California Environmental Quality Act
Initial Study and Mitigated Negative Declaration
Commerce Energy Storage Project

April 2022

Prepared For:
City of Commerce Planning Division
2535 Commerce Way
Commerce, CA 90040

Prepared By:
6 Executive Circle, Suite 200
Irvine, CA 92614

Mitigated Negative Declaration

Project Name: Commerce Energy Storage Project

Project Address: 6904 East Slauson Avenue, Commerce, CA 90040

Applicant: Commerce Energy Storage, LLC, 5000 Hopyard Road, Suite 480, Pleasanton, CA 94588

City and County: City of Commerce, Los Angeles County

Description: The City of Commerce, in its capacity as the Lead Agency under the California Environmental Quality Act (CEQA), is reviewing a request by Commerce Energy Storage, LLC to construct and operate a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The site could include facilities on an approximately 0.08-acre vacant parcel that would be purchased from the City and was the location of a previously abandoned City water supply well. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's high voltage electric grid. The Project is not an energy generator and there are no air or water emissions created by its operation. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment including inverters, transformers, and a small onsite substation, would connect to the existing Southern California Edison (SCE) Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. The Project is designed for remote operation and would be unoccupied with occasional inspection and maintenance visits. Due to its unmanned operation, it would generate negligible vehicle trips during operation. Operation of the facility would not require water except as required for fire protection. Because the site would not be occupied and energy storage represents a higher use than unused parking, the Applicant is requesting a variance from standard warehouse parking requirements and has designed the facility with three parking places.

Findings: The environmental analysis provided in the attached Initial Study concludes that the proposed project with mitigation will not result in any potentially significant environmental impact. For this reason, the City of Commerce determined that a Mitigated Negative Declaration is the appropriate CEQA document for the proposed project. The following findings may also be made based on the analysis contained in the attached Initial Study:

- The proposed project will not have the potential to degrade the quality of the environment.
- The proposed project will not have the potential to achieve short-term goals to the disadvantage of long-term goals.
- The proposed project will not have impacts that are individually limited but cumulatively considerable, when considering planned or proposed development in the City.
- The proposed project will not have environmental effects that will adversely affect humans, either directly or indirectly.

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APPENDICES

List of Acronyms and Abbreviations

Acronym	Name
AC	Alternating Current
Applicant	Commerce Energy Storage, LLC
BMPs	Best Management Practices
C & D	Construction and Demolition
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emission Estimator Model
CAMEO	California Metal Enameling Company
CASQA	California Stormwater Quality Association
CEQA	California Environmental Quality Act
CES	Commerce Energy Storage, LLC
CDFW	California Department of Fish and Wildlife
CHRIS	California Historical Resources Information System
CNDDB	California Natural Diversity Data Base
CO2	Carbon Dioxide
dB	Decibel
DC	Direct Current
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
FEMA	Federal Emergency Management Agency
GhG	Greenhouse Gas
kV	Kilovolts
LACFD	Los Angeles County Fire Department
MBTA	Migratory Bird Treaty Act
MW	Megawatt
MWh	Megawatt-hour
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
PI	Plasticity Index
PM	Particulate Matter
POI	point of interconnection
QSP	Qualified SWPPP Practitioner
ROGs	Reactive Organic Gasses
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SWPPP	Storm Water Pollution Prevention Plan
VHFHSZ	Very High Fire Hazard Severity Zone

1.0 INTRODUCTION

1.1 Project Overview

Commerce Energy Storage, LLC (CES or Applicant) has submitted applications to the City of Commerce (City) for construction and operation of a battery energy storage facility (Project) on an approximately 2.6-acre site (Site) located south of Slauson Avenue and east of Garfield Avenue at 6904 East Slauson Avenue (APNs 6356-017-028 and 6356-017-900), Commerce, California (Figure 1). The Site is vacant and surrounded by commercial and industrial land uses consisting of warehousing, manufacturing, and office space.

The project is the construction and operation of a utility scale battery energy storage system comprised of lithium-ion batteries and control equipment housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment including inverters, transformers, and a small onsite substation, would connect to the existing Southern California Edison (SCE) Laguna Bell substation via a new approximately 0.4-mile long underground electric tie-line in to be installed in Garfield Avenue. The Laguna Bell substation is located at the southwest quadrant of the intersection of Garfield Avenue and Randolph Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation.

The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's high voltage electric grid. The Project is not an energy generator and there would be no air or water emissions created by its operation. This Project would improve the efficiency of California's electric transmission system and facilitate more efficient use of renewable energy generation resources in California by storing energy generated during the day and discharging it at times when renewable resources are less available. In doing so, the Project would improve grid reliability and help avoid rolling blackouts similar to those seen in the summer of 2020. The need for facilities such as this one is immediate; on July 30th, 2021, Governor Newsom declared a State of Emergency in California regarding statewide electricity shortages caused by climate change, drought, and wildfires. The Governor called upon agencies across the State to take actions to expedite approval of battery energy storage systems to bring capacity online in 2022 and beyond.

In addition to addressing this urgent statewide need for electric reliability, the Project would provide local and regional economic benefits from construction jobs, operations jobs, sales taxes, property taxes, and diversification of the local economy. The facility would be unoccupied and is designed for full remote operation so there would be minimal new demand on City services. At the same time, the Project would put a high value use on a Site that is currently vacant with limited use opportunity due to residual environmental contamination. The Site occurs on a portion of a property referred to as the CAMEO (California Metal Enameling Company) site that has been investigated and remediated by the Department of Toxic Substances Control (DTSC) for past releases of hazardous materials to soil and groundwater. Prior to construction of the energy storage system, CES would enter into an agreement with DTSC to purchase the affected portion of the CAMEO site, take over maintenance and monitoring, and record a land use covenant following transfer of title. The land use covenant would include maintenance requirements and land use restrictions deemed necessary by DTSC to prevent unsafe exposure to residual impacted groundwater and/or soils.

The Project would require various approvals including:

- Conditional Use Permit (City of Commerce);
- Variance (parking) (City of Commerce);
- License Agreement (or similar agreement) for underground electric tie-line and other utilities (City of Commerce);
- Flood Permit (Los Angeles County Flood Control District); and
- Purchase of an approximately 0.08-acre vacant parcel (APN 6356-017-900) from the City and Certificate of Compliance to merge the purchased parcel with APN 6356-017-028.

1.2 California Environmental Quality Act

Discretionary approvals required for CES constitute a "project" as defined by the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the "CEQA Guidelines" (California Code of Regulations, Title 14, Section 15000 et seq), and are thereby subject to the requirements of CEQA. For purposes of CEQA, the term "project" refers to the whole of an action which has the potential to result in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378). As the principal public agency responsible for approval of the Commerce Energy Storage Project, the City is the "lead agency" overseeing and administering the CEQA environmental review process.

As set forth in various provisions of the CEQA Statute (e.g., Section 21080), before deciding whether to approve a project, public agencies must consider the potential significant environmental impacts of the project and must identify feasible measures to minimize these impacts. Pursuant to CEQA Guideline Section 15064, if any aspect of the proposed project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, an Environmental Impact Report (EIR) must be prepared.

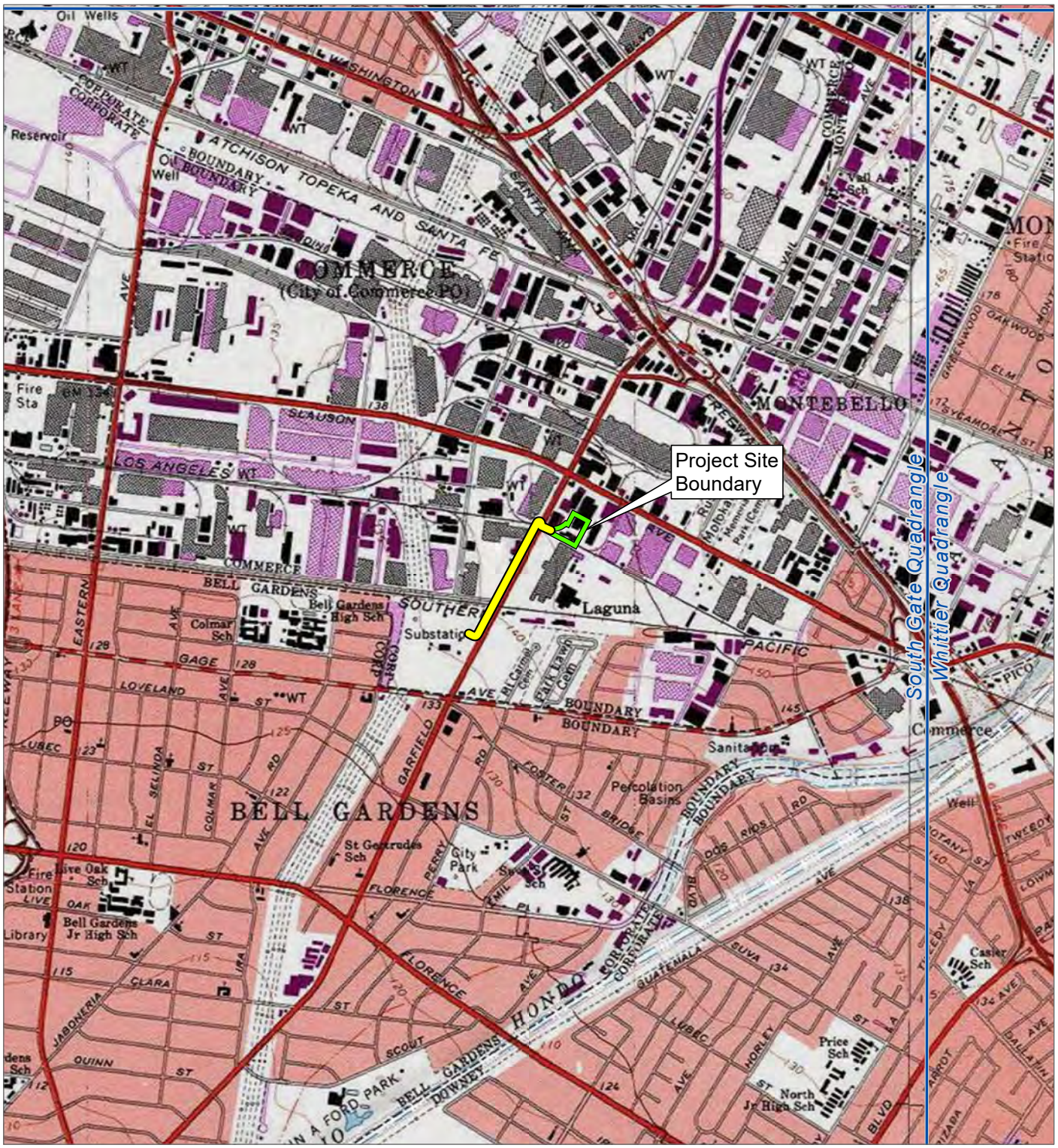
This Initial Study is a factual document, prepared in conformance with CEQA, and written for the purpose of making the public and decision-makers aware of the potential environmental consequences of the Project. For any Project impact that is considered potentially "significant," the Initial Study identifies mitigation measures, where feasible, to reduce or avoid the significant effect. Before any action can be taken to approve the Project, the City must certify that it has reviewed and considered the information in the Initial Study/Proposed Mitigated Negative Declaration and that this document has been completed in conformity with the requirements of CEQA. Adoption of a Mitigated Negative Declaration does not approve or deny the Project.

1.3 Environmental Review

Consistent with CEQA, this Initial Study/Proposed Mitigated Negative Declaration is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the proposed Project and to recommend mitigation measures and/or standard conditions of approval to lessen or eliminate adverse impacts.

This Initial Study/Proposed Mitigated Negative Declaration is available for public review for thirty days, during which time written comments may be submitted to:

Knarik Vizcarra
City of Commerce Planning Division
2535 Commerce Way
Commerce, CA 90040
KVizcarra@ci.commerce.ca.us



PROJECT SITE LOCATION

INTERCONNECTION ROUTE

USGS 7.5' QUADRANGLE BOUNDARY

N

0 1,000 2,000

FEET

1:24,000 1" = 2,000'

BASE MAP: ESRI "USGS TOPO", 7.5' QUADRANGLE: SOUTH GATE.
DATA SOURCES: TRC, ESRI

PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE:
SITE LOCATION
USGS 7.5' QUADRANGLES

DRAWN BY:	R. SPRING	PROJ. NO.:	393191.0000.0000
CHECKED BY:	S. STUART		
APPROVED BY:	J. STENGER		**FIGURE 1**
DATE:	NOVEMBER 2021		

TRC
17911 VON KARMAN AVENUE
SUITE 400
IRVINE, CA 92614
PHONE: 949.727.7348

FILE: COMMERCE_ENERGY_STORAGE.APRX

2.0 PROJECT DESCRIPTION

An aerial photograph of the Site and surrounding properties is shown in Figure 2. The Project would develop the Site with buildings or enclosures and related improvements for a utility scale energy storage system and ancillary equipment including an onsite substation. An approximately 0.4-mile underground and overhead 220 Kilovolt (kV) electric tie-line would be installed along primarily along Garfield Avenue as shown in Figure 3 to connect the Site with the Laguna Bell Substation. The Project Site is vacant. No demolition is needed other than removal of concrete near the south end of the site and removal of existing fencing. Photographs of existing conditions at the Site are provided in Appendix A.

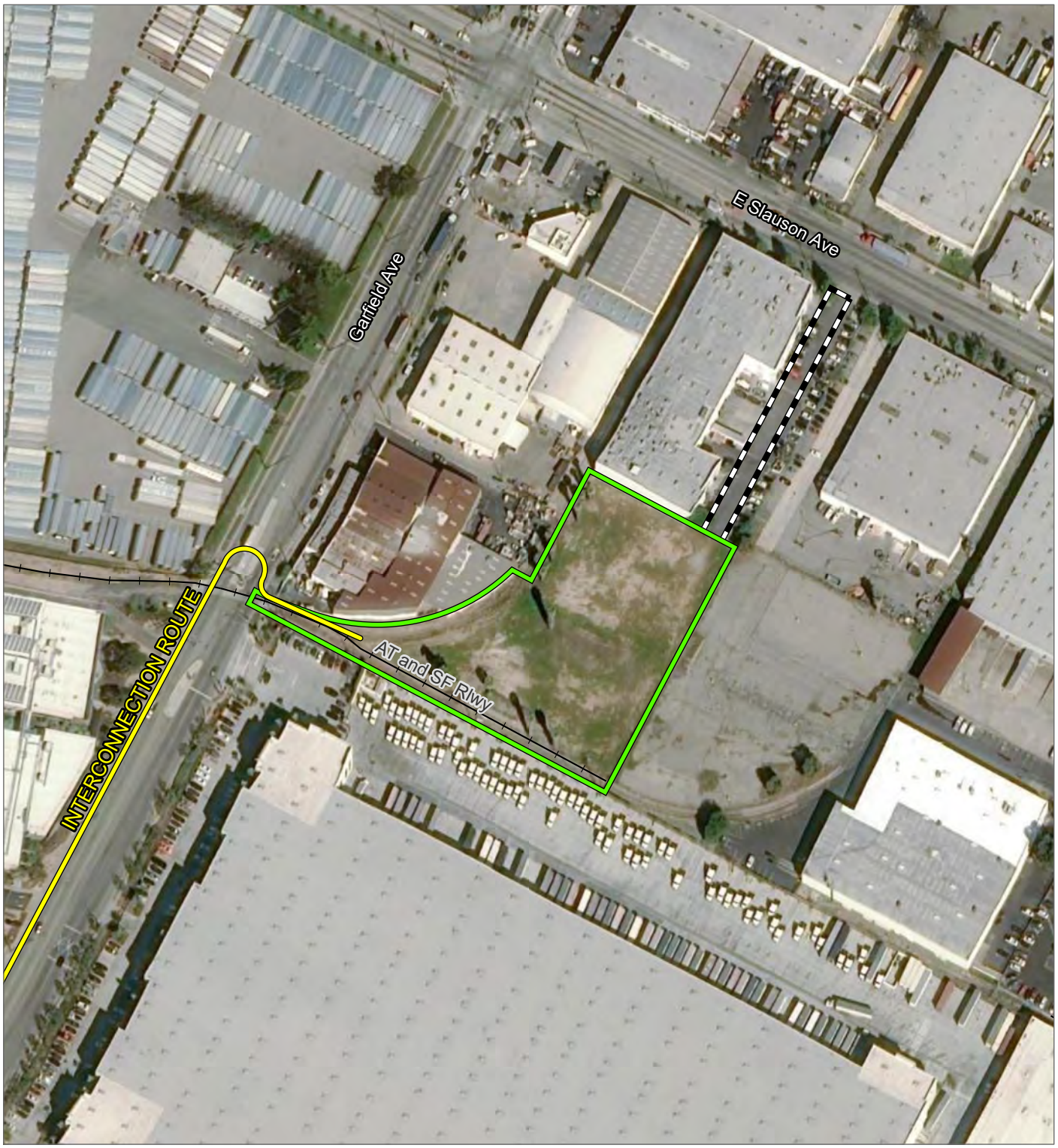
2.1 Project Design

Batteries and control equipment would be housed either in a single-story building or purpose-built free-standing enclosures. The preliminary site plan for these configurations is provided in Figures 4a and 4b. Additional preliminary design drawings and details are provided in Appendix B.

If a building is used ("building option"), the tallest building features would be on the order of 40 feet high. The building interior would have battery storage racks separated by aisles, with relay and communications systems for automated monitoring and managing of the batteries to ensure design performance and system life. Batteries operate with direct current (DC) electricity that must be converted to alternating current (AC) for compatibility with the existing electric grid. Power inverters to convert between AC and DC would be located outside the buildings along with transformers that would step up the voltage.

If enclosures are used ("enclosure option"), the battery enclosures would be arranged in an array along with inverters and transformers to convert voltage and current between the batteries and the onsite substation. Minimal grading is required to smooth the site with a gentle slope for positive drainage. The electrical equipment area would be surfaced with asphalt or concrete so the impervious Project footprint would be the same for either the building or enclosure option.

The majority of the Site would be finished with concrete, asphalt, or other impervious surfacing to minimize stormwater infiltration since impacted soils remain following DTSC's remediation. For either the building or enclosure option, the Site design includes a perimeter road. The developed area would be graded to direct stormwater runoff toward the east and west perimeter road segments. The roads would be paved and would direct runoff to drop inlets and underground pipes. Underground stormwater retention would be provided to retain the increase in peak flow that would otherwise occur due to the introduction of new impervious surfaces. An approximately 18-inch diameter pipe would convey stormwater drainage from the Site to the existing Los Angeles County Flood Control storm drain either west of the Site in Garfield Avenue or north of the Site in Slauson Avenue.



INTERCONNECTION ROUTE

SITE ACCESS EASEMENT

PROJECT PARCEL BOUNDARY

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

N

0 100 200

FEET

1:2,400 1" = 200'

PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

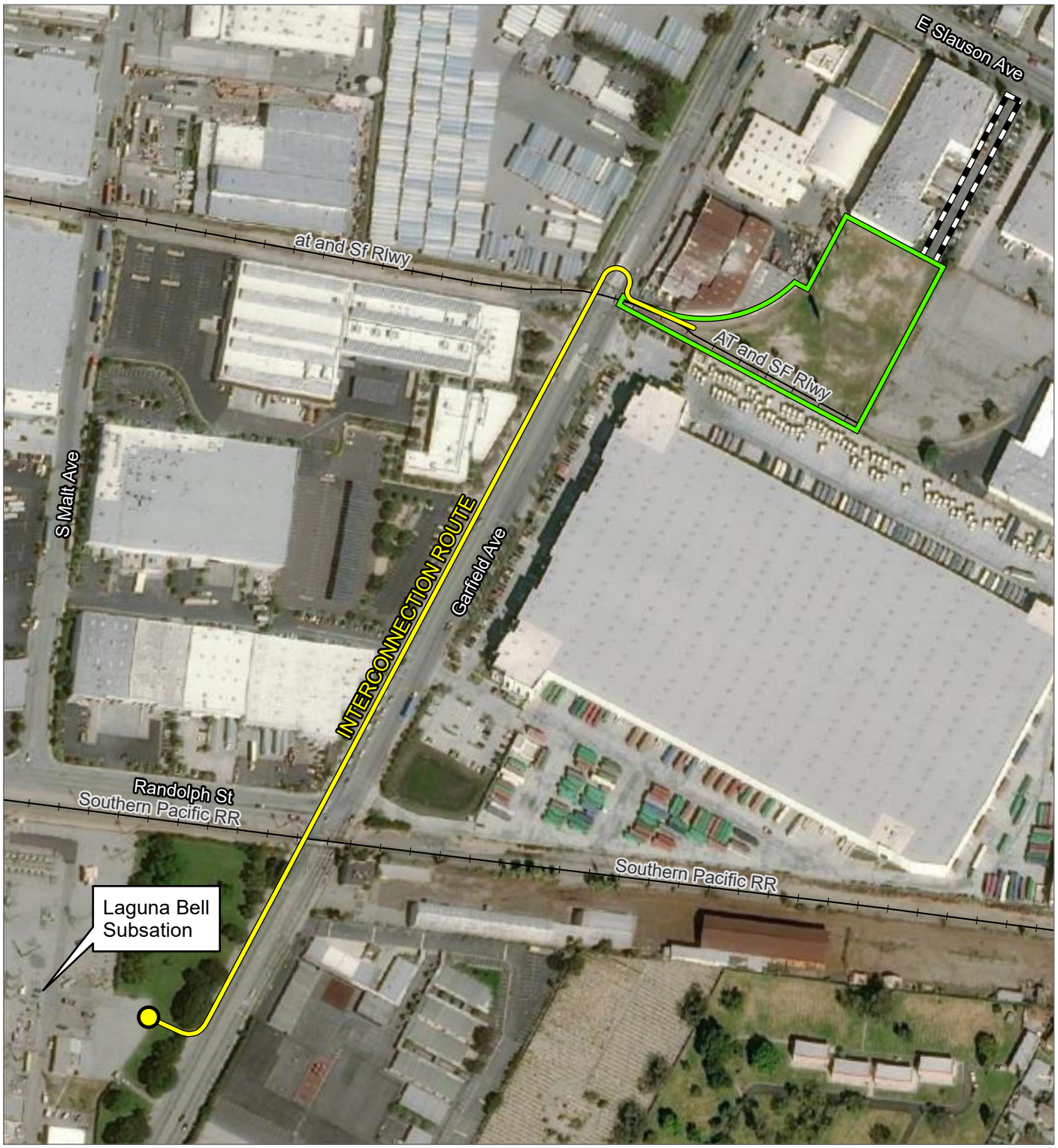
TITLE:
SITE LOCATION AERIAL

DRAWN BY:	R. SPRING	PROJ. NO.:	393191.0000.0000
CHECKED BY:	S. STUART		
APPROVED BY:	J. STENGER		**FIGURE 2**
DATE:	NOVEMBER 2021		

TRC
17911 VON KARMAN AVENUE
SUITE 400
IRVINE, CA 92614
PHONE: 949.727.7348

FILE: COMMERCE_ENERGY_STORAGE.APRX

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA V FIPS 0405 FEET: MAP ROTATION: 0
-- SAVED BY: RSPRING ON 11/18/2021, 17:47:33 PM; FILE PATH: \\EMPLOYEES\GIS\ARCGISPRO\1-PROJECTS\COMMERCE_ENERGY_STORAGE\393191_COMMERCE_ENERGY_STORAGE\2-APRX\COMMERCE_ENERGY_STORAGE.APRX; LAYOUT NAME: FIGURE 2-SITE AERIAL

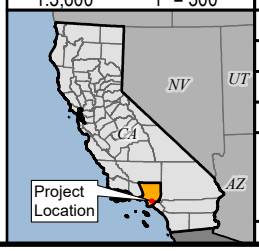


- INTERCONNECTION ROUTE
- SITE ACCESS EASEMENT
- PROJECT PARCEL BOUNDARY
- RISER POLE

BASE MAP: ESRI "WORLD IMAGERY".
DATA SOURCES: TRC, ESRI, TIGER

N

0 150 300
FEET
1:3,600 1" = 300'



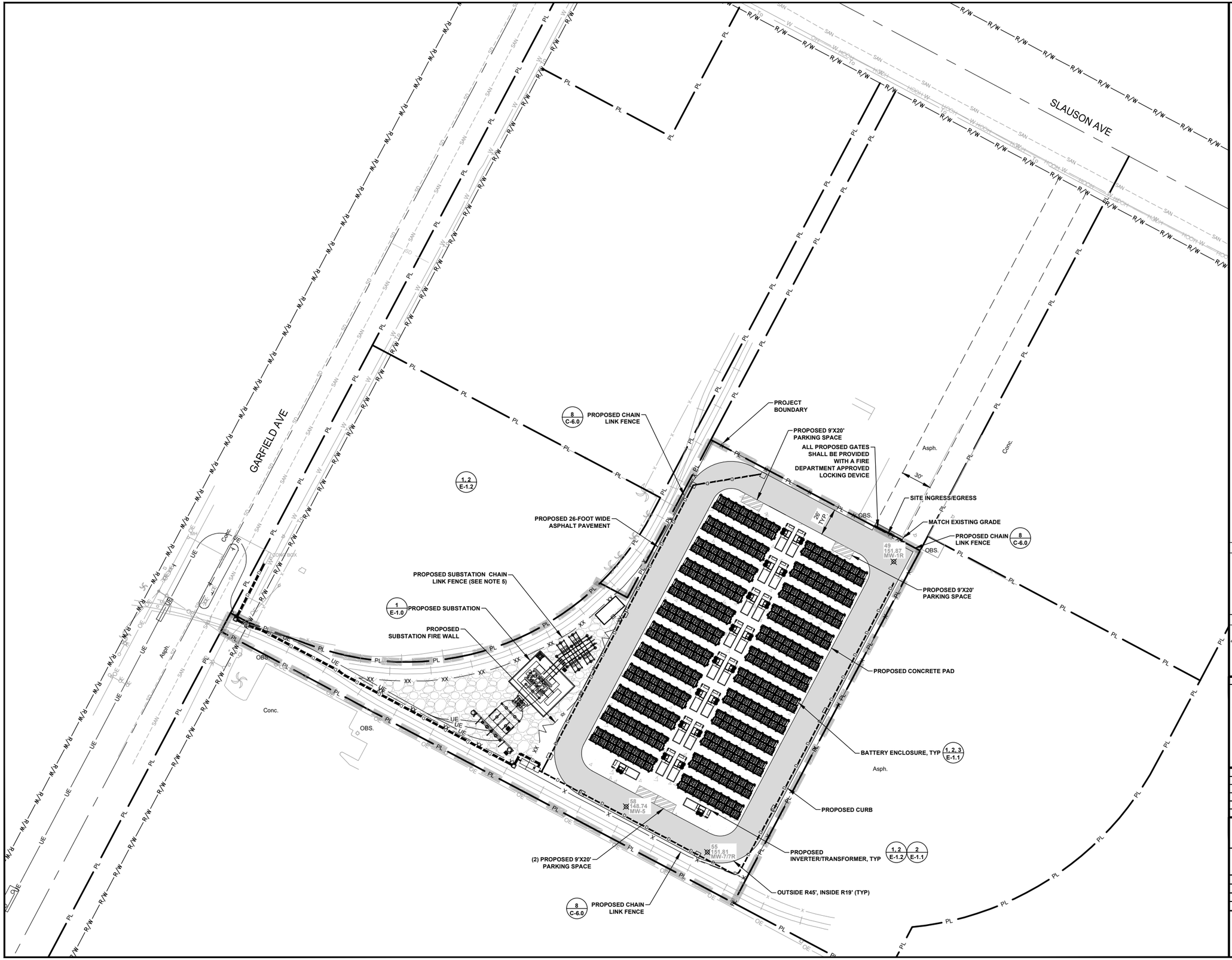
PROJECT: **COMMERCE ENERGY STORAGE, LLC.**
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, LOS ANGELES COUNTY, CALIFORNIA

TITLE:
230 kV TIE-LINE ROUTE

DRAWN BY:	R. SPRING	PROJ. NO.:	393191.0000.0000
CHECKED BY:	S. STUART		
APPROVED BY:	J. STENGER		**FIGURE 3**
DATE:	MARCH 2022		

TRC
17911 VON KARMAN AVENUE
SUITE 400
IRVINE, CA 92614
PHONE: 949.727.7348

FILE: COMMERCE_ENERGY_STORAGE.APRX



GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR THE APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. THE LOCATIONS OF PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCING, ENERGY STORAGE ENCLOSURES, INVERTER/TRANSFORMER PADS, OVERHEAD POLES AND LINES, ETC., SHOWN ARE APPROXIMATE AND ARE SUBJECT TO REFINEMENT PRIOR TO GRADING AND BUILDING PERMIT APPLICATIONS DUE TO SITE CONDITIONS, PERMIT REQUIREMENTS, EQUIPMENT SPECIFICATIONS, AND/OR OTHER CONSTRAINTS.
3. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
4. PROTECT IN PLACE ALL MONITORING WELLS NOT IDENTIFIED FOR DEMOLITION.
5. SUBSTATION WILL BE SURROUNDED BY A CHAIN LINK FENCE DESIGNED IN ACCORDANCE WITH HIGH VOLTAGE ELECTRIC CODE REQUIREMENTS.

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD
SEWER — SAN
WATER LINE — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
SURFACE WATER FLOW
EXISTING PALM TREE

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

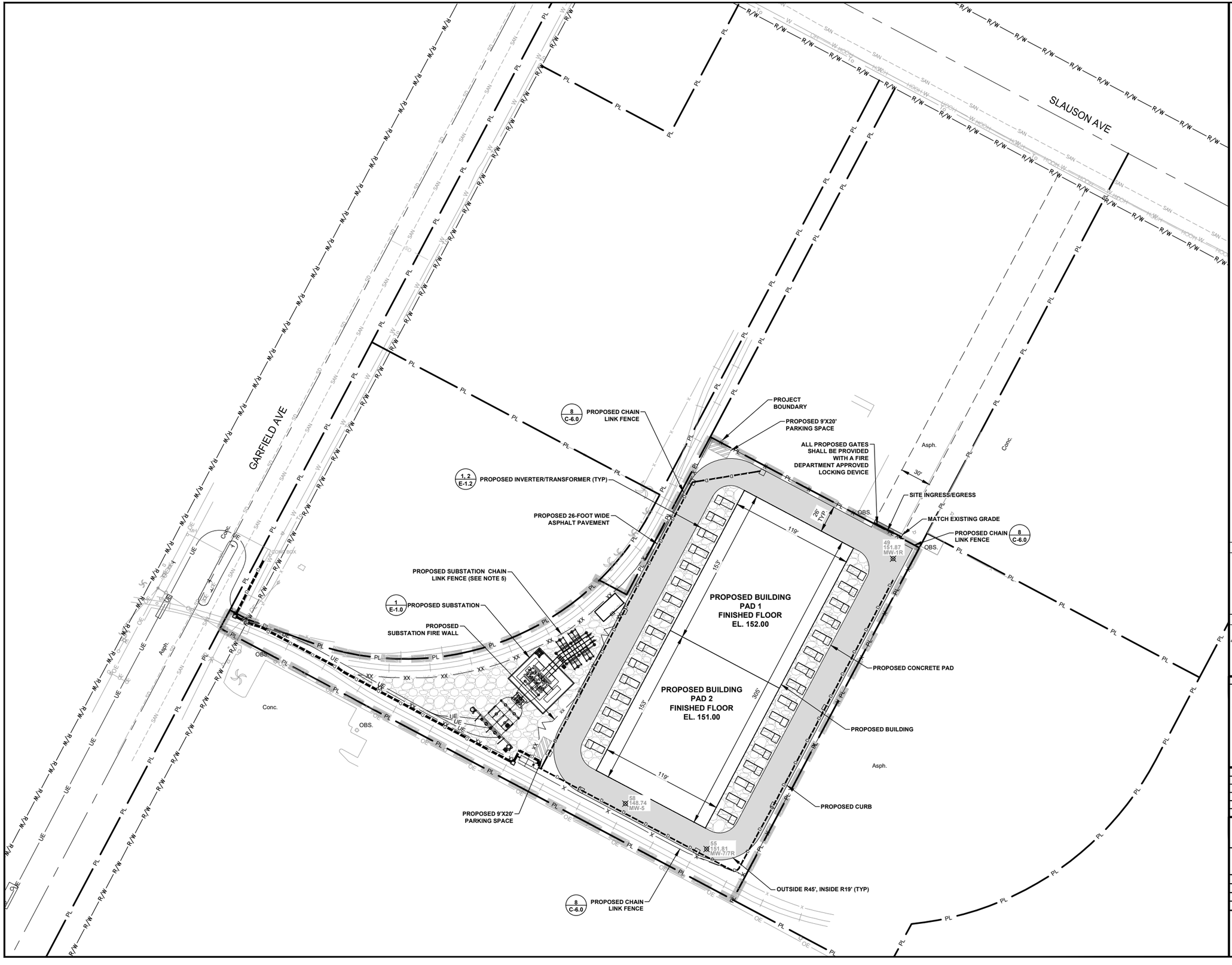
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SITE PLAN - ENCLOSURE OPTION

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		Figure 4a
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_SITES.DWG



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3. CONTRACTOR SHALL CALL AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. ADDITIONALLY, CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES.
4. PROTECT IN PLACE ALL MONITORING WELLS NOT IDENTIFIED FOR DEMOLITION.
5. SUBSTATION WILL BE SURROUNDED BY A CHAIN LINK FENCE DESIGNED IN ACCORDANCE WITH HIGH VOLTAGE ELECTRIC CODE REQUIREMENTS.

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

LEGEND

- PROJECT BOUNDARY
- PARCEL BOUNDARY — PL
- ROAD ROW — R/W — R/W
- EASEMENT LINE
- EX. CONTOUR — 800
- MONITORING WELL — MW
- SIGN, TYP.
- CLOSED MANHOLE
- FIRE HYDRANT
- AREA LIGHT/ LIGHT POLE
- STORM DRAIN — SD — SD
- SEWER — SAN — SAN
- WATER LINE — W — W
- TELCO LINE — To
- OVERHEAD LINE — OE
- CHAIN LINK FENCE — X — X
- PROPOSED SUBSTATION CHAIN LINK FENCE — XX XX XX
- SURFACE WATER FLOW
- EXISTING PALM TREE

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APPD.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SITE PLAN - BUILDING OPTION

DRAWN BY:	TSS
CHECKED BY:	DG
APPROVED BY:	SH
DATE:	4/13/2022
PROJ. NO.:	393191

Figure 4b

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

The Site would be fenced. Because the Project would be unoccupied and operated remotely, and because energy storage provides a higher use of space than unused parking at an unoccupied facility, CES is applying for a variance from standard parking requirements for warehousing and the facility is designed with three designated parking spaces.

The Project includes an onsite substation with switchgear and a step-up transformer to convert medium voltage power to the 220 kV needed for compatibility with the voltage at the point of interconnection (POI) to the electric grid. The substation area would be fenced in accordance with high voltage electric code requirements and would include an approximately 24-foot wide x 50-foot high H-frame structure with switches, lightning arrestors, and metering equipment. The onsite substation would be connected to the existing SCE Laguna Bell Substation with an underground power line and redundant dedicated fiber optic lines. One or more fiber optic lines would be co-located with the underground electric tie-line; a fiber optic line may also be installed overhead on existing poles on Garfield Avenue.

The underground portion of the electric tie-line would consist of conduits containing electric power cables, fiber optic communications cable, and a grounding conductor, within an approximately three foot wide and three foot deep high strength concrete encasement that would be a minimum of three feet below the surface. The location of existing utilities would need to be confirmed in detail for final design, however, preliminary investigations identified the westernmost southbound lane of Garfield Avenue to be the likely location for the electric tie-line. The preliminary design includes two underground splice vaults along the route beneath Garfield Avenue. The splice vaults are expected to be approximately 8 feet wide by 26 feet long by 8 feet deep. At the Laguna Bell Substation, the underground electric tie-line would exit the Garfield Avenue right-of-way and then transition from underground to overhead on Southern California Edison's substation property at a new approximately 85-foot high steel riser pole from which the cables would be connected to the substation with an overhead connection.

2.2 Operation

The Project would operate year-round and would be available to receive or deliver energy 24 hours a day, 365 days a year. The Project is designed for remote operation and would be unoccupied with occasional inspection and maintenance visits, conservatively estimated to be approximately one visit per day.

After construction and successful testing of the new tie-line, access to the underground tie-line splice vaults in Garfield Avenue would not be required except for infrequent, periodic inspections based on the cable supplier's recommendations. Inspections would take approximately 4 hours.

Due to its unmanned operation, the Project would generate negligible vehicle trips during operation. Operation of the facility would not create emissions to air or water, would not require sanitary facilities, and would not require a water supply except for fire protection. Project operations would not generate loud noise. Based on analysis of other battery energy storage projects, noise levels would be less than 75 decibels (dBA) 20 feet from the equipment (LSA, 2017 and 2021) so the Project is expected to conform with the City's 75 dBA Industrial land use noise limit. CES would provide Project-specific noise modelling results to the City once equipment vendors have been selected and prior to issuance of building permits to demonstrate compliance with the noise limit.

The unoccupied system would generate little waste. At the end of battery life, battery modules would be removed from the battery racks and returned to the manufacturer or their approved recycling partner(s) for dismantling, material processing and recovery. Other waste from Site maintenance would be removed from the Site and managed in accordance with applicable regulations. Oil-filled equipment (e.g. transformers) is operated closed and sealed.

As part of an agreement with DTSC, CES would implement an Operations and Maintenance Plan for the Site and Project operations would include continued monitoring of chromium concentrations in groundwater at the Site by the Applicant. Past monitoring has shown a decreasing trend following the remediation activities completed to date. Once DTSC approves a No Further Action designation for Site groundwater, the remaining monitoring wells would be properly abandoned. The draft Operation and Maintenance Plan is provided in Appendix C.

2.3 Safety

Each battery module would be monitored for electrical current, voltage, and temperature in order to optimize performance, mitigate potential failures, and prevent upset. Batteries performing out of specification would be immediately taken offline by the automated monitoring system. The system would be designed and constructed to comply with all applicable codes in effect in the City including the National Fire Protection Association (NFPA) Codes and Standards, National Electrical Code and California Fire Code. The Project would be constructed to meet all Los Angeles County Fire Department requirements including gate access, onsite road design, fire hydrants and other fire safety requirements.

The building or alternative purpose-built enclosures would be outfitted with fire suppression systems to meet or exceed all fire safety codes and standards. Fire protection would include prevention, suppression, and isolation methods and materials. At a minimum, this would include smoke/fire detection sensors; ground fault detection, alarms, and systems for automatic shutdown of cooling fans and opening of electrical contacts in the battery system; and systems for automatic release of a fire suppression agent appropriate to the battery technology. Typically, such systems use a clean fire suppression agent such as DuPont's FE-25, FM-200, or 3M's Novek 1230 and/or water sprinkler or mist systems as may be required by fire code.

2.4 Construction

Construction and equipment installation is expected to take 6 to 12 months including Site grading, stormwater controls, battery building construction or battery enclosure installation, outdoor electrical equipment installation, onsite substation construction, and installation of the underground electric tie-line and fiber optic lines. Construction may occur in phases. Construction staging and parking would occur either on-site, on the parcel adjacent to the east, or on another nearby suitable property. Final grading and building plans would be subject to approval by the City Engineering Division.

Approximately 15 palm trees on the Site would be removed prior to or concurrent with initial grading. If removal of the trees would occur during nesting season (February 15 to August 31), CES would have a qualified biologist evaluate the trees for the possible presence of active bird nests within 5 days prior to tree removal and if any active nest of a protected bird is found, CES would avoid disturbance to the nest by implementing a setback area around the nest in accordance with recommendations of the qualified biologist following California Department of Fish and Wildlife (CDFW) guidance.

Sanitary facilities during construction would be provided by portable self-contained units maintained by a licensed contractor.

Construction of the underground electric tie-line is expected to occur within Garfield Avenue and would be subject to the requirements of a License Agreement (or other similar agreement) and Encroachment Permit issued by the City of Commerce. Open trench methods for construction would be used where possible and the jack-and-bore method would be used at railroad crossings. The preliminary underground tie-line design anticipates the trenching depth would typically range from seven to 12 feet deep with deepest locations approximately 16 feet. To ensure safe, efficient, and continuous traffic operations on Garfield Avenue during construction, construction of the tie-line and implementation of any lane closures would be limited to the hours allowed by the encroachment permit on major arterial roads (i.e. Monday through Friday 9:00 PM to 6:00 AM and Saturday and Sunday, 8:00 AM to 5:00 PM). Temporary use of Garfield Avenue during construction would require temporary closing of a series of approximately 25 – 30 foot wide segments. At no point during construction would Garfield Avenue be completely closed to traffic in either direction. Construction of the trench would begin with excavation followed by installation of conduit and pouring concrete before backfilling the trench. It is expected that the tie-line would be constructed in approximately 200-foot lengths over the course of three to four days for each length for an estimated construction duration of one month. Work at some locations such as at splice vaults and jack-and-bore crossings of the railroads could take approximately two weeks due to the limited hours allowed for lane closures. Following construction each night, steel plates would be placed on top of open or unpaved road sections to ensure safe vehicle operations the following day. A Traffic Control Plan would be prepared prior to issuance of an encroachment permit to ensure continuous and safe traffic operations on Garfield Avenue in both directions during the entire construction period within Garfield Avenue.

The water table in the area is estimated to be below 100 feet below ground surface. In the unlikely event that groundwater is encountered during tie line construction, it would be pumped from the construction area into trucks and hauled offsite for safe disposal in compliance with Regional Water Quality Control Board requirements.

Following construction of the tie-line, the portions of Garfield Avenue subject to disturbance by permanent and temporary construction would be repaved and restored to the condition and quality which existed there prior to construction.

Project construction would adhere to all applicable emission control requirements of South Coast Air Quality Management District (SCAQMD) including, but not limited to, Rule 403 for control of fugitive dust emissions during construction. Key dust controls during construction would include:

- Water would be applied to disturbed soil areas during grading until the disturbed surface is stabilized. Watering would occur at least three times during a normal 8-hour workday at approximate 3-hour intervals.
- Haul trucks transporting soil, sand or other loose material offsite would be covered and would be loaded to maintain a freeboard of six inches.
- Best Management Practices (BMPs) would be implemented to minimize track-out onto adjacent public streets.
- A 15 mile per hour speed limit would be used for Site roadways until stabilized with gravel or other treatment to minimize dust.

- Disturbed surfaces would be stabilized as soon as practical.

2.5 Schedule

CES estimates construction would take six to 12 months and can begin upon receipt of needed authorizations.

3.0 CEQA INITIAL STUDY CHECKLIST

1. **Project title:** Commerce Energy Storage, LLC

2. **Contact person and phone number:**
   Knarik Vizcarra
   Contract Planner
   City of Commerce Planning Division
   2535 Commerce Way
   Commerce, CA 90040
   KVizcarra@ci.commerce.ca.us

3. **Project location:** 6904 E. Slauson Ave. Commerce, CA 90040

4. **Project sponsor's name and address:**
   Commerce Energy Storage, LLC
   c/o Matthew Gilliland
   5000 Hopyard Road, Suite 480
   Pleasanton, CA 94588

5. **General plan designation:** Industrial

6. **Zoning:** Heavy Manufacturing (M-2)

7. **Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**
   Refer to Project Description preceding this Checklist and Preliminary Site Plans in Appendix B.

8. **Surrounding land uses and setting (briefly describe the project's surroundings):**
   The Project Site occurs in an urban setting east of Garfield Avenue and south of Slauson Avenue. The Site is currently vacant and within an area designated as a redevelopment zone by the City. Surrounding uses are commercial and industrial. The site is bordered to the west and south by railroad spur tracks. There are no sensitive receptors in the vicinity.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)**
    The proposed Project would be required to obtain coverage under the State General National Pollutant Discharge Elimination System (NPDES) Permit for discharges of stormwater from construction projects. This permit is administered by the Regional Water Quality Control Board (RWQCB) and is in place for use by applicants upon filing of a satisfactory Permit Registration Documents. The NPDES general permit is not a discretionary permit and, therefore, not subject to CEQA. Additional approvals that may be needed for the Project include:
    - Conditional Use Permit (City of Commerce);
    - Variance (parking) (City of Commerce);
    - License Agreement (or similar agreement) for underground electric tie-line and other utilities (City of Commerce);
    - Flood Permit (LA County Flood Control); and
    - Purchase of an approximately 0.08-acre vacant parcel (APN 6356-017-900) from the City and Certificate of Compliance to merge the purchased parcel with APN 6356-017-028.

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project. Check marks are indicated by the following symbol: ☑

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

3.2 Determination

On the basis of this initial evaluation:

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

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

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

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

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

Prepared By: **TRC**

Joseph L. Stenger
Signature

4/14/2022
Date

Reviewed By: **Jose D. Jimenez**, Director of Economic Development and Planning

for Jose Jimenez
Signature

4/14/2022
Date

3.3 Evaluation of Impacts

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
No Impact: *The Project is in an urban area and would not impact any scenic vista.*				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☑
No Impact: *No designated or eligible State scenic highways occur in the vicinity. The Site is relatively flat and currently vacant and largely hidden from views from Garfield and Slauson Avenues due to being a flat lot surrounded by existing industrial buildings. There are no rock outcroppings, historic buildings, scenic tree stands or other scenic resources on the Site or electric line route. Considering these factors, there would be no impact to scenic resources.*				
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
Less than Significant Impact: *The Site is relatively flat and was previously developed, demolished, and remediated for hazardous materials releases. It is in the midst of an urbanized area and is largely hidden from views by surrounding commercial and industrial buildings. Existing uses surrounding the proposed Project are industrial and commercial developments. If the enclosure option is used, the scale and character of the Site would be similar to large truck and shipping container storage areas that are common in the vicinity. If the building option is used, the tallest building features would be on the order of 40 feet and their height and size would be of similar or smaller scale than surrounding warehouses. The building design would be similar to other modern warehouse style buildings in the area. The substation H-Frame could be on the order of 50-feet tall but buildings surrounding all sides of the Site would block views from most directions and prevent it from becoming a dominant visual feature. The electric tie-line would be underground offsite in Garfield Avenue and would transition to aboveground at an approximately 85 foot high steel riser pole at the Laguna Bell Substation. Overhead lines would extend into the substation from the riser pole. The riser pole would be located on the SCE Laguna Bell Substation parcel approximately 50 feet away from Garfield Avenue where mature trees adjacent to Garfield Avenue would provide some visual shielding to views of the riser pole and overhead lines into the substation. Considering these factors, the Project would not substantially degrade the existing visual character or quality of the Site and its surroundings.*				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☑
No Impact: *The Project would normally be unoccupied. Lighting would be provided only as*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
needed for safety and security such as at access gates and doorways to buildings. If used, lighting would be motion-activated, directed downward, and shielded to minimize visibility from offsite. The Site is blocked from most views by surrounding buildings so lighting would not be noticeable. As shown in the Preliminary Site Plans, if batteries are housed in buildings, they would be single-story warehouse-type architecture that would not be a substantial source of glare. Considering these factors, the Project would not create a new source of light or glare that could adversely affect day or nighttime views. Therefore, there would be no impact.				
II. AGRICULTURE AND FOREST RESOURCES -- In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
No Impact: *No farmlands occur on or in the vicinity of the proposed Project so no farmlands would be affected by the Project.*				
b) Conflict with existing zoning for agricultural use, or a Williamson Act	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
contract?				
No Impact: *No lands zoned for agriculture occur on or in the vicinity of the proposed Project so no lands zoned for agriculture or under a Williamson Act contract would be affected by the Project.*				
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☑
No Impact: *No lands zoned forest land, timberland or timberland production occur on or in the vicinity of the proposed Project so no lands zoned forest land, timberland or timberland production would be affected by the Project.*				
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
No Impact: *No forest lands occur on or in the vicinity of the proposed Project so no forest lands would be affected by the Project.*				
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑
No Impact: *The proposed Project comprises infill development in an urbanized area. There are no farmlands or forest lands on or in the vicinity of the proposed Project that could be affected. The proposed Project does not include any action that would result in rezoning or conversion of agricultural or forest land. Therefore, there would be no impact.*				
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Less than Significant Impact: *The proposed Project would be located within the jurisdiction of the SCAQMD. The Project would not conflict with or obstruct implementation of any applicable air quality plan. The Project would not add dwelling units, would not include stationary emission sources, and would be unoccupied so would not create regular commute traffic or result in population growth. The Project would comply with all applicable SCAQMD requirements for construction sites including, but not limited to, Best Available Control Measures outlined in Table 1 of Rule 403. The Site would be unoccupied but visited periodically through the year for equipment inspections, monitoring and testing, and maintenance as needed. Operations would not result in emissions to air other than exhaust emissions from vehicle use for these infrequent site visits. These emissions would be minor considering the small and infrequent level of activity. Therefore, impacts from operations emissions would be less than significant.*

Project construction would result in dust and fuel-burning emissions. The SCAQMD has District-wide and local significance thresholds for maximum daily emissions for determining if construction emissions are potentially significant. The Table below shows the more stringent of the SCAQMD's District-wide and local significance thresholds along with maximum daily Project construction emissions as estimated by CalEEMod (Appendix D).

Criteria Pollutant	***Max Daily Threshold (pounds)***	***Project Emissions (max pounds/day)***	***Significant?***
Oxides of Nitrogen (NOx)	*80*	*17.0*	*No*
Reactive Organic Gasses (ROGs)	*75*	*1.8*	*No*
Particulate Matter (PM10)	*4*	*3.3*	*No*
Particulate Matter (PM2.5)	*3*	*2.0*	*No*
Sulfur Dioxide (SO2)	*150*	*0.03*	*No*
Carbon Monoxide (CO)	*550*	*15.9*	*No*
Lead	*3*	*0.0*	*No*

Source: South Coast AQMD Air Quality Significance Thresholds, Updated April 2019 and "Appendix-c-mass-rate-lst-look-up-tables" Updated October 2009.

With watering of disturbed areas three times daily as committed in the Applicant's project description, the estimated construction emissions of PM10 and PM2.5 are below significance thresholds. Other emissions are below significance thresholds independent of water application. Therefore, impacts from construction emissions would be below significance thresholds.

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

Less than Significant Impact: *The South Coast Air Basin is designated under the National Ambient Air Quality Standards (NAAQS) as nonattainment (extreme) for 1-hour ozone, nonattainment (extreme) for 8-hour ozone, nonattainment (serious) for $PM_{2.5}$, and*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
nonattainment (partial) for lead. In addition, the South Coast Air Basin is designated under the California Ambient Air Quality Standards (CAAQS) as nonattainment for 1-hour ozone, 8-hour ozone, PM_{10}, and $PM_{2.5}$. Operation of the Project would not emit pollutants and emissions from periodic Site visits during operations (conservatively estimated not to exceed one per day) would be too negligible to result in a cumulative net increase in concentrations of these pollutants. The Site would be visited infrequently and it is expected that the minimal operations Site visits would be by workers that are already driving to work in the region so there would not be significant new commute emissions. Furthermore, the energy storage that would be provided by the Project would contribute toward increased use of renewable energy resources thereby reducing reliance on pollution-emitting power sources potentially contributing to reduced emissions of pollutants for which the basin is currently non-attainment. *Construction emissions would not exceed construction-related significance thresholds. These thresholds were designed to establish the level at which the SCAQMD believes emissions could cause significant environmental impacts under CEQA when considered in conjunction with other sources. The proposed Project would not conflict with any air quality plan or regulation. Considering these factors, the proposed Project would not result in a cumulatively considerable net increase of any non-attainment criteria pollutant. Therefore, the impact would be less than significant.*				
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
Less than Significant Impact: *Sensitive receptors are land uses that include members of the population that are particularly sensitive to the effects of air pollution such as children and the elderly and people with illnesses. Examples include residences, hospitals, schools, or convalescent homes. The nearest sensitive receptors are residences located 0.25 miles to the southeast of the Site. The proposed Project would operate without pollutant emissions. Construction emissions would be less than significant as described in Response III(a) above. Considering these factors, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the impact would be less than significant.*				
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☑	☐
Less than Significant Impact: *Project operations would not be a source of odors. Diesel engine emissions during construction may be a potential source of odor, primarily during grading. However, emissions from grading and other construction emissions would be short-term. Furthermore, if diesel emission odors are detectable offsite, they would not be substantial and would be intermittent. Considering these factors, if odor is detectable offsite, it would only be during the short period of construction and any impact would be less than significant.*				
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				
No Impact: *The Project footprint and surrounding area are 100 percent disturbed and highly urbanized. No natural habitat occurs on the Site or in the Site vicinity. No candidate, sensitive or special status species have important habitat in the vicinity. Therefore, there would be no impact.*				
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	☑
No Impact: *The Project footprint and surrounding area are 100 percent disturbed and highly urbanized. No natural habitat or riparian habitat occurs on the Site or in the Site vicinity.*				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
No Impact: *There are no federally jurisdictional waters or wetlands on or adjacent to the Project footprint. The Project footprint and surrounding area are 100 percent disturbed and highly urbanized with no natural habitat or riparian habitat. The US Department of Agriculture Web Soil Survey identifies soils as Urban Land-Azuvina-Montebello complex, a non-hydric soil. US Geological Survey maps show no blueline water features on or adjacent to the Project footprint (US Geological Survey, 1972, 1981, 2018). The National Wetlands Inventory (US Fish and Wildlife, 2021) does not include any wetlands or aquatic features in the Project vicinity. There are no natural drainages on the Site or electric tie-line footprint and drainage from the vicinity is captured by Los Angeles County Flood Control District's underground box culverts. With no federally protected wetlands on or adjacent to the Project footprint, there would be no impact.*				
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
native wildlife nursery sites?				
Less than Significant Impact: *The Project is an infill development project located on a currently vacant site that is 100 percent disturbed from past industrial uses and DTSC's remediation of past hazardous materials releases. The Site and tie-line route occur in a highly urbanized area with no natural habitats or perennial surface waters. For these reasons, the Project is not expected to interfere with the movement of any native resident or migratory fish or wildlife species or with any native resident or migratory wildlife corridor or native wildlife nursery site. Palm trees that are present on the site could provide nesting habitat for migratory birds protected under the Migratory Bird Treaty Act (MBTA). As described in Section 2.4 under the Project Description, the Applicant would have a qualified biologist evaluate the palm trees for active nests within 5 days prior to removal if they would be removed during nesting season (*February 15 to August 31*) and would avoiding disturbance if any active nest of a protected bird is detected. With MBTA compliance, the Project would not substantially interfere with the movement, native residence, or nursery site of any native or migratory species. Therefore, the impact would be less than significant.*				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
No Impact: *The Project does not propose removal of any tree protected by ordinance or policy. The Project would not conflict with any local policy or ordinance protecting biological resources. The Site and the tie-line route do not contain any protected habitat. Therefore, there would be no impact.*				
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑
No Impact: *The Project is located in an urban area and is not subject to requirements of any Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, there would be no impact.*				
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5?	☐	☐	☐	☑
No Impact: *The Project Site is currently vacant with no structures and the tie-line route traverses existing streets. The General Plan identifies three designated historic sites in the City; the Uniroyal Tire Plant and the Pillsbury Mill that are both listed in the State Register of Historic Places, and the Vail Landing Field commemorated by a plaque. The East Los Angeles Railroad Station also is listed in the State Register of Historic Places. None of these sites are located in the Project area. All are located east of Interstate 5. As part of*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
investigating for the potential presence of historical resources that could be affected by the Project, a search of the California Historical Resources Information System (CHRIS) database was conducted (Appendix E). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project, but none included the subject property. As a result of these prior studies, seven historic period cultural resources have been recorded within a 0.5-mile radius of the Project. Six of these are outside the Project area and consist of a historic period adobe, an industrial warehouse, the Bell Gardens High School, and three features of SCE historic infrastructure. The seventh resource is the SCE Laguna Bell Substation property (Resource No. P-19-191950). Constructed in 1924, the Laguna Bell Substation property was one of nine substations that defined the SCE 220 kV electric system, and additionally, the facility served as a switching station and connection point to SCE's Long Beach Steam Plant complex. The Laguna Bell Substation was evaluated for eligibility to the National Register of Historic Places (NRHP)/California Register of Historical Resources (CRHR) in 2014. The evaluation concluded that, in its current appearance, configuration, and condition, the Laguna Bell Substation property comprised of the Main substation building and the warehouse appears to be eligible for listing to the NRHP/ CRHR for its association with the historic Big Creek Hydroelectric System and the SCE 220kV system. Additionally, the Main Substation Building appears to be individually eligible for listing as an excellent example of the Stripped Classical style applied to a substation building. The existing transformer racks and switch racks at the property do not appear to contribute to the eligibility of the Laguna Bell Substation property. The other buildings on the property — the control house, test shop, oil pump and filter house, storage building, and water tower, are not from the period of significance and do not appear to contribute to the eligibility of the Laguna Bell Substation property. Because the Project will not impact either the Substation building or Warehouse, construction activities would not impact the Substation as a historical resource. No other structures or potential historical resource has been identified that could potentially be impacted by the Project. Therefore, the Project would not have the potential to change the significance of any known historical resource.				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to section 15064.5?	☐	☑	☐	☐
Less than Significant Impact With Mitigation Incorporated: *As described in the General Plan, prior to European contact local Gabrielino Indians lived in more than 50 villages located throughout the Los Angeles Basin including three early villages located in the vicinity of Commerce. Gathering activities were most likely concentrated along the Los Angeles and Rio Hondo River channels. Another post-contact Indian village site, referred to as the La Jaboneria, was known to have existed on the east bank of the Rio Hondo River in an area south of Telegraph Road. As part of investigating for the potential presence of archaeological resources that could be affected by the Project, a search of the CHRIS database was conducted (Appendix E). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project, but none included the subject property. No archaeological resources were recorded as a result of these prior studies. In addition, a search of the Native American Heritage Commission (NAHC) Sacred Lands File failed to indicate the presence of Native American cultural resources in the Project area. Considering the results of the records search, previous surveys near the Project area, and*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NAHC response, there are no known archaeological resources on or near areas that would be disturbed by the Project. The entire Project footprint has been previously developed and the ground has been modified such that there is no preindustrial ground surface exposed. Therefore, a ground survey was not conducted for this analysis and would be unlikely to be of any value. Multiple excavations have occurred at the Site in conjunction with DTSC's site investigation and remediation actions with no encounter of cultural resources. Nevertheless, given that native soil could be encountered by Site grading and excavations for the electric tie-line and storm water discharge connection, there is a possibility for discovering unknown archaeological resources. Mitigation Measure CUL-1 would ensure impacts are mitigated to a less than significant level in the event that unknown cultural resources are encountered during construction excavations. ***Mitigation Measure CUL-1:*** *Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be trained and instructed by a representative of the Applicant or its contractor to be observant for the potential occurrence of archaeological resources in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area immediately and notify the Project Applicant's representative if such resources are discovered. In the event of a discovery, the Applicant or Applicant's representative shall promptly notify the City and work in the area shall cease until the discovery is evaluated by a qualified cultural resource specialist. If evaluation by a qualified cultural resource specialist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified cultural resource specialist and in a manner allowing for collection of significant resources and information that may otherwise be affected by the Project, including development of a Research Design and Data Recovery Program if needed to mitigate impacts. If cultural artifacts are collected they shall be cataloged and curated with an appropriate institution. A final monitoring report shall be prepared and submitted to the City if significant cultural resources are discovered.*				
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐
Less than Significant Impact With Mitigation Incorporated: *The Project area is relatively flat and 100% urbanized terrain with no unique geologic features. The native geological materials beneath the Site are late to middle Pleistocene age old alluvial flood plain deposits (Stantec, 2021). The late to middle Pleistocene age means deposits at shallow depth may be about 12,000 years old or older. Alluvial flood plain deposits such as these can be fossil bearing, and these deposits are old enough to potentially contain fossils that could yield important information about the prehistoric record. The Site was previously developed and it is expected that all or most shallow soils within the depth of general site grading have been previously disturbed. Deeper excavation such as for Project footings, the electric tie-line trenching, the riser pole foundation, and the stormwater drainage connection to existing infrastructure may encounter native sediments and, therefore, have the potential to impact paleontological resources if any unknown resources are present. Mitigation Measure CUL-2, if adopted, would ensure impacts are mitigated to a less than significant level in the event that an important paleontological resource is encountered during construction.* ***Mitigation Measure CUL-2:*** *Construction shift foremen, excavation equipment operators*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
and other construction workers with responsibility for observing construction excavations shall be trained and instructed by a representative of the Applicant or its contractor to be observant for signs that excavation is in native material, and to be observant for possible occurrence of paleontological resources when excavating in native material. Trained observers shall be instructed and authorized to halt excavation in the area immediately and notify the Project Applicant's representative if vertebrate fossils are discovered. In the event of a discovery, the Applicant or Applicant's representative shall promptly notify the City and work in the area shall cease until the discovery is evaluated by a qualified paleontologist. If evaluation by a qualified paleontologist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified paleontologist and in a manner allowing for collection of significant resources and information that may otherwise be affected by the Project. If significant fossils are collected they shall be cataloged and curated with an appropriate institution. A final monitoring report shall be prepared and submitted to the City if significant fossils are discovered.				
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑
No Impact: *Given that there are no cemeteries or other known interments on or adjacent to the Project footprint, no impact to human remains is anticipated. In the unlikely event of a discovery of human remains during construction, all excavation and disturbance must stop and the County coroner immediately notified pursuant to California Health and Safety Code Section 7050.5 which includes provisions for immediate notification of the NAHC if the coroner finds reason to believe the remains are those of a Native American. Considering that there is no known interments and State law addresses potential unforeseen discoveries, no impact is expected.*				
VI. ENERGY – WOULD THE PROJECT:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	☑
No Impact: *The Project would not have unusual construction requirements that would be wasteful or inefficient. Operations would have a beneficial impact since energy storage would allow more use of renewable resources thereby reducing petroleum consumption for electric power. Considering these factors, the Project would not have an adverse impact related to wasteful, inefficient, or unnecessary consumption of energy resources.*				
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☑
No Impact: *The Project would help to achieve State and local goals for renewable energy and energy storage. California's target of achieving 100% renewable energy by 2045 relies on storage for intermittent renewable resources. More immediately, on July 30th, 2021, Governor Newsom declared a State of Emergency in California regarding statewide electricity shortages caused by climate change, drought, and wildfires. The Governor called*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
upon agencies across the State to take actions to expedite approval of battery energy storage systems to bring capacity online in 2022 and beyond. SCE has set forth an aggressive goal to procure 80% of energy supplied to the electric grid from carbon-free sources by 2030 (SCE, 2021). Energy storage is critical for achieving this goal to support use of intermittent renewable generation. SCE's Clean Power and Electricity Pathway emphasizes the urgency for energy storage investments to achieve its 2030 goal. The Project would be fully supportive of these goals. Therefore, there would be no adverse impact.				
VII. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☑
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	☐	☐	☐	☑
No Impact: *The Project location does not occur in any Alquist-Priolo earthquake fault zone nor does it occur on or cross any known active fault (Stantec, 2021; California Department of Conservation, 2021a). Therefore, the Project would have no impact associated with rupture of any identified active fault. The closest active fault is the Puente Hills blind thrust fault (Los Angeles Segment), located approximately 0.9 mile from the Site (Stantec, 2021).*				
ii) Strong seismic ground shaking?	☐	☐	☑	☐
Less than Significant Impact: *The Site is located in a seismically active area and a number of fault zones occur in the region associated with the overall San Andreas fault system demarking the intersection of the North American and Pacific tectonic plates. As described in Response VII(a)(i) above, the closest active fault is the Los Angeles segment of Puente Hills Fault, located approximately 0.9 mile from the Site. Fifteen other known regional faults occur within 23 miles of the Site (Stantec). Strong ground motions could occur in the vicinity of the proposed Project from an earthquake on any of these or other regional faults. Strong seismic ground shaking would be a potentially substantial seismic hazard if structures are not appropriately designed. The potential for seismic ground motions to damage structures is typically mitigated through proper design and construction to withstand predicted ground motions. The California Building Code seismic standards are designed to mitigate the potential for people or structures to be exposed to substantial risks from seismically-induced ground motions. Conformance with this code would be assured through the Building Permit process of the City of Commerce. Adherence to California Building Code requirements would limit the risk of damage or injury from seismic ground shaking to level that is less than significant.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
Less than Significant Impact: *Liquefaction can occur when there is a loss of shear strength in saturated granular soils cause by seismically-induced pore water pressures. The loss of shear strength in soils can reduce the ability of the soil to support overlying loads, such as equipment foundations. If liquefaction occurs, the surface structures may settle into the ground or tilt. The liquefaction potential of a site is dependent on characteristics of ground shaking, soil type, soil density, and depth-to- groundwater. The vast majority of liquefaction hazards are associated with sandy soils and silty soils of low plasticity. Cohesive soils with a plasticity index (PI) greater than 7 are generally not considered susceptible to soil liquefaction, although they can be subject to cyclic softening if they are soft enough, and if the seismic demand is relatively high. The Project is not located in a California Geological Survey Liquefaction Hazard Zone (California Department of Conservation, 2021b). This zone is defined as areas where historical occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation would be required. For the Project's Geotechnical Investigation, Stantec (2021) evaluated the potential for liquefaction at the Site based on a magnitude 7.3 earthquake and a peak ground acceleration of 0.93g. The Geotechnical Investigation identified stiff to hard cohesive soils to a depth of 20 feet followed by interbedded very dense granular soil, and very stiff to hard cohesive soil generally from the ground surface to the maximum 51.5-foot depth of the investigation. Based on the depth of groundwater table and density of the soils, most of the soil in the top 50 feet is not considered susceptible to liquefaction. However, some of the stiff soil below the historic high depth to groundwater in the upper 50 feet is susceptible to seismically induced settlement. Seismically induced settlement is estimated to be on the order of 2 inches. Differential settlement over a span of approximately 30 feet is estimated to be approximately 1 inch. The Geotechnical Investigation recommends the Project be constructed with a stiffened foundation underlain by a recompacted fill mat to limit the potential impact of seismically-induced differential settlement. Conformance with appropriate design recommendations compliant with the Building Code would be assured through the Building Permit process of the City of Commerce. Adherence to California Building Code requirements would limit the risk of seismically induced damage or injury from seismic ground shaking including liquefaction to level that is less than significant.*				
iv) Landslides?	☐	☐	☐	☑
No Impact: *The Project area is nearly flat. There are no substantial slopes in the Project area that could result in a landslide hazard.*				
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☑	☐
Less Than Significant Impact: *The Project is in an urban area and the entire Project footprint has been previously graded and no topsoil is present. In addition, the Project area is nearly flat, limiting the potential for soil erosion. Construction would occur under the State General Permit with a Storm Water Pollution Prevention Plan (SWPPP) implementing BMPs for erosion control. The General Permit would require that a construction SWPPP be prepared by a Qualified SWPPP Developer and implemented by a Qualified SWPPP*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Practitioner (QSP). Standard BMPs from the California Stormwater Quality Association (CASQA) or their equivalents would be required such as scheduling to minimize the term of disturbances, stabilization of disturbed surfaces, silt fences and a stabilized construction entrance. The SWPPP would be required to address erosion control until it is demonstrated to the RWQCB *that disturbed surfaces are stabilized and a Notice of Termination is accepted. Considering the absence of topsoil and considering that erosion would be controlled in accordance with requirements of the State General Permit, the proposed Project would not result in substantial erosion or loss of topsoil. Therefore, erosion and loss of topsoil impacts would be less than significant.*				
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☑	☐
Less than Significant Impact: *The potential for liquefaction and seismically-induced settlement is addressed in Response VII (a)(iii), above. The proposed Project would not affect or be affected by any other aspect of geologic unit instability including the potential for landslides, lateral spreading, subsidence, or collapse. The Project area is relatively flat and proposed grading would not result in any substantial slopes. Therefore, the Project does not have the potential to result in landslides. Lateral spreading is a phenomenon that can occur from seismic shaking or other lateral loading when the ground surface is not laterally supported on one or more sides, for example, on ridge tops or near edges of terraces or cliff faces. The Project area does not have slopes or other laterally unsupported conditions susceptible to lateral spreading. Soil collapse occurs when loosely compacted soils are disturbed by seismic shaking, rewetting, or other activities. Results of the Geotechnical Investigation (Stantec, 2021) show that soils at the Site are stiff to hard cohesive soils that are not susceptible to soil collapse. Subsidence can occur when pore pressures are reduced in unconsolidated geologic materials due to substantial fluid withdrawal. The Project does not involve substantial extraction of fluids from unconsolidated geologic deposits. Therefore, the Project does not have potential to create subsidence. Considering these factors, the Project would not be located on an unstable geologic unit or cause a unit to become unstable. Therefore, the impact would be less than significant.*				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☑	☐
Less than Significant Impact: *Soils in the Project area have a low expansion potential (Stantec, 2021). Therefore, the potential for adverse impacts from expansive soils is less then significant.*				
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *The Project does not propose use of a septic tank or other wastewater disposal. Bathrooms and other sanitary facilities are not included in the proposed project.*				
VIII. GREENHOUSE GAS EMISSIONS -- Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project would not generate greenhouse gas (GhG) emissions, with the primary exception being carbon dioxide (CO2) that would be generated from vehicle and equipment emissions for construction and maintenance activities. The estimated construction GhG emission calculated using CalEEMod is 139 metric tonnes of CO2 equivalents, well below SCAQMD's GhG significance threshold of 10,000 metric tonnes per year for stationary source projects which includes construction emissions amortized over 30 years and added to operational emissions. Once constructed, the Project would provide a new and reliable means of capturing and managing energy from renewable energy projects such as solar generation and wind generation projects increasing the effectiveness of renewable energy technologies, thereby reducing the dependency on fossil fuel-produced electric energy, providing an overall long-term GhG benefit. Considering that construction emissions would be short-term below SCAQMD's significance threshold, and that Project operations would contribute beneficially to GhG emission reduction regionally, GhG emissions would be less than significant both individually and cumulatively.*				
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑
No Impact: *The proposed Project would not conflict with any applicable plan, policy, or regulation adopted to reduce GhG emissions. The estimated construction GhG emission calculated using CalEEMod is 139 metric tonnes of CO2 equivalents, well below SCAQMD's GhG significance threshold of 10,000 metric tonnes per year for stationary source projects which includes construction emissions amortized over 30 years and added to operational emissions. Once constructed, the Project would operate without GhG emissions with the exception of minor emissions from occasional maintenance vehicle trips. The Project would be available to store energy from renewable energy projects such as solar generation and wind generation projects, reducing the dependency on fossil fuel-produced electric energy and supporting the achievement of local, state and federal renewable energy goals directed at GhG reduction.*				
IX. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Less than Significant Impact: *Construction would require the short-term transport, use and/or disposal of hazardous materials such as fuels, lubricants, adhesives, solvents and paints. Storage and use of hazardous materials onsite during construction could create a significant hazard to construction workers, the public or the environment if such materials are not properly contained. Construction would be required to occur under a comprehensive hazard communication program in accordance with 29 CFR 1910 to ensure that construction workers are knowledgeable in the identification and proper handling of hazardous materials to prevent unsafe exposure and to avoid spills. Stormwater BMPs would be required under the State General Permit to prevent contact of hazardous materials with stormwater. Furthermore, construction areas would not be open to the public. With these measures, the routine use of hazardous materials for construction would not create a significant hazard to the public or the environment.* *Deliveries of bulk fuels, lubricants, batteries, and other hazardous materials to the Site would be subject to Department of Transportation (DOT) regulations at 49 CFR 172 and 173 for hazardous materials transport. These regulations include requirements for hazardous material transport licensing, packaging and containment standards, labeling, and other protection measures to prevent hazardous materials incidents during transport and to facilitate response in the event of a hazardous material accident. Hazardous wastes produced would be minimal and would be required to be transported away from the Site in accordance with these same DOT regulations, as well as being managed at all times under requirements of California Code of Regulations Title 22 Division 4.5 for worker training and storage, shipping and disposal of hazardous waste. With these existing regulations in place, and considering the short term of construction activities, the transport, production, and disposal of hazardous materials associated with facility construction would not create a significant hazard to the public or the environment.* *Operation of the proposed Project would not typically involve handling of hazardous materials. The battery modules contain sealed battery cells which contain components that would be hazardous waste if disposed of. Battery modules and their various components replaced throughout the life of the system would be transported offsite and returned to the manufacturer or their approved and permitted recycling partner(s) for dismantling, material processing and recovery. Oil that would be present in oil-filled transformers is not routinely handled. The transformers are operated normally closed and sealed. On infrequent occasions, oil in oil-filled transformers may require filtering or replacement if it becomes contaminated. If transformer oil needs to be replaced, the used oil would be recycled at a licensed offsite recycler. Management and transport of replacement batteries and oil, used batteries, and used oil would be subject to the same management and transportation regulations and requirements as described for construction above for safe handling, transport and recycling. With these existing regulations in place, the transport, production, and disposal of hazardous materials associated with facility operations would not create a significant hazard to the public or the environment.*				
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
environment?				

Less than Significant Impact: *Construction would require the short-term use and transport of hazardous materials as described in Response IX (a), above. Construction would be required to occur under a comprehensive hazard communication program in accordance with 29 CFR 1910 to ensure that construction workers are knowledgeable in the identification and proper handling of hazardous materials to avoid spills or other upset conditions that could otherwise result in unsafe exposure. The general public would be excluded from the construction Site. Transport of bulk fuels, lubricants, batteries, and other hazardous materials to the Site would be subject to DOT regulations at 49 CFR 172 and 173 including requirements for hazardous material transport licensing, packaging and containment standards, labeling, and other protection measures to prevent hazardous materials incidents during transport and to facilitate response in the event of a hazardous material accident. Considering these factors, construction would not create a significant hazard to the public or the environment due to reasonably foreseeable upset or accident conditions.*

Operation of the proposed Project would be subject to 19 CCR Division 2, Chapter 4 requirements to submit and maintain a Hazardous Materials Business Plan and would be subject to periodic inspections by the Certified Unified Program Agency (Los Angeles County Fire Department) for safe operations related to hazardous materials. These regulations require reporting of hazardous materials present in quantities exceeding threshold quantities, worker training, emergency planning preparations to minimize potential hazards of a hazardous material upset, and immediate reporting to 911 and the California Office of Emergency Services of any release or threatened release of hazardous materials that presents a significant present or potential hazard to human health and safety, property or the environment. Oil-filled electrical equipment would be subject to 40 CFR 112 regulations that include comprehensive requirements for preventing releases of oil and for oil spill response preparedness. These regulations include safety measures such as secondary containment for oil-filled equipment, requirements for routine inspections and proper equipment maintenance, personnel training to prevent discharges, site security, oil transfer safety precautions, and oil spill response planning. The energy storage system and all other equipment would be constructed according to applicable National Fire Protection Association, National Electrical Code, and California Fire Code safety standards. Batteries would contain integrated safety systems to actively monitor electrical current, voltage and temperature to optimize performance, mitigate potential failures, and prevent upset. Batteries performing out of specification would be immediately taken offline by the automated monitoring system. The system would be designed and constructed to comply with applicable building, electrical and fire codes. Battery buildings or enclosures would be outfitted with fire suppression equipment to meet or exceed fire safety codes and standards. As detailed in the Applicant's Project Description, fire protection would include prevention, suppression, and isolation methods and materials including smoke/fire detection sensors; ground fault detection, alarms, and systems for automatic shutdown of cooling fans and opening of electrical contacts in the battery system; and systems for automatic release of a fire suppression agent appropriate to the battery technology. Typically, such systems use a clean fire suppression agent such as DuPont's FE-25, FM-200, or 3M's Novek 1230 and/or water sprinkler or mist systems as may be required by fire code. Operation of the facility

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
would be remotely monitored on a continuous basis. In addition, the system would be routinely visited to perform visual inspections. Security would be provided including perimeter fencing and remote video monitoring with pan, tilt and zoom capabilities. These design measures are included to minimize the potential for upset and to immediately respond in the event of an unforeseen upset. Considering these safety systems incorporated into the Project design, and existing regulatory requirements and standards applicable to the Project that are designed to minimize hazardous material upset risks to human health and the environment, the risk of a reasonably foreseeable upset or accident scenario creating a hazard to the public or the environment during operations is less than significant.				
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
No Impact: *There are no existing or proposed schools located within one-quarter mile of the Site. The closest school is Bell Gardens High School located 0.6 mile southwest of the Site and more than 0.3 mile from the closest approach of the tie-line route. Therefore, there would be no impact.*				
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☑	☐	☐
Less than Significant Impact with Mitigation Incorporated: *The Site is on DTSC's EnviroStor list with DTSC identified as the Lead Agency for the Site cleanup program. The DTSC Site name is CAMEO. The draft Operation and Maintenance Plan in Appendix C includes a summary of relevant Site history including investigations to characterize the extent of constituents of concern and remedial actions taken to remove impacted soils to the extent practical. Past manufacturing use of the Site resulted in releases of hazardous constituents including cadmium and compounds, chromium III, chromium VI, arsenic, lead, and petroleum hydrocarbons. In 2008, DTSC removed over 2,000 cubic yards of chromium impacted soil from the Site and replaced it with clean imported fill. In 2009, DTSC removed additional soils impacted with cadmium, lead and arsenic. Some chromium impacted soil remains onsite at depths of 20 feet and deeper that is not practical to remove, and an investigation directed by DTSC in 2011 concludes the potential for the residual chromium impacted soils impact groundwater appears low. In 2013, DTSC removed an additional 491 cubic yards of soil impacted with arsenic. Following this removal DTSC determined that remaining arsenic concentrations were within background levels. Sporadic cadmium detections remain in the upper 10 feet of soil across the site that pose a potential direct exposure risk to future construction workers. Volatile organic compounds including carbon tetrachloride and tetrachloroethene also have been detected in vadose zone soil gas with concentrations that increase with depth suggesting they are likely from an offsite source transported beneath the site at low concentrations in groundwater that occurs approximately 104 feet below the ground surface.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

As part of the Current Conditions Report (DTSC, 2017), DTSC prepared a human health risk assessment for the Site for soil direct contact and inhalation exposure under future commercial/industrial and construction/excavation scenarios, and a groundwater screening assessment to evaluate soil leaching constituents of potential concern to groundwater. Key findings include:

- *The calculated cumulative cancer risk to commercial/industrial workers from direct exposure to soil for soil ingestion, dermal contact and outdoor inhalation is de minimis.*
- *The calculated cumulative cancer risk to construction/excavation workers from direct exposure to soil for soil ingestion, dermal contact and outdoor inhalation is de minimis. The non-cancer Hazard Index is 4 and exceeds the target of 1 due to potential exposure to cadmium in shallow soil.*
- *Lead concentrations in soil do not pose a significant hazard to occupational workers.*
- *Residual hexavalent chromium in soil at depths of 60 feet below the ground surface in the area of two former industrial pits pose a threat to ground water. Maximum detected concentrations of all other metals are unlikely to impact groundwater at levels of health concern.*
- *Maximum soil concentrations of volatile organic compounds are unlikely to impact groundwater at levels of health concern. Carbon Tetrachloride was not detected in any soil sample but carbon tetrachloride in soil gas in one location at depths of 24 and 35 feet below ground surface may pose a threat to ground water.*

The updated risk assessment also concludes: (1) additional remedial action or engineering controls may be applicable to address site risks such as further excavation or an asphalt/concrete cap to prevent leaching and percolation of residual chromium or soil gas to groundwater and direct contact with cadmium impacted soil; (2) engineering controls would require a land use covenant to ensure their integrity; (3) a soil management plan would be required to protect construction/excavation workers when excavation or soil movement is needed; and (4) groundwater monitoring should continue to monitor hexavalent chromium and carbon tetrachloride concentrations. Groundwater monitoring results since the risk assessment was updated, including the latest posted annual sampling (June 2020), indicates all constituents analyzed are below or near allowable Maximum Contaminant Levels.

The Project would provide the land use covenant, soil management plan and groundwater monitoring concluded to be needed in DTSC's Current Conditions Report. The Project would develop impermeable areas over the majority of the Site that would be expected to further benefit groundwater quality by reducing stormwater infiltration through residual impacts in the vadose zone. The Applicant would enter into a Prospective Purchaser Agreement with DTSC pursuant to California Health and Safety Code Chapter 6.8 sections 25399, 58009 and 58010 whereby DTSC has authority to enter into agreements whereby DTSC covenants not to sue or assert claims for environmental remediation against a purchaser of an environmentally impacted property if such agreements are sufficiently in the public interest. The Agreement would set forth both parties' intent and belief that the Project with competent engineering and other data considered would not exacerbate or contribute to the existing contamination at the Site or pose health risks to persons present at the site. Under the Agreement, the Applicant would purchase the Site for energy storage and: (1) record a land use covenant for the Site limiting future use as necessary to ensure full protection of the

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

environment and human health; (2) prepare and submit to DTSC for review and approval a Site Operations and Maintenance Plan and corresponding detailed cost estimate to manage residual contamination after remediation has been completed by DTSC; and (3) carry out operations and maintenance obligations as required by the land use covenants, Operations and Maintenance Plan, and associated financial assurance responsibilities. The Applicant's deliverables would be subject to approval by DTSC and DTSC would provide oversite of field activities. With these measures, residual contamination at the Site would not result in a significant hazard to the public or the environment. Accordingly, Mitigation Measures HAZ-1 through HAZ-3 below would ensure that the Project would not create a significant hazard to the public or the environment as a result of residual Site contamination.

An environmental database search was conducted for the vicinity of the proposed underground electric tie-line, including a search of lists stemming from Government Code Section 65962.5 (EDR, 2021). The search resulted is the identification of several sites on the following lists that indicate a known past or ongoing hazardous material release within approximately 1/8 mile of the tie-line routes:

- *ERNS – The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances.*
- *CA LUST – Leaking Underground Storage Tank Sites included in the* RWQCB*'s GeoTracker database.*
- *CHMIRS – The California Hazardous Material Incident Reporting System contains information on reported hazardous material incidents such as spills or releases.*
- *RGA LUST – Recovered government archive of Leaking Underground Storage Tanks provides a list of leaking underground storage tanks from historical databases and includes many records that no longer appear in current government lists.*

The identified sites are summarized in the following table. Most of these site records are one-time release events that were contained and cleaned up and pose no lasting hazard. The additional sites are those on the LUST list and only one of these sites has an active status; Site C37 with a post-remedial action monitoring status. Ground water in the vicinity is on the order of 100 feet deep, which is much deeper than any anticipated Project excavations so even if ground water impacts remain at Site C37 (6023 S. Garfield Avenue), the Project would not be impacted by or exacerbate any ground water impacts that may exist.

SITE RECORD	***LOCATION***	***SUMMARY OF RELEASE***
Cluster A Site A44	*5928 S. Garfield Ave (Adjacent to the west of the Project Site)*	*CHMIRS list. Spill was reported to State Office of Emergency Services in 2019. Available information indicates an unknown quantity of talc was spilled and was contained.*
Cluster B Site B9	*6148 S. Garfield Ave. (East side of Garfield Avenue*	*CHMIRS list. Spill was reported to State Office of*

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	south of Project Site)	*Emergency Services in 2015. Available information indicates an unknown quantity of diesel fuel spilled and was contained and cleaned up by a contractor.*
Cluster C Site C17	*6100 S. Garfield Ave (East side of Garfield Avenue south of Project Site)*	*CHMIRS list. Spill was reported to State Office of Emergency Services in 2007. Available information indicates approximately 300 gallons of Pegmer Techmer 804 spilled when a tote valve was broken off and the spill was contained.*
Cluster C Site C22	*6100 S. Garfield Ave (East side of Garfield Avenue south of Project Site)*	*ERNS list. Available information indicates there was an accidental storage tank overfill of approximately 200 pounds of N-Butyl Acrylate in 1991. It was contained in a concrete dike and vacuumed up.*
Cluster C Sites C33, C36, C37 and C41	*6023 S. Garfield Ave (West side of Garfield Avenue south of Project Site)*	*CA LUST (or RGA LUST) list. Available information in these site records indicate a release of methylene chloride was reported in 1991 and that the site was remediated. The last site update indicates this site is in post-remedial action ground water monitoring.*

While the record search did not identify any known contamination issues that could affect the proposed electric tie-line construction, given the long industrial use of the vicinity, unknown impacted soils could potentially be encountered during tie-line construction, and residual impacts are known to exist on the Project Site. Impacted soils could create a hazard to workers and the public if not properly managed. Mitigation Measure HAZ-2 would ensure impacts are mitigated to a less than significant level if unknown contaminated soils are encountered during installation of offsite underground connections.

Mitigation Measure HAZ-1: *Prior to issuance of a building permit, the Applicant shall provide the City with evidence of recording a land use covenant for the Site pursuant to California Code of Regulations, Title 22, section 67391.1 to record the presence of residual hazardous constituents in soil, use restrictions, and the requirement for a long-term maintenance plan for protection of the environment and human health consistent with*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
DTSC's selected site remedy. ***Mitigation Measure HAZ-2:*** *Prior to issuance of a grading permit for the Site, the Applicant shall provide the City a DTSC-approved Construction Soil Management Plan for the Site. Furthermore, prior to issuance of an encroachment permit for offsite electric tie-line and stormwater discharge connection, the Applicant shall obtain City approval of a Construction Soil Management Plan for offsite excavations. The Construction Soil Management Plan for the Site shall summarize relevant conditions based on DTSC's Current Conditions Report or another more recent, applicable DTSC report, and identify all earth moving activity to be performed in accordance with the plan, and measures to prevent unsafe exposure to workers or the public including dust control, restriction of public access, and construction worker health and safety. The Construction Soil Management Plan for offsite excavations shall identify practices the Applicant would implement to ensure recognition of unknown impacted soil if encountered and steps to be taken upon an impacted soil discovery to prevent unsafe exposure to workers or the public.* ***Mitigation Measure HAZ-3:*** *Prior to issuance of a building permit, the Applicant shall provide the City an Operations and Maintenance Plan for the Site approved by DTSC.*				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
No Impact: *The Project area is not within an airport land use plan or within two miles of a public or public use airport. The closest airport is the Compton/Woodley Airport more than eight miles to the southwest.*				
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project would not alter any existing public or private through-way. Short term lane closures would be needed to install the electric tie-line in roadway areas. An Encroachment Permit requiring a traffic control plan would be required for any lane closures. This short-term impact during construction would not impair implementation of or physically interfere with any emergency response plan or emergency evacuation plan. Short term lane closure impact to travel on Garfield Avenue, a Major Arterial used for emergency response, is addressed in Section XVII, Transportation, below.*				
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☑
No Impact: *The proposed Project area is in an urban area. There are no wildlands in the*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Project Vicinity. Considering these factors, wildland fire is not a foreseeable risk for the Project.				
X. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☑	☐

Less than Significant Impact: *Construction would occur under the State General Permit with a Storm Water Pollution Prevention Plan (SWPPP) implementing Best Management Practices (BMPs) for protection of water quality. The State General Permit would require that a construction SWPPP be prepared by a Qualified SWPPP Developer and implemented by a QSP. Standard BMPs from the California Stormwater Quality Association (CASQA) or their equivalents would be required for sediment and other potential pollutants. Under the State General Permit, the SWPPP would need to address water quality BMPs and the permit would require that those BMPs be implemented until it is demonstrated to the Regional Water Quality Control Board (*RWQCB) *that disturbed surfaces are stabilized and a Notice of Termination is accepted. The General Permit requires construction discharges to not violate water quality standards. With adherence to the State General permit and BMPs, no violation of any water quality standard or waste discharge requirement or substantial degradation of water quality would be expected from construction.*

Discharges from the Project during operations would be required to comply with NPDES Permit CAS004001, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within the County of Los Angeles, and the Incorporated Cities Therein, except the City of Long Beach (RWQCB, 2007). The City of Commerce would require that the Project include all measures needed to comply with NPDES Permit CAS004001 through the City's Stormwater and Runoff Pollution Control Ordinance (Municipal Code Chapter 6.17) and the City's review of the Project design in conjunction with issuance of grading and building permits. Compliance with NPDES Permit 004001 would require that there is no discharge from the Project other than stormwater and exempted non-stormwater discharges such as air conditioning condensate that do not contain pollutants. The Project design incorporates onsite retention in underground stormwater storage pipes to store the increase in peak flow that would occur due to site development so that peak flows are not increased for the 24-hour design storm used for compliance with the Los Angeles County Stormwater Ordinance. Project facilities would be unattended except for periodic inspections or maintenance and would be secured to preclude public access so there typically would be no generation of trash, debris or other waste onsite that could impact stormwater runoff. Other Project design features to minimize impacts on water quality include:

- *No outdoor storage or work areas are proposed;*
- *No outdoor trash collection areas are proposed;*
- *No floor drains or interior or exterior wash-down areas are proposed;*

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
• *No repair/maintenance bays or fueling areas are proposed;* • *Site storm drain inlets would be stenciled;* • *Avoidance of disturbance to natural water bodies and drainage systems; and* • *Ongoing maintenance of stormwater controls and periodic inspections to ensure proper performance.* *In addition to design measures and NPDES permit compliance to prevent water quality degradation, the Project design includes impermeable surfacing over most of the Site that would reduce infiltration through residual impacted soils onsite which can be expected to have some beneficial effect on the quality of groundwater beneath and downgradient of the Site.* *Considering existing requirements of the State NPDES General Permit for construction and NPDES Permit CAS004001, and BMPs incorporated in the Project design, it is not expected that the Project would violate any water quality standards or waste discharge requirements or result in any substantial water quality degradation. Therefore, the impact would be less than significant.*				
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☑	☐
Less than Significant Impact: *Operation of the Project would not typically use water because potable water connections and landscaping are not proposed. The Site would be unoccupied. Project construction would require water for dust control and compaction. Construction water would be supplied from an existing hydrant near the northeast corner of the Site or another nearby existing hydrant. This use would be short-term and would not represent an ongoing water demand that could affect groundwater management of the basin. The amount of impervious area that would be added by the Project is negligible and would have no discernable impact on recharge within the 277 square mile Los Angeles Coastal Plain Central Groundwater Basin. Sources of recharge to the basin include surface and subsurface inflow, direct percolation of precipitation, stream flow, and applied water replenishing the aquifers dominantly north and east of the Commerce where the Los Angeles and San Gabriel Rivers enter the basin and permeable sediments exposed at the ground surface recharge the basin aquifers (Department of Water Resource, 2004).*				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through addition of impervious surfaces in a manner which would:				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Result in substantial erosion or siltation on- or off-site?	☐	☐	☑	☐
Less than Significant Impact: *Under existing conditions the drainage from the majority of the Site collects in an onsite shallow depression for smaller storms. Drainage from the westernmost portion of the Site, and drainage from the shallow depression for storms large enough to overtop the depression, drains westward to Garfield Avenue and into the regional underground Los Angeles County Flood Control infrastructure. The Project would not alter the course of any stream or river onsite or offsite since none occur within the Project footprint. The Project is designed to convey runoff to the same Los Angeles County Flood Control District storm water drainage infrastructure as existing conditions. The Project incorporates onsite storm water retention to retain the increase in peak flow runoff from the Site that would occur from development so there would be no increase in runoff from the design storms. Runoff from the site would be controlled with paved surfaces, curbs, drop inlets and underground piping connecting to the existing regional flood control infrastructure so there would not be any increase or change in drainage in areas with exposed soil. The tie-line would be installed underground, and surface grading and surfacing materials (e.g., paving) would be returned to existing conditions following installation so it would not change drainage patterns. Considering these factors, the Project would not alter existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. Therefore, the impact would be less than significant.*				
ii) Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☑	☐
Less than Significant Impact: *The Project would not alter the course of any stream or river since none occur within the Project footprint. The Project is designed to convey runoff to the same regional underground Los Angeles County Flood Control District storm water drainage infrastructure as existing conditions. The Project incorporates onsite storm water retention to retain the increase in peak flow runoff from the Site that would occur from development so there would be no increase in runoff from the design storms. Connection to the existing flood control infrastructure would require a permit from Los Angeles County Flood Control District and review of design storm peak flow conditions from the Site would be reviewed by the Los Angeles County Flood Control District as part of that permitting to ensure that the increase in peak flow due to Project development is retained so as not to increase flood flows in the storm drain system. The tie-line would be installed underground and surface grading and surfacing materials (e.g., paving) would be returned to existing conditions following installation so it would not change drainage patterns or increase design storm runoff in a manner that would result in flooding. Considering these factors, the Project would not alter existing drainage patterns or increase runoff in a manner that would result in flooding on- or off-site. Therefore, the impact would be less than significant.*				
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional	☐	☐	☑	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
sources of polluted runoff?				
Less than Significant Impact: *The Project design incorporates onsite stormwater retention to retain the increase in peak flow from the Site that would occur from development so there would be no increase in peak runoff from the design storms. Connection to the existing flood control infrastructure would require a permit from Los Angeles County Flood Control District and review of design storm peak flow conditions from the Site would be reviewed by the Los Angeles County Flood Control District as part of that permitting to ensure that the increase in peak flow due to Project development is retained so as not to increase design storm flood flows in the storm drain system. The tie-line would be installed underground, and surface grading and surfacing materials (e.g., paving) would be returned to existing conditions following installation so it would not change runoff compared to existing conditions. Battery energy storage is a clean industrial use for the Site. Electrical equipment would be housed in enclosures or a building, and the Project would be designed for full remote operation so the facility would unoccupied. The use does not include outdoor work areas, outdoor trash collection, outdoor material storage or other typical sources of polluted runoff. Considering these factors, Project impacts would be less than significant.*				
iv) Impede or redirect flood flows?	☐	☐	☑	☐
Less than Significant Impact: *The Project is located outside the 100-year flood hazard zone. Site drainage would be collected onsite and conveyed to the same flood control infrastructure as under existing conditions. The Project design incorporates onsite storm water retention to retain the increase in peak flow from the Site that would occur from development so there would be no increase in peak runoff from the design storms. Connection to the existing flood control infrastructure would require a permit from Los Angeles County Flood Control District and review of design storm peak flow conditions from the Site would be reviewed by the Los Angeles County Flood Control District as part of that permitting to ensure that the increase in peak flow due to Project development is retained so as not to increase design storm flood flows in the storm drain system. The tie-line would be installed underground, and surface grading and surfacing materials (e.g., paving) would be returned to existing conditions following installation so it would not change runoff compared to existing conditions. Considering these factors, Project impacts would be less then significant.*				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☑
No Impact: *The Project is located in Federal Emergency Management Act (FEMA) Flood Zone X, Area of Minimal Flood Hazard, (FEMA, 2021). Furthermore, the Project is not within the tsunami hazard zone (Department of Conservation, 2021b) and is located far from any water body large enough to result in seiche. For these reasons, no impact is expected.*				
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
No Impact: *As described in previous responses, the Project would be required to comply with the State General NPDES permit during construction and would be designed to comply with the MS4 permit during operations. Once operating, the facility would be passive and clean with no air pollutant emissions, without substantial traffic generation, and no outdoor material storage or other pollutant sources. Considering these factors, the Project would not conflict with any water quality control plan. The Project would be designed for remote operation and would not be occupied. Operations would not use water except for periodic flushing of fire prevention systems so would not impact sustainable water use. The development of impervious surfaces at the Site may provide some local improvement to ground water quality beneath and downgradient of the Site by reducing infiltration through residual impacted soils. Considering the small Site area, the reduced infiltration would not have a discernable effect on sustainable ground water management other than the potential local groundwater quality improvement. For these reasons, the project would not conflict with or obstruct any sustainable groundwater management plan and no impact is expected.*				
XI. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	☐	☐	☐	☑
No Impact: *The Project is infill building on a formerly developed vacant Site that is surrounded by industrial and commercial uses. The proposed Project would not result in any physical barrier or feature that could divide an established community.*				
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
No Impact: *The Site and surrounding area are zoned M-2 (Heavy Manufacturing). The purpose of this zone is to provide land suitable for heavy industrial uses. The requirements of the zone are intended to provide safeguards and to establish adequate buffer distances between uses that pose potentially adverse public health, safety, and welfare impacts and land uses in adjacent more restrictive zone districts. The proposed battery energy storage use has been determined to be Special Warehousing and Storage (SIC Code 4226) by the Director of Economic Development and Planning, requiring a Conditional Use Permit in M-2 zoning under Commerce Municipal Code Chapter 19.11.* *The proposed use would not conflict with any land use plan, policy, or regulation. The City of Commerce General Plan designates the Site and surrounding parcels as Industrial (City of Commerce, 2008) and located in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. Land use policy for this area encourages the continued presence of all types of industry throughout the planning area. The Site is currently vacant and the potential productive uses of it are limited and would be subject to deed restriction due to residual impacted soil. The proposed use would provide a productive use for the site and is designed to not to exacerbate or contribute to release of contaminants from residual impacted soils. Energy storage is considered critical infrastructure as it provides power grid stability and efficiency and helps the State reach its renewable energy goals. The proposed use of the*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Site would return the distressed site to productive use and generate increased property taxes, employment, and general business activity consistent with goals of the City's Redevelopment Area establishment. *Considering these factors, the proposed use would be consistent with the City's land use plans and policies. There would be no impact related to conflict with any land use plan, policy, or regulation.*				
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑
***No Impact**: The Project is surrounded by large expanses of urban development. There are no natural lands in the vicinity and no habitat conservation plan or natural community conservation plan applies to the Project area.*				
XII. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
***No Impact:** The Project area is highly developed and there are no known mineral resources that could be impacted by the Project.*				
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑
***No Impact:** The Project area is highly developed and there are no known mineral resources that could be impacted by the project. The General Plan does not identify any mineral resource that could be lost due to Site development.*				
XIII. NOISE - Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
Less Than Significant Impact: *Construction noise impacts would be short term and would be typical of construction sites with noise from equipment, tools, vehicles, and work crews. The highest noise levels would be expected during grading and site preparation when multiple pieces of equipment may be operating simultaneously for several hours each day such as a bulldozer, scraper, water truck, compactor, loader, and dump truck. Typical noise levels for these types of mobile*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

construction equipment (FHWA, 2006) include:

EQUIPMENT	*TYPICAL NOISE LEVEL (dBA) at 50 feet*
Bulldozer	*85*
Scraper	*89*
Water Truck	*88*
Compactor	*82*
Tractor/Loader/Backhoe	*80*
Dump Truck	*88*

The Site area is approximately 360 feet by more than 250 feet so most work would be away from property lines, allowing most noise to be attenuated by distance before reaching the property line. As a general rule in open space, sound intensity is decreased 6 dBA for each doubling of distance. For example, each of the dBA levels shown above would be reduced by 6 dBA at a distance of 100 feet from the source, and an additional 6 dBA at a distance of 200 feet. Equipment working near the Site boundaries would be intermittent and there are no noise sensitive resources in the vicinity. The Site is bordered by parking lots and commercial and industrial buildings. The short-term construction noise would not affect sensitive receptors and would not exceed any local standard. Considering these factors and the short term of construction, the construction noise impact would be less than significant.

Operation of the Project would generate noise primarily from outdoor electrical equipment and roof-mounted heating, ventilation and air conditioning motors and fans. Noise levels for typical equipment include:

EQUIPMENT	*TYPICAL NOISE LEVEL (dBA)*
Inverters	*80 at 3.3 feet (1 meter)*
Primary Transformers	*62 at 5 feet*
Rooftop HVAC Units	*85 at 3 feet*
Substation HVAC Units	*67 dBA at 10 feet*
Step-Up Transformer	*87 dBA at 5 feet*

For land use planning, the General Plan (City of Commerce, 2008) identifies the Industrial land use designation of the Site to have a desired maximum noise level of 70 dBA and a maximum acceptable noise level of 75 dBA. Based on analyses prepared for other battery energy storage projects, noise from most equipment would be attenuated to a level of less than 75 dBA within several feet of the equipment (LSA, 2017 and 2021), which would be well within the Site boundary. The step-up transformer would be the loudest single source of operational noise. The step-up transformer would be located approximately 40 feet from the Site boundary where the estimated noise level would be approximately 70 dBA. Therefore, the Project is expected to conform with the Industrial land use noise limit. The Applicant has committed to providing noise modelling results to the City to demonstrate compliance once equipment vendors have been selected and prior to issuance of building permits. Considering these factors, long-term noise impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
Less Than Significant Impact: *Grading may generate localized low-level groundborne vibration and noise but would not generate excessive groundborne vibration. Groundborne vibration and noise is attenuated rapidly with distance and the Site is bordered by parking lots and commercial and industrial buildings. Grading proximal enough to an active use to cause notable groundborne vibration or noise would only occur at the northernmost end of the Site adjacent to the existing commercial building. The Preliminary Site Plans in Appendix B show only minor grading would be required proximal to the northern Site boundary since there would be little difference in existing and proposed elevations and no deep excavation or foundations along the site perimeter. The duration of grading at this location would be short and episodic. Considering these factors, groundborne vibration and noise impacts would be less than significant.*				
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
No Impact: *The Project area is not in the vicinity of a private airstrip or an airport land use plan or within two miles of a public or public use airport. The closest airport is the Compton/Woodley Airport more than eight miles to the southwest.*				
XIV. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☑
No Impact: *The proposed Project would not generate population growth, either directly or indirectly. It does not propose any housing or commercial development, nor extension of roads or expansion of infrastructure. The project itself is a reinforcement of the existing electrical infrastructure in the region, however the capacity created by the system is planned as part of the long-term planning process for California electrical utilities to meet projected growth. The project, then, does not induce growth, rather it is being built in response to growth. Construction jobs would be short term and, therefore, would be expected to be filled by the existing regional workforce without inducing long-term growth. During operations, Project facilities would be unoccupied but visited periodically through the year for equipment inspections, monitoring and testing, and maintenance as needed. It is expected that operations positions would be filled with the existing workforce without relocation. Because the proposed Project would not generate new long-term full-time jobs or commercial*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
businesses, construct new housing, or extend existing infrastructure, it is not expected to generate population growth.				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
No Impact: *Existing housing would not be displaced by the construction or operation of the proposed Project. The Site is on land that is currently vacant and unsuitable for residential use. Therefore, no impacts would occur.*				
XV. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☑
No Impact: *Fire protection in the City of Commerce is provided by the Los Angeles County Fire Department (LACFD). The closest fire station to the Site is Station 27 at 6031 Rickenbacker Road approximately 4 minutes from the Site. The proposed Project would be designed and constructed to follow LACFD requirements for access and fire water supply. The final design would be subject to LACFD review and approval. The presence of oil in transformers onsite would require submittal of a Hazardous Materials Business Plan on the California Environmental Reporting System with an emergency response plan with emergency coordinator contact information and mechanisms for emergency access to the unoccupied Project Site. Onsite roads would be constructed with a compacted subgrade and paved surface. All electrical systems for the Projects would be required to be constructed in accordance with applicable codes. With adherence to these requirements, the Project is not expected to create a capacity or service level shortfall related to fire protection. No new or modified government facilities would be needed to provide fire protection for the Project. Therefore, there would be no impact.*				
Police protection?	☐	☐	☐	☑
No Impact: *The proposed Project would be located in the City of Commerce which contracts police protection from the Los Angeles County Sheriff's Department. Services for the Site area is from the East Los Angeles Sheriff's Station at 5019 E. Third Street, Los Angeles, approximately 16 minutes from the Site. Construction and operation of the Project would not generate a material demand on police services. The Site would be fenced with controlled*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
access gates that would avoid the need for routine police protection services. Security cameras and alarms would be monitored remotely. Construction and operation of the Project are not expected to generate population growth. Project facilities would be typically unoccupied during operation. Considering these factors, the proposed Project would not result in an adverse impact on police service response times, service ratios, or other performance objectives, nor would it result in the need for new or modified police facilities. No new or modified government facilities are needed to provide police protection for the Project. Therefore, there would be no impact.				
Schools?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Therefore, no new demands on school facilities would occur, and there would be no impact on school capacities, service levels or performance objectives. The proposed Project would not require new or physically altered school facilities. Therefore, there would be no impact.*				
Parks?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Therefore, no new demands on park facilities would occur and there would be no impact on park capacities, service levels or performance objectives. The proposed Project would not require new or physically altered park facilities. Therefore, there would be no impact.*				
Other public facilities?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth or extend infrastructure. It would not create a substantial new demand for services and would not require new or physically altered public facilities. Therefore, there would be no impact related to new or physically altered government facilities.*				
XVI. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Additionally, it would not displace, affect access to, or otherwise physically affect any park or recreational facility. Therefore, no increase or change would occur in the use of any park or recreational facility. Therefore, the proposed Project would not result in or accelerate physical deterioration of any park or recreational facility.*				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
might have an adverse physical effect on the environment?				
No Impact: *As described in Response XIV(a) above, the proposed Project would not generate population growth. Additionally, it would not displace, affect access to, or otherwise physically affect any existing park or recreational facility nor does it propose any new recreational facility. Therefore, there would be no impact.*				
XVII. TRANSPORTATION -- Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☐	☑	☐
Less than Significant Impact: *Project-related trips would be generated primarily during construction. Construction would occur over a six to twelve month period during which the peak number of construction workers is expected to be approximately 40. In addition, deliveries during construction would generate an estimated 5 round trips spread throughout the day during peak construction activities. Construction worker and delivery traffic would temporarily and incrementally add to existing traffic on Garfield Avenue, Slauson Avenue, and other arterial roads between the Project and Interstates 5 and 710. California's Office of Planning and Research CEQA guidelines on Evaluating Traffic Impacts (California Office of Planning and Research, 2018) suggests that projects generating less 110 trips per day can be assumed to cause a less than significant transportation impact. Considering the aforementioned expected workforce and deliveries during peak construction, trip generation would be below the 110 trips per day and, therefore, can be considered less than significant. Furthermore, the construction traffic impact would be short-term and project construction workers are expected to be primarily from the existing regional workforce currently contributing traffic to regional transportation routes.* *Following construction, Project facilities would be unattended and visited periodically through the year for equipment inspections, monitoring and testing, and maintenance as needed. These periodic visits during operations represent negligible trip generation and VMT.* *Garfield and Slauson Avenues are 4-lane Major Arterials with a 40 mile per hour speed limit. These roads carry extensive large truck traffic shipping goods to and from local warehouses and other industrial facilities and can accommodate needed construction shipments for the Project. Permits from the County and the State would be needed for oversize or overweight loads.* *Garfield and Slauson Avenues are bus routes serviced by the City's municipal bus lines and there are bus stops due north of the Site on both of these streets near their intersection. The Site does not front either of these streets and no work is proposed where these bus stops are located. Additional bus stops occur northbound and southbound on Garfield Avenue along the underground electric tie-line route, as well as on Randolph Street at Garfield Avenue. Work in the public right-of-way for installation of the underground electric tie-line would*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
require an encroachment permit from the City and implementation of a traffic management plan. The City's requirements for nighttime work in Major Arterials as described further below would avoid any conflict with public transit. *The City currently does not have any bicycle facilities. Slauson Avenue in the Project vicinity is recommended for improvement to a Class II Bicycle Lane with striping and one-way bicycle movement on each side (City of Commerce, 2020). Following construction, the Project would generate negligible vehicle trips and would not affect the planned bike lane improvement.* *Sidewalks are present at both Garfield Avenue and E. Slauson in the Project vicinity but there is limited pedestrian traffic in the M-2 area. The bulk of construction work onsite would be set back 200 to 400 feet from the sidewalk and separated by intervening buildings. Work in the public right-of-way for installation of the underground electric tie-line would require an encroachment permit from the City with a standard condition that safe pedestrian access be provided at all times.* *The Applicant would be required to obtain a Public Works Encroachment Permit from the City for work in the public right-of-way. The City's Public Works Encroachment Permit standard conditions limit work in Major Arterials to weekend days (8:00 a.m. to 5:00 p.m. and weekday nights (9:00 p.m. to 6:00 a.m.) to avoid significant impacts to transportation. Additionally, the application for the City's Public Works Encroachment Permit would require submittal of a Traffic Control Plan and provision of safe pedestrian access at all times in addition to standard technical specifications for depth of burial, backfilling, surface replacement, etc. to ensure public transportation safety. Temporary use of Garfield Avenue during construction would require temporary closing of a series of approximately 25 – 30 foot wide segments. At no point during construction would Garfield Avenue be completely closed to traffic in either direction. The tie-line would be constructed in a sequence of approximately 200 foot lengths for three to four days per length for an estimated construction duration of one month. Work at some locations such as at splice vaults and jack-and-bore crossings of the railroads could take approximately two weeks due to the limited hours allowed for lane closures. Following construction each night, steel plates would be placed on top of any open or unpaved section of the trench to ensure safe vehicle operations the following day.* *A Traffic Control Plan would be prepared prior to issuance of an encroachment permit to ensure continuous and safe traffic operations on Garfield Avenue in both directions during the entire construction period within Garfield Avenue. Because continuous traffic would be maintained in both directions on Garfield Avenue under safety measures of a Traffic Control Plan approved by the City including limiting lane closures to weekday nighttime and weekend daytime hours, and due to the short duration and length of lane closures at any given time and the overall short-term duration of construction in Garfield Avenue, the impact of lane closures is considered less than significant.* *Considering these factors, no aspect of the project would conflict with a program, plan, ordinance, or policy addressing circulation. Therefore, the impact would be less than significant.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the Project conflict with or be inconsistent with the CEQA Guidelines Section 15064.3 Subdivision (b)?	☐	☐	☐	☑
No Impact: *The Project would not conflict with guidance in CEQA Guidelines Section 15064. As described in Response XVII(a) above, the peak construction workforce is expected to be about 40 and following construction traffic would be negligible. Project trips generated and associated VMT would be below the 110 trips per day that can be assumed to cause a less than significant trip generation impact. Therefore, there would be no conflict with the CEQA Guidelines.*				
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☑	☐
Less than Significant Impact: *The proposed Project does not include any new construction or realignment of existing road facilities. The Project would not require new or modified streets or intersections. The Site would be accessed by an existing paved easement from Slauson Avenue that is capable of accommodating anticipated construction trip generation.* *Garfield and Slauson Avenues are 4-lane Major Arterials. These roads carry extensive large truck traffic shipping goods to and from local warehouse and other industrial facilities and can accommodate needed construction shipments for the Project. Permits from the County and the State would be needed for oversize or overweight loads.* *Considering these factors, neither construction nor operation would substantially increase hazards due to a design feature or incompatible use.*				
d) Result in inadequate emergency access?	☐	☐	☑	☐
Less than Significant Impact: *The Project is designed with an access gate and paved perimeter road meeting fire department access requirements. The Project would not impact any emergency access offsite except for the lane closures on Garfield Avenue during installation of the underground electric tie-line where it is within the road. Lane closures could slow traffic including emergency response. Work would occur in segments approximately 200 feet long for trenching and shorter for the two splice vault installations so lane closures would be short in length at any given time. Lane closures would be at night on weekdays or during the day on weekends, outside of peak traffic hours. A Traffic Control Plan would be prepared prior to issuance of an encroachment permit to ensure continuous and safe traffic operations on Garfield Avenue in both directions during the entire construction period within Garfield Avenue. Because continuous traffic would be maintained in both directions on Garfield Avenue under safety measures of a Traffic Control Plan approved by the City, and due to the short duration and length of lane closures at any given time and the overall short-term duration of construction in Garfield Avenue, the impact of temporary lane closures to emergency access would be less than significant.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES -- Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape, that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☑	☐	☐
Less than Significant with Mitigation Incorporated: *The Project would disturb a vacant previously developed site and a paved street in an urbanized area. As part of investigating for the potential presence of tribal cultural resources that could be affected by the Project, a search of the CHRIS database and the NAHC's Sacred Lands file was conducted (Appendix E). The results of the record search indicate there have been 11 cultural resource studies within a 0.5-mile radius of the Project, but none included the subject property. No archaeological resources were recorded as a result of these prior studies and no tribal cultural resources were identified in the Sacred Lands file. There are no designated State or local tribal cultural resources or tribal resources eligible for listing within or adjacent to the Project footprint. Mitigation Measure CUL-1 would mitigate the potential for impact to an unknown archaeological resource if discovered during construction excavations.*				
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☑	☐	☐
Less than Significant with Mitigation Incorporated: *The Project would disturb a vacant previously developed site and a paved street. The records search additionally revealed that there are no known archaeological sites within the Project area or within 0.5 miles of the subject property. There are no known significant tribal resources within or adjacent to the Project footprint. A record search of the NAHC's Sacred Lands File was conducted and*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
results were negative for the presence of Native American cultural resources in the Project area (Appendix E). Mitigation Measure CUL-1 would mitigate the potential for impact to an unknown resource if a significant resource were to be discovered during construction excavations. The NAHC-suggested Native American Tribal contacts have been notified of the project and opportunity to consult (Appendix E). To date, no responses have been received.				
XIX. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	☐	☑	☐	☐
Less than Significant Impact With Mitigation Incorporated: *The Project would not discharge wastewater or have any effect on any wastewater treatment system. The Project would not use natural gas. The Project water demand would be minimal, consisting of a temporary demand for construction and periodic flushing of hydrants during operations. The Project would include installation of redundant dedicated fiber optic lines between the Site and the Laguna Bell Substation. One or more fiber optic lines would be co-located with the underground electric tie-line; a fiber optic line may also be installed overhead on existing poles on Garfield Avenue. Considering these factors, the Project would not require relocation or construction of new or expanded, water, wastewater, natural gas, or telecommunications facilities in a manner that could cause significant environmental effects.* *The Project design includes stormwater controls that would collect runoff from the Site and store the increase in peak flow due to development of impervious surfaces so there would be no increase in peak flow discharge from the Site for the design storms. The Project would discharge stormwater through an underground pipe into the existing underground Los Angeles County Flood Control District underground box culvert at a location near the west end of the site on Garfield Avenue. The Project would be required to obtain a permit from Los Angeles County Flood Control District to construct the connection, and no improvements are needed beyond the connection point since peak flow would not increase. The stormwater controls are part of the Project Description with impacts analyzed in other sections of this initial Study and shown to be less than significant, including mitigation where applicable.* *A 230 kV underground electric tie-line and dedicated redundant fiber optic lines would be required to connect the Project to the Laguna Bell Substation. Impacts are described and evaluated in other sections of this Initial Study. The interconnections to the Laguna Bell Substation are part of the Project Description with impacts analyzed in other sections of this Initial Study and shown to be less than significant, including mitigation where applicable.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☑	☐
Less than Significant Impact: *Project water demand would be minimal, consisting of a temporary demand for construction and periodic fire hydrant flushing during operations. The facility would be unattended and does not include sanitary facilities or other water needs. Long term water use would be negligible since the Project would normally not use any water. Therefore, the impact on long-term water supply would be less than significant.*				
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
No Impact: *The proposed Project would be unattended and would not need wastewater services. No potable water or permanent sanitary facilities are proposed. Portable sanitary facilities would be used onsite for construction with regular pumping and maintenance by a licensed contractor. Because there would be no need for wastewater service to the Site, there would be no impact.*				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☑	☐
Less than Significant Impact: *Most construction waste streams would consist of recyclable materials such as wood pallets, plastic and paper packaging and scrap metal that can be taken to a waste recycling center. Under the City's Construction & Demolition Ordinance, the Project would be required to recycle or reuse at least 65% of the total Construction & Demolition (C & D) debris generated, and a Construction & Demolition Waste Management Plan would be required prior to issuance of building permits. Construction waste would only be generated for a short period of time. The City of Commerce has 11 approved commercial haulers to collect MSW and C&D debris from the site. There are 8 landfills in the surrounding area that have enough capacity for the waste generated by the Project. The closest facility is Savage Canyon Landfill with a permitted capacity of 350 tons per day and a remaining capacity of 3.8 million tons. The estimated end operation date for this MSW landfill is December 2048. Total waste generated by the proposed Project during construction and operation would not be substantial relative to landfill capacity. Therefore, impacts would be less than significant.* *Quantities of non-hazardous and hazardous waste generated by routine operations would be negligible. At the end of battery life, battery modules would be removed from the battery racks and returned to the manufacturer or their approved and permitted recycling partner(s) for dismantling, material processing and recovery.*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
The Project would be expected to meet all State and local solid waste standards and infrastructure is in place to accommodate Project needs. Therefore, the impact would be less than significant.				
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☑
No Impact: *The proposed Project would be required to comply with all relevant statutes and regulations, and the Project as proposed would not conflict with any statute or regulation for solid waste. Therefore, there would be no impact.*				
XX. WILDFIRE - If located near a State Responsibility Area or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a very high fire hazard severity zone (VHFHSZ). The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
c) Require the installation of maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☑
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability,	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
or drainage changes?				
No Impact: *The Project is not near a State Responsibility Area or lands classified as a VHFHSZ. The City and surrounding areas are developed with no nearby State Responsibility Areas, wildlands or VHFHSZs. Therefore, there would be no impact.*				
XXI. MANDATORY FINDINGS OF SIGNIFICANCE --				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐
Less than Significant Impact With Mitigation Incorporated: *The Project is in the midst of a region that has been urbanized for many decades and there are no natural areas on the Site or in the vicinity. The Site is within a redevelopment district surrounded by industrial uses and is a portion of a property remediated by DTSC for contamination by previous industrial uses. No special status species are known to occur. The Applicant has committed to evaluating the palm trees to be removed for the possible presence of active bird nests if the trees would be removed during nesting season (February 15 to August 31), and to avoiding disturbance to the active nest of any protected bird. With protection for nesting birds through compliance with the MBTA and California Fish and Game Code Section 3503 nest protection regulations, the Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, nor reduce the number or restrict the range of a rare or endangered plant or animal. Furthermore, there are no structures on the Project Site and no significant historic or prehistoric resources are known to occur onsite or along the electric tie-line optional routes. Mitigation Measures CUL-1 and CUL-2 would ensure that in the event of a cultural resource discovery, work in the area would promptly cease until the discovery is evaluated by a qualified cultural resource specialist and treated in a manner to limit impacts to a less than significant level through avoidance or proper research and documentation.*				
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the	☐	☑	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
effects of other current projects, and the effects of probable future projects)?				

Less than Significant Impact with Mitigation Incorporated: *As described in preceding sections of this Initial Study checklist, the Project would have no adverse impact on aesthetics, agricultural or forest lands, wasteful or inefficient energy consumption, land use planning, mineral resources, population, housing, public services, recreation, or wildfire. The Project would not conflict with any air quality plan and would be expected to contribute toward a reduction in fuel-burning emissions in the region through more effective use of renewable energy sources. It would not impact special-status plant or animal species or important natural habitat, or conflict with any wildlife management plan. The Project would help to attain State and local goals for renewable energy resources and energy storage consistent with goals for reduction of GhG emissions. The Project would be consistent with the City Zoning ordinance with issuance of a conditional use permit. Because the Project would have no impact or conflict in these topic areas, there is no potential for the Project to have a cumulative effect in these topic areas with other past, current, or probable future projects.*

Air quality cumulative impacts are addressed in Section III of this Initial Study checklist and are less than significant individually and cumulatively.

No significant cultural resources are known to occur on or adjacent to the Project footprint. Mitigation Measures CUL-1 and CUL-2 would ensure that impacts to cultural resources are mitigated in the event of an unexpected cultural resource discovery so that there are no cumulative impacts.

The Project would have no cumulative impact related to geology or soils. The Project would not impact important mineral resources or unique geologic features. Geologic hazards, by nature, are facility-specific and do not have the potential for cumulative effects. The Project would have no impact on seismic hazards at other locations, and no other reasonably foreseeable project could affect seismic hazards at the site. Therefore, there is no cumulative impact related to seismic shaking.

Construction of the Projects would require the use of fuels, lubricants, and other hazardous materials typical of construction sites and would be short term. No cumulative impact is anticipated. The facility would be unoccupied, and operations would not typically require handling of hazardous materials. The proposed use of the Site is consistent with DTSC's selected remedy for the site developed to be protective of human health and the environment. Based on a search of government records, no hazardous materials are expected to be encountered during offsite construction of the underground interconnections. Mitigation Measures HAZ-1, HAZ-2 and HAZ-3 would mitigate Project impacts related to hazardous materials to a less than significant impact, and no cumulative impact is anticipated.

The Project would not violate any water quality standard or waste discharge requirements or have an adverse impact on water quality. Therefore, there would be no cumulative effect in

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
these areas. There would be no cumulative impact to hydrology because the Site would be designed in accordance with to drain to the same County-maintained system as existing conditions. The final grading plan would be subject to review and approval by the City for conformance with the MS4 permit. *Construction noise would be short term and, following construction, the Project would not be a source of loud noise. The facility would comply with General Plan Policy noise levels. Considering these factors, the cumulative noise impact would not be considerable.* *As described in Section XVII of this Initial Study checklist, the Project would generate negligible traffic once construction is complete. Following construction, operations would typically be unattended, with routine monitoring and maintenance occurring during occasional site visits, which would be a negligible traffic impact. The Project would not involve new construction or realignment of any roads. The Project would conform with applicable plans, ordinances, and policies related to transportation, including the requirement for work in the Garfield Avenue right-of-way being limited to off-peak hours of weekday nights and weekend days. Construction is expected to generate less than 110 trips per day and construction impacts would be short-term. Considering these factors there would not be significant cumulative traffic impacts.* *There are no known significant tribal resources within or adjacent to the Project footprint. Mitigation Measure CUL-1, if adopted, would mitigate the potential for impact to an unknown resource if a significant resource were to be discovered during construction excavations. Native American Tribal contacts have been notified of the project and opportunity to consult (Appendix E). To date, no responses have been received.* *Considering the factors addressed above, the Project would not have significant cumulative impacts with mitigation incorporated.*				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐
Less than Significant Impact With Mitigation Incorporated: *The Project does not have the potential for environmental effects that could cause substantial adverse effects on human beings, either directly or indirectly, other than those addressed in preceding sections of this Initial Study checklist. As described in preceding sections of this Initial Study checklist, the Project would have no adverse impact on aesthetics, agricultural or forest lands, wasteful or inefficient energy consumption, land use planning, mineral resources, population, housing, public services, recreation, or wildfire. The Project would not conflict with any air quality plan and would be expected to contribute toward a reduction in fuel-burning emissions in the region through more effective use of renewable energy sources. It would not impact special-status plant or animal species or important natural habitat, or conflict with any wildlife management plan. The Project would help to attain State and local goals for renewable energy resources and energy storage consistent with goals for reduction of GhG emissions. The Project would be consistent with the City Zoning ordinance with issuance of a conditional use permit. The Project would not have substantial adverse effects related to geology and soils, hydrology, water quality, noise, transportation, or utilities. With recommended*				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
mitigation measures CUL-1, CUL-2, and HAZ-1 through HAZ-3 identified in Sections V and IX, respectively, of this Initial Study checklist, the Project would have less than significant impacts related to cultural resources, Tribal resources, and hazardous materials. There would be no significant direct, indirect, or cumulative impacts with these mitigation measures incorporated.				

3.4 List of Preparers

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17911 Von Karman Avenue, Suite 400
Irvine, CA 92614
(949) 727-9336

Joseph Stenger, PG, Project Director
Richard Burke, Senior Consultant
Matthew Wetherbee, RPA, Senior Archaeologist
Samantha Stuart, Engineer
Michael Riley, Senior Environmental Scientist - Air Quality
Haley DeLong, Environmental Scientist - GhG

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APPENDIX A

PHOTO LOG

Photo Log
Proposed Commerce Battery Energy Storage Facility

Photo 1: Northeast corner, looking to the south, general site conditions with slight elevation change.

Photo 2: Northeast corner, looking to the southwest, general site conditions. Palm trees are near the far end of the Site.

Photo 3: Northeast corner, looking to the west, general site conditions.

Photo 4: Northwest corner, looking to the southeast, general site conditions.

Photo Log
Proposed Commerce Battery Energy Storage Facility

Photo 5: Southwest corner, looking to the northeast, general site conditions.

Photo 6: Southeast corner, looking to the west. Monitoring wells can be seen in foreground and background.

Photo 7: South portion of the Site. Flushmount monitoring well cover is visable at lower left.

Photo 8: Concrete pad along the southern boundary of the site, adjacent to fenced City-owned parcel.

TRC Job No.	Photographs Taken By:	Page No.	Client:	Site Address:	
393191.0000.0000	Jose Maldonado	2 of 3	Commerce Energy Storage	6904 E. Slauson Avenue, Commerce, CA 90040	TRC

Photo Log
Proposed Commerce Battery Energy Storage Facility

Photo 9: Proposed underground electric tie-line route, looking to the south along Garfield Avenue from west end of the Site.

Photo 10: Proposed underground electric tie-line route, looking south along Garfield Avenue towards Randolph Street.

Photo 11: Proposed underground electric tie-line route, looking north along Garfield Avenue from intersection of Randolph Street and Garfield Avenue.

Photo 12: Proposed underground electric tie-line route east of the substation. Substation is behind the trees.

APPENDIX B

PRELIMINARY DESIGN DRAWINGS

PRELIMINARY SITE PLANS
COMMERCE ENERGY STORAGE, LLC

6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

PROPERTY OWNERS

DESCRIPTION

THE PROJECT DEPICTED IN THIS PRELIMINARY SITE PLAN SET CONSISTS OF THE DEVELOPMENT OF AN APPROXIMATELY 2.62 ACRE SITE FOR BATTERY ENERGY STORAGE INCLUDING BATTERIES, CONTROL EQUIPMENT, AND ANCILLARY FACILITIES. BATTERIES WILL BE CONTAINED EITHER IN PURPOSE-BUILT FREE-STANDING ENCLOSURES OR IN A 36,333 SQUARE FOOT SINGLE-STORY BUILDING. ANCILLARY EQUIPMENT INCLUDES ACCESS ROADS DESIGNED TO FIRE DEPARTMENT STANDARDS, INVERTERS, TRANSFORMERS, AN ONSITE ELECTRIC SUBSTATION, STORMWATER CONVEYANCE SYSTEMS, UNDERGROUND STORMWATER STORAGE, AND AN UNDERGROUND 230 kV ELECTRIC LINE CONNECTING THE SITE WITH THE EXISTING SOUTHERN CALIFORNIA EDISON LAGUNA BELL SUBSTATION. THE FACILITY WILL BE UNOCCUPIED AND IS DESIGNED FOR FULL REMOTE OPERATION. BECAUSE THE FACILITY WILL NOT BE OCCUPIED, NO POTABLE WATER SYSTEM OR SANITARY SYSTEM IS PROPOSED. NO EXTERIOR LIGHTING IS PROPOSED. NO MARKED PARKING SPACES ARE PROPOSED IN THE SITE DESIGN. THERE WILL BE ROOM FOR PARKING ONSITE FOR OCCASIONAL SITE VISITS.

SITE INFORMATION

ASSESSOR'S PARCEL NUMBERS:	6356-017-028, 6356-017-900
CURRENT USE:	VACANT, NO STRUCTURES
CURRENT/PROPOSED ZONING:	INDUSTRIAL (M-2)
BUILDING SQUARE FOOTAGE:	36,333 SF (BUILDING OPTION)
SITE AREA:	2.62 AC (114,163 SF)
DISTURBED AREA:	2.21 AC (96,175 SF)
EXISTING IMPERVIOUS AREA:	0.00 AC
PROPOSED IMPERVIOUS AREA:	2.09 AC (91,141 SF)
REMAINING PERVIOUS AREA:	0.53 AC (23,022 SF)
CONSTRUCTION TYPE:	II-A

EARTHWORK QUANTITIES

LIMITS OF GRADING: 2.21 AC

BUILDING OPTION		**CONTAINER OPTION**	
CUT:	1817 CY	CUT:	285 CY
FILL:	583 CY	FILL:	1933 CY
NET (CUT):	1235 CY (EXPORT)	NET (FILL):	1648 CY (IMPORT)

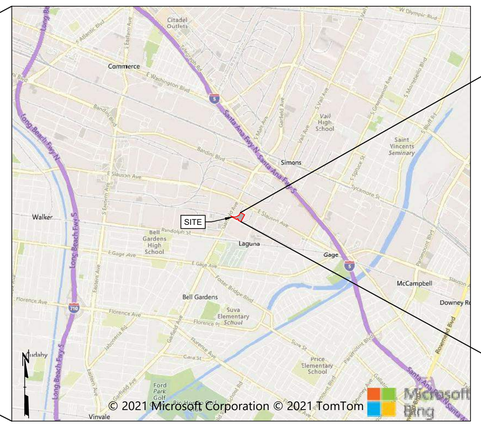
PREPARED FOR: COMMERCE ENERGY STORAGE, LLC
5000 HOPYARD ROAD, SUITE 480
PLEASANTON, CA 94588

PREPARED BY: TRC COMPANIES, INC.
6 EXECUTIVE CIRCLE, SUITE 200
IRVINE, CA 92614

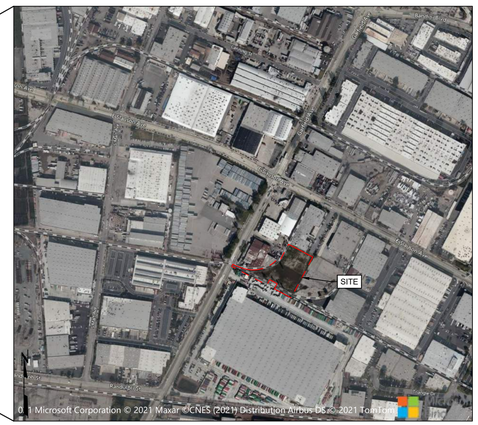
DATE: April 2022

SHEET INDEX

LOS ANGELES COUNTY, CALIFORNIA
NTS



VICINITY MAP
NTS



SITE LOCATOR
NTS

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT: COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE: COVER SHEET

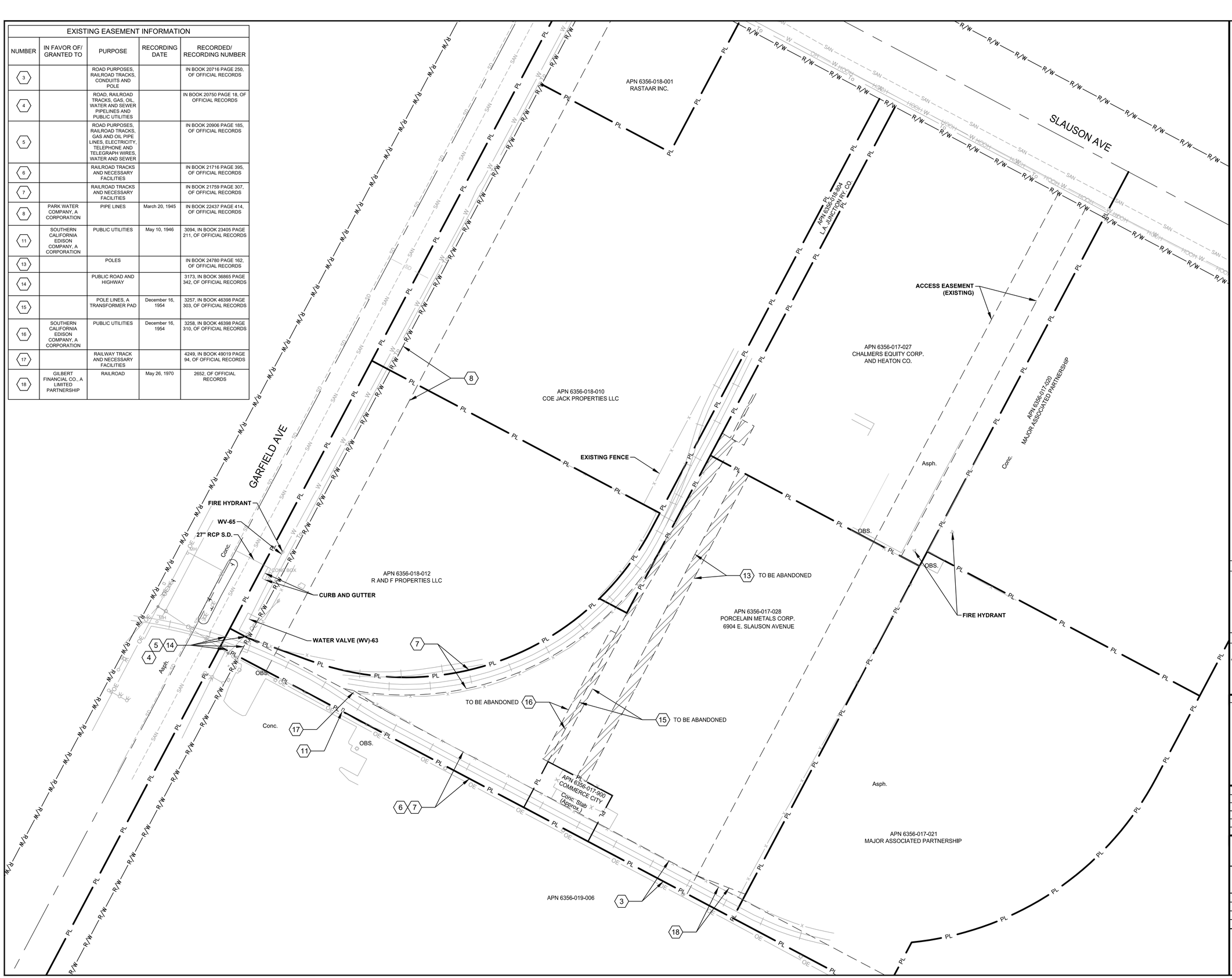
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-1.0
DATE:	4/13/2022		

6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\S POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_COV AND DET.DWG

EXISTING EASEMENT INFORMATION

NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4		ROAD, RAILROAD TRACKS, GAS, OIL, WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
11	SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION	PUBLIC UTILITIES	May 10, 1946	3094, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS
13		POLES		IN BOOK 24780 PAGE 162, OF OFFICIAL RECORDS
14		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
15		POLE LINES, A TRANSFORMER PAD	December 16, 1954	3257, IN BOOK 46398 PAGE 303, OF OFFICIAL RECORDS
16	SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION	PUBLIC UTILITIES	December 16, 1954	3258, IN BOOK 46398 PAGE 310, OF OFFICIAL RECORDS
17		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49019 PAGE 94, OF OFFICIAL RECORDS
18	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, OF OFFICIAL RECORDS



GENERAL NOTES

1. THIS PRELIMINARY PLAN SET IS SUBMITTED FOR APPLICATION AND ISSUANCE OF A LAND USE ENTITLEMENT FOR THE PROJECT FROM THE CITY OF COMMERCE.
2. THIS PLAN WAS PRODUCED UTILIZING GIS RESOURCES, SURVEY, AND INFORMATION FROM MULTIPLE SOURCES, INCLUDING THE CITY OF COMMERCE AND GOOGLE EARTH PRO.
3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021.

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1810F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
BOUNDARIES, EASEMENTS AND FLOODING (EXISTING CONDITION)

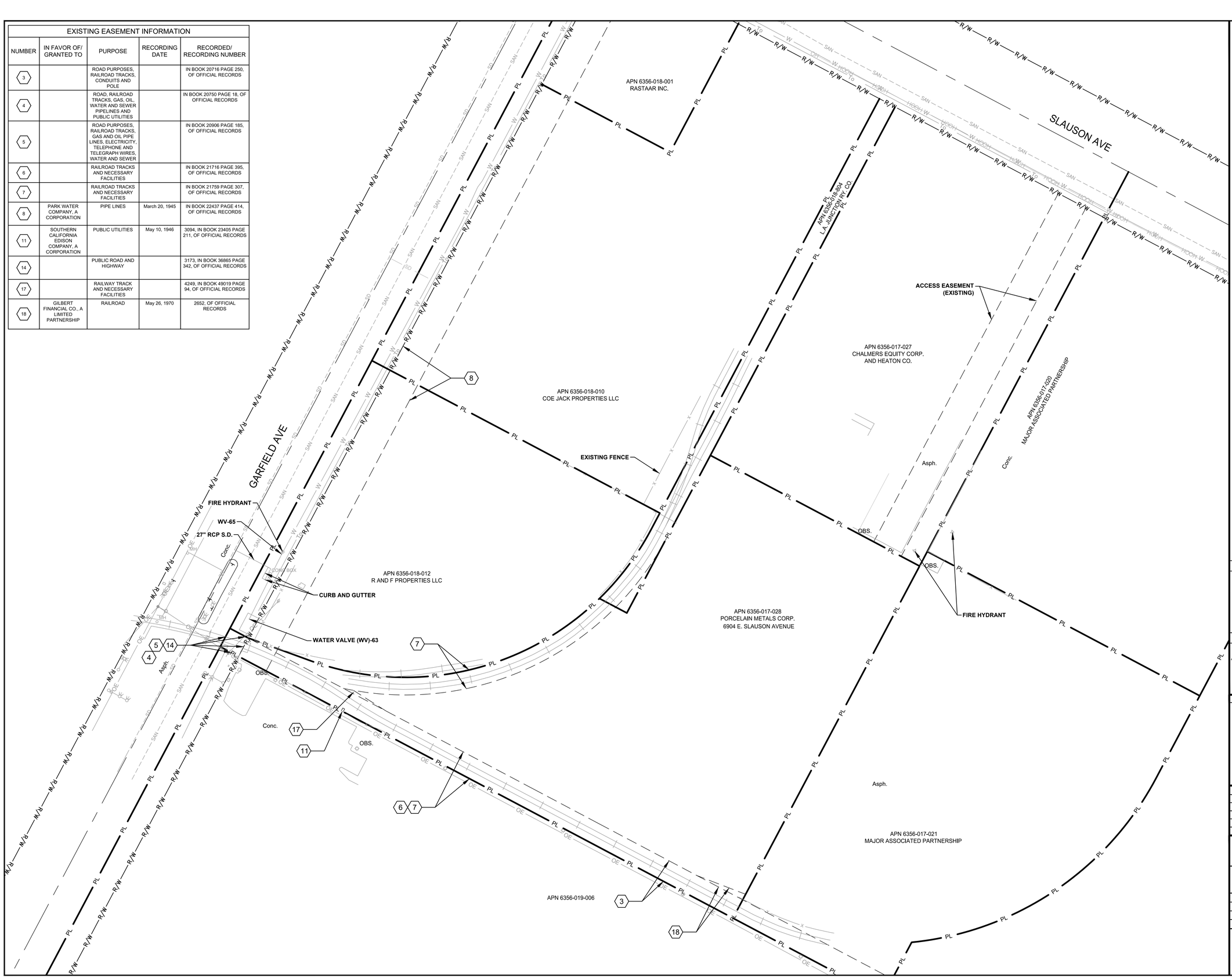
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-2.0
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_SITES.DWG

EXISTING EASEMENT INFORMATION

NUMBER	IN FAVOR OF/ GRANTED TO	PURPOSE	RECORDING DATE	RECORDED/ RECORDING NUMBER
3		ROAD PURPOSES, RAILROAD TRACKS, CONDUITS AND POLE		IN BOOK 20716 PAGE 250, OF OFFICIAL RECORDS
4		ROAD, RAILROAD TRACKS, GAS, OIL WATER AND SEWER PIPELINES AND PUBLIC UTILITIES		IN BOOK 20750 PAGE 18, OF OFFICIAL RECORDS
5		ROAD PURPOSES, RAILROAD TRACKS, GAS AND OIL PIPE LINES, ELECTRICITY, TELEPHONE AND TELEGRAPH WIRES, WATER AND SEWER		IN BOOK 20906 PAGE 185, OF OFFICIAL RECORDS
6		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21716 PAGE 395, OF OFFICIAL RECORDS
7		RAILROAD TRACKS AND NECESSARY FACILITIES		IN BOOK 21759 PAGE 307, OF OFFICIAL RECORDS
8	PARK WATER COMPANY, A CORPORATION	PIPE LINES	March 20, 1945	IN BOOK 22437 PAGE 414, OF OFFICIAL RECORDS
11	SOUTHERN CALIFORNIA EDISON COMPANY, A CORPORATION	PUBLIC UTILITIES	May 10, 1946	3094, IN BOOK 23405 PAGE 211, OF OFFICIAL RECORDS
14		PUBLIC ROAD AND HIGHWAY		3173, IN BOOK 36865 PAGE 342, OF OFFICIAL RECORDS
17		RAILWAY TRACK AND NECESSARY FACILITIES		4249, IN BOOK 49019 PAGE 94, OF OFFICIAL RECORDS
18	GILBERT FINANCIAL CO., A LIMITED PARTNERSHIP	RAILROAD	May 26, 1970	2652, OF OFFICIAL RECORDS



GENERAL NOTES

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3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021.

FLOOD ZONING

1. **THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (COMMUNITY PANEL 06037C1810F, DATED 09/26/2008) PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA).**

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD
SEWER — SAN
WATER LINE — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X
PROPOSED SUBSTATION CHAIN LINK FENCE — xx
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
BOUNDARIES, EASEMENTS AND FLOODING
(PROPOSED CONDITION)

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-2.1
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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3. ALTA SURVEY INFORMATION IN THIS PLAN SET PROVIDED BY TSAC ENGINEERING, DATED 06/21/2021.

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
SURFACE WATER FLOW
EXISTING PALM TREE

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EXISTING TOPOGRAPHY AND DRAINAGE

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-2.2
DATE:	4/13/2022		

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6 Executive Circle
Suite 200
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Phone: 949.727.9336

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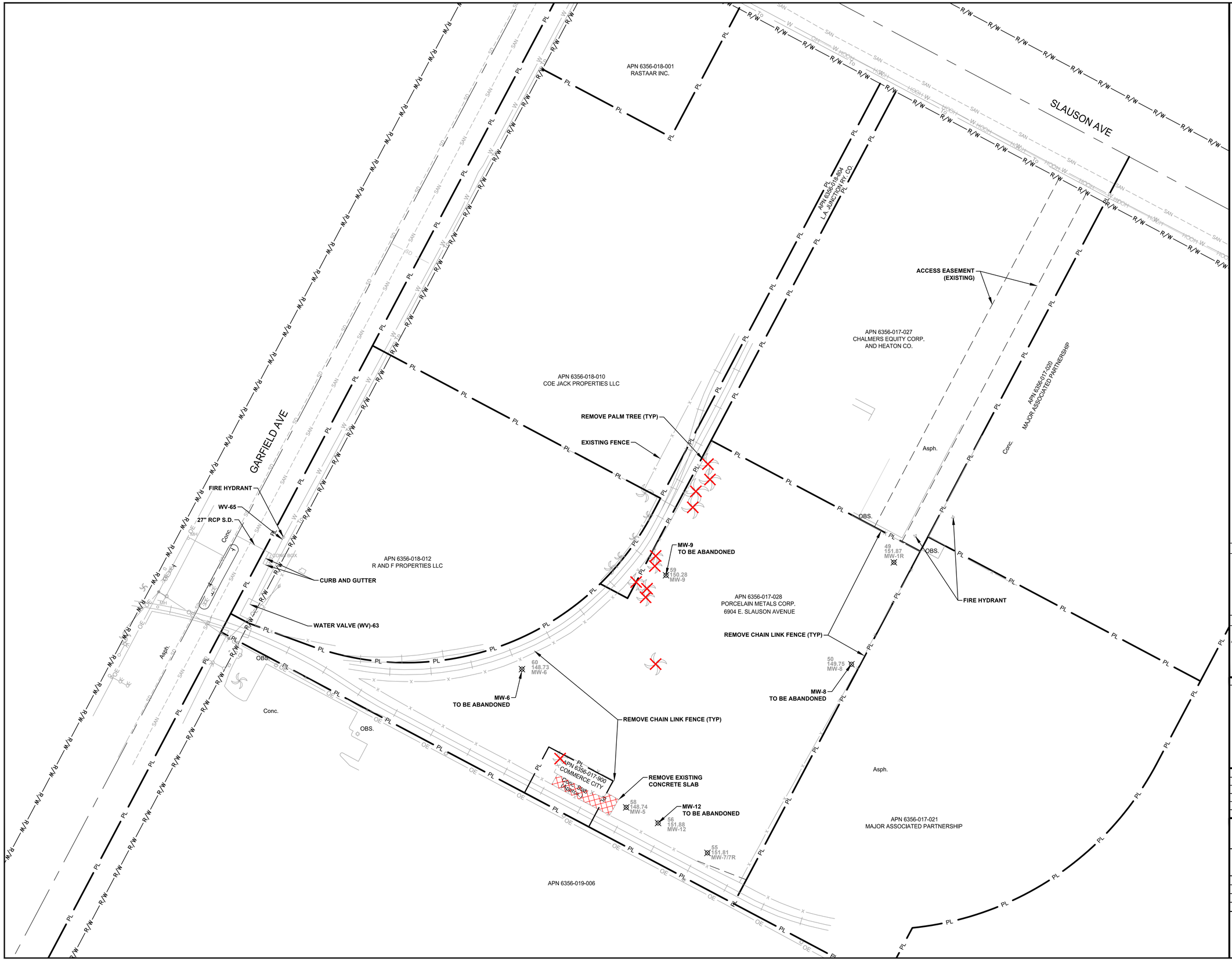

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LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX — XX
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
DEMOLITION PLAN

DRAWN BY:	TSS
CHECKED BY:	DG
APPROVED BY:	SH
DATE:	4/13/2022
PROJ. NO.:	393191

C-2.3

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6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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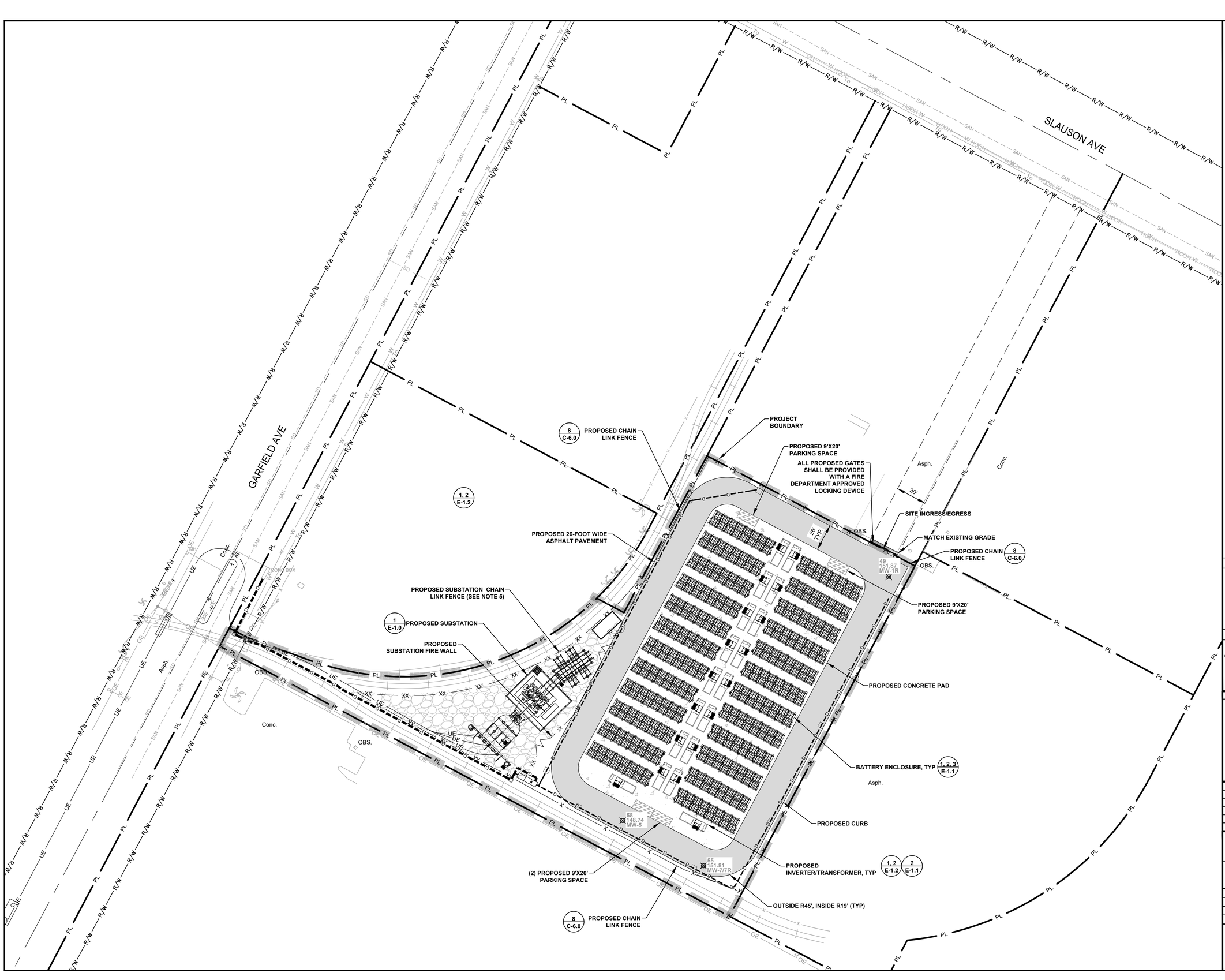

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4. PROTECT IN PLACE ALL MONITORING WELLS NOT IDENTIFIED FOR DEMOLITION.
5. SUBSTATION WILL BE SURROUNDED BY A CHAIN LINK FENCE DESIGNED IN ACCORDANCE WITH HIGH VOLTAGE ELECTRIC CODE REQUIREMENTS.

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

LEGEND

PROJECT BOUNDARY	
PARCEL BOUNDARY	PL
ROAD ROW	R/W R/W
EASEMENT LINE	
EX. CONTOUR	800
MONITORING WELL	MW
SIGN, TYP.	
CLOSED MANHOLE	
FIRE HYDRANT	
AREA LIGHT/ LIGHT POLE	
STORM DRAIN	SD SD
SEWER	SAN SAN
WATER LINE	W W
TELCO LINE	To
OVERHEAD LINE	OE
CHAIN LINK FENCE	X X
PROPOSED SUBSTATION CHAIN LINK FENCE	XX XX XX
SURFACE WATER FLOW	
EXISTING PALM TREE	

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SITE PLAN - ENCLOSURE OPTION

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-3.0
APPROVED BY:	SH		
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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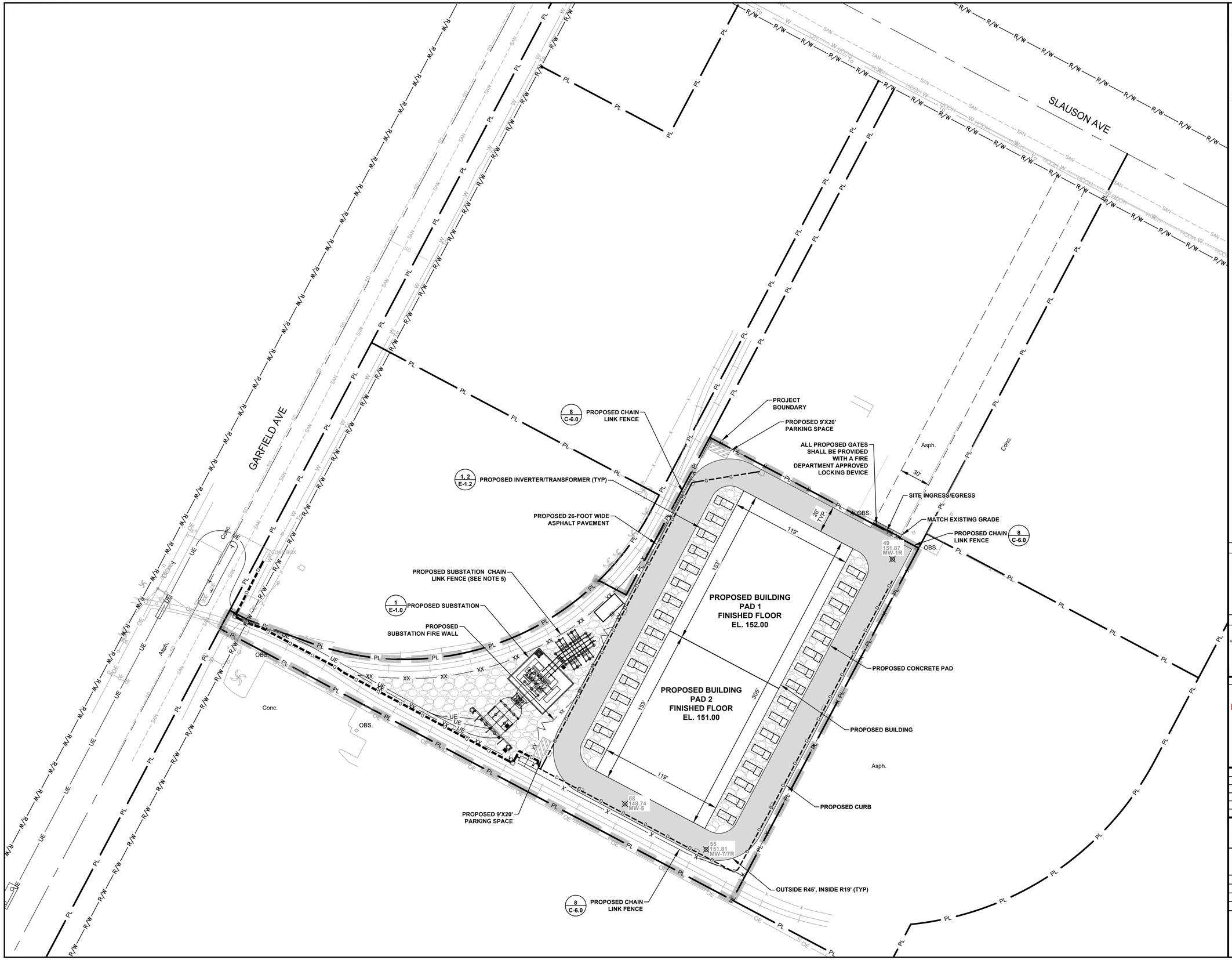

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LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD
SEWER — SAN
WATER LINE — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — XX — XX
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SITE PLAN - BUILDING OPTION

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-3.1
DATE:	4/13/2022		

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Phone: 949.727.9336

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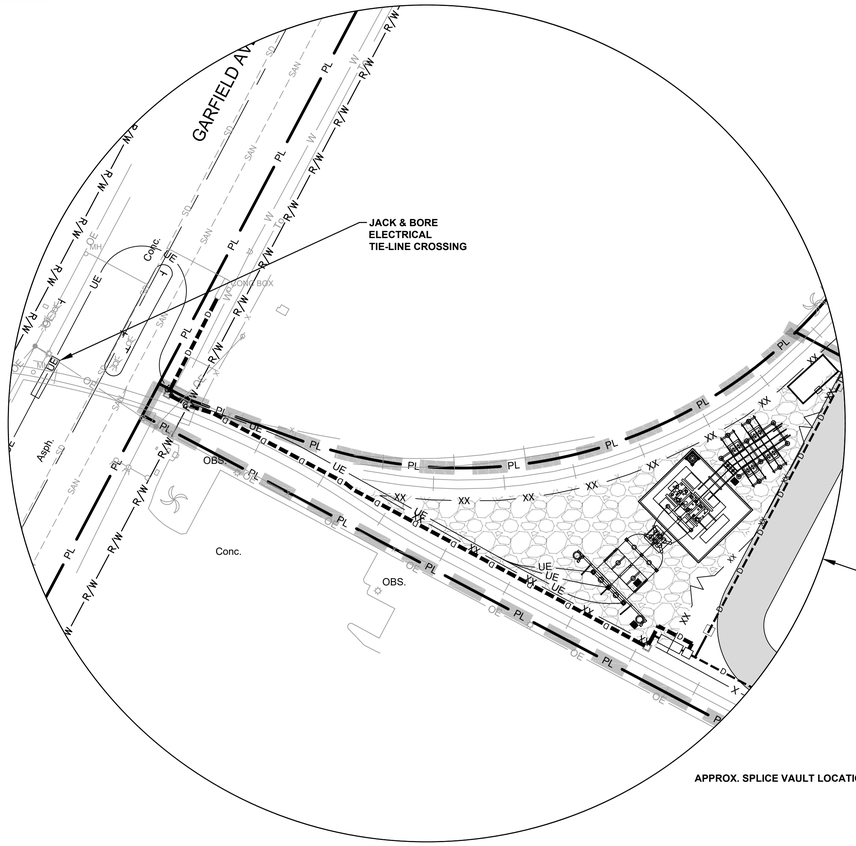
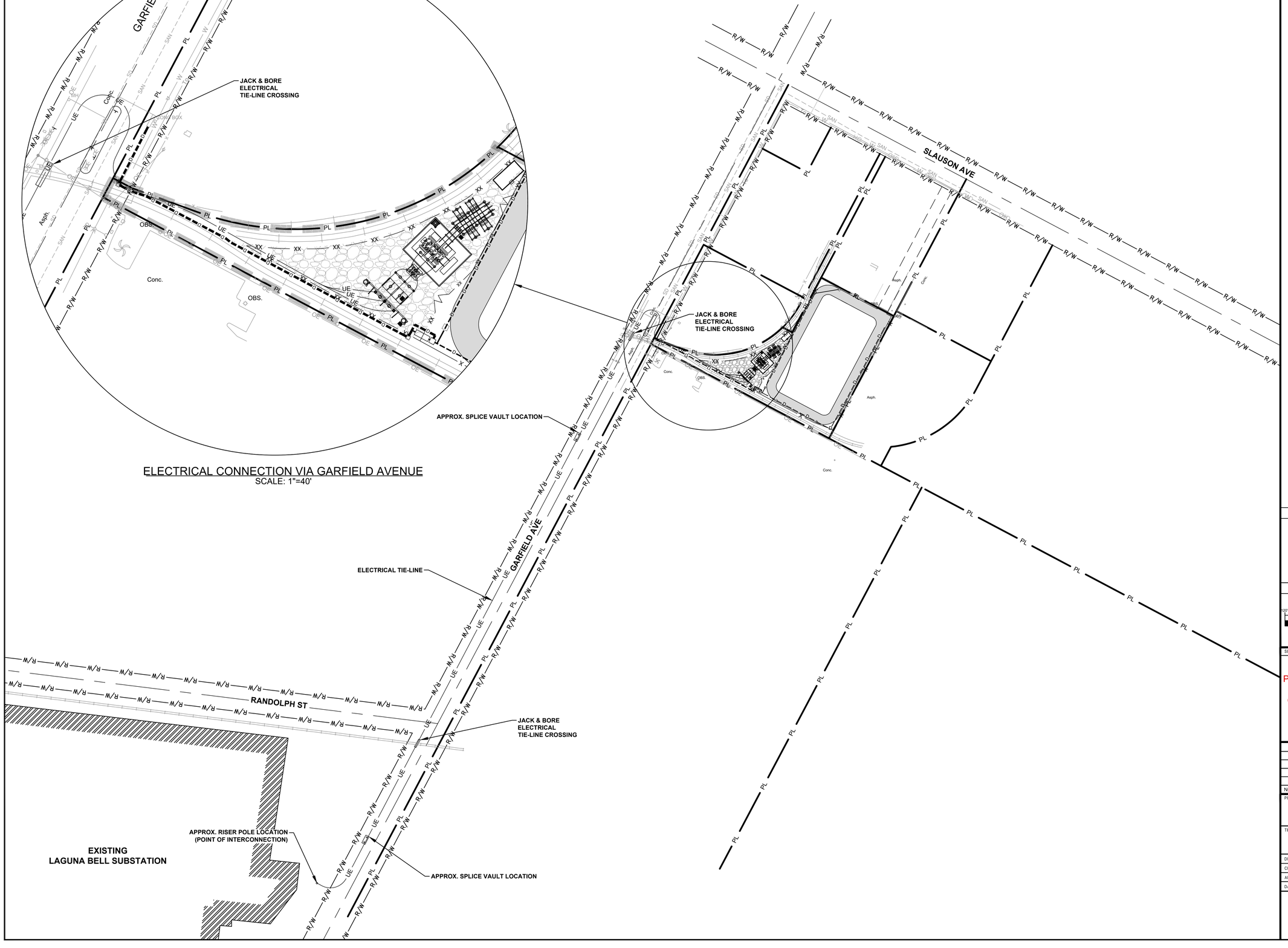


ELECTRICAL CONNECTION VIA GARFIELD AVENUE
SCALE: 1"=40'



LEGEND

PROJECT BOUNDARY	
PARCEL BOUNDARY	PL
ROAD ROW	R/W R/W
EASEMENT LINE	
EX. CONTOUR	800
MONITORING WELL	MW
SIGN, TYP.	
CLOSED MANHOLE	
FIRE HYDRANT	
AREA LIGHT/ LIGHT POLE	
STORM DRAIN	SD
SEWER	SAN
WATER LINE	W
TELCO LINE	To
OVERHEAD LINE	OE
CHAIN LINK FENCE	X
PROPOSED SUBSTATION CHAIN LINK FENCE	XX
SURFACE WATER FLOW	
EXISTING PALM TREE	

NORTH

N

GRAPHIC SCALE

120' 0 120'

1" = 120'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
ELECTRICAL CONNECTION PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-3.2
DATE:	4/13/2022		

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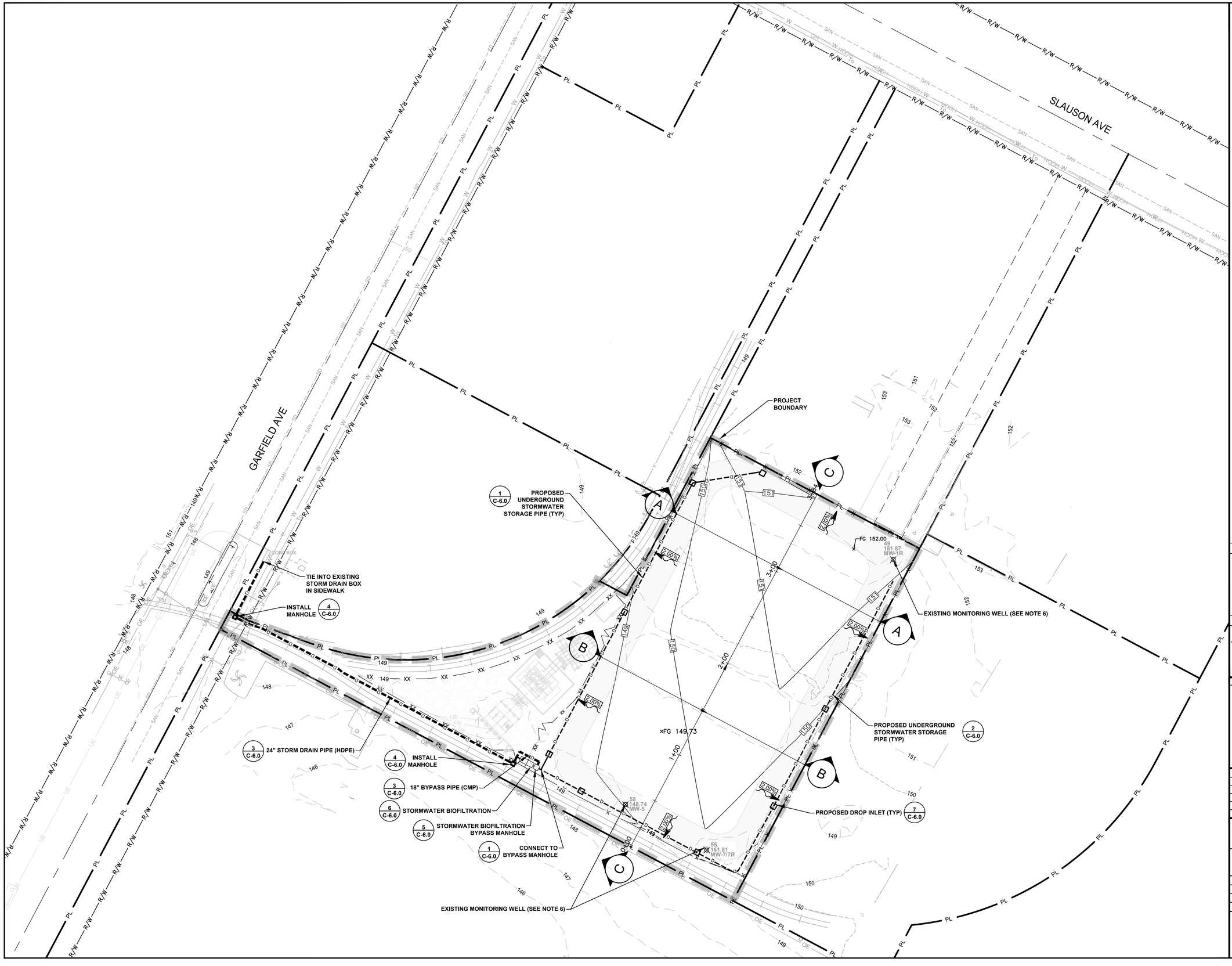

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6. EXISTING MONITORING WELLS MW-1R, MW-5, AND MW-7/7R TO BE RETAINED AND FINISHED WITH TRAFFIC-RATED COVERS.

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY
ROAD ROW
EASEMENT LINE
EX. CONTOUR 800
MONITORING WELL MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN SD
SEWER SAN
WATER LINE W
TELCO LINE To
OVERHEAD LINE OE
CHAIN LINK FENCE X
PROPOSED SUBSTATION CHAIN LINK FENCE XX
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

GRAPHIC SCALE
40' 0 40'
1" = 40'

SEAL:

PERMIT PLAN SET NOT FOR CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
GRADING & DRAINAGE PLAN - ENCLOSURE OPTION

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-4.0
DATE:	4/13/2022		

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6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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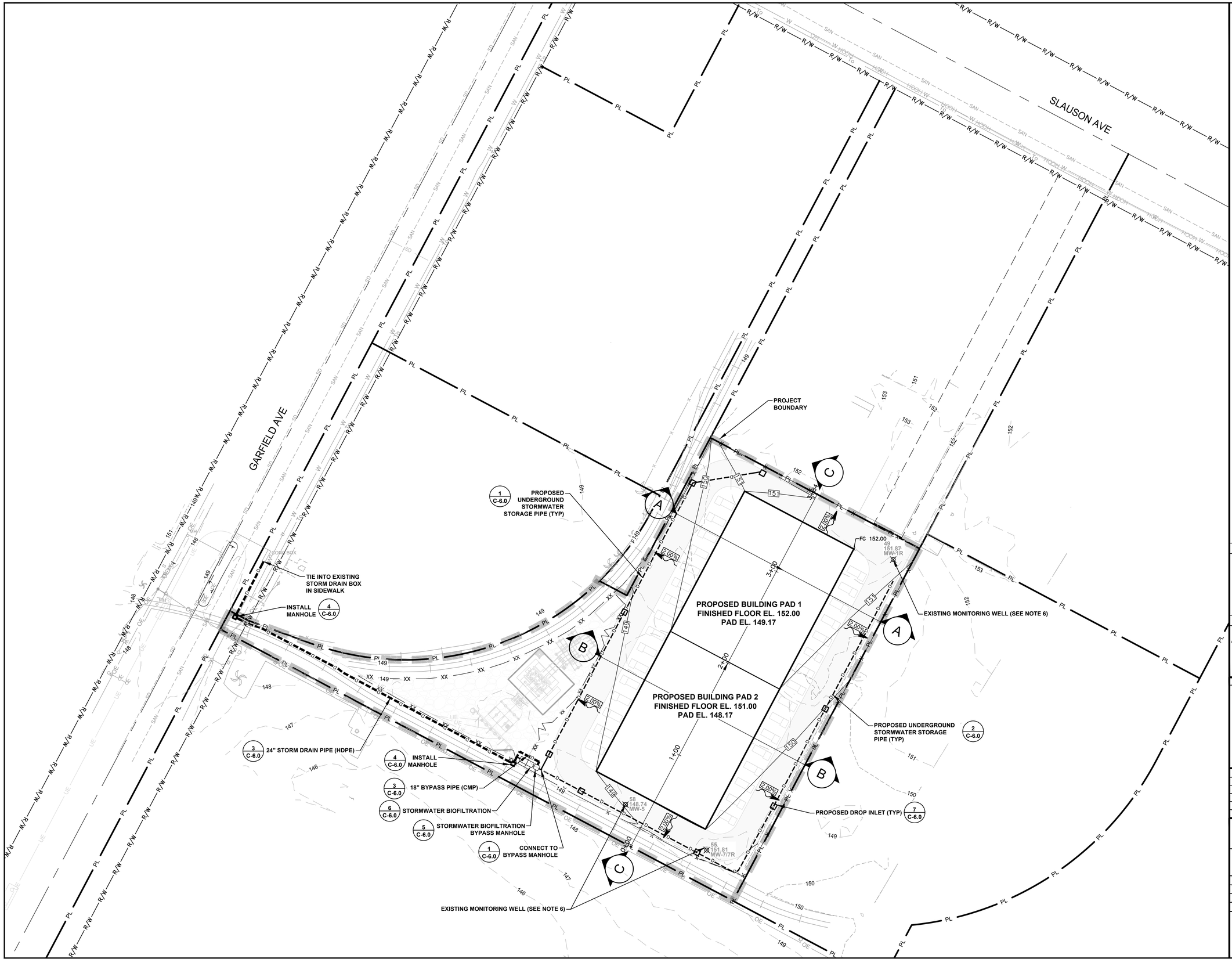

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6. EXISTING MONITORING WELLS MW-1R, MW-5, AND MW-7/7R TO BE RETAINED AND FINISHED WITH TRAFFIC-RATED COVERS.

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY — PL
ROAD ROW — R/W — R/W
EASEMENT LINE
EX. CONTOUR — 800
MONITORING WELL — MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN — SD — SD
SEWER — SAN — SAN
WATER LINE — W — W
TELCO LINE — To
OVERHEAD LINE — OE
CHAIN LINK FENCE — X — X
PROPOSED SUBSTATION CHAIN LINK FENCE — xx — xx — xx
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
GRADING & DRAINAGE PLAN - BUILDING OPTION

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-4.1
APPROVED BY:	SH		
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

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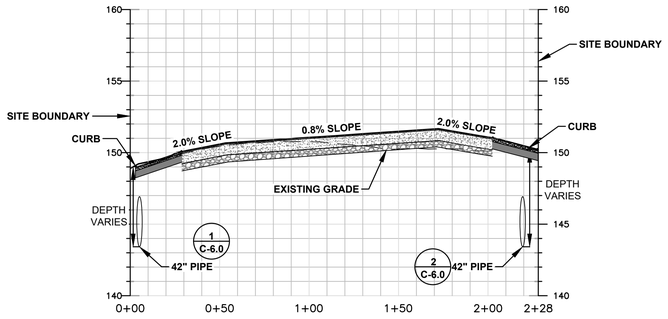
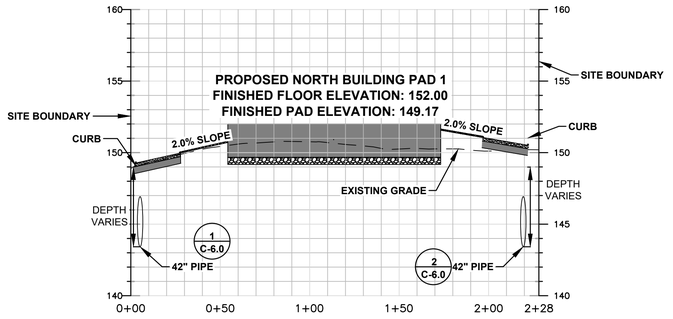
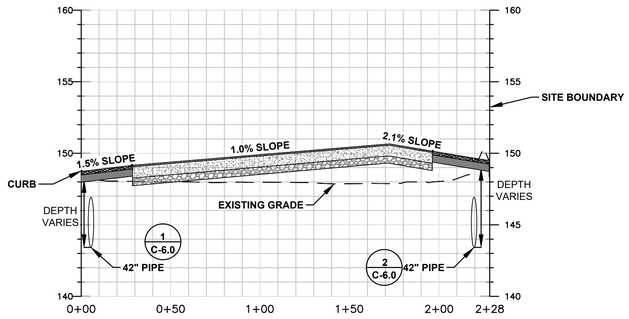


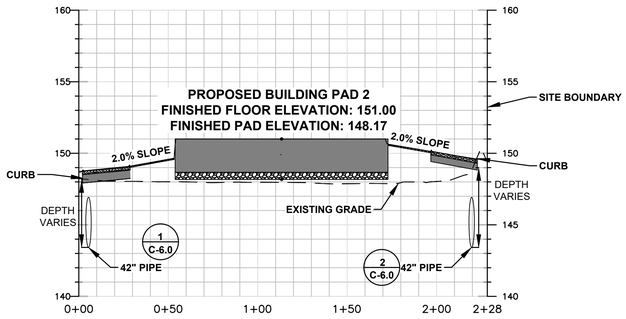
CROSS SECTION A-A: ENCLOSURE OPTION
V: 1" = 5' H: 1"=40'



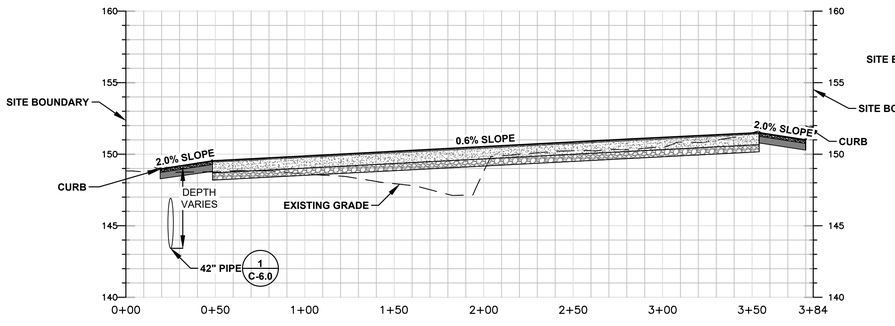
CROSS SECTION A-A: BUILDING OPTION
V: 1" = 5' H: 1"=40'



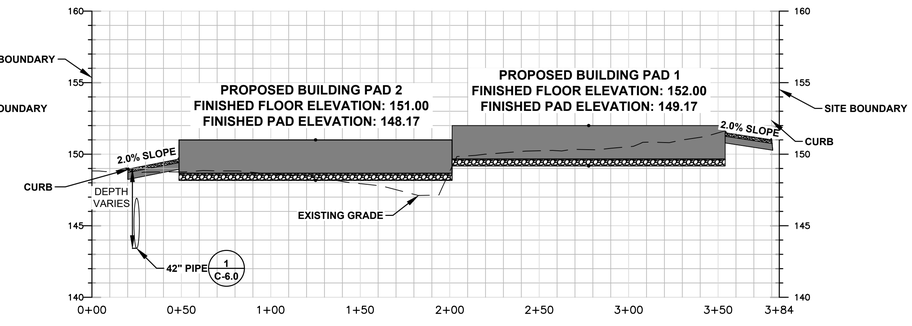
CROSS SECTION B-B: ENCLOSURE OPTION
V: 1" = 5' H: 1"=40'



CROSS SECTION B-B: BUILDING OPTION
V: 1" = 5' H: 1"=40'



CROSS SECTION C-C: ENCLOSURE OPTION
V: 1" = 5' H: 1"=40'



CROSS SECTION C-C: BUILDING OPTION
V: 1" = 5' H: 1"=40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

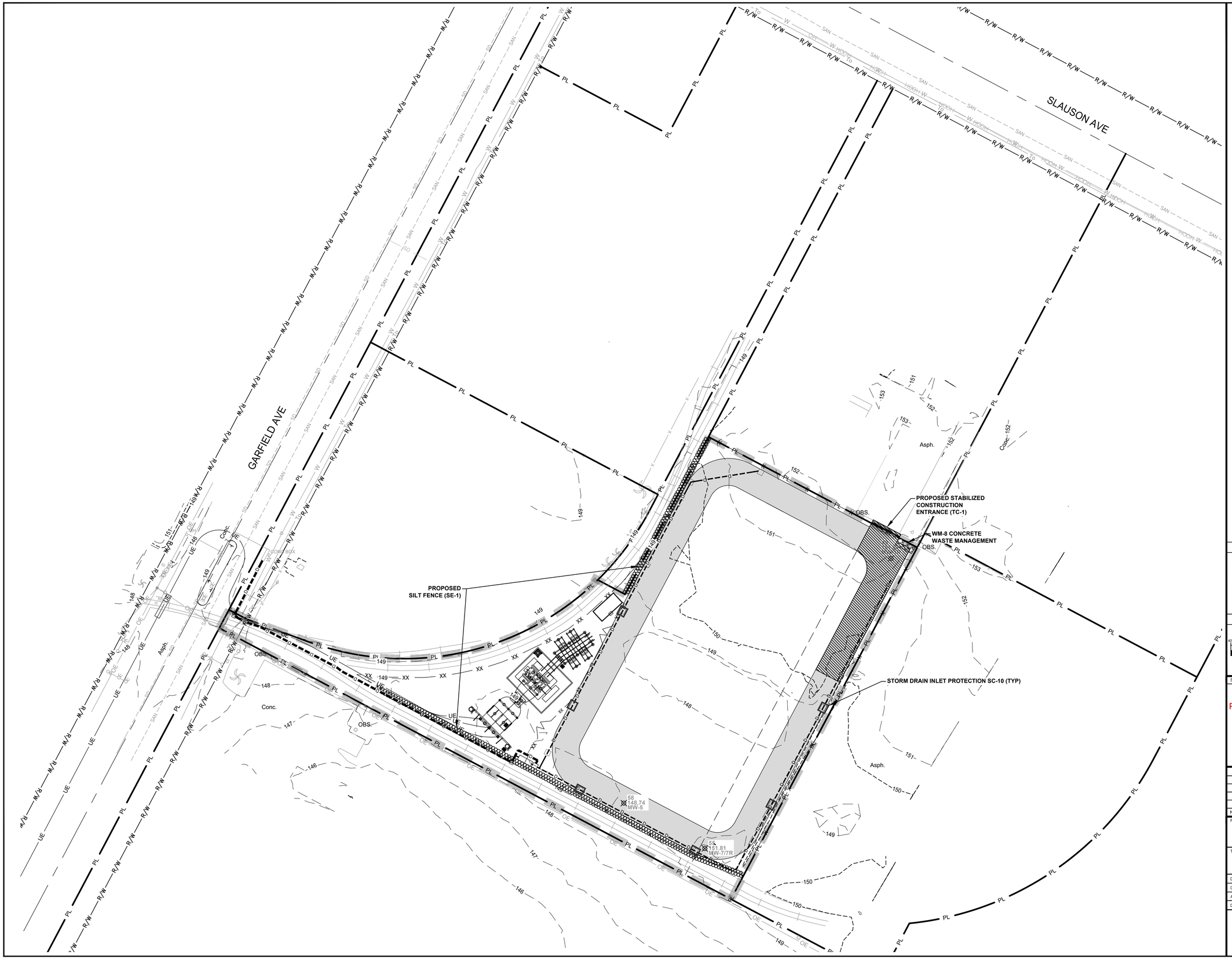
NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
GRADING & DRAINAGE PLAN - CROSS SECTIONS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-4.2
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



GENERAL NOTES

1. THE PROPERTY OWNER IS OBLIGATED TO INSURE COMPLIANCE WITH ALL APPLICABLE STORMWATER REGULATIONS AT ALL TIMES. THE BMP'S (BEST MANAGEMENT PRACTICES) THAT HAVE BEEN INCORPORATED INTO THIS PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO EFFECTIVELY PREVENT THE POTENTIALLY NEGATIVE IMPACTS OF THIS PROJECT'S CONSTRUCTION ACTIVITIES ON STORMWATER QUALITY. THE MAINTENANCE OF THE BMP'S IS THE PERMITTEE'S RESPONSIBILITY, AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP'S MAY RESULT IN ENFORCEMENT ACTION IF INSTALLED BMP FAILS. IF INSTALLED BMP'S FAIL, THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE WITHIN 24 HOURS, OR AS SOON AS SAFE TO DO SO.
2. A NOTICE OF INTENT (NOI) HAS BEEN OR WILL BE FILED WITH THE REGIONAL WATER QUALITY CONTROL BOARD INCLUDING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION SITES FOR ALL CONSTRUCTION ASSOCIATED WITH THESE PLANS. THE PERMITTEE SHALL KEEP A COPY OF THE SWPPP ON SITE AND AVAILABLE FOR THE DURATION OF CONSTRUCTION.

LEGEND

PROJECT BOUNDARY
PARCEL BOUNDARY
ROAD ROW
EASEMENT LINE
EX. CONTOUR 800
MONITORING WELL MW
SIGN, TYP.
CLOSED MANHOLE
FIRE HYDRANT
AREA LIGHT/ LIGHT POLE
STORM DRAIN SD
SEWER SAN
WATER LINE W
TELCO LINE To
OVERHEAD LINE OE
CHAIN LINK FENCE X
PROPOSED SUBSTATION CHAIN LINK FENCE XX
SURFACE WATER FLOW
EXISTING PALM TREE

NORTH

N

GRAPHIC SCALE

40' 0 40'

1" = 40'

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

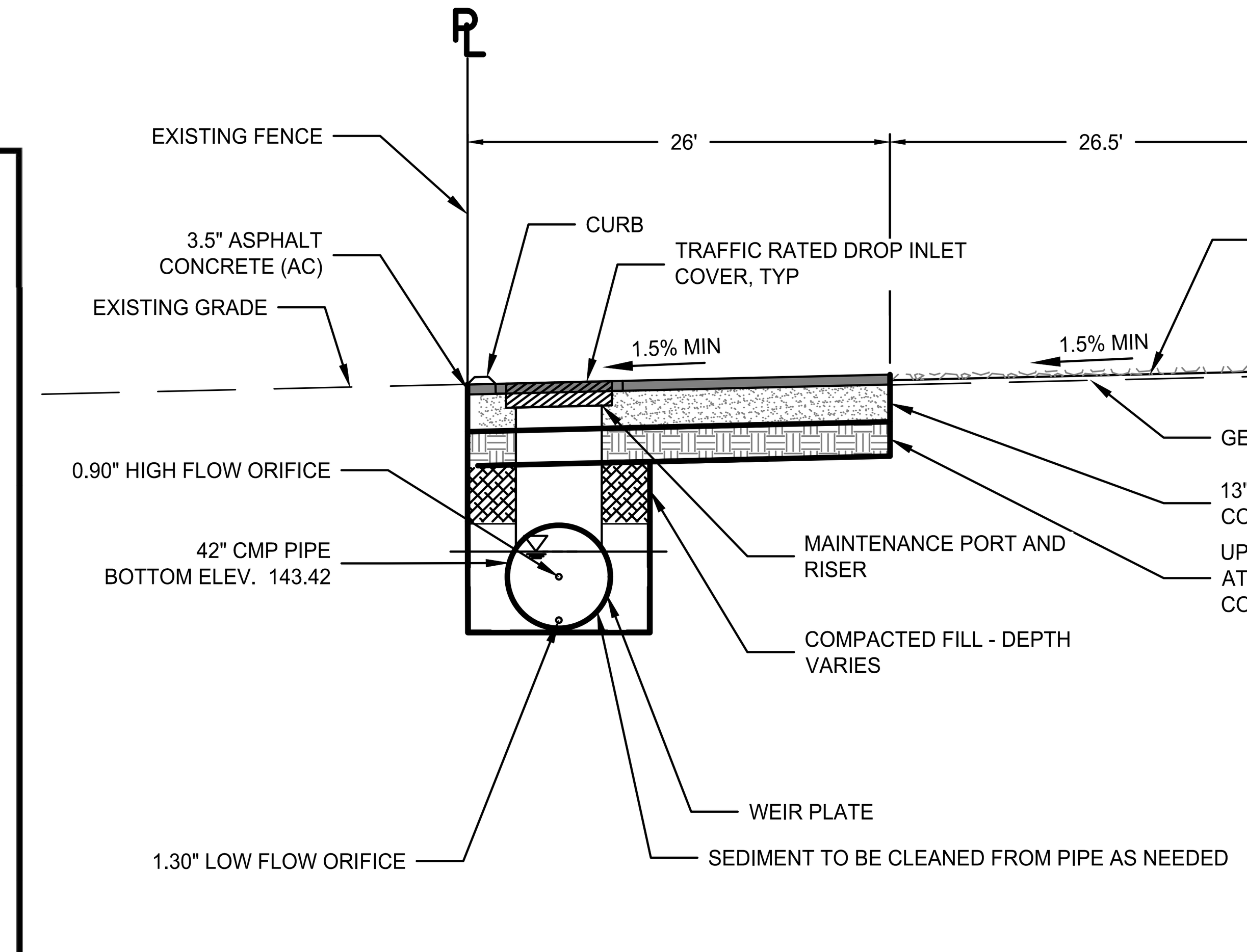
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EROSION CONTROL PLAN

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		C-5.0
DATE:	4/13/2022		

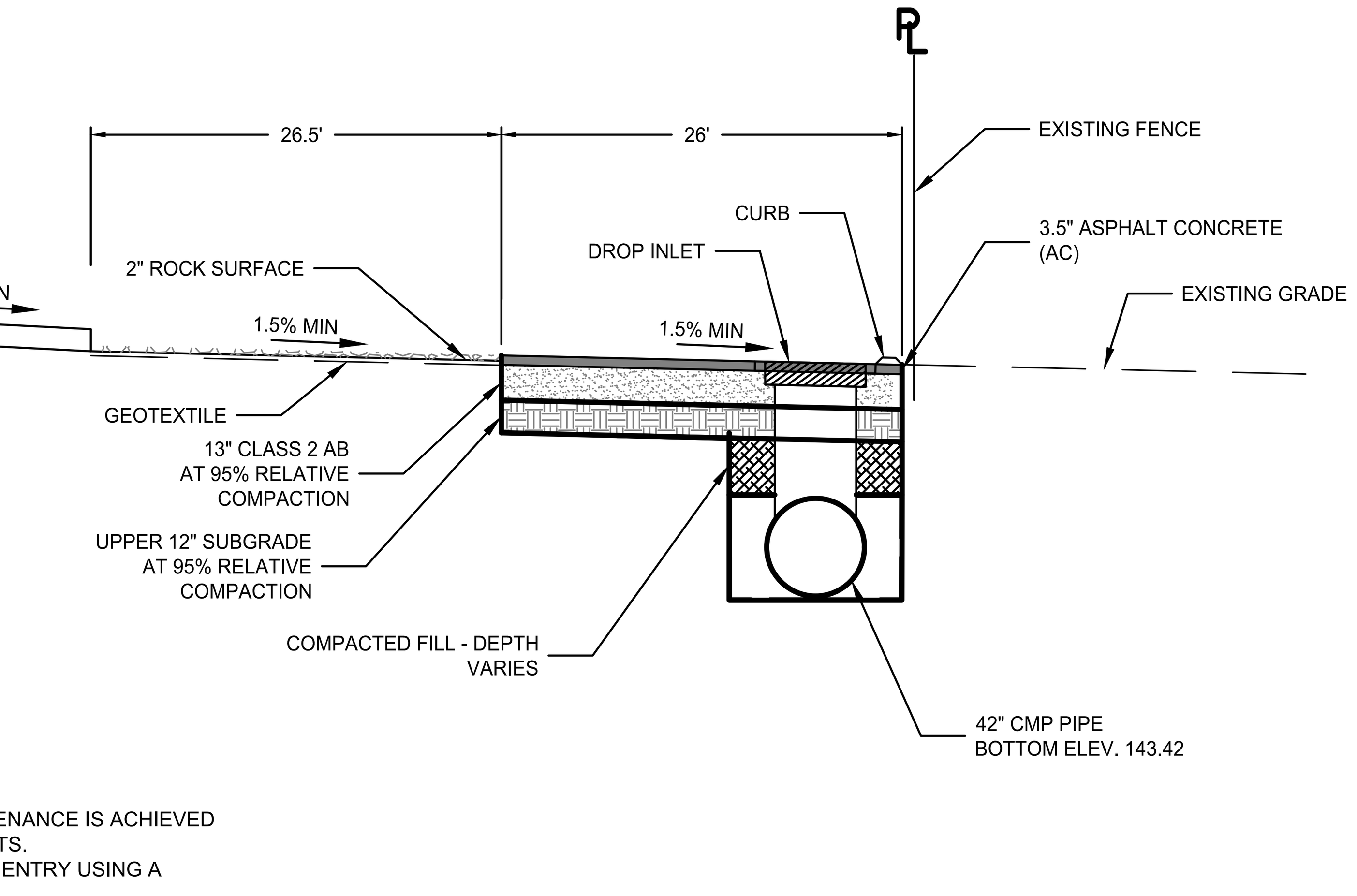
TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_SITES.DWG



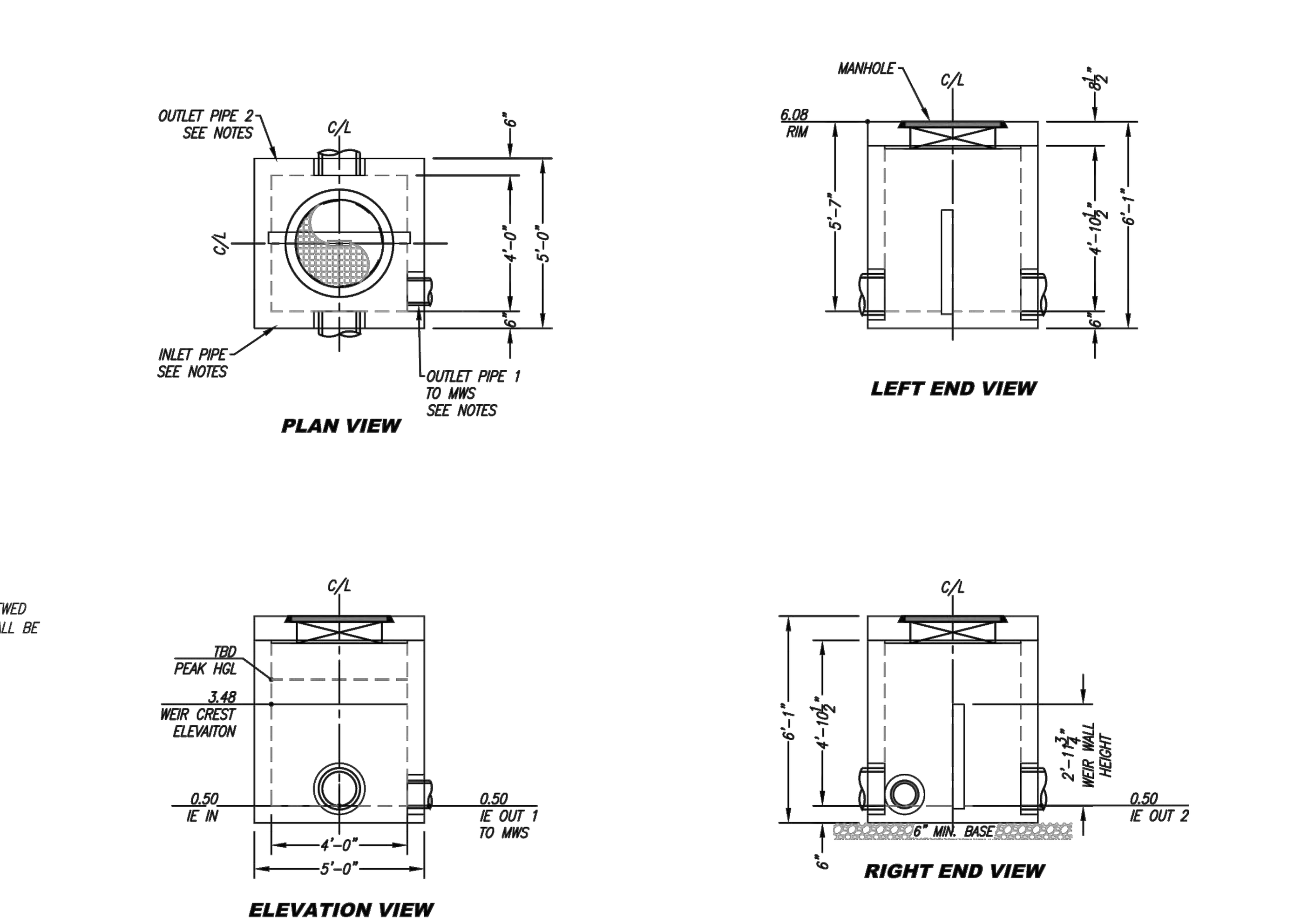
1 UNDERGROUND STORMWATER STORAGE AND WEST AND SOUTH DRIVEWAY (TYP.)
(NOT TO SCALE)

NOTES :
1. ACCESS FOR INSPECTIONS AND MAINTENANCE IS ACHIEVED VIA DROP INLET AT MAINTENANCE PORTS.
2. SEDIMENT MAY BE REMOVED WITHOUT ENTRY USING A VACUUM HOSE OR OTHER MEANS.
3. BODILY ENTRY INTO STORMWATER STORAGE PIPES SHALL NOT OCCUR BY ANY INDIVIDUAL THAT HAS NOT BEEN TRAINED IN CONFINED SPACE ENTRY AND SHALL NOT OCCUR WITHOUT CONFINED ENTRY PREPARATIONS, PRECAUTIONARY MEASURES AND PERMIT AS REQUIRED BY CalOSHA.



2 UNDERGROUND STORMWATER STORAGE AND EAST DRIVEWAY (TYP.)
(NOT TO SCALE)

SITE SPECIFIC DATA			
PROJECT NUMBER	14733		
ORDER NUMBER	----		
PROJECT NAME	COMMERCE ENERGY STORAGE		
PROJECT LOCATION	COMMERCE, CA		
STRUCTURE ID	----		
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			TBD
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	0.50	CMP	12"
OULET PIPE 1 TO MWS	0.50	CMP	8"
OUTLET PIPE 2	0.50	CMP	12"
RIM ELEVATION	6.08		
TOP OF WEIR	3.48		
SURFACE LOAD	TRAFFIC		
FRAME & COVER	ø30		
NOTES: PRELIMINARY NOT FOR CONSTRUCTION.			



INTERNAL BYPASS DISCLOSURE:

THE DESIGN AND CAPACITY OF THE PEAK CONVEYANCE METHOD TO BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD. HGL(S) AT PEAK FLOW SHALL BE ASSESSED TO ENSURE NO UPSTREAM FLOODING. PEAK HGL AND BYPASS CAPACITY SHOWN ON DRAWING ARE USED FOR GUIDANCE ONLY.

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER

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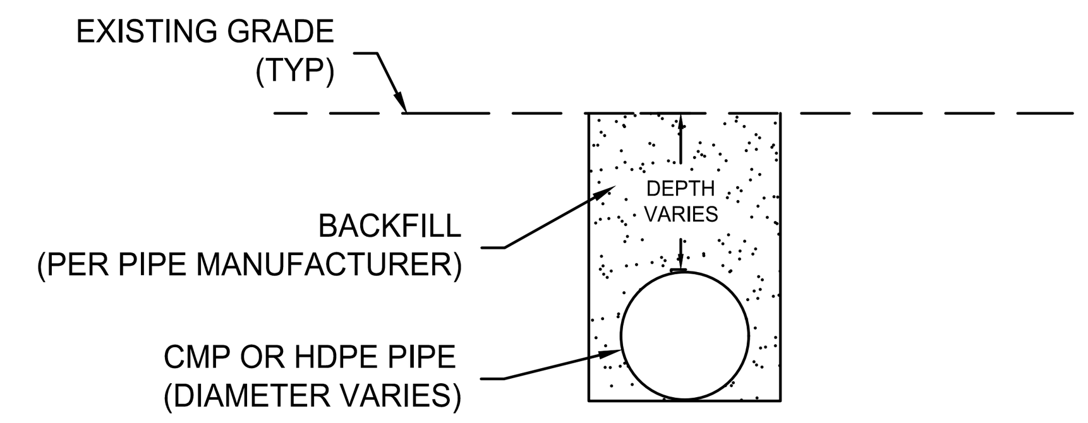
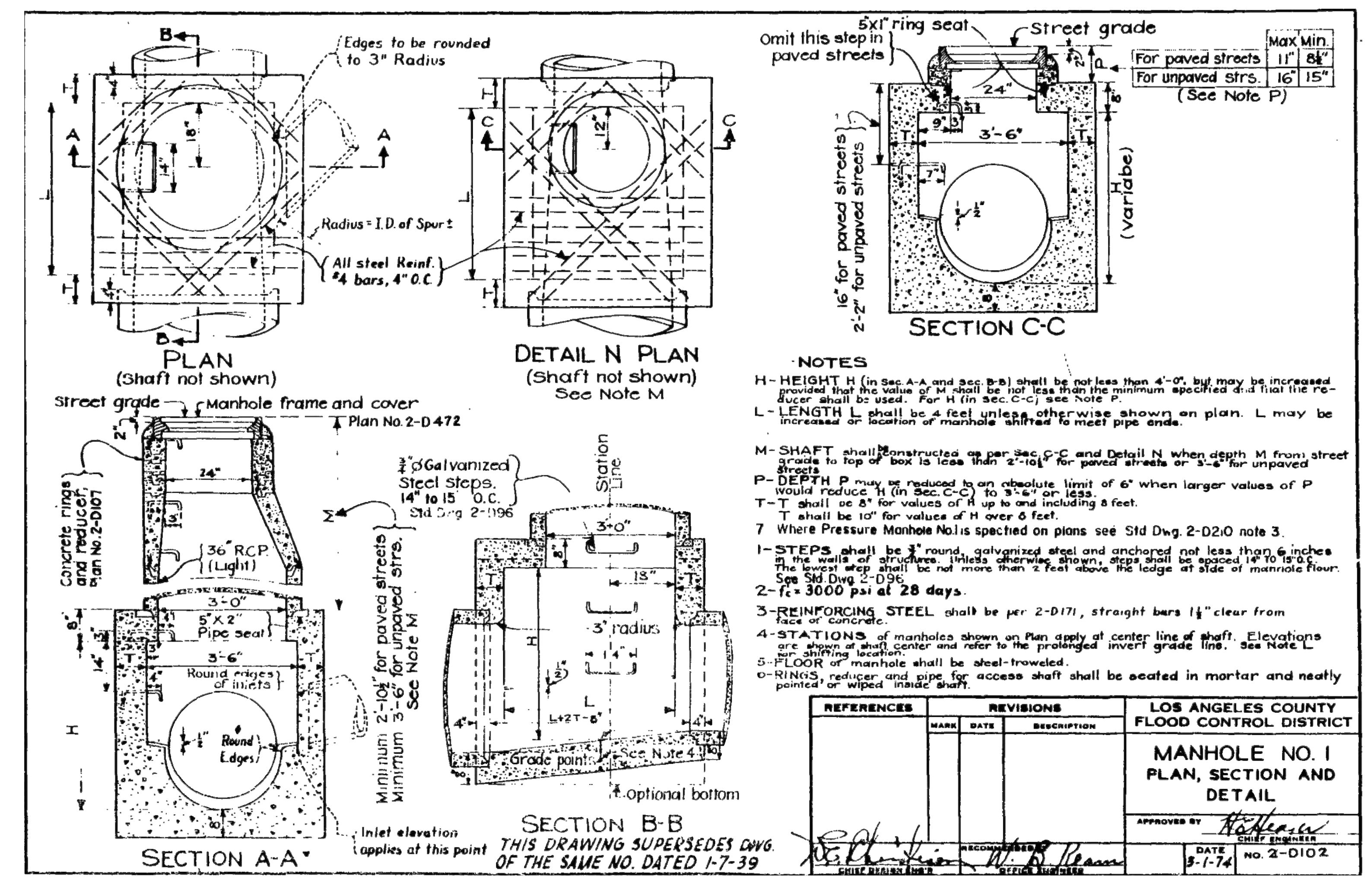
Bio Clean — A Forterra Company

BC-DS-4-4-6'-9"
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

5 STORMWATER BIOFILTRATION DETAIL (BC-DS-4-4-6'-9")
(NOT TO SCALE)

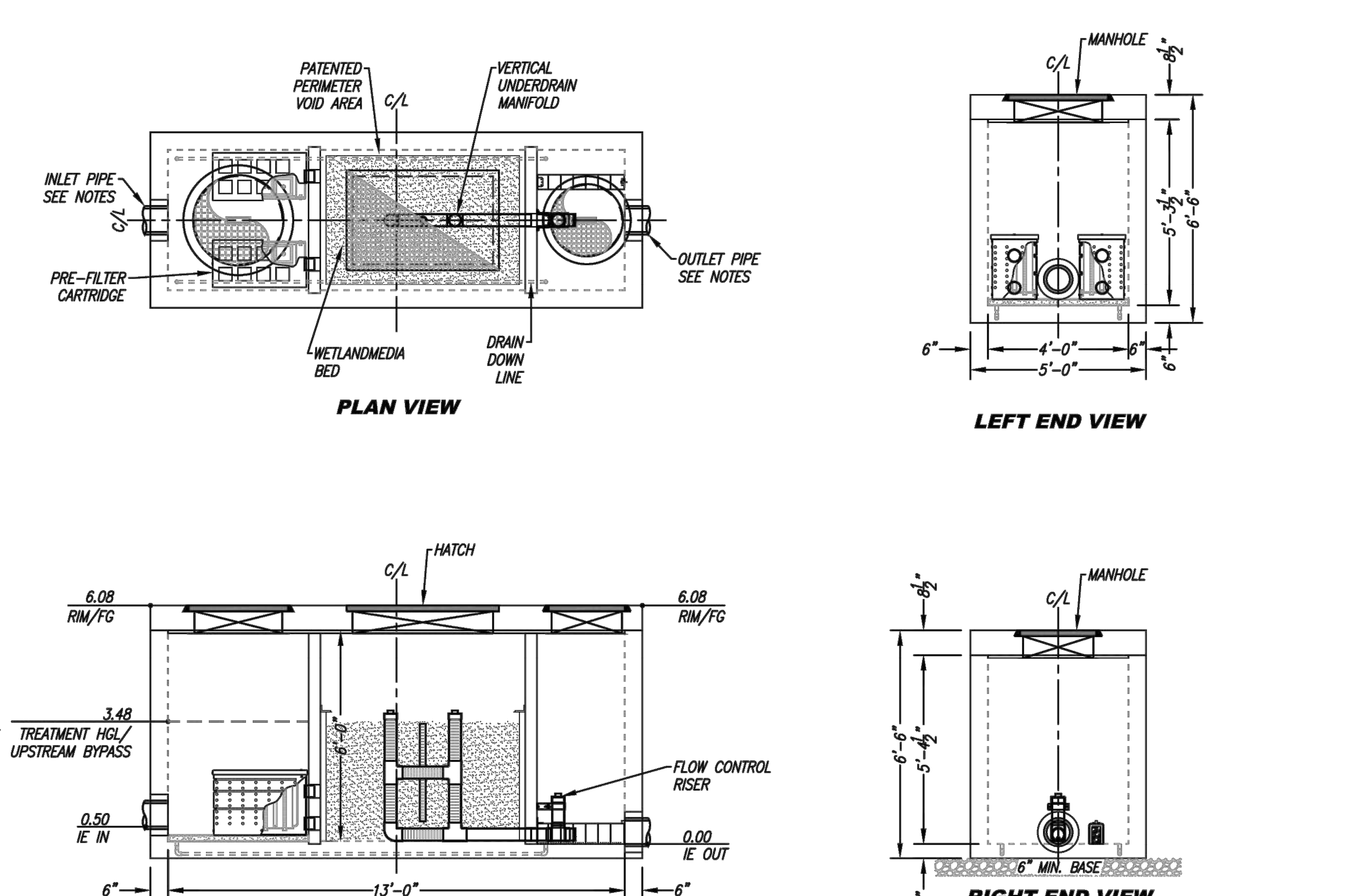


3 STORM DRAIN PIPE
(NOT TO SCALE)



4 MANHOLE
(NOT TO SCALE)

SITE SPECIFIC DATA			
PROJECT NUMBER	14733		
PROJECT NAME	COMMERCE ENERGY STORAGE		
PROJECT LOCATION	COMMERCE, CA		
STRUCTURE ID	----		
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
5,600		N/A	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			OFFLINE
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	0.50	CMP	8"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	0.00	CMP	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	6.08	6.08	6.08
SURFACE LOAD	H20	N/A	H20
FRAME & COVER	ø30"	30" X 48"	ø24"
WETLANDMEDIA VOLUME (CY)			4.52
ORIFICE SIZE (DIA. INCHES)			ø0.81"
NOTES: PRELIMINARY NOT FOR CONSTRUCTION. UPSTREAM BYPASS SET AT 3.48.			



REQUIRED TREATMENT VOLUME (CF)	5600
DRAINDOWN DURATION (HOURS)	48
AVERAGE DISCHARGE RATE PER MWS UNIT(GPM)	14.45
OPERATING HEAD (FT)	3.4
WETLANDMEDIA INFILTRATION RATE (IN/HR)	23
WETLANDMEDIA LOADING RATE (GPM/SF)	0.23

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS' SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO USE GROUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

1/27/22GSCHIPPER

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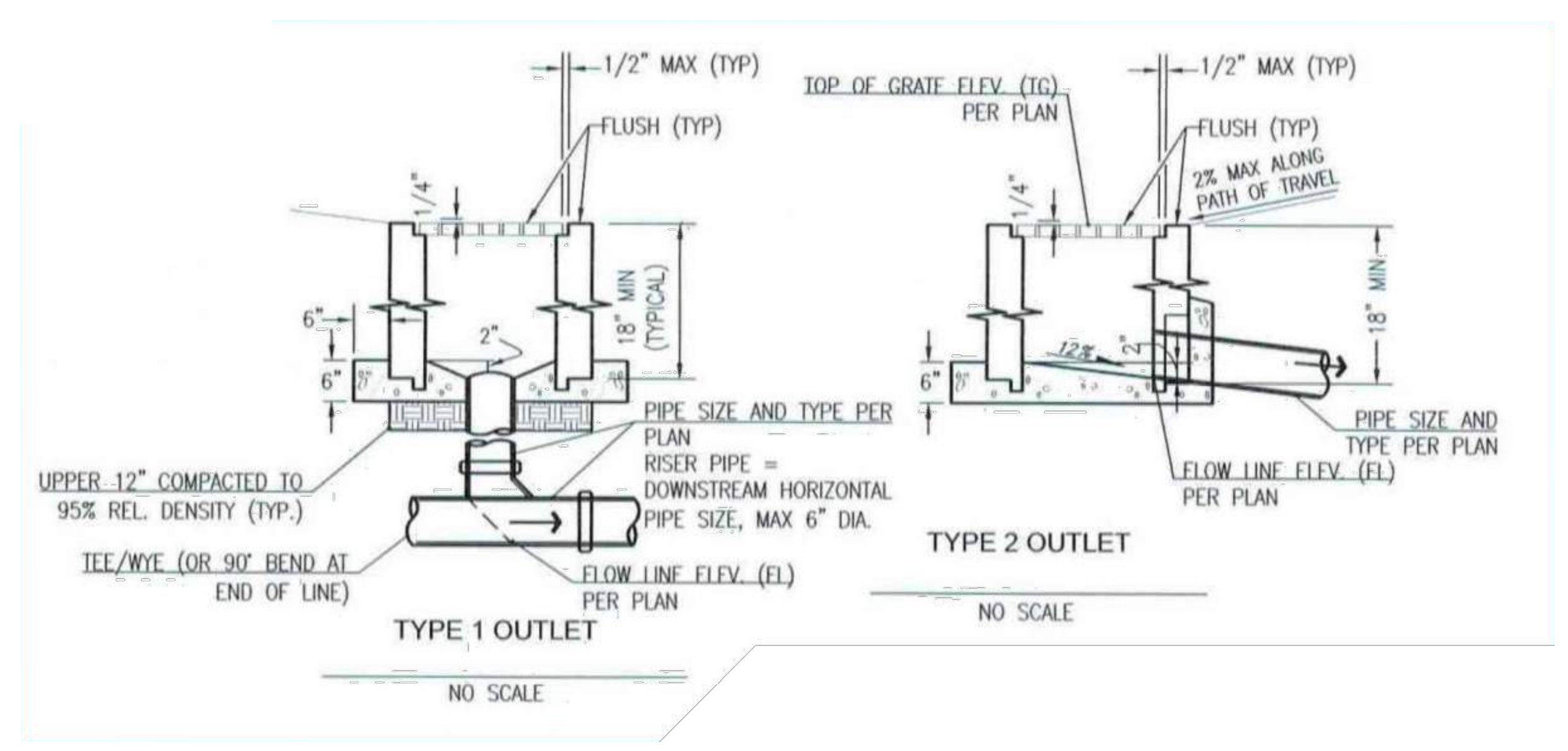
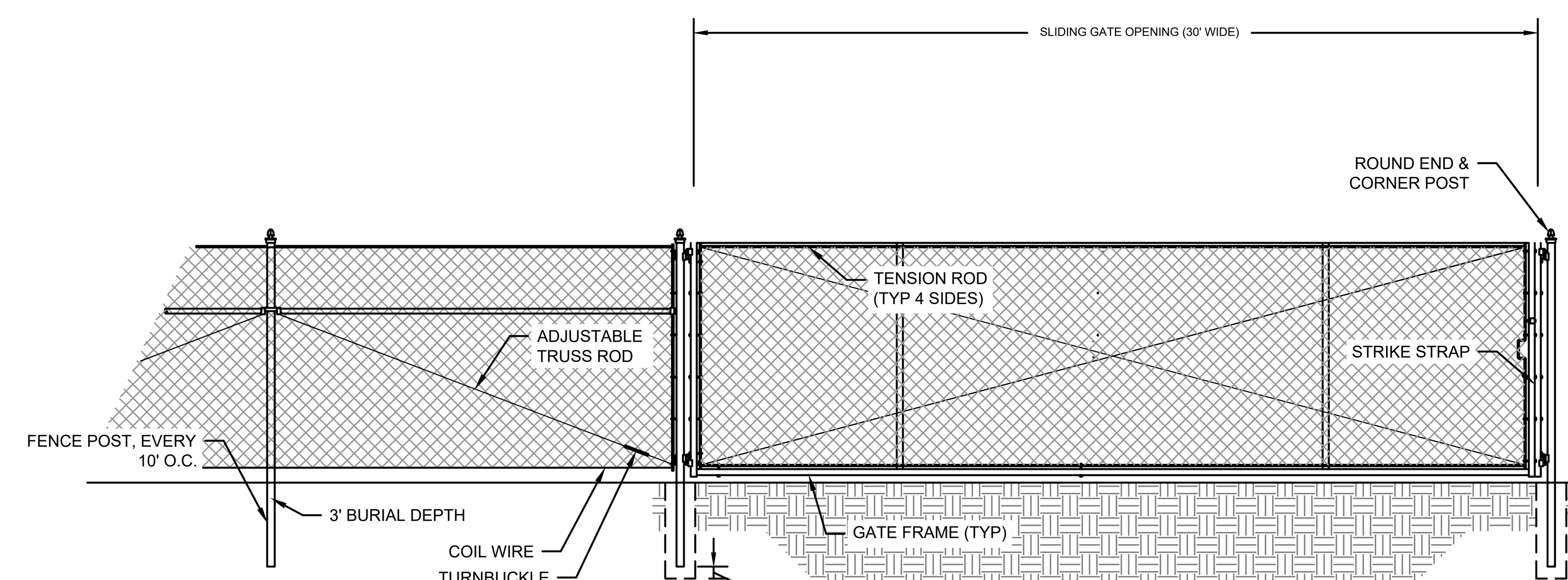
Bio Clean — A Forterra Company

MWS-L-4-13-6'-0"-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

6 STORMWATER BIOFILTRATION DETAIL (MWS-L-4-13-6'-0"-V-UG)
(NOT TO SCALE)



7 DROP INLET
(NOT TO SCALE)



8 TYPICAL ACCESS GATE & FENCE DETAIL
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

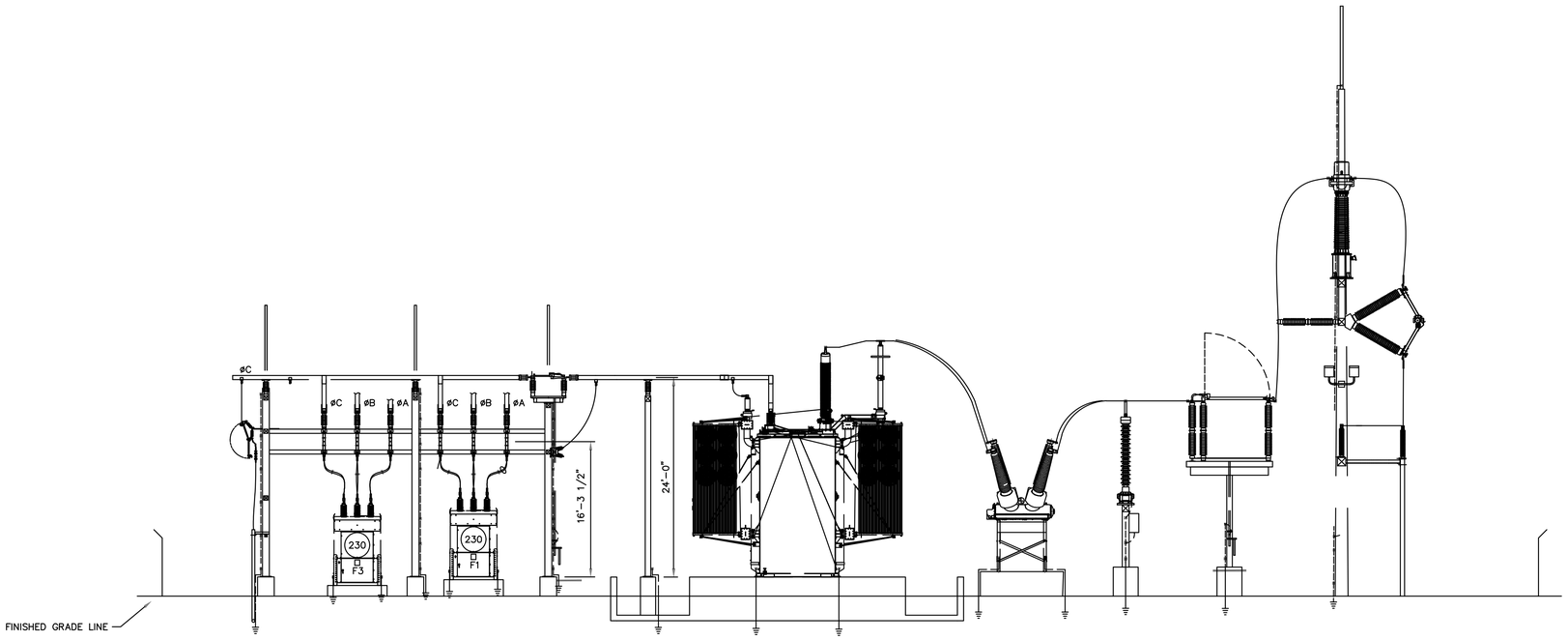
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
DETAILS

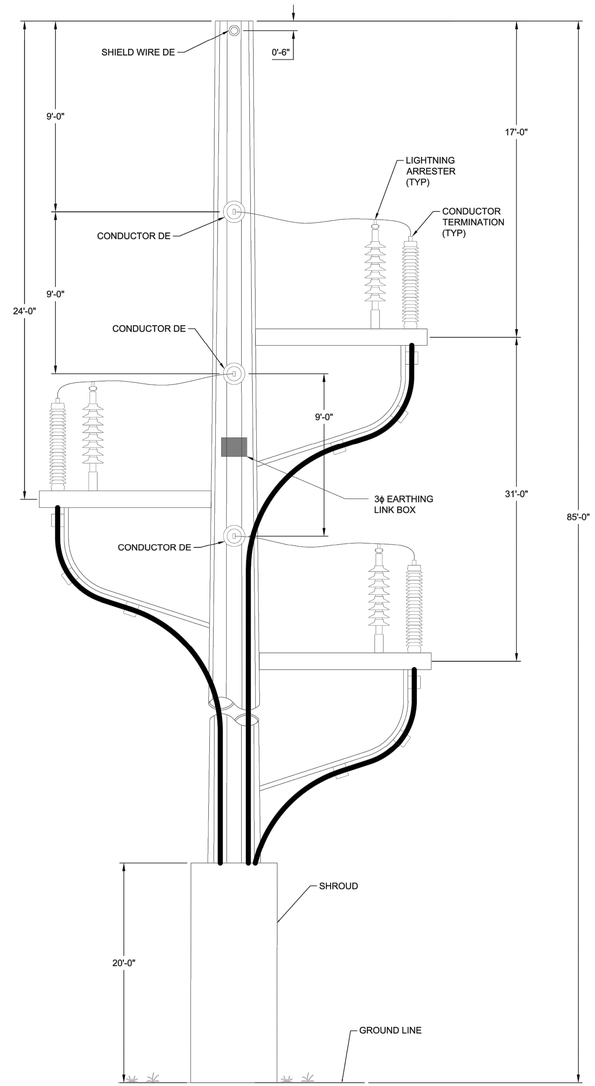
DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		C-6.0
APPROVED BY:	SH		
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

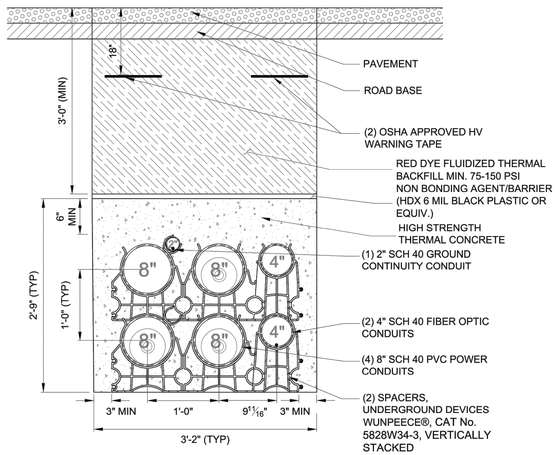
H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_CDV AND DET.DWG



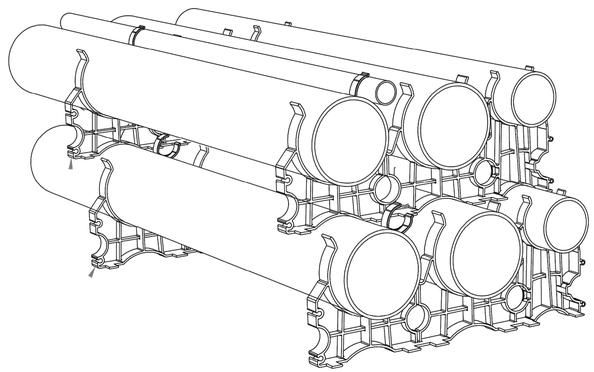
1 SUBSTATION PROFILE
(NOT TO SCALE)



2 RISER POLE FRAMING
(NOT TO SCALE)



3 POWER CABLE TRENCH (IN CITY STREETS)
(NOT TO SCALE)



4 CONDUIT AND SPACER SYSTEM
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
SUBSTATION PROFILE & ELECTRIC TIE-LINE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.0
DATE:	4/13/2022		

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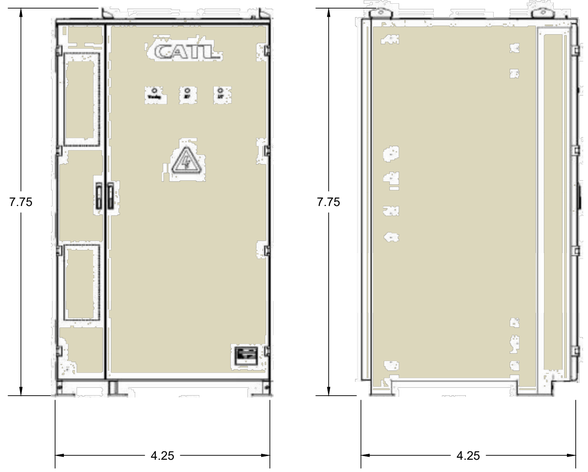
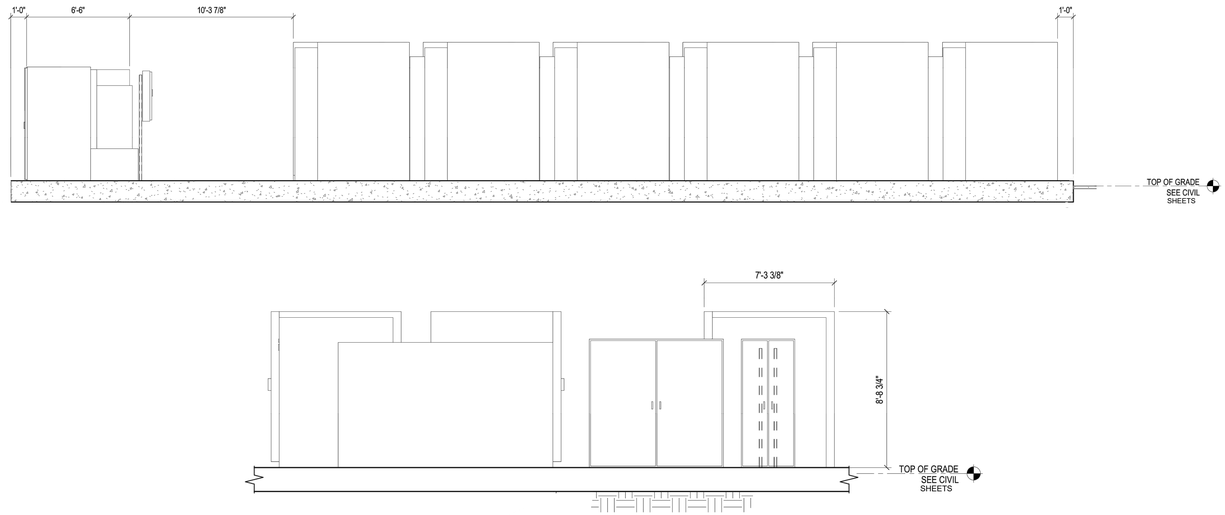
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336

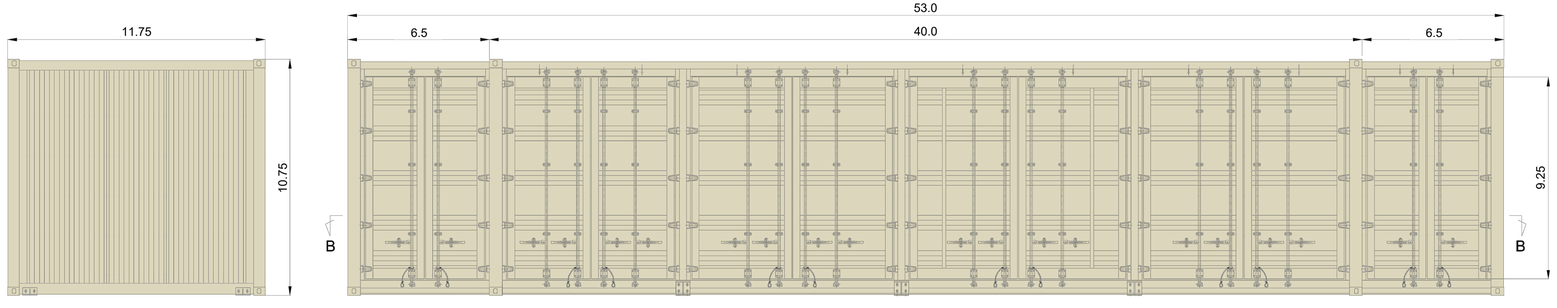
H:\WORK IN PROGRESS\SOLAR SITES\LS POWER DEVELOPMENT\COMMERCE, CA\CAD\SITE PLANS\393191_COV AND DET.DWG



1 EXAMPLE BATTERY ENCLOSURE
(NOT TO SCALE)



2 EXAMPLE BATTERY ENCLOSURE WITH CONTROL EQUIPMENT AND TRANSFORMER
(LONGITUDINAL AND SIDE VIEWS)
(NOT TO SCALE)



3 EXAMPLE BATTERY ENCLOSURE
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

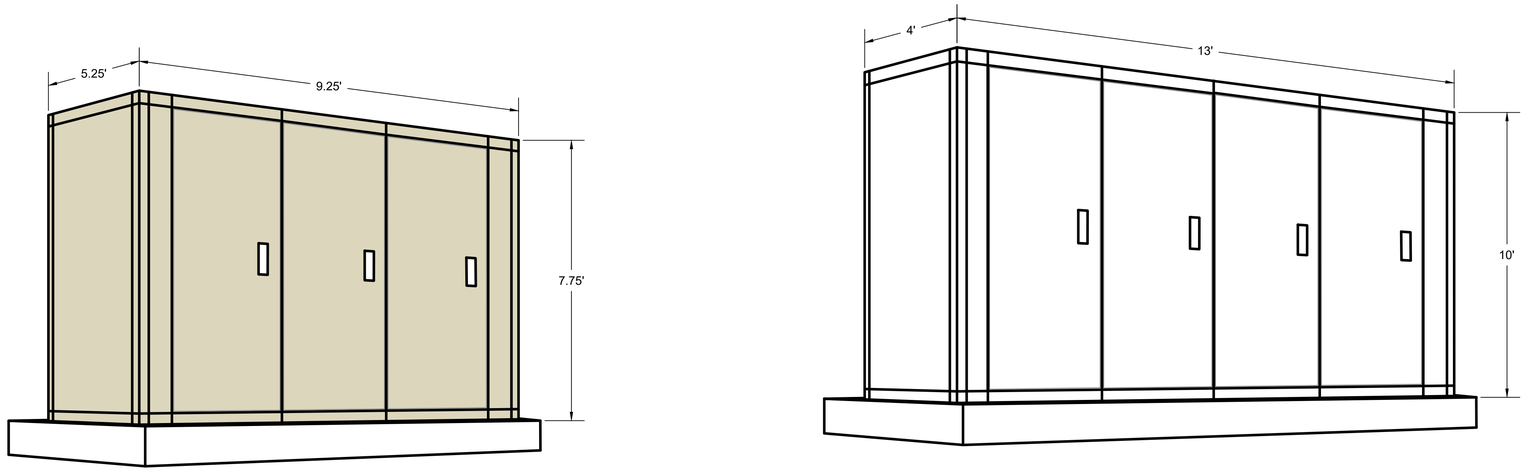
NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

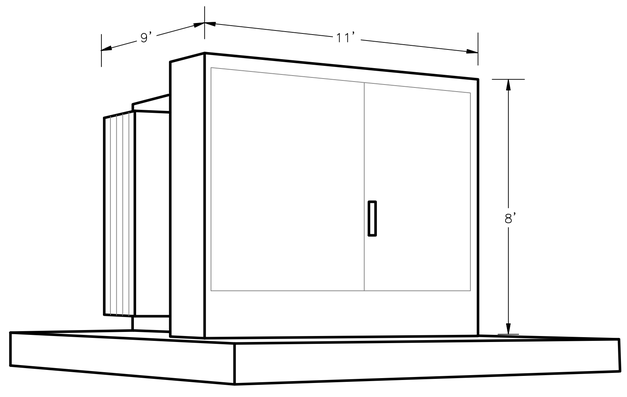
TITLE:
BATTERY ENCLOSURE EXAMPLE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.1
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



1 EXAMPLE INVERTER ENCLOSURES
(NOT TO SCALE)



2 EXAMPLE PADMOUNT TRANSFORMER
(NOT TO SCALE)

SEAL:

PERMIT PLAN SET
NOT FOR
CONSTRUCTION

PROFESSIONAL ENGINEER:

DATE:

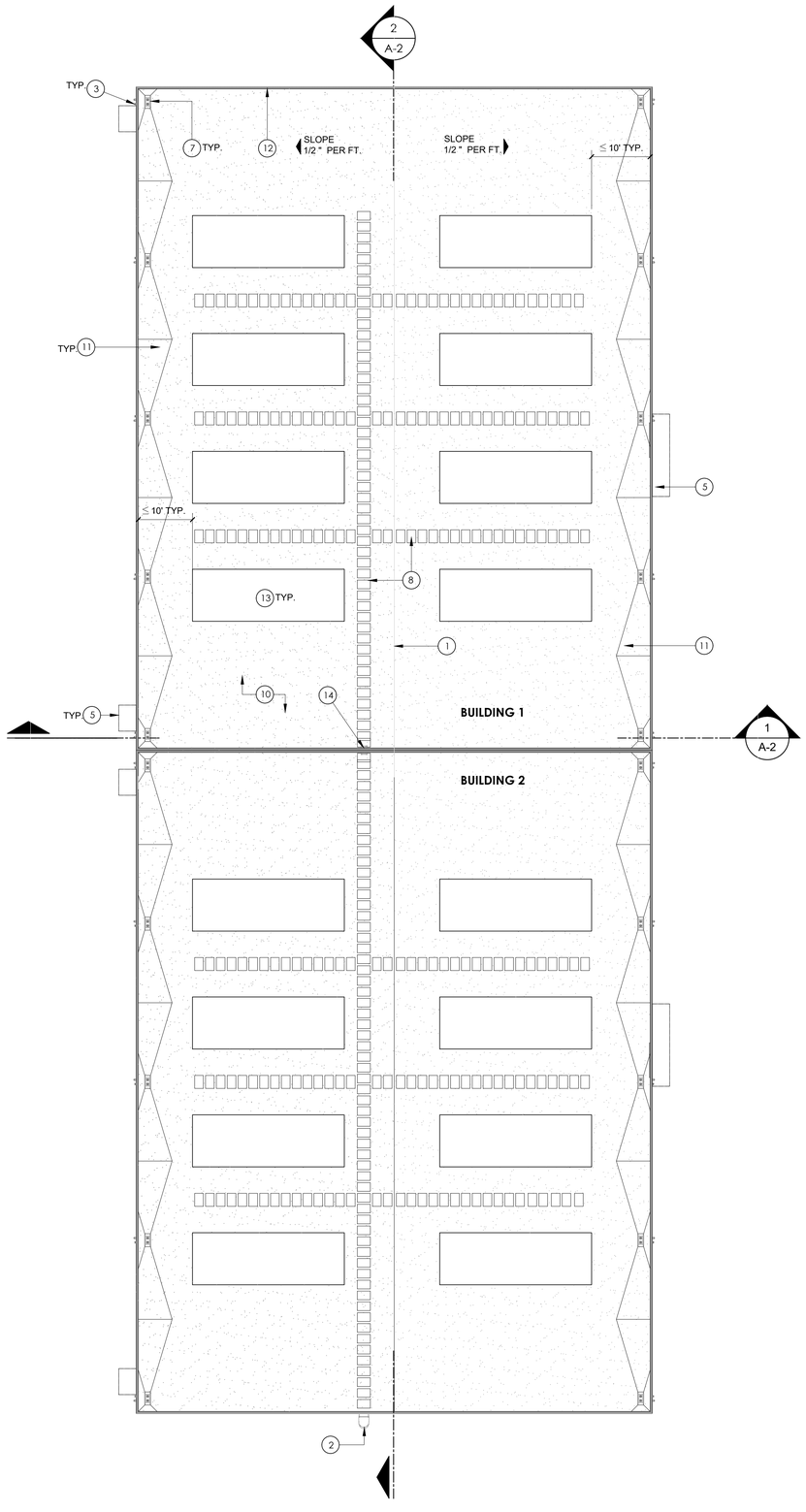
NO.	BY	DATE	REVISION	APP'D.
1	SH	04/13/2022	ISSUED FOR LAND USE PERMITTING	SH

PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

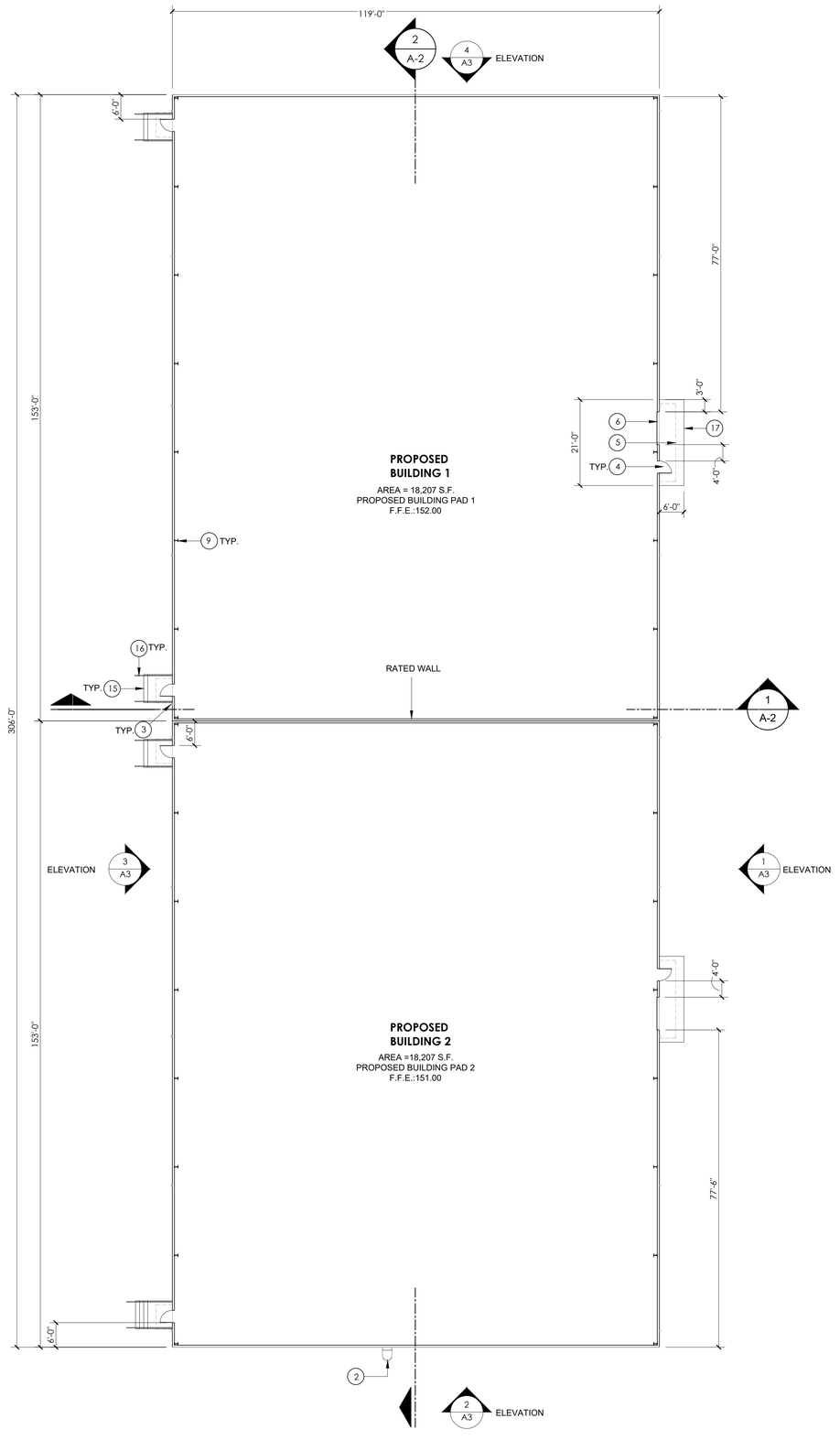
TITLE:
INVERTER ENCLOSURE AND PAD MOUNTED
TRANSFORMER EXAMPLE DETAILS

DRAWN BY:	TSS	PROJ. NO.:	393191
CHECKED BY:	DG		
APPROVED BY:	SH		E-1.2
DATE:	4/13/2022		

TRC
6 Executive Circle
Suite 200
Irvine, CA 92614
Phone: 949.727.9336



ROOF PLAN SCALE : 1/16" = 1'-0" 2



FLOOR PLAN SCALE : 1/16" = 1'-0" 2

KEY NOTES

1. LINE INDICATE TOP OF ROOF SLOPE
2. ROOF ACCESS LADDER
3. DOWNSPOUT LOCATION
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. 8'W, x10'H, METAL ROLL-UP DOOR
7. ROOF DRAIN AND OVERFLOW
8. ROOF TRAFFIC PADS
9. STEEL COLUMN
10. BITUMINOUS ROOFING SYSTEM
11. ROOF CRICKET
12. PARAPET WALL
13. MECHANICAL UNITS
14. ROOF ACCESS
15. CONCRETE STEPS
16. HANDRAIL
17. CONCRETE BASE

NORTH

N

GRAPHIC SCALE

0' 4' 8' 16'

SEAL:

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APPD.
1	MS	03/28/2022	ISSUED FOR LAND USE PERMITTING	FW

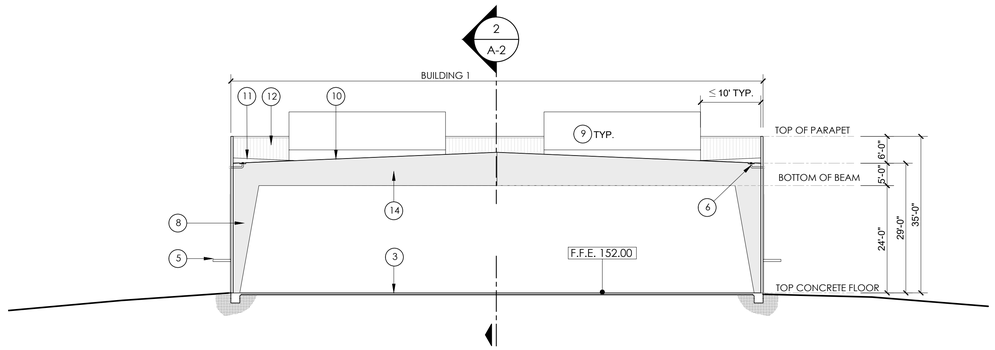
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
FLOOR PLAN - ROOF PLAN

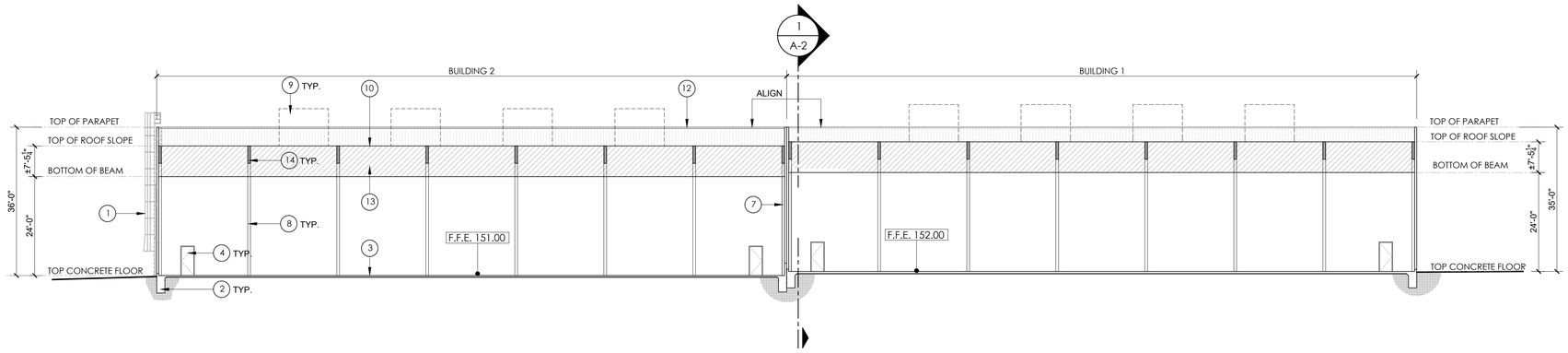
DRAWN BY:	PROJ. NO.:
CHECKED BY:	**A -1**
APPROVED BY:	
DATE:	

TRC

FILE NO:



BUILDING SECTION SCALE : 1/16" = 1'-0" 1



BUILDING SECTION SCALE : 1/16" = 1'-0" 2

KEY NOTES

1. ROOF ACCESS LADDER
2. CONCRETE FOOTING
3. CONCRETE SLAB
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. DRAIN PIPE
7. RATED WALL
8. STEEL COLUMN
9. MECHANICAL UNITS
10. BUILT-UP ROOF - SLOPE PER ROOF PLAN
11. ROOF CRICKET
12. PARAPET WALL
13. HATCHED AREA INDICATES ROOF FRAMING STRUCTURE
14. STEEL BEAM

NORTH

N

GRAPHIC SCALE

0' 4' 8' 16'

SEAL:

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D
1	MS	03/28/2022	ISSUED FOR LAND USE PERMITTING	FW

PROJECT:

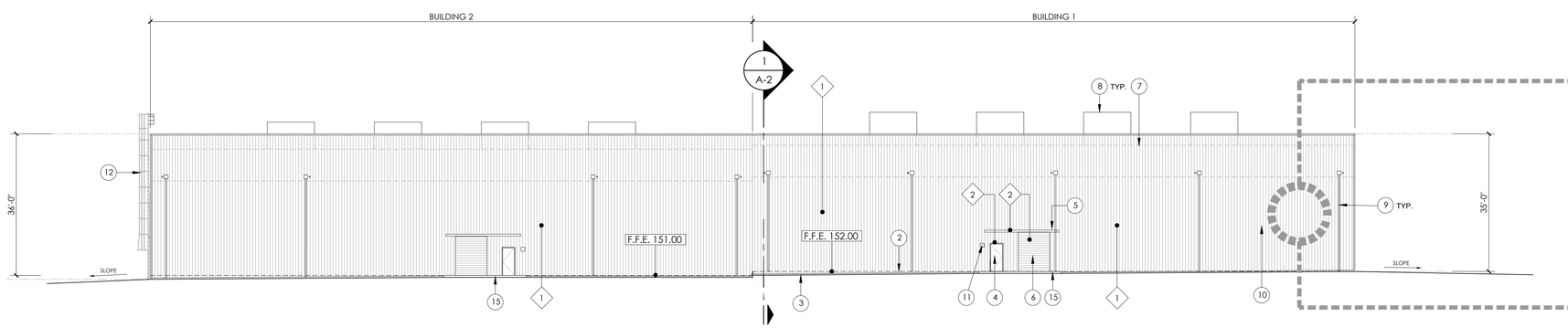
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

BUILDING SECTIONS

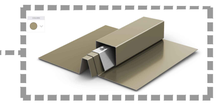
DRAWN BY:	PROJ. NO.:
CHECKED BY:	**A -2**
APPROVED BY:	
DATE:	

FILE NO:



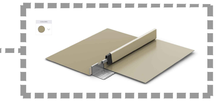
EAST - ELEVATION SCALE : 1/16" = 1'-0" | 1

Architectural Panel Seam Example A



Batten Seam Panel

Architectural Panel Seam Example B



Standing Seam Tee Panel

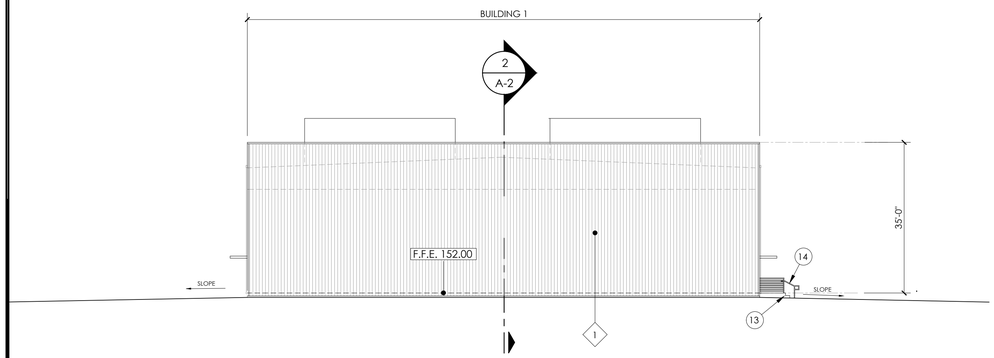
KEY NOTES

1. NOT USED
2. LINE OF CONCRETE FLOOR
3. GRADE
4. METAL DOOR
5. DOOR AWNING PROJECTION
6. 8'W, x10'H, METAL ROLL-UP DOOR
7. ROOF LINE PROJECTION
8. MECHANICAL UNIT
9. DOWN SPOUT
10. ARCHITECTURAL STANDING SEAM WALL PANEL SYSTEM
11. LIGHT FIXTURE
12. ROOF ACCESS LADDER
13. CONCRETE STEPS
14. HANDRAIL
15. CONCRETE BASE

COLOR LEGEND

1. FIELD COLOR - BEIGE
2. TRIMS COLORS - BLUE

NOTE:
FOR COLOR ELEVATIONS SEE SHEET A3.1



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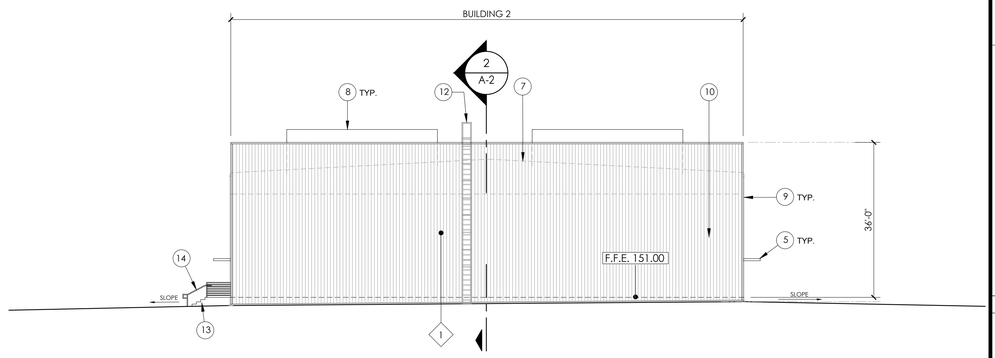

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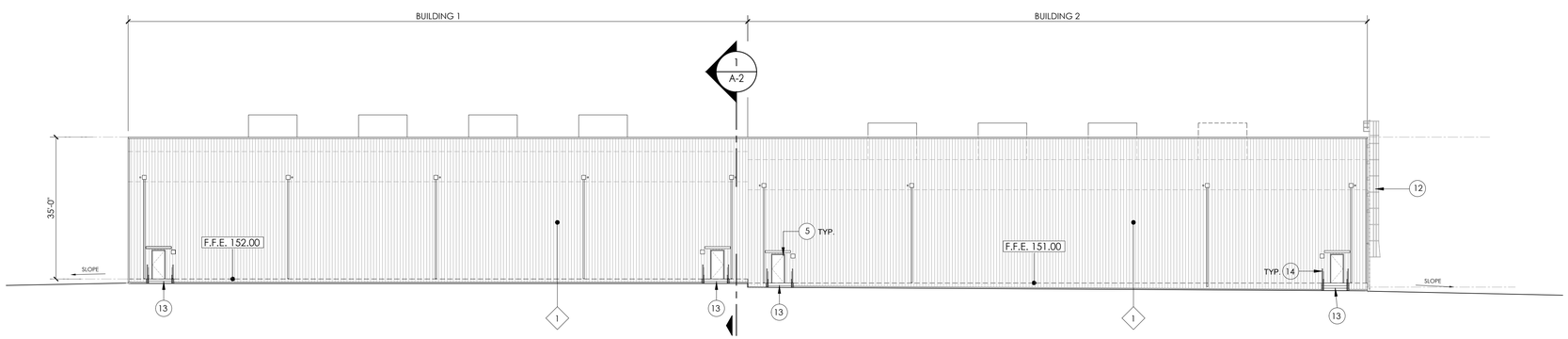


WEST - ELEVATION SCALE : 1/16" = 1'-0" | 3

NORTH
N

GRAPHIC SCALE

0' 4' 8' 16'

SEAL:

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D
1	MS	04/12/2022	ISSUED FOR LAND USE PERMITTING	FW

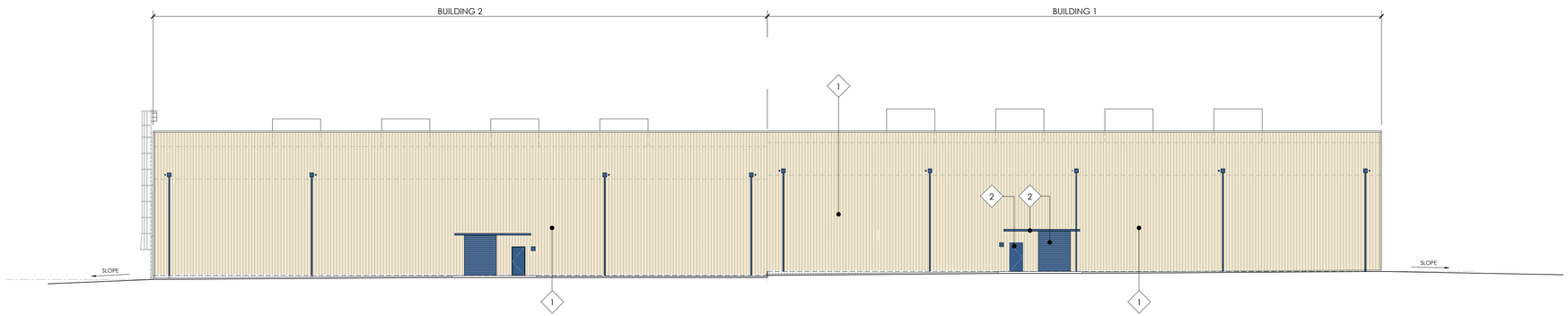
PROJECT:
COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:
EXTERIOR ELEVATIONS

DRAWN BY:	PROJ. NO.:
CHECKED BY:	**A -3**
APPROVED BY:	
DATE:	

TRC

FILE NO:



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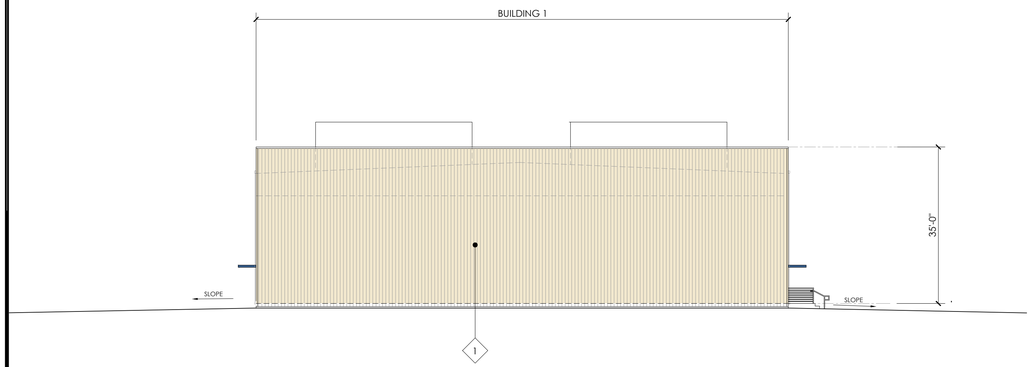

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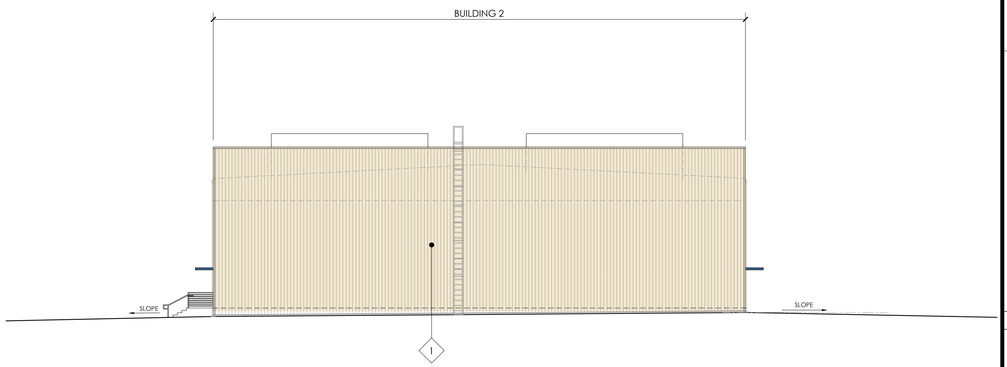
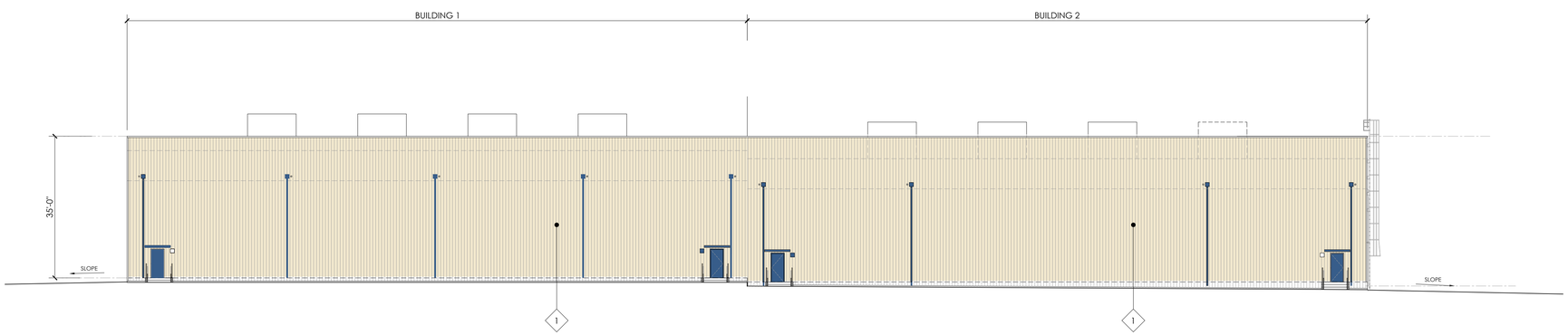


SOUTH - ELEVATION SCALE : 1/16" = 1'-0" | 2



WEST - ELEVATION SCALE : 1/16" = 1'-0" | 3

COLOR LEGEND

1	FIELD COLOR	- BEIGE	
2	TRIMS COLORS	- BLUE	

NORTH

N

GRAPHIC SCALE

0' 4' 8' 16'

SEAL:

PROFESSIONAL ENGINEER:

DATE:

NO.	BY	DATE	REVISIONS	APP'D
1	MS	03/28/2022	ISSUED FOR LAND USE PERMITTING	FW

PROJECT:

COMMERCE ENERGY STORAGE, LLC
6904 E. SLAUSON AVENUE
COMMERCE, CA 90040

TITLE:

EXTERIOR ELEVATIONS - COLORS

DRAWN BY:	PROJ. NO.:
CHECKED BY:	**A -3.1**
APPROVED BY:	
DATE:	

TRC

FILE NO:

APPENDIX C

DRAFT OPERATION AND MAINTENANCE PLAN

Prepared for:

Commerce Energy Storage, LLC

Operation and Maintenance Plan

Former Porcelain Metals Company CAMEO Site
6904 East Slauson Avenue
City of Commerce, California

30 September 2021

Project No.: 0609795

The business of sustainability

ERM

Document details	The details entered below are automatically shown on the cover and the main page footer. PLEASE NOTE: This table must NOT be removed from this document.
Document title	Operation and Maintenance Plan
Document subtitle	Former Porcelain Metals Company CAMEO Site
Project No.	0609795
Date	30 September 2021
Client Name	Commerce Energy

Signature Page

30 September 2021

Operation and Maintenance Plan

Former Porcelain Metals Company CAMEO Site
6904 East Slauson Avenue
City of Commerce, California

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CONTENTS

List of Figures

Acronyms and Abbreviations

bgs	Below ground surface
COC	Constituent of concern
Commerce Energy	Commerce Energy Storage, LLC
Cr	Chromium
Cr^{+6}	Hexavalent chromium
CT	Carbon tetrachloride
DTSC	Department of Toxic Substances Control
ERM	ERM-West, Inc.
Ft	Feet
HHRA	Human Health Risk Assessment
LUC	Land use covenant
MCL	Maximum Contaminant Level
mg/kg	Milligrams per kilogram
O&M	Operations and Maintenance
PCE	Tetrachloroethene
PMC	Porcelain Metals Company
QA/QC	Quality assurance/quality control
SG	Soil gas
TCRA	Time Critical Removal Action
USEPA	United States Environmental Protection Agency
VOC	Volatile organic compound

1. INTRODUCTION

On behalf of Commerce Energy Storage, LLC (Commerce Energy), ERM-West, Inc. (ERM) has prepared this Operation and Maintenance (O&M) Plan for the former Porcelain Metals Company (PMC) CAMEO facility located at 6904 East Slauson Avenue (APN #6356-017-028) in Commerce, California (site). The site location is shown on Figure 1 and site details are presented on Figure 2. This Plan has been prepared to document the agreed upon remedial status and monitoring for the site as outlined in the following approved documents, as well as discussions between Commerce Energy and the Department of Toxic Substances Control (DTSC):

- 9 June 2017 *Current Conditions Report – CAMEO Site (Lot 2)* (Current Conditions Report; URS 2017)
- January 2021 *Annual Groundwater Sampling Report – June 2020* (Annual GWSR; AECOM 2021a)
- April 2021 *Soil Gas Sampling Report – September 2020* (SG Sampling Report; AECOM 2021b)

As documented in these reports, soil remediation at the site has been completed although some residual metals impact has been documented that has been determined to not pose a threat to groundwater. It is anticipated that these residual impacts will be addressed by institutional controls including a Land Use Covenant (LUC).

The SG Sampling Report concluded that, based on the remaining soil vapor concentrations and the site's current use as an unoccupied commercial property, the site did not pose a significant risk to human health or the environment and recommended that soil vapor monitoring be ceased and the remaining soil vapor probes properly destroyed. Based on conversations with DTSC staff, DTSC will implement this recommendation prior to Commerce Energy's purchase of the property.

The Annual GWSR concluded that volatile organic compounds (VOCs) are not considered site constituents of concern (COCs) and chromium (Cr) and hexavalent chromium (Cr^{+6}) concentrations have been steadily decreasing over the past 5 years, indicating that the Cr^{+6} concentrations are naturally attenuating and do not pose a migration threat. The report also concludes that Cr^{+6} concentrations in site groundwater have been adequately delineating and no further investigation is needed. The report recommends that annual groundwater monitoring of select shallow monitoring wells (MW-1R, -5, -7R, -9, and -11) continue, to confirm the natural attenuation of the Cr^{+6} concentrations. However, the remaining existing wells that are not part of the ongoing monitoring schedule (i.e., MW-1, -6, -8, -10, and -12) are to be properly destroyed. Based on conversations with DTSC staff, DTSC will implement the recommended well destructions prior to Commerce Energy's purchase of the property.

1.1 Purpose and Organization

This O&M Plan provides the procedures for confirmatory monitoring activities to document the reduction of Cr^{+6} concentrations and lack of a migration threat as part of a subsequent request for "no further action" with regard to groundwater issues at the site. This O&M Plan has been developed in compliance with the United States Environmental Protection Agency (USEPA) guidance for preparation of corrective measure documents (USEPA 1994).

This O&M Plan is organized as follows:

- Section 1 states the purpose and organization of this document and presents the project management approach for O&M Plan implementation.
- Section 2 presents a summary of the site background including a site history, surrounding land use, and site characterization and remediation activities.

- Section 3 presents the groundwater monitoring program for the site.
- Section 4 presents the LUC elements, including the scope of inspections and assessment of institutional controls.
- Section 5 presents references used in preparing this O&M Plan.

Figures referenced in this O&M Plan are provided following the text.

1.2 Project Management

The DTSC provides regulatory oversight for the environmental management of the site in Commerce, California. Commerce Energy will be the primary responsible party for groundwater monitoring of the site, in conjunction with DTSC, which is the facilitating the property sale. Commerce Energy will select and manage a contractor to implement the scope of work described in this document.

2. SITE BACKGROUND

This section provides a summary of site background including a site history, surrounding land use, and site investigation and remediation activities. The majority of this information was obtained from the 2017 Current Conditions Report.

2.1 Site History and Surrounding Land Use

From 1946 until 1990, the former CAMEO facility was owned and operated by PMC. The facility was used to manufacture porcelain enamel-coated products, primarily metal signs for streets and highways (DTSC 2006). Major processes included sheet metal fabrication and cleaning, preparation of porcelain enamel coatings from glass and metal oxides, application of enamel coatings, and baking of the porcelain enamel finish onto the sheet metal products.

The former CAMEO facility was approximately 4.9 acres that now encompass two areas known as Lot 1 and Lot 2 (Figure 2). As seen on Figure 2, Lot 1, located at 6840 East Slauson Avenue is approximately 2.3 acres and occupies the northern portion of the original CAMEO facility. DTSC formally closed Lot 1 in 2001 after a “No Further Action” determination was issued on 14 June 2001. A new commercial building currently exists on Lot 1.

Lot 2, located at 6904 East Slauson Avenue (Assessor’s Parcel No. 6356-017-028), is 2.6 acres and occupies the southern portion of the original facility (Figure 2). Lot 2 has no direct street access and must be accessed by way of an easement extending from Slauson Avenue south to the site through the driveway on Lot 1. Lot 2, the focus of this O&M Plan, is currently vacant and undeveloped, and is enclosed by a 9-foot-high, chain-link fence.

The site is in an area zoned for general industrial use and is neighbored by light-industrial facilities. The nearest residential population is approximately 0.5 mile from the site and sensitive ecosystems are not found in the site vicinity.

2.2 Site Investigation and Remediation Activities

Site investigations to characterize soil and groundwater impacts and interim removal activities to mitigate risks to human health and the environment began in 1986. The results of the investigations and remedial activities are summarized in this section.

2.2.1 Site Geology and Hydrogeology

The former CAMEO facility is located at the southern edge of the Montebello Plain physiographic feature within the Coastal Plain of Los Angeles County, approximately 3 miles southwest of the Merced Hills. Site investigation data indicate similar soils across the site, consisting predominantly of layers of silt, silty sand and sand from the ground surface to approximately 100 feet below ground surface (ft bgs). Groundwater was encountered at approximately 104 ft bgs in most wells during the latest sampling event conducted in June 2020. Hydrostratigraphic units underlying the site include seven identified aquifers (Exposition, Gage/Gardena, Hollydale, Jefferson, Lynwood, Silverado, and Sunnyside) in descending sequence from ground surface to a depth of approximately 1,380 ft bgs (California Department of Water Resources 1961). The shallow site monitoring wells are completed in the Exposition aquifer and MW-12 (the deeper monitoring well) is believed to be completed in the Gage/Gardena aquifer (AECOM 2021a).

2.2.2 Previous Investigation and Remediation Activities

Site investigation and remediation activities were completed in two distinct periods. Details of the investigation and remediation events are provided in the Current Conditions Report.

2.2.2.1 Initial Phase of Investigation and Remediation

PMC completed investigative fieldwork during the first period between 1992 and 1998. The first investigation was focused on the existing three buildings and their related facilities, including pits, ditches, sumps, and machinery, to characterize the associated wastes for management and disposal prior to demolition of these features. Figure 2 provides the location of the former site features. The residual wastes were removed in December 1992 and the buildings were demolished to their foundations. A second investigation was completed in April 1993 to investigate whether site activities impacted the shallow soil to a depth of 50 ft bgs. This investigation discovered the presence of elevated concentrations of Cr and Cr^{+6} in soil within the Former Pit 1 and 2 areas.

Additional soil and groundwater investigations were completed in 1997 to further characterize Cr and Cr^{+6} in deeper soil and groundwater. The investigation results indicated that soil impacts appeared to be primarily to a depth of about 25 ft bgs with limited impact in isolated deeper intervals between 50 and 60 ft bgs. The groundwater investigation included installation of one monitoring well upgradient (MW-1) and three downgradient of the former pit areas (MW-2 through -4) These monitoring wells are shown on Figure 3. The groundwater results indicated shallow groundwater was impacted by Cr and Cr^{+6}. In a subsequent groundwater investigation in 1998, the previously installed monitoring wells were resampled, and three additional downgradient wells (MW-5 through -7) were installed and sampled. The results confirmed the presence of elevated concentrations of Cr and Cr^{+6}.

2.2.2.2 Second Phase of Investigation and Remediation

2006-2009 Investigation Activities

In April 2006, DTSC terminated its Voluntary Cleanup Program agreement with PMC due to the lack of any additional site investigation and/or remediation at Lot 2 during the previous 5 years, despite the need for additional work. DTSC informed PMC that, due to the presence of elevated concentrations of Cr and Cr^{+6}, an enforcement order may be necessary to pursue cleanup options at the site. DTSC ultimately issued an *Imminent and Substantial Endangerment Determination and Order and Remedial Action Order* in June 2006. In 2007, DTSC determined that PMC was out of compliance with the orders and prepared a workplan to address the soil source of Cr^{+6} to groundwater in the former pit areas.

In 2008, DTSC started the second period of field activities with implementation a Time Critical Removal Action (TCRA) to address the elevated concentrations of Cr and Cr^{+6} in the former pit areas. Over 2,000 cubic yards of soil were removed to a depth of 25 ft bgs in the former pit areas. Confirmation sampling confirmed that target Cr^{+6} concentrations (<37 milligrams per kilogram [mg/kg]) were achieved in all but one location (at 20 ft bgs). The excavation was backfilled with imported soil and a small area of soil with Cr^{+6} concentrations above the target goal was left in the ground.

In 2009, DTSC implemented an additional soil investigation to determine the volume of soil above the target concentration that was left in the ground. The investigation results indicated that approximately 500 cubic yards of impacted soil was still present between 20 and 25 ft bgs.

2010 Soil and Groundwater Characterization

DTSC implemented an extensive investigation in 2010 to complete the characterization of soil and groundwater impacts at the site, assess the risk to human health and the environment, and determine if additional remedial activities were necessary. The activities included:

- A sitewide geophysical survey
- A sitewide soil gas survey
- A sitewide soil investigation including soil borings and exploratory trenches

The geophysical survey results indicated the presence of 11 anomalies (A through K on Figure 2) that were investigated as part of the soil investigation. The soil gas survey indicated the presence of VOCs including carbon tetrachloride (CT) and tetrachloroethene (PCE). Only CT exceeded the DTSC *HERO HHRA Note 3* (DTSC 2016) modified screening level of 0.58 microgram per liter.

The soil investigation involved the collection of 250 soil samples from 40 soil borings and 27 exploratory trenches. The samples were analyzed for one or more the following analytes:

- Cr (USEPA Method 6010B)
- Cr^{+6} (USEPA Method 7199)
- Total Metals (USEPA Method 6010B)
- Total petroleum hydrocarbon C6-C44 chain (USEPA Method 8015B)
- VOCs (USEPA Method 8260B)
- Semivolatile organic compounds (USEPA Method 8270C)
- Pesticides (USEPA Method 8081A)
- Polychlorinated biphenyls (USEPA Method 8082)
- Polycyclic aromatic hydrocarbons (USEPA Method 8310)

The soil investigation confirmed the presence of a deeper soil mass with Cr^{+6} impact in the former pit areas as defined by the results of the 2009 investigation. In addition, the investigation discovered elevated cadmium concentrations above screening levels at a number of the geophysical anomaly areas (E, G and I). CT was not detected in any soil samples and PCE was only detected at trace levels in soil samples from the former pit areas.

As part of the 2010 investigation, DTSC assessed the monitoring network and found that three wells (MW-2 through -4) had been damaged during the TCRA and needed to be properly abandoned. Three wells (MW-5 through -7) were in fair condition and were redeveloped and sampled. MW-1 was in fair condition but was dry.

To augment the monitoring network, DTSC installed three additional wells (MW-1R, MW-8, and MW-9). The monitoring wells were sampled four times in 2010 and the results indicated that the former pit areas were a likely source of Cr^{+6} to groundwater as the upgradient concentrations were lower than concentrations detected in the downgradient wells. In addition, CT was detected in low concentrations in all site wells and PCE was detected in low concentrations in samples from MW-1R located upgradient of the former pit areas. The results suggest that the VOCs detected in groundwater could be from offsite sources.

The results of the 2010 investigation led to a removal action in the vicinity of geophysical anomalies C and D, where vaults were discovered during the exploratory trenching work, and anomaly G. The work involved the removal of soil and waste material with elevated concentrations of cadmium, lead, and arsenic.

2011 Data Gaps Investigation

An additional remedial investigation was completed in December 2011 to address data gaps identified in the former pit areas, geophysical anomalies I, J, and K, and the site perimeter. One boring was installed in the former pit areas to determine the depth of Cr^{+6} impact in soil and collect soil parameter data to evaluate the potential for the remaining Cr^{+6} concentrations to migrate to groundwater. In addition, groundwater were collected in all site monitoring wells during the December 2011 investigations. The soil results indicated that the potential threat of the residual Cr^{+6} concentrations in soil to impact groundwater appeared low. The groundwater results showed a reduction in chromium and Cr^{+6} concentrations compared to the 2010 results; however, it was recommended that groundwater concentrations be monitored in downgradient wells (specifically MW-5 and -7) to demonstrate this finding by continuing to show decreasing Cr^{+6} trends in the downgradient wells.

The investigation of geophysical anomalies I, J, and K indicated the presence of cadmium and arsenic concentrations above screening levels in anomaly I and cadmium in anomaly K. The evaluation concluded that the arsenic concentrations identified in anomaly I posed a substantial risk to human exposure and required additional investigation to complete the characterization of arsenic in shallow soil.

To evaluate the site perimeter issues, three borings were installed near geophysical anomalies C and D and in the southern portion of geophysical anomaly E, and soil samples were collected. Arsenic was discovered in samples from both C/D and I geophysical anomaly areas. The evaluation determined that the elevated arsenic concentrations were from site activities and posed a substantial human health risk.

2012 Shallow Soil Investigation

In September 2012, an additional shallow soil investigation was completed in geophysical anomaly areas C, D, E, and I to delineate the extent of elevated arsenic concentrations within these areas. Eighteen shallow soil borings were completed in these areas and 64 soil samples were collected and analyzed for arsenic. The results of the investigation completed the characterization of arsenic in shallow soil and allowed for estimating the volume of soil impacted by arsenic with a greater degree of accuracy.

Based on the results of the 2012 arsenic investigation, DTSC performed an arsenic removal event at geophysical anomaly areas C, D, E, and I in late 2013. A total of 491 cubic yards of soil was removed from these areas including 409 cubic yards from anomaly I, 65 cubic yards from anomaly E, and 17 cubic yards from anomaly C/D.

Following the excavation, arsenic concentrations remaining in soil in anomaly areas C/D and E were within the accepted background concentrations. At the completion of excavation work at anomaly I, three confirmation sample locations contained arsenic concentrations ranging from 16.6 to 20.7 mg/kg in excess of the accepted upper limit of background concentrations (12 mg/kg). DTSC evaluated the data statistically and determined that the results of all confirmation samples indicated that the residual arsenic concentrations in this area were within background concentrations and no additional excavation was necessary.

2012 to 2018 Groundwater Monitoring

Six groundwater monitoring events were completed between 2012 and the end of 2018. The groundwater results indicated an increase in Cr^{+6} concentrations in wells MW-05 and -07, downgradient from the former pit areas, to a maximum of 110 and 43 μg/L, respectively, in samples collected during the November 2015 monitoring event. The Cr^{+6} concentrations in these wells during the three subsequent monitoring events showed a decreasing trend with Cr^{+6} concentrations of 11 and 15 μg/L in MW-05 and MW-07R, respectively, in samples collected from these wells during the June 2018 monitoring event.

2019 Additional Characterization

In 2019, one onsite deep well (MW-12) and two offsite shallow wells (MW-10 and -11) were installed to provide additional information on the vertical and lateral extent of Cr^{+6} and VOCs in groundwater. The well locations are shown on Figure 3. Groundwater monitoring at the site began in 2010 and the last groundwater monitoring event was completed in June 2020 with the results provided in the Annual GWSR. The results of the 2020 monitoring event indicated that Cr^{+6} concentrations in onsite shallow wells continued to show a decreasing trend with regard to historical data but were above the the Maximum Contaminant Level (MCL) for Cr^{+6} set at 10 μg/L. The downgradient, offsite shallow well MW-11 contained a Cr^{+6} concentration that was below the Cr^{+6} MCL; Cr^{+6} was not detected in the sample collected from MW-12, the deep onsite well. Trace levels of VOCs were detected in the samples from some of the wells; however, given the lack of VOCs detected in onsite soil and soil vapor, the report states that VOCs are not considered site COCs. Based on the results of the 2020 groundwater sampling event, the report stated that the lateral and vertical extent of COCs in site groundwater has been adequately delineated and additional investigation is not necessary. The Annual GWSR recommended that Cr^{+6} monitoring continue for wells MW-1R, -5, -7R, 9, and -11 to verify that groundwater conditions are stable. It recommended that all other site monitoring wells (MW-1, -6, -8, -10, and -12) be properly abandoned.

Additional investigation at the site included the 2019 installation of 22 soil vapor probes at five locations to provide further information on the presence and vertical distribution of CT and other VOCs in vadose zone soil vapor. The probes were sampled after installation and again in September 2020. The results of the 2019 monitoring were provided in the *Soil Gas Monitoring Well Installation and Sampling Report* (AECOM 2020); results of the 2020 monitoring event were provided in the SG Sampling Report. As stated in the SG Sampling Report, certain VOCs (CT, PCE, and chloroform) were detected in at least one probe sample at every location and the concentrations of VOCs at a given location increased with depth.

The report concluded that, given the lack of detections of these compounds in site soil, the presence of these compounds in site groundwater, and the fact that VOC concentrations increase with depth, the identified groundwater contamination is believed to be the source of VOCs to soil vapor. The report also concluded that, given the current status of the site as an unoccupied property, the detected soil gas concentrations do not pose a human health risk and further investigation is not necessary. This is also consistent with the proposed future use as an unmanned, battery energy storage system. Given the lack of a soil source of VOCs to soil vapor, the report also concluded that active remediation such as a soil vapor extraction system is not necessary. The report concludes that future soil vapor monitoring is not needed and recommends that the soil vapor probes be properly abandoned.

2.2.2.3 Health Risk Assessment

As part of the Current Conditions Report, DTSC updated a Human Health Risk Assessment (HHRA) that was first completed for the site in 2010 and updated in 2014 following completion of the 2012 investigation and remediation activities. The 2017 HHRA evaluated the accepted site COC (metals and VOCs) data for soil direct contact and inhalation exposures under future commercial/industrial and construction/excavation scenarios. The key findings of the HHRA were:

- The calculated cumulative cancer risk to commercial/industrial workers from direct exposure to soil summed across all the COCs for soil ingestion, dermal contact, and outdoor inhalation is 6×10^{-7}, which is considered de minimis.
- The calculated cumulative cancer risk to construction/excavation workers from direct exposure to soil summed across all the COCs for soil ingestion, dermal contact, and outdoor inhalation is $3x10^{-7}$, which is considered de minimis. The non-cancer hazard index is 4 and exceeds the target of 1 due to potential exposure to cadmium in shallow soils (0 to10 ft bgs).

- Residual Cr^{+6} concentrations in the vadose zone underlying the Former Pit 1 and 2 areas exceed the 0.67 microgram per kilogram screening level at depths of 60 ft bgs and pose a threat to groundwater. Maximum detected concentrations of all other metals exceeding the protection of groundwater screening levels occur in the top 20 ft bgs and are unlikely to impact groundwater at levels of health concern.
- Maximum concentrations of VOCs in soil exceeding the protection of groundwater screening levels are unlikely to impact groundwater at levels of health concern.
- An evaluation of the 95% Upper Confidence Limit groundwater concentrations compared to MCLs shows that groundwater is impacted with Cr^{+6} from the Former Pit 1 and 2 areas.

The HHRA concluded that unacceptable risks to construction/excavation workers are due to cadmium concentrations in soil that remain at the site. In addition, residual Cr^{+6} concentrations in vadose zone soil could pose a threat to groundwater. The report concludes that engineering controls such as an asphalt cap may be applicable, which would require an LUC and Soil Management Plan to ensure their integrity and protect construction/excavation workers in the event that trenching or other soil movement is necessary.

3. SITE GROUNDWATER MONITORING PLAN

As recommended in the Annual GWSR, continued annual groundwater monitoring will document groundwater elevations and flow direction and assess offsite migration of Cr^{+6} to verify that groundwater conditions are stable. Consistent with the Annual GWSR recommendations, annual groundwater monitoring will be completed for shallow monitoring wells MW-1R, -5, -7R, -9 , and -11. The following subsections describe of the proposed monitoring and reporting plan.

3.1 Well Gauging, Purging, and Sampling Procedures

Depth to groundwater in each well will be measured and recorded. Following collection of water levels, the wells will be purged using a low-flow sampling procedure to collect groundwater samples from the screen interval while minimizing drawdown in the well. A submersible air bladder pump fitted with pre-cleaned, disposable polyethylene tubing will be used to purge the wells and the water discharge will be monitored for pH, temperature, specific conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity using a flow cell. These water quality parameters will be monitored during purging to determine stabilization prior to sampling.

Depth-to-groundwater measurements will be recorded during well purging and after parameters stabilize to monitor drawdown in the wells. To the extent practical, pumping rates will be controlled to allow at least 80 percent recovery of each well's pre-purge volume prior to sampling. If a well has insufficient water for low-flow purging and sampling (i.e., less than 1.5 feet water column), the well will purged dry using a bailer and allowed to recharge to 80 percent or for 24 hours prior to sampling. Once the water quality parameters have stabilized, groundwater samples will be collected in laboratory-provided containers, labeled with their unique sample information (location, date, time, and sampler identification), and placed in Ziploc plastic bags. The samples will be transported to the analytical laboratory in an iced cooler under chain-of-custody protocol.

3.2 Laboratory Analysis

Consistent with previous groundwater sampling events, all groundwater samples will be submitted to a California-certified environmental laboratory, for analysis of the following parameters:

- Cr^{+6} by USEPA Method 218.6
- Total Cr by USEPA Method 6010B
- Dissolved Cr (field filtered) by USEPA Method 6010B

3.3 Quality Assurance/Quality Control Samples

Groundwater quality assurance/quality control (QA/QC) samples will collected and submitted for analysis during the groundwater monitoring events to verify sample integrity during the various stages of collection, storage, transport, and analysis. Field duplicate samples will collected at a rate of 10 percent or more of primary samples to verify consistency in laboratory analytical results. Each labeled container will be stored on ice with the groundwater samples and delivered to the laboratory with the appropriate chain-of-custody documentation.

3.4 Data Quality Review

The laboratory data, including the laboratory-provided QA/QC data, will be reviewed to determine data quality and usability. The data review will be consistent with the principles presented in the USEPA

National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2020a). A QA/QC review memorandum will be generated to document the findings of the review and provide any additional data qualifiers.

3.5 Reporting

Upon receipt of the analytical data, an annual groundwater monitoring report will be prepared to present the current data along with historical data to provide information verifying that groundwater concentrations of Cr^{+6} are remaining stable or decreasing. The report will provide historical groundwater data tables and maps showing the distribution of site COCs.

Consistent with the last four monitoring events, if the monitoring shows that Cr^{+6} concentrations continue to decrease to near or below the MCL or remain relatively stable (within the same order of magnitude concentrations) without showing any significant increase (order of magnitude) following two additional annual monitoring events, a request for the cessation of monitoring and site closure will be made. The report will present an evaluation of the monitoring data and site conditions, including a re-evaluation of human health risk showing the lack of offsite migration and complete exposure pathways, to justify the request for cessation of monitoring and that the site be granted a “no further action” determination for groundwater, based on the low threat to human health posed by the residual Cr^{+6} concentrations.

Once DTSC approves the “No Future Action” designation for site groundwater, the remaining monitoring wells will be properly abandoned. Following the abandonment of the wells, annual inspections of the property will be completed to show that the property usage has remained commercial/industrial as specified by the LUC and the results of the inspection will be provided to DTSC in a letter report. In addition, Five Year Reports (FYR) will be prepared, starting with the first five years after the approval of the LUC. The FYR will outline the activities that have occurred over the five year period. The purpose of these reports are to document that the current site remedy (LUC) continues to be protective of human health and the environment.

4. LAND USE COVENANT

The presence of residual concentrations of metals at the site and the use of engineering controls to address the potential risk to human health and the environment require that an LUC be recorded with the property chain of title. The LUC would include the following provisions:

- Require property owners and prospective buyers to restrict property use for the following purposes:
  - A residence for human habitation
  - A hospital for humans
  - A school for persons under 21 years of age
  - A care or community center for children or senior citizens
- Prohibit any excavation work unless it is conducted in accordance with a DTSC-approved Soil Management Plan or is otherwise expressly permitted in writing by the DTSC, and performed pursuant to an appropriate and fully implemented Health and Safety Plan. The Soil Management Plan would be required prior to any ground disturbance to provide information on the location and potential concentrations of residual site COCs and the detailed protocols to identify and manage the contaminated media, if and when encountered.
- Require any impacted soils brought to the surface by grading, excavation, trenching, or backfilling to be managed in accordance with all applicable provisions of local, state, and federal laws and regulations.
- Prohibit drilling, boring, constructing, or using a well (except a groundwater monitoring well) for the purpose of extracting water for any use, including but not limited to domestic, potable, or industrial uses, unless expressly permitted in writing by the DTSC and Regional Water Quality Control Board.
- Notify the DTSC of any disturbance to any existing groundwater monitoring well on the property that could affect its performance.
- Provide DTSC reasonable access to the property for the purposes of site inspections.

The LUC restrictions would be monitored through periodic (annual) physical inspections to review and critically evaluate the property to verify that the restrictions remain in place and are functioning effectively to achieve their objectives.

5. REFERENCES

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APPENDIX D

EMISSIONS MODELING

APPENDIX D

CALIFORNIA EMISSION ESTIMATOR MODELING

COMMERCE ENERGY STORAGE PROJECT

The California Emissions Estimator Model (CalEEMod) version 2020.4.0 was used to estimate the emissions that could be expected to occur from the proposed Commerce Energy Storage Project. CalEEMod is a computer model that provides a comprehensive tool for quantifying air quality impacts of land use projects. It can calculate both the daily maximum and annual average emissions for criteria pollutants as well as annual greenhouse gas (GHG) emissions. Specifically, the model can aid the user by conducting the following calculations:

- Short-term construction emissions associated with the demolition, site preparation, grading, building, coating, and paving.
- Operational emissions for fully built-out land use development.
- Mitigation adjustments to both short-term construction and operational emissions.

CalEEMod utilizes widely accepted methodologies for estimating emissions combined with default project input data based on land use type that can be used when site-specific information is not available. Default input values include consideration of the Project's physical location. Where default values were used for emissions modeling, they were taken from the land use category of "unrefrigerated warehouse, no rail" since this is the CalEEMod land use category that most closely approximates the Project.

Project emissions modeling input used the actual Site area to be graded based on the preliminary Site Plan (2.3 acres). In addition, the estimated construction equipment use scenario shown in Attachment D.1 was developed for the project in place of the CalEEMod default values for:

- Construction phases.
- Construction schedule.
- Equipment utilized.
- Hours per day of equipment utilization.
- Vehicle trips to match maximum worker estimate and paving material needs.

A 3-times-per-day watering schedule is committed in the Project Description to reduce fugitive PM10 and PM2.5 emissions from construction. The 3-times-per-day watering commitment is reflected in the Project emissions model output for the mitigated construction condition.

The more stringent of the SCAQMD District-wide and local significance thresholds for construction activities are provided in the following table along with maximum daily Project construction emissions as estimated by CalEEMod. The CalEEMod printout is provided in Attachment D.2.

Criteria Pollutant	Max Daily Threshold (pounds)*	Project Emissions (max pounds/day)**
Oxides of Nitrogen (NOx)	80	17.0
Reactive Organic Gasses (ROGs)	75	1.8
Particulate Matter (PM10)	4	3.3
Particulate Matter (PM2.5)	3	2.0
Sulfur Dioxide (SO2)	150	0.03
Carbon Monoxide (CO)	550	15.9
Lead	3	0.0

*Source: South Coast AQMD Air Quality Significance Thresholds, Updated April 2019 and "Appendix-c-mass-rate-lst-look-up-tables" Updated October 2009.

**With watering of disturbed areas three times daily as committed in the Project Description.

For operations emissions modeling, characteristics defined in the Project Description were used in place of the CalEEMod default values to reflect:

- An unoccupied facility with much less routine traffic than the default value for a typical "unrefrigerated warehouse, no rail". The modeling conservatively used an average of one trip per day and still shows the operations emissions to be negligible. Actual operations inspections and maintenance trips are expected to be much less frequent.
- Lack of architectural coating.
- Lack of wastewater at an unoccupied facility.
- Lack of solid waste generated at an unoccupied facility.
- No landscaping care.

The more stringent of the SCAQMD District-wide and local significance thresholds for operational activities are provided in the following table along with maximum daily Project operations emissions as estimated by CalEEMod.

Criteria Pollutant	Max Daily Threshold (pounds)*	Project Emissions (max pounds/day)**
Oxides of Nitrogen (NOx)	55	0.01
Reactive Organic Gasses (ROGs)	55	0.6
Particulate Matter (PM10)	1	0.009
Particulate Matter (PM2.5)	1	0.003
Sulfur Dioxide (SO2)	150	0.001
Carbon Monoxide (CO)	550	0.05
Lead	3	0.0

*Source: South Coast AQMD Air Quality Significance Thresholds, Updated April 2019 and "Appendix-c-mass-rate-lst-look-up-tables" Updated October 2009.

Attachment D.1

CalEEMod Estimated Construction Scenario

ATTACHMENT D.1
ESTIMATED CONSTRUCTION SCENARIO FOR MODELING
COMMERCE ENERGY STORAGE PROJECT

WORK STAGE	SCHEDULE	EQUIPMENT	NUMBER	HOURS/DAY
Onsite				
Rough Grading	Weeks 1-3	Bulldozer	1	6
		Scraper	1	6
		Water Truck	1	4
		Compactor	1	6
		Tractor/Loader/Backhoe	1	6
		Dump Truck (trees, debris)	1	6
		Grader	1	2
Finish Grading	Weeks 4-6	Water Truck	1	2
		Grader	1	6
		Tractor/Loader/Backhoe	1	6
		Compactor	1	6
		Bobcat	1	6
Trenching/Foundations	Weeks 7-10	Water Truck	1	2
		Dump Truck	1	4
		Tractor/Loader/Backhoe	2	6
		Bobcat	1	6
Vertical (building option)	Weeks 11- 20	Water Truck	1	2
		Man Lift	2	6
		Crane	1	4
		Fork Lift	1	2
Paving/Surfacing	Weeks 21-24	Asphalt Roller	1	4
		Tack trailer (for asphalt)	1	4
Equipment Installation	Weeks 25-33	Man Lift	2	6
		Forklift	1	6
Testing & Commissioning	Weeks 33-38	Man Lift	1	4
Offsite				
Underground Installations	Weeks 25-28	Concrete saw	1	6
		Excavator/Backhoe	1	6
		Loader	1	6
		Dump Truck	2	6
		Street Sweeper	1	2
		Asphalt Roller	1	6
		Tack trailer (for asphalt)	1	6
		Horizontal Drill	1	6
		Mud truck (if drilled)	1	6

Attachment D.2

CalEEMod Modeling Printout

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Commerce Energy Storage 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
Unrefrigerated Warehouse-No Rail	32.00	1000sqft	2.30	32,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage is total to be graded during construction. 32,000 square feet is size of warehouse structure.

Construction Phase - Phases and phase duration provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Trips and VMT - Non-default trips reflect maximum workers on site as provided by construction contractor.

Grading - Area to be graded provided by construction contractor.

Vehicle Trips - Facility is an energy storage site, and is not occupied. 1 vehicle trip per day is assumed. This is very conservative, since maintence visits will be less than weekly.

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products - The site is not a city park or golf course.

Area Coating - Building is not architecturally coated, nor will be.

Landscape Equipment - Landscaping will not be required at this site.

Water And Wastewater - Facility is unmanned, and will not have water.

Solid Waste - Facility is unmanned, and will not generate waste.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	10.00	20.00
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblGrading	AcresOfGrading	13.13	2.30
tblGrading	AcresOfGrading	15.00	2.30
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LotAcreage	0.73	2.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblSolidWaste	SolidWasteGenerationRate	30.08	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.74	0.03
tblVehicleTrips	SU_TR	1.74	0.03
tblVehicleTrips	WD_TR	1.74	0.03
tblWater	IndoorWaterUseRate	7,400,000.00	0.00

2.0 Emissions Summary

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.8396	17.0258	15.8703	0.0316	6.3524	0.7484	7.1008	3.3723	0.6885	4.0608	0.0000	2,965.4121	2,965.4121	0.7140	0.0403	2,989.4608
Maximum	**1.8396**	**17.0258**	**15.8703**	**0.0316**	**6.3524**	**0.7484**	**7.1008**	**3.3723**	**0.6885**	**4.0608**	**0.0000**	**2,965.4121**	**2,965.4121**	**0.7140**	**0.0403**	**2,989.4608**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.8396	17.0258	15.8703	0.0316	2.5797	0.7484	3.3281	1.3423	0.6885	2.0308	0.0000	2,965.4121	2,965.4121	0.7140	0.0403	2,989.4608
Maximum	**1.8396**	**17.0258**	**15.8703**	**0.0316**	**2.5797**	**0.7484**	**3.3281**	**1.3423**	**0.6885**	**2.0308**	**0.0000**	**2,965.4121**	**2,965.4121**	**0.7140**	**0.0403**	**2,989.4608**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.39**	**0.00**	**53.13**	**60.20**	**0.00**	**49.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Energy	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Mobile	3.5200e-003	3.9600e-003	0.0401	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		9.2523	9.2523	5.7000e-004	3.6000e-004	9.3723
Total	**0.6382**	**0.0114**	**0.0496**	**1.3000e-004**	**9.2900e-003**	**6.3000e-004**	**9.9200e-003**	**2.4700e-003**	**6.3000e-004**	**3.1000e-003**		**18.1296**	**18.1296**	**7.6000e-004**	**5.2000e-004**	**18.3028**

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	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Energy	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Mobile	3.5200e-003	3.9600e-003	0.0401	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		9.2523	9.2523	5.7000e-004	3.6000e-004	9.3723
Total	**0.6382**	**0.0114**	**0.0496**	**1.3000e-004**	**9.2900e-003**	**6.3000e-004**	**9.9200e-003**	**2.4700e-003**	**6.3000e-004**	**3.1000e-003**		**18.1296**	**18.1296**	**7.6000e-004**	**5.2000e-004**	**18.3028**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	3/1/2022	3/21/2022	5	15	
2	Fine Grading	Grading	3/22/2022	4/11/2022	5	15	
3	Trenching / Foundations	Trenching	4/12/2022	5/9/2022	5	20	
4	Building	Building Construction	5/10/2022	7/18/2022	5	50	
5	Paving / Surfacing	Paving	7/19/2022	8/15/2022	5	20	
6	Installation	Building Construction	8/16/2022	10/17/2022	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.3

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Off-Highway Trucks	1	2.00	402	0.38
Rough Grading	Rollers	1	6.00	80	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Skid Steer Loaders	1	6.00	65	0.37

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Rough Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching / Foundations	Off-Highway Trucks	2	3.00	402	0.38
Trenching / Foundations	Skid Steer Loaders	1	6.00	65	0.37
Trenching / Foundations	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building	Aerial Lifts	2	6.00	63	0.31
Building	Cranes	1	4.00	231	0.29
Building	Forklifts	1	2.00	89	0.20
Building	Generator Sets	1	8.00	84	0.74
Building	Off-Highway Trucks	1	2.00	402	0.38
Building	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building	Welders	3	8.00	46	0.45
Paving / Surfacing	Dumpers/Tenders	1	4.00	16	0.38
Paving / Surfacing	Pavers	1	8.00	130	0.42
Paving / Surfacing	Paving Equipment	1	8.00	132	0.36
Paving / Surfacing	Rollers	1	4.00	80	0.38
Paving / Surfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation	Aerial Lifts	2	6.00	63	0.31
Installation	Forklifts	1	6.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching / Foundations	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building	10	40.00	5.00	70.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving / Surfacing	5	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation	3	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2022

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					6.1847	0.0000	6.1847	3.3278	0.0000	3.3278			0.0000			0.0000
Off-Road	1.5809	16.9879	9.8271	0.0227		0.7473	0.7473		0.6875	0.6875		2,194.5414	2,194.5414	0.7098		2,212.2854
Total	**1.5809**	**16.9879**	**9.8271**	**0.0227**	**6.1847**	**0.7473**	**6.9320**	**3.3278**	**0.6875**	**4.0153**		**2,194.5414**	**2,194.5414**	**0.7098**		**2,212.2854**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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	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
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0519**	**0.0379**	**0.5904**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**155.0163**	**155.0163**	**4.2200e-003**	**3.7500e-003**	**156.2404**

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					2.4120	0.0000	2.4120	1.2978	0.0000	1.2978			0.0000			0.0000
Off-Road	1.5809	16.9879	9.8271	0.0227		0.7473	0.7473		0.6875	0.6875	0.0000	2,194.5414	2,194.5414	0.7098		2,212.2854
Total	**1.5809**	**16.9879**	**9.8271**	**0.0227**	**2.4120**	**0.7473**	**3.1594**	**1.2978**	**0.6875**	**1.9854**	**0.0000**	**2,194.5414**	**2,194.5414**	**0.7098**		**2,212.2854**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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	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
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0519**	**0.0379**	**0.5904**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**155.0163**	**155.0163**	**4.2200e-003**	**3.7500e-003**	**156.2404**

3.3 Fine Grading - 2022

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					6.1847	0.0000	6.1847	3.3278	0.0000	3.3278			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.1847**	**0.7423**	**6.9270**	**3.3278**	**0.6829**	**4.0107**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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	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
Worker	0.0346	0.0253	0.3936	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		103.3442	103.3442	2.8200e-003	2.5000e-003	104.1603
Total	**0.0346**	**0.0253**	**0.3936**	**1.0200e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**103.3442**	**103.3442**	**2.8200e-003**	**2.5000e-003**	**104.1603**

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					2.4120	0.0000	2.4120	1.2978	0.0000	1.2978			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.4120**	**0.7423**	**3.1543**	**1.2978**	**0.6829**	**1.9807**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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	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
Worker	0.0346	0.0253	0.3936	1.0200e-003	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		103.3442	103.3442	2.8200e-003	2.5000e-003	104.1603
Total	**0.0346**	**0.0253**	**0.3936**	**1.0200e-003**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**103.3442**	**103.3442**	**2.8200e-003**	**2.5000e-003**	**104.1603**

3.4 Trenching / Foundations - 2022

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	0.6956	6.2202	6.9164	0.0161		0.2705	0.2705		0.2489	0.2489		1,561.3908	1,561.3908	0.5050		1,574.0155
Total	**0.6956**	**6.2202**	**6.9164**	**0.0161**		**0.2705**	**0.2705**		**0.2489**	**0.2489**		**1,561.3908**	**1,561.3908**	**0.5050**		**1,574.0155**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	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
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0450**	**0.0328**	**0.5117**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**134.3475**	**134.3475**	**3.6600e-003**	**3.2500e-003**	**135.4083**

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	0.6956	6.2202	6.9164	0.0161		0.2705	0.2705		0.2489	0.2489	0.0000	1,561.3908	1,561.3908	0.5050		1,574.0155
Total	**0.6956**	**6.2202**	**6.9164**	**0.0161**		**0.2705**	**0.2705**		**0.2489**	**0.2489**	**0.0000**	**1,561.3908**	**1,561.3908**	**0.5050**		**1,574.0155**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	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
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0450**	**0.0328**	**0.5117**	**1.3300e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**134.3475**	**134.3475**	**3.6600e-003**	**3.2500e-003**	**135.4083**

3.5 Building - 2022

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	1.6848	12.7734	14.1571	0.0257		0.5626	0.5626		0.5447	0.5447		2,351.4959	2,351.4959	0.4618		2,363.0407
Total	**1.6848**	**12.7734**	**14.1571**	**0.0257**		**0.5626**	**0.5626**		**0.5447**	**0.5447**		**2,351.4959**	**2,351.4959**	**0.4618**		**2,363.0407**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	6.5200e-003	0.2351	0.0548	8.7000e-004	0.0245	1.7500e-003	0.0263	6.7200e-003	1.6700e-003	8.3900e-003		95.3086	95.3086	5.0600e-003	0.0151	99.9415
Vendor	9.8400e-003	0.2449	0.0840	9.8000e-004	0.0320	2.3300e-003	0.0344	9.2200e-003	2.2300e-003	0.0115		105.2308	105.2308	3.5200e-003	0.0152	109.8376
Worker	0.1384	0.1010	1.5743	4.0900e-003	0.4471	2.8600e-003	0.4500	0.1186	2.6300e-003	0.1212		413.3768	413.3768	0.0113	0.0100	416.6411
Total	**0.1548**	**0.5811**	**1.7131**	**5.9400e-003**	**0.5037**	**6.9400e-003**	**0.5106**	**0.1345**	**6.5300e-003**	**0.1411**		**613.9162**	**613.9162**	**0.0198**	**0.0403**	**626.4201**

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	1.6848	12.7734	14.1571	0.0257		0.5626	0.5626		0.5447	0.5447	0.0000	2,351.4959	2,351.4959	0.4618		2,363.0407
Total	**1.6848**	**12.7734**	**14.1571**	**0.0257**		**0.5626**	**0.5626**		**0.5447**	**0.5447**	**0.0000**	**2,351.4959**	**2,351.4959**	**0.4618**		**2,363.0407**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	6.5200e-003	0.2351	0.0548	8.7000e-004	0.0245	1.7500e-003	0.0263	6.7200e-003	1.6700e-003	8.3900e-003		95.3086	95.3086	5.0600e-003	0.0151	99.9415
Vendor	9.8400e-003	0.2449	0.0840	9.8000e-004	0.0320	2.3300e-003	0.0344	9.2200e-003	2.2300e-003	0.0115		105.2308	105.2308	3.5200e-003	0.0152	109.8376
Worker	0.1384	0.1010	1.5743	4.0900e-003	0.4471	2.8600e-003	0.4500	0.1186	2.6300e-003	0.1212		413.3768	413.3768	0.0113	0.0100	416.6411
Total	**0.1548**	**0.5811**	**1.7131**	**5.9400e-003**	**0.5037**	**6.9400e-003**	**0.5106**	**0.1345**	**6.5300e-003**	**0.1411**		**613.9162**	**613.9162**	**0.0198**	**0.0403**	**626.4201**

3.6 Paving / Surfacing - 2022

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	0.6697	6.6074	8.7234	0.0136		0.3330	0.3330		0.3071	0.3071		1,308.4874	1,308.4874	0.4166		1,318.9025
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6697**	**6.6074**	**8.7234**	**0.0136**		**0.3330**	**0.3330**		**0.3071**	**0.3071**		**1,308.4874**	**1,308.4874**	**0.4166**		**1,318.9025**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	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
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0519**	**0.0379**	**0.5904**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**155.0163**	**155.0163**	**4.2200e-003**	**3.7500e-003**	**156.2404**

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	0.6697	6.6074	8.7234	0.0136		0.3330	0.3330		0.3071	0.3071	0.0000	1,308.4873	1,308.4873	0.4166		1,318.9025
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6697**	**6.6074**	**8.7234**	**0.0136**		**0.3330**	**0.3330**		**0.3071**	**0.3071**	**0.0000**	**1,308.4873**	**1,308.4873**	**0.4166**		**1,318.9025**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	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
Worker	0.0519	0.0379	0.5904	1.5300e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		155.0163	155.0163	4.2200e-003	3.7500e-003	156.2404
Total	**0.0519**	**0.0379**	**0.5904**	**1.5300e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**155.0163**	**155.0163**	**4.2200e-003**	**3.7500e-003**	**156.2404**

3.7 Installation - 2022

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	0.1393	1.6316	2.5063	3.6700e-003		0.0680	0.0680		0.0626	0.0626		354.9529	354.9529	0.1148		357.8229
Total	**0.1393**	**1.6316**	**2.5063**	**3.6700e-003**		**0.0680**	**0.0680**		**0.0626**	**0.0626**		**354.9529**	**354.9529**	**0.1148**		**357.8229**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

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	0.0000
Vendor	9.8400e-003	0.2449	0.0840	9.8000e-004	0.0320	2.3300e-003	0.0344	9.2200e-003	2.2300e-003	0.0115		105.2308	105.2308	3.5200e-003	0.0152	109.8376
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0548**	**0.2778**	**0.5956**	**2.3100e-003**	**0.1773**	**3.2600e-003**	**0.1806**	**0.0478**	**3.0900e-003**	**0.0508**		**239.5783**	**239.5783**	**7.1800e-003**	**0.0184**	**245.2459**

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	0.1393	1.6316	2.5063	3.6700e-003		0.0680	0.0680		0.0626	0.0626	0.0000	354.9529	354.9529	0.1148		357.8229
Total	**0.1393**	**1.6316**	**2.5063**	**3.6700e-003**		**0.0680**	**0.0680**		**0.0626**	**0.0626**	**0.0000**	**354.9529**	**354.9529**	**0.1148**		**357.8229**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

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	0.0000
Vendor	9.8400e-003	0.2449	0.0840	9.8000e-004	0.0320	2.3300e-003	0.0344	9.2200e-003	2.2300e-003	0.0115		105.2308	105.2308	3.5200e-003	0.0152	109.8376
Worker	0.0450	0.0328	0.5117	1.3300e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		134.3475	134.3475	3.6600e-003	3.2500e-003	135.4083
Total	**0.0548**	**0.2778**	**0.5956**	**2.3100e-003**	**0.1773**	**3.2600e-003**	**0.1806**	**0.0478**	**3.0900e-003**	**0.0508**		**239.5783**	**239.5783**	**7.1800e-003**	**0.0184**	**245.2459**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5200e-003	3.9600e-003	0.0401	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		9.2523	9.2523	5.7000e-004	3.6000e-004	9.3723
Unmitigated	3.5200e-003	3.9600e-003	0.0401	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		9.2523	9.2523	5.7000e-004	3.6000e-004	9.3723

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.96	0.96	0.96	4,411	4,411
Total	0.96	0.96	0.96	4,411	4,411

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
NaturalGas Unmitigated	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230

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					
Unrefrigerated Warehouse-No Rail	75.3973	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Total		**8.1000e-004**	**7.3900e-003**	**6.2100e-003**	**4.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**8.8703**	**8.8703**	**1.7000e-004**	**1.6000e-004**	**8.9230**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.0753973	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Total		**8.1000e-004**	**7.3900e-003**	**6.2100e-003**	**4.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**8.8703**	**8.8703**	**1.7000e-004**	**1.6000e-004**	**8.9230**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Unmitigated	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Total	**0.6339**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.4600e-003**

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Total	**0.6339**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.4600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Commerce Energy Storage Project - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Commerce Energy Storage Project

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	32.00	1000sqft	2.30	32,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage is total to be graded during construction. 32,000 square feet is size of warehouse structure.

Construction Phase - Phases and phase duration provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Trips and VMT - Non-default trips reflect maximum workers on site as provided by construction contractor.

Grading - Area to be graded provided by construction contractor.

Vehicle Trips - Facility is an energy storage site, and is not occupied. 1 vehicle trip per day is assumed. This is very conservative, since maintence visits will be less than weekly.

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products - The site is not a city park or golf course.

Area Coating - Building is not architecturally coated, nor will be.

Landscape Equipment - Landscaping will not be required at this site.

Water And Wastewater - Facility is unmanned, and will not have water.

Solid Waste - Facility is unmanned, and will not generate waste.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	10.00	20.00
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblGrading	AcresOfGrading	13.13	2.30
tblGrading	AcresOfGrading	15.00	2.30
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LotAcreage	0.73	2.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblSolidWaste	SolidWasteGenerationRate	30.08	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.74	0.03
tblVehicleTrips	SU_TR	1.74	0.03
tblVehicleTrips	WD_TR	1.74	0.03
tblWater	IndoorWaterUseRate	7,400,000.00	0.00

2.0 Emissions Summary

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.8491	17.0297	15.7453	0.0314	6.3524	0.7484	7.1008	3.3723	0.6885	4.0608	0.0000	2,943.6241	2,943.6241	0.7140	0.0410	2,967.8874
Maximum	**1.8491**	**17.0297**	**15.7453**	**0.0314**	**6.3524**	**0.7484**	**7.1008**	**3.3723**	**0.6885**	**4.0608**	**0.0000**	**2,943.6241**	**2,943.6241**	**0.7140**	**0.0410**	**2,967.8874**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.8491	17.0297	15.7453	0.0314	2.5797	0.7484	3.3281	1.3423	0.6885	2.0308	0.0000	2,943.6241	2,943.6241	0.7140	0.0410	2,967.8874
Maximum	**1.8491**	**17.0297**	**15.7453**	**0.0314**	**2.5797**	**0.7484**	**3.3281**	**1.3423**	**0.6885**	**2.0308**	**0.0000**	**2,943.6241**	**2,943.6241**	**0.7140**	**0.0410**	**2,967.8874**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.39**	**0.00**	**53.13**	**60.20**	**0.00**	**49.99**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Energy	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Mobile	3.4700e-003	4.2800e-003	0.0388	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		8.8548	8.8548	5.8000e-004	3.7000e-004	8.9798
Total	**0.6382**	**0.0117**	**0.0482**	**1.3000e-004**	**9.2900e-003**	**6.3000e-004**	**9.9200e-003**	**2.4700e-003**	**6.3000e-004**	**3.1000e-003**		**17.7321**	**17.7321**	**7.7000e-004**	**5.3000e-004**	**17.9102**

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	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Energy	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Mobile	3.4700e-003	4.2800e-003	0.0388	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		8.8548	8.8548	5.8000e-004	3.7000e-004	8.9798
Total	**0.6382**	**0.0117**	**0.0482**	**1.3000e-004**	**9.2900e-003**	**6.3000e-004**	**9.9200e-003**	**2.4700e-003**	**6.3000e-004**	**3.1000e-003**		**17.7321**	**17.7321**	**7.7000e-004**	**5.3000e-004**	**17.9102**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	3/1/2022	3/21/2022	5	15	
2	Fine Grading	Grading	3/22/2022	4/11/2022	5	15	
3	Trenching / Foundations	Trenching	4/12/2022	5/9/2022	5	20	
4	Building	Building Construction	5/10/2022	7/18/2022	5	50	
5	Paving / Surfacing	Paving	7/19/2022	8/15/2022	5	20	
6	Installation	Building Construction	8/16/2022	10/17/2022	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.3

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Off-Highway Trucks	1	2.00	402	0.38
Rough Grading	Rollers	1	6.00	80	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Skid Steer Loaders	1	6.00	65	0.37

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Rough Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching / Foundations	Off-Highway Trucks	2	3.00	402	0.38
Trenching / Foundations	Skid Steer Loaders	1	6.00	65	0.37
Trenching / Foundations	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building	Aerial Lifts	2	6.00	63	0.31
Building	Cranes	1	4.00	231	0.29
Building	Forklifts	1	2.00	89	0.20
Building	Generator Sets	1	8.00	84	0.74
Building	Off-Highway Trucks	1	2.00	402	0.38
Building	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building	Welders	3	8.00	46	0.45
Paving / Surfacing	Dumpers/Tenders	1	4.00	16	0.38
Paving / Surfacing	Pavers	1	8.00	130	0.42
Paving / Surfacing	Paving Equipment	1	8.00	132	0.36
Paving / Surfacing	Rollers	1	4.00	80	0.38
Paving / Surfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation	Aerial Lifts	2	6.00	63	0.31
Installation	Forklifts	1	6.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching / Foundations	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building	10	40.00	5.00	70.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving / Surfacing	5	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation	3	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2022

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					6.1847	0.0000	6.1847	3.3278	0.0000	3.3278			0.0000			0.0000
Off-Road	1.5809	16.9879	9.8271	0.0227		0.7473	0.7473		0.6875	0.6875		2,194.5414	2,194.5414	0.7098		2,212.2854
Total	**1.5809**	**16.9879**	**9.8271**	**0.0227**	**6.1847**	**0.7473**	**6.9320**	**3.3278**	**0.6875**	**4.0153**		**2,194.5414**	**2,194.5414**	**0.7098**		**2,212.2854**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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	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
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0556**	**0.0419**	**0.5421**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**146.8205**	**146.8205**	**4.2700e-003**	**4.0100e-003**	**148.1225**

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					2.4120	0.0000	2.4120	1.2978	0.0000	1.2978			0.0000			0.0000
Off-Road	1.5809	16.9879	9.8271	0.0227		0.7473	0.7473		0.6875	0.6875	0.0000	2,194.5414	2,194.5414	0.7098		2,212.2854
Total	**1.5809**	**16.9879**	**9.8271**	**0.0227**	**2.4120**	**0.7473**	**3.1594**	**1.2978**	**0.6875**	**1.9854**	**0.0000**	**2,194.5414**	**2,194.5414**	**0.7098**		**2,212.2854**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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	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
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0556**	**0.0419**	**0.5421**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**146.8205**	**146.8205**	**4.2700e-003**	**4.0100e-003**	**148.1225**

3.3 Fine Grading - 2022

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					6.1847	0.0000	6.1847	3.3278	0.0000	3.3278			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**6.1847**	**0.7423**	**6.9270**	**3.3278**	**0.6829**	**4.0107**		**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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	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
Worker	0.0370	0.0279	0.3614	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		97.8803	97.8803	2.8500e-003	2.6700e-003	98.7483
Total	**0.0370**	**0.0279**	**0.3614**	**9.7000e-004**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**97.8803**	**97.8803**	**2.8500e-003**	**2.6700e-003**	**98.7483**

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					2.4120	0.0000	2.4120	1.2978	0.0000	1.2978			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	**1.5403**	**16.9836**	**9.2202**	**0.0206**	**2.4120**	**0.7423**	**3.1543**	**1.2978**	**0.6829**	**1.9807**	**0.0000**	**1,995.4825**	**1,995.4825**	**0.6454**		**2,011.6169**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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	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
Worker	0.0370	0.0279	0.3614	9.7000e-004	0.1118	7.2000e-004	0.1125	0.0296	6.6000e-004	0.0303		97.8803	97.8803	2.8500e-003	2.6700e-003	98.7483
Total	**0.0370**	**0.0279**	**0.3614**	**9.7000e-004**	**0.1118**	**7.2000e-004**	**0.1125**	**0.0296**	**6.6000e-004**	**0.0303**		**97.8803**	**97.8803**	**2.8500e-003**	**2.6700e-003**	**98.7483**

3.4 Trenching / Foundations - 2022

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	0.6956	6.2202	6.9164	0.0161		0.2705	0.2705		0.2489	0.2489		1,561.3908	1,561.3908	0.5050		1,574.0155
Total	**0.6956**	**6.2202**	**6.9164**	**0.0161**		**0.2705**	**0.2705**		**0.2489**	**0.2489**		**1,561.3908**	**1,561.3908**	**0.5050**		**1,574.0155**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	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
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0482**	**0.0363**	**0.4698**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**127.2444**	**127.2444**	**3.7000e-003**	**3.4800e-003**	**128.3729**

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	0.6956	6.2202	6.9164	0.0161		0.2705	0.2705		0.2489	0.2489	0.0000	1,561.3908	1,561.3908	0.5050		1,574.0155
Total	**0.6956**	**6.2202**	**6.9164**	**0.0161**		**0.2705**	**0.2705**		**0.2489**	**0.2489**	**0.0000**	**1,561.3908**	**1,561.3908**	**0.5050**		**1,574.0155**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	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
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0482**	**0.0363**	**0.4698**	**1.2600e-003**	**0.1453**	**9.3000e-004**	**0.1462**	**0.0385**	**8.6000e-004**	**0.0394**		**127.2444**	**127.2444**	**3.7000e-003**	**3.4800e-003**	**128.3729**

3.5 Building - 2022

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	1.6848	12.7734	14.1571	0.0257		0.5626	0.5626		0.5447	0.5447		2,351.4959	2,351.4959	0.4618		2,363.0407
Total	**1.6848**	**12.7734**	**14.1571**	**0.0257**		**0.5626**	**0.5626**		**0.5447**	**0.5447**		**2,351.4959**	**2,351.4959**	**0.4618**		**2,363.0407**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	6.3700e-003	0.2447	0.0558	8.7000e-004	0.0245	1.7500e-003	0.0263	6.7200e-003	1.6700e-003	8.3900e-003		95.3365	95.3365	5.0500e-003	0.0151	99.9707
Vendor	9.7200e-003	0.2550	0.0869	9.8000e-004	0.0320	2.3400e-003	0.0344	9.2200e-003	2.2400e-003	0.0115		105.2703	105.2703	3.5100e-003	0.0152	109.8827
Worker	0.1482	0.1116	1.4455	3.8700e-003	0.4471	2.8600e-003	0.4500	0.1186	2.6300e-003	0.1212		391.5213	391.5213	0.0114	0.0107	394.9934
Total	**0.1643**	**0.6113**	**1.5881**	**5.7200e-003**	**0.5037**	**6.9500e-003**	**0.5106**	**0.1345**	**6.5400e-003**	**0.1411**		**592.1281**	**592.1281**	**0.0200**	**0.0410**	**604.8467**

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	1.6848	12.7734	14.1571	0.0257		0.5626	0.5626		0.5447	0.5447	0.0000	2,351.4959	2,351.4959	0.4618		2,363.0407
Total	**1.6848**	**12.7734**	**14.1571**	**0.0257**		**0.5626**	**0.5626**		**0.5447**	**0.5447**	**0.0000**	**2,351.4959**	**2,351.4959**	**0.4618**		**2,363.0407**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	6.3700e-003	0.2447	0.0558	8.7000e-004	0.0245	1.7500e-003	0.0263	6.7200e-003	1.6700e-003	8.3900e-003		95.3365	95.3365	5.0500e-003	0.0151	99.9707
Vendor	9.7200e-003	0.2550	0.0869	9.8000e-004	0.0320	2.3400e-003	0.0344	9.2200e-003	2.2400e-003	0.0115		105.2703	105.2703	3.5100e-003	0.0152	109.8827
Worker	0.1482	0.1116	1.4455	3.8700e-003	0.4471	2.8600e-003	0.4500	0.1186	2.6300e-003	0.1212		391.5213	391.5213	0.0114	0.0107	394.9934
Total	**0.1643**	**0.6113**	**1.5881**	**5.7200e-003**	**0.5037**	**6.9500e-003**	**0.5106**	**0.1345**	**6.5400e-003**	**0.1411**		**592.1281**	**592.1281**	**0.0200**	**0.0410**	**604.8467**

3.6 Paving / Surfacing - 2022

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	0.6697	6.6074	8.7234	0.0136		0.3330	0.3330		0.3071	0.3071		1,308.4874	1,308.4874	0.4166		1,318.9025
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6697**	**6.6074**	**8.7234**	**0.0136**		**0.3330**	**0.3330**		**0.3071**	**0.3071**		**1,308.4874**	**1,308.4874**	**0.4166**		**1,318.9025**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	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
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0556**	**0.0419**	**0.5421**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**146.8205**	**146.8205**	**4.2700e-003**	**4.0100e-003**	**148.1225**

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	0.6697	6.6074	8.7234	0.0136		0.3330	0.3330		0.3071	0.3071	0.0000	1,308.4873	1,308.4873	0.4166		1,318.9025
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6697**	**6.6074**	**8.7234**	**0.0136**		**0.3330**	**0.3330**		**0.3071**	**0.3071**	**0.0000**	**1,308.4873**	**1,308.4873**	**0.4166**		**1,318.9025**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	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
Worker	0.0556	0.0419	0.5421	1.4500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		146.8205	146.8205	4.2700e-003	4.0100e-003	148.1225
Total	**0.0556**	**0.0419**	**0.5421**	**1.4500e-003**	**0.1677**	**1.0700e-003**	**0.1687**	**0.0445**	**9.9000e-004**	**0.0455**		**146.8205**	**146.8205**	**4.2700e-003**	**4.0100e-003**	**148.1225**

3.7 Installation - 2022

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	0.1393	1.6316	2.5063	3.6700e-003		0.0680	0.0680		0.0626	0.0626		354.9529	354.9529	0.1148		357.8229
Total	**0.1393**	**1.6316**	**2.5063**	**3.6700e-003**		**0.0680**	**0.0680**		**0.0626**	**0.0626**		**354.9529**	**354.9529**	**0.1148**		**357.8229**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

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	0.0000
Vendor	9.7200e-003	0.2550	0.0869	9.8000e-004	0.0320	2.3400e-003	0.0344	9.2200e-003	2.2400e-003	0.0115		105.2703	105.2703	3.5100e-003	0.0152	109.8827
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0579**	**0.2913**	**0.5567**	**2.2400e-003**	**0.1773**	**3.2700e-003**	**0.1806**	**0.0478**	**3.1000e-003**	**0.0509**		**232.5147**	**232.5147**	**7.2100e-003**	**0.0187**	**238.2555**

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	0.1393	1.6316	2.5063	3.6700e-003		0.0680	0.0680		0.0626	0.0626	0.0000	354.9529	354.9529	0.1148		357.8229
Total	**0.1393**	**1.6316**	**2.5063**	**3.6700e-003**		**0.0680**	**0.0680**		**0.0626**	**0.0626**	**0.0000**	**354.9529**	**354.9529**	**0.1148**		**357.8229**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

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	0.0000
Vendor	9.7200e-003	0.2550	0.0869	9.8000e-004	0.0320	2.3400e-003	0.0344	9.2200e-003	2.2400e-003	0.0115		105.2703	105.2703	3.5100e-003	0.0152	109.8827
Worker	0.0482	0.0363	0.4698	1.2600e-003	0.1453	9.3000e-004	0.1462	0.0385	8.6000e-004	0.0394		127.2444	127.2444	3.7000e-003	3.4800e-003	128.3729
Total	**0.0579**	**0.2913**	**0.5567**	**2.2400e-003**	**0.1773**	**3.2700e-003**	**0.1806**	**0.0478**	**3.1000e-003**	**0.0509**		**232.5147**	**232.5147**	**7.2100e-003**	**0.0187**	**238.2555**

Commerce Energy Storage Project - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.4700e-003	4.2800e-003	0.0388	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		8.8548	8.8548	5.8000e-004	3.7000e-004	8.9798
Unmitigated	3.4700e-003	4.2800e-003	0.0388	9.0000e-005	9.2900e-003	6.0000e-005	9.3500e-003	2.4700e-003	6.0000e-005	2.5300e-003		8.8548	8.8548	5.8000e-004	3.7000e-004	8.9798

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.96	0.96	0.96	4,411	4,411
Total	0.96	0.96	0.96	4,411	4,411

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
NaturalGas Unmitigated	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230

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					
Unrefrigerated Warehouse-No Rail	75.3973	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Total		**8.1000e-004**	**7.3900e-003**	**6.2100e-003**	**4.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**8.8703**	**8.8703**	**1.7000e-004**	**1.6000e-004**	**8.9230**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.0753973	8.1000e-004	7.3900e-003	6.2100e-003	4.0000e-005		5.6000e-004	5.6000e-004		5.6000e-004	5.6000e-004		8.8703	8.8703	1.7000e-004	1.6000e-004	8.9230
Total		**8.1000e-004**	**7.3900e-003**	**6.2100e-003**	**4.0000e-005**		**5.6000e-004**	**5.6000e-004**		**5.6000e-004**	**5.6000e-004**		**8.8703**	**8.8703**	**1.7000e-004**	**1.6000e-004**	**8.9230**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Unmitigated	0.6339	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Total	**0.6339**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.4600e-003**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6336					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.0000e-004	3.0000e-005	3.2700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		7.0000e-003	7.0000e-003	2.0000e-005		7.4600e-003
Total	**0.6339**	**3.0000e-005**	**3.2700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**7.0000e-003**	**7.0000e-003**	**2.0000e-005**		**7.4600e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Commerce Energy Storage Project

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	32.00	1000sqft	2.30	32,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2023
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot acreage is total to be graded during construction. 32,000 square feet is size of warehouse structure.

Construction Phase - Phases and phase duration provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Eqipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Off-road Equipment - Equipment list provided by construction contractor.

Trips and VMT - Non-default trips reflect maximum workers on site as provided by construction contractor.

Grading - Area to be graded provided by construction contractor.

Vehicle Trips - Facility is an energy storage site, and is not occupied. 1 vehicle trip per day is assumed. This is very conservative, since maintence visits will be less than weekly.

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Consumer Products - The site is not a city park or golf course.

Area Coating - Building is not architecturally coated, nor will be.

Landscape Equipment - Landscaping will not be required at this site.

Water And Wastewater - Facility is unmanned, and will not have water.

Solid Waste - Facility is unmanned, and will not generate waste.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	220.00	50.00
tblConstructionPhase	NumDays	220.00	45.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	6.00	15.00
tblConstructionPhase	NumDays	10.00	20.00
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblGrading	AcresOfGrading	13.13	2.30
tblGrading	AcresOfGrading	15.00	2.30
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LotAcreage	0.73	2.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	6.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblSolidWaste	SolidWasteGenerationRate	30.08	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	70.00
tblTripsAndVMT	WorkerTripNumber	13.00	40.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.74	0.03
tblVehicleTrips	SU_TR	1.74	0.03
tblVehicleTrips	WD_TR	1.74	0.03
tblWater	IndoorWaterUseRate	7,400,000.00	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0890	0.7625	0.7803	1.5900e-003	0.1142	0.0331	0.1472	0.0556	0.0311	0.0868	0.0000	137.6787	137.6787	0.0311	1.4300e-003	138.8830
Maximum	**0.0890**	**0.7625**	**0.7803**	**1.5900e-003**	**0.1142**	**0.0331**	**0.1472**	**0.0556**	**0.0311**	**0.0868**	**0.0000**	**137.6787**	**137.6787**	**0.0311**	**1.4300e-003**	**138.8830**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0890	0.7625	0.7803	1.5900e-003	0.0576	0.0331	0.0907	0.0252	0.0311	0.0563	0.0000	137.6785	137.6785	0.0311	1.4300e-003	138.8829
Maximum	**0.0890**	**0.7625**	**0.7803**	**1.5900e-003**	**0.0576**	**0.0331**	**0.0907**	**0.0252**	**0.0311**	**0.0563**	**0.0000**	**137.6785**	**137.6785**	**0.0311**	**1.4300e-003**	**138.8829**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.57**	**0.00**	**38.43**	**54.73**	**0.00**	**35.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2022	5-31-2022	0.4687	0.4687
2	6-1-2022	8-31-2022	0.3462	0.3462
3	9-1-2022	9-30-2022	0.0225	0.0225
		Highest	0.4687	0.4687

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1156	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	23.2040	23.2040	1.8600e-003	2.5000e-004	23.3249
Mobile	6.2000e-004	7.9000e-004	7.1400e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4778	1.4778	1.0000e-004	6.0000e-005	1.4986
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1164**	**2.1400e-003**	**8.2700e-003**	**3.0000e-005**	**1.6600e-003**	**1.1000e-004**	**1.7700e-003**	**4.4000e-004**	**1.1000e-004**	**5.5000e-004**	**0.0000**	**24.6819**	**24.6819**	**1.9600e-003**	**3.1000e-004**	**24.8235**

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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	0.1156	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	23.2040	23.2040	1.8600e-003	2.5000e-004	23.3249
Mobile	6.2000e-004	7.9000e-004	7.1400e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4778	1.4778	1.0000e-004	6.0000e-005	1.4986
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1164**	**2.1400e-003**	**8.2700e-003**	**3.0000e-005**	**1.6600e-003**	**1.1000e-004**	**1.7700e-003**	**4.4000e-004**	**1.1000e-004**	**5.5000e-004**	**0.0000**	**24.6819**	**24.6819**	**1.9600e-003**	**3.1000e-004**	**24.8235**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	3/1/2022	3/21/2022	5	15	
2	Fine Grading	Grading	3/22/2022	4/11/2022	5	15	
3	Trenching / Foundations	Trenching	4/12/2022	5/9/2022	5	20	

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4	Building	Building Construction	5/10/2022	7/18/2022	5	50	
5	Paving / Surfacing	Paving	7/19/2022	8/15/2022	5	20	
6	Installation	Building Construction	8/16/2022	10/17/2022	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 2.3

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Off-Highway Trucks	1	2.00	402	0.38
Rough Grading	Rollers	1	6.00	80	0.38
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Skid Steer Loaders	1	6.00	65	0.37
Rough Grading	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Trenching / Foundations	Off-Highway Trucks	2	3.00	402	0.38
Trenching / Foundations	Skid Steer Loaders	1	6.00	65	0.37
Trenching / Foundations	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building	Aerial Lifts	2	6.00	63	0.31
Building	Cranes	1	4.00	231	0.29
Building	Forklifts	1	2.00	89	0.20
Building	Generator Sets	1	8.00	84	0.74
Building	Off-Highway Trucks	1	2.00	402	0.38

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Building	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building	Welders	3	8.00	46	0.45
Paving / Surfacing	Dumpers/Tenders	1	4.00	16	0.38
Paving / Surfacing	Pavers	1	8.00	130	0.42
Paving / Surfacing	Paving Equipment	1	8.00	132	0.36
Paving / Surfacing	Rollers	1	4.00	80	0.38
Paving / Surfacing	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Installation	Aerial Lifts	2	6.00	63	0.31
Installation	Forklifts	1	6.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Trenching / Foundations	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building	10	40.00	5.00	70.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving / Surfacing	5	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Installation	3	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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					0.0464	0.0000	0.0464	0.0250	0.0000	0.0250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1274	0.0737	1.7000e-004		5.6000e-003	5.6000e-003		5.1600e-003	5.1600e-003	0.0000	14.9314	14.9314	4.8300e-003	0.0000	15.0521
Total	**0.0119**	**0.1274**	**0.0737**	**1.7000e-004**	**0.0464**	**5.6000e-003**	**0.0520**	**0.0250**	**5.1600e-003**	**0.0301**	**0.0000**	**14.9314**	**14.9314**	**4.8300e-003**	**0.0000**	**15.0521**

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	3.9000e-004	3.2000e-004	4.1700e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.0139	1.0139	3.0000e-005	3.0000e-005	1.0229
Total	**3.9000e-004**	**3.2000e-004**	**4.1700e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0139**	**1.0139**	**3.0000e-005**	**3.0000e-005**	**1.0229**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Rough Grading - 2022

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					0.0181	0.0000	0.0181	9.7300e-003	0.0000	9.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0119	0.1274	0.0737	1.7000e-004		5.6000e-003	5.6000e-003		5.1600e-003	5.1600e-003	0.0000	14.9314	14.9314	4.8300e-003	0.0000	15.0521
Total	**0.0119**	**0.1274**	**0.0737**	**1.7000e-004**	**0.0181**	**5.6000e-003**	**0.0237**	**9.7300e-003**	**5.1600e-003**	**0.0149**	**0.0000**	**14.9314**	**14.9314**	**4.8300e-003**	**0.0000**	**15.0521**

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	3.9000e-004	3.2000e-004	4.1700e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.3000e-004	0.0000	1.0139	1.0139	3.0000e-005	3.0000e-005	1.0229
Total	**3.9000e-004**	**3.2000e-004**	**4.1700e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0139**	**1.0139**	**3.0000e-005**	**3.0000e-005**	**1.0229**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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					0.0464	0.0000	0.0464	0.0250	0.0000	0.0250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1274	0.0692	1.5000e-004		5.5700e-003	5.5700e-003		5.1200e-003	5.1200e-003	0.0000	13.5770	13.5770	4.3900e-003	0.0000	13.6868
Total	**0.0116**	**0.1274**	**0.0692**	**1.5000e-004**	**0.0464**	**5.5700e-003**	**0.0520**	**0.0250**	**5.1200e-003**	**0.0301**	**0.0000**	**13.5770**	**13.5770**	**4.3900e-003**	**0.0000**	**13.6868**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6759	0.6759	2.0000e-005	2.0000e-005	0.6819
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6759**	**0.6759**	**2.0000e-005**	**2.0000e-005**	**0.6819**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Fine Grading - 2022

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					0.0181	0.0000	0.0181	9.7300e-003	0.0000	9.7300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0116	0.1274	0.0692	1.5000e-004		5.5700e-003	5.5700e-003		5.1200e-003	5.1200e-003	0.0000	13.5770	13.5770	4.3900e-003	0.0000	13.6868
Total	**0.0116**	**0.1274**	**0.0692**	**1.5000e-004**	**0.0181**	**5.5700e-003**	**0.0237**	**9.7300e-003**	**5.1200e-003**	**0.0149**	**0.0000**	**13.5770**	**13.5770**	**4.3900e-003**	**0.0000**	**13.6868**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.7800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6759	0.6759	2.0000e-005	2.0000e-005	0.6819
Total	**2.6000e-004**	**2.1000e-004**	**2.7800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6759**	**0.6759**	**2.0000e-005**	**2.0000e-005**	**0.6819**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	6.9600e-003	0.0622	0.0692	1.6000e-004		2.7100e-003	2.7100e-003		2.4900e-003	2.4900e-003	0.0000	14.1647	14.1647	4.5800e-003	0.0000	14.2792
Total	**6.9600e-003**	**0.0622**	**0.0692**	**1.6000e-004**		**2.7100e-003**	**2.7100e-003**		**2.4900e-003**	**2.4900e-003**	**0.0000**	**14.1647**	**14.1647**	**4.5800e-003**	**0.0000**	**14.2792**

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	4.5000e-004	3.7000e-004	4.8200e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1716	1.1716	3.0000e-005	3.0000e-005	1.1820
Total	**4.5000e-004**	**3.7000e-004**	**4.8200e-003**	**1.0000e-005**	**1.4200e-003**	**1.0000e-005**	**1.4300e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1716**	**1.1716**	**3.0000e-005**	**3.0000e-005**	**1.1820**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Trenching / Foundations - 2022

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	6.9600e-003	0.0622	0.0692	1.6000e-004		2.7100e-003	2.7100e-003		2.4900e-003	2.4900e-003	0.0000	14.1647	14.1647	4.5800e-003	0.0000	14.2792
Total	**6.9600e-003**	**0.0622**	**0.0692**	**1.6000e-004**		**2.7100e-003**	**2.7100e-003**		**2.4900e-003**	**2.4900e-003**	**0.0000**	**14.1647**	**14.1647**	**4.5800e-003**	**0.0000**	**14.2792**

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	4.5000e-004	3.7000e-004	4.8200e-003	1.0000e-005	1.4200e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1716	1.1716	3.0000e-005	3.0000e-005	1.1820
Total	**4.5000e-004**	**3.7000e-004**	**4.8200e-003**	**1.0000e-005**	**1.4200e-003**	**1.0000e-005**	**1.4300e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**1.1716**	**1.1716**	**3.0000e-005**	**3.0000e-005**	**1.1820**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	0.0421	0.3193	0.3539	6.4000e-004		0.0141	0.0141		0.0136	0.0136	0.0000	53.3310	53.3310	0.0105	0.0000	53.5929
Total	**0.0421**	**0.3193**	**0.3539**	**6.4000e-004**		**0.0141**	**0.0141**		**0.0136**	**0.0136**	**0.0000**	**53.3310**	**53.3310**	**0.0105**	**0.0000**	**53.5929**

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	1.6000e-004	6.1900e-003	1.3800e-003	2.0000e-005	6.0000e-004	4.0000e-005	6.5000e-004	1.7000e-004	4.0000e-005	2.1000e-004	0.0000	2.1618	2.1618	1.1000e-004	3.4000e-004	2.2669
Vendor	2.4000e-004	6.4300e-003	2.1300e-003	2.0000e-005	7.9000e-004	6.0000e-005	8.5000e-004	2.3000e-004	6.0000e-005	2.8000e-004	0.0000	2.3870	2.3870	8.0000e-005	3.4000e-004	2.4916
Worker	3.4300e-003	2.8500e-003	0.0371	1.0000e-004	0.0110	7.0000e-005	0.0110	2.9100e-003	7.0000e-005	2.9800e-003	0.0000	9.0124	9.0124	2.6000e-004	2.5000e-004	9.0923
Total	**3.8300e-003**	**0.0155**	**0.0406**	**1.4000e-004**	**0.0124**	**1.7000e-004**	**0.0125**	**3.3100e-003**	**1.7000e-004**	**3.4700e-003**	**0.0000**	**13.5612**	**13.5612**	**4.5000e-004**	**9.3000e-004**	**13.8508**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building - 2022

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	0.0421	0.3193	0.3539	6.4000e-004		0.0141	0.0141		0.0136	0.0136	0.0000	53.3310	53.3310	0.0105	0.0000	53.5928
Total	**0.0421**	**0.3193**	**0.3539**	**6.4000e-004**		**0.0141**	**0.0141**		**0.0136**	**0.0136**	**0.0000**	**53.3310**	**53.3310**	**0.0105**	**0.0000**	**53.5928**

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	1.6000e-004	6.1900e-003	1.3800e-003	2.0000e-005	6.0000e-004	4.0000e-005	6.5000e-004	1.7000e-004	4.0000e-005	2.1000e-004	0.0000	2.1618	2.1618	1.1000e-004	3.4000e-004	2.2669
Vendor	2.4000e-004	6.4300e-003	2.1300e-003	2.0000e-005	7.9000e-004	6.0000e-005	8.5000e-004	2.3000e-004	6.0000e-005	2.8000e-004	0.0000	2.3870	2.3870	8.0000e-005	3.4000e-004	2.4916
Worker	3.4300e-003	2.8500e-003	0.0371	1.0000e-004	0.0110	7.0000e-005	0.0110	2.9100e-003	7.0000e-005	2.9800e-003	0.0000	9.0124	9.0124	2.6000e-004	2.5000e-004	9.0923
Total	**3.8300e-003**	**0.0155**	**0.0406**	**1.4000e-004**	**0.0124**	**1.7000e-004**	**0.0125**	**3.3100e-003**	**1.7000e-004**	**3.4700e-003**	**0.0000**	**13.5612**	**13.5612**	**4.5000e-004**	**9.3000e-004**	**13.8508**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	6.7000e-003	0.0661	0.0872	1.4000e-004		3.3300e-003	3.3300e-003		3.0700e-003	3.0700e-003	0.0000	11.8704	11.8704	3.7800e-003	0.0000	11.9649
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7000e-003**	**0.0661**	**0.0872**	**1.4000e-004**		**3.3300e-003**	**3.3300e-003**		**3.0700e-003**	**3.0700e-003**	**0.0000**	**11.8704**	**11.8704**	**3.7800e-003**	**0.0000**	**11.9649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**5.1000e-004**	**4.3000e-004**	**5.5600e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3519**	**1.3519**	**4.0000e-005**	**4.0000e-005**	**1.3638**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Paving / Surfacing - 2022

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	6.7000e-003	0.0661	0.0872	1.4000e-004		3.3300e-003	3.3300e-003		3.0700e-003	3.0700e-003	0.0000	11.8704	11.8704	3.7800e-003	0.0000	11.9649
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7000e-003**	**0.0661**	**0.0872**	**1.4000e-004**		**3.3300e-003**	**3.3300e-003**		**3.0700e-003**	**3.0700e-003**	**0.0000**	**11.8704**	**11.8704**	**3.7800e-003**	**0.0000**	**11.9649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.3000e-004	5.5600e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3519	1.3519	4.0000e-005	4.0000e-005	1.3638
Total	**5.1000e-004**	**4.3000e-004**	**5.5600e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3519**	**1.3519**	**4.0000e-005**	**4.0000e-005**	**1.3638**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1300e-003	0.0367	0.0564	8.0000e-005		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	7.2452	7.2452	2.3400e-003	0.0000	7.3038
Total	**3.1300e-003**	**0.0367**	**0.0564**	**8.0000e-005**		**1.5300e-003**	**1.5300e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**7.2452**	**7.2452**	**2.3400e-003**	**0.0000**	**7.3038**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	5.7900e-003	1.9200e-003	2.0000e-005	7.1000e-004	5.0000e-005	7.6000e-004	2.0000e-004	5.0000e-005	2.5000e-004	0.0000	2.1483	2.1483	7.0000e-005	3.1000e-004	2.2424
Worker	1.0000e-003	8.3000e-004	0.0108	3.0000e-005	3.2100e-003	2.0000e-005	3.2300e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.6361	2.6361	8.0000e-005	7.0000e-005	2.6595
Total	**1.2200e-003**	**6.6200e-003**	**0.0128**	**5.0000e-005**	**3.9200e-003**	**7.0000e-005**	**3.9900e-003**	**1.0500e-003**	**7.0000e-005**	**1.1200e-003**	**0.0000**	**4.7844**	**4.7844**	**1.5000e-004**	**3.8000e-004**	**4.9019**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Installation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1300e-003	0.0367	0.0564	8.0000e-005		1.5300e-003	1.5300e-003		1.4100e-003	1.4100e-003	0.0000	7.2452	7.2452	2.3400e-003	0.0000	7.3038
Total	**3.1300e-003**	**0.0367**	**0.0564**	**8.0000e-005**		**1.5300e-003**	**1.5300e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**7.2452**	**7.2452**	**2.3400e-003**	**0.0000**	**7.3038**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.2000e-004	5.7900e-003	1.9200e-003	2.0000e-005	7.1000e-004	5.0000e-005	7.6000e-004	2.0000e-004	5.0000e-005	2.5000e-004	0.0000	2.1483	2.1483	7.0000e-005	3.1000e-004	2.2424
Worker	1.0000e-003	8.3000e-004	0.0108	3.0000e-005	3.2100e-003	2.0000e-005	3.2300e-003	8.5000e-004	2.0000e-005	8.7000e-004	0.0000	2.6361	2.6361	8.0000e-005	7.0000e-005	2.6595
Total	**1.2200e-003**	**6.6200e-003**	**0.0128**	**5.0000e-005**	**3.9200e-003**	**7.0000e-005**	**3.9900e-003**	**1.0500e-003**	**7.0000e-005**	**1.1200e-003**	**0.0000**	**4.7844**	**4.7844**	**1.5000e-004**	**3.8000e-004**	**4.9019**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	6.2000e-004	7.9000e-004	7.1400e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4778	1.4778	1.0000e-004	6.0000e-005	1.4986
Unmitigated	6.2000e-004	7.9000e-004	7.1400e-003	2.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.4778	1.4778	1.0000e-004	6.0000e-005	1.4986

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.96	0.96	0.96	4,411	4,411
Total	0.96	0.96	0.96	4,411	4,411

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.544785	0.062844	0.187478	0.127235	0.023089	0.006083	0.010475	0.008012	0.000925	0.000611	0.024394	0.000698	0.003374

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21.7355	21.7355	1.8300e-003	2.2000e-004	21.8476
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	21.7355	21.7355	1.8300e-003	2.2000e-004	21.8476
NaturalGas Mitigated	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4686	1.4686	3.0000e-005	3.0000e-005	1.4773
NaturalGas Unmitigated	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4686	1.4686	3.0000e-005	3.0000e-005	1.4773

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	27520	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4686	1.4686	3.0000e-005	3.0000e-005	1.4773
Total		**1.5000e-004**	**1.3500e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**1.4686**	**1.4686**	**3.0000e-005**	**3.0000e-005**	**1.4773**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	27520	1.5000e-004	1.3500e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	1.4686	1.4686	3.0000e-005	3.0000e-005	1.4773
Total		**1.5000e-004**	**1.3500e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**1.4686**	**1.4686**	**3.0000e-005**	**3.0000e-005**	**1.4773**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	122560	21.7355	1.8300e-003	2.2000e-004	21.8476
Total		**21.7355**	**1.8300e-003**	**2.2000e-004**	**21.8476**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	122560	21.7355	1.8300e-003	2.2000e-004	21.8476
Total		**21.7355**	**1.8300e-003**	**2.2000e-004**	**21.8476**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.1156	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.1156	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1156**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1156**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

Commerce Energy Storage Project - Los Angeles-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX E

RESULTS OF CULTURAL RESOURCES RECORD SEARCH AND NATIVE AMERICAN HERITAGE COMMISSION FILE SEARCH

17911 Von Karman Ave.
Suite 400
Irvine, CA 92614

T 949.727.9336
TRCcompanies.com

January 25, 2022

Mr. Matthew Gilliland
Commerce Energy Storage, LLC
5000 Hopyard Road, Suite 480
Pleasanton, CA 94588

Via e-mail: mgilliland@revrenewables.com

Re: Letter Report for the Commerce Energy Storage Project, Los Angeles County, California – Results of Cultural Resources Records Search and Native American Heritage Commission Sacred Lands File Search

Dear Mr. Gilliland,

The following letter report details the results of a cultural resources study including a review of a California Historical Resources Information System (CHRIS) records search by the South-Central Coastal Information Center (SCCIC) and Sacred Lands file search by the Native American Heritage Commission undertaken by TRC. The study was conducted at the request of Commerce Energy Storage, LLC for the Commerce Energy Storage Project proposed for construction on vacant private property and within a public road right-of-way in the City of Commerce, Los Angeles County, California. The study was conducted to determine the potential for impacts to cultural resources from development of the project in support of a California Environmental Quality Act (CEQA) Initial Study. Based on the results of the record searches, TRC recommends no additional cultural resources work. The following report details the methods and findings of the study.

Project Description: The project consists of the development of a vacant approximately 2.6-acre parcel for battery energy storage, with construction and operation of an associated approximately 0.4 mile long underground 230kV electric tie-line to connect the facility to the Southern California Edison (SCE) Laguna Bell Substation. The facility will receive energy from the grid, store it, and return it to the grid when needed. The project's energy storage capacity will help to achieve local, state and federal goals for energy storage to combat climate change. Battery banks and control equipment will be housed in purpose-built outdoor enclosures or single-story buildings. A small substation will be included on the site. Access roads will be designed to fire department standards. Storm water controls will be engineered to avoid increasing peak discharge rates for the design storm. The facility will be designed for complete remote operation and will not be occupied.

Project Locations: The proposed project is located southwest of Interstate 5 Freeway south of Slauson Avenue and north of Gauge Avenue in and on both sides of Garfield Avenue, Los Angeles County, California. The Project Area can be found within Township 2 South, Range 12 West, on the South Gate, California 7.5' USGS Topographic Quadrangle in Appendix A (Figures 1-3).

Regulatory Framework: The project will require one or more discretionary actions by the City of Commerce that will be subject to compliance with the California Environmental Quality Act (CEQA). The California Office of Historic Preservation, a division of the California Department of Parks and Recreation, is responsible for carrying out the duties described in the California Public Resources Code (PRC) and maintaining the California Historic Resources Inventory and California Register of Historical Resources (CRHR). The state-level regulatory framework includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archaeological resources.

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to

whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

SCCIC Records Search: On October 1, 2021, TRC senior archaeologist Matthew Wetherbee, MSc., RPA., initiated a CHRIS records search from the SCCIC, located at the California State University in Fullerton, California. As part of this study, the following resource listings were reviewed: the California Register of Historical Resources, the California State Historic Resources Inventory, the National Register of Historic Places (NRHP), the Office of Historic Preservation (OHP), the California Historical Landmarks, the California Points of Historical Resources, Archaeological Determinations of Eligibility, and the OHP Historic Property Directory. Records search map is included in Attachment A (Figure 3).

NAHC: On October 1, 2021, TRC requested a search of the Sacred Lands File and requested a list of groups or individuals listed as contacts from the NAHC on behalf of the City of Commerce. On October 5, 2021, TRC received the results of the search and the contacts list from the NAHC by email and are included in this report (Attachment B). The results of the Sacred Lands File search were negative for cultural resources.

Findings: The results of the records search indicate that there are 11 cultural resources studies within the 0.5-mile radius of the Project Area, but none included the subject property (Table 1). As a result of these prior studies, seven cultural resources have been recorded within 0.5-mile radius of the Project Area. Six of these are outside the project area and consist of a historic period adobe, an industrial warehouse, the Bell Gardens High School, and three features of SCE historic infrastructure. The seventh resource is the SCE Laguna Bell Substation property (P-19-191950).

Table 1. Prior Cultural Resources Studies in the Project Area and 0.5-mile Radius.

Report Number	Author	Year	Study Title	Relationship to Project Area
LA-02626	Alexandrowicz, John S., W.A. Sawyer, A.Q. Duffield-Stoll, S.R. Alexandrowicz, A.A. Kuhner, M. Perry, and K. Slater	1992	Historical Archaeology at the Vicente Lugo Adobe, City of Bell Gardens, County of Los Angeles, California.	Outside Project Area
LA-04082	Romani, John F.	1982	Archaeological Survey Report for the I-5 Transitway	Outside Project Area
LA-05578	Sylvia, Barbara	2000	Negative Archaeological Survey Report	Outside Project Area
LA-05765	Unknown	1977	Historic Property Survey 07-la-5 Santa Ana Freeway (southbound) Pm 8.3/11.6 Lakewood Boulevard to Washington Boulevard.	Outside Project Area
LA-07634	Bonner, Wayne H.	2005	Cultural Resource Records Search and Site Visit Results for T-Mobile Candidate La03354c (sm354 Mesa/Redondo M6-t5a), Gage Avenue East of Darwell. Bell Gardens, Los Angeles County, California.	Outside Project Area
LA-10562	Webb, Lois M. and Gene Huey	1978	Historic Property Survey of Santa Ana Freeway from Route 605 to Washington Blvd. northbound & from Washington Blvd. to Garfield Southbound.	Outside Project Area

Report Number	Author	Year	Study Title	Relationship to Project Area
LA-11899	Supernowicz, Dana	2012	Architectural Evaluation Study of the SCE Randolph Tower Project, MetroPCS California, LLC Site No. LA5702, 6285 Randolph Street, Commerce, Los Angeles County, CA.	Outside Project Area
LA-12305	Bonner, Wayne and Crawford, Kathleen	2013	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate LA02041A (LA041 City of Commerce 3) 7400 East Slauson Avenue, Commerce, California.	Outside Project Area
LA-12465	McKenna, Jeanette	2014	A Determination of Eligibility Study: The Bell Gardens High School Campus and Proposed Improvements, Bell Gardens, Los Angeles County, California.	Outside Project Area
LA-12603	Bonner, Wayne	2013	LA0580/PA#3551455031, 630 N Garfield Avenue, Commerce (Los Angeles County) CA 90040.	Outside Project Area
LA-13274	Williams, Audry and Wendy L. Tinsley Becker	2016	Historical Resource Analysis Report / Historic Property Survey Report, Southern California Edison Company, Long Beach Steam Plant 66kV and 220kV Transmission Lines.	Outside Project Area

The Laguna Bell Substation Property (P-19-191950) was initially recorded in 2014 by Urbana Preservation and Planning, LLC as located within the current Project Area. The property is located at 6301 Garfield Avenue in Commerce, California. It comprises 24.71 acres on an irregularly shaped lot identified as Los Angeles County Assessor's Parcel Number (APN) 6330-001-80, and bounded by Randolph Street to the north, Garfield Avenue to the east, and Gage Avenue to the south. Constructed in 1924, the Laguna Bell Substation property was one of nine substations that defined the SCE 220kV system, and additionally, the facility served as a switching station and connection point to SCE's Long Beach Steam Plant complex. Today the substation property retains much of its original features and overall appearance, though the entrance to the building has been altered and instead of a driveway, it is surrounded by parking spaces. The property entrance is from a driveway south of the control house.

The Laguna Bell Substation was evaluated for National Register of Historic Places (NRHP) / California Register of Historical Resources (CRHR) eligibility in 2014 (Urbana Preservation & Planning 2014). The study concluded that, in its current appearance, configuration, and condition the Laguna Bell Substation property comprised of the Main substation building and the warehouse and appears to be eligible for listing to the NRHP / CRHR under eligibility criterion A / 1 for its association with the historic Big Creek Hydroelectric System and the SCE 220kV system in its position as an end point in the Eagle Rock-Laguna Bell line that connected to the Big Creek hydroelectric system. The substation and its 1927 building extension helped to meet the increasing demand for electricity from nearby cities and industries, facilitating the development and industrialization of central Los Angeles County. The period of significance for the property is 1924, upon completion of construction, through 1929, the end of the Big Creek Hydroelectric System period of significance. Additionally, the Main Substation Building appears to be individually eligible for listing under NRHP / CRHR criterion C / 3 as an excellent example of the Stripped Classical style applied to a substation building. The period of significance under Criterion C / 3 is 1924. The existing transformer racks and switch racks at the property do not appear to contribute to the eligibility of the Laguna Bell Substation property. The other buildings on the property — the control house, test shop, oil pump and filter house, storage building, and water tower, are not from the period of significance and do not appear to contribute to the eligibility of the Laguna Bell Substation property.

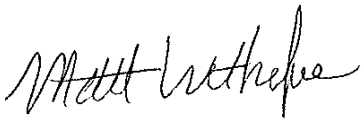
Table 2. Previously Recorded Cultural Resources within 0.5-mile Radius of the Project Area.

Primary Number	Year	Site Type	Relationship to Project Area
P-19-001260	1986	Historic - A.M. Lugo Adobe - BG	Outside (within 0.5-mile radius)
P-19-190052	2012	Historic - SCE Transmission Tower M0-T3 Mesa Redondo	Outside (within 0.5-mile radius)
P-19-190301	2013	Historic - Gehr Industries	Outside (within 0.5-mile radius)
P-19-190683	2014	Historic - Bell Gardens High School	Outside (within 0.5-mile radius)
P-19-190770	2013	Historic - SCE Commerce LA0580 (CLU6001); Laguna Bell - Velasco (220kV) M0-T2 (1952)	Outside (within 0.5-mile radius)
P-19-191950	2014	Historic - Laguna Bell Substation Property	Within Project Area
P-19-192309	2016	Historic - SCE's Long Beach-Laguna Bell 60kV and 220 kV Transmission Lines	Outside (within 0.5-mile radius)

Summary and Recommendations: Information provided by previous cultural resource studies indicates that one resource, the Laguna Bell Substation property (P-19-191950) is situated within the Project Area. Of the eight features previously recorded within the substation property, two features (Substation Building and Warehouse) were recommended eligible for listing on the NRHP / CRHR. Because the current project will not impact either of Substation building or Warehouse, construction activities will not impact historical resources under CEQA, and no further cultural resources work is recommended at this time. If cultural resources are discovered by the construction crews, a qualified archaeologist should be called to assess the findings and work with the City of Commerce to make recommendations for their treatment.

If you have any questions, please call me at (206) 945-6644 or email at mwetherbee@trccompanies.com.

Sincerely,



Matthew Wetherbee, MSc., RPA
Senior Archaeologist/Project Manager
TRC

Attachment A: Project Location and Information and Report Figures.
Attachment B: Native American Coordination; NAHC Sacred Lands File Search

References:

Urbana Preservation & Planning, LLC
2014 Historical Resource Analysis Report / Historic Property Survey Report, SCE Laguna Bell and Lighthipe Substation Properties. Prepared by Urbana Preservation and Planning, LLC, La Mesa, CA.

ATTACHMENT A:

Project Location Information
and
Report Figures

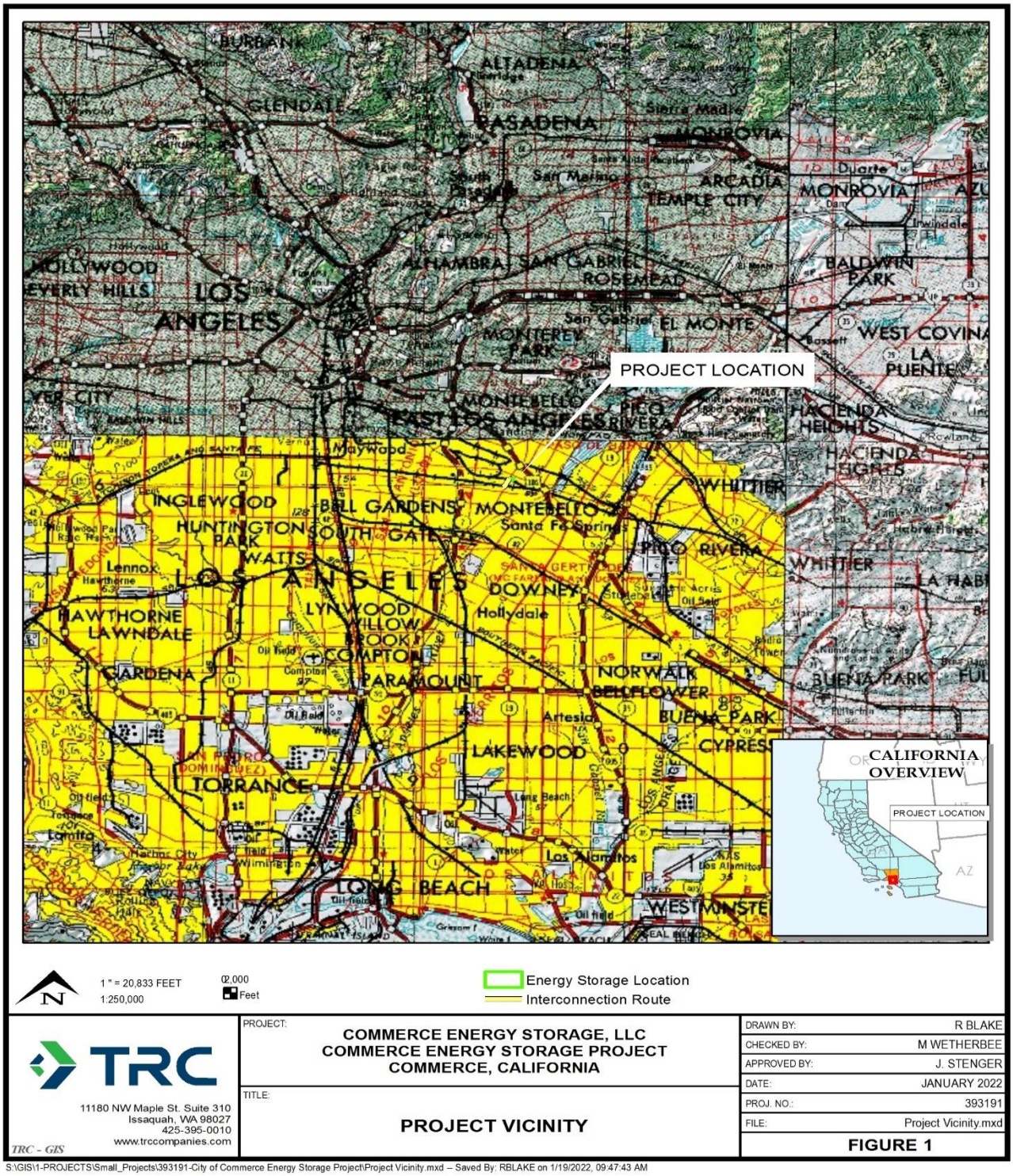


Figure 1. Project Vicinity Map.

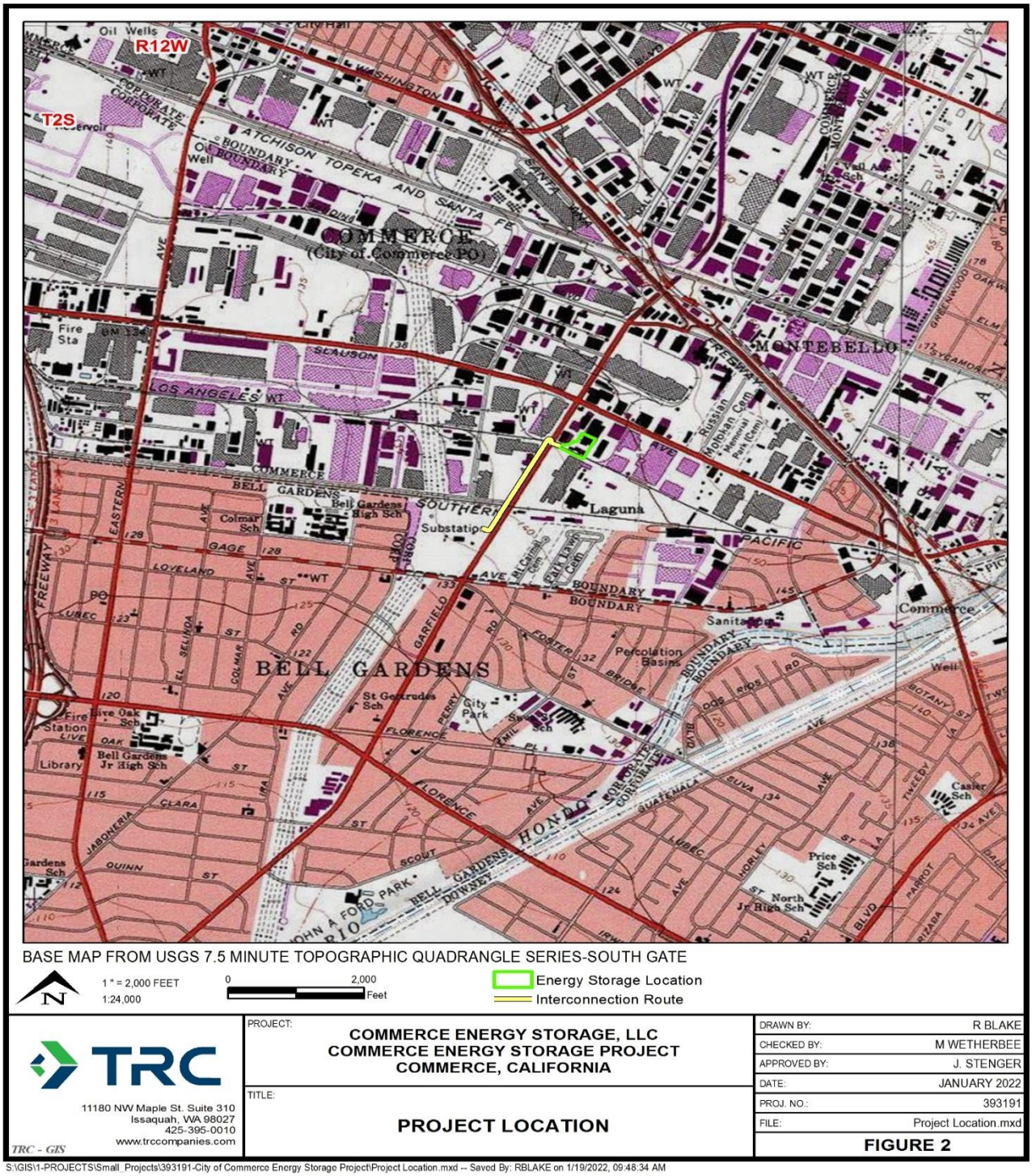


Figure 2. Project Location Map.

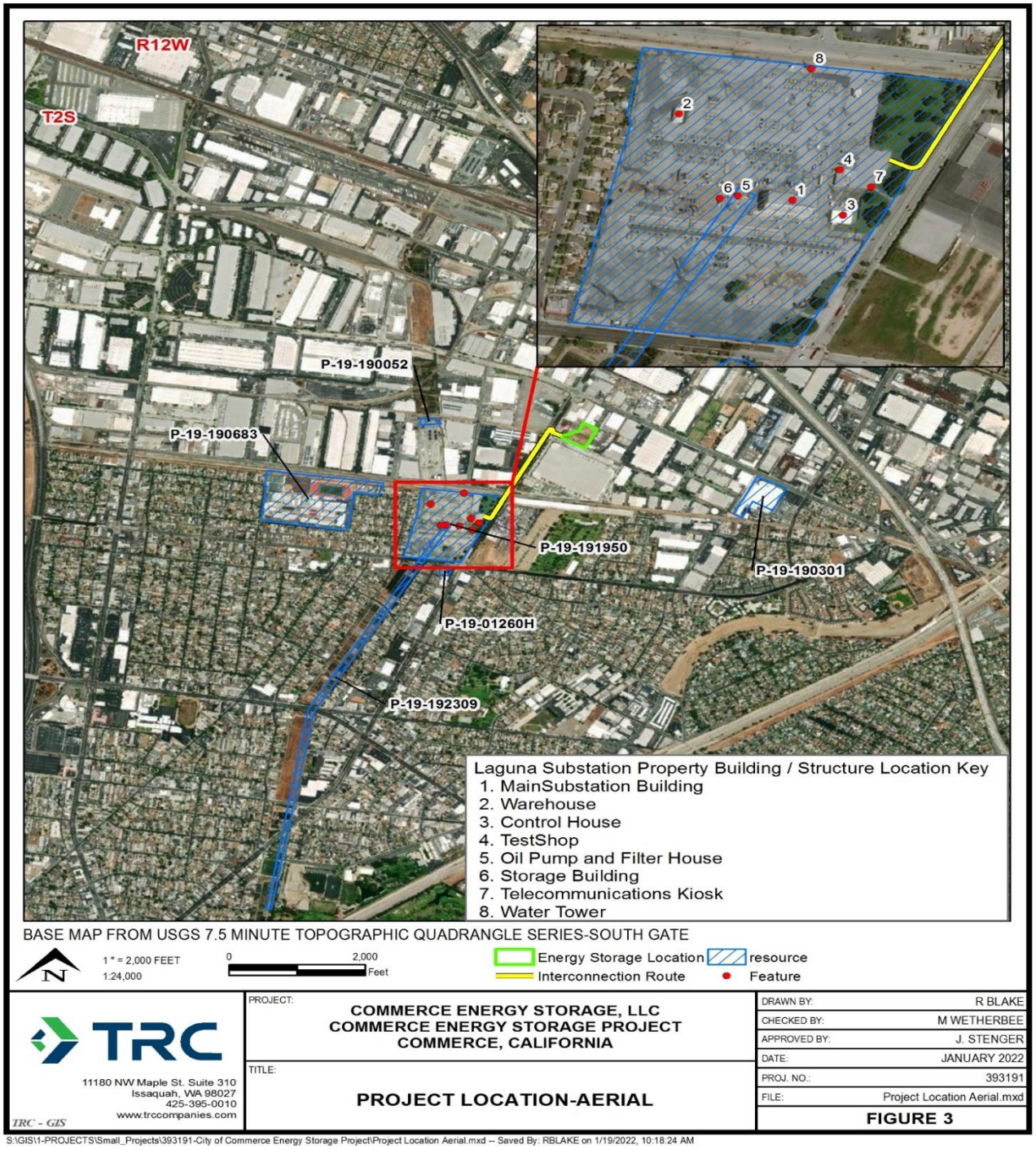


Figure 3. Project Location on Aerial Map with Cultural Resources. The Main Substation Building (No. 1) and the Warehouse (No. 2).

ATTACHMENT B:

Native American Coordination
NAHC Sacred Lands File Search

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

November 5, 2021

Matthew Wetherbee
TRC

Via Email to: mwetherbee@trccompanies.com

Re: City of Commerce Energy Storage Project, Los Angeles County

Dear Mr. Wetherbee:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Los Angeles County
11/5/2021

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393 — Gabrieleno
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693 — Gabrieleno
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231 — Gabrielino
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Gabrielino Tongva Indians of California Tribal Council
Christina Conley, Tribal Consultant and Administrator
P.O. Box 941078 — Gabrielino
Simi Valley, CA, 93094
Phone: (626) 407 - 8761
christina.marsden@alumni.usc.edu

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490 — Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street — Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820 — Cahuilla
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov

Soboba Band of Luiseno Indians
Joseph Ontiveros, Cultural Resource Department
P.O. BOX 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487 — Cahuilla, Luiseno
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed City of Commerce Energy Storage Project, Los Angeles County.

April 14, 2022

Mr. Charles Alvarez
Gabrielino-Tongva Tribe
23454 Vanowen Street
West Hills, CA 91307

Submitted to: roadkingcharles@aol.com

RE: City of Commerce Energy Storage Project

Dear Mr. Alvarez:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

In order to ensure that any areas containing cultural resources or sacred lands are considered, TRC requests any information you are willing to share regarding Native American resources (including properties, places, or archaeological sites) in the vicinity of the project site that may be affected by the proposed project. The project site is depicted on the South Gate, California United States Geologic Survey 7.5' topographic quadrangle map in an unsectioned portion of Township 2 South, Range 12 West as shown on **Figure 1**, *City of Commerce Energy Storage Project Area Location,* attached.

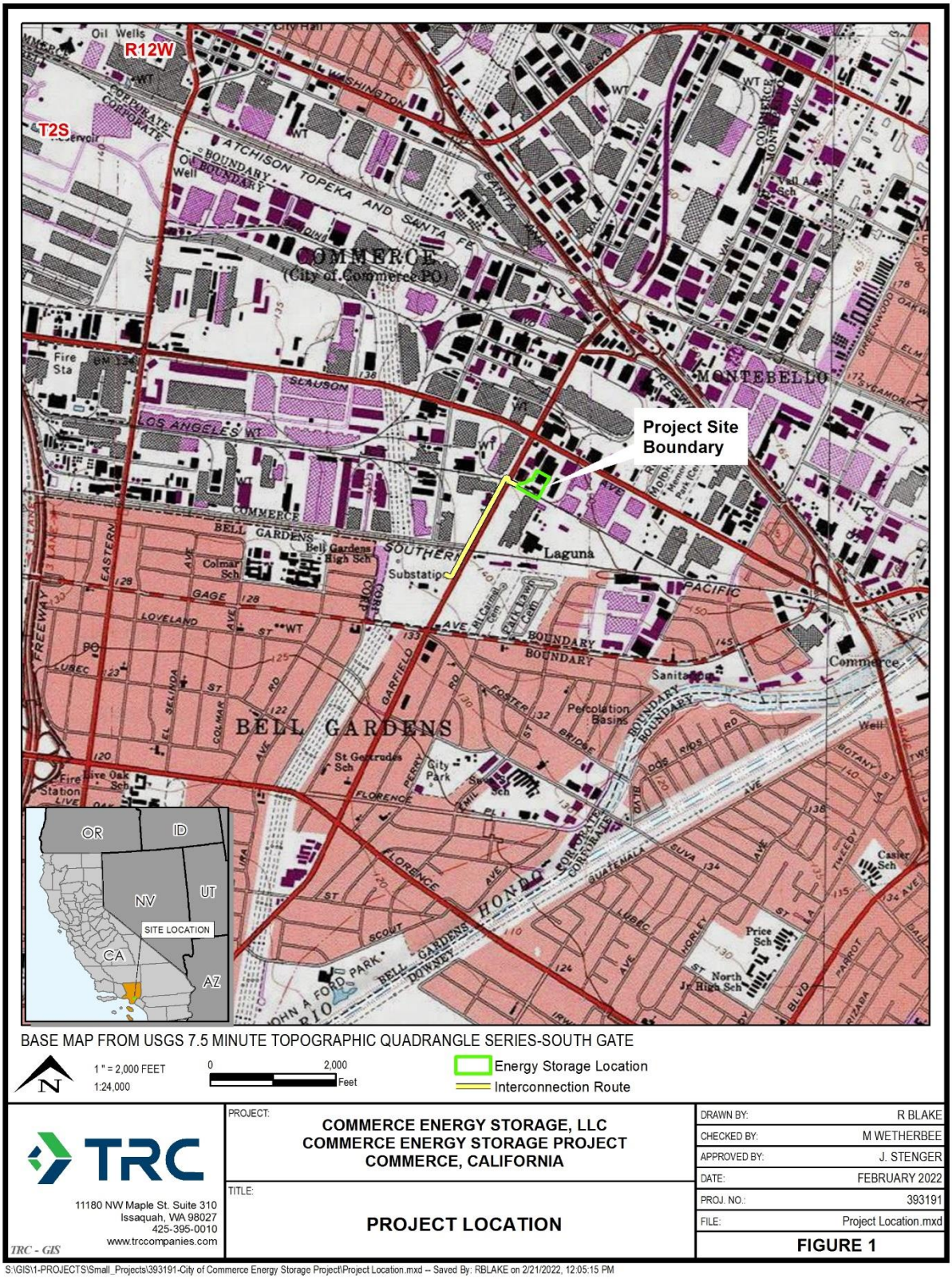
Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (206) 945-6644 or via email at mwetherbee@trccompanies.com.

Per Public Resources Code, Section 21080.3.1(d), a request for consultation must be submitted within 30 days of receipt of this letter.

Sincerely,

Matthew Wetherbee, MSc., RPA
Senior Archaeologist/Project Manager
TRC
1180 NW Maple Street, Suite 310
Issaquah, WA 98027

Attachment: Project Location Map.



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES-SOUTH GATE

N

1 " = 2,000 FEET
1:24,000

0 2,000 Feet

Energy Storage Location
Interconnection Route

TRC
11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com
TRC - GIS

PROJECT:
COMMERCE ENERGY STORAGE, LLC
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE:
PROJECT LOCATION

DRAWN BY:	R BLAKE
CHECKED BY:	M WETHERBEE
APPROVED BY:	J. STENGER
DATE:	FEBRUARY 2022
PROJ. NO.:	393191
FILE:	Project Location.mxd

FIGURE 1

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April 14, 2022

Ms. Christina Conley
Gabrieleno Tongva Indians of California Tribal Council
P.O. Box 941078
Simi Valley, CA 93094

Submitted to: christina.marsden@alumni.usc.edu

RE: City of Commerce Energy Storage Project

Dear Ms. Conley:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

In order to ensure that any areas containing cultural resources or sacred lands are considered, TRC requests any information you are willing to share regarding Native American resources (including properties, places, or archaeological sites) in the vicinity of the project site that may be affected by the proposed project. The project site is depicted on the South Gate, California United States Geologic Survey 7.5' topographic quadrangle map in an unsectioned portion of Township 2 South, Range 12 West as shown on **Figure 1**, *City of Commerce Energy Storage Project Area Location***,** attached.

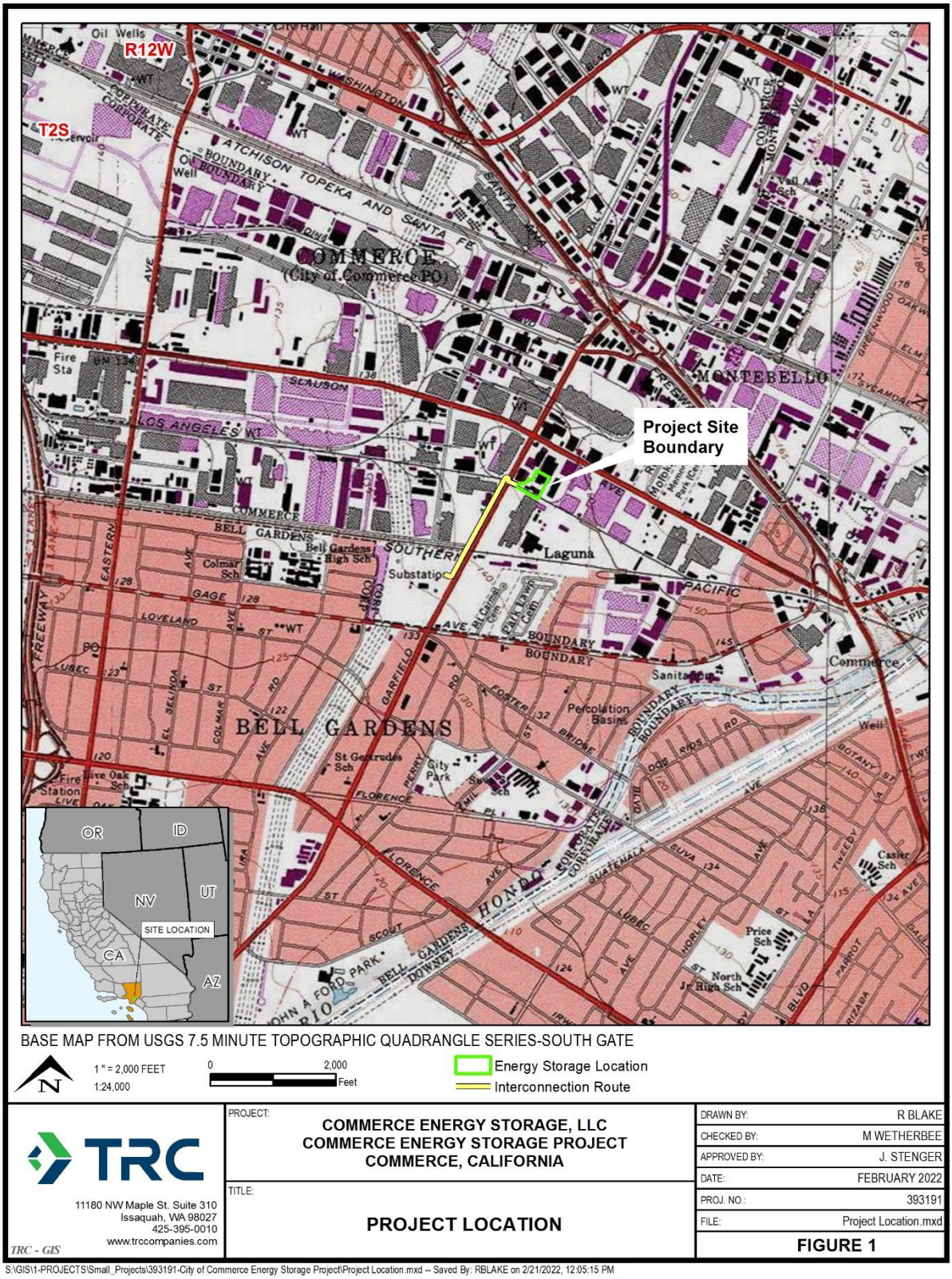
Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (206) 945-6644 or via email at mwetherbee@trccompanies.com.

Per Public Resources Code, Section 21080.3.1(d), a request for consultation must be submitted within 30 days of receipt of this letter.

Sincerely,

Matthew Wetherbee, MSc., RPA
Senior Archaeologist/Project Manager
TRC
1180 NW Maple Street, Suite 310
Issaquah, WA 98027

Attachment: Project Location Map.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(City of Commerce PO)
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BELL GARDENS
Laguna
Substation
Commerce
Sanitation
Percolation Basins
Well
Bell Gardens High Sch
Colmar Sch
St Gertrudes Sch
City Park
Live Oak Sch
Fire Station
Casey Sch
Price Sch
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April 14, 2022

Mr. Robert Dorame
Gabrielino Tongva Indians of California Tribal Council
P.O. Box 490
Bellflower, CA 90707

Submitted to: gtongva@gmail.com

RE: City of Commerce Energy Storage Project

Dear Mr. Dorame:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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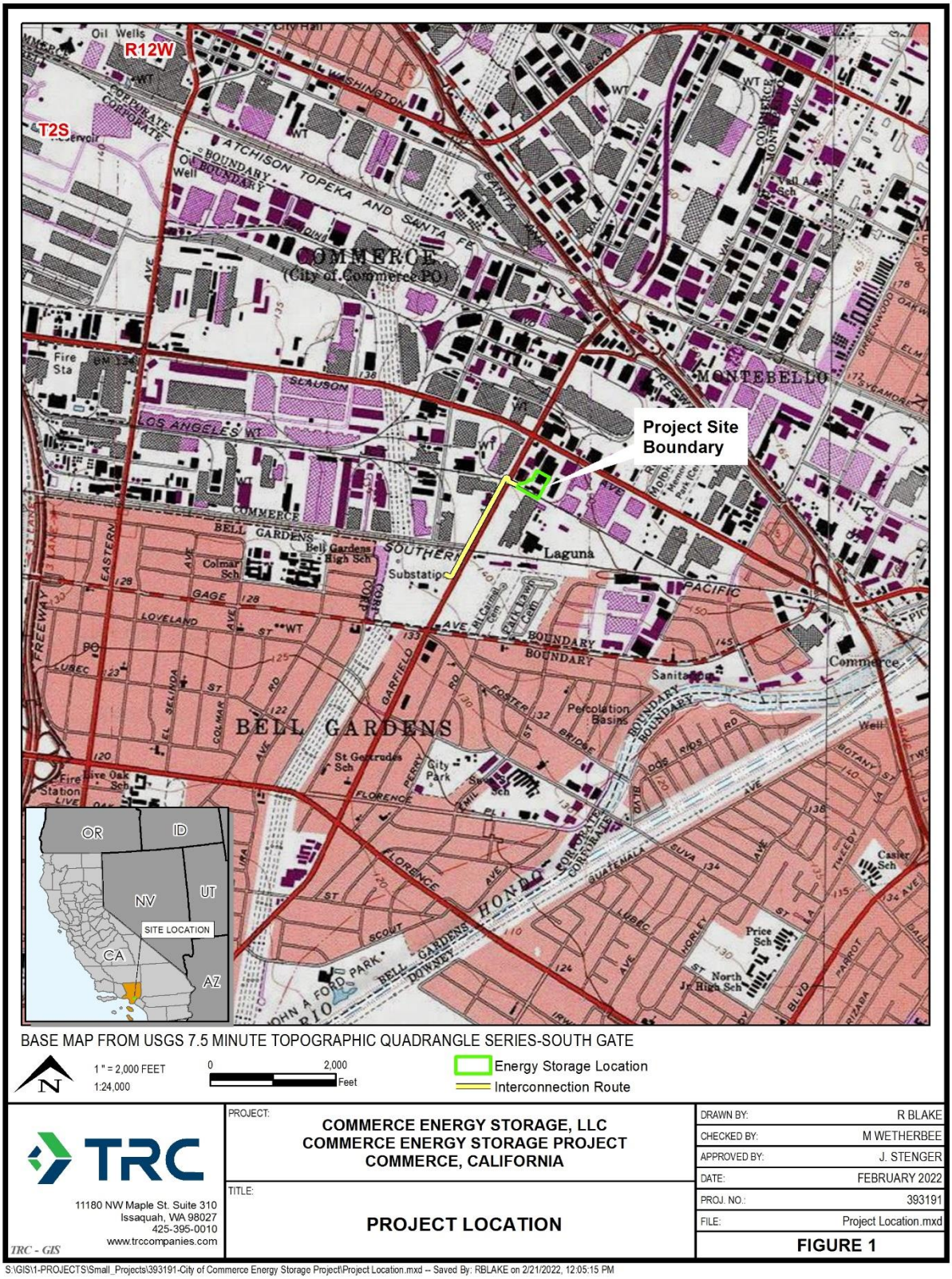

TRC

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TRC - GIS

PROJECT:

COMMERCE ENERGY STORAGE, LLC
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE:

PROJECT LOCATION

DRAWN BY:	R BLAKE
CHECKED BY:	M WETHERBEE
APPROVED BY:	J. STENGER
DATE:	FEBRUARY 2022
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April 14, 2022

Ms. Sandonne Goad
Gabrieleno/Tongva Nation
106 ½ Judge John Aiso St., No. 231
Los Angeles, CA 90012

Submitted to: sgoad@gabrielino-tongva.com

RE: City of Commerce Energy Storage Project

Dear Ms. Goad:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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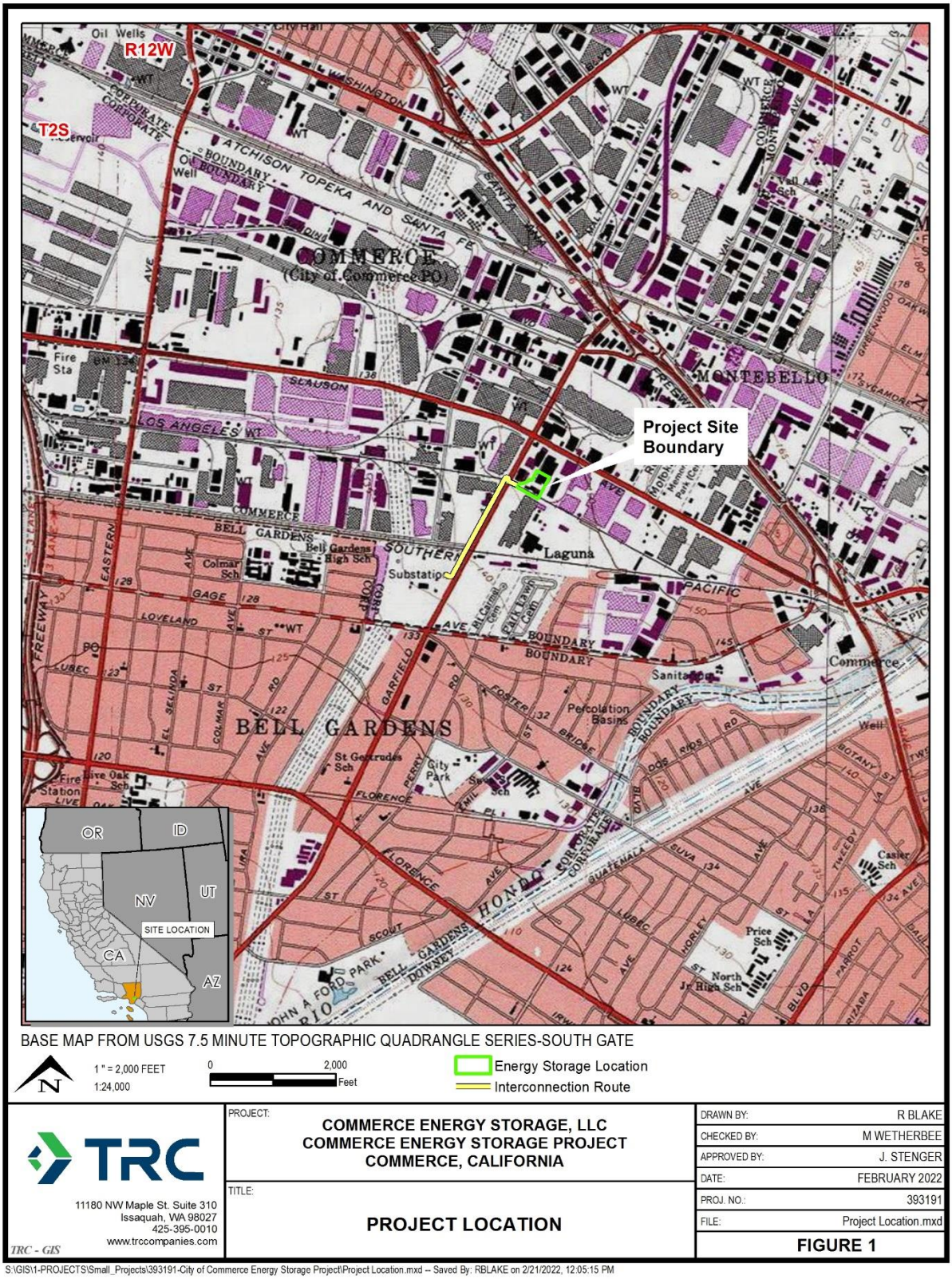
Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (206) 945-6644 or via email at mwetherbee@trccompanies.com.

Per Public Resources Code, Section 21080.3.1(d), a request for consultation must be submitted within 30 days of receipt of this letter.

Sincerely,

Matthew Wetherbee, MSc., RPA
Senior Archaeologist/Project Manager
TRC
1180 NW Maple Street, Suite 310
Issaquah, WA 98027

Attachment: Project Location Map.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COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA
TITLE:
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April 14, 2022

Mr. Anthony Morales
Gabrieleno/Tongva San Gabriel Band of Mission Indians
P.O. Box 693
San Gabriel, CA 91778

Submitted to: GTTribalcouncil@aol.com

RE: City of Commerce Energy Storage Project

Dear Mr. Morales:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (206) 945-6644 or via email at mwetherbee@trccompanies.com.

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Senior Archaeologist/Project Manager
TRC
1180 NW Maple Street, Suite 310
Issaquah, WA 98027

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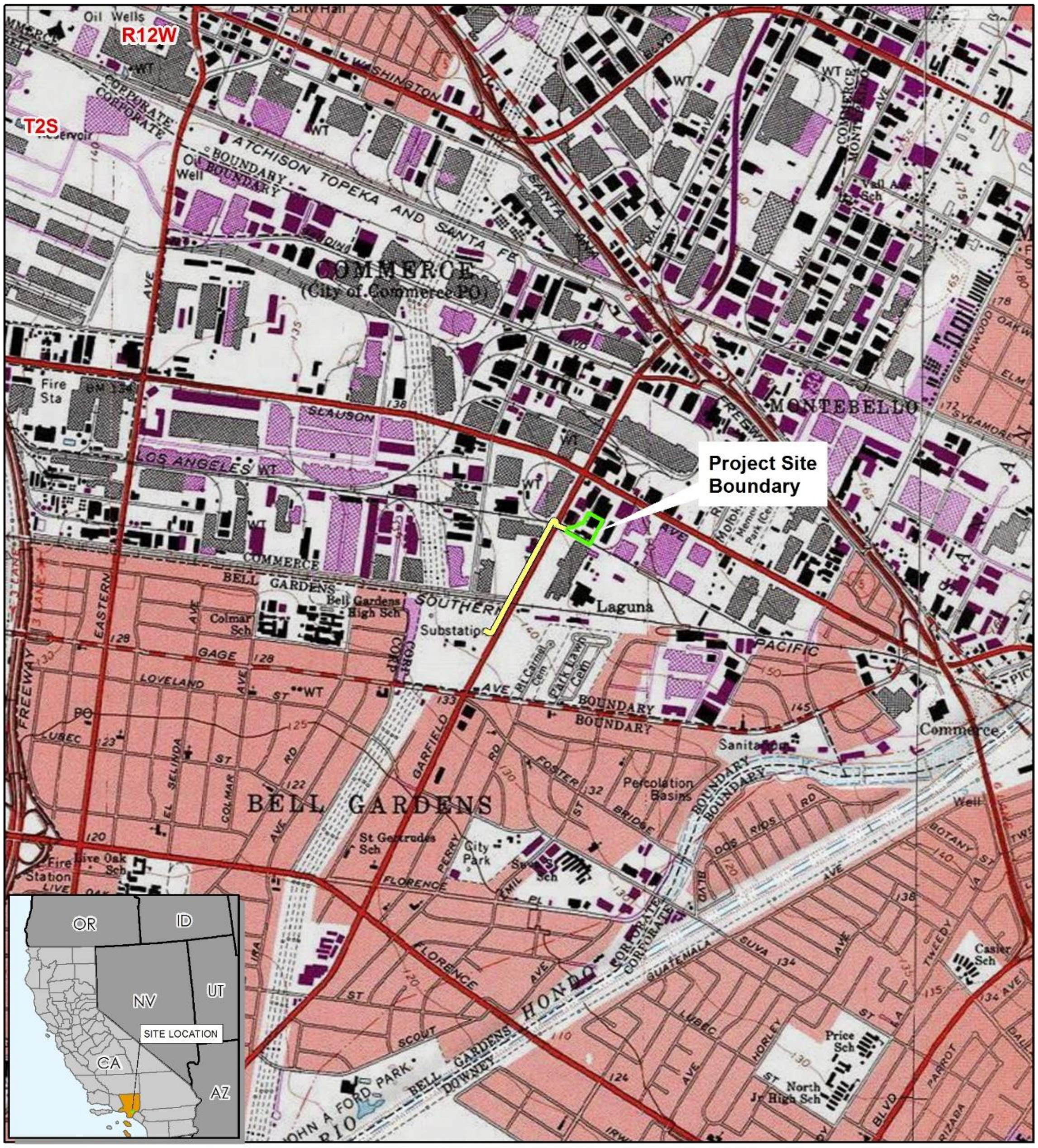

BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES-SOUTH GATE

N 1 " = 2,000 FEET 1:24,000

0 2,000 Feet

Energy Storage Location

Interconnection Route

TRC 11180 NW Maple St. Suite 310 Issaquah, WA 98027 425-395-0010 www.trccompanies.com TRC - GIS	PROJECT: **COMMERCE ENERGY STORAGE, LLC COMMERCE ENERGY STORAGE PROJECT COMMERCE, CALIFORNIA**	DRAWN BY:	R BLAKE
		CHECKED BY:	M WETHERBEE
		APPROVED BY:	J. STENGER
	TITLE: **PROJECT LOCATION**	DATE:	FEBRUARY 2022
		PROJ. NO.:	393191
		FILE:	Project Location.mxd
		FIGURE 1	

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April 14, 2022

Mr. Joseph Ontiveros
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA 92581

Submitted to: jontiveros@soboba-nsn.gov

RE: City of Commerce Energy Storage Project

Dear Mr. Ontiveros:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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Senior Archaeologist/Project Manager
TRC
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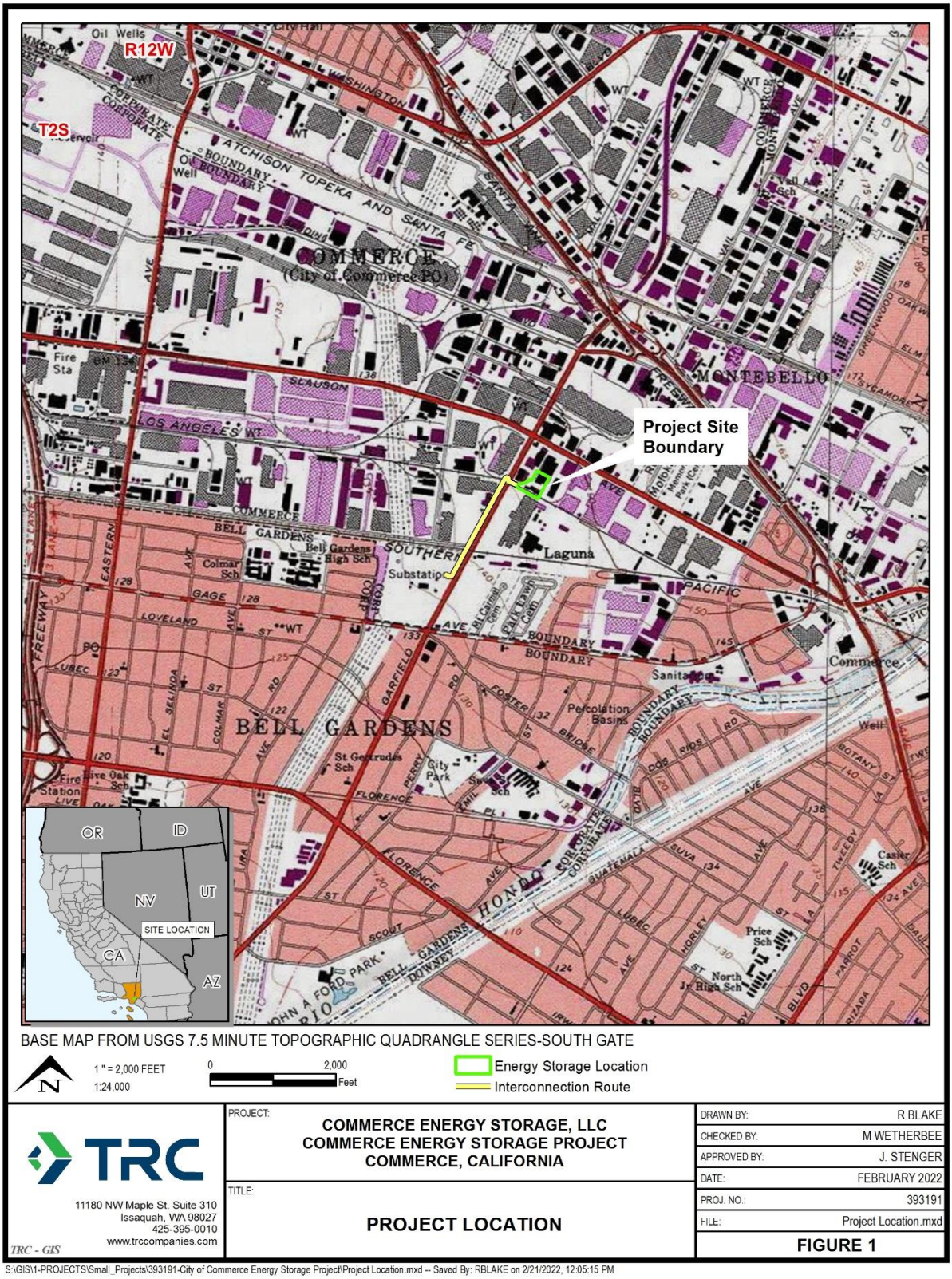
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April 14, 2022

Ms. Lovina Redner
Santa Rosa Band of Cahuilla Indians
P.O. Box 391820
Anza, CA 92539

Submitted to: lsaul@santarosa-nsn.gov

RE: City of Commerce Energy Storage Project

Dear Ms. Redner:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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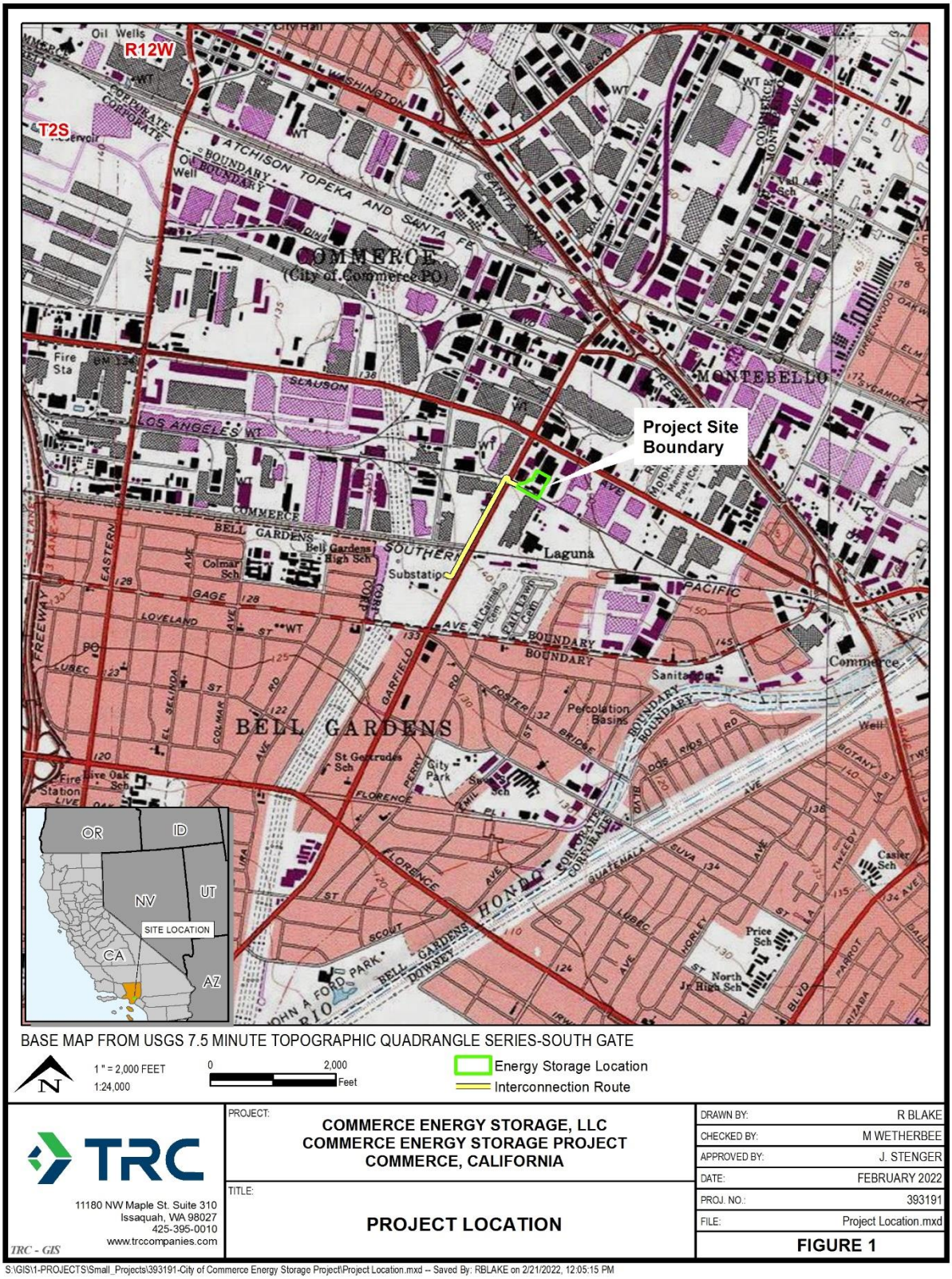

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Energy Storage Location
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TRC - GIS

PROJECT:
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COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE:
PROJECT LOCATION

DRAWN BY:	R BLAKE
CHECKED BY:	M WETHERBEE
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FIGURE 1

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April 14, 2022

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

Submitted to: admin@gabrielenoindians.org

RE: City of Commerce Energy Storage Project

Dear Mr. Salas:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

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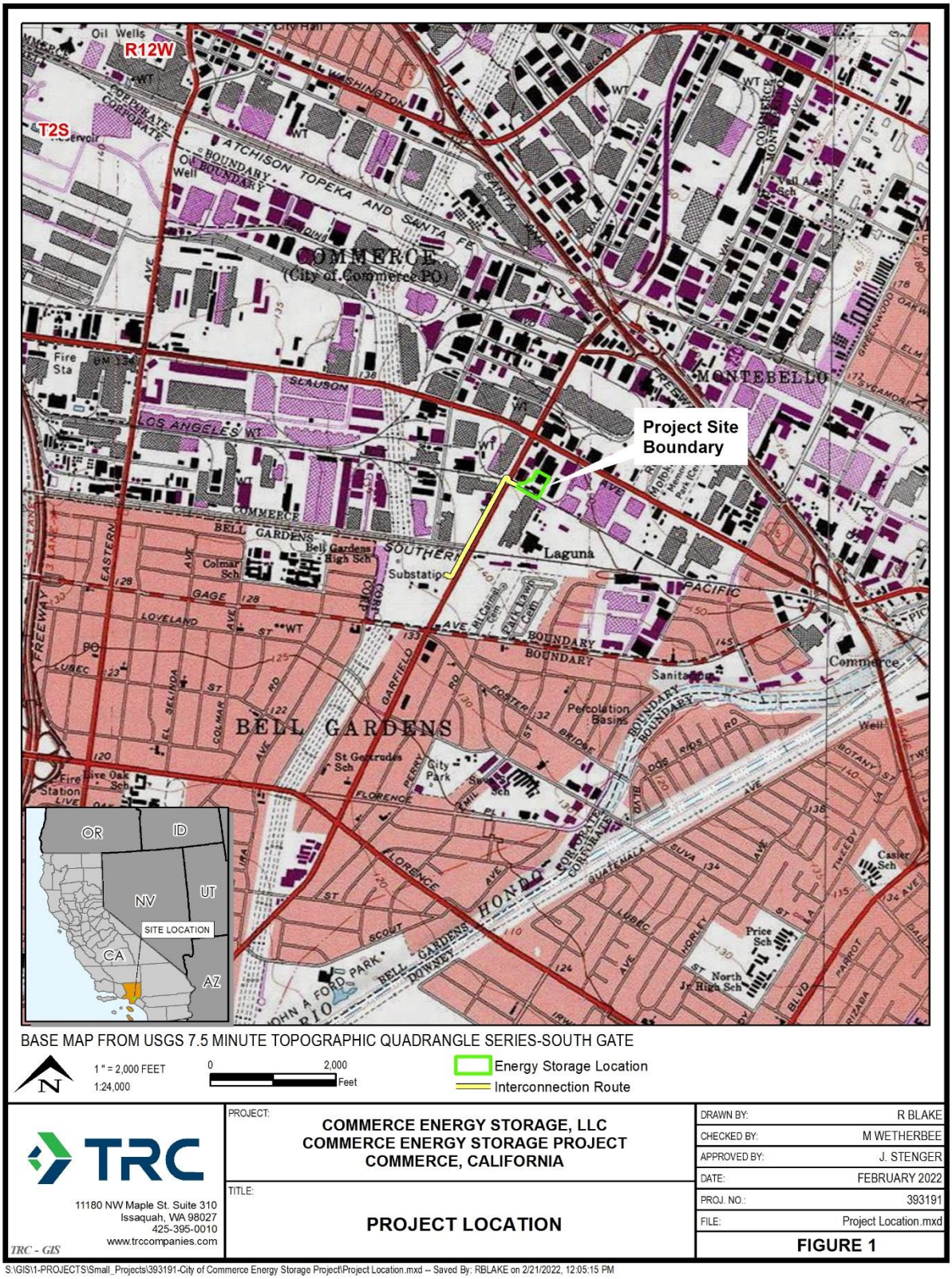
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FILE: Project Location.mxd
FIGURE 1
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April 14, 2022

Mr. Isaiah Vivanco
Soboba Band of Luiseno Indians
P.O. Box 487
San Jacinto, CA 92581

Submitted to: ivivanco@soboba-nsn.gov

RE: City of Commerce Energy Storage Project

Dear Mr. Vivanco:

On behalf of the City of Commerce, TRC is preparing environmental documentation for the proposed Commerce Energy Storage Project located at 6904 East Slauson Avenue, Commerce, CA 90040. This project will involve constructing and operating a battery energy storage system on a vacant approximately 2.6-acre site in the City's Redevelopment Project Area 1 in the Commerce Park Planning Area. The Project is designed to receive, store, and discharge electricity conveyed from and to Southern California Edison's (SCE) high voltage electric grid. Lithium-ion batteries and control equipment would be housed in either a single-story building or a series of purpose-built free-standing enclosures. The batteries, together with related control equipment, and a small onsite substation, would connect to the existing SCE Laguna Bell Substation via a new approximately 0.4-mile long underground electric tie-line to be installed in Garfield Avenue. The tie-line would transition from underground to overhead at a "riser pole" at the Laguna Bell Substation. The facility would operate year-round by remote operation and would be available to receive, store or deliver energy 24 hours a day, 365 days a year. In accordance with Public Resources Code, Section 21080.3.1(d), the City of Commerce is hereby providing formal notification to your tribe of the Commerce Energy Storage Project.

In order to ensure that any areas containing cultural resources or sacred lands are considered, TRC requests any information you are willing to share regarding Native American resources (including properties, places, or archaeological sites) in the vicinity of the project site that may be affected by the proposed project. The project site is depicted on the South Gate, California United States Geologic Survey 7.5' topographic quadrangle map in an unsectioned portion of Township 2 South, Range 12 West as shown on **Figure 1**, *City of Commerce Energy Storage Project Area Location,* attached.

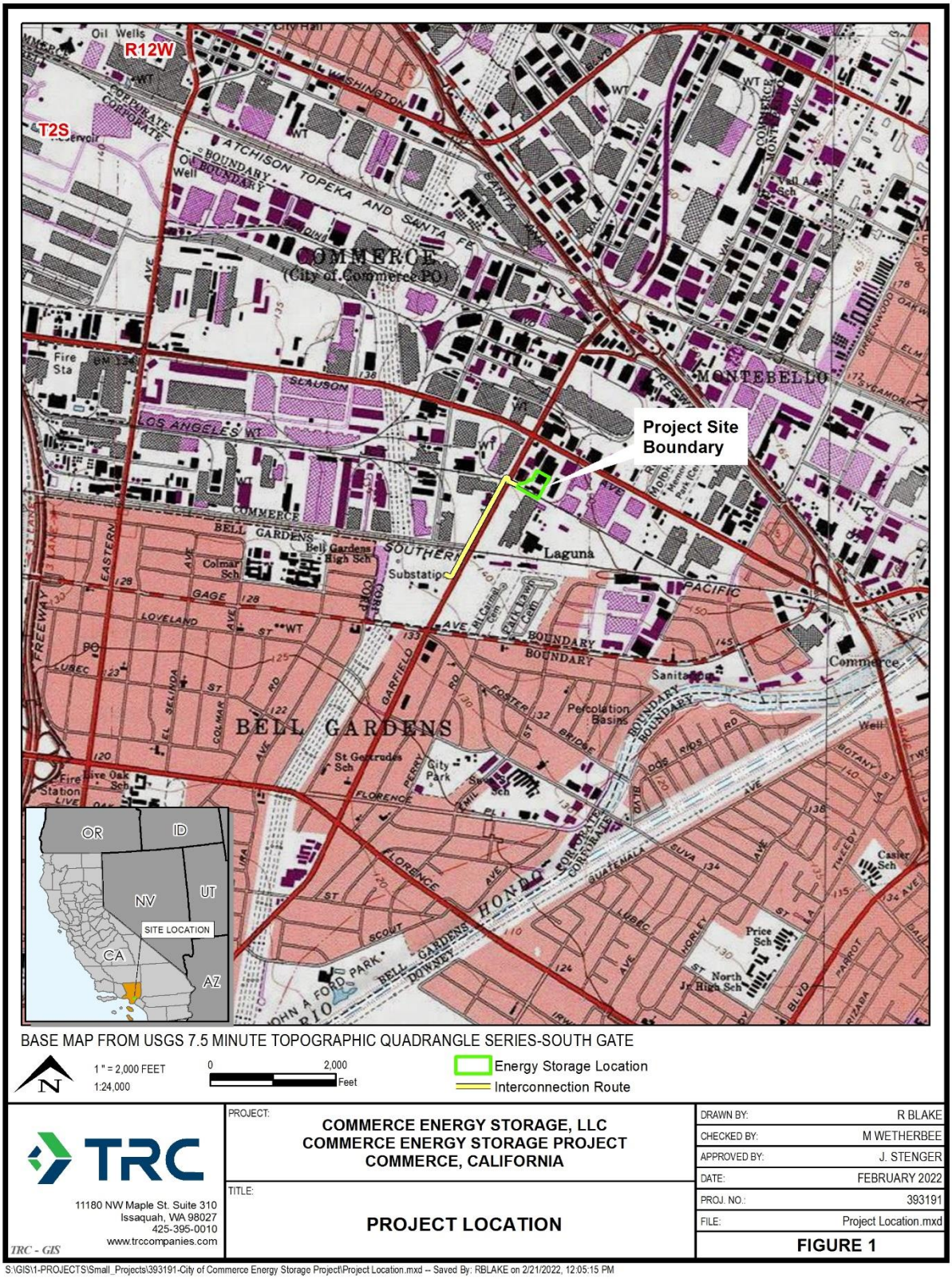
Thank you for your assistance with our efforts to address possible Native American concerns that may be affected by the proposed project. If you have any questions or need additional information, please contact me at (206) 945-6644 or via email at mwetherbee@trccompanies.com.

Per Public Resources Code, Section 21080.3.1(d), a request for consultation must be submitted within 30 days of receipt of this letter.

Sincerely,

Matthew Wetherbee, MSc., RPA
Senior Archaeologist/Project Manager
TRC
1180 NW Maple Street, Suite 310
Issaquah, WA 98027

Attachment: Project Location Map.



TRC

11180 NW Maple St. Suite 310
Issaquah, WA 98027
425-395-0010
www.trccompanies.com

TRC - GIS

PROJECT:

COMMERCE ENERGY STORAGE, LLC
COMMERCE ENERGY STORAGE PROJECT
COMMERCE, CALIFORNIA

TITLE:

PROJECT LOCATION

DRAWN BY:	R BLAKE
CHECKED BY:	M WETHERBEE
APPROVED BY:	J. STENGER
DATE:	FEBRUARY 2022
PROJ. NO.:	393191
FILE:	Project Location.mxd

FIGURE 1

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