------|--|------------------|----------|-----------------|--|--|
|             |           |  |                  |          |                 |  | LA-12526, LA-12552, LA-12558, LA-12697, LA-12928, LA-13458, VN-03153 |
| P-19-187085 |           | Resource Name - The Mojave Rd;   | Structure, Other | Historic | HP37            | 1989 (S. Elder);<br>2014 (Marc Beherec, AECOM) | LA-12788, LA-12808, LA-13259   |
| P-19-188913 |           | OHP Property Number - 136375   | Building         | Historic | HP03            | 2002 (Claudia A. Harbert, Caltrans)            | LA-10190   |
| P-19-188914 |           | OHP Property Number - 136376   | Building         | Historic | HP03            | 2002 (Claudia A. Harbert, Caltrans)            | LA-10190   |
| P-19-188915 |           | OHP Property Number - 136377   | Building         |          | HP02            | 2002 (Claudia A. Harbert, Caltrans)            | LA-10190   |
| P-19-188916 |           | OHP Property Number - 136378   | Building         |          | HP03            | 2002 (Claudia A. Harbert, Caltrans)            | LA-10190   |
| P-19-188917 |           | OHP Property Number - 136379   | Building         |          | HP03            | 2002 (Claudia A. Harbert, Caltrans)            | LA-10190   |
| P-19-188918 |           | OHP Property Number - 136380   | Building         |          | HP02; HP06      | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188919 |           | OHP Property Number - 136381   | Building         |          | HP03            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188920 |           | OHP Property Number - 136382;<br>Resource Name - Burl Watson Realty Inc                        | Building         |          | HP06            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188921 |           | OHP Property Number - 136383;<br>OHP Property Number - 095025;<br>OHP Property Number - 136386 | Building         |          | HP03            | 2001 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188922 |           | OHP Property Number - 136384   | Building         | Historic | HP03            | 2001 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188923 |           | OHP Property Number - 136385   | Building         |          | HP03            | 2001 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188924 |           | OHP Property Number - 136387   | Building         |          | HP03            | 2001 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188925 |           | OHP Property Number - 136388   | Building         |          | HP06            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188926 |           | OHP Property Number - 136389;<br>Resource Name - The Aristocrat Motel                          | Building         | Historic | HP05            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188927 |           | OHP Property Number - 136390;<br>Resource Name - Taxcos Restaurant                             | Building         | Historic | HP06            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |
| P-19-188928 |           | OHP Property Number - 136391;<br>Resource Name - Nextel  | Building         | Historic | HP06            | 2002 (Kelly F. Ewing, Caltrans)                | LA-10190   |

## Resource List

| Primary No. | Trinomial | Other IDs  | Type                           | Age      | Attribute codes | Recorded by   | Reports  |
|-------------|-----------|--|--------------------------------|----------|-----------------|---|--|
| P-19-188983 |           | Resource Name - L A Dept of Water & Power Boudler Lines North & South;<br>Other - LADWP Boulder Lines 1 & 2;<br>Other - Boulder Dam-Los Angeles 287.5 kV Transmission Line | Structure, Element of district | Historic | HP09; HP11      | 1999 (Stephen Van Wormer, KEA);<br>2008 (Noah M. Stewart, Caltrans District 7);<br>2013 (Heather Gibson and Marc Beherec, AECOM);<br>2018 (Jessica B. Feldman, ICF)   | LA-10883, LA-11400, LA-11746, LA-12041, LA-12096, LA-12103, LA-12133, LA-12296, LA-12306, LA-12465, LA-12756, LA-13259 |
| P-19-190504 |           | Resource Name - SCE Rio Hondo-Amador-Jose-Mesa-Narrows 66kV Transmission Line  | Structure                      | Historic | HP09; HP11      | 2010 (Wendy L. Tinsley Becker, Urbana Preservation & Planning);<br>2018 (Audrey von Ahrens, GPA)  | LA-12552, LA-13259   |
| P-19-190510 |           | Resource Name - San Gabriel River Levee - Arcadia-El Monte-Irwindale Span  | Structure                      | Historic | HP20            | 2010 (Wendy L. Tinsley Becker, Urbana Preservation & Planning)  | LA-13259   |
| P-19-192581 |           | Resource Name - Big Creek No. 4;<br>Resource Name - Antelope-Mesa 220 kV Transmission Line;<br>Other - Magunden-Mesa 220kV TL;<br>Other - Antelope-Vincent No. 1           | Structure                      | Historic | HP11            | 2010 (Wendy L. Tinsley, Urbana Preservation & Planning);<br>2010 (Wendy L. Tinsley, Urbana Preservation & Planning);<br>2014 (Daniel Leonard, BCR Consulting);<br>2017 (Audry Williams, SCE);<br>2018 (Audrey von Ahrens, GPA);<br>2019 (Audry Williams, SCE) |  |
| P-19-192758 |           | Resource Name - 3350 Gilman Road, El Monte, CA 91732   | Building                       | Historic | HP08            | 2017 (Allyson Lyons, GPA)   |  |
| P-19-192817 |           | Resource Name - 12127 Exline Street, El Monte, CA 91732  | Building                       | Historic | HP02            | 2017 (Allison Lyons, GPA)   |  |
| P-19-192819 |           | Resource Name - 12424, 12432, 12440 Exline Street, El Monte, CA 91732  | Building                       | Historic | HP08            | 2017 (Allison Lyons, GPA)   |  |
| P-19-192820 |           | Resource Name - 12955 Perez Place, La Puente, CA 91746   | Building                       | Historic | HP06            | 2017 (Allison Lyons, GPA)   |  |
| P-19-192826 |           | Resource Name - Jerry Voorhis Elementary School  | Building                       | Historic | HP15            | 2017 (Allison Lyons, GPA)   |  |

Appendix D  
Barnes Park Paleontological Analysis Report



## MEMORANDUM

**DATE:** September 16, 2021

**To:** Katie Harrel, CWE

**FROM:** Jacob Biewer, M.S., Paleontologist, and Sarah Rieboldt, Ph.D., Principal Paleontologist

**SUBJECT:** Paleontological Analysis of the Barnes Park Multi-Benefit Project, Baldwin Park, Los Angeles County, California

### INTRODUCTION

This memorandum was prepared to ensure that the proposed Barnes Park Multi-Benefit Project (project) in Baldwin Park, Los Angeles County, California, is in compliance with all applicable State regulations and requirements regarding paleontological resources, as well as the standards of the Society of Vertebrate Paleontology (SVP, 2010). The applicable regulations and requirements include the California Environmental Quality Act (CEQA): Public Resources Code (PRC) Division 13, Chapter 2.6; the *State CEQA Guidelines*: California Code of Regulations, Title 14, Chapter 3, Appendix G; and PRC §5097.5. The City of Baldwin Park (City) is the Lead Agency for CEQA compliance.

### PROJECT LOCATION AND DESCRIPTION

The project site is situated primarily in Barnes Park, located at 3251 Patritti Ave, but also extends north of the park into two vacant parcels owned by the City and by the San Gabriel Valley Water Company. The project site is depicted on Figure 1 (Attachment B) on the United States Geological Survey (USGS) *Baldwin Park, California* and *El Monte, California* 7.5-minute topographic quadrangle maps in unsectioned land of the La Puente Land Grant (USGS, 1981, 1994).

The project will reduce pollutant loading to downstream water bodies by capturing wet- and dry-weather runoff. The project includes both subsurface and surface improvements. The subsurface infrastructure has a primary function of improving water quality, while the surface improvements provide community enhancements/benefits.

Subsurface improvements include the installation of a storage system with an approximate footprint of 1.2 acres and a dead storage capacity of 10 acre-feet, as well as a diversion pipeline and pretreatment unit. The diversion pipeline is under 600 feet long, extending from the storm drain on Bess Avenue at Patritti Avenue to just south of the parking lot at Barnes Park. The diversion pipe is expected to have a diameter no greater than 42 inches. The pretreatment system will be a precast concrete system capable of capturing and retaining trash, sediment, and debris to preserve downstream infiltration capacities and concentrate more frequent maintenance activities. The

pretreatment unit is expected to have a diameter greater than 12 feet and a depth of approximately 20 feet. The exact configuration and component sizing will be confirmed through the design process.

Surface improvements include increasing the size of Barnes Park with development planned for two vacant parcels north of the existing park boundary. The expansion concept is anticipated to include additional parking, modified trails, new basketball courts, new mini-pitch soccer field, landscape, and other enhancements. The exact amenities will be confirmed based on funding availability and through the design process. The project is also expected to include a new dog park area on the south side of the existing park. Fences and monument signs will be placed to create both a small dog area and an area for dogs of any size. The subsurface infiltration system will be located outside of the dog park limits, which will be refined during the design process.

Development of the project will involve demolition of some existing park and parking lot improvements; excavation for and installation of the subsurface storage system, pretreatment unit, and diversion pipeline; construction of park improvements and amenities; and installation of new wet and dry utilities, landscaping, and lighting.

### **Excavation Parameters**

The deepest excavation associated with the project is expected to be for the subsurface storage system and will extend to a maximum depth of approximately 20 to 25 feet (ft). Excavation for the diversion pipe along Patritti Avenue will not exceed 15 ft deep and excavation for the pretreatment unit will reach 20 ft.

## **METHODS**

LSA examined geologic maps of the project site and reviewed relevant geological and paleontological literature to determine which geologic units are present in the project site and whether fossils have been recovered in the project site or from similar geologic units elsewhere in the region. Additionally, a fossil locality search was conducted through the Natural History Museum of Los Angeles County (NHMLAC) to determine the status and extent of previously recorded paleontological resources within and surrounding the project site. Pedestrian field survey of the project site was conducted on August 7, 2021. The purpose of the field survey is to note the sediments and identify any fossils that may be present within the project site.

## **RESULTS**

### **Literature Review**

The project site is in the northern Peninsular Ranges Geomorphic Province, a 900-mile (mi) long northwest–southeast trending structural block that extends from the Transverse Ranges in the north to the tip of Baja California in the south and includes the Los Angeles Basin (California Geological Survey, 2002; Norris and Webb, 1976). The total width of this province is 225 mi, extending from the Colorado Desert in the east, across the continental shelf, to the Southern Channel Islands (Santa Barbara, San Nicolas, Santa Catalina, and San Clemente) in the west (Sharp, 1976). This province is characterized by a series of mountain ranges and valleys that trend in a northwest–southeast direction roughly parallel to the San Andreas Fault Zone (Norris and Webb, 1976; Sharp, 1976). It

contains extensive pre-Cenozoic (more than 66 million years ago [Ma]) igneous and metamorphic rocks covered by a veneer of Cenozoic (66 Ma to Present) sedimentary deposits (Norris and Webb, 1976).

Geologic mapping by Morton and Miller (2006) indicates that the project site contains Young Alluvial Fan Deposits. Artificial Fill is likely present in the project site as the area is previously developed. These geologic units and their relative paleontological sensitivities are described in more detail below. The dates for the geologic time intervals are based on the International Chronostratigraphic Chart prepared by the International Commission on Stratigraphy (Cohen et al., 2021).

#### *Artificial Fill*

Artificial Fill consists of sediments that have been removed from one location and transported to another location by human activity, rather than by natural means. The transportation distance can vary from a few feet to many miles, and composition is dependent on the source and purpose. Artificial Fill will sometimes contain modern debris, such as asphalt, wood, bricks, concrete, metal, glass, plastic, or plant material, and may contain fossils.

Any fossils encountered in Artificial Fill have been removed from their original location and are thus out of stratigraphic context. Therefore, they are not considered important for scientific study. As such, Artificial Fill has no paleontological sensitivity.

#### *Young Alluvial Fan Deposits*

The Young Alluvial Fan Deposits are Holocene to late Pleistocene in age (less than 129,000 years ago) and consist of unconsolidated silt, sand, and gravel (Morton and Miller, 2006). Cobble- and boulder-size clasts are also present and become more abundant closer to the hills and mountains (Morton and Miller, 2006). These sediments were eroded from higher elevations, carried by flooding streams and debris flows, and deposited in a fan or lobe shape at the base of the hills. They show slight to moderate dissection by erosional gullies (Morton and Miller, 2006).

Although Holocene (less than 11,700 years ago) deposits can contain remains of plants and animals, only those from the middle to early Holocene (4,200 to 11,700 years ago) are considered scientifically important (SVP, 2010), and fossils from this time interval are not very common. These Holocene deposits overlie older, Pleistocene deposits, which have produced scientifically important fossils elsewhere in the region (Jefferson 1991a, 1991b; Miller 1971; Reynolds and Reynolds 1991; Springer et al. 2009). These older, Pleistocene deposits span the end of the Rancholabrean North American Land Mammal Age (NALMA), which dates from 11,000 to 240,000 years ago (Sanders et al., 2009) and was named for the Rancho La Brea fossil site in central Los Angeles. The presence of *Bison* defines the beginning of the Rancholabrean NALMA (Bell et al. 2004), but fossils from this time also include other large and small mammals, reptiles, fish, invertebrates, and plants (Jefferson 1991a, 1991b; Miller 1971; Reynolds and Reynolds 1991; Springer et al. 2009). There is a potential to find these types of fossils in the older sediments of this geologic unit, which may be encountered below a depth of approximately 10 ft. Therefore, these deposits are assigned a low paleontological sensitivity above a depth of 10 ft and a high sensitivity below that mark.

### Fossil Locality Search

The fossil locality search through the NHMLAC indicated that no fossil localities are present within the boundaries of the project site. However, this search noted fossil localities nearby from the same or similar geologic units as those within the project site, either at the surface or possibly at depth. One fossil locality, LACM 7702, from an unnamed Pleistocene geologic unit to the south in Bell Gardens produced fish (*Gasterosteus*), snake (*Colubridae*), rodents (*Thomomys*, *Microtus*), and rabbit (*Sylvilagus*) from a depth of 30 ft below the surface. Another vertebrate locality, LACM 3363, from an unnamed Pleistocene geologic unit to the west in Monterey Park produced fossils of horse (*Equus*). A third locality also from an unnamed Pleistocene geologic unit to the east in Chino produced terrestrial vertebrate fossils of horse (*Equus*) and camel (*Camelops*). A copy of the fossil locality search results through the NHMLAC is included in Attachment C.

### Field Survey

The small, flat rectangular lot is bound between Patriitti Avenue to the east, residential development to the north, and the I-605 to the west. The northern portion of the project site contains a gated asphalt lot, as well as the park's community center, parking lot, and basketball courts. The southern portion of the project site contains a large grassy field with sparse trees. A cement walking path follows the western perimeter of the park. Visibility was very poor across the majority of the project site at approximately 5 percent, with most areas obscured by grass, other vegetation, and various park amenities, including the basketball court, community center, parking area, and the asphalt lot. Open ground with exposed sediments was noted in a small band paralleling the walking path in the western portion of the project site. These sediments consisted of compacted dark gray silty sand with sparse interspersed gravel, indicative of Artificial Fill. No native sediments were seen within the entirety of the project area, and no paleontological resources were identified.

## CONCLUSIONS AND RECOMMENDATIONS

The project site contains Artificial Fill, which has no paleontological sensitivity, as well as Young Alluvial Fan Deposits, which have low paleontological sensitivity from the surface to a depth of 10 ft and high sensitivity below that depth. With excavation for the subsurface project components extending to depths of 15 ft to 25 ft across the project site, development of this project is expected to extend into paleontologically sensitive sediments of Young Alluvial Fan Deposits and has the potential to impact scientifically significant paleontological resources. Therefore, in order to mitigate potential impacts to these resources, LSA recommends the following mitigation measures:

**PALEO-1** A paleontologist who meets the qualifications of established by the Society of Vertebrate Paleontology (SVP) shall be retained to develop a Paleontological Resources Impact Mitigation Program (PRIMP) for this project. The PRIMP shall be consistent with the standards of the SVP and include the methods that will be used to protect paleontological resources that may exist within the project site, as well as procedures for monitoring, fossil preparation and identification, curation into a repository, and preparation of a report at the conclusion of grading.

**PALEO-2** Excavation and grading activities in deposits with high paleontological sensitivity (i.e., Young Alluvial Fan Deposits below a depth of 10 ft) shall be monitored by a

qualified paleontological monitor following a PRIMP. No monitoring is required for excavations in deposits with no paleontological sensitivity (i.e., Artificial Fill). If paleontological resources are encountered during the course of ground disturbance, the paleontological monitor shall have the authority to temporarily redirect construction away from the area of the find. In the event that paleontological resources are encountered when a paleontological monitor is not present, work in the immediate area of the find shall be redirected, and the paleontologist or paleontological monitor shall be contacted to assess the find for scientific significance. If determined to be scientifically significant, the fossil shall be collected from the field.

**PALEO-3** Collected resources shall be prepared to the point of identification, identified to the lowest taxonomic level possible, cataloged, and curated into the permanent collections of a museum repository. At the conclusion of the monitoring program, a report of findings shall be prepared to document the results of the monitoring program.

Implementation of Mitigation Measures PALEO-1 through PALEO-3 will ensure that project impacts on paleontological resources will be reduced to a level that is less than significant.

Attachments: A: References  
B: Figure  
C: Fossil Locality Search Results from the Natural History Museum of Los Angeles County

## ATTACHMENT A

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- 1994 El Monte, California 7.5-minute topographic quadrangle. Published 1966, photorevised 1981, minor revisions 1994. Denver, Colorado.

## **ATTACHMENT B**

### **FIGURES**

Figure 1: Project Location Map

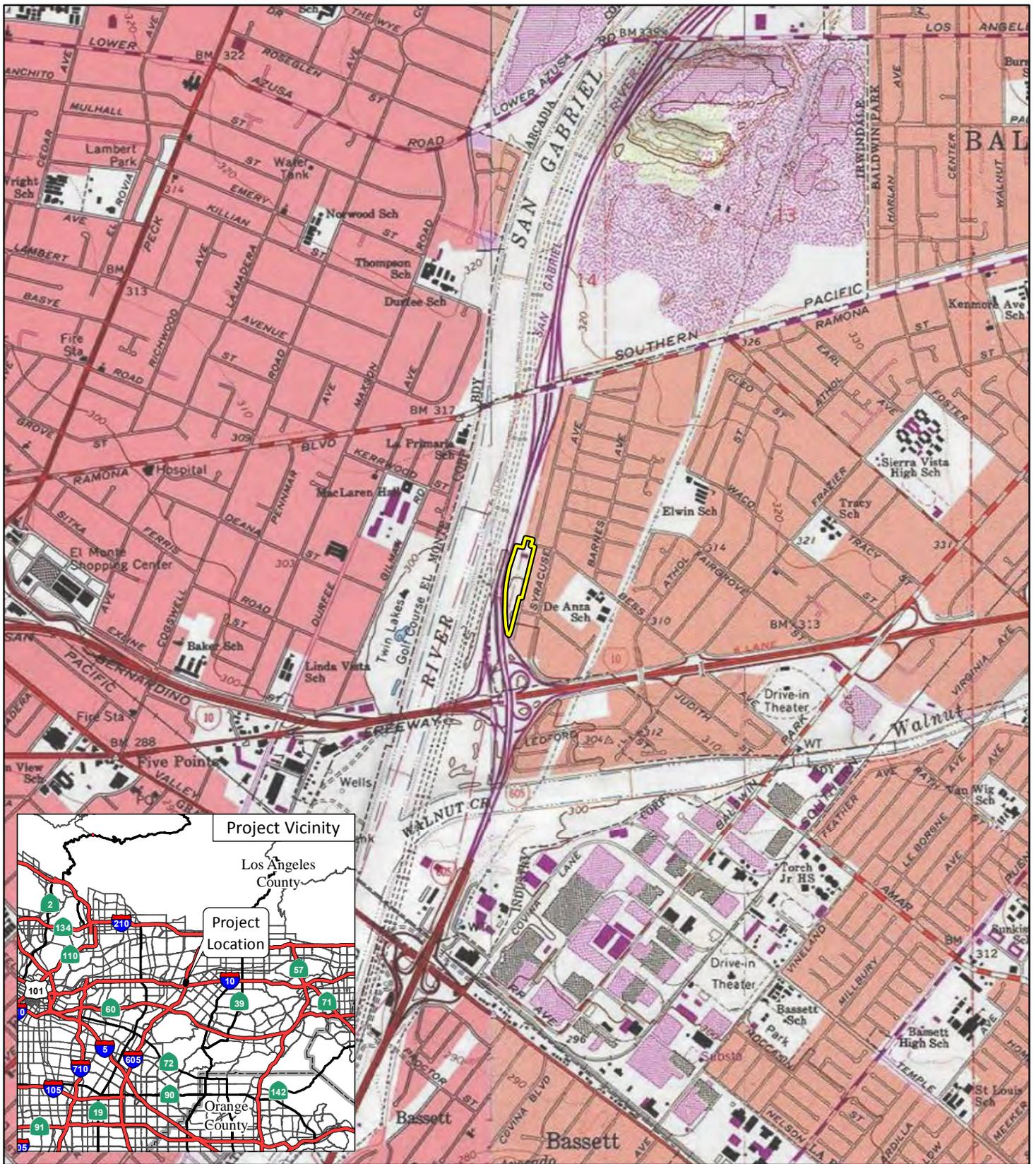


FIGURE 1

LSA

LEGEND

 Project Location



0 1000 2000  
FEET

SOURCE: USGS 7.5' Quad - Baldwin Park (1981); El Monte (1994), CA  
I:\CWE2107\GIS\MXD\ProjectLocation\_USGS.mxd (6/29/2021)

Barnes Park Multi-Benefit Project  
Project Location and Vicinity

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## ATTACHMENT C

### FOSSIL LOCALITY SEARCH RESULTS FROM THE NATURAL HISTORY MUSEUM OF LOS ANGELES COUNTY

Natural History Museum  
of Los Angeles County  
900 Exposition Boulevard  
Los Angeles, CA 90007

tel 213.763.DINO  
www.nhm.org

Research & Collections

e-mail: [paleorecords@nhm.org](mailto:paleorecords@nhm.org)

July 4, 2021

LSA Associates, Inc.  
Attn: Jacob Biewer

re: Paleontological resources for the Barnes Park Multi-Benefit Project (CWE2107)

Dear Jacob:

I have conducted a thorough search of our paleontology collection records for the locality and specimen data for proposed development at the Barnes Park Multi-Benefit project area as outlined on the portion of the Baldwin Park USGS topographic quadrangle map that you sent to me via e-mail on June 30, 2021. We do not have any fossil localities that lie directly within the proposed project area, but we do have fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at the surface or at depth.

The following table shows the closest known localities in the collection of the Natural History Museum of Los Angeles County.

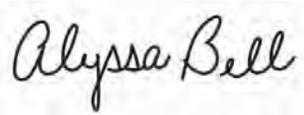
| Locality Number                        | Location   | Formation  | Taxa   | Depth          |
|--|--|--|--|----------------|
| VPLACM6350-6362; LACM IP 16968-16991   | Puente Hills Landfill  | Fernando Formation; Repetto Member (massive clayey siltstone)        | Herring ( <i>Ganolytes</i> ), hake ( <i>Merluccius</i> ), rattail ( <i>Coelorhynchus</i> ), lanternfish ( <i>Lampanyctus</i> , <i>Diaphus</i> ), white shark ( <i>Charcharodon carcharias</i> ); marine mammals (Cetacea); Invertebrates (unspecified) | unknown        |
| LACM VP 7930-7932; LACM IP 17925-17932 | Near the intersection of Shadow Oak Dr & S Woodgate Dr; South San Jose Hills | Monterey Formation (Yorba Shale; sandstone & diatomaceous shale)     | Bony fish (Osteichthyes), including ray-finned fishes (Clupeidae); Invertebrates (unspecified)   | 6.5 - 7 ft bgs |
| LACM VP 3347                           | 11204 Bluefield; Whittier  | La Habra Formation (lacustrine silt with caliche and plant detritus) | Horse ( <i>Equus</i> )   | 2 feet bgs     |
| LACM VP 7702                           | Intersection of 26th St and Atlantic Blvd, Bell Gardens                      | Unknown Formation (Pleistocene; silt)                                | Fish ( <i>Gasterosteus</i> ); Snake (Colubridae), Rodents ( <i>Thomomys</i> , <i>Microtus</i> ); Rabbit ( <i>Sylvilagus</i> )  | 30 ft bgs      |

|              |   |   |   |              |
|--------------|---|---|---|--------------|
| LACM VP 3363 | W of Monterey Pass Road in Coyote Pass; E of the Long Beach Freeway & S of the N boundary of Section 32 | Unknown Formation (Pleistocene; sand and silt)  | Horse ( <i>Equus</i> )                            | unknown      |
| LACM VP 1728 | W of intersection of English Rd & Peyton Dr, Chino  | Unknown formation (Pleistocene; light brown shale with interbeds of very coarse brown sand) | Horse ( <i>Equus</i> ), camel ( <i>Camelops</i> ) | 15-20 ft bgs |

*VP, Vertebrate Paleontology; IP, Invertebrate Paleontology; bgs, below ground surface*

This records search covers only the records of the Natural History Museum of Los Angeles County (“NHMLA”). It is not intended as a paleontological assessment of the project area for the purposes of CEQA or NEPA. Potentially fossil-bearing units are present in the project area, either at the surface or in the subsurface. As such, NHMLA recommends that a full paleontological assessment of the project area be conducted by a paleontologist meeting Bureau of Land Management or Society of Vertebrate Paleontology standards.

Sincerely,



Alyssa Bell, Ph.D.  
Natural History Museum of Los Angeles County

enclosure: invoice