MT. SAN JACINTO COMMUNITY COLLEGE DISTRICT

ADDENDUM NO. 1

Bid No. 2019-011

Temecula Valley Campus Electrical Construction Separation

January 17, 2019

Owner:

Mt. San Jacinto Community College District

1499 No. State Street

San Jacinto, CA 92583

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON BID FORM WHEN SUBMITTED

Questions:

Q1. Is an office trailer needed for this project?
A1. No, just provide what is needed for your firm.

Q2. Will restrooms be available to our employees?
A2. No, please provide your own restroom with hand washing stations.

Q3. Is there terminations in Existing Electric Manhole 11 which is on college side of Ynez Road which MV Cables could be saved off?
A3. Demolition of feeder 120 shown on manhole profile EMH-1 on sheet E701 is for reference only. Feeder 120 will be demolished as part of a separate project and is not within the scope of this project.

A4. Will you need Electrical circuit for heater in new MV switchgear? Will you need electric circuit for lighting and outlets in 12KV breaker section? – (Customer switchgear)
A4. Strip heater, GFCI receptacle and Light fixtures are all prewired and served from the Control Power Transformer within the switchgear. No outside power circuit is required.

Q5. Is there a remote annunciator for Generator?
A5. No Remote Annunciator is required as part of the project scope. #14 Control wires for Start/Stop signal from ATS to generator are only desired as part of the project scope.

Q6. With the only MV termination above ground are in the New College 12KV switchgear and campus 12KV transformers. Are you wanting the neon voltage indicators or test point fault indicators installed at either locations?
A6. Test point mounted neon voltage indicators are not required for above ground termination. However neon voltage indicators and test point fault indicators are required for all new modular splices inside manhole EMH-1.

Plans:

Please see attached plans for your use and information:

Edison Final Plan

MSJC Electrical Upgrades

MSJC Electrical Upgrades Structural Calculations

Sections:

Section 261300 – Medium Voltage Switchgear

General Information:

Contractor is required to replace and clean up soft scape areas that are damaged for installation of materials.

Contractor is required to accept and unload Edison equipment, expected delivery is 3/13. Should the enclosure not be ready, the District will provide a place to store the equipment.

SECTION 261300 - MEDIUM-VOLTAGE SWITCHGEAR

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes [metal-clad, circuit-breaker] switchgear with the following components, features, and accessories:

1. Copper, silver-plated main bus at connection points
2. Circuit breakers
3. Communication modules.
4. Meters
5. Analog instruments.
6. Relays.
7. Control switches
8. Surge arresters.
9. Provisions for future devices.
10. Fungus proofing.
11. Control battery system, battery charger.
12. Mimic bus.

B. 15kV switchgear 'MS' is owner furnished and to be installed by contractor. Contractor to install, test, commission and energize the 15kV switchgear 'MS'. Contractor is responsible for coordinating the overcurrent protection settings for all relays at the new 15kV switchgear and downstream 15kV transformer with the Utility (SCE) and owner. Submit final settings to Engineer and SCE atleast 10 days in advance prior to energization for approval. All approved settings to be dialed in to the new 15kV switchgear 'MS' prior to energization.

C. Contractor to provide (3) copies of relay settings in RDB file format for all SEL relays for engineer's review.

D. Switchgear shall be front, and rear aligned.

E. Related Sections include the following:

1. 260513 "Medium-Voltage Cables" for requirements of terminating cables in incoming section of substation.
2. Section 260526 "Grounding and Bonding For Electrical Systems".
3. Section 260573 "Overcurrent Protective Device Coordination Study" for short-circuit rating of devices and for setting of overcurrent protective devices.

F. References:

1. ANSI Standard C37.20.2, Metal-Clad and Station Type Cubicle Switchgear.
2. ANSI Standard C37.04, Rating Structure for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis.
3. ANSI Standard C37.06, American National Standard for Switchgear - AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis - Preferred Ratings and Related Required Capabilities.

1.3 DEFINITIONS

A. ATS: Acceptance Testing Specifications.

B. BIL: Basic Impulse Insulation Level

C. GFCI: Ground-Fault Circuit Interrupter.

D. NETA: InterNational Electrical Testing Association.

E. UPS: Uninterruptable power supply.

F. VRLA: Valve-regulated, recombinant, lead-calcium acid

1.4 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Switchgear shall withstand the effects of earthquake motions determined according to SEI/ASCE 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event

1.5 SUBMITTALS – Not Applicable – Switchgear provided by College

A. Product Data: Manufacturer’s technical data sheets, catalog cuts for each type of switchgear and related equipment, include the following:

1. Rated capacities, operating characteristics, furnished specialties, and accessories for individual interrupter switches and circuit breakers.
2. Time-current characteristic curves for overcurrent protective devices, including circuit-breaker relay trip.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection. Shop drawings shall be prepared by the factory engineer for each type of switchgear and related equipment, and include the following:

1. Dimensioned plans, elevations, sections, and details drawn to scale (1/4”=1’-0”), including required clearances and service space around equipment. Show method of field assembly and location and size of each field connection. Include the following:

a. Tabulation of installed devices with features and ratings.
b. Bill of materials.

c. Bus Structure Diagram: For each equipment, provide bus structure diagram with minimum scale of 3/4 inch equals 12 inches. Provide single line diagram using standard ANSI symbols.
d. Incoming line conductor size.
e. Incoming voltage characteristics.
f. Indicate horizontal and vertical bus capacity in amperes and bar sizes.
g. Indicate RMS symmetrical current bracing in amperes.
h. Indicate ampere interrupting capacity (AIC) for all circuit breakers.
i. Indicate equipment ground and neutral bus capacity in amperes and bar sizes.
j. Indicate each bolted and stub-in provision for devices.
k. Relay, Controls & Metering.
l. Outline and general arrangement drawing showing dimensions, shipping sections, and weights of each assembled section.
m. Drawing of cable termination compartments showing preferred locations for conduits and indicating space available for cable terminations.
n. Floor plan drawing to scale (1/4”=1”-0”) showing locations for anchor bolts and leveling channels.
o. Current ratings of buses.
p. Short-time and short-circuit ratings of switchgear assembly.
q. Nameplate legends.
r. Mimic-bus diagram.

s. Utility company's metering provisions with indication of approval by utility company. Coordinate with utility company.

2. Catalog Cuts: Manufacturer’s catalog cuts for each equipment, device, component including meters, CTs, Pts, switches etc.

3. Design Calculations: Signed and sealed by a qualified California registered professional engineer. Calculate requirements for selecting seismic restraints.
4. Battery calculations prepared by switchgear or battery manufacturer.
5. Wiring Diagrams: For each type of switchgear and related equipment, include the following:

a. Power, signal, and control wiring. Differentiate between manufacturer installed and field installed wiring.
b. Three-line diagrams of main and feeder breakers (including current and future secondary circuits) showing device terminal numbers and internal diagrams.
c. Schematic control diagrams.
d. Diagrams showing connections of component devices and equipment including meters.
e. Schematic diagrams showing connections to remote devices, including SCADA remote terminal unit.
f. Diagram showing Fiberoptic (FO) cable connection for data service to main SCADA patch panel and main meters. Include site drawing showing the underground route of main FO cable.

C. Coordination Drawings: Floor plans to scale (1/4”=1’-0) showing dimensioned layout, required working clearances, and required area above and around switchgear where piping and ducts are prohibited. Show switchgear layout and relationships between components and adjacent structural and mechanical elements. Show support locations, type of support, and weight on each support. Identify field measurements. Include reflected ceiling plans (1/4”=1’-0”) showing ceiling mounted items, structural supports for structure supported raceways, overhead busways and seismic bracing.

D. Samples: Representative portion of mimic bus with specified finish. Manufacturer's color charts showing colors available for mimic bus.

E. Manufacturer Seismic Qualification Certification: Submit certification that switchgear, accessories, and components will withstand seismic forces defined in Section 260548 "Vibration and Seismic Controls for Electrical Systems." Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

    a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.
4. Submit certified test report of the shake table tests done on similar equipment.

F. Installation instructions.

G. Qualification Data: For professional engineer and testing agency.

H. Source quality-control test report: Certified written reports signed by factory testing engineer or technician including their name and review comments from the testing engineer. Each report shall include date, location of tests and actual test data. Submit within two (2) weeks of factory tests prior to shipment of switchgear.

I. Field quality-control test reports. Submit within two (2) weeks of completion of field tests.

J. Updated mimic bus diagram reflecting field changes after final switchgear load connections have been made, for record.

K. Operation and Maintenance Data: For switchgear and switchgear components to include in emergency, operation, and maintenance manuals. In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device.

1.6 CLOSEOUT SUBMITTALS - Not applicable

A. Operation and Maintenance Data: For each switchgear and accessories to include in emergency, operation, and maintenance manuals.

B. Provide one portable circuit breaker lifting device, floor-supported with a roller base. Device shall be suitable for handling PTs also in any installed location.

1.7 QUALITY ASSURANCE. – Not applicable

A. Regulatory Requirements: Construct equipment conforming to ANSI and NEMA standards.

B. If alternate manufacturer of products other than what are specified in this section are submitted, all necessary documents not limited to cut sheets, technical information, test reports from recognized testing labs and factory test reports shall be submitted to the satisfaction of the owner/engineer to ensure quality and conformance to the specifications. Additional testing shall be undertaken if it is concluded by the owner/engineer that the submitted test reports are either insufficient or do not include all tests necessary for product acceptance. The tests shall be conducted by a recognized lab acceptable to the owner/engineer and all tests shall be witnessed by owner's/engineer's personnel. All testing procedures and test results shall be satisfactory to the owner/engineer. Contractor shall be responsible for arranging the tests, for transportation, food and lodging for minimum of one owner's/engineer's representative to witness the test at the testing lab. Include all costs for the above in the bid.

C. Contractor shall ensure that the manufacturer has a minimum of 15 years experience in the production of Medium Voltage Switchgear similar to the type and size specified in this project. Furnish a list of minimum three (3) installations with similar equipment completed within the last five (5) years. Include name, email and telephone number of the owner's facility engineer for each installation.

D. Manufacturer shall have ISO 9001 Certification.

E. Manufacturer shall have ability to readily provide replacement parts for a minimum period of ten years, from the date of completion of the project.

F. Switchgear shall be assembled at the manufacturer's own manufacturing facility using its own devices (e.g., primary switch, circuit breakers), bus for the assembly. These devices shall be normally carried by the manufacturer as standard catalog items.

G. Switchgear shall comply with seismic zone applicable to the project. Verify requirements with architect and/or structural engineer. Provide certified test reports of shake table test done by manufacturer on similar units.

H. Materials and equipment shall be new, modern in design and shall not have been in prior service except as required by factory tests. Major components (e.g., primary switch, transformer, and switchboard) shall be manufactured within six months of installation.

I. Source Limitations: Obtain switchgear through one source from a single manufacturer. All power distribution equipment shall be of a single manufacturer.

J. Comply with IEEE C2.

K. Comply with IEEE C37. 20.

L. Comply with NFPA 70.

M. Testing Agency Qualifications:

1. Testing Agency Qualifications: Testing agency shall be an independent company with the experience and capability to conduct field testing indicated; shall have been a member of International Testing Association (NETA) for a minimum of last ten (10) years.

2. The company shall have permanent in-house testing engineers and technicians on its staff
3. Testing company shall be located with 50 miles radius of the project.
4. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing to supervise on-site testing specified in Part 3.
5. Field Testing technician and supervisor shall have minimum ten (10) years' experience in field testing of MV Switchgear similar to the type and rating specified on this project.

N. Source Limitations: Obtain each type of switchgear and associated components through one source from a single manufacturer.

O. Product Options: Drawings indicate size, profiles, and dimensional requirements of switchgear and are based on the specific system indicated. Refer to Section 016000 "Product Requirements."

P. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver in sections of lengths that can be moved past obstructions in delivery path as indicated.

B. Store switchgear indoors in clean dry space with uniform temperature to prevent condensation. Protect switchgear from exposure to dirt, fumes, water, corrosive substances, and physical damage.

C. If stored in areas subjected to weather, cover switchgear to provide protection from weather, dirt, dust, corrosive substances, and physical damage. Remove loose packing and flammable materials from inside switchgear; install electric heating (250 W per section) to prevent condensation.

D. Follow manufacturer's recommendations on storage of switchgear.

1.9 PROJECT CONDITIONS

A. Environmental Limitations: Rate equipment for continuous operation at indicated ampere ratings for the following conditions:

1. Ambient temperature not exceeding [122 deg F (50 deg C)]

B. Installation Pathway: Remove and replace building components and structures to provide pathway for moving switchgear into place.

C. Product Selection for Restricted Space: Drawings indicate maximum dimensions for switchgear, including clearances between switchgear and adjacent surfaces and other items. Comply with indicated maximum dimensions.

D. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted in writing under the following conditions and then only after arranging to provide temporary electrical service according to requirements indicated:

1. Notify Owner no fewer than fourteen (14) days in advance of proposed interruption of electrical service.
2. Do not proceed with interruption of electrical service without Owner's] written permission.
3. Comply with NFPA 70E.
4. Provide temporary standby power through a standby diesel quiet type back-up generator complete with fuel and 7/24 monitoring if the existing service interruption exceeds 2 hours. Coordinate additional requirements with owner minimum fourteen days in advance. Indicate method of providing temporary electric service.

1.10 COORDINATION

A. Coordinate layout and installation of switchgear and components with other construction including conduit, piping, equipment, and adjacent surfaces. Maintain required clearances for workspace and equipment access doors and panels.

B. Coordinate size and location of concrete bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

1.11 EXTRA MATERIALS – Not applicable

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Fuses: [Six] of each type and rating used. Include spares for future transformers, control power circuits, and fusible devices.
2. Indicating Lights: [Six] of each type installed.
3. Touchup Paint: [Three] containers of paint matching enclosure finish, each 0.5 pint (250 mL).
4. Primary Switch Contact Lubricant: One container.
5. Two (2) keys per section.
6. A set of two (2) spare PTs.

B. Maintenance Tools: Furnish tools and miscellaneous items required for interrupter switchgear test, inspection, maintenance, and operation. Include the following:

1. Provide two insulated handle tools designed for pulling fuses.
2. Extension rails, lifting device, transport or dockable dolly or mobile lift, and all other items necessary to remove circuit breaker from housing and transport to remote location.
3. Two racking and charging handles to move circuit breaker manually between connected and disconnected positions, and a secondary test coupler to permit testing of circuit breaker without removal from switchgear.
4. Provide one test jumper cable.
5. Special tools.

1.12 Warranty

A. The Contractor shall provide a complete 3 year warranty, including all labor and materials. Warranty shall cover on-site repairs and replacement of defective components by manufacturer’s trained technicians within 24 hours.

PART 2 - PRODUCTS – Not applicable

2.1 MANUFACTURERS

A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 MANUFACTURED UNITS

A. Description: Factory assembled and tested, and complying with IEEE C37.20.1.

B. Ratings: Suitable for application in 3-phase, 60-Hz, solidly grounded-neutral system.

C. System Voltage: 12 kV nominal; 15 kV maximum

2.3 METAL-CLAD, CIRCUIT-BREAKER SWITCHGEAR

A. Manufacturers:

1. Square D; Schneider Electric.

B. Comply with IEEE C37.20.2.

C. Comply with IEEE C37.20.7.

D. Nominal Interrupting-Capacity Class: 500MVA.

E. Ratings: Comply with IEEE C37.04.

1. Main-Bus Rating: 1200 A, continuous.

F. Circuit Breakers: Three-pole, single-throw, electrically operated, drawout-mounting units using three individual, [vacuum-sealed] interrupter modules and including the following features:

1. Designed to operate at rated voltage to interrupt fault current within its rating within three cycles of trip initiation. For systems with X/R ratio of 17 or less, transient voltage during interruption shall not exceed twice the rated line-to-ground voltage of the system.
2. Contact-Wear Indicator: Readily accessible to field maintenance personnel.
3. Minimum of six Type A and six Type B spare contacts.
4. Interchangeability: Circuit breakers are interchangeable with vacuum circuit breakers of same current and interrupting ratings.
5. Switchgear to be equipped with arc flash sensors and fiber optic cable. Sensor loops to be tied into main breaker and branch breaker. Provide drawing showing location of sensors on the switchgear and spaces within the switchgear protected by the arc flash detection.
6. Minimum Circuit breaker ratings shall be as indicated below unless otherwise noted on the drawings:

a. Current Rating of Main Circuit Breaker: [1200], A.
b. Continuous Current Rating of Feeder Circuit Breaker: [1200], A.

7. Operating Mechanism: Electrically charged, mechanically and electrically trip-free, stored-energy operated.

   a. Closing speed of moving contacts to be independent of both control and operator.
   b. Design mechanism to permit manual charging and slow closing of contacts for inspection or adjustment.

      1) Control Power: 48V dc for closing and tripping.
      2) Control Power: 120-V ac for closing and tripping.

   c. Provide shunt trip capability independent of overcurrent trip.

G. Circuit Breaker Compartment:

1. Each circuit breaker compartment shall be designed to house a horizontal drawout metal-clad vacuum circuit breaker. The stationary primary disconnecting contacts shall be silver-plated copper and mounted within porcelain support bushings. The movable contacts and springs shall be mounted on the circuit breaker element for ease of inspection / maintenance.
2. Window suitable for viewing the position of the circuit breaker in the cell and the position of the shutters with the circuit breaker out of the cell shall be provided.
3. Entrance to the stationary primary disconnecting contacts shall be automatically covered by metal shutters when the circuit breaker is withdrawn from the connected position to the test or disconnected position or removed from the circuit breaker compartment. Extend a copper ground bus into the circuit breaker compartment to automatically ground the breaker frame with high-current spring type grounding contacts located on the breaker chassis when in the test and connected positions. Guide rails for positioning the circuit breaker and all other necessary hardware are to be an integral part of the circuit breaker compartment. Blocking devices shall interlock breaker frame sizes to prevent installation of a lower ampere rating or interrupting capacity element into a compartment designed for one of a higher rating.
4. The drawout mechanism shall provide four (4) distinct positions of the circuit breaker (connected, disconnect, test and withdraw) and padlock provisions for locking the breaker in either the test or disconnect position. When the breaker is in the "test" position, it shall be possible to operate all the various functions of the breaker while disconnected from the switchgear distribution bus.
5. Grounding of the breaker frame shall be maintained throughout the travel of the drawout mechanism. Interlocks shall prevent the racking out or racking in of a closed breaker.
6. The cubicle door shall be designed so as it cannot be opened once the breaker is fully racked in.
7. The cubicle door shall be designed so as it cannot be opened while the breaker is energized.
8. The cubicle door shall be designed so as it can be opened only if the breaker is in the fully Disconnected or Test position.

H. Test Accessories: Relay and meter test plugs.

I. Low-DC-Voltage Alarm: Switchgear shall have a monitor for dc control power voltage with a remote alarm located where indicated. Alarm shall sound if voltage falls to an adjustable value

to indicate an impending battery failure. Factory set alarm value at 80 percent of full-charge voltage.

J. Grounding and Testing Device: Suitable for phasing out, testing, and grounding switchgear bus or feeder if device is installed in place of circuit breaker. Include the following:

1. Portable Grounding and Testing Device: Interchangeable with drawout-mounting, medium-voltage circuit breakers to provide interlocked electrical access to either bus or feeder; electrically operated.
2. System control cabinet permanently mounted near switchgear.
3. Portable Remote-Control Station: For grounding and testing device.
4. Control-Cabinet Coupler Cable: Of adequate length to connect device inserted in any switchgear cubicle and control cabinet.
5. Remote-Control Coupler Cable: 50 feet (15 m) long to connect control cabinet and portable remote-control station.
6. Permanent Control Power Wiring: From control cabinet to power source.
7. Protective Cover: Fabricated of heavy-duty plastic and fitted to device.
8. Approval of Grounding and Testing Device System: Obtain approval of final system design from utility company and agency designated by Owner to handle future maintenance of medium-voltage switchgear.

K. Circuit-Breaker Test Cabinet: Separately mounted and containing push buttons for circuit-breaker closing and tripping, control relay, fuses, and secondary coupler with cable approximately 108 inches (2740 mm) long. Include a set of secondary devices for operating circuit breaker if removed from switchgear and moved near test cabinet. Include provision for storage of test and maintenance accessories in cabinet.

L. Cable Connection: Terminate cables with porcelain terminators. Provide 3 sets of terminators in the main breaker cubicles, and 2 sets of terminators in all other breaker cubicles, including the spare cubicles. Terminators shall be suitable for 15kV, EPR, 133% rated 500MCM cable as indicated on feeder schedule.

2.4 FABRICATION

A. Outdoor Enclosure: Walk-in with galvanized steel, weatherproof construction NEMA 3R ;; integral structural-steel base frame with factory-applied asphaltic undercoating.

1. Each compartment shall have the following features:

a. Structural design and anchorage adequate to resist loads imposed by [125-mph (200-km/h)] wind.
b. Pitched roof
c. Space heater operating at one-half or less of rated voltage, sized to prevent condensation.
d. Louvers equipped with insect and rodent screen and filter, and arranged to permit air circulation while excluding rodents and exterior dust.
e. Mechanical Interlock: Prevent opening compartment door while the breaker is energized or racked in.
f. Window: Permit viewing breaker positions if door is closed or position of the shutters when the breaker is removed from the cell.
g. Hinged front door with pad locking provisions.
h. Interior light with switch.
i. Weatherproof GFCI duplex receptacle powered by the control power transformer .

j. Power for heaters, lights, and receptacles to be provided [by control power transformer.

B. Finish: Manufacturer's standard gray finish over rust-inhibiting primer on phosphatizing-treated metal surfaces.

C. Bus Transition Unit: Arranged to suit bus and adjacent units.

D. Incoming-Line Unit: Arranged to suit incoming line.

E. Outgoing Feeder Units: Arranged to suit distribution feeders.

F. Auxiliary Compartments: Arranged to suit house meters, relays, controls, and auxiliary equipment; isolated from medium-voltage components.

G. Key Interlocks: Arranged to effect interlocking schemes indicated.

H. Provisions for Future Key Interlocks: Mountings and hardware required for future installation of locks, where indicated.

2.5 COMPONENTS

A. Main Bus: Copper, silver plated at connection points~~;~~ full length of switchgear.

B. Ground Bus: Copper, silver plated or copper, tin plated; minimum size 1/4 by 2 inches (6 by 50 mm); full length of switchgear.

C. Bus Insulation: Covered with flame-retardant insulation during manufacture.

D. Multifunction relay with overcurrent protection, negative sequence, under/over voltage, arc flash detection and neutral and phase arc flash overcurrent elements including high speed relay contacts. Program auxiliary contact 1 for maintenance mode instantaneous trip function for arc flash mitigation during periodic maintenance to switchgear. Comply with IEEE C37.90, integrated digital type; with test blocks and plugs.

1. Schweitzer SEL 751 digital Relays equipped with arc flash detection input module shall be provided as shown on Drawings.
2. Inputs from sensors or 5-A current-transformer secondaries, and potential terminals rated to 600 V.
3. Provide test switch for each PT and CT.
4. Each vacuum circuit Breaker shall be individually equipped with Lockout Relay "Device 86" with manual reset. Trip functions from all devices shall be connected via this Lockout relay.
5. Each circuit breaker’s protective relays shall have provisions for outputs of relay failure alarm wired to the breaker’s power monitoring relay inputs.
6. Switch-selectable digital display.
7. The substation battery voltage shall be connected to the VBAT terminals of SEL relay 751. The relay shall include two programmable threshold comparators and associated logic for battery charger fail alarm and control. The alarm shall occur, if the battery charger fails and the measured dc falls below a programmable threshold. The SEL-751 alarms shall alert operations personnel before the substation battery voltage falls to unacceptable levels.

8. Power monitoring with sequential events recorder, oscillographic event reports, post fault diagnostics, real, reactive, apparent power and power factor metering.
9. Communications module suitable for remote monitoring of DC power, meter quantities and functions and Interface communication and metering requirements according to Section 260913 "Electrical Power Monitoring and Control."
10. Mounting: Display and control unit that is flush or semi-flush mounted in instrument compartment door.

E. Instrument Transformers: Comply with IEEE C57.13.

1. Each breaker compartment shall have provision for front-accessible mounting of up to four current transformers per phase, two on bus side and two on cable side of circuit breaker.
2. Provide all PTs and CTs as shown on the Drawings. The location of CT mounting (bus side vs line side) is essential to proper protective relaying and shall not be deviated from the drawings.
3. Provide all PTs and CTs, with an accuracy of not less than 0.6%.
4. Provide all PTs with 12,000 volt primary and 120 volt secondary with multi ratio taps. Each PT shall be fused.
5. Provide all CTs with 5 amp secondaries. Primary winding ratios shall be as indicated on the Drawings.
6. Provide all CTs with shorting blocks.
7. Provide all CTs with a minimum of C100 Class.

F. Multifunction Digital-Metering Monitor: Microprocessor-based unit suitable for three- or four-wire systems, listed and labeled by UL, Square- D PM7550 and with the following features:

1. Inputs from sensors or 5-A current-transformer secondaries, and potential terminals rated to 600 V.
2. Switch-selectable digital display with the following features:

    a. Phase Currents, Each Phase: Plus or minus 1 percent.
    b. Phase-to-Phase Voltages, Three Phase: Plus or minus 1 percent.
    c. Phase-to-Neutral Voltages, Three Phase: Plus or minus 1 percent.
    d. Three-Phase Real Power: Plus or minus 2 percent.
    e. Three-Phase Reactive Power: Plus or minus 2 percent.
    f. Power Factor: Plus or minus 2 percent.
    g. Frequency: Plus or minus 0.5 percent.
    h. Integrated Demand, with Demand Interval Selectable from 5 to 60 Minutes: Plus or minus 2 percent.
    i. Accumulated energy, in megawatt hours (joules), plus or minus 2 percent; stored values unaffected by power outages for up to 72 hours.

3. Communications module suitable for remote monitoring of meter quantities and functions. Interface communication and metering requirements according to Section 260913 "Electrical Power Monitoring and Control."
4. Mounting: Display and control unit that is flush or semiflush mounted in instrument compartment door. Maximum mounting height unless otherwise indicated, shall not exceed 5’-6”above finished floor including house keeping pad
5. Meters shall be compatible with owner’s existing Power Monitoring System.

G. Analog Instruments: Rectangular, 4-1/2 inches (115 mm) square, 1 percent accuracy, semiflush mounting, with antiparallax 250-degree scale and external zero adjustment, and complying with ANSI C39.1.

1. Voltmeters: Cover an expanded scale range of normal voltage plus 10 percent.
2. Voltmeter Selector Switch: Rotary type with off position to provide readings of phase-to-phase voltages.
3. Locate meter and selector switch on circuit-breaker compartment door for indicated feeder circuits only.

H. Relays: Comply with IEEE C37.90, integrated digital type; with test blocks and plugs. Manufacturer SEL 751 equipped with arc flash detection capability.

I. Breaker Control Switch with Relay: Switch shall provide time delay trip and close for arc flash protection of personnel. Time delay shall be field adjustable. Manufacturer-“Electroswitch”.

J. Test Switches: Provide time delay test switch on front of switchboard to isolate each relay for testing. Switch shall be semi-flush mounted with connections on the rear of the switch. Test switch shall include features necessary for safe measurement and isolation of individual current, voltage and digital I/O signals to facilitate testing of substation instrumentation and protective devices. All the measurements and test functions shall be able to perform from the front of the switchgear without taking any devices out of service and without the need to access wiring at the rear of the devices. Provide clear cover on each switch to prevent unauthorized access to the connections. Manufacturer “ABB- Flexitest FT series.”

K. Surge Arresters: Distribution class, metal-oxide-varistor type. Comply with NEMA LA 1.

1. Install in cable termination compartments in each phase of circuit.
2. Coordinate rating with circuit voltage.

L. Provision for Future Devices: Equip compartments with rails, mounting brackets, supports, necessary appurtenances, and bus connections.

M. Fungus Proofing: Permanent fungicidal treatment for switchgear interior, including instruments and instrument transformers.

N. Control Power Supply: Marine grade UPS for harsh environment to be provided at each individual section of the switchgear. UPS to be sized per final loads requirements of each section.

O. Control Power Supply: Control power transformer supplies 120-V control circuits through secondary disconnect devices. Include the following features:

1. Dry-type transformers, in separate compartments for units larger than 3 kVA, including primary and secondary fuses.

2. Control power transformer in separate compartment with necessary interlocking relays; transformer connected to line side of associated main circuit breaker.

    a. Secondary windings connected through relay(s) to control bus to affect an automatic transfer scheme.
    b. Secondary windings connected through an internal automatic transfer switch to switchgear control power bus.

3. Control Power Fuses: Primary and secondary fuses provide current-limiting and overload protection.

P. Indicating Lamps: Each circuit breaker shall be provided with heavy duty, 22 millimeter LED indicating lights, with individual push to test function. The following indicating lights shall be provided:

1. Red shall indicate "BREAKER CLOSED".
2. Green shall indicate "BREAKER OPEN".
3. Amber shall indicate "BREAKER TRIP".

Q. Control Wiring: Factory installed, complete with bundling, lacing, and protection; and complying with the following:

1. Flexible conductors for No. 8 AWG and smaller, for conductors across hinges, and for conductors for interconnections between shipping units.
2. Conductors sized according to NFPA 70 for duty required.

2.6 CONTROL POWER SYSTEM

A. System Requirements: Marine grade UPS listed for harsh environment operation of 50deg C.

B. Each individual section equipped with a dedicated UPS.

C. UPS to be flush mounted on the door for each compartment.

D. UPS to have adequate capacity to provide minimum backup power for 24hours for all connected loads.

E. UPS to be sized per manufacturer’s recommendation for load associated with each breaker.

F. Provide load calculation and UPS sizing calculation for engineer’s review.

G. UPS system including batteries, inverters, and all associated accessories to be UL listed.

2.7 CONTROL NETWORK

A. Compliance with ASHRAE 135: Controllers shall support serial MS/TP and Ethernet IP communications and shall be able to communicate directly via RS-485 serial networks and Ethernet 10Base-T networks as a native device.

2.8 IDENTIFICATION

A. Materials: Refer to Section 260553 "Identification for Electrical Systems." Identify units, devices, controls, and wiring.

B. Mimic Bus: Continuous mimic bus applied to front of switchgear, arranged in single-line diagram format, using symbols and lettered designations consistent with approved final mimic-bus diagram.

1. Mimic-bus segments coordinated with devices in switchgear sections to which applied, to produce a concise visual presentation of principal switchgear components and connections.
2. Medium: Painted graphics, or tape as approved.

3. Color: Contrasting with factory-finish background; red color

2.9 SOURCE QUALITY CONTROL

A. Before shipment of equipment, perform the following tests and prepare test reports:

1. Production tests on circuit breakers according to ANSI C37.09.
2. Production tests on completed switchgear assembly according to IEEE C37.20.2.

B. Assemble switchgear and equipment in manufacturer's plant and perform the following:

1. Functional tests of all relays, instruments, meters, and control devices by application of secondary three-phase voltage to voltage circuits and injection of current in current transformer secondary circuits.
2. Functional test of all control and trip circuits. Connect test devices into circuits to simulate operation of controlled remote equipment such as circuit-breaker trip coils, close coils, and auxiliary contacts. Test proper operation of relay targets.
3. Draw-out each breaker from its cell and make sure it goes in smoothly.
4. Coordinate and obtain approval from Southern California Edison utility representative at no additional cost to the owner. Changes or modifications as requested by SCE shall be made at no additional cost to the owner.

C. Prepare equipment for shipment.

1. Provide suitable crating, blocking, and supports so equipment will withstand expected domestic shipping and handling shocks and vibration.
2. Weatherproof equipment for shipment. Close connection openings to prevent entrance of foreign material during shipment and storage.

2.10 FACTORY FINISHES

A. Finish: Manufacturer's standard color finish applied to equipment before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine elements and surfaces to receive switchgear for compliance with requirements for installation tolerances, required clearances, and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Anchor switchgear assembly to 4-inch (100-mm), channel-iron sill embedded in concrete base and attach by bolting.

1. Sills: Select to suit switchgear; level and grout flush into concrete base.

2. Design each fastener and support to carry load indicated by seismic requirements and according to seismic-restraint details. See Section 260548 "Vibration and Seismic Controls for Electrical Systems" for seismic-restraint requirements.

3. Concrete Bases: 6 inches (100 mm) high, reinforced, with chamfered edges. Extend base no less than 60 inches (75 mm) in front and back and 6” on the sides beyond the maximum dimensions of switchgear, unless otherwise indicated or unless required for seismic anchor support. Construct concrete bases according to Paragraph 3.4, Section 260529 "Hangers and Supports for Electrical Systems."

B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from switchgear units and components.

C. Mounting heights shall be as follows:

1. Control Device including switches, circuit breakers: Maximum mounting height above finished floor to the center of grip of device operating handle in its highest position shall be 6’-6” unless a lower height is required by ANSI or code.
2. Monitoring instruments including meters: Maximum height above finished floor to the center of display shall be 5’-0” unless otherwise indicated.

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs as specified in Section 260553 "Identification for Electrical Systems."

B. Diagram and Instructions:

1. Frame under clear acrylic plastic on front of switchgear.

a. Operating Instructions: Printed basic instructions for switchgear, including control and key-interlock sequences and emergency procedures.
b. System Power Riser Diagrams: Depict power sources, feeders, distribution components, and major loads.

2. Storage for Maintenance: Include a rack or holder, near the operating instructions, for a copy of maintenance manual.

3.4 CONNECTIONS

A. Cable terminations at switchgear are specified in Section 260513 "Medium-Voltage Cables."

B. Tighten bus joints, electrical connectors, and terminals according to manufacturer's published torque-tightening values.

C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."

D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables" and Section 260513 "Medium-Voltage Cables."

3.5 FIELD QUALITY CONTROL

A. Prepare for acceptance tests as follows:

1. Test insulation resistance for each switchgear bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

B. Manufacturer's Field Service: Engage a factory-authorized service representative to perform the following:

1. Inspect switchgear, wiring, components, connections, and equipment installation Test and adjust components and equipment.
2. Assist in field testing of equipment including pretesting and adjusting of automatic power factor correction units.
3. Start up of the switchgear including all devices.
4. Report results in writing.

C. Testing Agency: Engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

D. Perform the following field tests and inspections and prepare test reports:

1. Perform each electrical test and visual and mechanical inspection stated in latest edition of NETA ATS. Certify compliance with test parameters. Perform NETA tests and inspections for each of the following NETA categories:

a. Switchgear.
b. Circuit breakers.
c. Protective relays.
d. Instrument transformers.
e. Metering and instrumentation.
f. Ground-fault systems.
g. Battery systems.
h. Surge arresters.
i. Arc flash detection and protection.

2. All battery systems shall be tested to IEEE 1106 standard in addition to tests listed in NETA standard.

E. Remove and replace malfunctioning units and retest as specified above.

F. Infrared Scanning: After Substantial Completion, but not more than 60 days after Final Acceptance, perform infrared scan of each switchgear. Remove front and rear panels so joints and connections are accessible to portable scanner.

1. Follow-up Infrared Scanning: Perform an additional follow-up infrared scan of each switchgear 11 months after date of Substantial Completion.
2. Instrument: Use an infrared-scanning device designed to measure temperature or to detect significant deviations from normal values. Provide calibration record for device.
3. Record of Infrared Scanning: Prepare a certified report that identifies switchgear checked and that describes infrared-scanning results. Include scanned photos, notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.6 ADJUSTING

A. Set field-adjustable, protective-relay trip characteristics according to results in Section 260573 "Overcurrent Protective Device Coordination Study.

3.7 CLEANING

A. On completion of installation, inspect interior and exterior of switchgear. Vacuum dirt and debris; do not use compressed air to assist in cleaning. Repair damaged finishes.

3.8 PROTECTION

A. Temporary Heating: Apply temporary heat to switchgear, according to manufacturer's written instructions, throughout periods when switchgear environment is not controlled for temperature and humidity within manufacturer's stipulated service conditions.

3.9 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain switchgear. Refer to Section 017900 "Demonstration and Training."

END OF SECTION 261300

TRAFFIC CONTROL

CONTRACTOR IS SOLELY RESPONSIBLE TO DEVELOP TRAFFIC CONTROL PLANS FOR ALL UNDERGROUND WORK TO BE PERFORMED AS PART OF THIS PROJECT SCOPE INCLUDING WORK ALONG YNEZ ROAD AND OBTAIN NECESSARY APPROVAL FROM CITY OF TEMECULA AND OTHER APPLICABLE AUTHORITIES HAVING JURISDICTION. ALL ASSOCIATED COSTS SHOULD BE INCLUDED AS PART OF BASE BID.

CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN ENCROACHMENT PERMIT AND OTHER APPLICABLE APPROVALS FROM CITY OF TEMECULA FOR PERFORMING UNDERGROUND WORK ALONG YNEZ ROAD. ALL ASSOCIATED COSTS SHOULD BE INCLUDED AS PART OF BASE BID.

SCOPE OF WORK

THE SCOPE OF THIS PROJECT COMPROMISES OF PROVIDING A DEDICATED SOUTHERN CALIFORNIA EDISON (SCE) UTILITY SERVICE FOR MSJC, TEMECULA CAMPUS. AS PART OF THIS PROJECT, AN SCE ENCLOSURE AND SWITCHGEAR ENCLOSURE WILL BE CONSTRUCTED ON THE NORTH-WEST SIDE OF THE CAMPUS TO HOUSE THE SCE EQUIPMENT.TRANSFORMER AND SERVICE SWITCHGEAR. 15KV SWITCHGEAR 'MS' IS OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT. CONTRACTOR IS RESPONSIBLE TO INSTALL, TEST, COMMISSION AND ENERGIZE THE 15KV SWITCHGEAR 'MS'.

ADD ALTERNATE 1

A 400KW DIESEL FIRED GENERATOR IN WEATHERPROOF SOUND ATTENUATED ENCLOSURE WILL BE INSTALLED IN THE SERVICE YARD OF BUILDING G, ADJACENT TO THE EXISTING LOADING DOCK.

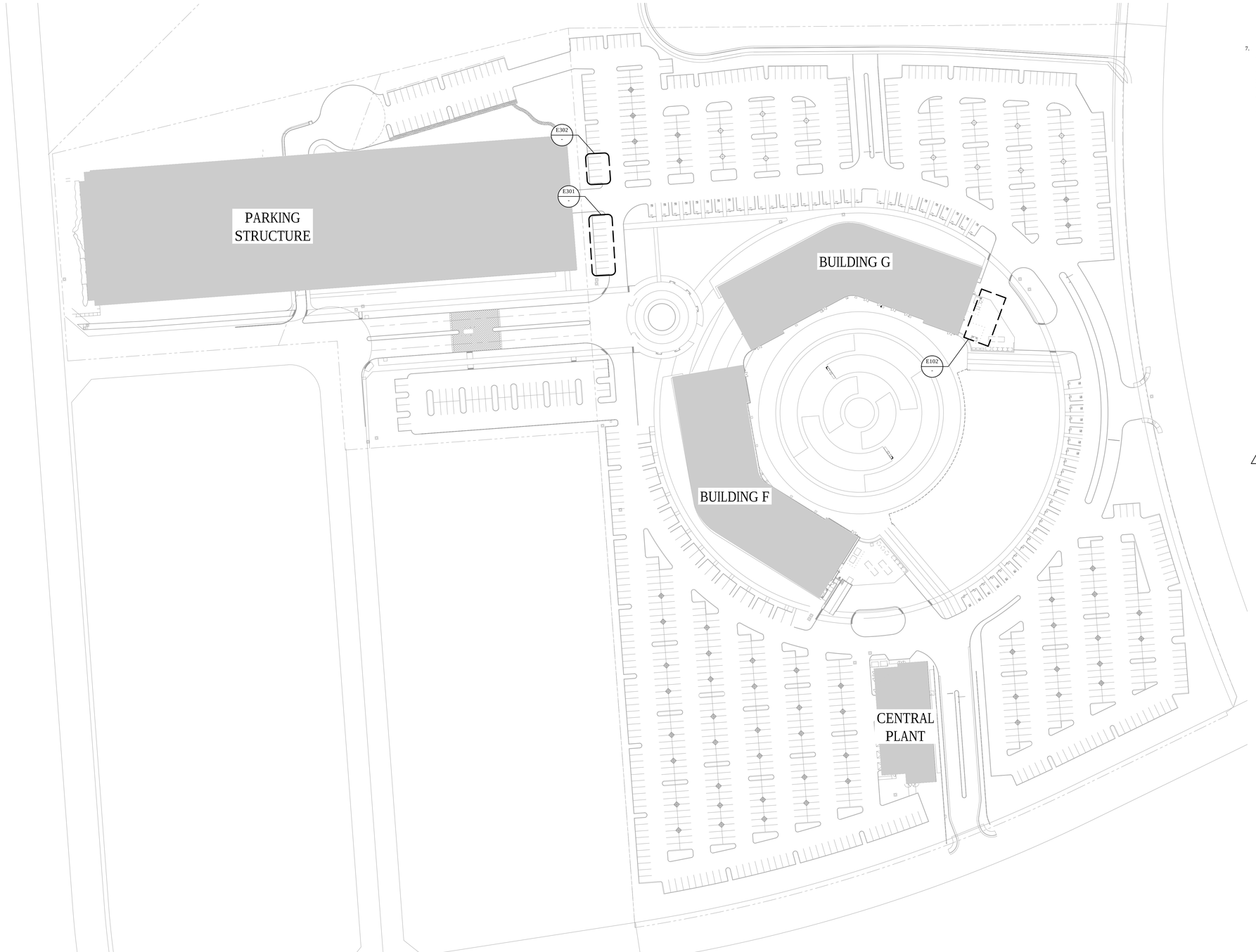
APPLICABLE CODES

1. 2016 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24, CCR
2. 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, CCR
3. 2016 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, CCR
4. 2016 CALIFORNIA MECHANICAL CODE, PART 4, TITLE 24, CCR
5. 2016 CALIFORNIA PLUMBING CODE, PART 5, TITLE 24, CCR
6. 2016 CALIFORNIA ENERGY CODE, PART 6, TITLE 24, CCR
7. 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24, CCR
8. 2016 CALIFORNIA GREEN BUILDING STANDARDS (CARGREEN), PART 11, TITLE 24, CCR
9. 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24, CCR
10. 2016 NFPA STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
11. 2014 NATIONAL ELECTRICAL CODE (NFPA 70)
12. NFPA 72 NATIONAL FIRE ALARM CODE, 2016 EDITION
13. 2016 NFPA 80 FIRE DOOR AND OTHER OPENINGS PROTECTIVES

DSA NOTES

1. COMPLY WITH TITLE 24, CCR, PARTS 1-6 AND 9.
2. TITLE 24, CCR, PARTS 1-5 MUST BE KEPT ON SITE DURING CONSTRUCTION.
3. ALL ADDENDA MUST BE SIGNED BY ARCHITECT AND APPROVED BY DSA. (SECTION 4-338(c), PART 1).
4. ALL SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS CONSTRUCTION CHANGE DOCUMENTS (CCD), AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION. (IR A-6)(SECTION 4-338(c), PART 1) SUBSTITUTION SHALL BE FOR ANY MATERIAL, SYSTEM OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA.
5. ALL CONSTRUCTION CHANGE DOCUMENTS (CCD) (PRELIMINARY CHANGE ORDERS)(SECTION 4-338(c)(d), PART 1) MUST BE SIGNED BY ALL THE FOLLOWING:
   A. A/E OF RECORD.
   B. OWNER (CHANGE ORDERS ONLY).
   C. STRUCTURAL ENGINEER (WHEN APPLICABLE).
   D. DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE).

   AND SHALL BE SUBMITTED TO AND APPROVED BY DSA.
6. A PROJECT INSPECTOR AND TESTING LAB SHALL BE PROVIDED AND APPROVED BY ALL OF THE FOLLOWING:
   A. A/E OF RECORD.
   B. STRUCTURAL ENGINEER.
   C. DSA.
7. ANY ALTERATIONS, REHABILITATION, OR RECONSTRUCTION AS STATED IN TITLE 24, PART 1 SECTION 4-317(c) OR SIMILAR MEANING: THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION, OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NONCOMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE DSA APPROVED DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODES OF REGULATIONS, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE REPAIR WORK.



SHEET INDEX

SCALE: 1" = 60'
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Consultant

Project Title

MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
San Jacinto, CA 92583

DIVISION OF
THE STATE ARCHITECT
APPL # 04-117696
FILE # _____
AC _____ FLS _____
SSS _____ DATE _____
IDENTIFICATION STAMP

Revisions

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	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	1" = 60'

Sheet Title

Overall Site Plan, DSA Notes, Scope Of Work, Applicable Codes And Sheet Index

Sheet Number

G001

P2S No. 9371

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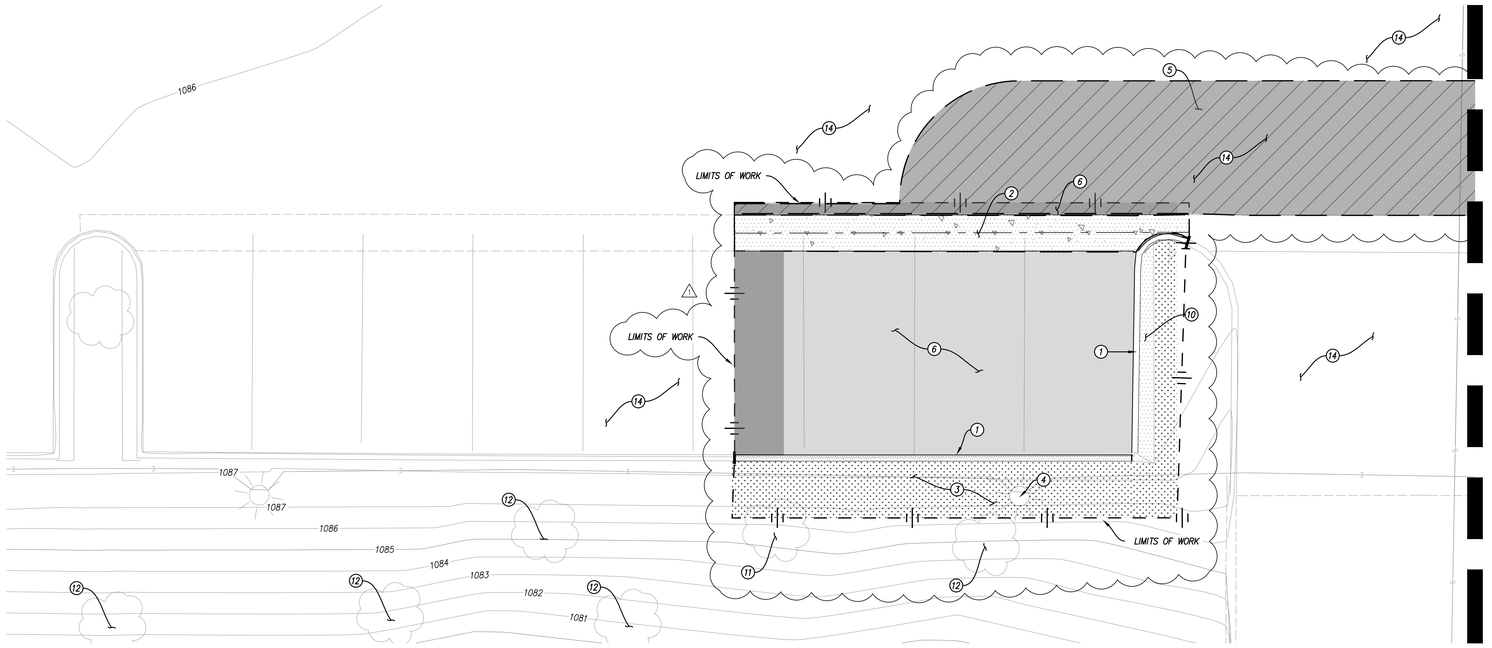

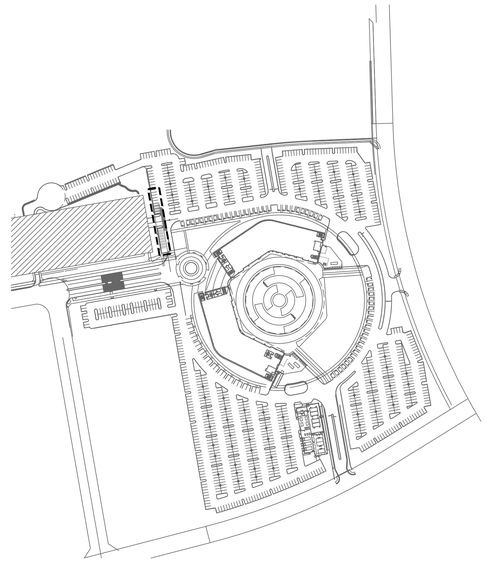

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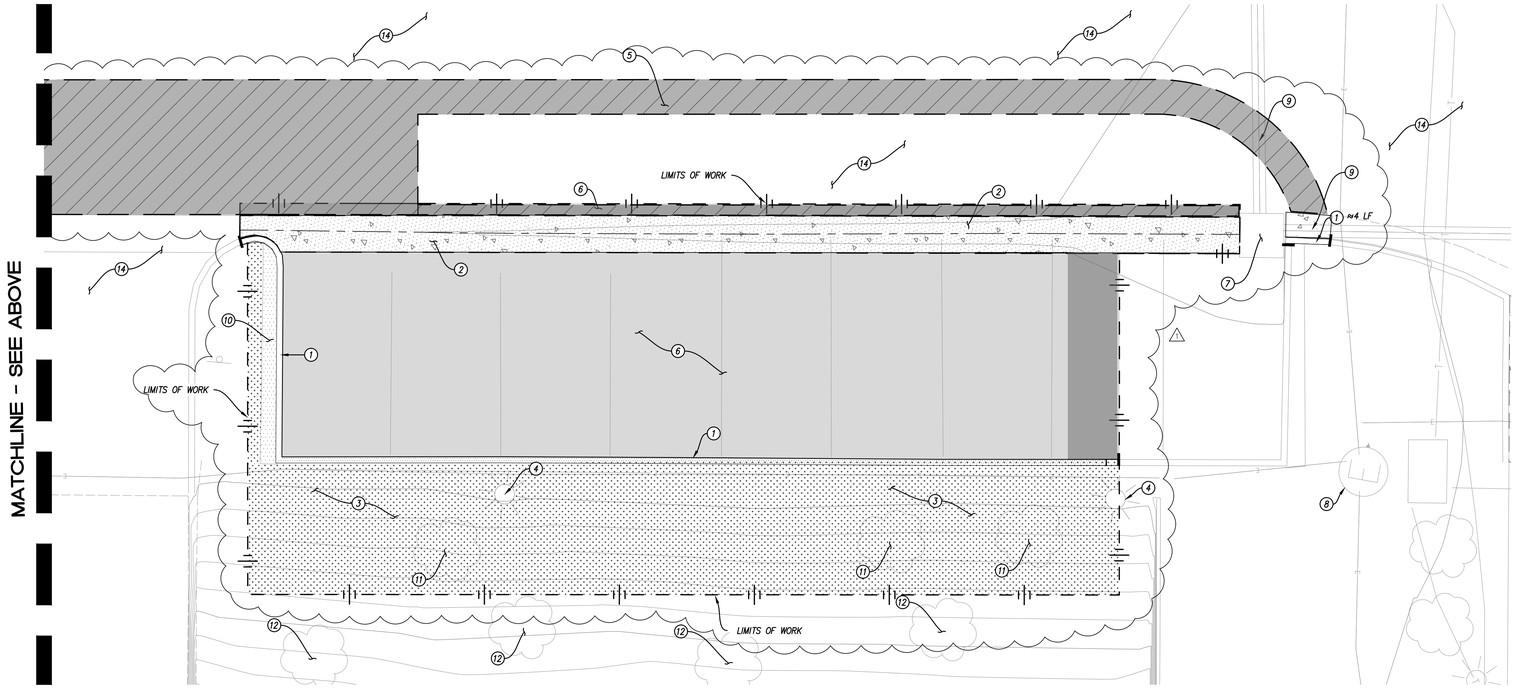

LEGEND

- LIMITS OF WORK
- SAWCUT
- REMOVE EXISTING CONCRETE
- REMOVE EXISTING AC PAVEMENT
- AC TRENCHING
- REMOVE EXISTING LANDSCAPING
- LIMITS OF CURB REMOVAL

DEMOLITION NOTES

1. SAWCUT AND REMOVE EXISTING CURB.
2. SAWCUT AND REMOVE EXISTING CROSS GUTTER.
3. DEMOLISH AND REMOVE EXISTING LANDSCAPING.
4. DEMOLISH LIGHT POLE. WORK TO INCLUDE FOOTING AND FIXTURE.
5. AC TRENCHING FOR PROPOSED ELECTRICAL CONDUIT.
6. DEMOLISH AND REMOVE AC PAVING AND BASE MATERIAL.
7. PROTECT IN PLACE EXISTING STORM DRAIN INLET.
8. PROTECT IN PLACE ELECTRICAL MANHOLE.
9. PROTECT STORM DRAIN PIPE IN PLACE.
10. DEMOLISH AND REMOVE PCC PAVING AND BASE MATERIAL.
11. DEMOLISH TREE INCLUDING TRUNK AND ROOTS COMPLETELY.
12. PROTECT IN PLACE TREE.
13. PROTECT IN PLACE RIBBON GUTTER.
14. PROTECT IN PLACE AC PAVING.

DEMOLITION GENERAL NOTES

1. THE LOCATION OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES, RECORD DRAWINGS, AND UTILITY GPR. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. CONTRACTOR IS RESPONSIBLE TO CONDUCT UNDERGROUND EXPLORATIONS AND POT HOLING PRIOR TO COMMENCEMENT OF WORK TO ENSURE LOCATIONS OF EXISTING UTILITIES.
3. IRRIGATION SHALL BE DISCONNECTED AND REROUTED TO MAINTAIN OPERATION OUTSIDE OF THE CONSTRUCTION AREA. CONTRACTOR SHALL REPLACE ANY LANDSCAPING WHICH IS DAMAGED DURING THE CONSTRUCTION PERIOD BECAUSE OF INTERRUPTED IRRIGATION SERVICES.
4. DEMOLITION IS LIMITED TO WORK WITHIN THE DEMOLITION LIMIT LINE UNLESS OTHERWISE NOTED.
5. DEMOLITION CALLOUTS IN THIS SECTION ARE REPRESENTATIVE OF WHAT IS TO BE DONE, NOT AN ITEMIZED ACCOUNTING FOR EACH PIPE, CATCH BASIN, MANHOLE, VAULT, ETC. THAT IS TO BE DEMOLISHED, REMOVED AND DISPOSED OF.

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PLANNING & ENGINEERING

Project Title

MSJC Temecula
Electrical Upgrade
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
AC FLS
SSS DATE
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. SESS
No. 71075
Exp. 06-30-19
CIVIL
STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
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1	Addendum 1	01/11/2019

Designed	V. Bolles
Drawn	V. Bolles
Checked	K. Boyce
Approved	M. Semic
Date	January 16, 2019
Submittal	Addendum 1
Scale	

Sheet Title

Demolition Plan

Sheet Number

C100

P2S No. 9371

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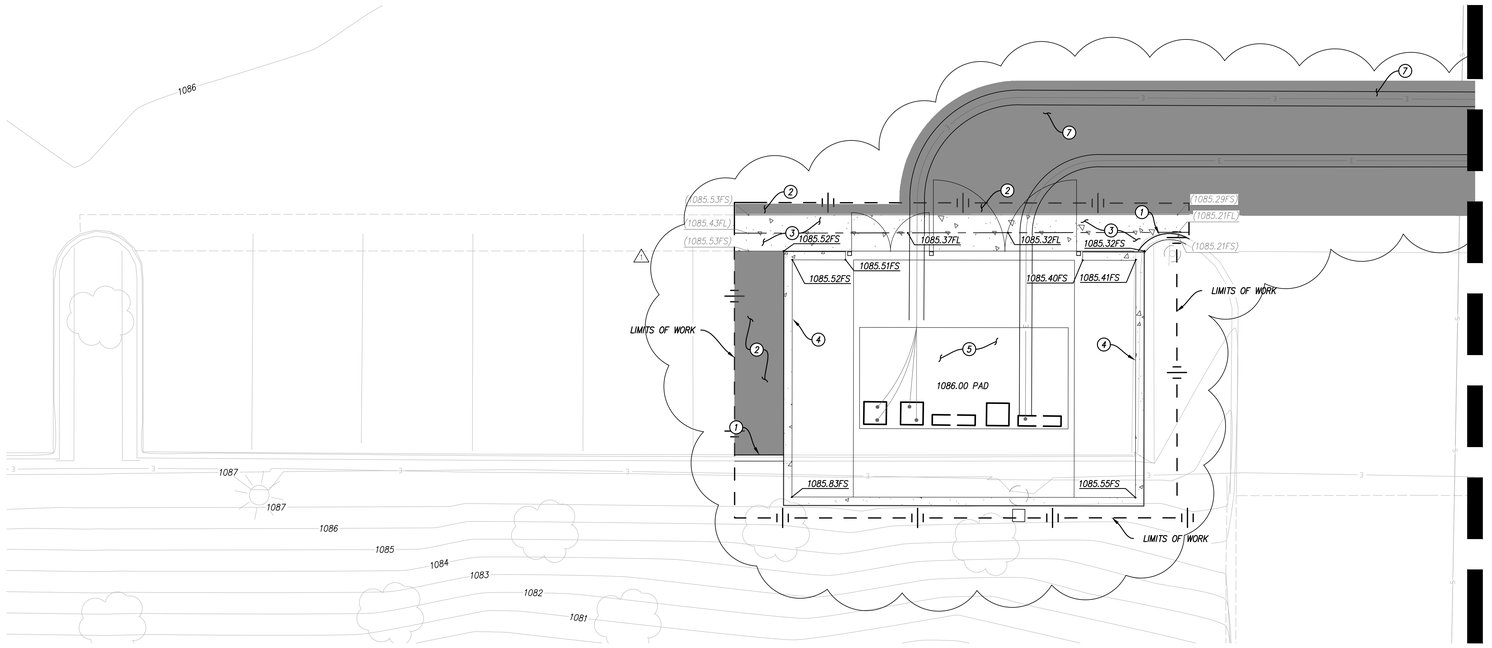

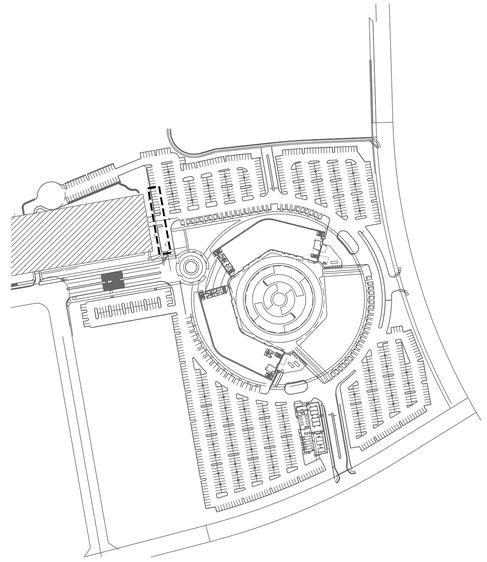

KEY MAP
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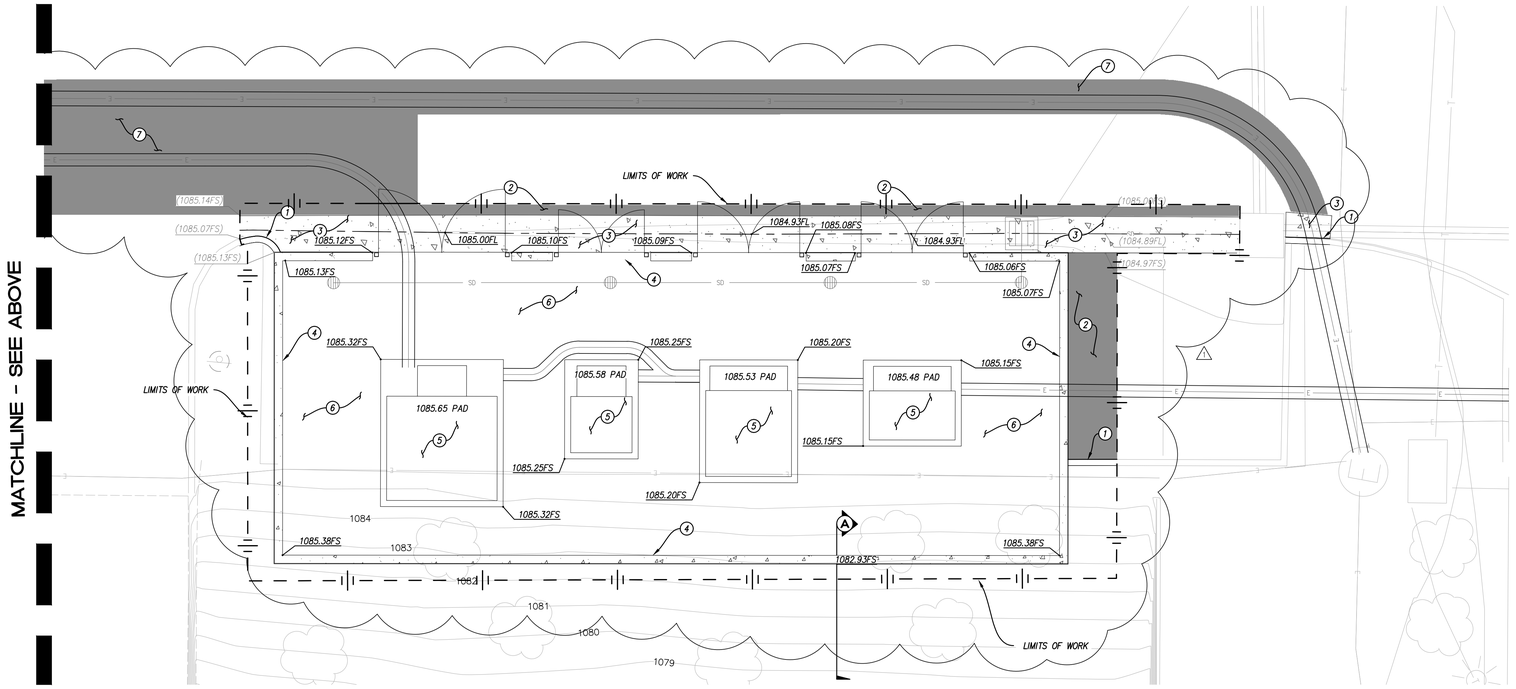


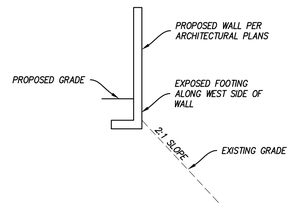
LEGEND

LIMITS OF WORK	
LIMITS OF TRENCHING	
PROPOSED PCC CONCRETE	
PROPOSED AC PAVEMENT	

NOTE:
PROJECT IS UNDER STORM WATER QUALITY THRESHOLD FOR NEW IMPERVIOUS AREA.

CONSTRUCTION NOTES

1. INSTALL 6" CURB TO MATCH EXISTING PER DETAIL 1, C500.
2. INSTALL AC PAVEMENT TO MATCH EXISTING GRADES. MAX 2% SLOPE IN ANY DIRECTION.
3. INSTALL PCC RIBBON GUTTER PER DETAIL 4, C500. MATCH EXISTING GRADES.
4. WALL PER ARCHITECTUAL PLANS.
5. INSTALL 4" TRANSFORMER PAD PER ARCHITECTURAL PLANS. ELEVATION AND GRADES PER THIS SHEET.
6. INSTALL DG PER ARCHITECTURAL PLANS
7. PATCH AC PAVEMENT ABOVE TRENCHING. MATCH BASE COURSE MATERIAL AND DEPTH OF EXISTING AC PAVING. MATCH EXISTING GRADES.



SECTION A
NO SCALE

0 2.5 5 10 15
(IN FEET)
1 inch = 5 ft.

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PLANNING & ENGINEERING

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Approved	M. Semic
Date	January 16, 2019
Submittal	Addendum 1
Scale	

Sheet Title

Civil Site Plan

Sheet Number

C200

P2S No. 9371

FILE PATH & NAME: H:\1609\1609.00_025_MSJC ELECTRIC UPGRADE\ENGINEERING\PLANS\GRADING\C2 IMPROVEMENT PLAN.DWG; KYLE BOYCE
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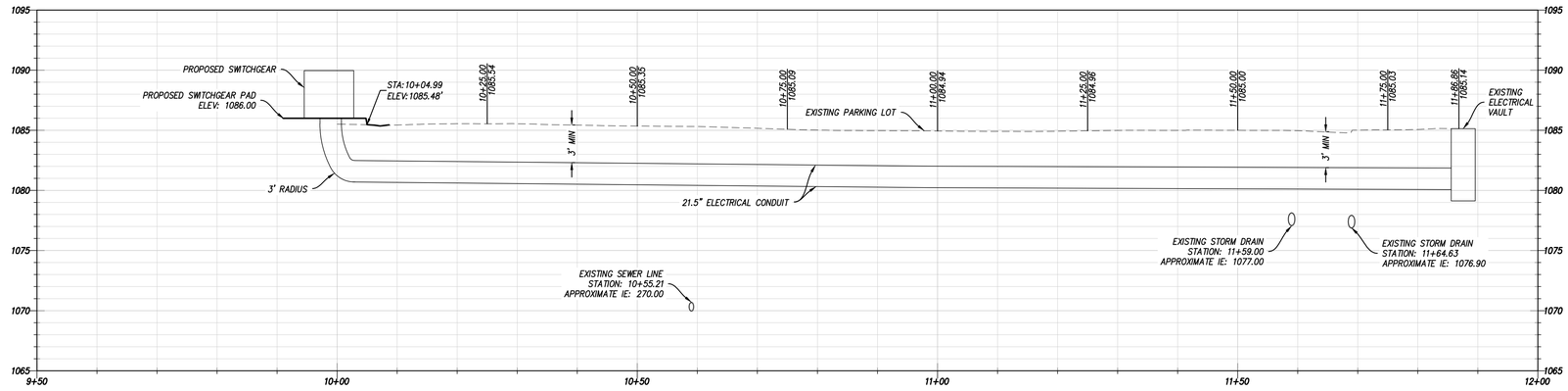
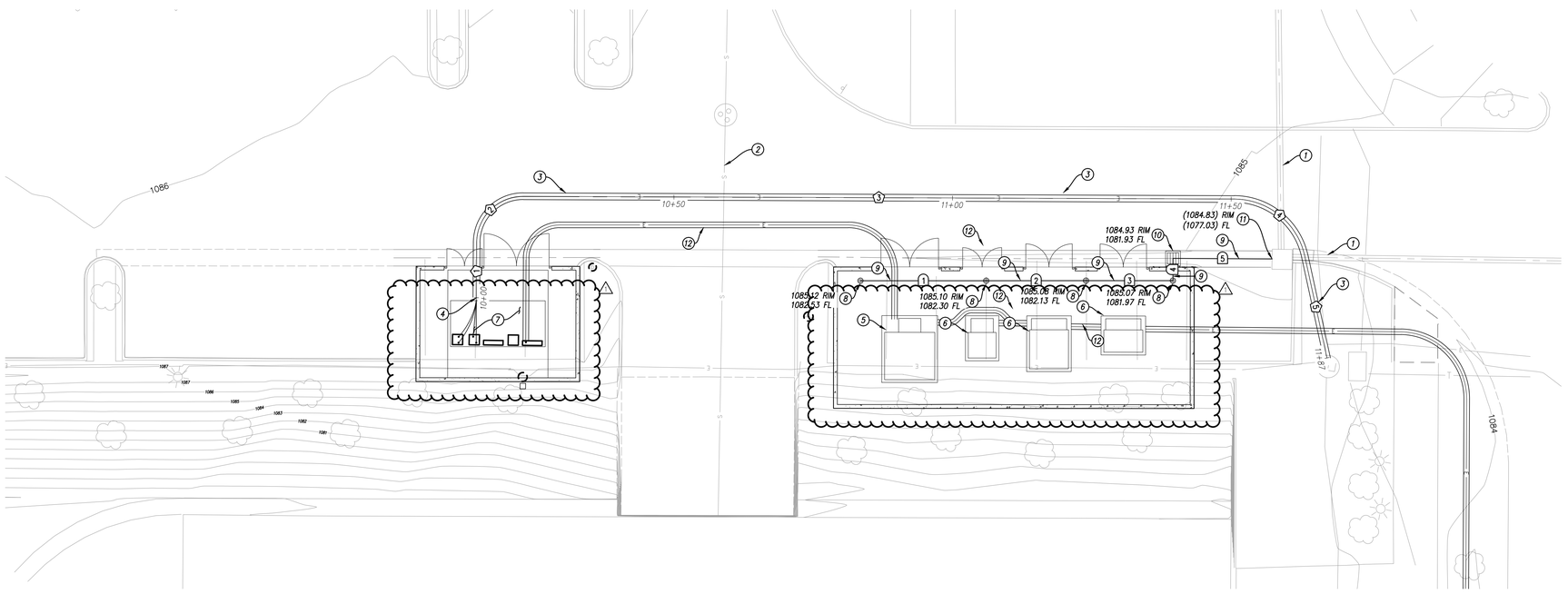


ELECTRICAL CONDUIT PROFILE

1" = 10' HORIZONTAL SCALE
1" = 2' VERTICAL SCALE



UTILITY PLAN VIEW

1" = 10' SCALE

LEGEND

- LIMITS OF WORK
- LIMITS OF TRENCHING
- PROPOSED ELECTRICAL CONDUIT
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN AREA DRAIN
- PROPOSED STORM DRAIN INLET

UTILITY NOTES

1. EXISTING STORM DRAIN TO REMAIN AND BE PROTECTED IN PLACE.
2. EXISTING SEWER TO REMAIN AND BE PROTECTED IN PLACE.
3. PROPOSED ELECTRICAL CONDUIT PER E601. SEE PROFILE FOR ELEVATIONS.
4. CONNECT ELECTRICAL CONDUIT TO PROPOSED SWITCHGEAR PER E302.
5. PROPOSED SCE TRANSFORMER PER SEPARATE PLAN SET.
6. PROPOSED SCE SWITCHGEAR PER SEPARATE PLAN SET.
7. PROPOSED SWITCHGEAR PER ELECTRICAL SHEET E302.
8. PROPOSED AREA DRAIN PER DETAIL 3, C500.
9. PROPOSED STORM DRAIN LINE PER TABLE.
10. PROPOSED 12"X12" BROOKS BOX PER DETAIL 2, C500.
11. CONNECT TO EXISTING STORM DRAIN INLET.
12. SCE CONDUIT PER SEPERATE PLAN SET.

STORM DRAIN DATA (PVT)

NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N10°22'27"W	--	22.57'	6" PVC
2	N10°22'27"W	--	17.92'	6" PVC
3	N10°22'27"W	--	15.58'	6" PVC
4	N79°53'48"E	--	4.00'	6" PVC
5	N10°03'11"W	--	17.79'	6" PVC

ELECTRICAL DATA

NO.	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N79°53'03"E	--	10.33'	(4) 5" CONDUIT PER DETAIL 2, SHEET E601.
2	Δ=90°00'00"	8.33'	13.09'	(4) 5" CONDUIT PER DETAIL 2, SHEET E601.
3	N10°08'06"W	--	127.60'	(4) 5" CONDUIT PER DETAIL 2, SHEET E601.
4	Δ=77°29'10"	13.00'	17.58'	(4) 5" CONDUIT PER DETAIL 2, SHEET E601.
5	N67°21'04"E	--	18.71'	(4) 5" CONDUIT PER DETAIL 2, SHEET E601.

NOTE:
CONTRACTOR TO MAINTAIN A 3' MINIMUM DEPTH TO TOP OF ELECTRICAL CONDUITS.

NOTE:
FOR SURFACE IMPROVEMENTS AND GRADING, SEE SHEET C200.

NOTE:
FOR OFFSITE ELECTRICAL CONDUIT PROFILE, SEE SHEETS C301 – C303.

GENERAL UTILITY PLAN NOTES:

1. CONTRACTOR TO REFERENCE ELECTRICAL PLANS FOR ELECTRICAL/JOINT TRENCH/TELECOM REQUIREMENTS, DETAILS AND SPECIFICATIONS. THE INTENT OF THIS SHEET IS TO PROVIDE HORIZONTAL AND VERTICAL CONTROL OF THE PROPOSED DRY UTILITY ALIGNMENTS.
2. CONTRACTOR TO VERIFY EXACT LOCATION AND ELEVATION OF EXISTING GRADES, UTILITIES AND UTILITY CROSSINGS PRIOR TO COMMENCING CONSTRUCTION. IF ANY CONFLICTS OR DEVIATIONS FROM THIS PLAN ARE IDENTIFIED THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OF WORK PRIOR TO COMMENCING CONSTRUCTION.
3. IF UTILITIES CONNECTIONS SHOWN ON PLANS ARE DIFFERENT THAN THE ONES IN THE SITE, THEN THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER OF WORK AND CONNECT TO THE PROPER CONNECTIONS.
4. CONTRACTOR TO ADJUST ALL PROPOSED AND EXISTING UTILITY RIM ELEVATIONS TO THE FINISHED GRADES SHOWN ON THESE PLANS.
5. STORM DRAIN UTILITY CROSSINGS WITH ONE FOOT OR LESS VERTICAL CLEARANCE SHALL BE SLURRY ENCASED EXTENDING A MINIMUM ONE FOOT IN EACH DIRECTION OF CROSSING UTILITY.

0 5 10 20 30
(IN FEET)
1 inch = 10 ft.

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Project Title

MSJC Temecula
Electrical Upgrade
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
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SSS DATE
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER
MATTHEW J. SEM
No. 71075
Exp. 06-30-19
CIVIL
STATE OF CALIFORNIA

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1	Addendum 1	01/11/2019

Designed	V. Bolles
Drawn	V. Bolles
Checked	K. Boyce
Approved	M. Semic
Date	January 16, 2019
Submittal	Addendum 1
Scale	

Sheet Title

Utility Plan

Sheet Number

C300

P2S No. 9371

FILE PATH & NAME: I:\15\00\1620.00 P2S - MSJC ELECTRIC UPGRADE\ENGINEERING\PLANS\GRADING\C-3 UTILITY PLAN.DWG KYLE BOYCE
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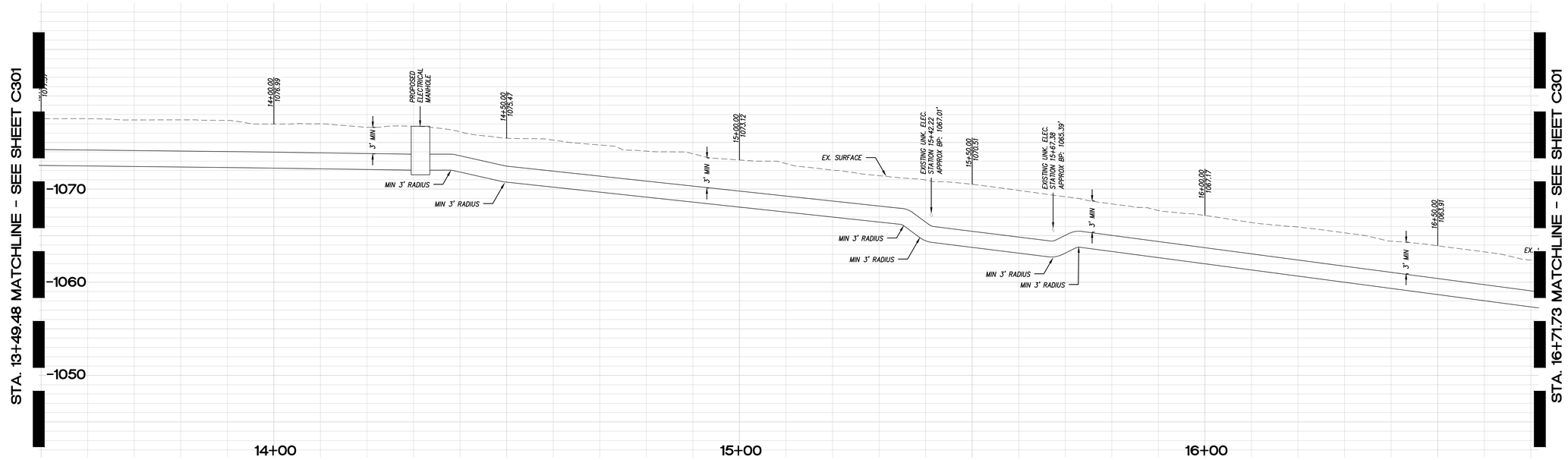
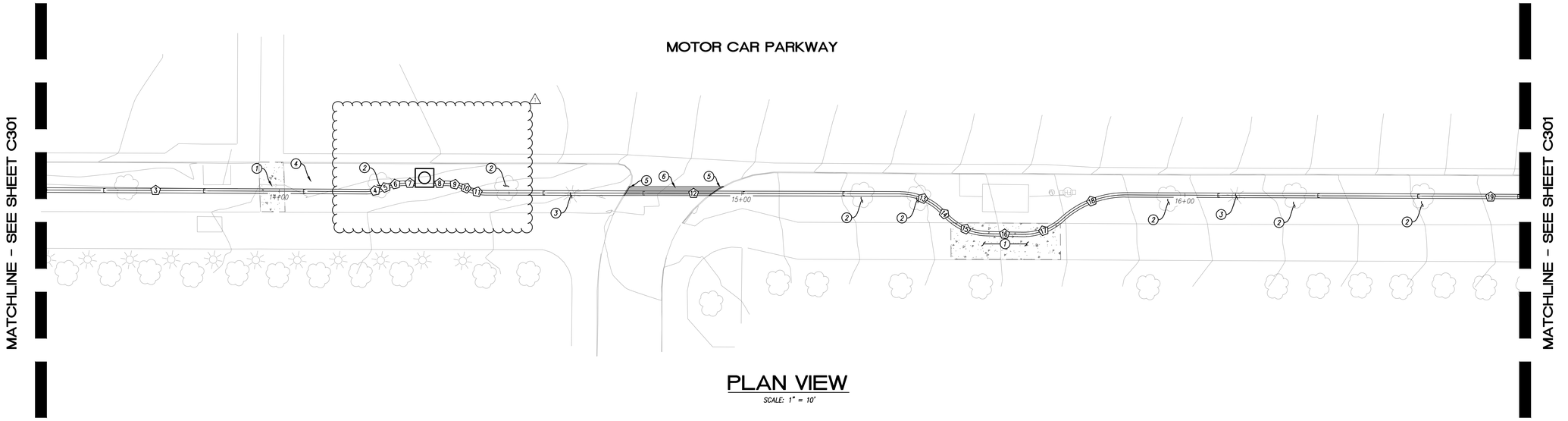


PROFILE VIEW

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 2'



PLAN VIEW

SCALE: 1" = 10'

LEGEND

- LIMITS OF WORK
- LIMITS OF TRENCHING
- PROPOSED PCC CONCRETE
- PROPOSED AC PAVEMENT

CONSTRUCTION NOTES

1. REPLACE SIDEWALK FOR ELECTRICAL TRENCH. CONTRACTOR TO REMOVE SIDEWALK BETWEEN SCORE JOINTS. IF ADA RAMP IS IMPACTED DUE TO CONSTRUCTION, CONTRACTOR TO REMOVE EXISTING CURB RAMP IN ITS ENTIRELY AND REPLACE TO EXISTING CONDITION PER CITY OF TEMECULA STANDARD DRAWING 402, SEE DETAIL 5, SHEET C500. ALL IMPROVEMENTS TO MATCH EXISTING SIDEWALK CONSTRUCTION AND GRADES.
2. DEMOLISH TREE INCLUDING TRUNK AND ROOTS COMPLETELY.
3. DEMOLISH LIGHT POLE. WORK TO INCLUDE FOOTING AND FIXTURE.
4. PROPOSED ELECTRICAL MANHOLE PER E101.
5. REPLACE CURB FOR ELECTRICAL TRENCH. CONTRACTOR TO MATCH EXISTING CURB CONSTRUCTION AND GRADES.
6. AC TRENCHING FOR ELECTRICAL TRENCH, CONTRACTOR TO MATCH EXISTING AC CONSTRUCTION AND GRADES.

ELECTRICAL DATA

PI	BEARING/DELTA	RADIUS	LENGTH	NOTE
3			SEE SHEET C301.	
4	Δ=23°03'44"	10.00'	4.03'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
5	N56°51'36"E	--	0.63'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
6	Δ=22°30'00"	10.00'	3.93'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
7	N79°21'36"E	--	2.31'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
8	N79°46'34"E	--	2.51'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
9	Δ=22°54'46"	10.00'	4.00'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
10	N77°18'40"W	--	1.12'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
11	Δ=22°54'46"	10.00'	4.00'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
12	N79°46'34"E	--	89.12'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
13	Δ=45°00'00"	12.48'	9.80'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
14	N55°07'45"W	--	1.61'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
15	Δ=44°04'06"	12.52'	9.63'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
16	N80°48'09"E	--	7.52'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
17	Δ=43°33'18"	12.52'	9.52'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
18	Δ=42°37'24"	19.98'	14.86'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.
19	N79°52'15"E	--	169.03'	(2) 6" CONDUIT PER DETAIL 3, SHEET E601.

NOTE: IRRIGATION LINES SHOWN ARE BASED ON RECORD DRAWINGS FROM MSJC AND ARE FOR REFERENCE ONLY. CONTRACTOR IS SOLELY RESPONSIBLE FOR ASSURING THAT ALL AREAS SERVED BY EXISTING IRRIGATION ARE KEPT IN OPERATION DURING AND AFTER CONSTRUCTION.

NOTE: CONTRACTOR TO REPLACE ANY LANDSCAPING DAMAGED DURING CONSTRUCTION DUE TO AN INTERRUPTION IN IRRIGATION SERVICES.

NOTE: CONTRACTOR TO REPLACE ANY LANDSCAPING DISTURBED DURING CONSTRUCTION DUE TO TRENCHING OF ELECTRICAL CONDUIT. ALL PROPOSED PLANTING MUST BE APPROVED BY COLLEGE REPRESENTATIVE PRIOR TO INSTALLATION.

N

0 5 10 20 30
(IN FEET)
1 inch = 10 ft.

FILE PATH & NAME: H:\1609.16\00.00_PTS - MSJC ELECTRIC UPGRADE\ENGINEERING\PLANS\GRADING\C-302 UTILITY PLAN.DWG PAOLA UBARTE
PLOT: Thursday, January 10, 2019 4:47:59 PM

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Drawn	V. Bolles
Checked	K. Boyce
Approved	M. Semic
Date	January 16, 2019
Submittal	Addendum 1
Scale	

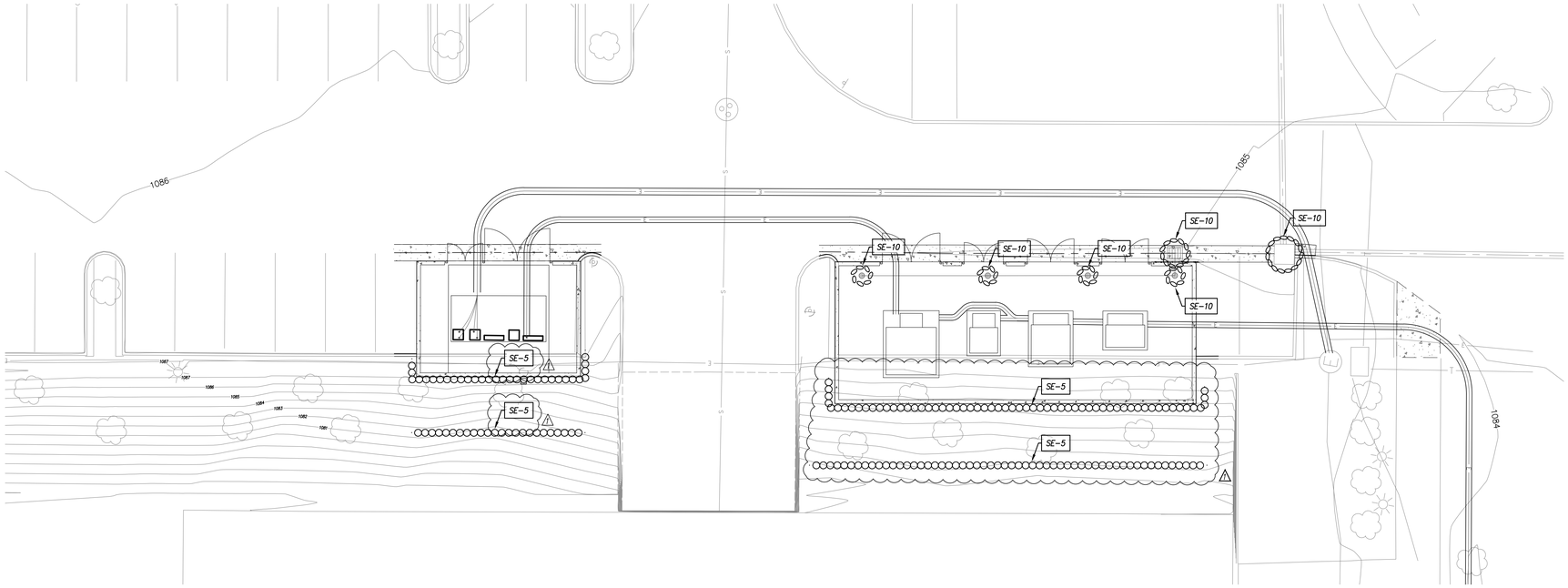
Sheet Title

Offsite Electrical Conduit - Plan And Profile

Sheet Number

C302

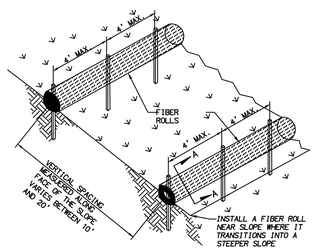
P2S No. 9371



LEGEND

SE-5 ∞∞∞∞∞∞∞∞∞∞ FIBER ROLL (CASQA BMP)

SE-10 GRAVEL BAG/INLET PROTECTION (CASQA BMP)



NOTE
INSTALL FIBER ROLL ALONG A LEVEL CONTOUR

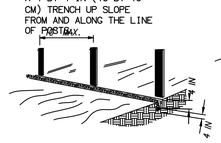
DETAIL
A-ANTS

FIBER ROLL SPACING	
GRADE	FLOW LENGTH
0-25%	20 FEET
25-50%	15 FEET
OVER 50%	10 FEET

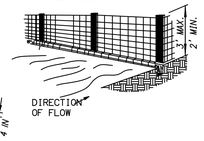
TYPICAL FIBER ROLL INSTALLATION 1

NTS C-160

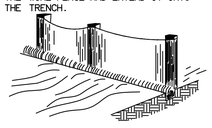
1. SET POSTS AND EXCAVATE A 4 BY 4 IN (10 BY 10 CM) TRENCH UP SLOPE FROM AND ALONG THE LINE OF POSTS.



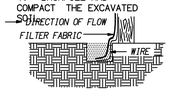
2. STAPLE WIRE FENCING TO THE POSTS.



3. ATTACH THE FILTER FABRIC TO THE WIRE FENCE AND EXTEND IT INTO THE TRENCH.



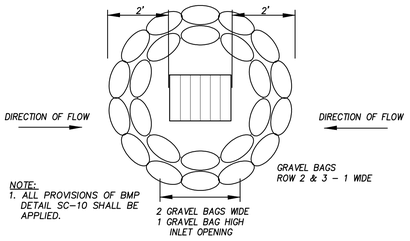
4. BACKFILL AND COMPACT THE EXCAVATED SOIL.



NOTE
PREFABRICATED SILTFENCE MAYBE USED IN LIEU OF IN PLACE CONSTRUCTION.

SILT FENCE 5

NTS C-160



NOTE:
1. ALL PROVISIONS OF BMP DETAIL SC-10 SHALL BE APPLIED.

STORM DRAIN INLET PROTECTION FOR INLET IN SUMP CONDITION 2

NTS C-160

MINIMUM POST-CONSTRUCTION MAINTENANCE PLAN

AT THE COMPLETION OF THE WORK SHOWN, THE FOLLOWING PLAN SHALL BE FOLLOWED TO ENSURE WATER QUALITY CONTROL IS MAINTAINED FOR THE LIFE OF THE PROJECT:

1. STABILIZATION: ALL PLANTED SLOPES AND OTHER VEGETATED AREAS SHALL BE INSPECTED PRIOR TO OCTOBER 1 OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ? INCH) AND REPAIRED AND REPLANTED AS NEEDED UNTIL A NOTICE OF TERMINATION (NOT) IS FILED.
2. STRUCTURAL PRACTICES: DESILTING BASINS, DIVERSION DITCHES, DOWNDRAINS, INLETS, OUTLET PROTECTION MEASURES, AND OTHER PERMANENT WATER QUALITY AND SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED PRIOR TO OCTOBER 1ST OF EACH YEAR AND AFTER MAJOR RAINFALL EVENTS (MORE THAN ? INCH). REPAIRS AND REPLACEMENTS SHALL BE MADE AS NEEDED AND RECORDED IN THE MAINTENANCE LOG IN PERPETUITY.
3. OPERATION AND MAINTENANCE, FUNDING: POST CONSTRUCTION MANAGEMENT MEASURES ARE THE RESPONSIBILITY OF UCSD.

EROSION AND SEDIMENT CONTROL NOTES

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE UNIVERSITY OF SAN DIEGO CALIFORNIA SAN DIEGO MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING/I MPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WATER QUALITY TECHNICAL REPORT (WQTR), AND/OR WATER POLLUTION CONTROL PLAN (WPCP).
2. FOR STORM DRAIN INLET, PROVIDE A CURB SEDIMENT CONTAINMENT SYSTEM IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. FOR INLETS LOCATED AT SUMPS ADJACENT TO TOP OF SLOPES, THE CONTRACTOR SHALL ENSURE THAT WATER DRAINING TO THE SUMP IS DIRECTED INTO THE INLET AND THAT A MINIMUM OF 1.00' FREEBOARD EXISTS AND IS MAINTAINED ABOVE THE TOP OF THE INLET. IF FREEBOARD IS NOT PROVIDED BY GRADING SHOWN ON THESE PLANS, THE CONTRACTOR SHALL PROVIDE IT VIA TEMPORARY MEASURES, I.E. GRAVEL BAGS.
4. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) DUE TO CONSTRUCTION ACTIVITY.
5. THE CONTRACTOR SHALL CHECK AND MAINTAIN ALL LINED AND UNLINED DITCHES AFTER EACH RAINFALL.
6. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL, OR WHEN SILT REACHES AN ELEVATION OF 0.5' BELOW WEIR OPENING FOR GRAVEL BAG BASINS.
7. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ON SITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
8. PERMANENT BMP DEVICES SHOWN ON PLAN SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF UCSD AND THE ENGINEER OF WORK.
9. THE CONTRACTOR SHALL RESTORE ALL EROSION/SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
10. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER AND THE ENGINEER OF WORK DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
12. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED GRADING PLAN SHALL BE INCORPORATED HEREON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM GRADING CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
13. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
14. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE FIVE DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
15. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING FOR THE AREAS FOR WHICH THE CONTRACTOR CAN PROVIDE EROSION/SEDIMENT CONTROL MEASURES.
16. THE CONTRACTOR SHALL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 30TH TO MARCH 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, AND THE RESIDENT ENGINEER) TO EVALUATE THE ADEQUACY OF THE EROSION CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.
17. STABILIZED ENTRANCES SHALL BE MAINTAINED AND CLEANED WEEKLY IN ORDER TO MAINTAIN MAXIMUM EFFECTIVENESS AT ALL TIMES DURING CONSTRUCTION.

N

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(IN FEET)
1 inch = 10 ft.

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Designed V. Bolles
Drawn V. Bolles
Checked K. Boyce
Approved M. Semic

Date January 16, 2019

Submittal Addendum 1

Scale

Sheet Title

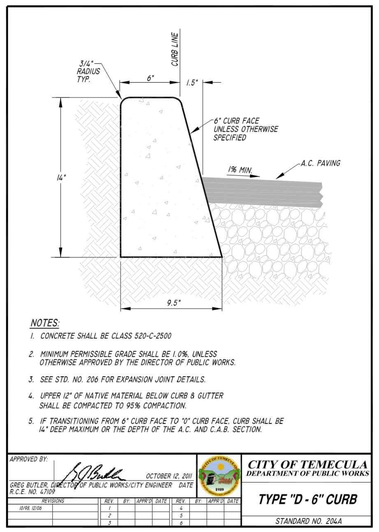
Erosion Control Plan

Sheet Number

C400

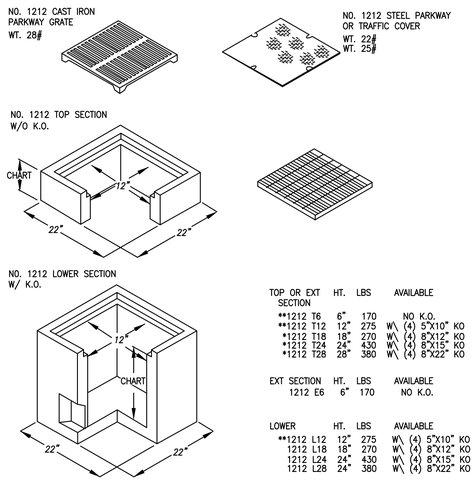
P2S No. 9371

FILE PATH & NAME: H:\1609\16090.00 - PDS - MSJC ELECTRIC UPGRADE\ENGINEERING\PLANS\GRADING\C.4 EROSION CONTROL PLAN.DWG KYLE BOYCE
PLOT: Thursday, January 10, 2019 2:13:17 PM



6" CURB
NTS

1



TOP OR EXT SECTION	HT.	LBS	AVAILABLE
**1212 T6	6"	170	NO K.O.
**1212 T12	12"	275	W\ (4) 5"X10" KO
*1212 T18	18"	270	W\ (4) 8"X12" KO
*1212 T24	24"	430	W\ (4) 8"X15" KO
*1212 T28	28"	380	W\ (4) 8"X22" KO

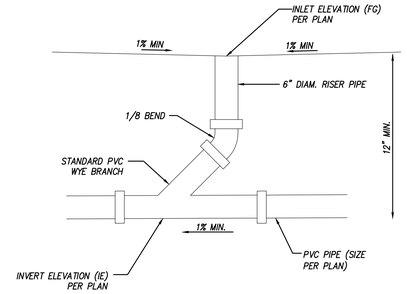
EXT SECTION	HT.	LBS	AVAILABLE
1212 E6	6"	170	NO K.O.

LOWER	HT.	LBS	AVAILABLE
**1212 L12	12"	275	W\ (4) 5"X10" KO
1212 L18	18"	270	W\ (4) 8"X12" KO
1212 L24	24"	430	W\ (4) 8"X15" KO
1212 L28	24"	380	W\ (4) 8"X22" KO

* WITH FRAME ONLY.
** WITH OR WITHOUT FRAME.

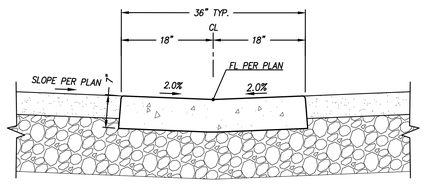
12"x12" BROOKS BOX
NTS

2



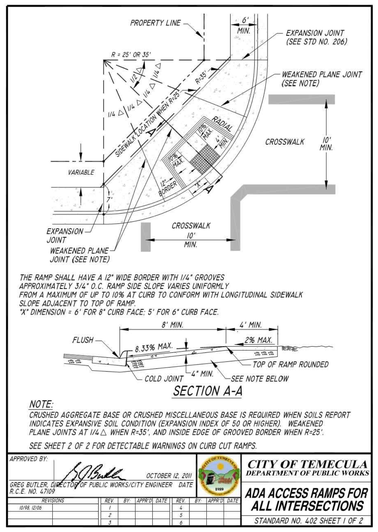
AREA DRAIN
NTS

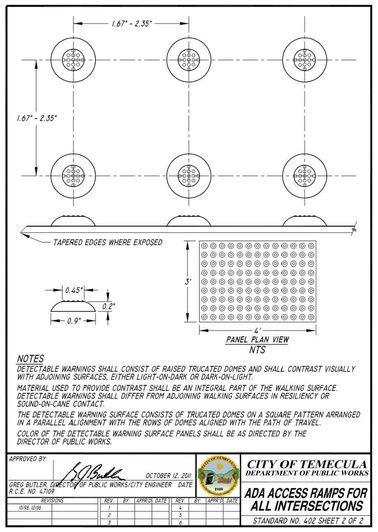
3



RIBBON GUTTER
NTS

4





ADA ACCESS RAMPS
NTS

5

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Scale

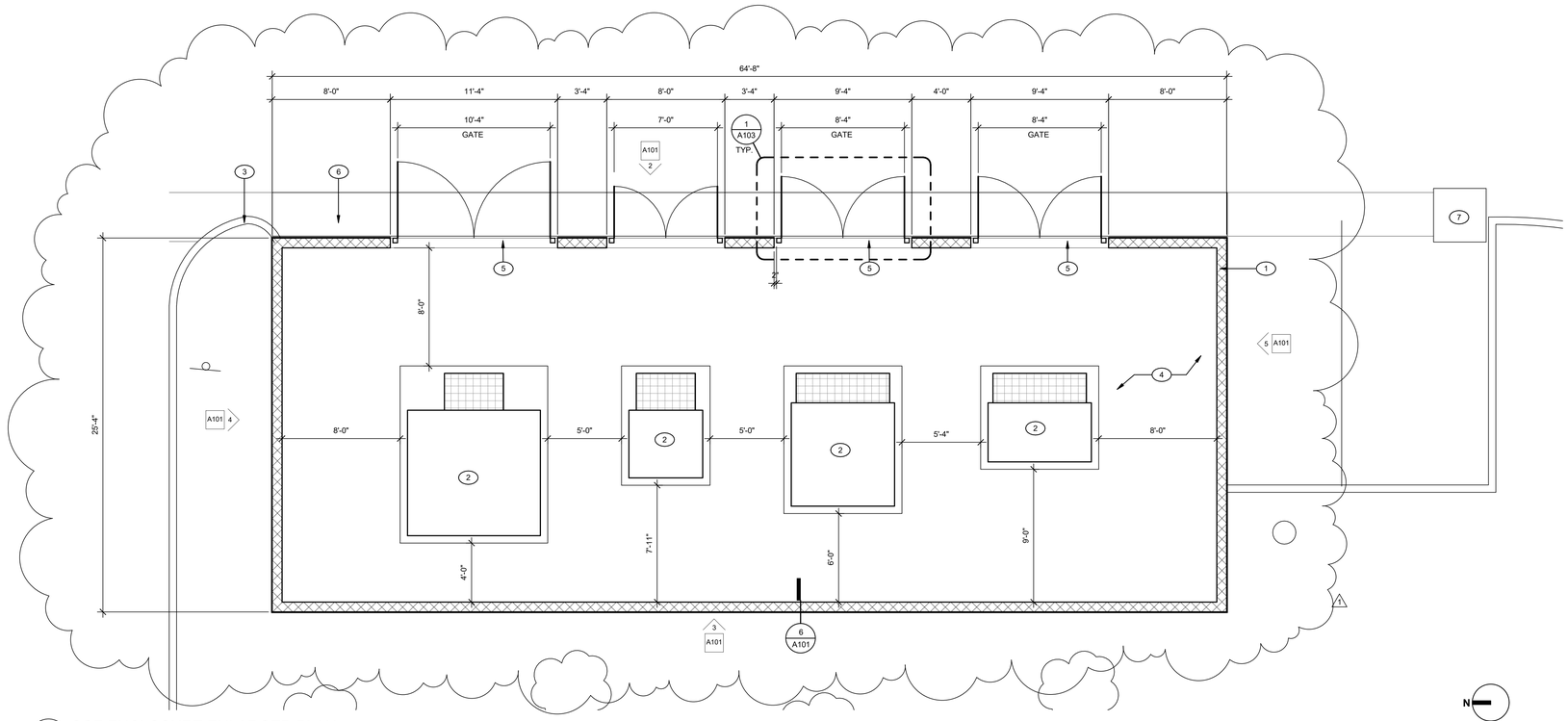
Sheet Title

Details

Sheet Number

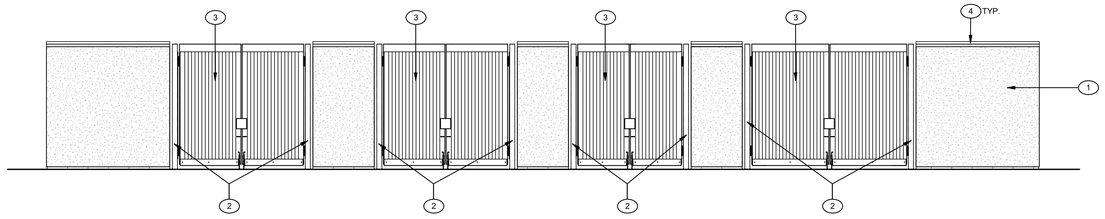
C500

P2S No. 9371



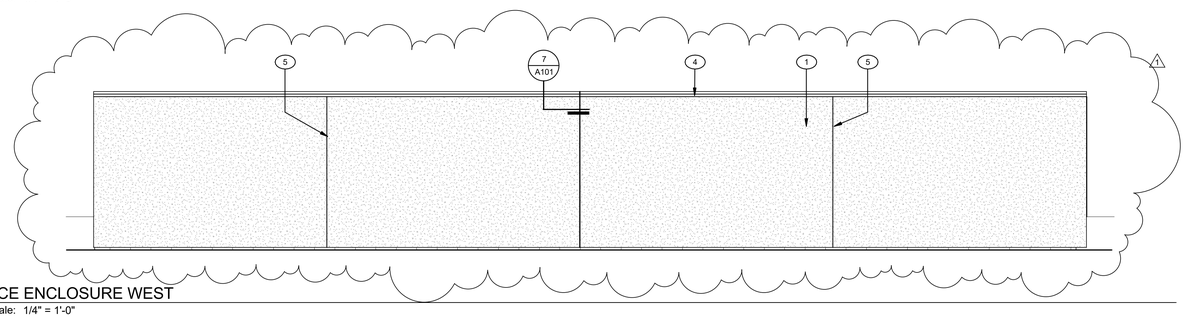
1 SCE ENCLOSURE ENLARGED PLAN

Scale: 1/4" = 1'-0"



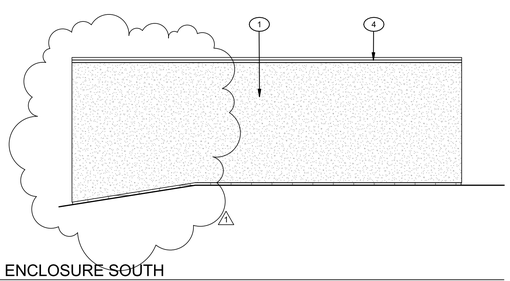
2 SCE ENCLOSURE EAST.

Scale: 1/4" = 1'-0"



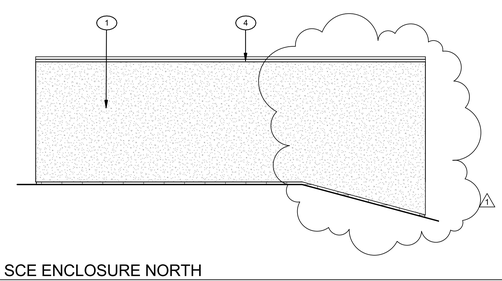
3 SCE ENCLOSURE WEST

Scale: 1/4" = 1'-0"



5 SCE ENCLOSURE SOUTH

Scale: 1/4" = 1'-0"



4 SCE ENCLOSURE NORTH

Scale: 1/4" = 1'-0"

SCE ENCLOSURE PLAN CODED NOTES

1. 8" CMU WALL W/ 1/2" CEMENT PLASTER TYPICAL. SEE STRUCTURAL DRAWINGS FOR CMU WALL.
2. SCE EQUIPMENT, SEE ELECTRICAL
3. CONCRETE CURB, SEE CIVIL DRAWINGS
4. NEXPAVE ORGANIC LOCK AGGREGATE PAVING BY GAIL MATERIALS.
5. STEM WALL, COORDINATE HEIGHT WITH CIVIL (MATCH EDGE OF CONCRETE GUTTER)
6. RIBBON GUTTER & ASPHALT PATCHING SEE CIVIL
7. EXISTING CATCH BASIN

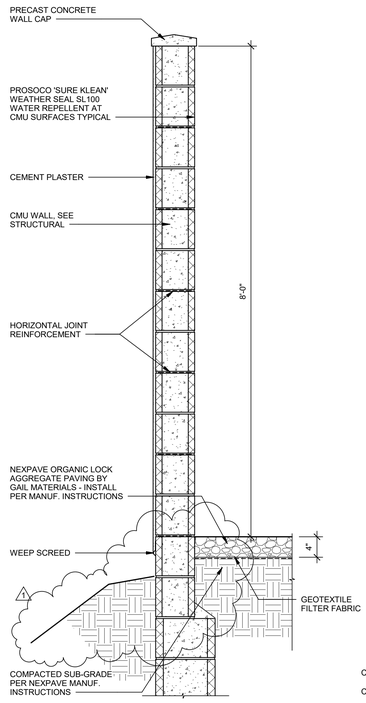
FLOOR PLAN LEGEND

(#) ENCLOSURE PLAN CODED NOTE

8" CMU WALL, SEE STRUCTURAL

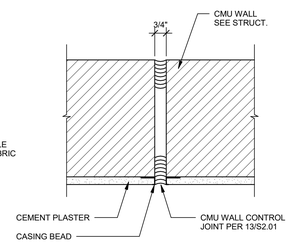
ELEVATION CODED NOTES

1. CEMENT PLASTER OVER CONCRETE BLOCK (EXTERIOR OF ENCLOSURE ONLY)
2. TUBE STEEL COLUMN (GALVANIZED & PAINTED), SEE STRUCTURAL
3. STEEL GATE (GALVANIZED & PAINTED)
4. PRE-CAST CONCRETE CAP
5. CEMENT PLASTER EXPANSION JOINT, SEE SPECIFICATIONS



6 SCE ENCLOSURE WALL SECTION

Scale: 1" = 1'-0"



7 CONTROL JOINT

Scale: 3" = 1'-0"

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MORETO MATHISON & ASSOCIATES ARCHITECTS

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41888 Motor Car Parkway
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Mount San Jacinto College

MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
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Revisions

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	50% Construction Docs	08/03/2018
	DSA Submittal	09/14/2018
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1	Addendum 1	01/11/2019

Designed	DAM
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Checked	DAM
Approved	DAM
Date	January 16, 2019
Submittal	Addendum 1
Scale	As Noted

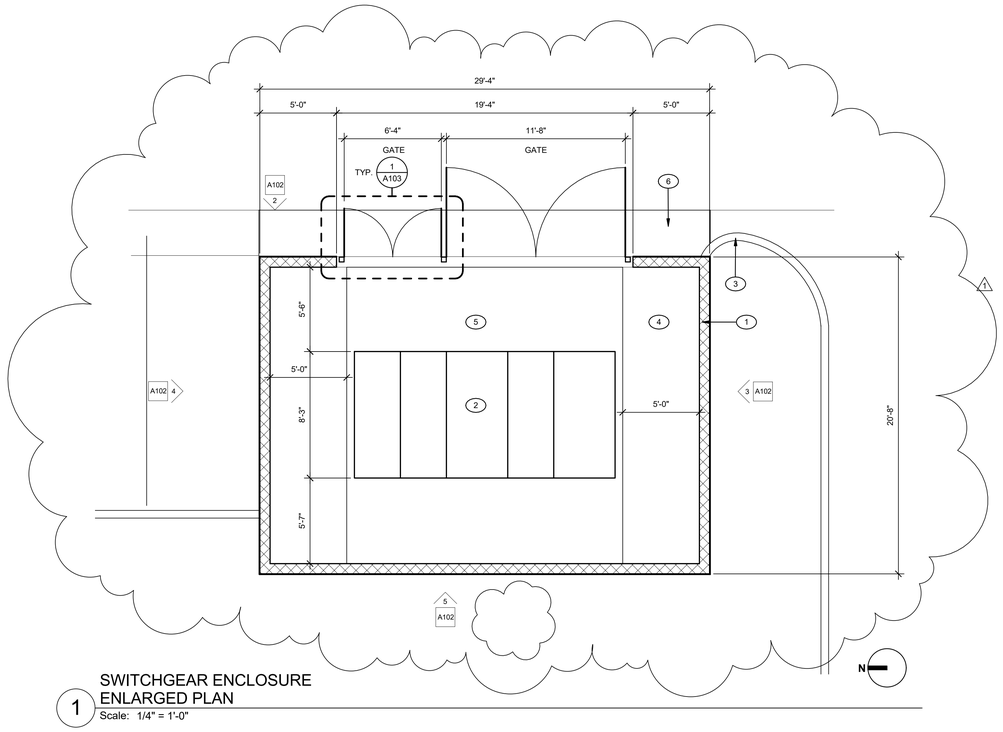
Sheet Title

SCE Enclosure Plan

Sheet Number

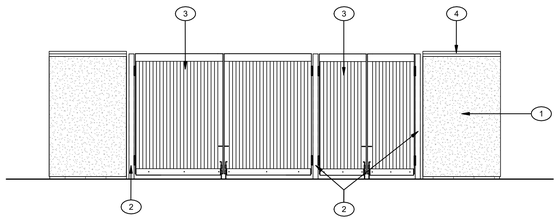
A101

P2S No. 7926



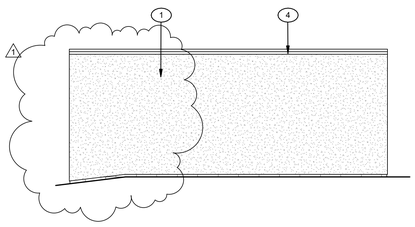
1 SWITCHGEAR ENCLOSURE ENLARGED PLAN

Scale: 1/4" = 1'-0"



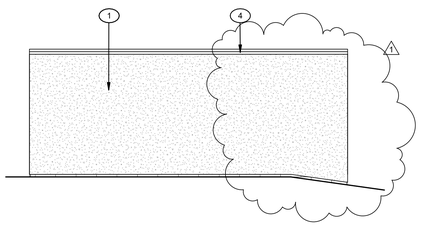
2 SWITCHGEAR ENCLOSURE EAST

Scale: 1/4" = 1'-0"



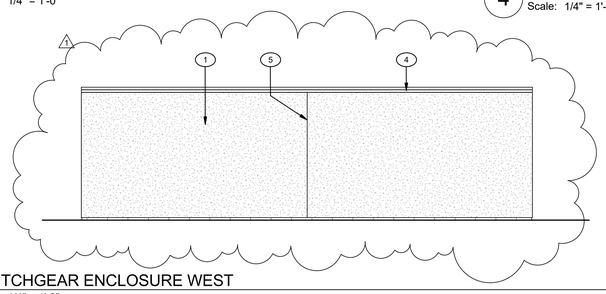
3 SWITCHEAR ENCLOSURE SOUTH

Scale: 1/4" = 1'-0"



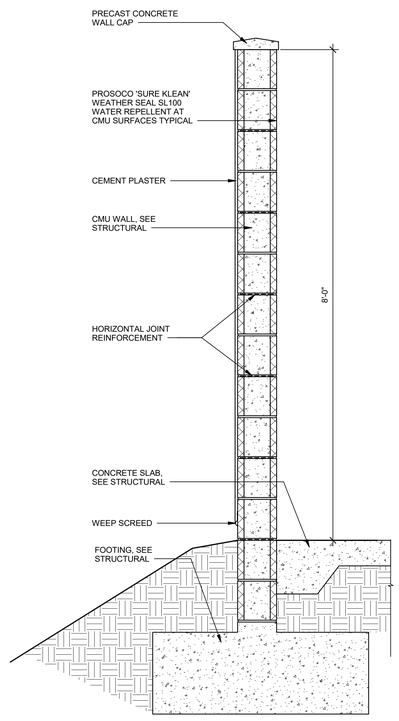
4 SWITCHGEAR ENCLOSURE NORTH

Scale: 1/4" = 1'-0"



5 SWITCHGEAR ENCLOSURE WEST

Scale: 1/4" = 1'-0"



6 SWITCHGEAR ENCLOSURE WALL SECTION

Scale: 1" = 1'-0"

SWITCHGEAR ENCLOSURE PLAN CODED NOTES

1. 8" CMU WALL W/ CEMENT PLASTER TYPICAL. SEE STRUCTURAL DRAWINGS FOR CMU WALL.
2. SWITCHGEAR, SEE ELECTRICAL
3. CONCRETE CURB, SEE CIVIL DRAWINGS
4. CONCRETE PAD, SEE STRUCTURAL (AND CIVIL FOR ELEVATIONS)
5. CONCRETE EQUIPMENT PAD, SEE STRUCTURAL
6. CONCRETE RIBBON GUTTER AND ASPHALT PATCHING SEE CIVIL

FLOOR PLAN LEGEND

(#) ENCLOSURE PLAN CODED NOTE

8" CMU WALL, SEE STRUCTURAL

ELEVATION CODED NOTES

1. CEMENT PLASTER OVER CONCRETE BLOCK (EXTERIOR OF ENCLOSURE ONLY)
2. TUBE STEEL COLUMN (GALVANIZED & PAINTED), SEE STRUCTURAL
3. STEEL GATE (GALVANIZED & PAINTED)
4. PRE-CAST CONCRETE CAP
5. CEMENT PLASTER EXPANSION JOINT, SEE SPECIFICATIONS

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ARCHITECTS

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Submittal	Addendum 1
Scale	As Noted

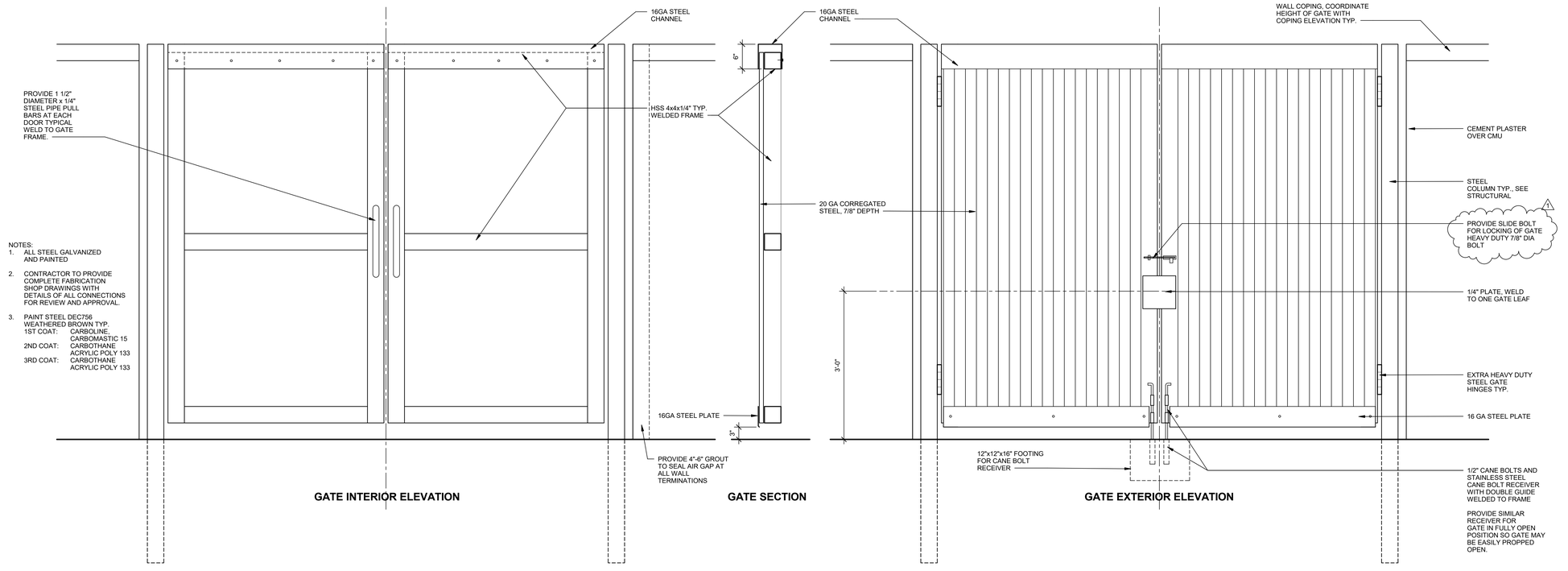
Sheet Title

Switchgear Plan

Sheet Number

A102

P2S No. 7926



NOTES:
1. ALL STEEL GALVANIZED AND PAINTED
2. CONTRACTOR TO PROVIDE COMPLETE FABRICATION SHOP DRAWINGS WITH DETAILS OF ALL CONNECTIONS FOR REVIEW AND APPROVAL.
3. PAINT STEEL DEC756 WEATHERED BROWN TYP.
   1ST COAT: CARBOLINE, CARBOMASTIC 15
   2ND COAT: CARBOTHANE ACRYLIC POLY 133
   3RD COAT: CARBOTHANE ACRYLIC POLY 133

1 ENCLOSURE GATE
Scale: 1" = 1'-0"

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Submittal	Addendum 1
Scale	As Noted

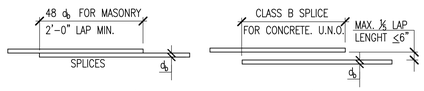
Sheet Title

Gate Details

Sheet Number

A103

P2S No. 7926



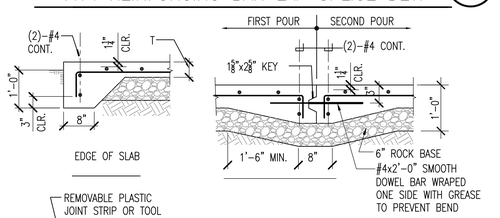
REINFORCEMENT LAP SPLICES IN INCHES					
BAR SIZE	LAP CLASS	f'c=3,000 psi			
		TOP BARS		OTHER BARS	
		CASE 1	CASE 2	CASE 1	CASE 2
#3	B	19	28	17	22
#4	B	25	37	19	29
#5	B	47	70	36	54
#6	B	56	84	43	64
#7	B	81	122	63	94
#8	B	93	139	72	107

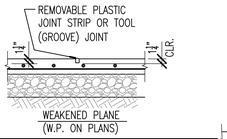
NOTES:
1. TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMAL-WEIGHT CONCRETE.
2. TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS ARE BASED ON ACI 318-11, SECTIONS 12.2.2 & 12.15, RESPECTIVELY.
3. CASES 1 AND 2, WHICH DEPEND ON CONCRETE COVER, AND THE CENTER-TO-CENTER SPACING OF THE REINFORCING BARS, ARE DEFINED AS:

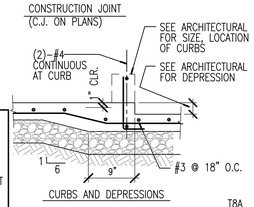
CASE 1	COVER AT LEAST $1\frac{1}{2}d_b$ AND C.-C. SPACING AT LEAST $1\frac{1}{2}d_b$ AND CODE REQ'D. MINIMUM STIRRUPS OR TIES THROUGH DEVELOPE LENGTH OF REBARS OR CLEAR COVER AT LEAST $1d_b$ AND C-C SPACING NOT LESS THAN $2d_b$
CASE 2	OTHER THAN CASE 1

4. LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS B=1.3$_d$ (ACI 318-11, SECTION 12.15.1)
5. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF FRESH CONCRETE CAST BELOW THE BARS.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE, MULTIPLY THE TABULATED VALUES BY 1.33

TYP. REINFORCING BAR LAP SPLICE DET. 4 T9

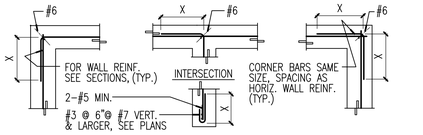






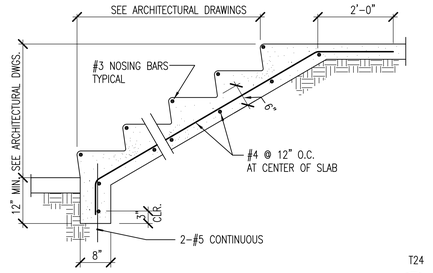
NOTE:
1. ALL SLAB REINFORCING STEEL ARE AS CALLED FOR ON PLAN.
2. PROVIDE CONSTRUCTION JOINT AND WEAKENED PLANE AS CALLED FOR BY SPECIFICATION OR AS SHOWN ON PLAN BUT NOT TO EXCEED SPACING OF 20'-0" O.C.

TYP. SLAB-ON-GRADE DETAIL (REINFORCED) 5 T8A



X=36 BAR DIA. IN CONCRETE X=48 BAR DIA. IN MASONRY

TYPICAL WALL REINFORCING DETAIL 6 T6



TYPICAL CONCRETE STAIR ON GRADE DETAIL 7 T24

OUTLINED STRUCTURAL DESIGN CRITERIA:

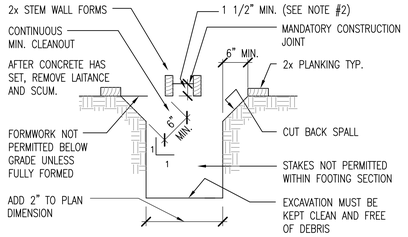
PROJECT LOCATION
LATITUDE = 33.51789°N
LONGITUDE = 117.15333°W

LATERAL LOADS DESIGN CRITERIA:
A. WIND LOADS – CONFORM TO CBC CHAPTER 16, WITH THE FOLLOWING PARAMETERS:
   a. EXPOSURE TYPE.....EXPOSURE C
   b. BASIC WIND SPEED.....110 MPH, 3 SEC. GUST

B. SEISMIC LOADS – CONFORM TO CBC CHAPTER 16, WITH THE FOLLOWING PARAMETERS:

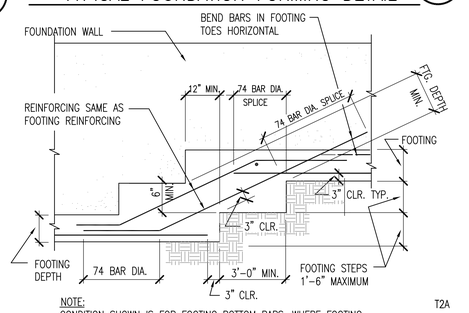
SEISMIC DESIGN	SUBSTATION YARD
SEISMIC FORCE-RESISTING SYSTEM PER ASCE 7-10 TABLE 12.2	LIGHT-FRAME WALL WITH SHEAR PANEL (A.17)
IMPORTANCE FACTOR	1.00
OCCUPANCY CATEGORY	II
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION.....S_{DS}	1.316
ONE SECOND PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION.....S_{D1}	0.807
COMPONENT MODIFICATION FACTOR...a_p	1.0
COMPONENT RESPONSE MODIFICATION FACTOR.....R_p	2.5
COMPONENT IMPORTANCE FACTOR...I_p	1.0
DESIGN BASE SHEAR(ASD).....V	0.276

VERTICAL LOADS DESIGN CRITERIA:
A. LIVE LOADS (ROOF).....20 POUNDS PER SQUARE FOOT



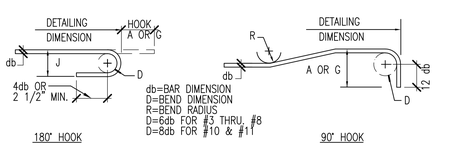
NOTES:
1. FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATION, PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT (STRUCTURAL ENGINEER) SUBJECT TO THE APPROVAL OF THE OFFICE OF STATE ARCHITECT.
2. PROVIDE 1½" STARTER WALL FOR ALL CONCRETE AND MASONRY WALLS FOOTINGS BELOW GRADE.

TYPICAL FOUNDATION FORMING DETAIL 1 T1C



NOTE:
CONDITION SHOWN IS FOR FOOTING BOTTOM BARS. WHERE FOOTING HAS TOP AND BOTTOM BARS, TOP BARS SHALL BE SPLICED SIMILARLY.

TYPICAL STEPPED FOOTING DETAIL 2 T2A



180° HOOK 90° HOOK

BAR SIZE	DIMENSION OF STANDARD 180° HOOK, ALL GRADES		DIMENSION OF STANDARD 90° HOOK, ALL GRADES	
	A OR G	J	A OR G	D
#3	5"	3"	6"	2 1/4"
#4	6"	4"	8"	3"
#5	7"	5"	10"	3 3/4"
#6	8"	6"	1'-0"	4 1/2"
#7	10"	7"	1'-2"	5 1/4"
#8	11"	8"	1'-4"	6"
#9	1'-3"	11 3/4"	1'-7"	9 1/2"
#10	1'-5"	1'-1 1/4"	1'-10"	10 3/4"
#11	1'-7"	1'-2 3/4"	2'-0"	1'-0"

TYPICAL REBAR STANDARD HOOK DETAIL 3 T10A

MASONRY:

1. ALL CONCRETE BLOCK UNITS SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C-90 GRADE N-1.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT REBAR SIZES NO. 3 BE GRADE 40.
3. REINFORCING STEEL SHALL LAP A MINIMUM OF 48 BAR DIAMETERS AND ALL SPLICES SHALL BE STAGGERED UNLESS OTHERWISE NOTED. SEE CONCRETE AND REINFORCING STEEL SECTION ABOVE FOR OTHER REQUIREMENTS.
4. REINFORCING STEEL SHALL HAVE MINIMUM 1/2 INCH OR ONE BAR DIAMETER GROUT COVERAGE.
5. GROUT AND MORTAR MIX SHALL BE DESIGNED BY A TESTING LABORATORY
6. THE 28 DAY MATERIAL STRENGTHS SHALL BE AS FOLLOWS:
   CONCRETE BLOCK UNIT.....2800 PSI
   MORTAR (TYPE M OR S).....2700 PSI
   GROUT (COARSE).....2900 PSI
7. THE MASONRY DESIGN IS BASED ON[F'm=2300 PSI AT 28 DAYS.
8. NO PIPES OR DUCTS SHALL BE PLACED IN MASONRY WALLS UNLESS SPECIFICALLY NOTED OR DETAILED.
9. ALL CELLS ARE TO BE GROUTED SOLID UNLESS OTHERWISE NOTED.
10. ALL BLOCK UNITS SHALL BE LAID IN RUNNING BOND. CONSTRUCTION SHALL CONFORM TO CBC 2103A.1
11. HORIZONTAL CONSTRUCTION JOINT AT TOP OF CMU WALL SHALL BE FORMED BY STOPPING THE GROUT 1/2 INCH BELOW THE TOP OF THE BLOCKS.
12. SIKA GROUT AID TYPE II SHALL BE USED FOR ADMIXTURE.
13. BOLTS EMBEDDED IN MASONRY SHALL BE GROUTED IN PLACE WITH NOT LESS THAN 1" OF GROUT BETWEEN THE BOLT AND THE MASONRY UNIT. BOLTS SHALL BE PLACED ACCURATELY WITH A TEMPLATE. USE BOND BEAM, OPEN ENDS AND OTHER SPECIAL SHAPES AS REQUIRED TO FACILITATE REINFORCING STEEL INSTALLATION.
14. LOW-LIFT GROUTED CONSTRUCTION SHALL CONFORM TO TMS 602/ACI 530 SECTION 3.5D.
a) UNITS SHALL BE LAID A MAXIMUM OF 4 FEET BEFORE GROUTING, AND ALL OVER-HANGING MORTAR AND MORTAR DROPPINGS SHALL BE REMOVED.
b) GROUTING SHALL FOLLOW EACH 4 FEET OF CONSTRUCTION LAID AND SHALL BE CONSOLIDATED SO AS TO COMPLETELY FILL ALL VOIDS AND EMBED ALL REINFORCING STEEL.
c) WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT NOT LESS THAN 1/2 INCH OR MORE THAN 2 INCHES BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.
d) HORIZONTAL STEEL SHALL BE FULLY EMBEDDED IN GROUT IN AN UNINTERRUPTED POUR.
15. HIGH-LIFT GROUTED CONSTRUCTION SHALL CONFORM TO TMS 602/ACI 530 SECTION 3.5D.
a) UNITS SHALL BE LAID A MAXIMUM OF 12 FEET FOR 8" WALL AND 12.67 FEET FOR 12" WALL FOR EACH CONTINUOUS GROUT POUR IN SAME WORKING DAY. ALL OVERHANG MORTAR SHALL BE REMOVED.
b) CLEAN-OUT OPENINGS SHALL BE PROVIDED IN EVERY CELL AT THE BOTTOM OF EACH POUR OF GROUT.
c) THE FOUNDATION OR OTHER HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED OF ALL LOOSE MATERIAL AND MORTAR DROPPINGS BEFORE EACH POUR.
d) THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING.
e) EACH GROUT LIFT SHALL BE LIMITED TO A MAXIMUM OF 8 FEET. LENGTH OF WALL TO BE GROUTED IS LIMITED TO A LENGTH IN WHICH SUCCESSIVE LIFTS CAN BE PLACED WITHIN ONE HOUR OF THE PRECEDING LIFTS.
f) VERTICAL BARRIERS OF MASONRY MAY BE BUILT ACROSS THE GROUT SPACE. THE GROUTING OF ANY SECTION OF WALL BETWEEN BARRIERS SHALL BE COMPLETED IN ONE DAY.
g) POUR NO GROUT UNTIL THE MORTAR HAS BEEN SET AND CURED.

PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS:

(BOLTS MUST HAVE A VALID EVALUATION REPORT)

1. ANCHOR DIAMETER REFERS TO THE THREAD SIZE FOR THE EXPANSION ANCHOR.
2. APPLY PROOF TEST LOADS TO EXPANSION ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT & INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH & APPLY LOAD.
3. PROOF LOAD TEST SHALL MEET TWICE THE MAXIMUM ALLOWABLE TENSION LOAD AS PROVIDED IN THE EVALUATION REPORT. TENSION TEST LOAD NEED NOT TO EXCEED 80 PERCENT OF THE NOMINAL YEILDI STRENGTH OF THE ANCHOR ELEMENT. THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE LSIED BELOW IS ALSO ACCEPTABLE FOR HILTI KWIK BOLT TZ.

ANCHOR DIA. (IN.)	EXPANSION TYPE TORQUE TEST (FT.-LBS.)
3/8	25
1/2	40
5/8	60
3/4	110

4. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).
5. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
6. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
   a). HYDRAULIC RAM METHOD:
   THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR EXPANSION ANCHORS, A PRACTICAL WAY TO DETERMINED OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.
   b). TORQUE WRENCH METHOD:
   THE MANUFACTURER'S SPECIFIED TEST TORQUE MUST BE REACHED WITHIN ONE-HALF (1/2) TURN OF THE NUT.

FOUNDATION:

1. 1. ALL CONCRETE FOR CONCRETE-ON-GRADE CONSTRUCTION INCLUDING BUT NOT LIMITED TO SLAB-ON-GRADE, FOOTINGS, GRADE BEAMS, STEM WALLS, ETC. SHALL HAVE TYPE II CEMENT LOW ALKALI.
2. PRIOR TO THE POURING OF CONCRETE, THE SOILS ENGINEER SHALL INSPECT AND APPROVE THE FOUNDATION EXCAVATIONS AND SHALL CERTIFY THE WORK INSPECTED THAT MEETS THE CONDITIONS OF THE REPORT, BUT NO CONCRETE SHALL BE POURED UNTIL INSPECTOR-OF-RECORDS HAS ALSO INSPECTED AND APPROVED THE FOUNDATION EXCAVATIONS. A WRITTEN CERTIFICATION TO THIS EFFECT SHALL BE FILED WITH UCI UPON COMPLETION OF THE WORK.
3. ALL FOOTING SHALL BE CARRIED AT A MINIMUM DEPTH OF 12" BELOW LOWEST ADJACENT BEDROCK.
4. BASIC ALLOWABLE SOIL BEARING CAPACITY OF FOOTING IS 1500 PSF.
5. NO EXISTING FOUNDATIONS SHALL BE UNDERMINED IN ALL AREA OF WORK AND RENOVATION.

GENERAL NOTES:

1. THE FOLLOWING NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS NOTED OTHERWISE.
2. ALL CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO THE 2016 CALIFORNIA BUILDING CODE.
3. IT IS MANDATORY THAT THE CONTRACTOR COORDINATE AND VERIFY ALL DIMENSIONS, ELEVATIONS, DETAILS, ETC., WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ANY OTHER DRAWINGS IN THE BID DOCUMENT, INCLUDING SPECIFICATIONS, PRIOR TO ANY FABRICATION OR CONSTRUCTION. THIS COORDINATION INCLUDES THE REQUIREMENTS OF ALL TRADES. CONTRACTOR MUST NOTIFY THE ARCHITECT AND/OR STRUCTURAL ENGINEER OF ANY DISCREPANCIES, NEED FOR COORDINATION AND/OR CLARIFICATION IMMEDIATELY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE, THROUGH THE APPROPRIATE DESIGN PROFESSIONAL AND THEIR DRAWINGS, ALL OF THE TRUE FACTS PRIOR TO BIDDING, FABRICATION AND/OR CONSTRUCTION.
4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS.
5. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
6. FRAMING CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE FRAMED SIMILAR TO THE DETAILS SHOWN FOR THE RESPECTIVE MATERIALS.
7. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUE, SEQUENCE AND PROCEDURE.
8. FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES. THE SERVICES PERFORMED BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN THE QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
9. DESIGN MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE DESCRIBED BELOW OR INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ARCHITECT/ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY.

CONCRETE AND REINFORCING STEEL:

1. GENERAL:
   (A) NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
   (B) REFER TO ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS FOR ALL MOULDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
2. AGGREGATES: NATURAL SAND AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
3. THE MINIMUM 28 DAY STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:
   FOOTINGS,.....150 PCF, F'c=3000 PSI
   SLAB-ON-GRADE.....150 PCF, F'c=4000 PSI
   ALL OTHERS UNLESS NOTED.....150 PCF, F'c=3000 PSI
   SLURRY CONCRETE .....150 PCF, F'c=1000 PSI
   (A) CONCRETE MIXES SHALL BE DESIGNED BY AN APPROVED TESTING LABORATORY. MINIMUM CEMENT CONTENT FOR SLAB-ON-GRADE SHALL BE 5.3 SACKS PER CUBIC YARD.
   (B) UNLESS OTHERWISE APPROVED, CONCRETE SLUMP SHALL NOT EXCEED FOUR INCHES. WITH W/C RATIOS NOT TO EXCEED 0.5.
   (C) FLYASH WHEN APPROVED BY THE ARCHITECT/ENGINEER SHALL NOT EXCEED 12% (PER CENT) VOLUME OF THE TOTAL CEMENT CONTENT.
   (D) ADDITIVE OR ADMIXTURES, IF USED, REQUIRE PRIOR APPROVAL FROM THE BUILDING OFFICAL.
4. (A) ALL REINFORCING STEEL SHALL BE SPLICE LAP (2'-0" MINIMUM) PER DETAIL 4/S101 UNLESS OTHERWISE NOTED.
   (B) SPLICES OF HORIZONTAL REINFORCING IN WALLS SHALL BE STAGGERED.
   (C) DOWELS FOR COLUMNS AND WALLS SHALL BE SAME SIZE AND SPACING AS THE COLUMN OR WALL VERTICAL REINFORCING UNLESS NOTED OTHERWISE.
5. MINIMUM CONCRETE COVERAGE: THE FOLLOWING MINIMUM CLEAR DISTANCES BETWEEN ANY REINFORCING STEEL AND FACE OF SHALL BE MAINTAINED UNLESS OTHERWISE INDICATED.
   SLABS ON GRADE .....2" FROM TOP OF SLAB
   CURBS OR STEM WALLS.....CENTER OF WALL
   CONCRETE BELOW GRADE-POURED AGAINST EARTH.....3"
   CONCRETE BELOW GRADE-FORMED EXTERIOR.....2"
   CONCRETE EXPOSED TO EARTH OR WEATHER > NO. 6 BARS....2"
   CONCRETE EXPOSED TO EARTH OR WEATHER < NO. 6 BARS....1½"
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER.....1½"
6. REINFORCING STEEL IN STRUCTURAL SLABS, WALLS AND FOOTINGS SHALL CONFORM TO ASTM A-615, GRADE 60, EXCEPT REBAR TIES AND STIRRUPS NO. 3 MAY BE GRADE 40.
7. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO THE PLACING OF ANY CONCRETE OR GROUT.
8. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C-150, TYPE II
9. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D12.1 USING PROPER HYDROGEN ELECTRODES WELDED REINFORCING STEEL SHALL CONFORM TO ASTM 706. GRADE 60. WELDING ELECTRO SHAL BE E70XX U.N.O.
10. WHERE DRILLED ANCHORS ARE USED, COORDINATE POSITIONING WITH REINFORCING STEEL.

INSPECTIONS:

1. CONTINUOUS INSPECTION BY AN APPROVED INSPECTOR OF RECORDS SHALL BE PROVIDED FOR ALL WORK PER CALIFORNIA BUILDING CODE SECTION 1704A.
2. INSPECTION OF CONCRETE SHALL INCLUDE, BUT NOT BE LIMITED TO, INSPECTION OF REINFORCING STEEL SIZES, LENGTH, SPLICE LENGTH, TAKING TEST CYLINDERS AND INSURING PROPER PLACEMENT AND VIBRATION OF CONCRETE.
3. SPECIAL INSPECTIONS FOR EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD BEARING REQUIREMENTS SHALL BE AS REQUIRED BY CBC 1705A.6 AND TABLE 1705A.6.
4. SPECIAL INSPECTIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY CBC 1705A.3 AND TABLE 1705A.3.
5. SPECIAL INSPECTIONS FOR MASONRY CONSTRUCTION SHALL BE AS REQUIRED BY CBC 1705A.4 AND TMS 402/ACI 530 TABLE 1.18.2-LEVEL B QUALITY ASSURANCE.

TESTS:

1. MILL TEST REPORTS OF CEMENT, REINFORCING STEEL AND STRUCTURAL STEEL SHALL BE SUBMITTED TO THE ARCHITECT PER CALIFORNIA BUILDING CODE SECTION 1903A.
2. CONCRETE TEST CYLINDERS SHALL BE MADE FOR EACH DAY'S PLACING, AND EACH 50 CUBIC YARDS OR FRACTION THEREOF. ONE CYLINDER TO BE TESTED 7 DAYS, TWO AT 28 DAYS. PER ACI 318 SECTION 5.6.
3. PROVIDE IN-PLACE TESTING OF DRILLED WEDGE ANCHORS PER "PROOF LOAD TESTS FOR EXPANSION TYPE ANCHOR BOLTS" DESCRIBED IN THIS SHEET.

DRAWING INDEX

ABBREVIATION

@	PLATE	INSUL.	INSULATION
&	AND	INT.	INTERIOR
L	ANGLE	INTERM.	INTERMEDIATE
@	AT	INVERT	INVERTED
©	CENTER LINE	JST.	JOIST
ø	DIAMETER OR ROUND	JT.	JOINT
#	POUND OR NUMBER	LAB.	LABORATORY
(E)	EXISTING	LAM.	LAMINATE
(N)	NEW	L.L.H.	LONG LEG HORIZONTAL
A.B.	ANCHOR BOLT	L.L.V.	LONG LEG VERTICAL
ABV.	ABOVE	LO.	LOW
ADJ.	ADJACENT	LOC.	LOCATION
AGGR.	AGGREGATE	LT.	LIGHT
APPROX.	APPROXIMATE	LT.WT.	LIGHT WEIGHT
ARCH.	ARCHITECT	MANUF.	MANUFACTURER
ARCH'L.	ARCHITECTURAL	MAX.	MAXIMUM
B	BOLT	M.B'S.	MACHINE BOLTS
BD.	BOARD	MECH.	MECHANICAL
BLDG.	BUILDING	MEMB.	MEMBRANE
BLK.	BLOCK	MTL.	METAL
BLKG.	BLOCKING	MFG.	MANUFACTURING
BLW.	BELOW	MIN.	MINIMUM
BM.	BEAM	MISC.	MISCELLANEOUS
B.N.	BOUNDARY NAILING	M.O.	MASONRY OPENING
BOT.	BOTTOM	N.	NORTH
BRG.	BEARING	N.I.C.	NOT IN CONTRACT
CEM.	CEMENT	NO. OR #	NUMBER
CLG.	CEILING	NOM.	NOMINAL
CLR.	CLEAR	N.S.	NELSON STUD
C.J.	CONSTRUCTION JOINT	N.T.S.	NOT TO SCALE
C.J.P.	COMPLETE JOINT PENETRATION	O.C.	ON CENTER
COL.	COLUMN	O.D.	OUTSIDE DIAMETER (DIM)
CONC.	CONCRETE	OPNG.	OPENING
CONN.	CONNECTION	OPP.	OPPOSITE
CONSTR.	CONSTRUCTION	O.F.	OUTSIDE FACE
CONT.	CONTINUOUS	PC.	PIECE
CTSK.	COUNTERSUNK	PRCST.	PRECAST
CTR.	CENTER	PL.	PLATE (WOOD)
DBL.	DOUBLE	P.L.	PROPERTY LINE
DEPT.	DEPARTMENT	PLAS.	PLASTER
DET.	DETAIL	PLYWD.	PLYWOOD
DIA.	DIAMETER	PROJ.	PROJECT
DIM.	DIMENSION	PT.	POINT
DN.	DOWN	PTN.	PARTITION
DWG.	DRAWING	REINF.	REINFORCING
E	EAST	RM.	ROOM
EA.	EACH	R.O.	ROUGH OPENING
E.F.	EACH FACE	S	SOUTH
E.J.	EXPANSION JOINT	SC.	SCALE
EL.	ELEVATION	SCHED.	SCHEDULE
ELEV.	ELEVATION OR ELEVATOR	SECT.	SECTION
E.N.	EDGE NAILING	SHT.	SHEET
EQ.	EQUAL	SHTG.	SHEETING
EQPT.	EQUIPTMENT	SIM.	SIMILAR
E.W.	EACH WAY	SQ.	SQUARE
EXIST'G.	EXISTING	STD.	STANDARD
EXP.	EXPANSION	STIFF.	STIFFENER
EXT.	EXTERIOR	STL.	STEEL
FDN.	FOUNDATION	STRL.	STRUCTURAL
FIN.	FINISH	SUSP.	SUSPENDED
F.F.	FINISH FLOOR	SYM.	SYMMETRICAL
FLR.	FLOOR	TEMP.	TEMPORARY OR TEMPERATURE
F.O.C.	FACE OF CONCRETE	THK.	THICK
F.O.S.	FACE OF STUDS	T.O.F.	TOP OF FOOTING
F.S.	FAR SIDE	T.O.P.	TOP OF PARAPET
FT.	FOOT OR FEET	T.O.S.	TOP OF STEEL
FTG.	FOOTING	TSG.	TAPERED STEEL GIRDER
GA.	GAUGE	T.W.	TOP OF WALL
GALV.	GALVANIZED	T & B	TOP AND BOTTOM
GLB	GLUED-LAMINATED BEAM	TYP.	TYPICAL
GND.	GROUND	U.N.O.	UNLESS NOTED OTHERWISE
GR.	GRADE	VERT.	VERTICAL
GYP.	GYPSUM	W	WEST
HK.	HIGH	W/	WITH
HORIZ.	HORIZONTAL	W/O	WITHOUT
HT.	HEIGHT	WD.	WOOD
I.D.	INSIDE DIAMETER (DIM)	W.P.	WEAKENED PLANE
I.N.	INTERMEDIATE (FIELD) NAILING	WT.	WEIGHT
		W.W.F.	WELDED WIRE FABRIC

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Project Title

MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE
1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
AC FLS
SSS DATE
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER WEN Y. LIN No. 2970 EXP. 9-30-19 STRUCTURAL STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed W.L.
Drawn J.Y.
Checked W.L.
Approved .

Date January 16, 2019

Submittal Addendum 1

Scale

Sheet Title

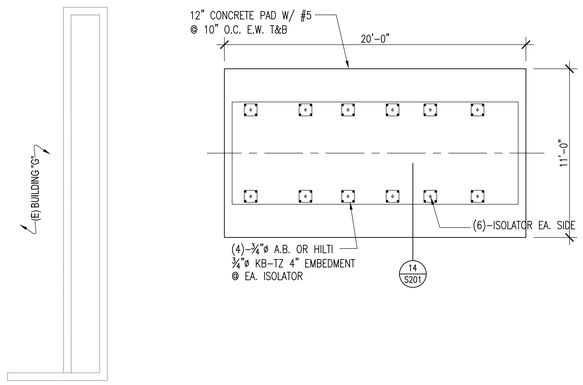
General Notes, Drawing Index, Abbreviations And Typical Details

Sheet Number

S101

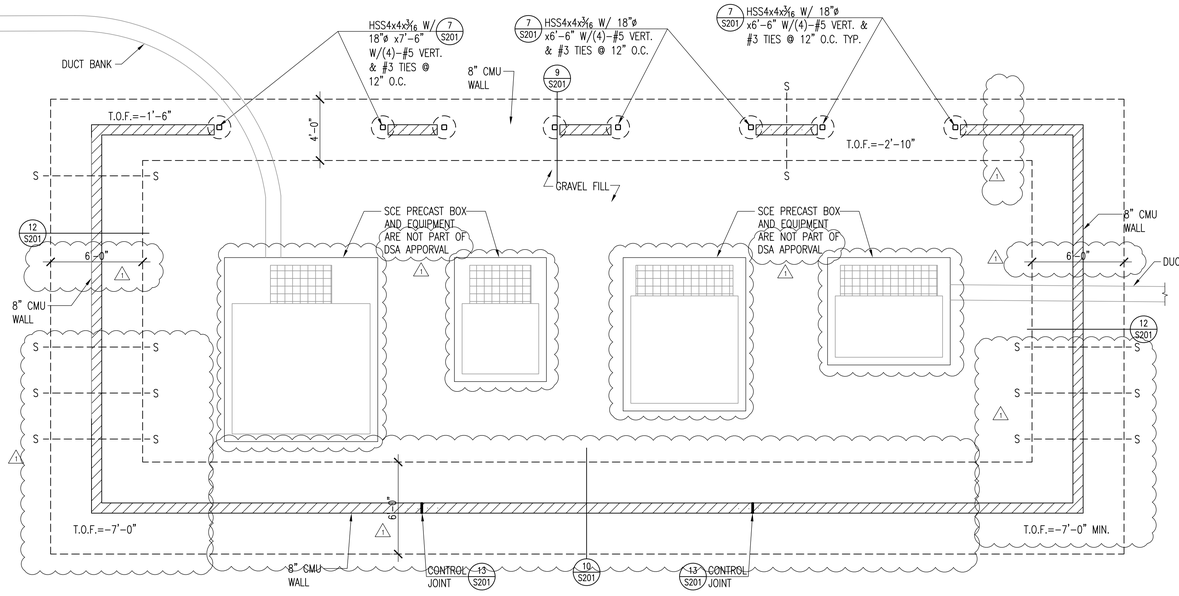
P2S No. 9371

LW18-38



3 GENERATOR CONC. PAD PLAN

SCALE: 1/4" = 1'-0"

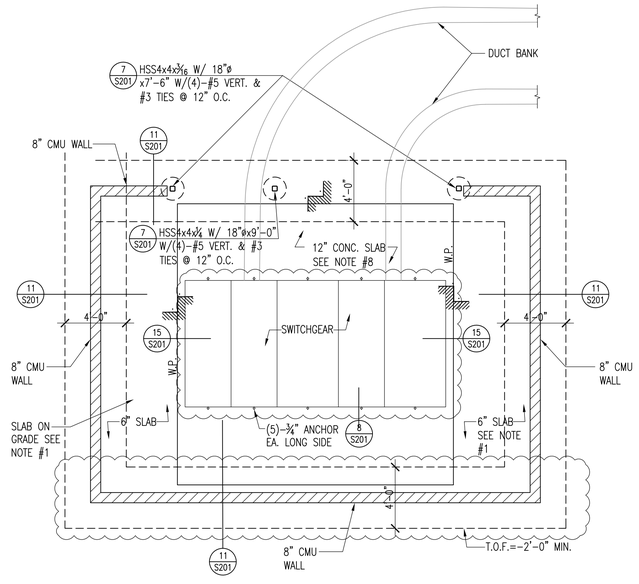


1 SCE ENCLOSURE FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

FOUNDATION NOTES:

1. SLAB ON GRADE TO BE 6" THICK W/ #4 @ 16" O.C. E.W. OVER 10 MIL VAPOR BARRIER OVER 6" ROCK BASE AND SHALL BE SUPPORTED ON COMPACTED FILL.
2. VERIFY ALL UNDERGROUND UTILITY TRENCHING WITH ARCHITECTURAL, ELECTRICAL, MECHANICAL AND PLUMBING DRAWINGS.
3. FOR ALL OPENINGS SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS.
4. ALL FILLINGS, BACKFILLING AND COMPACTION OPERATIONS SHALL BE PERFORMED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
5. S- - - -S DENOTES STEP FOOTING SEE 2/S101.
6. FOR FINISHED GRADE ELEVATIONS, SEE ARCHITECTURAL AND CIVIL DRAWINGS.
7. W.P. DENOTE WEAKEN PLANE, SEE DETAIL 5/S101.
8. SWITCHGEAR SLAB SHALL BE 12" THICK CONC. SLAB OVER 10 MIL VAPOR BARRIER OVER 6" ROCK BASE AND SHALL BE SUPPORTED ON COMPACTED FILL W/ #5 @ 12" O.C. E.W. T&B.



2 SWITCHGEAR ENCLOSURE FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

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Designed W.L.
Drawn J.Y.
Checked W.L.
Approved .

Date January 16, 2019

Submittal Addendum 1

Scale

Sheet Title

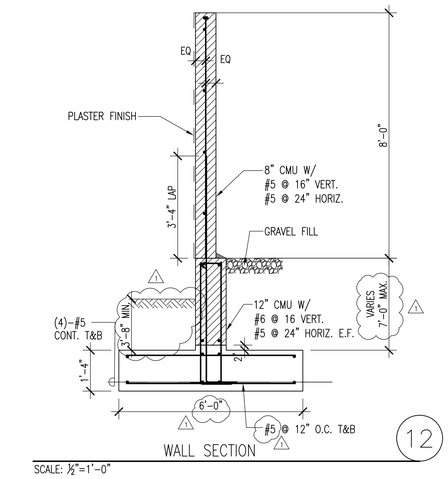
Foundation Plans

Sheet Number

S200

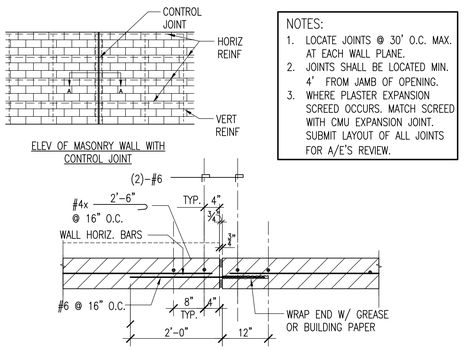
P2S No. 9371

LW18-38



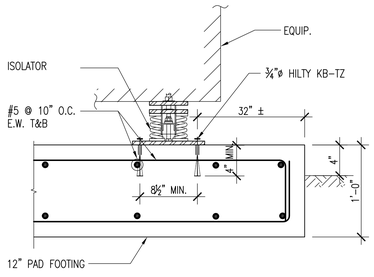
WALL SECTION 12

SCALE: ½"=1'-0"



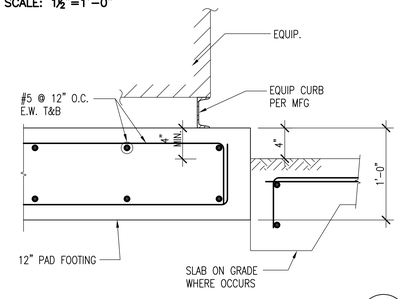
NOTES:
1. LOCATE JOINTS @ 30' O.C. MAX. AT EACH WALL PLANE.
2. JOINTS SHALL BE LOCATED MIN. 4' FROM JAMB OF OPENING.
3. WHERE PLASTER EXPANSION SCREED OCCURS, MATCH SCREED WITH CMU EXPANSION JOINT. SUBMIT LAYOUT OF ALL JOINTS FOR A/E'S REVIEW.

CMU WALL CONTROL JOINT DETAIL 13



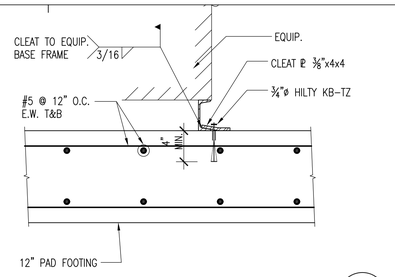
GENERATOR 12" CONC. PAD EQUIPMENT PAD AND ANCHOR 14

SCALE: 1½"=1'-0"



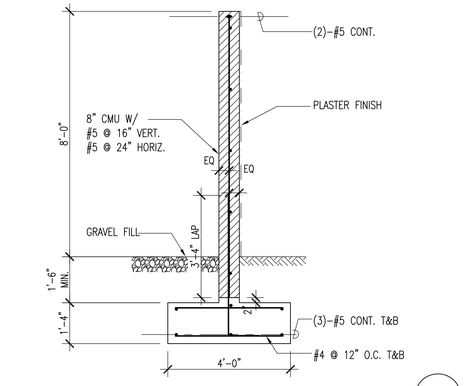
EQUIPMENT PAD AND ANCHOR 15

SCALE: 1½"=1'-0"



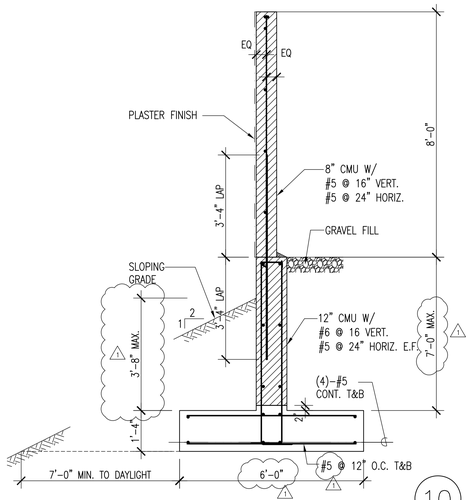
EQUIPMENT PAD AND ANCHOR 8

SCALE: 1½"=1'-0"



WALL SECTION 9

SCALE: ½"=1'-0"



WALL SECTION 10

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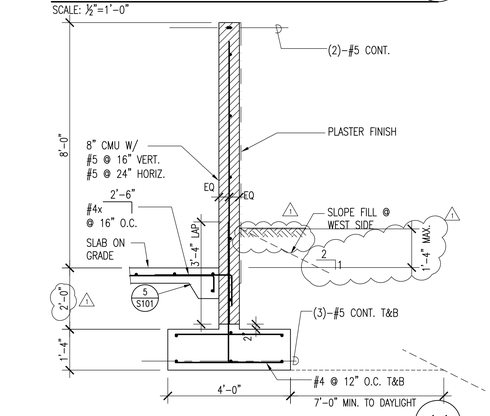

WALL SECTION 11

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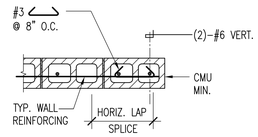
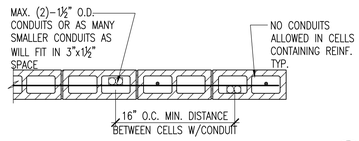


JAMB OR END OF WALL

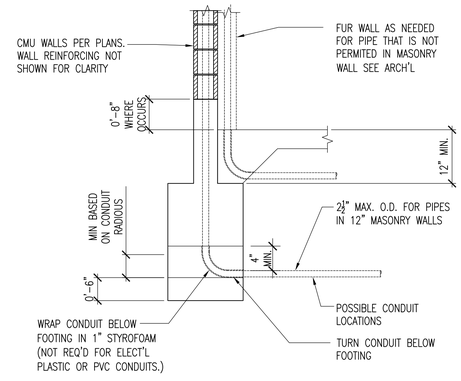
TYP. JAMB 5

SCALE: N.T.S.

NOTE: CONDUIT SHALL NOT BE INSTALLED WITHIN 32" OF A WALL CORNER OR WITHIN 16" OF A CONTROL JOINT.



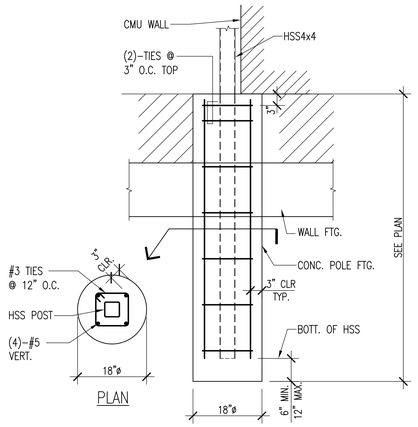
CONDUIT IN CMU A



CONDUIT IN CMU WALL FOOTING B

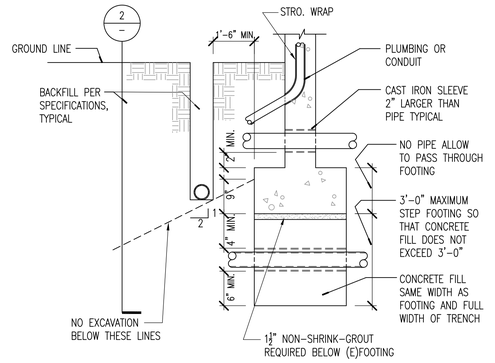
CONDUIT IN CMU WALL 6

SCALE: N.T.S.



GATE POST 7

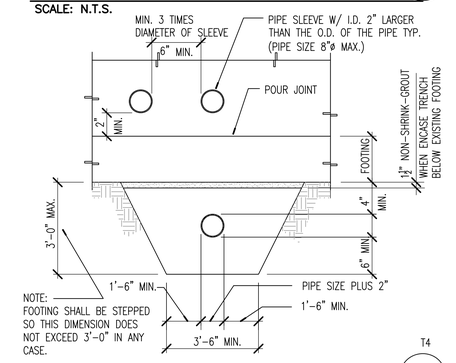
SCALE: ¾"=1'-0"



NOTES: FOR PIPES MORE THAN 3'-0" BELOW BOTTOM OF FOOTING TRENCH MAY BE BACKFILLED WITH COMPACTED FILL PER SPECIFICATION. DO NOT TRENCH BENEATH FOOTING AFTER FOOTING HAS BEEN POURED.

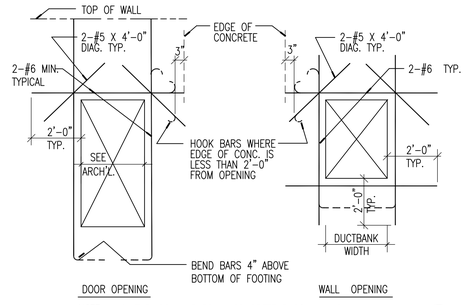
TYPICAL PIPE AND TRENCH DETAIL 2 1

SCALE: N.T.S.



PIPE OR PIPE SLEEVE THROUGH FTG. DET. T4 2

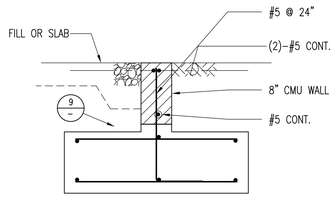
SCALE: N.T.S.



NOTE: OMIT DIAGONAL BARS IN CONCRETE BLOCK WALLS

TYPICAL WALL OPENING REINFORCING DETAIL 3

SCALE: N.T.S.



DOOR SILL 4

SCALE: ¾"=1'-0"

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Project Title

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Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE
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DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
AC FLS
SSS DATE
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER WEN Y. LIN No. 2970 EXP. 9-30-19 STRUCTURAL STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed W.L.
Drawn J.Y.
Checked W.L.
Approved .

Date January 16, 2019

Submittal Addendum 1

Scale

Sheet Title

Typical Details And Wall Sections

Sheet Number

S201

P2S No. 9371

LW18-38

PANEL SCHEDULES

PANEL: LP-MDFA (EXISTING)

LOCATION : MDF ROOM (TG130) **VOLTAGE/PHASE :** 120/208V, 3Ø, 4W **FED FROM :** XFMR T-MDFA
FLOOR : - **BUS AMPS :** 100A **MINIMUM BUS BRACING :** 10 KAIC
MOUNTING : WALL MOUNT **MAIN BREAKER :** 100A

	SEE	*	OUTLETS			VOLT-AMPS				BKR/		BKR/		VOLT-AMPS			OUTLETS			*	SEE	
LOADS	NOTE		LTG	REC	MISC	A	B	C	CKT	POLE	A B C	POLE	CKT	A	B	C	LTG	REC	MISC		NOTE	LOADS
RACK RECEP						800			1	20/3	* - -	100/3	2									MAIN
\							800		3	\	- * -	\	4									\
\								800	5	\	- - *	\	6									\
RACK RECEP						800			7	20/3	* - -	20/1	8	100								MAIN SHUNT
\							800		9	\	- * -	20/1	10									SPARE
\								800	11	\	- - *	20/1	12			800						LEAK DETECTION
208V TELCO RECEP						500			13	20/1	* - -	20/1	14	500								208V TELCO RECEP
208V TELCO RECEP							500		15	20/1	- * -	20/1	16		500							208V TELCO RECEP
208V TELCO RECEP								500	17	20/1	- - *	20/1	18			500						208V TELCO RECEP
208V TELCO RECEP						500			19	20/1	* - -	20/1	20	500								208V TELCO RECEP
IT WORKSTN, DATA RM									21	20/1	- * -	20/1	22		500							208V TELCO RECEP
SPARE									23	20/1	- - *	20/1	24									SPARE
SPARE									25	20/1	* - -	20/3	26	800								RACK RECEP
SPARE									27	20/1	- * -	\	28		800							\
SPARE									29	20/1	- - *	\	30			800						\
SECURITY EQPT RACK						500			31	20/1	- - *	20/3	32	800								RACK RECEP
SECURITY EQPT BB							500		33	20/1	* - -	\	34		800							\
VORIZON SONIC RQ								500	35	20/1	- * -	\	36			800						\
SPARE									37	20/1	* - -	20/1	38									SPARE
SPARE									39	20/1	- * -	20/1	40									SPARE
SPARE									41	20/1	- - *	20/1	42									SPARE

TOTAL ØA = 5,800 VOLT-AMPS
TOTAL ØB = 5,200 VOLT-AMPS
TOTAL ØC = 5,500 VOLT-AMPS
LCL = 0 VOLT-AMPS

TOTAL PANEL = 16,500 VA @ 208V, 3Ø = **46 AMPS**

NOTES:
** "L" DENOTES LONG CONTINUOUS LOAD*

PANEL: LP-MDFB (EXISTING)

LOCATION : MDF ROOM (TG130) **VOLTAGE/PHASE :** 120/208V, 3Ø, 4W **FED FROM :** XFMR 'T-MDFB'
FLOOR : - **BUS AMPS :** 100A **MINIMUM BUS BRACING :** 10 KAIC
MOUNTING : WALL MOUNT **MAIN BREAKER :** 100A

ADD ALTERNATE 1

	SEE	*	OUTLETS			VOLT-AMPS				BKR/		BKR/		VOLT-AMPS			OUTLETS			*	SEE	
LOADS	NOTE		LTG	REC	MISC	A	B	C	CKT	POLE	A B C	POLE	CKT	A	B	C	LTG	REC	MISC		NOTE	LOADS
RACK RECEP						800			1	20/3	* - -	100/3	2									MAIN
\							800		3	\	- * -	\	4									\
\								800	5	\	- - *	\	6									\
RACK RECEP						800			7	20/3	* - -	20/1	8	100								MAIN SHUNT
\							800		9	\	- * -	20/1	10									SPARE
\								800	11	\	- - *	20/1	12									SPARE
208V TELCO RECEP						500			13	20/1	* - -	20/1	14	500								208V TELCO RECEP
208V TELCO RECEP							500		15	20/1	- * -	20/1	16		500							208V TELCO RECEP
208V TELCO RECEP								500	17	20/1	- - *	20/1	18			500						208V TELCO RECEP
208V TELCO RECEP						500			19	20/1	* - -	20/1	20	500								208V TELCO RECEP
IT WORKSTN, DATA RM									21	20/1	- * -	20/1	22		500							208V TELCO RECEP
SPARE									23	20/1	- - *	20/1	24			1,000						FA A-PANEL TG128
SPARE									25	20/1	* - -	20/3	26	800								RACK RECEP
SPARE									27	20/1	- * -	\	28		800							\
RECEP (CONV)								360	29	20/1	- - *	\	30			800						\
RECEP (CONV)						180			31	20/1	- - *	20/3	32	800								RACK RECEP
RECEP (CONV)							360		33	20/1	* - -	\	34		800							\
RECEP (CONV)								180	35	20/1	- * -	\	36			800						\
RECEP (CONV)						180			37	20/1	* - -	20/1	38									SPARE
SPARE									39	20/1	- * -	20/1	40									SPARE
SPARE									41	20/1	- - *	20/1	42									EPO

TOTAL ØA = 5,660 VOLT-AMPS
TOTAL ØB = 5,060 VOLT-AMPS
TOTAL ØC = 5,740 VOLT-AMPS
LCL = 0 VOLT-AMPS

TOTAL PANEL = 16,460 VA @ 208V, 3Ø = **46 AMPS**

NOTES:
** "L" DENOTES LONG CONTINUOUS LOAD*

PANEL: LP-MDF (NEW)

LOCATION : MDG ROOM (TG130) **VOLTAGE/PHASE :** 277/480V, 3Ø, 4W **FED FROM :** PANEL 'EDG'
FLOOR : **BUS AMPS :** 100A **MINIMUM BUS BRACING :** 14 KAIC
MOUNTING : WALL MOUNT **MAIN BREAKER :** 100A/3P

	SEE	*	OUTLETS			VOLT-AMPS				BKR/		BKR/		VOLT-AMPS			OUTLETS			*	SEE	
LOADS	NOTE		LTG	REC	MISC	A	B	C	CKT	POLE	A B C	POLE	CKT	A	B	C	LTG	REC	MISC		NOTE	LOADS
XFMR 'TMDFA'						5,800			1	50/3	* - -	50/3	2	5,660								XFMR 'TMDFB'
\							5,200		3	\	- * -	\	4		5,060							\
\								5,500	5	\	- - *	\	6			5,740						\
CRAC 30-1						746			7	15/3	* - -	15/3	8	746								CRAC 30-2
\							746		9	\	- * -	\	10		746							\
\								746	11	\	- - *	\	12			746						\
SPARE									13	20/1	* - -	20/1	14									SPARE
SPARE									15	20/1	- * -	20/1	16									SPARE
SPARE									17	20/1	- - *	20/1	18									SPARE
SPARE									19	20/1	* - -	20/1	20									SPARE
SPARE									21	20/1	- * -	20/1	22									SPARE
SPARE									23	20/1	- - *	20/1	24									SPARE
SPACE									25		* - -		26									SPACE
SPACE									27		- * -		28									SPACE
SPACE									29		- - *		30									SPACE

TOTAL ØA = 12,952 VOLT-AMPS
TOTAL ØB = 11,752 VOLT-AMPS
TOTAL ØC = 12,732 VOLT-AMPS
LCL = 0 VOLT-AMPS

TOTAL PANEL = 37,436 VA @ 480V, 3Ø = **45 AMPS**

NOTES:
** "L" DENOTES LONG CONTINUOUS LOAD*

PANEL: LP-G-1A (EXISTING)

LOCATION : ELECTRICAL ROOM (TG113) **VOLTAGE/PHASE :** 120/208V, 3Ø, 4W **FED FROM :** DIST. PANEL LDP-1A
FLOOR : - **BUS AMPS :** 100A **MINIMUM BUS BRACING :** 10 KAIC
MOUNTING : WALL MOUNT **MAIN BREAKER :** 100A

	SEE	*	OUTLETS			VOLT-AMPS				BKR/		BKR/		VOLT-AMPS			OUTLETS			*	SEE	
LOADS	NOTE		LTG	REC	MISC	A	B	C	CKT	POLE	A B C	POLE	CKT	A	B	C	LTG	REC	MISC		NOTE	LOADS
FIRE SMKE DAMPERS						800			1	20/1	* - -	20/1	2	600								TG 166, 164 RECEPT
ELEV. PIT							800		3	20/1	- * -	20/1	4		400							TG 166, 164 RECEPT
RECEIVE/ELEC RECEP								500	5	20/1	- - *	20/1	6			500						RECEPTACLE
STAIR/CORRID RECEP						500			7	20/1	* - -	20/1	8	500								PVT. DINNING A.V.
SHELL SPACE RECEP							200		9	20/1	- * -	20/1	10		540							SPARE
BMS PANEL								720	11	20/1	- - *	20/1	12			540						ROLL UP DOOR
PNL						720			13	20/1	* - -	20/1	14	1,080								RECEPTACLE
JACKET WTR HEAT	1,2						1,125		15	20/2	- * -	20/1	16		1,080							RECEPTACLE
\	1,2							1,125	17	\	- - *	20/1	18			1,080						RECEPTACLE
TG150 WATER SFTNER						1,000			19	20/1	* - -	20/1	20	900								TG 154 (PVT. DINNING)
ATM MACHINE							500		21	20/1	- * -	20/1	22		900							TG 154 (PVT. DINNING)
SPARE									23	20/1	- - *	**20/1**	**24**			**720**						**GEN. BATTERY**
TG164 AV EQUIP						330			25	20/1	* - -	20/1	26	50								PVT DINNING
TIMECLOCK									27	20/1	- * -	20/1	28									BLUE PHONE
SPARE									29	20/1	- - *	20/1	30									BLUE PHONE
TG154 AV TABLE CONF						180			31	20/1	- - *	20/1	32	460								I AM SEC
BBQ									33	20/1	* - -	20/1	34									GATE POWER
BBQ									35	20/1	- * -	20/1	36									CONTROLLER POWER
ENTRY A.V.						1,200			37	20/1	* - -	20/1	38	460								IRIG CONTROLLER
LIGHTING 1ST FL EAST							1,000		39	20/1	- * -	20/1	40									F.A. BELL
SPARE									41	20/1	- - *	20/1	42									F.A. PANEL

TOTAL ØA = 8,780 VOLT-AMPS
TOTAL ØB = 6,545 VOLT-AMPS
TOTAL ØC = 5,185 VOLT-AMPS
LCL = 0 VOLT-AMPS

TOTAL PANEL = 20,510 VA @ 208V, 3Ø = **57 AMPS**

NOTES:
** "L" DENOTES LONG CONTINUOUS LOAD*
1. DISCONNECT AND REMOVE EXISTING CIRCUIT BREAKER.
2. PROVIDE 20A, 2-POLE CIRCUIT BREAKER AS SHOWN. BREAKER TYPE, RATING AND MANUFACTURER SHALL MATCH EXISTING BREAKERS.

PANEL: HP-G-1A

LOCATION : ELECTRICAL ROOM BLDG G1 **VOLTAGE/PHASE :** 480/277V **FED FROM :** MAIN SWITCHBOARD
FLOOR : FIRST FLOOR **BUS AMPS :** 100A **MINIMUM BUS BRACING :**
MOUNTING : SURFACE **MAIN BREAKER :** MLO

	SEE	*	OUTLETS			VOLT-AMPS				BKR/		BKR/		VOLT-AMPS			OUTLETS			*	SEE	
LOADS	NOTE		LTG	REC	MISC	A	B	C	CKT	POLE	A B C	POLE	CKT	A	B	C	LTG	REC	MISC		NOTE	LOADS
LIGHTING CORE AREA	1					810			1	20/1	* - -	20/1	2	1,350							1	LIGHTING 1ST FLOOR-EAST
NORTH PARKING-SITE LIGHT	2						**4,300**		3	20/1	- * -	20/1	4		640						1	LIGHTING 1ST FLOOR-EAST
NORTH PARKING-SITE LIGHT	2							**4,300**	5	20/1	- - *	20/1	6			3,000					1	LIGHTING 1ST FLOOR-EAST
SPARE									7	20/1	* - -	20/1	8	3,520							1	LIGHTING 1ST FLOOR-EAST
SPARE									9	20/1	- * -	20/1	10									SPARE
SPARE									11	20/1	- - *	20/1	12									SPARE
SPARE									13	20/1	* - -	20/1	14									SPARE
SPARE									15	20/1	- * -	20/1	16									SPARE
SPARE									17	20/1	- - *	20/1	18									SPARE
SPARE									19	20/1	* - -	20/1	20									SPARE
SPARE									21	20/1	- * -	20/1	22									SPARE
SPARE									23	20/1	- - *	20/1	24									SPARE
SPARE									25	20/1	* - -	20/1	26									SPARE
SPARE									27	20/1	- * -	20/1	28									SPARE
SPARE									29	20/1	- - *	20/1	30									SPARE
SPARE									31	20/1	* - -	20/1	32									SPARE
SPARE									33	20/1	- * -	20/1	34									SPARE
SPARE									35	20/1	- - *	20/1	36									SPARE
EF-112 (10HP)	1					3,880			37	40/3	* - -	20/1	38									SPARE
-	1						3,880		39	-	- * -	20/1	40									SPARE
-	1							3,880	41	-	- - *	20/1	42									SPARE

TOTAL ØA = 9,560 VOLT-AMPS
TOTAL ØB = 8,820 VOLT-AMPS
TOTAL ØC = 11,180 VOLT-AMPS
LCL = 0 VOLT-AMPS

TOTAL PANEL = 29,560 VA @ 480V, 3Ø = **36 AMPS**

NOTES:
1. EXISTING CIRCUIT BREAKER WITH EXISTING LOAD.
2. EXISTING CIRCUIT BREAKER WITH NEW LOAD.

LEGEND

SYMBOL	DESCRIPTION
-	NOTE CALLOUT
- / -	DETAIL CALLOUT - NUMBER ON TOP DENOTES DETAIL NUMBER - NUMBER ON BOTTOM DENOTES SHEET DETAIL IS SHOWN
- / -	MECHANICAL EQUIPMENT CALLOUT, SEE MECHANICAL PLANS FOR EXACT LOCATION AND REQUIREMENTS
- / -	SECTION CALLOUT
-	FEEDER CALLOUT
-	EXISTING FEEDER CALLOUT
	NEW LINEWORK
	EXISTING LINEWORK
	DEMOLISHED LINEWORK
	CONDUIT CONCEALED IN WALL OR ABOVE CEILING
	CONDUIT EXPOSED
	CONDUIT CONCEALED UNDERGROUND OR BELOW FLOOR
	CONDUIT EMERGENCY
W W	MULTI-CHANNEL RACEWAY
	CONDUIT TURNED UP
	CONDUIT CAPPED
A-1	BRANCH CIRCUIT HOMERUN TO PANELBOARD AND CIRCUITS AS INDICATED
	3/4" CONDUIT, TICK MARKS INDICATE QUANTITY OF #12 AWG WIRES (UNLESS NOTED OTHERWISE, NO MARKS INDICATES 2#12 & 1#12 GND WIRES) - SMALL MARK DENOTES HOT WIRE - LARGE MARK DENOTES NEUTRAL WIRE - DIAGONAL DENOTES GROUND WIRE
G	GENERATOR
	SWITCH
	CIRCUIT BREAKER
	2-WAY SWITCH, TRANSFER SWITCH
	FUSE
	TRANSFORMER
	GROUND CONNECTION
	MOTOR - SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER
M	METER
ECM	ELECTRONIC CIRCUIT MONITOR
	480V DRAWOUT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
	PANEL
	FUSED DISCONNECT SWITCH
	NON-FUSED DISCONNECT SWITCH
	COMBINATION STARTER/DISCONNECT SWITCH
S M	SWITCH MOTOR RATED
	SPLICE
	TERMINATION
	EXISTING TERMINATION
52	MEDIUM VOLTAGE - DRAWOUT CIRCUIT BREAKER
	MEDIUM VOLTAGE FUSED DISCONNECT SWITCH
	MEDIUM VOLTAGE MODULAR SPLICE
	MEDIUM VOLTAGE EXISTING MODULAR SPLICE
J	JUNCTION BOX
	LIGHTING CONTROL PANEL - SURFACE MOUNTED
	PANELBOARD - RECESSED MOUNTED
	PANELBOARD - SURFACE MOUNTED
	DISTRIBUTION PANEL/ BOARD
	SURGE ARRESTER
	CAPACITOR
VM	VOLTMETER
VMS	VOLTMETER SELECTOR SWITCH
SEL-751	SCHWEITZER 751 FEEDER PROTECTION RELAY
PM-7550	SQUARE D 7550 DIGITAL METER
86	LOCKOUT RELAY

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
1/C	SINGLE CONDUCTOR
&	AND
@	AT
A OR AMP	AMPERES
ABV	ABOVE
A.C.	ASPHALT CONCRETE
AF	AMPERE FUSE RATING
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISH GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECT; ARCHITECTURAL
AS	AMPERE SWITCH RATING
ASCC	AVAILABLE SHORT CIRCUIT CURRENT
ATC	AIR TERMINAL CHAMBER
ATO	AUTOMATIC THROW-OVER (SWITCH)
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BAT	BATTERY
BEL	BELOW
BKBD	BACKBOARD
BKR	BREAKER
BLDG	BUILDING
B.S.	BARE STRANDED
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CONSTANT CURRENT
CEC	CALIFORNIA ELECTRICAL CODE
CF	CUBIC FEET
CKT	CIRCUIT
CL	CENTER LINE
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
C.O.	CONDUIT ONLY WITH PULL WIRE
COL	COLUMN
CP	COMMUNICATION PROCESSOR
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CSFD	COMBINATION SMOKE FIRE DAMPER
CT	CURRENT TRANSFORMER
CW	COLD WATER
CU	COPPER
DIAG	DIAGRAM
DIST.	DISTANCE
DL	DAMP LOCATION LISTING
DM	DIGITAL METER
DMM	DIGITAL METER MODULE
DP	DISTRIBUTION PANEL
DIST.	DISTANCE
DWG	DRAWING
DWP	DEPARTMENT OF WATER & POWER
EA	EACH
ECM	ELECTRONIC CIRCUIT MONITOR
ELEC.	ELECTRICAL
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER
EQUIP	EQUIPMENT
ER	EXISTING TO BE REMOVED
ERR	EXISTING TO BE RELOCATED AND - RECONNECTED
EXIST/(E)	EXISTING
EXP	EXPLOSION PROOF
FA	FIRE ALARM
FFE	FINISHED FLOOR ELEVATION
FIN.	FINISH
FIP.	FIELD INTERFACE PANEL
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLR	FLOOR
FLUOR	FLUORESCENT
FT	FEET
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FMC	FLEXIBLE METAL CONDUIT
FO	FIBER OBTIC
FTG	FOOTING
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFR	GROUND FAULT RELAY
GG	GREEN GROUND
GND	GROUND
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HTR	HEATER
HZ	HERTZ
ICON	INTEGRATED COMMUNICATIONS OPTICAL - NETWORK
IE	INVERT ELEVATION
IED	INTELLIGENT ELECTRONIC DEVICES
IMC	INTERMEDIATE METAL CONDUIT
ISC	SHORT CIRCUIT CURRENT
INCAND	INCADESCENT
J, JB, J-BOX	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT

ABBREVIATION	DESCRIPTION
KVA	KILOVOLT-AMPERES
KW	KILOWATT
LF	LINEAR FEET
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
LGST	LARGEST
LIS	LOAD INTERRUPTER SWITCH
LOC.	LOCATION
LOTO	LOCK-OUT & TAG-OUT
LSI	LONG TERM, SHORT TERM, INSTANTANEOUS
LTG	LIGHTING
LV	LOW VOLTAGE
M	METER
MAX	MAXIMUM
MCA	MAXIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFGR, MFR	MANUFACTURER
MH	MANHOLE
MI.	MECHANICAL INTERLOCK
MRCT	MULTI-RATIO CURRENT TRANSFORMER
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
MTG	MOUNTING
MTR	MOTOR
MTTB	MAIN TELEPHONE TERMINAL BOARD
MV	MEDIUM VOLTAGE
N	NORTH
NAC	NOTIFICATION APPLIANCE CIRCUIT
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NF	NON-FUSED
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT- 24HRS ON
NO.	NUMBER
OC	ON CENTER
OCPD	OVERCURRENT PROTECTIVE DEVICE
OD	OUTSIDE DIAMETER
OE	OVERHEAD ELECTRICAL
OFC	OIL FUSED CUTOUT
OH	OVERHEAD
OL	OIL LEVER SWITCH
P	POLE
PAC	PROGRAMMABLE AUTOMATION CONTROLLER
PB	PULL BOX
PC	PHOTOCELL
PCB	POLYCHLORINATED BIPHENYL
PDS	PRESSURE DIFFERENTIAL SWITCH
PF	POWER FACTOR
PH OR Ø	PHASE
PILC	PAPER INSULATED, LEAD COVER
PIV	POST INDICATING VALVE
PL	PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POC	POINT OF CONNECTION
PREF.	PREFERRED
PRI.	PRIMARY
PVC	POLY-VINYL CHLORIDE
PWR	POWER
REC/RECEPT	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RMC	RIGID METAL CONDUIT
RPBP	REDUCED PRESSURE BACK FLOW PREVENTER
RM	ROOM
RTAC	REAL TIME AUTOMATION CONTROLLER
SCCR	SHORT CIRCUIT CURRENT RATING
SCE	SOUTHERN CALIFORNIA EDISON
SF	SQUARE FEET
SHT	SHEET
SIG.	SIGNAL
SP	SPARE
SPECS	SPECIFICATIONS
ST	STREET
STD	STANDARD
STP	SHIELDED TWISTED PAIR
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SWST	SWITCHING STATION
TB	TERMINAL BLOCK
TEL./TELE	TELEPHONE
TMH	TELEPHONE MANHOLE
T.O.D.	TOP OF DUCTBANK
T.O.M.	TOP OF MANHOLE
TPS	TWISTED SHIELDED PAIR
TRANSF,XFMR	TRANSFORMER
TS	TAMPER SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VA	VOLT-AMPERES
VB	VIBRATION SWITCH
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS
W/	WITH
W/O	WITHOUT
WCR	WITHSTAND CLOSE-ON RATING
WP	WEATHERPROOF
Z	IMPEDANCE

IN THE EVENT ABBREVIATIONS NOT MENTIONED HEREIN ARE USED, REFERENCE WILL BE MADE TO ANSI Y1.1, MILITARY STANDARD ABBREVIATIONS, AND OTHER STANDARD INDUSTRY CONVENTIONS.

GENERAL NOTES

1. ALL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE AND ALL OTHER APPLICABLE FEDERAL AND STATE. WHERE THE CONSTRUCTION DOCUMENTS INDICATE MORE RESTRICTIVE REQUIREMENTS, THE CONSTRUCTION DOCUMENTS SHALL GOVERN BUT THE CONSTRUCTION DOCUMENTS SHALL NOT BE INTERPRETED AS AUTHORITY TO VIOLATE ANY CODE OR REGULATION.
2. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BEAR THE UNDERWRITERS' LABEL (UL) AND SHALL BE INSTALLED IN THE MANNER FOR WHICH THEY ARE DESIGNED AND APPROVED.
3. THE CONTRACTOR SHALL NOT BORE, NOTCH OR IN ANY WAY CUT INTO ANY STRUCTURAL MEMBER WITHOUT WRITTEN APPROVAL FROM THE ARCHITECT OR STRUCTURAL ENGINEER.
4. MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT ANCHORAGE NOTES:

   ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCES AND DISPLACEMENT REQUIREMENTS.

   A. ALL PERMANENT EQUIPMENT AND COMPONENTS.

   B. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.

   C. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

   THE ATTACHMENT OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENT SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

   A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT.

   B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

   FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.
5. PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES:

   PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN LATEST SECTIONS OF CBC AND ASCE.

   THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

   COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

   THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

SHEET INDEX

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Consultant

Project Title

MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE
1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
AC FLS
SSS DATE
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER ARVIND BATRA No. E16609 ELECTRICAL STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	No Scale

Sheet Title

General Notes, Legend, Abbreviations, Sheet Index And Panel Schedules

Sheet Number

E001

P2S No. 9371

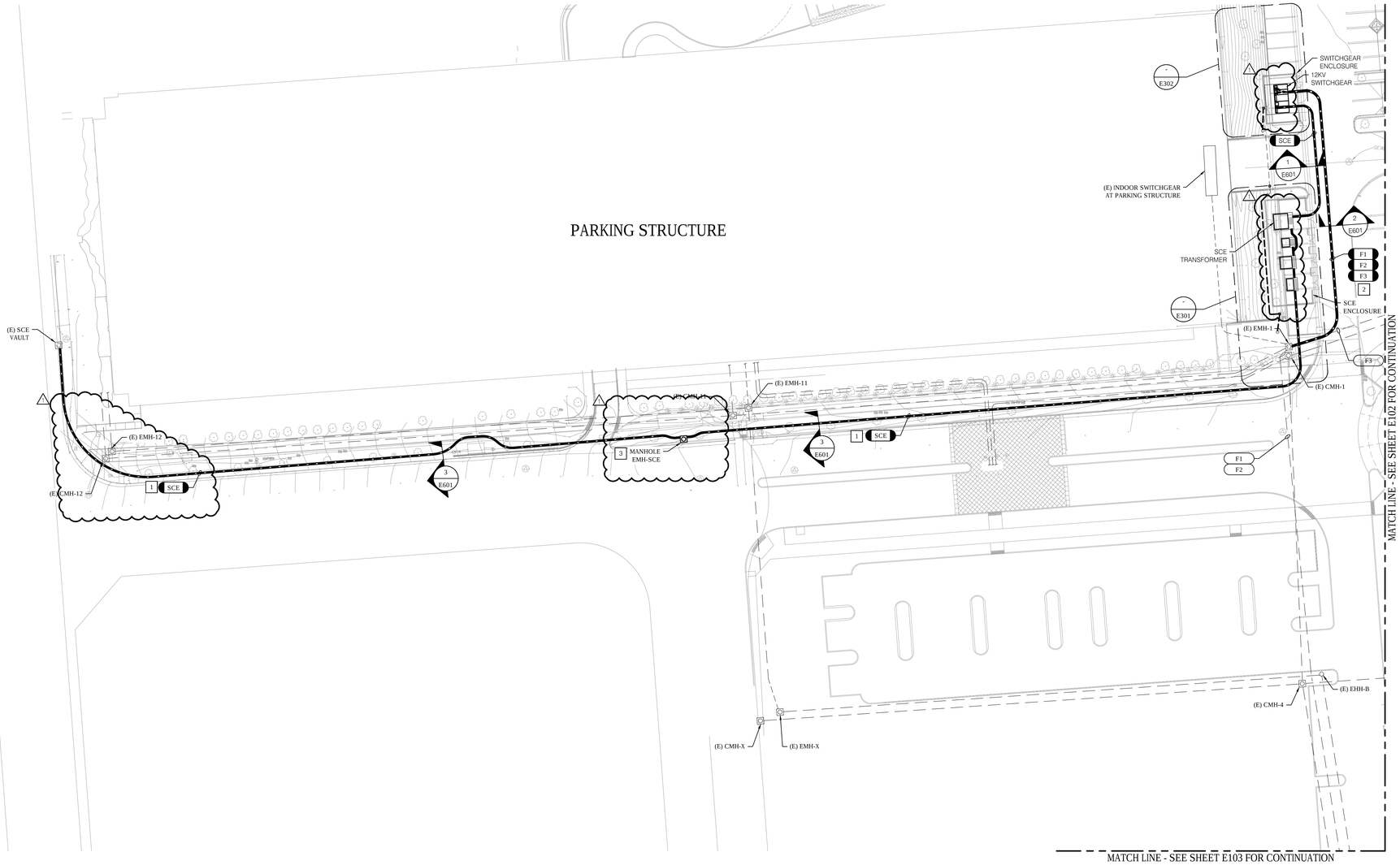
FILE PATH & NAME: R:\J9371\ELECTRICAL\J9371_E001.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:51:42 PM

GENERAL NOTES

1. REFER TO SCE UNDERGROUND STRUCTURES STANDARDS FOR SCE REQUIREMENTS.
2. ALL WORK TO BE IN COMPLIANCE PER SCE ESR-7 STANDARDS.

NOTES

1. PROVIDE (2) 6" CONCRETE ENCASED DUCTBANK PER SCE STANDARDS AS SHOWN. FEEDER TO BE PROVIDED BY SCE. REFER TO SHEET E601 FOR DUCTBANK DETAILS.
2. PROVIDE FEEDER IN DUCTBANK AS SHOWN. REFER TO FEEDER SCHEDULE ON SHEET E501 FOR FEEDER SIZES AND QUANTITY.
3. PROVIDE 7' X 14' X 8' ELECTRICAL MANHOLE 'EMH-SCE' AS SHOWN. MANHOLE SHALL BE PER SCE STANDARDS.



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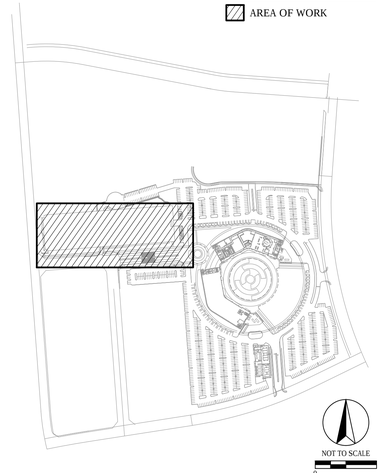
KEY PLAN

LEGEND

AREA OF WORK



NOT TO SCALE
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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
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Scale	1" = 30'

Sheet Title

Enlarged Site Plan

Sheet Number

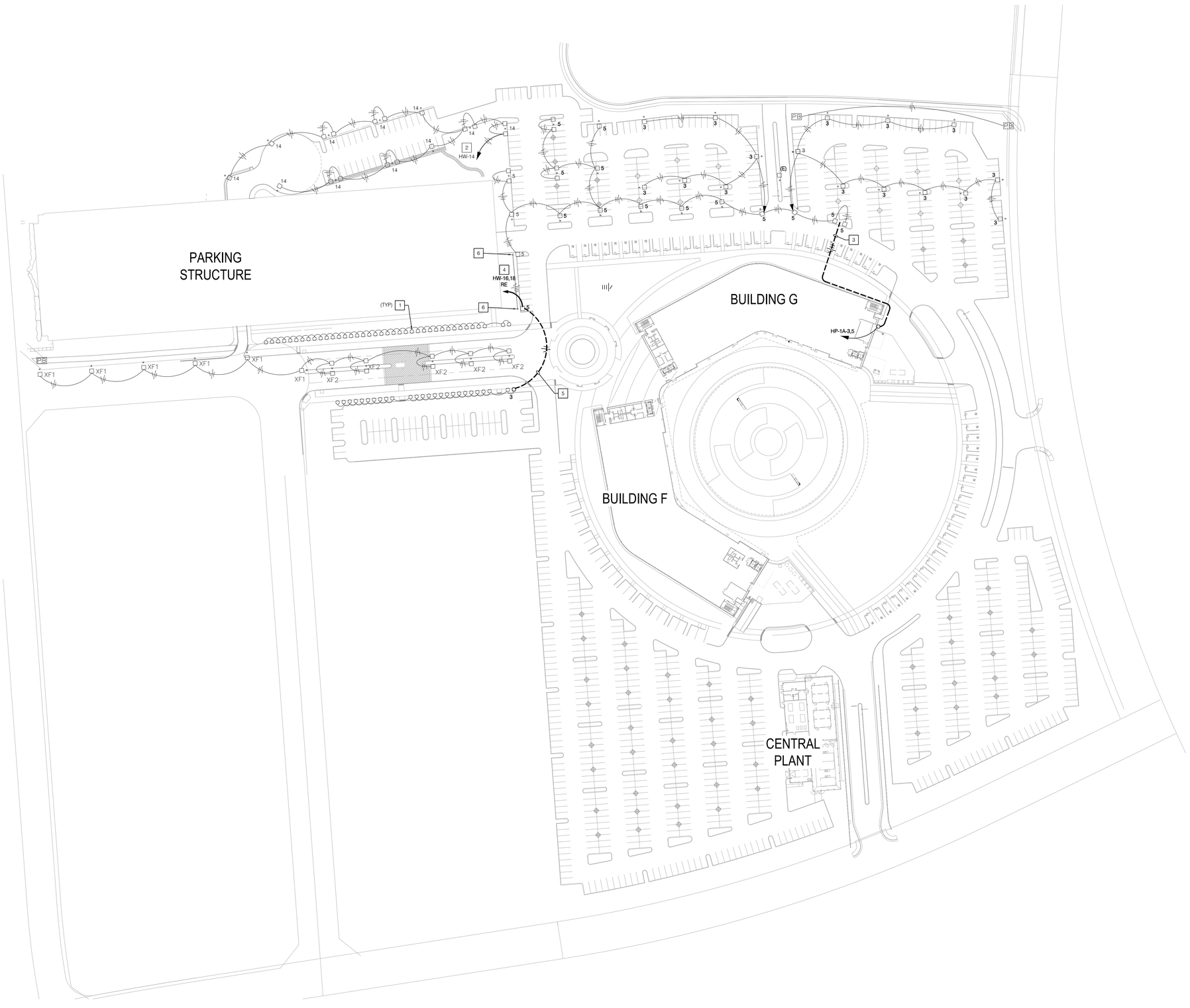
E101

P2S No. 9371

FILE PATH & NAME: P:\2017\ELECTRICAL\9371_E101.DWG MOHAMMAD NASIF
PLOT: Wednesday, January 16, 2019 4:51:57 PM

NOTES

1. ABOVE-GRADE PATHWAY LIGHTS ADJACENT TO PARKING STRUCTURE ARE EXISTING TO REMAIN. MAINTAIN EXISTING CONNECTION FROM PANEL HW.
2. MAINTAIN EXISTING CONNECTION TO SITE LIGHTING FIXTURES LOCATED NORTH OF THE PARKING STRUCTURE. FIELD-VERIFY ROUTING OF EXISTING CIRCUIT AND RE-ROUTE BRANCH CIRCUIT TO PANEL HW IN PARKING STRUCTURE'S ELECTRICAL ROOM AS INDICATED.
3. INTERCEPT EXISTING CIRCUITS SERVING LIGHT FIXTURE AND EXTEND AS SHOWN. RE-ROUTE CIRCUITS THROUGH STREET, WALKWAYS AND LANDSCAPE TO PANEL HP-1A IN BUILDING G AS INDICATED. PROVIDE 1"C - 4#4 & 1#4 GND FROM LIGHT FIXTURE TO PANEL HP-1A. REFER TO SHEET E203 FOR LOCATION OF PANEL HP-1A.
4. DISCONNECT AND REMOVE EXISTING HOME RUNS FOR CIRCUITS HE-16 AND HE-18. FIELD-VERIFY ROUTING OF EXISTING EXTERIOR LIGHT CIRCUITS PRIOR TO REMOVAL OF CIRCUITS.
5. ABOVE-GRADE PATHWAY FIXTURES ACROSS MOTOR CAR PARKWAY ARE EXISTING TO REMAIN. FIELD-VERIFY EXISTING CONNECTION AND PROVIDE 1"C - 4#4 & 1#4 GND FROM LIGHT FIXTURE AS SHOWN.
6. EXISTING FIXTURE TO BE RELOCATED AS SHOWN. REFER TO SITE PLAN ON SHEET E303 FOR ADDITIONAL INFORMATION.



SCALE: 1" = 60'
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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	1" = 60'

Sheet Title

Site Lighting Plan

Sheet Number

1 E110

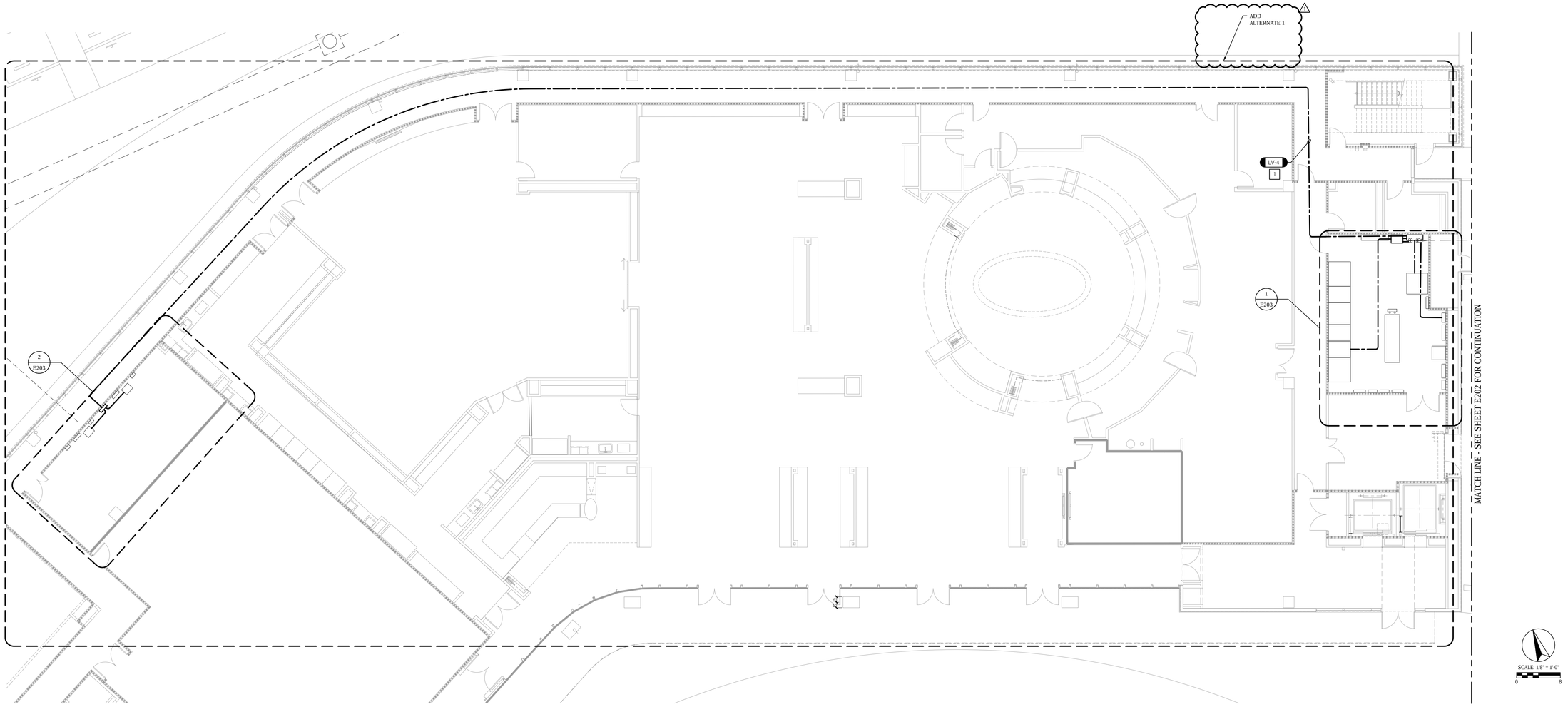
P2S No. 9371

FILE PATH & NAME: P:\9371\ELECTRICAL\9371_E110.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 8:51:37 PM

NOTES

1. PROVIDE FEEDER IN CONDUIT AS SHOWN. ROUTE CONDUIT IN CEILING SPACE. REFER TO FEEDER SCHEDULE ON SHEET E501 FOR FEEDER SIZES AND QUANTITY.

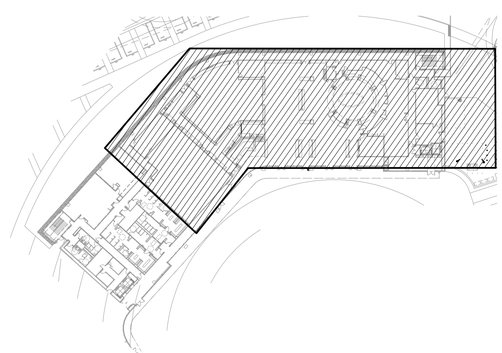
ADD ALTERNATE 1



KEY PLAN

LEGEND

AREA OF WORK



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FILE PATH & NAME: R:\9371\ELECTRICAL\9371_E201.DWG MOHAMMAD WASIF
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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	1/8" = 1'-0"

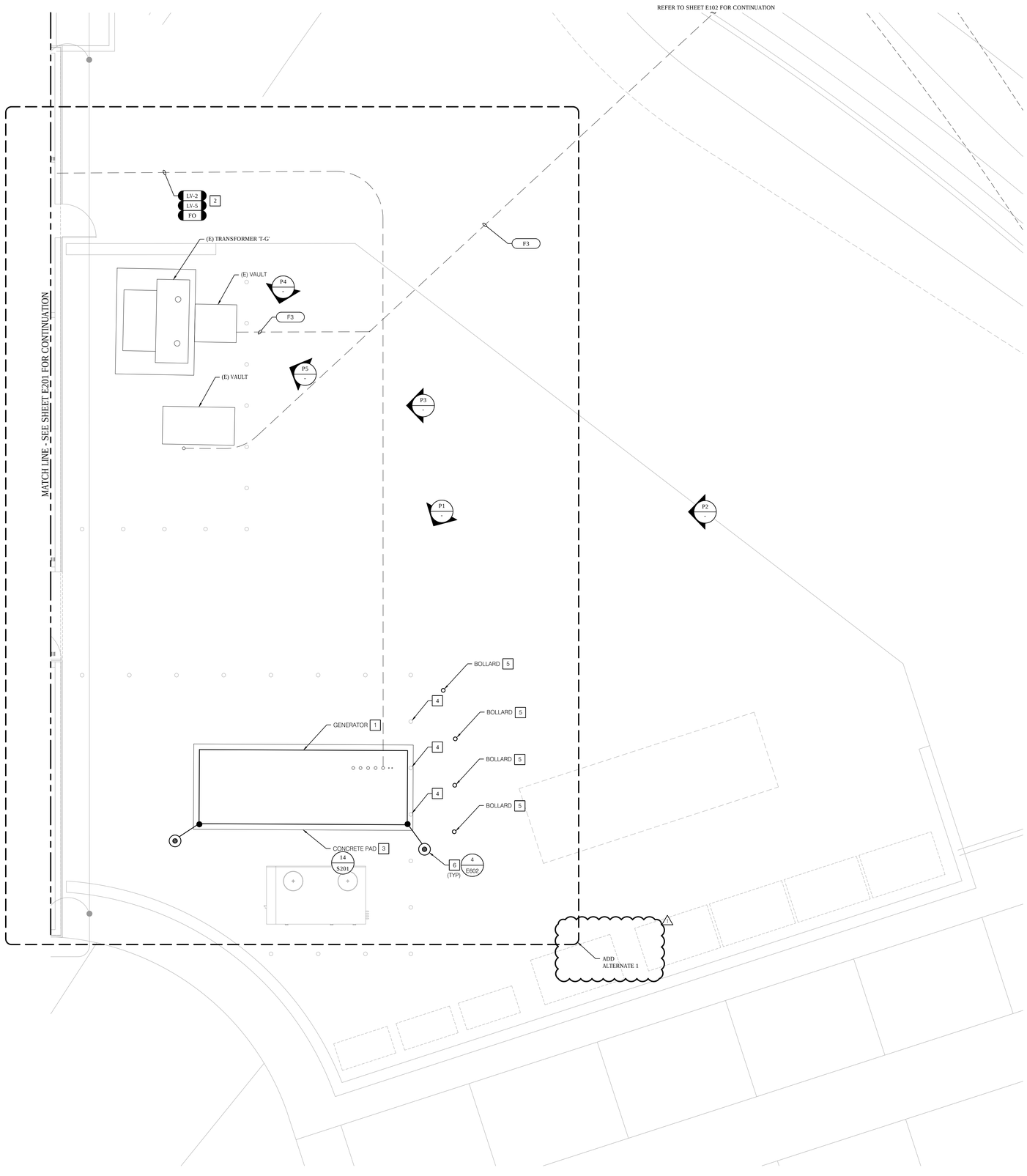
Sheet Title

Building G
First Floor Plan

Sheet Number

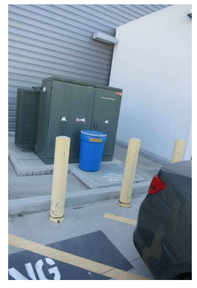
E201

P2S No. 9371



NOTES

1. PROVIDE GENERATOR AS SHOWN. REFER TO SINGLE LINE DIAGRAM ON SHEET E502 FOR EQUIPMENT RATING AND TYPE.
2. PROVIDE FEEDER IN EXISTING DUCTBANK AS SHOWN. REFER TO FEEDER SCHEDULE ON SHEET E501 FOR FEEDER SIZES AND QUANTITY.
3. PROVIDE CONCRETE PAD EXTENDING 6' BEYOND THE EQUIPMENT ON ALL SIDES AS SHOWN.
4. REMOVE EXISTING BOLLARD.
5. PROVIDE TRAFFIC RATED BOLLARD AS SHOWN. REFER TO DETAIL 3 ON SHEET E604 FOR ADDITIONAL DETAILS.
6. PROVIDE 3/4'Ø X 10'-0' LONG GROUND ROD WITH TEST WELL AS SHOWN.



P5 TRANSFORMER 'T-G'
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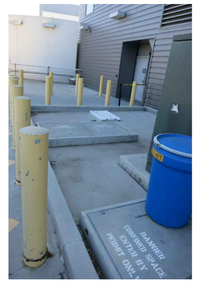

P4 PHOTO
NO SCALE

P3 TRANSFORMER 'T-G'
NO SCALE

P2 PHOTO
NO SCALE

P1 PHOTO
NO SCALE

SCALE: 1/4" = 1'-0"
0 4

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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	1/4" = 1'-0"

Sheet Title

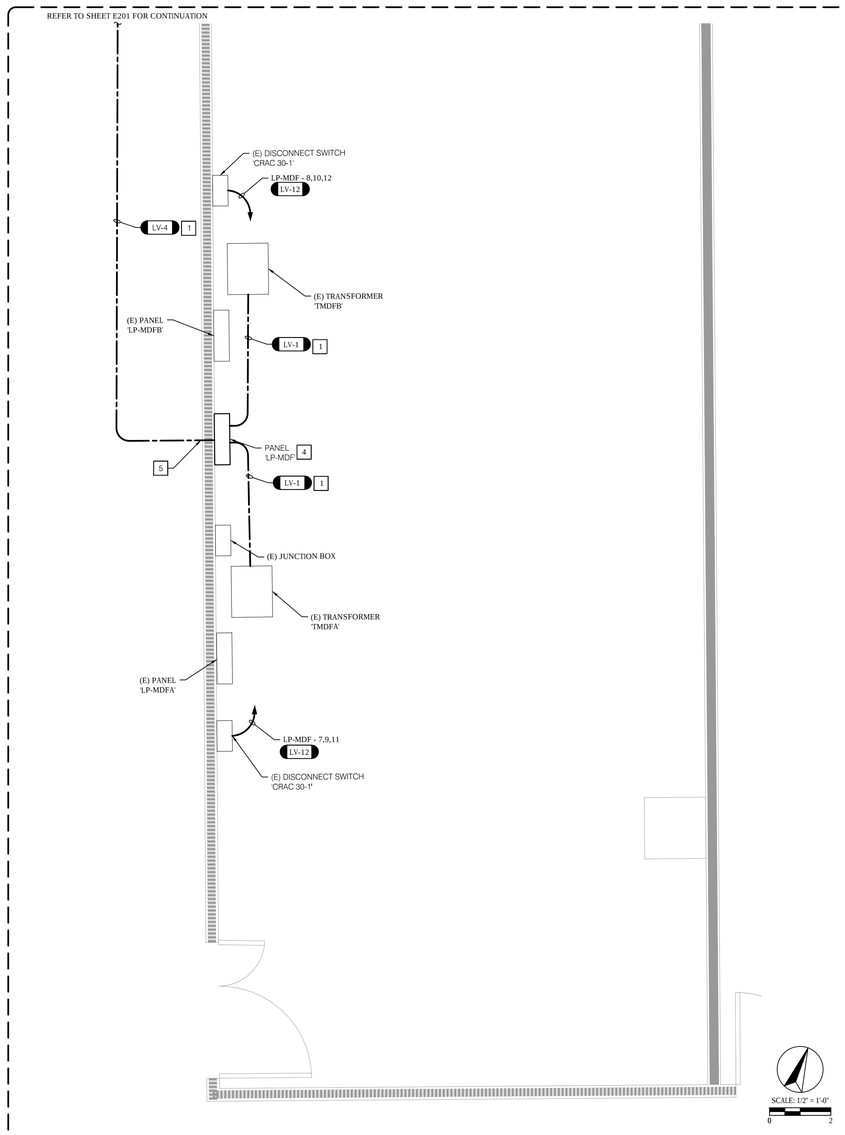
Building G
Yard Site Plan

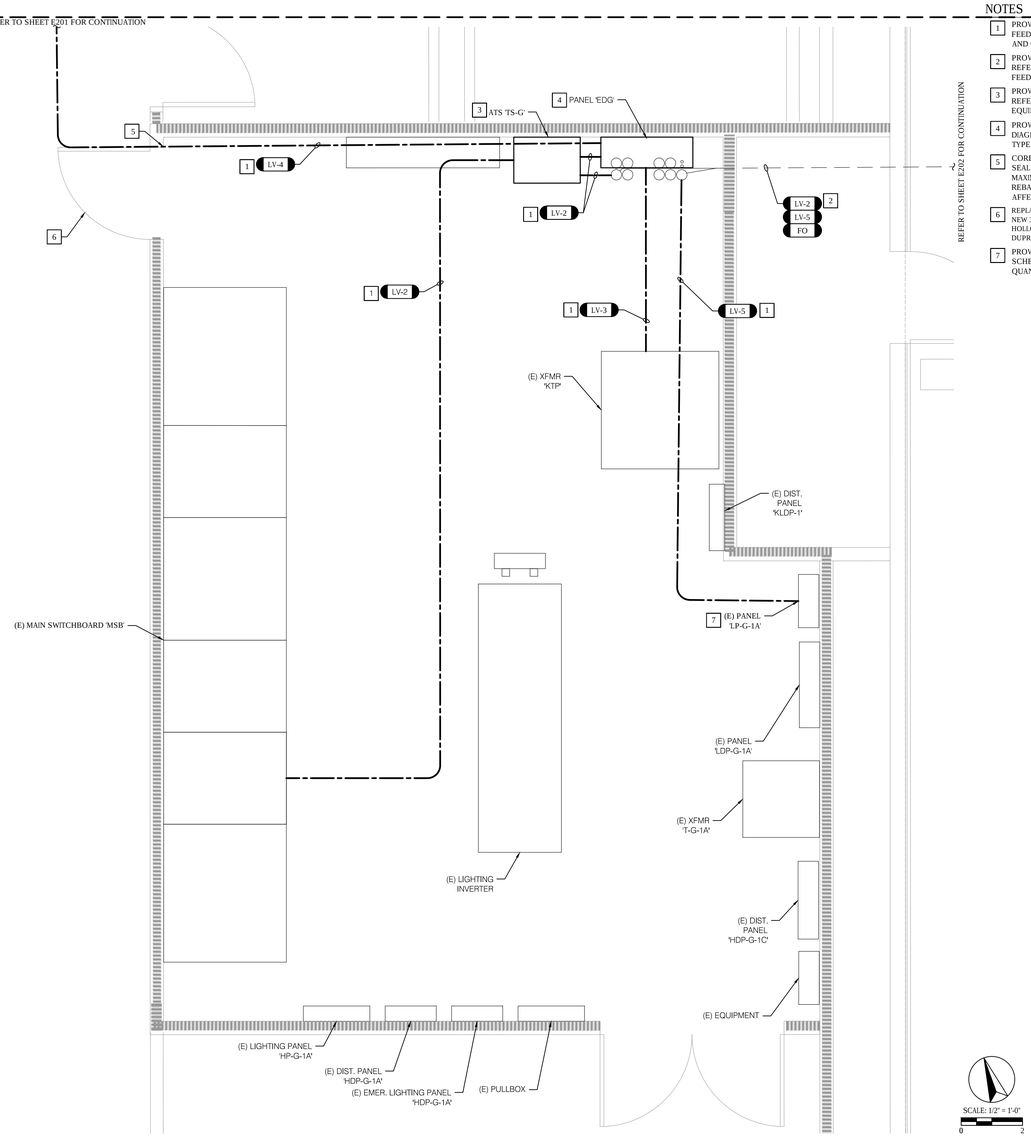
Sheet Number

E202

P2S No. 9371

FILE PATH & NAME: R:\9371\ELECTRICAL\9371_E202.DWG; MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:52:42 PM





NOTES

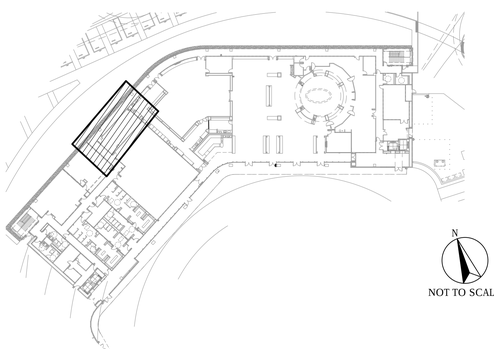
1. PROVIDE FEEDER IN CONDUIT AS SHOWN. REFER TO FEEDER SCHEDULE ON SHEET E501 FOR FEEDER SIZES AND QUANTITY.
2. PROVIDE FEEDER IN EXISTING DUCTBANK AS SHOWN. REFER TO FEEDER SCHEDULE ON SHEET E501 FOR FEEDER SIZES AND QUANTITY.
3. PROVIDE AUTOMATIC TRANSFER SWITCH AS SHOWN. REFER TO SINGLE LINE DIAGRAM ON SHEET E503 FOR EQUIPMENT RATING AND TYPE.
4. PROVIDE PANEL AS SHOWN. REFER TO SINGLE LINE DIAGRAM ON SHEET E502 FOR EQUIPMENT RATING AND TYPE.
5. CORE DRILL (E) WALL AND PROVIDE FIRE CAULKING TO SEAL PENETRATION PER DETAIL 5 ON SHEET E604. MAXIMUM CORE SIZE SHALL BE 2". TRACE AND LOCATE (E) REBAR PRIOR TO CORING. NO REBARS SHALL BE AFFECTED.
6. REPLACE EXISTING DOORS AND DOOR-FRAMES WITH NEW 3' X 7' X 1 ¾" RATED SOLID CORE WOOD DOORS AND HOLLOW METAL FRAMES SWINGING OUTWARDS WITH VON DUPRIN AX 98/99 SERIES PANIC HARDWARE.
7. PROVIDE CIRCUIT BREAKER IN PANEL. REFER TO PANEL SCHEDULE ON SHEET E001 FOR BREAKER SIZE AND QUANTITY.

ADD ALTERNATE 1

KEY PLAN

LEGEND

AREA OF WORK



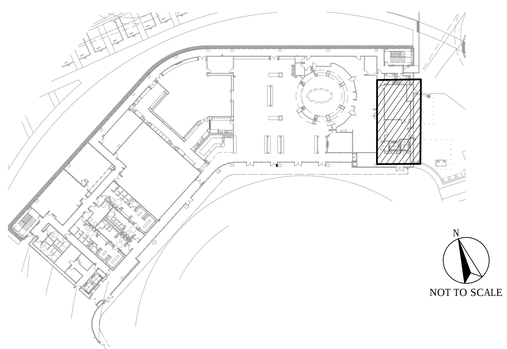
2 MDF ROOM ENLARGED PLAN

NO SCALE

KEY PLAN

LEGEND

AREA OF WORK



1 ELECTRICAL ROOM ENLARGED PLAN

NO SCALE

FILE PATH & NAME: P:\9371\ELECTRICAL\9371_E203.DWG MOHAMMAD WASIF
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Designed M Fernando
Drawn S Salazar
Checked M Wasif
Approved A Batra

Date January 16, 2019

Submittal Addendum 1

Scale As Noted

Sheet Title

Building G
Enlarged Floor Plan

Sheet Number

E203

P2S No. 9371

P6 PHOTO
NO SCALE

P4 PHOTO
NO SCALE

P2 PHOTO
NO SCALE

P5 PHOTO
NO SCALE

P3 PHOTO
NO SCALE

P1 PHOTO
NO SCALE

SCE UNDERGROUND STRUCTURE SCHEDULE

1.	SCE SS530	JENSEN PRECAST MODEL # K686-SB42-11 UTILITY VAULT PRECAST MODEL # ED626-SB
2.	SCE SS535	JENSEN PRECAST MODEL # K586-SB60-11 UTILITY VAULT PRECAST MODEL # ED1012-SB
3.	SCE SS537	JENSEN PRECAST MODEL # K78-SB60-11 UTILITY VAULT PRECAST MODEL # ED78-SB
4.	SCE SS538	JENSEN PRECAST MODEL # K810-SB42-11 UTILITY VAULT PRECAST MODEL # ED810-SB538

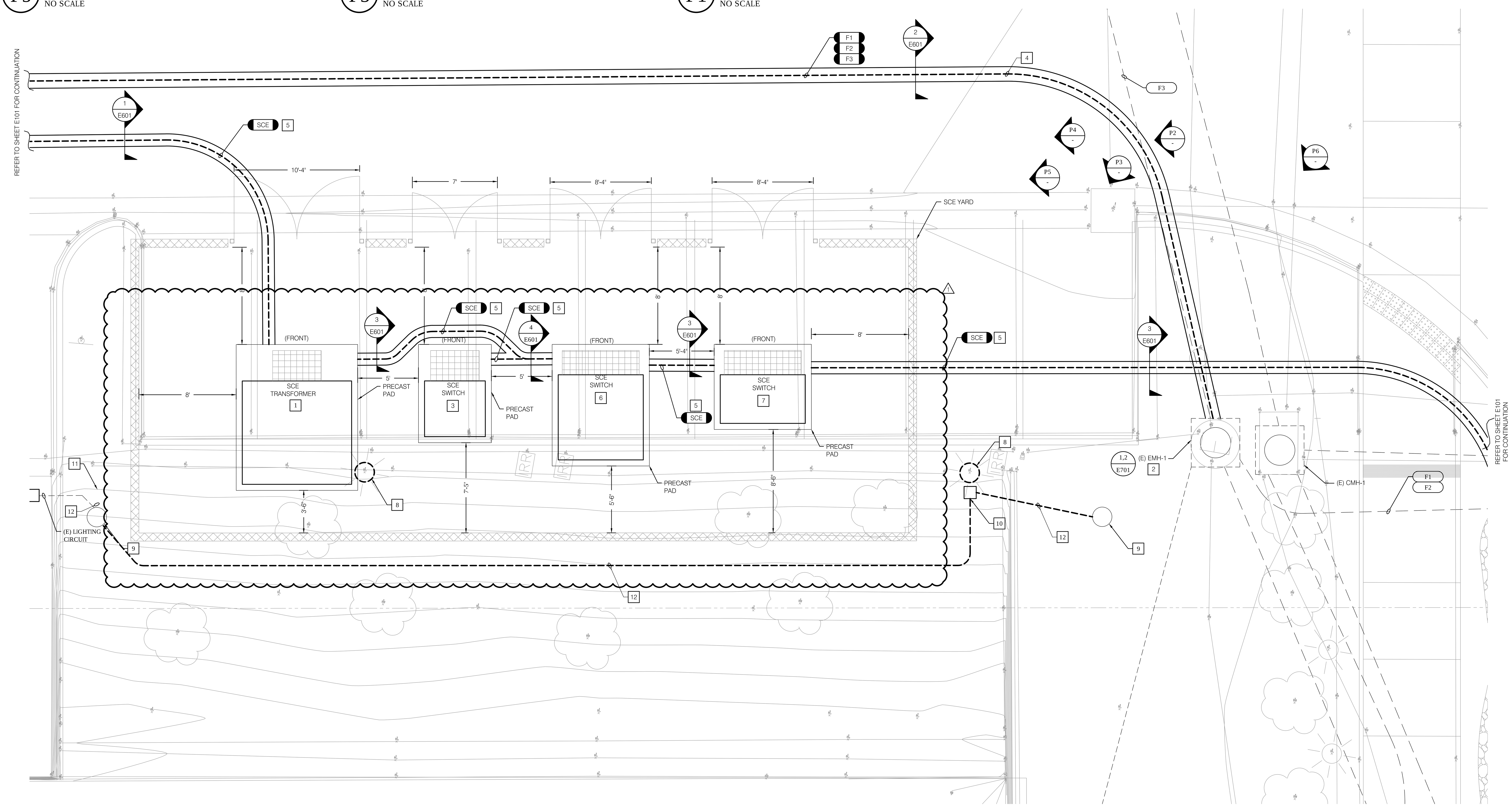
ALL KNOCKOUTS TO BE 6".

GENERAL NOTES

1. REFER TO SCE UNDERGROUND STRUCTURES STANDARDS FOR SCE REQUIREMENTS.
2. ALL WORK TO BE IN COMPLIANCE PER SCE ESR-7 STANDARDS.

NOTES

1. 34.5KV-12KV TRANSFORMER BY SCE. EQUIPMENT, PRECAST PAD, PRECAST VAULT AND ALL ASSOCIATED ACCESSORIES TO BE PER SCE STANDARD SS535. ALL KNOCKOUTS FOR CONDUIT ENTRY TO BE 6".
2. CORE DRILL EXISTING MANHOLE WALL FOR CONDUIT ENTRY AS SHOWN. REFER TO DETAIL 2 ON SHEET E604 FOR ADDITIONAL DETAILS.
3. SWITCH BY SCE. EQUIPMENT, PRECAST PAD, PRECAST VAULT AND ALL ASSOCIATED ACCESSORIES TO BE PER SCE STANDARD SS530. ALL KNOCKOUTS FOR CONDUIT ENTRY TO BE 6".
4. PROVIDE CONCRETE ENCASED DUCTBANK AS SHOWN. REFER TO SHEET E601 FOR ADDITIONAL DETAILS.
5. PROVIDE CONCRETE ENCASED DUCTBANK PER SCE STANDARDS AS SHOWN. FEEDER TO BE PROVIDED BY SCE. REFER TO SHEET E601 FOR ADDITIONAL DETAILS.
6. SWITCH BY SCE. EQUIPMENT, PRECAST PAD, PRECAST VAULT AND ALL ASSOCIATED ACCESSORIES TO BE PER SCE STANDARD SS538. ALL KNOCKOUTS FOR CONDUIT ENTRY TO BE 6".
7. SWITCH BY SCE. EQUIPMENT, PRECAST PAD, PRECAST VAULT AND ALL ASSOCIATED ACCESSORIES TO BE PER SCE STANDARD SS537. ALL KNOCKOUTS FOR CONDUIT ENTRY TO BE 6".
8. (E) LIGHTS TO BE REMOVED AND REINSTALLED IN NEW LOCATION.
9. (E) LIGHTS TO BE REINSTALLED IN NEW LOCATION. PROVIDE NEW BASE, BASE PLATE AND ANCHORS. REFER TO DETAIL 7 ON SHEET E601 FOR LIGHT POLE FOOTING DETAILS.
10. TRACE AND LOCATE (E) LIGHTING CIRCUITS. PROVIDE 10" X 17" X 12" PRECAST CONCRETE UNDERGROUND HANDHOLE 'HH-1' BY JENSEN 'HN1017' OR APPROVED EQUAL AND INTERCEPT (E) LIGHTING CIRCUITS AFTER REMOVAL OF LIGHT POLE. EXTEND EXISTING LIGHTING CIRCUITS SERVING (E) ABOVE GRADE PATHWAY FIXTURES ACROSS MOTOR CAR PARKWAY AND INTERCEPT IN HANDHOLE. INTERCEPT (E) LIGHTING CIRCUIT SERVING RELOCATED LIGHT FIXTURE WITH NEW FEEDERS IN HANDHOLE 'HH-1' AS SHOWN.
11. TRACE AND LOCATE (E) LIGHTING CIRCUITS. PROVIDE 10" X 17" X 12" PRECAST CONCRETE UNDERGROUND HANDHOLE 'HH-2' BY JENSEN 'HN1017' OR APPROVED EQUAL AND INTERCEPT (E) LIGHTING CIRCUITS AFTER REMOVAL OF LIGHT POLE. INTERCEPT (E) LIGHTING CIRCUIT SERVING RELOCATED LIGHT FIXTURE WITH NEW FEEDERS IN HANDHOLE 'HH-2' AS SHOWN.
12. PROVIDE 2#4 AND 1#4 GND IN 1" CONDUIT TO SERVE RELOCATED LIGHT FIXTURE.



SCALE: 1/4" = 1'-0"
0 4

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Project Title
MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE
1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE #
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IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER ARVIND BATRA No. E16609 ELECTRICAL STATE OF CALIFORNIA

Revisions

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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
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Scale	1/4" = 1'-0"

Sheet Title
Enlarged SCE Enclosure Site Plan

Sheet Number
E301

P2S No. 9371

P3 PHOTO
NO SCALE

P2 PHOTO
NO SCALE

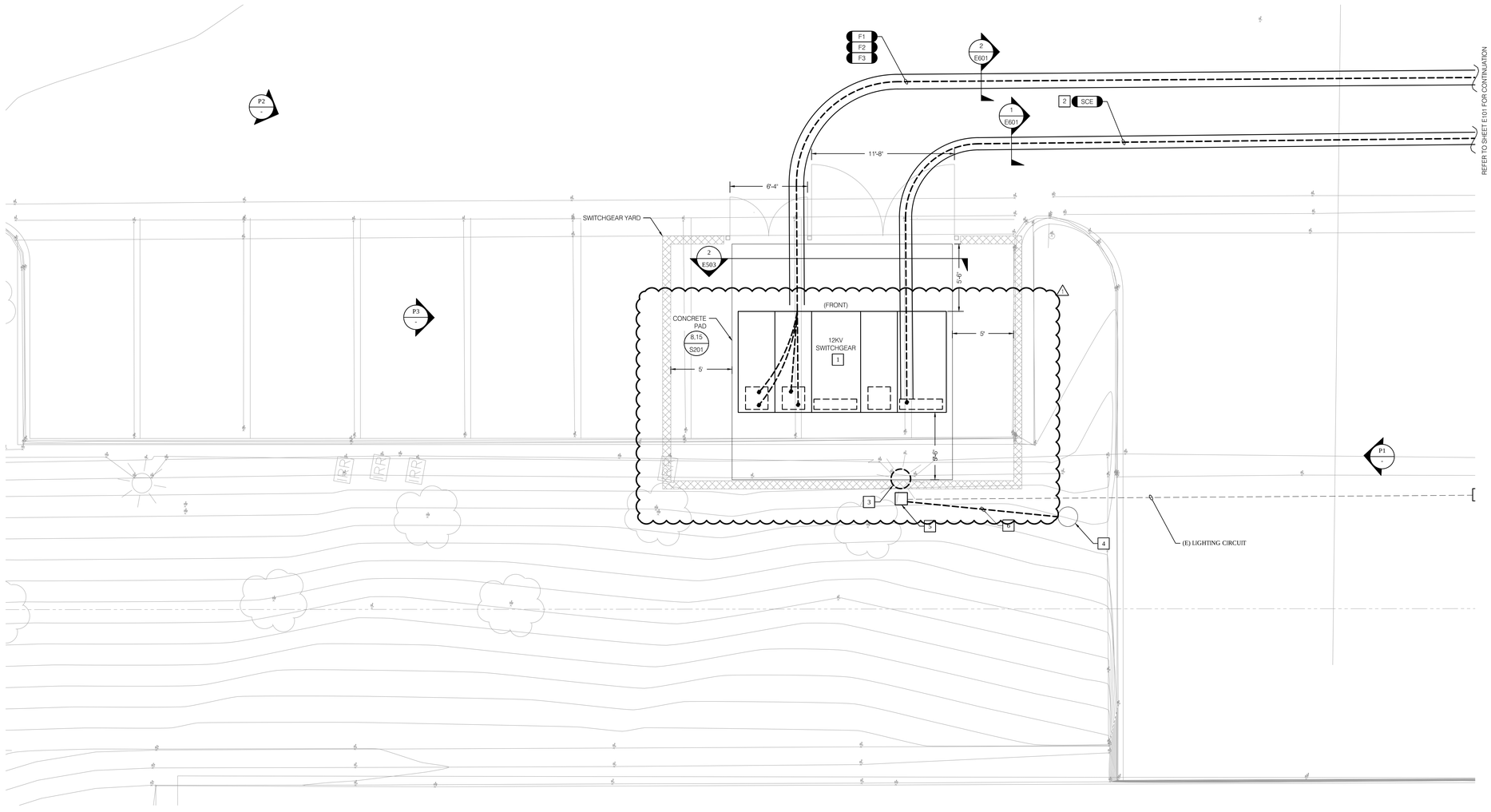
P1 PHOTO
NO SCALE

GENERAL NOTES

1. REFER TO SCE UNDERGROUND STRUCTURES STANDARDS FOR SCE REQUIREMENTS.
2. ALL WORK TO BE IN COMPLIANCE PER SCE ESR-7 STANDARDS.

NOTES

1. 15KV SWITCHGEAR 'MS' TO BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR. CONTRACTOR TO INSTALL, TEST, COMMISSION AND ENERGIZE 15KV SWITCHGEAR 'MS'. REFER TO SINGLE LINE DIAGRAM ON SHEET E501 AND E503 FOR EQUIPMENT RATING AND TYPE.
2. PROVIDE CONCRETE ENCASED DUCTBANK PER SCE STANDARDS AS SHOWN. FEEDER TO BE PROVIDED BY SCE. REFER TO SHEET E601 FOR ADDITIONAL DETAILS.
3. (E) LIGHTS TO BE REMOVED AND REINSTALLED IN NEW LOCATION.
4. (E) LIGHTS TO BE REINSTALLED IN NEW LOCATION. PROVIDE NEW BASE, BASE PLATE AND ANCHORS. REFER TO DETAIL 7' ON SHEET E601 FOR POLE LIGHT FOOTING DETAILS.
5. TRACE AND LOCATE (E) LIGHTING CIRCUITS. PROVIDE 10' X 17' X 12' PRECAST CONCRETE UNDERGROUND HANDHOLE 'HH-3' BY JENSEN 'HN1017' OR APPROVED EQUAL AND INTERCEPT (E) LIGHTING CIRCUITS AFTER REMOVAL OF LIGHT POLE. INTERCEPT (E) LIGHTING CIRCUIT SERVING RELOCATED LIGHT FIXTURE WITH NEW FEEDERS IN HANDHOLE 'HH-3' AS SHOWN.
6. PROVIDE 2 # 4 AND 1 # 4 GND IN 1" CONDUIT TO SERVE LIGHTING FIXTURES.



SCALE: 1/4" = 1'-0"
0 4

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No. E16609
ELECTRICAL
STATE OF CALIFORNIA

Revisions

Number	Description	Date
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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	1/4" = 1'-0"

Sheet Title

Enlarged Switchgear
Enclosure Site Plan

Sheet Number

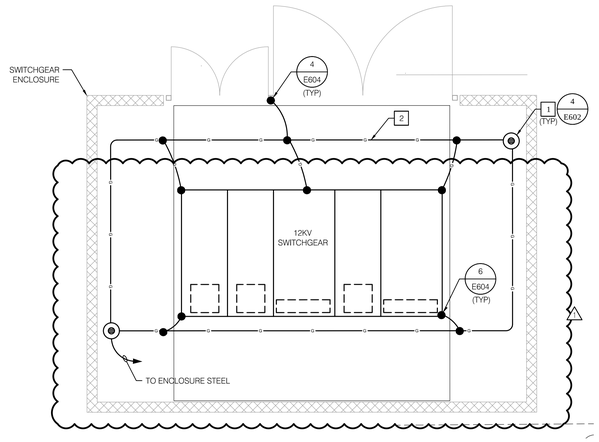
E302

P2S No. 9371

FILE PATH & NAME: R:\9371\ELECTRICAL\9371_E302.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:53:16 PM

NOTES

1. PROVIDE 3/4"Ø X 10'-0" LONG GROUND ROD WITH TEST WELL AS SHOWN.
2. PROVIDE #4/0 BARE COPPER GROUND CONDUCTOR LOOP AS SHOWN.

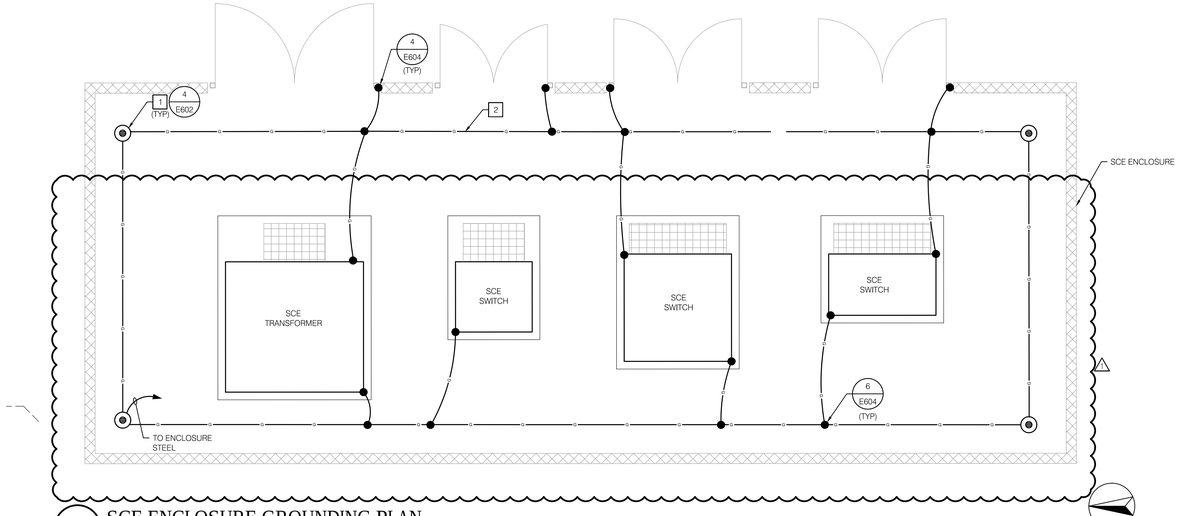


2 SWITCHGEAR ENCLOSURE GROUNDING PLAN

1/4" = 1'-0"

SCALE: 1/8" = 1'-0"

0 8



1 SCE ENCLOSURE GROUNDING PLAN

1/4" = 1'-0"

SCALE: 1/8" = 1'-0"

0 8

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1	Addendum 1	01/11/2019

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Drawn	S Salazar
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Approved	A Batra
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Scale	1/4" = 1'-0"

Sheet Title

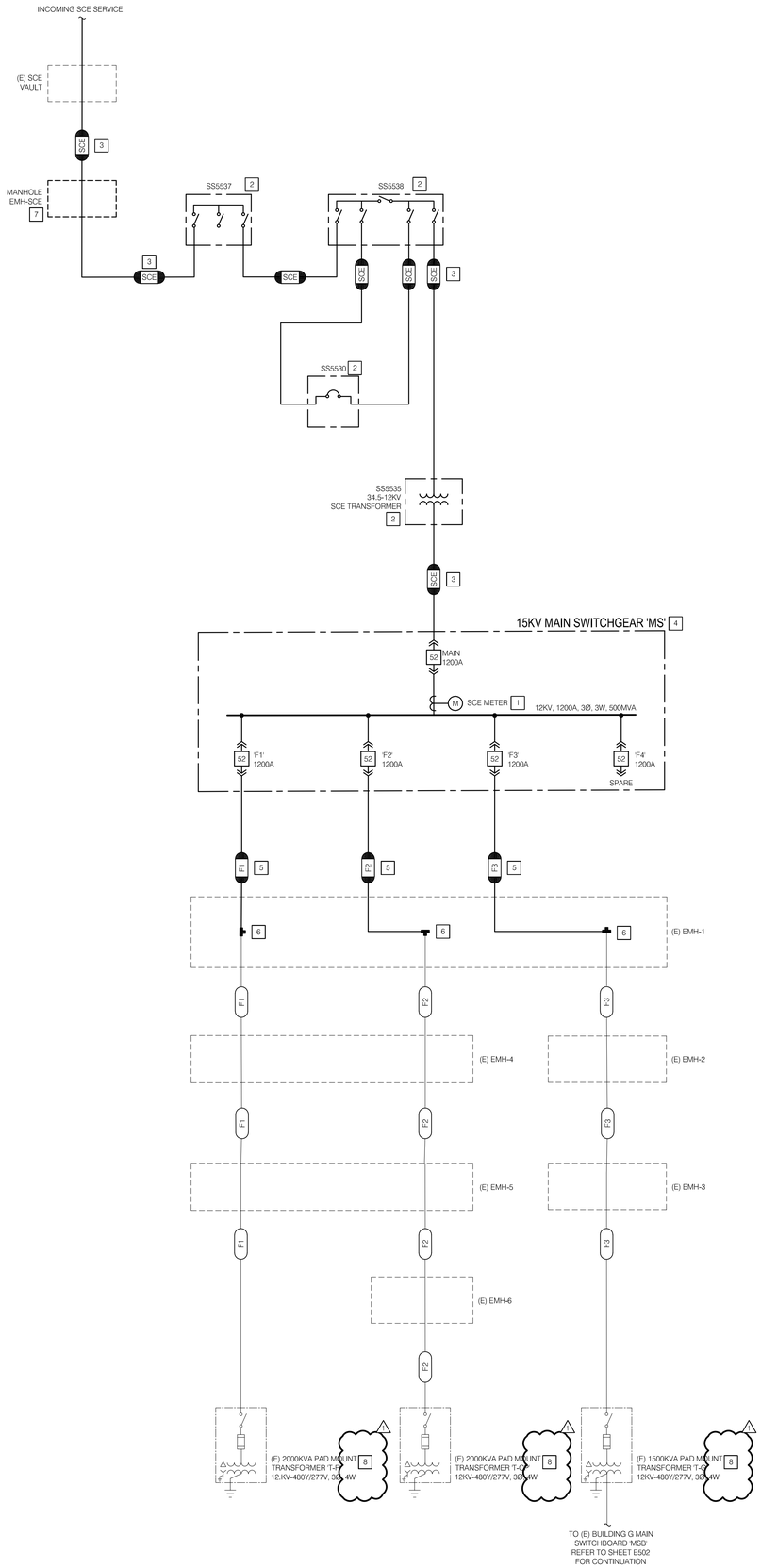
Enclosure Grounding Plans

Sheet Number

E303

P2S No. 9371

FILE PATH & NAME: R:\9371\ELECTRICAL\9371_E303.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:53:24 PM



NOTES

1. METER PER SCE STANDARDS.
2. EQUIPMENT BY SCE.
3. FEEDERS TO BE PROVIDED BY SCE. PROVIDE CONCRETE ENCASED DUCTBANK FOR SCE FEEDERS AS SHOWN.
4. 15KV, 1200A, 500MVA MAIN SWITCHGEARNEMA 3R ENCLOSURE. MS IS OWNER FURNISHED. CONTRACTOR TO INSTALL, TEST, COMMISSION AND ENERGIZE 15KV SWITCHGEAR 'MS'.
5. PROVIDE FEEDER AND CONDUIT AS SHOWN. REFER TO FEEDER SCHEDULE FOR FEEDER SIZES AND QUANTITY.
6. INTERCEPT INCOMING FEEDER AND SPLICE IN PLACE WITH NEW FEEDER AS SHOWN.
7. PROVIDE MANHOLE 'EMH-SCE' PER SCE STANDARDS AS SHOWN. REFER TO SHEET E102 FOR MANHOLE SIZE AND ADDITIONAL INFORMATION.
8. ADJUST PRIMARY TAP FOR TRANSFORMER FROM 12000V TO OPERATE AT 12300V.

FEEDER AND CONDUIT SCHEDULE

FEEDER	VOLTAGE	NUMBER AND SIZE OF CONDUITS	SETS OF CONDUCTORS PER CONDUIT	REMARKS
F1	15KV	5"	3#4/0 & 1#4/0 GND	NEW
F2	15KV	5"	3#4/0 & 1#4/0 GND	NEW
F3	15KV	5"	3#4/0 & 1#4/0 GND	NEW
SCE	15KV/35KV	5"/6"	FEEDER BY SCE	
F1	15KV	5"/4"	3#1/0 & 1#4 GND	EXISTING
F2	15KV	5"/4"	3#1/0 & 1#4 GND	EXISTING
F3	15KV	5"/4"	3#1/0 & 1#4 GND	EXISTING
LV-1	600V	3/4"	3#6 & 1#10 GND	NEW
LV-2	600V	(2) 4"	4#350KCMIL & 1#1 GND	NEW
LV-3	600V	4"	4#500KCMIL & 1#2 GND	NEW
LV-4	600V	1 1/2"	4#2 & 1#8 GND	NEW
LV-5	600V	4"	4#10 & 1#10 GND	NEW
LV-12	600V	3/4"	3#12 & 1#12 GND	NEW
LV-1	600V	2 1/2"	4#4/0 & 1#4 GND	EXISTING
LV-2	600V	(2) 2"	4#3/0 & 1#2 GND	EXISTING
LV-3	600V	(2) 3"	4#500KCMIL & 1#1/0 GND	EXISTING
LV-4	600V	(4) 3"	4#500KCMIL & 1#3/0 GND	EXISTING
LV-5	600V	1 1/4"	3#3 & 1#8 GND	EXISTING
LV-6	600V	(2) 3 1/2"	4#500KCMIL & 1#1/0 GND	EXISTING
LV-7	600V	(2) 3"	3#500KCMIL & 1#1/0 GND	EXISTING
LV-8	600V	(2) 2"	3#3/0 & 1#2 GND	EXISTING
LV-9	600V	1 1/2"	3#2/0 & 1#6 GND	EXISTING
LV-10	600V	3/4"	3#6 & 1#10 GND	EXISTING
LV-11	600V	1 1/4"	4#2 & 1#8 GND	EXISTING
LV-12	600V	3/4"	3#12 & 1#12 GND	EXISTING
FO	COMM	1"	4#12 & 1#12 GND	NEW

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APPL # 04-117696
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Designed M Fernando
Drawn S Salazar
Checked M Wasif
Approved A Batra

Date January 16, 2019

Submittal Addendum 1

Scale No Scale

Sheet Title

Renovation
Single Line Diagram

Sheet Number

E501

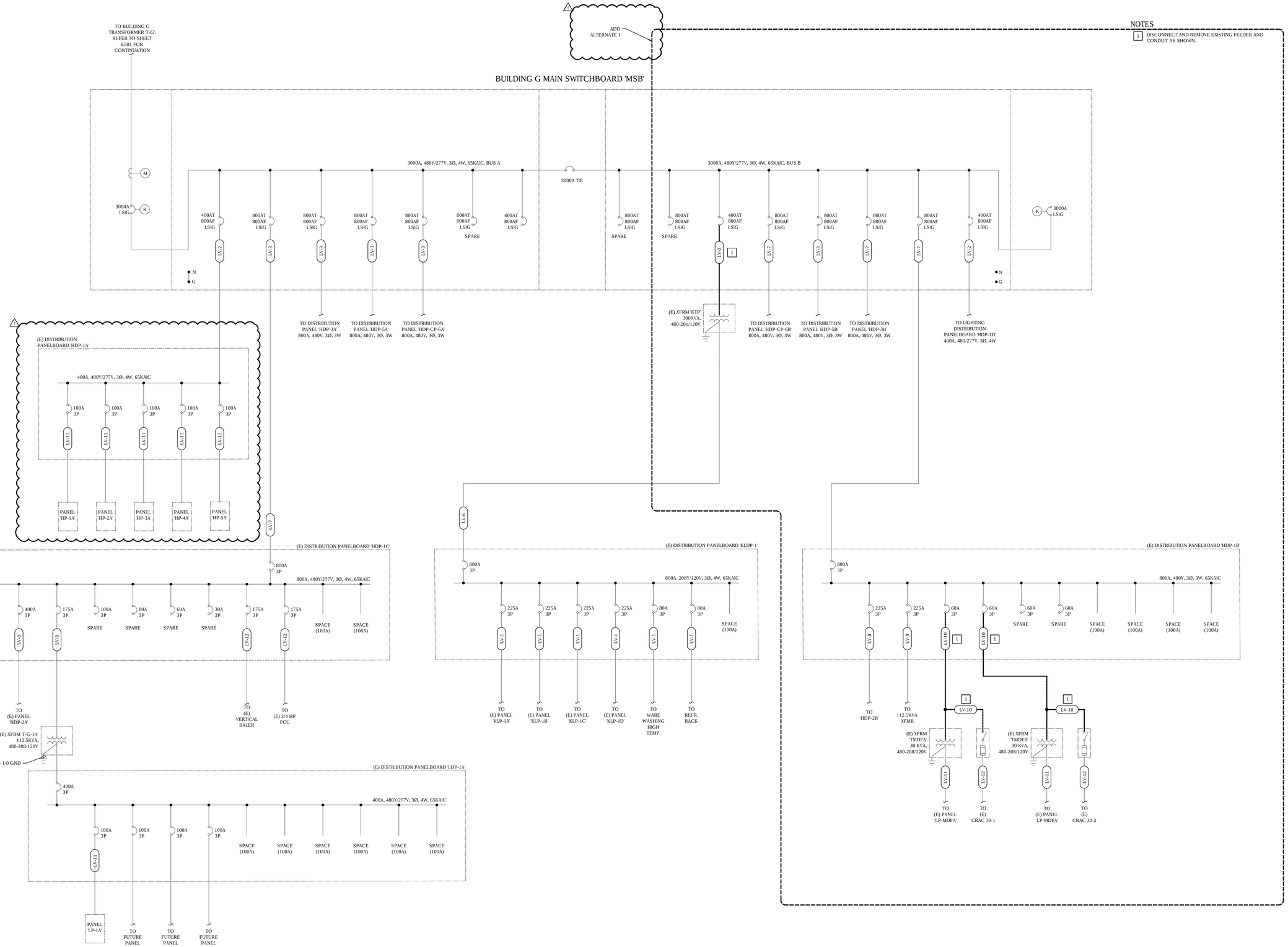
P2S No. 9371

GENERAL NOTES

1. REFER TO SHEET E502 FOR RENOVATION SINGLE LINE DIAGRAM
2. REFER TO SHEET E501 FOR FEEDER AND CONDUIT SCHEDULE.

NOTES

1 DISCONNECT AND REMOVE EXISTING FEEDER AND CONDUIT AS SHOWN.



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Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	No Scale

Sheet Title

Building G Demolition
Single Line Diagram

Sheet Number

ED502

P2S No. 9371

FILE PATH & NAME: P:\9371\ELECTRICAL\9371_ED502.DWG; MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:53:37 PM

TO BUILDING G TRANSFORMER 'T-G'. REFER TO SHEET E501 FOR CONTINUATION

AFC = 19KA

3000A LSIG

BUILDING G MAIN SWITCHBOARD 'MSB'

3000A, 480Y/277V, 3Ø, 4W, 65KAIC, BUS A

3000A TIE

3000A, 480Y/277V, 3Ø, 4W, 65KAIC, BUS B

400AT 800AF LSIG — LV-2

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-3A' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-5A' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL HDP-CP-6A' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — SPARE

600AT 800AF LSI — 4 — LV-2

800AT 800AF LSIG — LV-3 — SPARE

800AT 800AF LSIG — LV-3 — SPARE

400AT 800AF LSIG — LV-3 — SPARE

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-3B' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-5B' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-3B' 800A, 480V, 3Ø, 3W

800AT 800AF LSIG — LV-3 — TO DISTRIBUTION PANEL 'HDP-1B' 800A, 480V, 3Ø, 3W

400AT 800AF LSIG — LV-2 — TO LIGHTING DISTRIBUTION PANELBOARD 'HDP-1D' 400A, 480/277V, 3Ø, 4W

K — 3000A LSIG

N, G

ADD ALTERNATE 1

GENERAL NOTES

1. REFER TO SHEET E501 FOR FEEDER AND CONDUIT SCHEDULE.

NOTES

1. PROVIDE 400KW, 480V, 3Ø, 4W, STANDBY DIESEL FIRED GENERATOR IN A WEATHERPROOF SOUND ATTENUATED ENCLOSURE ALONG WITH ALL ASSOCIATED ACCESSORIES AS SHOWN. PROVIDE CIRCUIT BREAKERS WITH LSIG TRIP UNIT AS SHOWN. REFER TO SINGLE LINE DIAGRAM FOR BREAKER RATING, TYPE AND QUANTITY.
2. PROVIDE 600A, 600V, 4-POLE, WALL MOUNT, AUTOMATIC TRANSFER SWITCH ALONG WITH ALL ASSOCIATED ACCESSORIES IN NEMA 1 ENCLOSURE AS SHOWN.
3. PROVIDE 600A, 480Y/277V, 3Ø, 4W DISTRIBUTION PANEL ALONG WITH ALL ASSOCIATED ACCESSORIES IN NEMA 1 ENCLOSURE AS SHOWN.
4. ADJUST BREAKER SETTING TO TRIP AT 600AT.
5. PROVIDE FEEDER IN CONDUIT AS SHOWN.
6. PROVIDE 100A, 480Y/277V, 3Ø, 4W PANEL ALONG WITH ALL ASSOCIATED ACCESSORIES IN NEMA 1 ENCLOSURE AS SHOWN. REFER TO PANEL SCHEDULE ON SHEET E001 FOR ADDITIONAL DETAILS.
7. PROVIDE CIRCUIT BREAKERS AT PANEL. REFER TO PANEL SCHEDULE ON SHEET E001 FOR BREAKER TYPE, SIZE AND QUANTITY.
8. REUSE EXITING SPARE BREAKER AT PANEL TO SERVE PARKING LOT LIGHT POLES. REFER TO PANEL SCHEDULE ON SHEET E001 FOR ADDITIONAL INFORMATION.

LOAD SUMMARY PANEL 'EDG'

CIRCUIT #	LOAD DESCRIPTION	LOAD (AMPS)	LOAD (VA)
1	(E) PANEL 'KLDP-1'	322.36A	268,640VA
2	PANEL 'MDF'	39.55A	32,960VA
	TOTAL	361.91A	301,600VA

LOAD SUMMARY (E) PANEL 'KLDP-1'

CIRCUIT #	LOAD DESCRIPTION	LOAD (AMPS)	LOAD (VA)
1	(E) PANEL 'KLP-1A'	158.2A	57,000VA
2	(E) PANEL 'KLP-1B'	143.5A	51,700VA
3	(E) PANEL 'KLP-1C'	193.7A	69,800VA
4	(E) PANEL 'KLP-1D'	156.9A	56,540VA
5	(E) WARE WASHER HIGH TEMP.	47.5A	17,100VA
6	(E) REFRIGERATION RACK	45.8A	16,500VA
	TOTAL	745.6A	268,640VA

LOAD SUMMARY GENERATOR

CIRCUIT #	LOAD DESCRIPTION	LOAD (AMPS)	LOAD (VA)
1	PANEL 'EDG'	361.91A	301,600VA
2	EGRESS LIGHTING	12.03A	10,000VA
3	FIRE PUMP	65A	54040VA
	TOTAL	438.94A	365,640VA

(E) DISTRIBUTION PANELBOARD 'HDP-1A'

400A, 480Y/277V, 3Ø, 4W, 65KAIC

100A 3P — LV-11 — 8 — PANEL 'HP-1A'

100A 3P — LV-11 — PANEL 'HP-2A'

100A 3P — LV-11 — PANEL 'HP-3A'

100A 3P — LV-11 — PANEL 'HP-4A'

100A 3P — LV-11 — PANEL 'HP-5A'

(E) DISTRIBUTION PANELBOARD 'HDP-1C'

800A, 480Y/277V, 3Ø, 3W, 65KAIC

800A 3P

400A 3P — LV-8 — TO (E) PANEL 'HDP-2A'

175A 3P — LV-9 — (E) XFRM 'T-G-1A' 112.5KVA, 480-208/120V — 3/4" C - 1/0 GND

100A 3P — SPARE

80A 3P — SPARE

60A 3P — SPARE

30A 3P — SPARE

175A 3P — LV-12 — TO (E) VERTICAL BALER

175A 3P — LV-12 — TO (E) 3/4 HP FCU

SPACE (100A)

SPACE (100A)

(E) DISTRIBUTION PANELBOARD 'LDP-1A'

400A, 480Y/277V, 3Ø, 4W, 65KAIC

400A 3P — LV-11 — 7 — PANEL 'LP-1A'

100A 3P — SPARE

100A 3P — SPARE

100A 3P — SPARE

100A 3P — SPACE (100A)

SPACE (100A)

SPACE (100A)

SPACE (100A)

SPACE (100A)

SPACE (100A)

400KW, 480V, 3Ø STANDBY DIESEL GENERATOR — 1

SPARE (TO SERVE FIRE PUMP) 100A 3P

SPARE (LIFE SAFETY LOADS) 100A 3P

600AT 800AF LSI 3P — G — 1 # 1/0 GND

600A, 600V, 4-POLE, AUTOMATIC TRANSFER SWITCH 'TS-G' — 2

AFC = 18.2KA

AFC = 4.98KA

LV-2

LV-2 — 5 (TYP)

AFC = 18KA

PANEL 'EDG' — 3

600AT 800AF LSI

600A, 480Y/277V, 3Ø, 4W, 25KAIC

400AT 400AF — LV-3 — (E) XFRM 'KTP' 300KVA, 480-208/120V — 3/4" C - 1/0 GND

100AT 100AF — LV-4

100AT 100AF — SPARE

100AT 100AF — SPARE

AFC = 4KA

PANEL 'LP-MDF' — 6

LV-6

(E) DISTRIBUTION PANELBOARD 'KLDP-1'

800A, 208Y/120V, 3Ø, 4W, 65KAIC

800A 3P

225A 3P — LV-1 — TO (E) PANEL 'KLP-1A'

225A 3P — LV-1 — TO (E) PANEL 'KLP-1B'

225A 3P — LV-1 — TO (E) PANEL 'KLP-1C'

225A 3P — LV-1 — TO (E) PANEL 'KLP-1D'

80A 3P — LV-1 — TO WARE WASHING HIGH TEMP.

80A 3P — LV-1 — TO REFR. RACK

SPACE (100A)

LV-11 — (E) XFRM 'TMDFA' 30 KVA, 480-208/120V — TO (E) PANEL 'LP-MDFA'

LV-12 — DISCONNECT SWITCH CRAC 30-1 — TO (E) CRAC 30-1

LV-11 — (E) XFRM 'TMDFB' 30 KVA, 480-208/120V — TO (E) PANEL 'LP-MDFB'

LV-12 — DISCONNECT SWITCH CRAC 30-2 — TO (E) CRAC 30-2

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Submittal	Addendum 1
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Sheet Title

Building G Renovation
Single Line Diagram

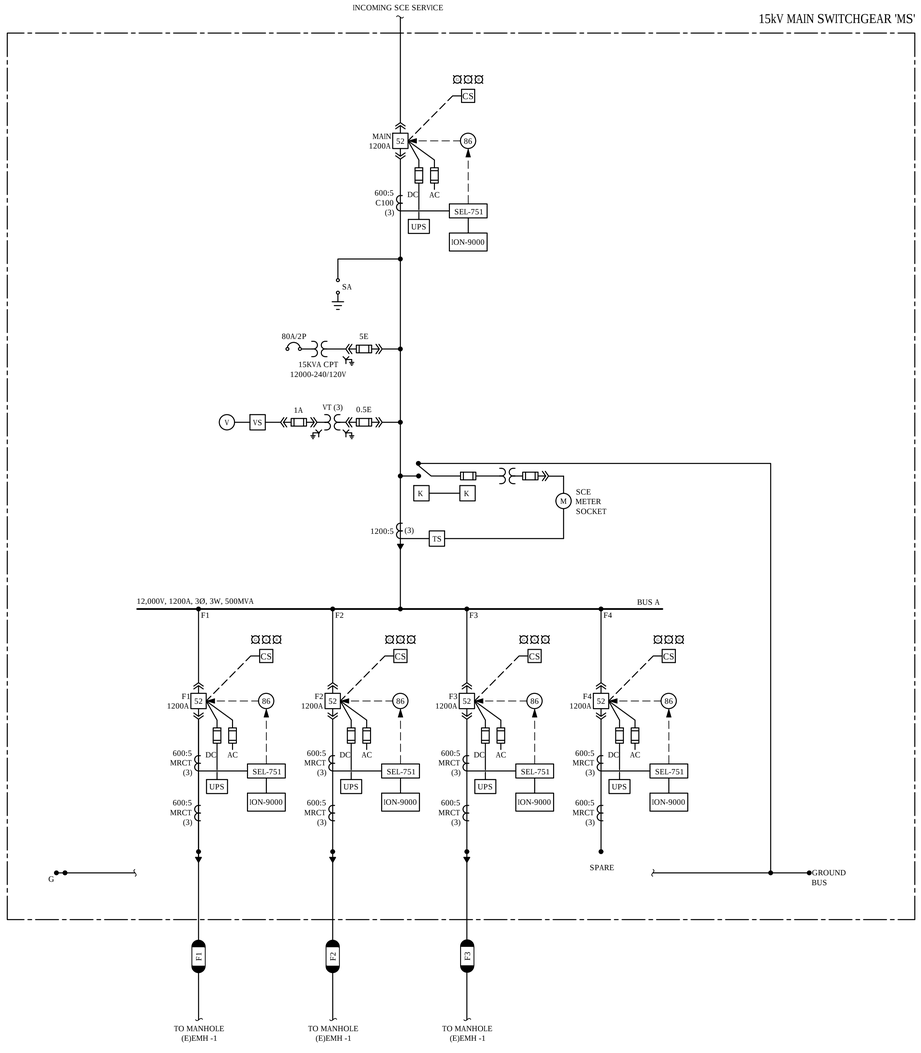
Sheet Number

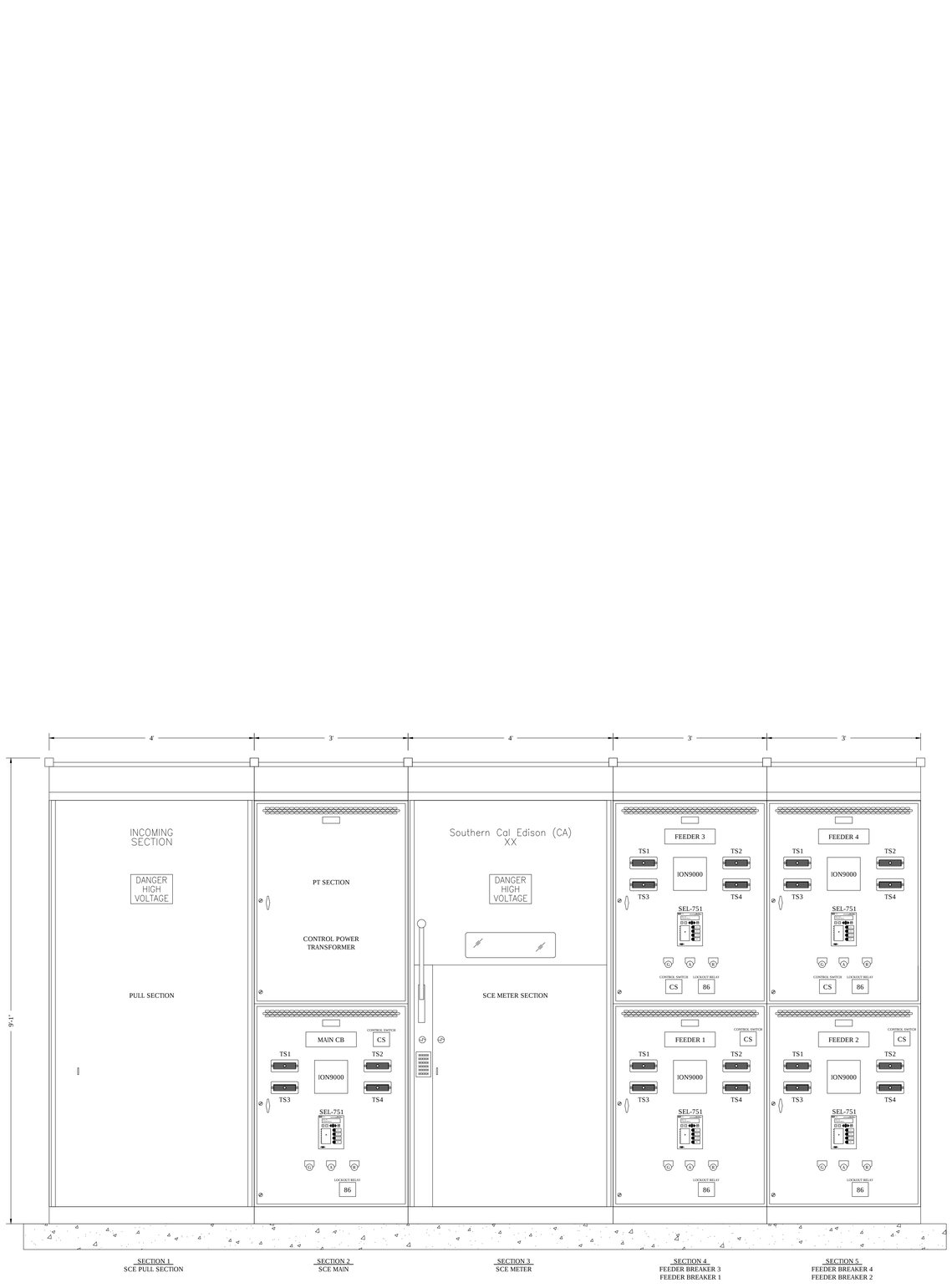
E502

P2S No. 9371

GENERAL NOTES

1. REFER TO SHEET E501 FOR RENOVATION SINGLE LINE DIAGRAM
2. REFER TO SHEET E501 FOR FEEDER AND CONDUIT SCHEDULE
3. 15KV SWITCHGEAR 'MS' IS OWNER FURNISHED CONTRACTOR INSTALLED EQUIPMENT. CONTRACTOR TO INSTALL, TEST, COMMISSION AND ENERGIZE 15KV SWITCHGEAR 'MS'.





2 SWITCHGEAR ELEVATION PLAN

1" = 1'-0"

1 SWITCHGEAR SINGLE LINE DIAGRAM

NO SCALE

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Drawn	S Salazar
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Sheet Title

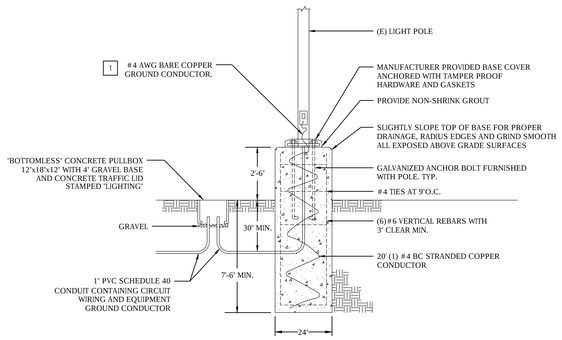
Switchgear Single lIne Diagram and Elevation

Sheet Number

E503

P2S No. 9371

FILE PATH & NAME: P:\9371 ELECTRICAL\9371_ES03.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:53:48 PM

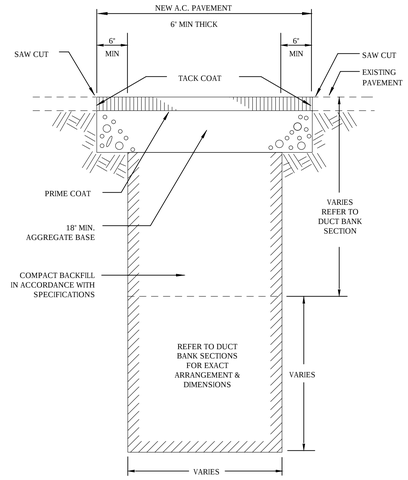


NOTES

1 GROUND POLE TO GROUND CONDUCTORS IN CONDUITS.

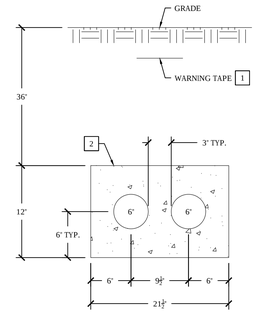
7 LIGHT POLE FOOTING

NO SCALE



5 TYPICAL DUCT BANK COVER

NO SCALE



NOTES

1 WARNING TAPE FOR MEDIUM VOLTAGE DUCTBANKS ONLY.

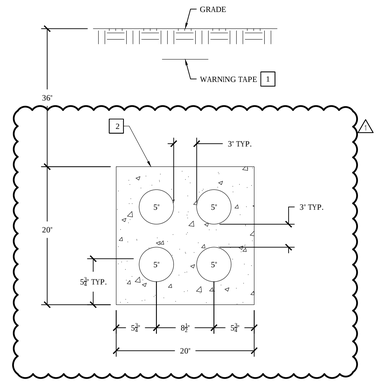
2 RED CONCRETE ENCASEMENT CONSISTING OF 3 SACK OF CEMENT AND 10 LBS OF RED OXIDE (OR 1 GALLON OF RED COLOR) PER CUBIC YARD OF SAND FOR MEDIUM VOLTAGE DUCTBANKS ONLY.

GENERAL NOTES

1. REFER TO DETAIL 5 ON THIS SHEET FOR TYPICAL DUCTBANK COVER.

3 DUCTBANK SECTION

NO SCALE

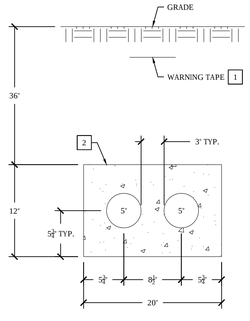


GENERAL NOTES

1. REFER TO DETAIL 5 ON THIS SHEET FOR TYPICAL DUCTBANK COVER.

2 DUCTBANK SECTION

NO SCALE

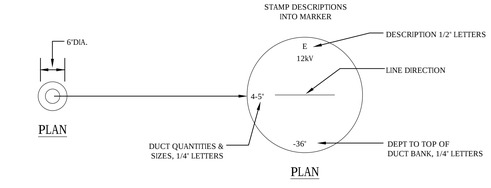


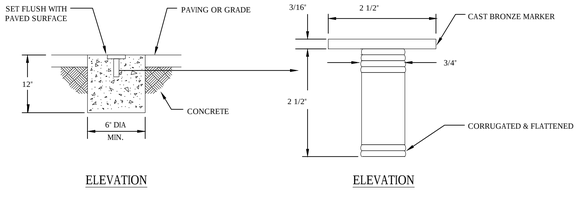
GENERAL NOTES

1. REFER TO DETAIL 5 ON THIS SHEET FOR TYPICAL DUCTBANK COVER.

1 DUCTBANK SECTION

NO SCALE



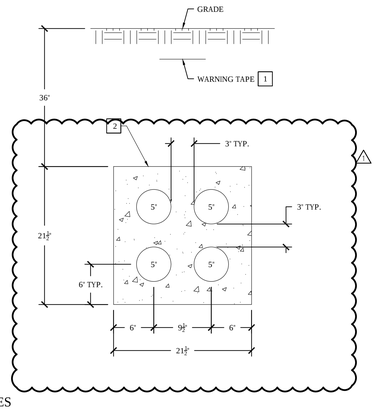


NOTES

1. THE TOP OF EACH MARKER SHALL BE MACHINED FLAT READY FOR STEEL STAMPING OR ENGRAVING, AND MAY HAVE A 45 DEGREE CHAMFER.
2. INSTALL A UTILITY MARKER AT THE FOLLOWING LOCATIONS: (A) CHANGE OF DIRECTION. (B) ALL BRANCH DUCTS. (C) EVERY 100' STRAIGHT RUN. (D) WHERE DUCTS ENTER A BUILDING.

6 CONDUIT DUCT BANK - STUB OUT MARKER

NO SCALE



GENERAL NOTES

1. REFER TO DETAIL 5 ON THIS SHEET FOR TYPICAL DUCTBANK COVER.

4 DUCTBANK SECTION

NO SCALE

P2S ENG
Long Beach | Los Angeles
San Diego | San Jose
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Consultant

Project Title

MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College
MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE # _____
AC _____ FLS _____
SSS _____ DATE _____
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER No. E16609 ELECTRICAL STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	No Scale

Sheet Title

Details

Sheet Number

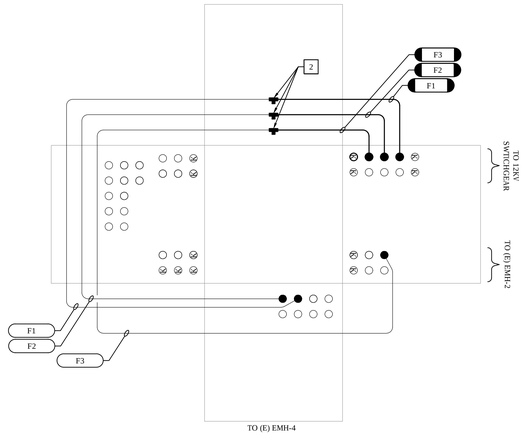
E601

P2S No. 9371

FILE PATH & NAME: R:\9371\ELECTRICAL\9371_E601.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:53:52 PM

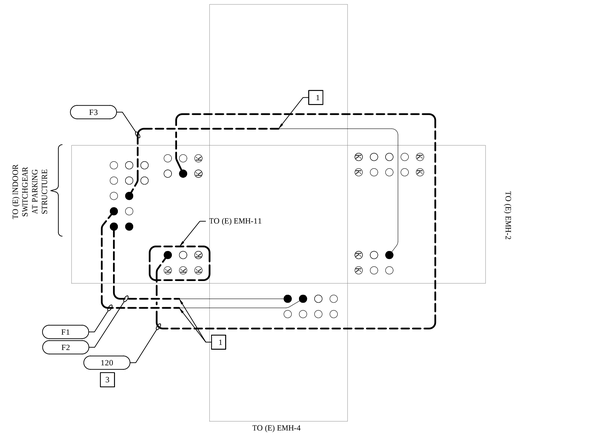
NOTES

1. CUT (E) FEEDER IN MANHOLE AS SHOWN. PROTECT EXISTING FEEDER FOR RECONNECTION TO NEW FEEDER.
2. INTERCEPT NEW FEEDER AND SPLICE IN PLACE WITH (E) FEEDER AS SHOWN.
3. DEMOLITION OF FEEDER '120' SHOWN FOR REFERENCE ONLY AND NOT PART OF PROJECT SCOPE. FEEDER TO DEMOLISHED AS PART OF A SEPARATE PROJECT.



2 (E) EMH-1 RENOVATION PLAN

NO SCALE



1 (E) EMH-1 DEMOLITION PLAN

NO SCALE

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Consultant

Project Title

MSJC Temecula
Electrical Upgrades
41888 Motor Car Parkway
Temecula, CA 92591

Mount San Jacinto College

MSJC MT. SAN JACINTO COLLEGE

1499 N. State Street
San Jacinto, CA 92583

DIVISION OF THE STATE ARCHITECT
APPL # 04-117696
FILE # _____
AC _____ FLS _____
SSS _____ DATE _____
IDENTIFICATION STAMP

REGISTERED PROFESSIONAL ENGINEER No. E16600 ELECTRICAL STATE OF CALIFORNIA

Revisions

Number	Description	Date
	100% Preliminary Design	07/02/2018
	50% Construction Docs	08/03/2018
	DSA Submittal	09/17/2018
	DSA Back Check Submittal	12/04/2018
1	Addendum 1	01/11/2019

Designed	M Fernando
Drawn	S Salazar
Checked	M Wasif
Approved	A Batra
Date	January 16, 2019
Submittal	Addendum 1
Scale	No Scale

Sheet Title

Manhole Profiles

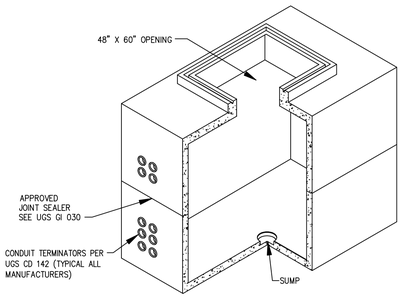
Sheet Number

E701

P2S No. 9371

FILE PATH & NAME: P:\9371\ELECTRICAL\9371_E701.DWG MOHAMMAD WASIF
PLOT: Wednesday, January 16, 2019 4:54:14 PM

PRECAST TUB–TYPE VAULTS
SEE UGS VA 410



CONSULT MANFACTURER'S INSTALLATION GUIDES FOR EXACT EXCAVATION DIMENSIONS FOR EACH STRUCTURE SIZE.

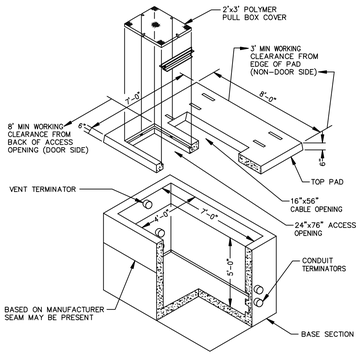
ITEM NUMBER	NOMINAL SIZE	TYPE	MANUFACTURER'S NUMBERS	
			JENSEN PRECAST	UTILITY VAULT CO.
V510	5' x 10'–6" x 7'	TUB STYLE	K5106–FV84–11	ED 5106–84VT
V510I	5' x 10'–6" x 7'	INTERCEPT	K5106–FV84–11–INT	ED 5106–84VT–INT
V612	6' x 12' x 7'	TUB STYLE	K612–FV84–11	ED 612–84VLT
V612I	6' x 12' x 7'	INTERCEPT	K612–FV84–11–INT	ED 612–84VLT–INT
V714	7' x 14' x 8'	TUB STYLE	K714–FV96–11	ED 714–96VLT
V714I	7' x 14' x 8'	INTERCEPT	K714–FV96–11–INT	ED 714–96VLT–INT
V718A	7' x 18' x 8' TYPE 1	TUB STYLE	K718–FV96–11	ED 718–96DV–TYPE 1
V718AI	7' x 18' x 8' TYPE 1	INTERCEPT	K718–FV96–11–INT	ED 718–96DV–INT–TYPE 1
V718B	7' x 18' x 8' TYPE 2	TUB STYLE	—	ED 718–96DV–TYPE 2
V718BI	7' x 18' x 8' TYPE 2	INTERCEPT	—	ED 718–96DV–INT–TYPE 2

NOTES:
1. CONDUIT TERMINATORS TO BE GENERALLY LOCATED AS SHOWN ON UGS CD 142. STANDARD CONDUIT ENTRANCE SHALL BE A FLATWALL DESIGN. SLIGHT VARIATIONS BY MANUFACTURERS MAY BE ALLOWABLE WITH COMPANY APPROVAL.
2. TUB–TYPE STRUCTURES SHALL BE FURNISHED WITH 1/2" THREADED BRONZE GROUNDING INSERTS, AS SHOWN ON UGS VA 411.
3. ALL VENT LOCATIONS TO BE FURNISHED WITH 10" PLASTIC VENT TERMINATORS.
4. INSIDE WALLS AND CEILING TO BE PAINTED WHITE.

REF.: UGS GI 030 GENERAL SPECIFICATION FOR PRECAST STRUCTURES
UGS GI 035 ALLOWABLE TOLERANCES FOR INSTALLED PRECAST STRUCTURES
UGS VA 410 PRECAST TUB–TYLE VAULTS
UGS VA 470 VAULT NECK, POURED OR PRECAST
UGS FC 660 VAULT COVER–PRECAST CONCRETE 48" X 60"
UGS AC 711 SUMP DRAIN AND DETAIL
UGS AC 725 INSERTS: TYPE, LOCATION, AND QUANTITY
UGS AC 742 LADDER
UGS AC 751 VENT LOCATIONS

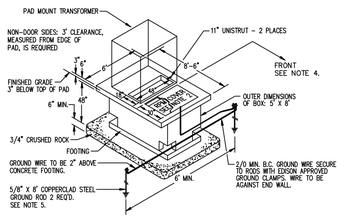
D60: Rev. 02/14/11

EQUIPMENT SLAB BOX
7'x 8' PAD W/4'x 7'x 5' BOX
SEE UGS SS 537



D34 Rev. 02/18/11

6'x8'–6" SLAB BOX
FOR 3ø PAD–MOUNTED TRANSFORMER
(FOOTING REQUIRED)
SEE UGS SS 530



NOTES:
1. PAD OVERHANG TO REST ON UNDISTURBED EARTH OR WELL–COMPACTED BACKFILL TO PREVENT FUTURE SUBSIDENCE.
2. THE SLAB 30" x 48" CLEAR OPENING SHALL BE COVERED WITH A 2'–6" x 4' RPM COVER AS SHOWN ON UGS FC 618. 6⅜" STAINLESS STEEL BOLTS WITH STAINLESS STEEL CAPTIVE WASHERS WILL BE SUPPLIED FOR COVER BOLT DOWN.
3. SLAB RPM COVER RECESS SHALL BE CONCRETE (NONMETAL FRAMED), AND PROVIDED WITH 6⅜" THREADED INSERTS, EACH WITH CLEAN OUT HOLES.
4. AN 8' MINIMUM CLEARANCE IS REQUIRED ON DOOR SIDE OF CABINET FOR OPERATION. REFER TO FIGURE SS 530 (SHEET 3) AND FIGURE SS 530–4 (SHEET 3) FOR WORKING CLEARANCES.
5. GROUND RODS, CLAMPS, AND WIRE WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. SEE UGS AC 703 FOR APPROVED GROUNDING MATERIALS. GROUND WIRE TO BE A MINIMUM OF 2/0 BARE COPPER.
6. MASTIC SEALANT IS REQUIRED AT JOINTS.
7. SEE UGS SS 530.2 (SHEET 2) FOR CONDUIT ENTRANCE GUIDELINES.
8. SEE UGS SS 500 FOR APPROVED MANUFACTURERS.

D45: Rev. 02/18/11

UNDERGROUND SERVICE ALERT
Dial 811
Call USA
For Underground Locating
2 Working Days Before You Dig

WARNING
THE EXCAVATOR MUST TAKE ALL STEPS NECESSARY TO AVOID CONTACT WITH UNDERGROUND FACILITIES WHICH MAY RESULT IN INJURY TO PERSONS OR DAMAGE TO FACILITIES IN THE AREA. THE INDICATED LOCATIONS OF EDISON UNDERGROUND FACILITIES, AS PROVIDED, ARE BELIEVED TO BE ACCURATE, HOWEVER, THE FINAL DETERMINATION OF EXACT LOCATIONS AND THE COST OF REPAIR TO DAMAGED FACILITIES IS THE RESPONSIBILITY OF THE EXCAVATOR.

NOTE:
ALL ELECTRICAL DUCTS AND STRUCTURES WILL CONFORM TO GENERAL ORDER #128 (RULES FOR CONSTRUCTION OF UNDERGROUND ELECTRICAL SUPPLY AND COMMUNICATION PRESCRIBED BY THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA, JANUARY 2006).

CONNECTING TO EXISTING SCE STRUCTURES

- Per SCE requirements, customers are not allowed to enter, intercept or tie–in to existing SCE facilities; e.g. structures, equipment, multi–conduit runs/banks, or conductors. These facilities may be energized and the work will only be performed by SCE. Contact the appropriate SCE inspector to schedule an appointment. Customers may connect to an existing conduit stub without a SCE inspector present.
- Multi–conduit runs/banks are runs of conduit in close proximity to each other and other SCE facilities. A conduit stub is a single empty conduit stub that is not in close proximity to other SCE owned facilities. Refer to the work order map for details.
- Per CPUC/SCE's Rule 15 B.1.A and Rule 16 D.1.A., the customer will provide all necessary excavations (with the exception of excavation under pads and primary splice boxes), material (including conduit and structures) and encasement, to be utilized in the intercept/tie–in process.
- The customer must adhere to all applicable Cal–OSHA, local, city, state and federal regulations, (including, but not limited to, all necessary shoring and traffic control in place to perform the intercept/tie–in work by SCE's underground civil contractor(s)).
- Intercept/tie–in work must be coordinated with SCE's civil contractors through the Division Inspector/P–Spec to limit exposure of excavation(s). Customer is responsible for securing excavation(s).

DOB: 11/13/18

TIE–IN MADE THROUGH SIDE WALL OF STRUCTURE
(Vault, Manhole, PME, SOE/CST, BURD, Slab Box, Pull Box, PMH)
The customer is responsible to trench to the structure entrance point and bring the conduit to within 5' of the structure being entered. The customer is to provide slip coupling and conduit.

CONSTRUCTION NOTES:

Unless otherwise specified on the working drawing which forms a part of the specification, the Contractor/Developer shall furnish the following items at no cost to the Edison Company.

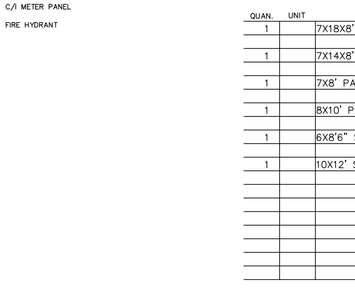
Southern California Edison Company has attempted to correctly show all existing utilities and substructures in the vicinity of the work, but does not guarantee there are no other substructures in the area. Failure of SCE to show all substructures in their correct location will not be a basis for a claim for extra work, and the contractor shall be responsible for all damages to substructures whether shown or not.

1. FOR GENERAL SPECIFICATIONS SEE UGS GI 001.
2. CONDUIT:
   a. Minimum cover in street or parkway is 30" below gutter grade, unless noted otherwise.
   b. Minimum cover on private property is 30" below finished grade, unless noted otherwise.
   c. Contractor is to furnish and install approved conduit to Edison specifications per UGS CD 100.1, 110 AND 120.
   d. For the type of conduit for this job, See UGS CD 110.1.
   e. Install all risers per UGS CD 160, 161, 162 and 170.
   f. Cap all mainline conduits per UGS CD 148 and service conduits per UGS CD 150.
   g. Install blank conduit plugs in all conduits terminating into Vaults, Manhole's, PMH's, SOE's & all cap locations, per UGS CD 180.1 & UGS CD 180.2
   h. Install pull rope in all conduit runs. Pull rope to be at least 3/8" polypropylene rope, braided or twisted. For specifications, approved makes, and suppliers, see UGS GI 040.
   i. All conduit must be mandrelled with the approved mandrel UGS CD 197.
3. CONDUIT RADIUS REQUIREMENTS:
   a: The minimum radius for bends are:
      36" for conduits 3" in diameter or smaller
      48" for conduits 4" and 5" in diameter
      60" for 6" diameter conduit
   b: The minimum radius for all sweeps of all mainline conduits is 12'–6" (unless noted otherwise).
4. EXCAVATION AND BACKFILL:
   a. Work area shall be cleared and rough graded to within four inches of final grade prior to installation of Edison conduit or structures.
   b. All excavations shall be in accordance with the California State Construction Safety Orders (when applicable), Edison specifications, and all governing local ordinances.
   c. Each trench to be a uniform depth below final grade prior to installation of Edison conduit or structures.
   d. Backfill shall be provided by the Contractor for all excavations and shall include crushed rock, concrete, and/or imported backfill, when required.
   e. Backfill with a MINIMUM of one sack per yard sand cement slurry around and over vaults and manholes per UGS GI 030, section 6.4 and around PMH's within one foot of finished grade, per UGS SS 590.1.
   f. Backfill, per Edison specifications, shall immediately follow conduit or substructure installation. At no time shall conduit be left exposed over 24 hours.
   g. No rocks are allowed within 12 inches of direct–buried cables or any conduit without concrete encasement. Native backfill capable of passing through a one–half inch mesh screen shall be considered to be "rock free". If existing backfill does not pass through a 1/2" screen, place imported sand 3" below and 12" above Edison cables. After this point, no rocks larger than 12" diameter are permitted.
   h. All backfill shall be compacted to meet or exceed local ordinances or other requirements. It shall be placed in a manner that will not damage the conduit or substructure or allow future subsidence of the trench or structures.
5. PAVING:
   Repaving, where required, shall be placed in such a manner that interference with traffic, including pedestrian traffic, will be kept to a minimum. The Contractor shall establish a program of repaving acceptable to the Municipality, County, or other authority having jurisdiction and which is acceptable to Edison.
6. STRUCTURES:
   a. All substructures shall be constructed or installed to Edison specifications.
   b. Install protective barriers per UGS MS 830 when required in areas exposed to traffic, per Edison Inspector.
   c. All conduit lines and concrete floored substructures shall be water tight.
   d. All grounding materials shall be furnished and installed by the Contractor.
7. RETAINING WALLS:
   When required, retaining walls shall be provided by the Developer. Walls are required wherever grade rises more than 18 inches above the structure or 24" above the pad surface at a distance of 5 feet from the same, or in areas subject to erosion. Design and installation must comply with local building ordinances. Refer to Edison Inspector for typical space requirements.
8. PERMITS:
   All permits necessary for excavation shall be provided by the Contractor/Developer.
9. ACCESS:
   Heavy truck access shall be maintained to equipment locations. Structures must be clear of all appurtenances that would obstruct the loading or unloading of equipment.
10. SERVICES:
    a. Meters and services shall comply with Edison Electrical Services Requirements.
    b. Wiring must be in accordance with applicable local ordinances and approved by local Inspection Authorities.
11. LOCATION:
    a. The location of excavations and structures for Edison shall be as shown on the working drawing. No deviation from the planned locations will be permitted unless approved by the Edison Inspector. See UGS GI 001, section 2.2.
    b. Actual location of obstructions, storm drains, and/or other foreign utilities to be the responsibility of the Contractor. See UGS GI 001, section 2.3.
12. Contractor is to verify location and widths of all sidewalks and driveways prior to street light installation. See UGS CD 175.1, UGS CD 175.2 and UGS CD 175.3.
13. SURVEY:
    Surveying of street improvements, property corners, lot lines, finished grade, etc., necessary for the installation of underground facilities must be completed and markers or stakes placed prior to the start of the installation. In addition, Developer shall maintain the markers during the installation and inspection by Edison. Grade and property line stakes must show any offset measurements.
14. COORDINATION AND SUPERVISION:
    The Developer shall provide supervision over and coordination among the various contractors working within the development in order to prevent damage to Edison facilities. He is responsible for the cost of repairs, replacement, relocation, or other corrections to Edison facilities made necessary by his failure to provide supervision or to otherwise comply with these specifications.
15. TELEPHONE AND OTHER UTILITY REQUIREMENTS:
    The drawing prepared for this job may also cover the facilities to be installed for the telephone company and/or other utility. Any questions concerning details of their installation should be referred to the company concerned.
16. OWNERSHIP:
    Developer is to deed to the Edison Company all structures shown hereon except those shown as customer owned.
17. WARRANTY:
    Applicants expressly represent and warrant that all work performed and all material used in meeting Applicants' obligations herein are free from defects in workmanship and are in conformity with Southern California Edison Company's requirements. This warranty shall commence upon receipt by Applicants of Company's final acceptance and shall expire one year from that date. Applicants agree to promptly correct to the Company's satisfaction and that of any governmental agency having jurisdiction and at Applicant's expense any breach of this warranty which may become apparent through inspection or operation of underground electric system by Company during this warranty period.
18. INSPECTION:
    Inspection is required during the construction period. A 48 hour advance notice of intent to start construction is required from the contractor to the Southern California Edison Company. Standards of Edison construction requirements are available upon request.

Duct and Structure Inspector: JASON GRAHAM Phone: 909–784–8756
Cabling Construction Coordinator: SEE PLANNER Phone:

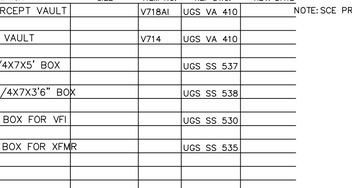
D05: Rev. 07/21/16

EQUIPMENT SLAB BOX
8'x 10'x 8" PAD W/4'x 7'x 3'–6" BOX
SEE UGS SS 538



D109: Rev. 2/23/10

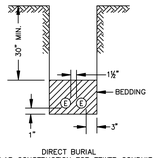
10'x12' PRECAST SLAB–BOX
FOR 3ø PAD–MOUNTED TRANSFORMERS
UP TO 3,750 KVA
SEE UGS SS 535



NOTES:
1. CONDUIT TERMINATORS TO BE LOCATED AS SHOWN ON UGS SS 535–2 (SHEET 2) TO UGS 535–5 (SHEET 5). STANDARD CONDUIT ENTRANCE SHALL BE A FLATWALL DESIGN. SLIGHT VARIATIONS BY MANUFACTURERS MAY BE ALLOWED WITH COMPANY APPROVAL.
2. WHEN CABLE TRENCH OPENINGS ARE REQUIRED IN A SLAB BOX, THEY CAN BE SPECIAL ORDERED FROM THE CONCRETE PRECASTER.
3. FOR SLAB BOX STRUCTURAL DESIGN CRITERIA, SEE UGS SS 535–2 (SHEET 2) TO UGS 535–5 (SHEET 5).
4. FOR LIST OF MATERIAL REQUIREMENTS AND NOTES, SEE TABLE UGS SS 535–1 (SHEET 6).
5. CONSULT MANUFACTURERS' INSTALLATION GUIDES FOR EXCAVATION DIMENSIONS.
6. AN EIGHT–FOOT MINIMUM CLEARANCE IS REQUIRED ON DOOR SIDE OF TRANSFORMER FOR OPERATION.
7. GROUND RODS, CLAMPS, AND WIRE WILL BE FURNISHED BY CONTRACTOR. SEE UGS AC 703 FOR APPROVED GROUNDING MATERIALS. GROUND WIRE TO BE A MINIMUM OF 2/0 BARE COPPER. GROUND WIRE TO BE PLACED THROUGH CAPPED ONE–INCH PVC CONDUIT AT EITHER END OF SLAB BOX. A MINIMUM THREE–FOOT LENGTH OF GROUND WIRE SHALL BE PLACED IN SLAB BOX.
8. MASTIC SEALANT IS REQUIRED AT JOINTS.
9. TOP SURFACE OF SLAB BOX SHALL BE SET THREE INCHES ABOVE FINISHED GRADE.
10. SEE UGS SS 500 FOR APPROVED MANUFACTURERS.

D56 REV. 02/14/11

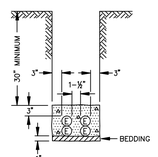
TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120



DIRECT BURIAL
SIMILAR CONSTRUCTION FOR FEWER CONDUIT
2 CONDUITS MAX.

D81: Rev. 09/23/09

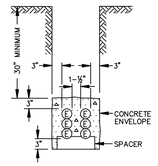
TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120



SEMI–ENCASEMENT
3 OR 4 CONDUITS

D73: Rev. 09/23/09

TYPICAL CONDUIT BANK SECTION
SEE UGS CD 120



FULL ENCASEMENT
MORE THAN 4 CONDUITS
(BASE SPACER REQUIRED)

D72: Rev. 09/23/09

CONDUIT RADIUS REQUIREMENTS:

A: The minimum radius for bends are:
36" for conduits 3" in diameter or smaller
48" for conduits 4" and 5" in diameter
60" for 6" diameter conduit

B: The minimum radius for sweeps are:
36" for conduits 3" in diameter or smaller
12'–6" for conduits 4" in diameter and larger,
unless otherwise noted.

LEGEND OF CONDUIT SYMBOLS
(CONVENTIONAL U. G.)

EDISON
NO. CONDUIT REQ'D. → SIZE OF CONDUIT
RUN NO. → LENGTH OF CONDUIT RUN

TRENCH
TYPE OF FACILITY (CIC–DB, ETC.) →
RUN NO. → LENGTH OF TRENCH

STREET LIGHT
NO. CONDUIT REQ'D. → SIZE OF CONDUIT
RUN NO. → LENGTH OF CONDUIT RUN

STREET LIGHT TRENCH
TYPE OF FACILITY →
RUN NO. → LENGTH OF ADDITIONAL TRENCH REQ'D.

EDISON
NO. CONDUIT REQ'D. → SIZE OF CONDUIT
REFERENCE RUN NO. → MEMO → DENOTES CONDUIT RUN CONTINUATION FOR CONSTRUCTION INFORMATION

STREET LIGHT
NO. CONDUIT REQ'D. → SIZE OF CONDUIT
REFERENCE RUN NO. → MEMO → DENOTES CONDUIT RUN CONTINUATION FOR CONSTRUCTION INFORMATION

ANY OF THE ABOVE SYMBOLS FOLLOWED BY A →

DENOTES THE FOLLOWING:

DB CONDUIT WITHOUT ENCASEMENT IS ACCEPTABLE FOR PORTIONS OF TRENCH WITH ONLY ONE OR TWO CONDUITS

SEMI–ENCASEMENT IS REQUIRED FOR PORTIONS OF TRENCH WITH ONLY THREE OR FOUR CONDUITS

FULL ENCASEMENT IS REQUIRED FOR MORE THAN FOUR CONDUITS

D18: Rev. 5/08/2006

LEGEND OF DRAFTING SYMBOLS

TRENCH
- EDISON CONDUIT (DIST. & SL)
- CUST. OWNED CONDUIT
- RESIDENTIAL SERVICE CABLE
- E — EXISTING CONDUIT

STRUCTURES
- VAULT
- MANHOLE
- PME 3–5
- PME 6–12
- PULL BOX
- HANDHOLE
- SOE
- PAD
- 4'x4' BURD SWITCH ENCLOSURE
- 36" BURD SWITCH ENCLOSURE
- BURD TRANSFORMER ENCLOSURE
- STREET LIGHT ELECTROLIER
- C/I METER PANEL
- FIRE HYDRANT

CONCRETE PRODUCTS

Precast concrete item complete with neck. Cover and inserts may be obtained from any of the following listed and approved manufactureres:

JENSEN PRECAST
14221 San Bernardino Ave., Fontana, Calif. 92335
Phone: (909) 350–4111
(800) 257–6100

OLDCASTLE PRECAST
10650 Hemlock Ave., Fontana, Calif. 92337
Phone: (909) 428–3700
(800) 626–3860

FOR HANDHOLE AND PULLBOX MANUFACTURERS, SEE UGS HP 200.

D41: Rev. 01/21/09

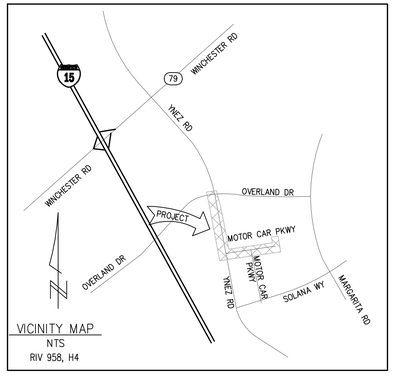
PRELIM ON–SITE LIST OF MATERIALS [EDISON CO.]

NOTES:
1. Footage quantites are approximate.
2. Where reference is to an item not detailed, see separate description list.
3.. This list provides a summary of major items.

SEE UGS SECTION INDEX
FOR REFERENCE DRAWINGS

QUAN.	UNIT	DESCRIPTION	SIZE	ITEM NO.	REF DWG.	REV. DATE
1		7X18X8' INTERCEPT VAULT		V718AI	UGS VA 410	NOTE: SCE PROVIDED
1		7X14X8' TUB VAULT		V714	UGS VA 410	
1		7X8' PAD W/4X7X5' BOX			UGS SS 537	
1		8X10' PAD W/4X7X3'6" BOX			UGS SS 538	
1		6X8'6" SLAB BOX FOR VFI			UGS SS 530	
1		10X12' SLAB BOX FOR XFMR			UGS SS 535	

D04: Rev. 07/17/07



VICINITY MAP
NTS
RIV 958, H4

CONTRACTOR _____
COST PLUS ☐ FIRM ☐ DEV. ☐
INCLUDES PERM. PAVING YES ☐ NO ☐
PERMIT NUMBER _____
DATE STARTED _____
DATE COMPLETED _____
INSPECTOR _____
PRECASTER _____ CONDUIT _____

PROJECT REQUIREMENTS (Y/N)

EDISON EASEMENT REQUIRED	Y
PWRD 88 REQUIRED	Y
UG CIVIL ONLY WORK ORDER	Y
PERMIT REQUIRED	Y
PERMIT TYPE: ENCROACHMENT TEMECULA	
OUTAGE REQUIRED	Y
OUTAGE DATE: _____ TIME: _____	
TRAFFIC CONTROL REQUIRED	Y
PED. TRAFFIC CONTROL REQ'D	Y
CONVEYANCE LETTER REQ'D	N
ENVIRONMENTAL CLEARANCE REQ'D	Y
CSD 140 (TLM) REQ'D	N

D124: Rev. 02/08/18

THIS PLAN APPROVED AS TO LOCATION AND TYPE OF ELECTRIC SUBSTRUCTURES

Developer: MSJC
Attn: LYNN PURPER–DEAN OF FACIL
Address: 1499 N.STATE ST
SAN JACINTO, CA 92583
Telephone: 951–487–3024
FAX: _____

Dwg./Rev.	Developer's Signature	Date
Original	LYNN PURPER	1/2/19
Rev.		
Rev.		
Rev.		

CHANGES IN THESE PLANS WILL REQUIRE AN ADDITIONAL 3 TO 4 WEEKS AND CUSTOMER WILL BE CHARGED IN ADVANCE FOR REQUESTED CHANGES.

D26: Rev. 02/12/08

INVENTORY MAP #'S: 492–1722–1, 492–1723–5, 493–1723–5
THOMAS GUIDE: RIV CO 958–G4,H4,H5

FINAL DESIGN
APPROVED FOR CONSTRUCTION

SURVEYED
DATE: 6/18/18

SCALE: 1 IN = 40 FT

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

DISTRICT: 88 – WILDOMAR	PROJ. MGR. PHONE		PLANNER BRANDON TAHL PHONE 714–474–6063		DESIGNER B.TAHL
PROJECT NO.: 1580522	SERVICE REQUEST: 2490314	MSR NO.	PRODUCT–1: 1387380–LINE EXTENSION		ASSOC DESIGN: 1024509
CIRCUIT / VOLTAGE: PONY 33KV		THOMAS GUIDE: 958 H4	PRODUCT–2: N/A		ASSOC DESIGN: N/A
SUB / PG NO.: MORAGA		CIRCUIT CODE: B3	PRODUCT–3: N/A		ASSOC DESIGN: N/A
INVENTORY MAP: 492–1722–1		J.P.A. NO.: N/A	PROPOSED CONSTRUCTION (LOCATION): MSJC TEMECULA CAMPUS 41888 MOTOR CAR PKWY TEMECULA, CA 92591		
F	1/10/19	JC	JC	TAHL	19554
PRE	12/24/18		JC	TAHL	19554
TYPE	DATE	APPROVED BY	CHECKED BY	DRAWN BY	PAX #

Southern California Edison Company

SHEET 1 OF 3

DESIGN\DRWG NO. 1024509_0.01

9 **EXISTING** **4246151E**

85' Class 2

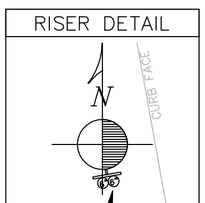
IN: 1– FAULT TAMER FH'S W/12' COMPOSITE ARM
IN: 1– 25KVA–12KV 120/240 1P
.
SN: _____

1 **EXISTING** **4246152E**

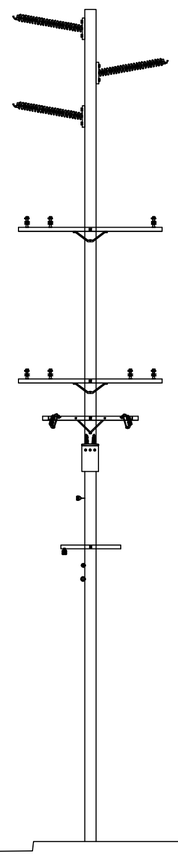
80' Class C1

RM: 1– 12' SINGLE ARM (PONY 33KV)–51'2"
RM: 3– 33KV INSULATORS
RM: 1– 12' SINGLE ARM (HUNTER 12KV)–38'6"
RM: 4– 12KV INSULATORS
RM: 1– 8' SINGLE ARM W/ 2 FAULT TAMER FH'S
RM: 1– 10KVA–12KV 120/240 1P
.
SN: _____
IN: 1– 12' COMPOSITE SINGLE ARM (PONY 33KV)–48'
IN: 3– 33KV POLY CLAMPTOP INSULATORS
IN: 1– 12' COMPOSITE DOUBLE ARM (HUNTER 12KV)–34'6" TO PULL UP BELLY IN 12KV WHEN LOWERING
IN: 4– 12KV POLY DE'S
IN: 4– 12KV POLY CLAMPTOP INSULATORS
IN: 1– 6" RISER W/ UNISTRUT
NOTE: USE 6" FIBERGLASS RISER

RISER DETAIL

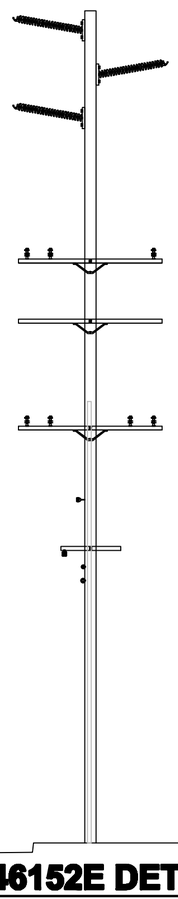


RISER UP: 44'
RUN: 176'
TOTAL: 220'



—69' – 653A–115kV
—65' – 653A–115kV
—61' – 653A–115KV
—51'2" – 336A–33kV
—38'6" – 336A–12kV
—35'4" – FUSE ARM
—33' – 10kVA XFMR 1Ø
—28'6" – 120/240V
—24'6" – ECS GUARD ARM
—23' – .75"CATV FIBER
—22' – 1" COMM

4246152E DETAIL
EXISTING
LOOKING SOUTH



—69' – 653A–115kV
—65' – 653A–115kV
—61' – 653A–115KV
NEW FIBERGLASS 33 ARM TO MAINTAIN TOH 302 CLEARANCES
—48' – 336A–33kV
—43'6" – 33 POTHEAD ARM
—7' – SPACE FOR 33 CABLE
—36'6" – TOP OF 33 RISER
—34'6" – 336A–12kV NEW FIBERGLASS 12 ARM
—28'6" – 120/240V
—24'6" – ECS GUARD ARM
—23' – .75"CATV FIBER
—22' – 1" COMM

4246152E DETAIL
PROPOSED
LOOKING SOUTH

THIS PLAN APPROVED AS TO LOCATION AND TYPE OF ELECTRIC SUBSTRUCTURES

Developer: MSJC
Attn: LYNN PURPER–DEAN OF FACIL
Address: 1499 N.STATE ST
SAN JACINTO, CA 92583
Telephone: 951–487–3024
FAX:

Dwg./Rev.	Developer's Signature	Date
Original	LYNN PURPER	1/2/19
Rev.		
Rev.		
Rev.		

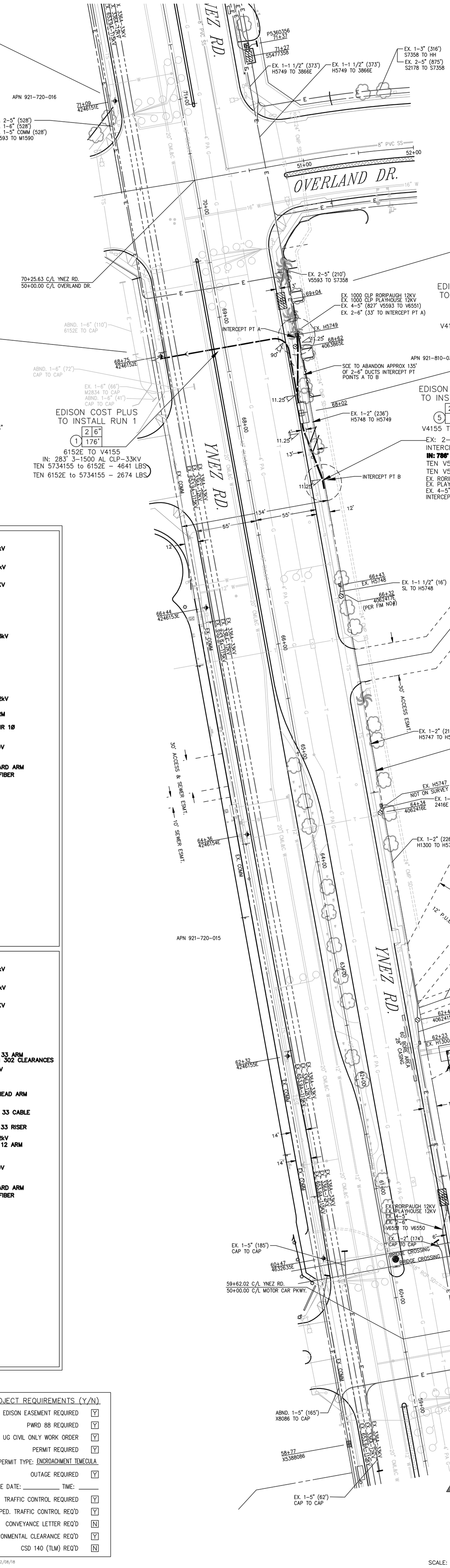
CHANGES IN THESE PLANS WILL REQUIRE AN ADDITIONAL 3 TO 4 WEEKS AND CUSTOMER WILL BE CHARGED IN ADVANCE FOR REQUESTED CHANGES.

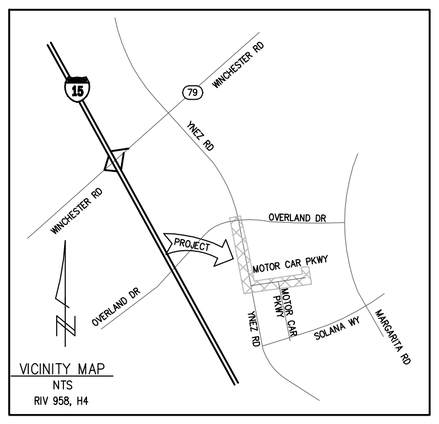
D26: Rev. 02/12/08

PROJECT REQUIREMENTS (Y/N)

EDISON EASEMENT REQUIRED	Y
PWRD 88 REQUIRED	Y
UG CIVIL ONLY WORK ORDER	Y
PERMIT REQUIRED	Y
PERMIT TYPE: ENCROACHMENT TEMECULA	
OUTAGE REQUIRED	Y
OUTAGE DATE: _____ TIME: _____	
TRAFFIC CONTROL REQUIRED	Y
PED. TRAFFIC CONTROL REQ'D	Y
CONVEYANCE LETTER REQ'D	N
ENVIRONMENTAL CLEARANCE REQ'D	Y
CSD 140 (TLM) REQ'D	N

D124: Rev. 02/08/18





VICINITY MAP
NTS
RIV 958, H4

SURVEYED
DATE: 6/18/18

FINAL DESIGN
APPROVED FOR CONSTRUCTION

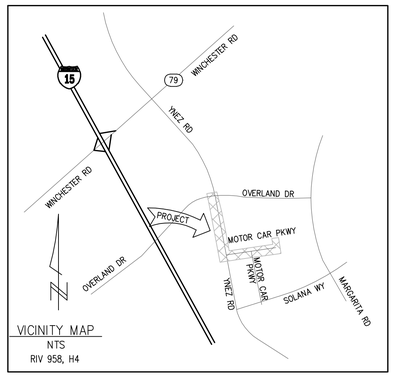
DISTRICT: 88 – WILDOMAR	PROJ. MGR. PHONE		PLANNER: BRANDON TAHL PHONE: 714–474–6063		DESIGNER: B.TAHL
PROJECT NO.: 1580522	SERVICE REQUEST: 2490314	MSR NO.	PRODUCT–1: 1387380–LINE EXTENSION		ASSOC DESGN: 1024509
CIRCUIT / VOLTAGE: PONY 33KV		THOMAS GUIDE: 958 H4	PRODUCT–2: N/A		ASSOC DESGN: N/A
SUB / PG NO.: MORAGA SUB		CIRCUIT CODE: B3	PRODUCT–3: N/A		ASSOC DESGN: N/A
INVENTORY MAP: 492–1722–1		J.P.A. NO.: N/A			

F	1/18/19	JC	JC	TAHL	19554
PRE	12/24/18		JC	TAHL	19554
TYPE	DATE	APPROVED BY	CHECKED BY	DRAWN BY	PAX #

Southern California Edison Company

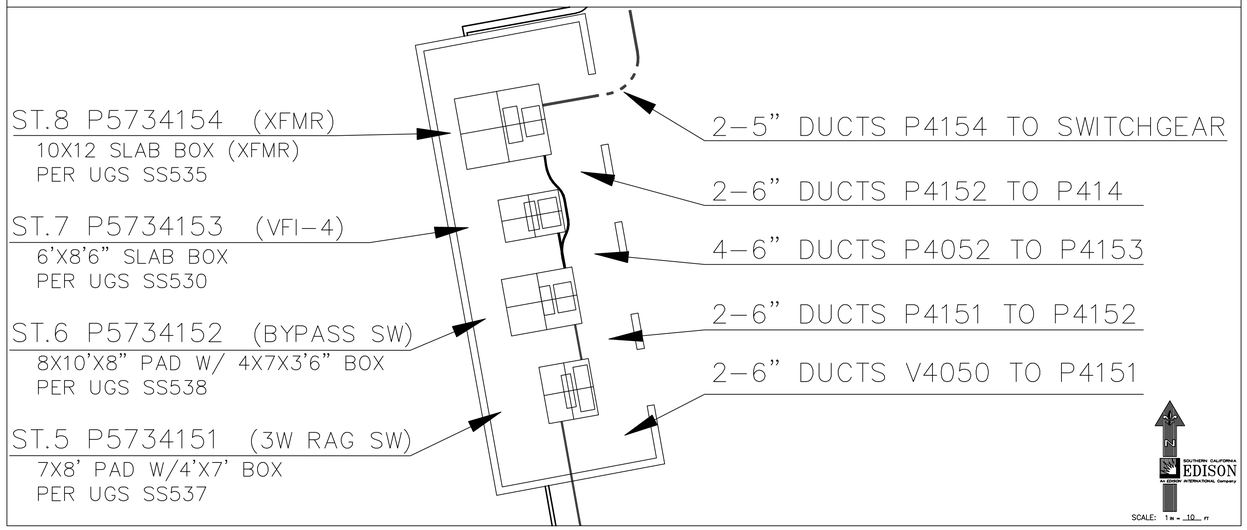
PROPOSED CONSTRUCTION (LOCATION)
MSJC TEMECULA CAMPUS
41888 MOTOR CAR PKWY
TEMECULA, CA 92591

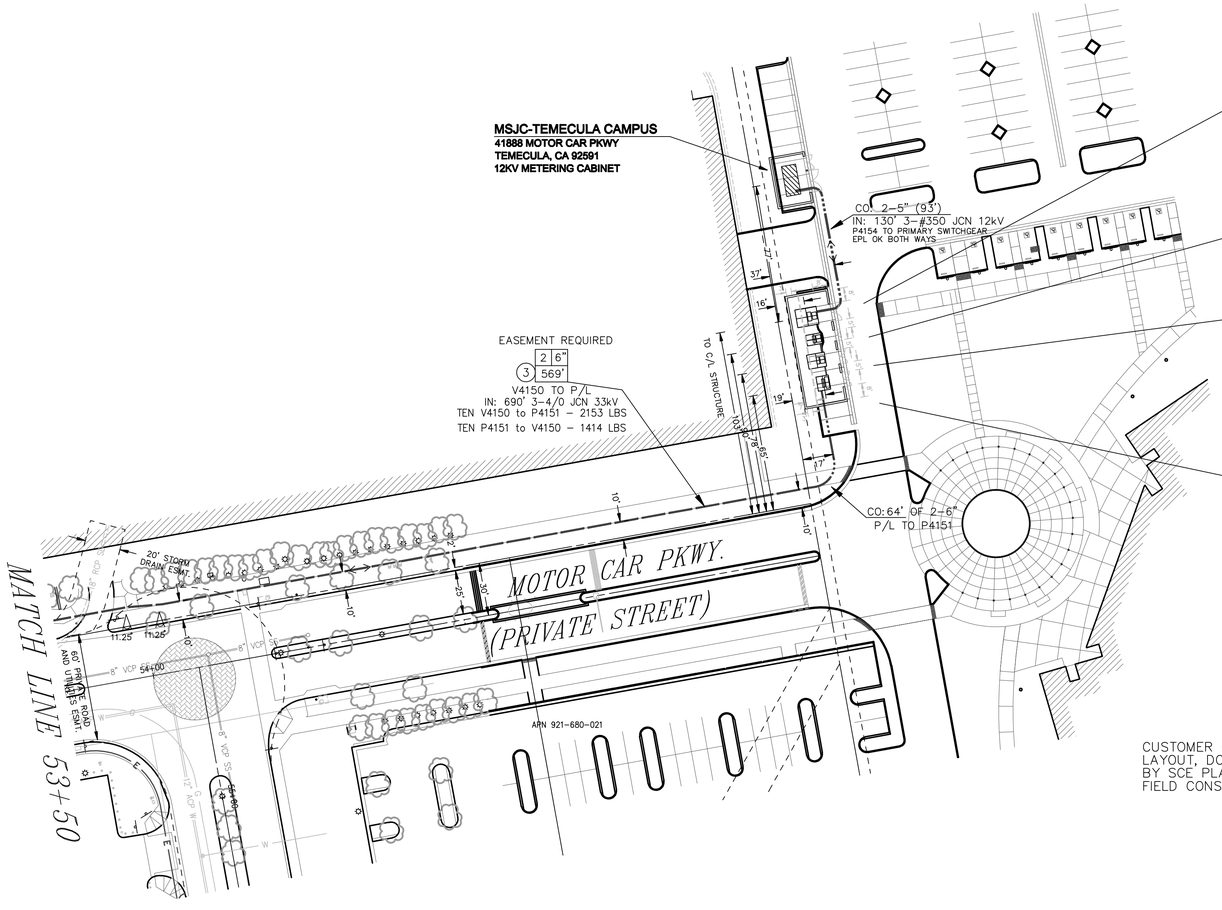
SHEET 2 OF 3
DESIGN\DRWG NO. 1024509_0.01



VICINITY MAP
NTS
RIV 958, H4

EDISON EQUIPMENT ENCLOSURE DETAIL





CO: P5734154 SLAB BOX — 8
10'x12' CONCRETE
IN: 1- 3750KVA-34KV 7200/12470Y 3P
SN:_____
IN: 130- 3-1/C 350 CLP JCN-12KV
P4154 TO 12KV METERING CABINET
IN: 3- MTR CT's WND INDOOR 100/5 15KV
IN: 2- MTR KWH 2.5A PT 100/1 12KV 3P 3W

CO: 2-6" (22')
P4152 TO P4154
IN: 60' 3-4/0 JCN 34.5kV
EPL OK BOTH WAYS

CO: P5734153 VFI-4 — 7
6'x8'6" SLAB BOX
IN: 1- PADMOUNTED VFI4-35KV 3P-GS8596
SN:_____

CO: 2-6" (5')
P4153 BACK TO P4152
IN: 25' 3-4/0 JCN 34.5kV
EPL OK BOTH WAYS

CO: P5734152 BYPASS SW — 6
8'x10'x8' PAD W/4X7X3'6" BOX
IN: 1- 33KV BYPASS SWITCH-GS8595
SN:_____
IN: 25- 3-1/C 4/0 AL CLP PJ-34.5KV
P4152 BYPASS TO P4153 VFI
IN: 25- 3-1/C 4/0 AL CLP PJ-34.5KV
P4153 VFI TO P4152 BYPASS
IN: 60- 3-1/C 4/0 AL CLP PJ-34.5KV
P4152 BYPASS TO P4154 XFMR

CO: 2-6" (5')
P4152 TO P4153
IN: 25' 3-4/0 JCN 34.5kV
EPL OK BOTH WAYS

CO: P5734151 RAG SW — 5
7X8' PAD W/ 4X7' PULLBOX UGS SS 537
IN: 1- 3 WAY PADMOUNTED RAG SW-33KV - GS8594
SN:_____
IN: 20- 3-1/C 4/0 AL CLP PJ-35KV
P4151 TO P4152

CO: 2-6" (5')
P4151 TO P4152
IN: 20' 3-4/0 JCN 34.5kV
EPL OK BOTH WAYS

RETAINING WALL REQUIRED AT REAR OF CUSTOMER EQUIPMENT ENCLOSURE

CUSTOMER OWNED EQUIPMENT AND METERING ENCLOSURES LAYOUT, DOORS, AND CLEARANCES SUBJECT TO FINAL APPROVAL BY SCE PLANNER, DIVISION INSPECTION, METER TECHNICIAN, AND FIELD CONSTRUCTION.

PROJECT REQUIREMENTS (Y/N)	
EDISON EASEMENT REQUIRED	[Y]
PWRD 88 REQUIRED	[Y]
UG CIVIL ONLY WORK ORDER	[Y]
PERMIT REQUIRED	[Y]
PERMIT TYPE: ENCROACHMENT TEMECULA	
OUTAGE REQUIRED	[Y]
OUTAGE DATE: _____ TIME: _____	
TRAFFIC CONTROL REQUIRED	[Y]
PED. TRAFFIC CONTROL REQ'D	[Y]
CONVEYANCE LETTER REQ'D	[N]
ENVIRONMENTAL CLEARANCE REQ'D	[Y]
CSD 140 (TLM) REQ'D	[N]

D124: Rev. 02/08/18

THIS PLAN APPROVED AS TO LOCATION AND TYPE OF ELECTRIC SUBSTRUCTURES

Developer: MSJC
Attn: LYNN PURPER-DEAN OF FACIL
Address: 1499 N.STATE ST
SAN JACINTO, CA 92583
Telephone: 951-487-3024
FAX: _____

Dwg./Rev.	Developer's Signature	Date
Original	LYNN PURPER	1/2/19
Rev.		
Rev.		
Rev.		

CHANGES IN THESE PLANS WILL REQUIRE AN ADDITIONAL 3 TO 4 WEEKS AND CUSTOMER WILL BE CHARGED IN ADVANCE FOR REQUESTED CHANGES.

D26: Rev. 02/12/08

SURVEYED
DATE: 6/18/18

FINAL DESIGN
APPROVED FOR CONSTRUCTION

SCALE: 1 IN = 40 FT

DISTRICT: 88 - WILDOMAR		PROJ. MGR. PHONE		PLANNER: BRANDON TAHL PHONE 714-474-6063	DESIGNER: B.TAHL
PROJECT NO.: 1580522	SERVICE REQUEST: 2490314	MSR NO.		PRODUCT-1: 1387380-LINE EXTENSION	ASSOC DESGN: 1024509
CIRCUIT / VOLTAGE: PONY 33KV		THOMAS GUIDE: 958 H4		PRODUCT-2: N/A	ASSOC DESGN: N/A
SUB / PG NO.: MORAGA		CIRCUIT CODE: B3		PRODUCT-3: N/A	ASSOC DESGN: N/A
INVENTORY MAP: 492-1722-1		J.P.A. NO.: N/A		PROPOSED CONSTRUCTION (LOCATION): MSJC TEMECULA CAMPUS 41888 MOTOR CAR PKWY TEMECULA, CA 92591	
F 1/18/19	JC	JC	TAHL	19554	
PRE 12/24/18		JC	TAHL	19554	
TYPE / DATE / APPROVED BY		CHECKED BY	DRAWN BY	PAX #	

Southern California Edison Company

SHEET: 3 OF 3

DESIGN\DRWG NO.: 1024509_0.01