June 5, 2019

PROJECT: **El Norte Parkway Improvement Project**

SUBJECT: **Request for Construction Bridge Support, Geotechnical and Construction Material and Testing Services**

Dear Consultant,

The City of Escondido is requesting proposals to provide construction bridge support, geotechnical observation, construction material testing and special inspection services for the El Norte Parkway Improvement Project in Escondido, CA. Construction Management and project administration will be performed by the City. The project will consist of construction of a new bridge, pedestrian signal, new landscaped/irrigated medians, removal and replacement of existing pavement, curbs, gutters, pedestrian ramps, sidewalks, driveways, and other improvements per the contract documents. Project plans and specifications will be made available to interested firms, upon written (or emailed) request. **Provide experience of firm listing at minimum three projects completed by consultant having similar project elements (3-pages max.), experience of assigned professional staff that will be assigned to the project, and providing their credentials and services rendered on projects completed with similar complexity (4-pages maximum), two pages providing a complete list of all sub-consultants, and the qualifications for each sub-consultant, and rate sheets for all assigned staff (2-pages max.) and sub-consultants (1 page max. per sub-consultant).** Consultant shall provide primary contact information for all referenced projects. Rate sheets shall include hourly wages and laboratory rates for all staffing and lab work required to complete the services identified below, and other items you deem appropriate to provide complete project services. The proposal shall be your best estimate of services required to provide material testing, special inspection, and bridge construction support for the proposed improvements. The proposal shall include a conclusion page where the submitter outlines why their firm and listed sub-consultants are the best candidate for these services, and a written statement outlining the steps their staff takes to notify clients of potential project concerns, and the steps they take to keep project costs within contract limits.

**Scope of services shall include:**

- Attend preconstruction meeting
- Material inspection and testing services shall be in accordance with industry standards, the City of Escondido’s Quality Assurance Plan, and Caltrans Construction Manual, Chapter 3, “Control of Materials”, and Chapter 6, “Sample Types and Frequencies.”
- Materials inspection and testing services shall include, but not be limited to the following:
  - Concrete plant inspection upon request
  - Concrete field sampling and laboratory testing
  - Compaction testing during earthwork
  - Trench backfill
· Subgrade preparation and compaction
· Base aggregate placement and compaction
· Asphalt concrete paving and compaction
· Reinforcing steel splice testing
· Laboratory maximum density testing of samples of soil, base aggregate, and asphalt concrete
· As-requested geotechnical consulting
· Geotechnical monitoring of pile driving
· Structural concrete and mortar sampling, testing, and special inspection
· Laboratory concrete compression testing
· Post-installed anchor and epoxy dowel special inspection
· Review of shop drawings and material submittals for conformance with contract documents, upon request
· Preparation and submittal of field reports summarizing the work performed by the contractor and the general results of the field testing and special inspections for each visit. The City shall be informed immediately (day of work) of failed testing, etc.
· Preparation of contract binder, three (3) copies.
· Construction Inspection/Construction Engineering for bridge only. Coordinate and schedule onsite inspections and construction engineering with the City’s Construction Management Team for items listed herein only, with all remaining items being inspected by City staff, unless otherwise noted or requested:
  · construction operations for contract compliance, and performing field engineering as noted.
  · Pile driving
  · Earthwork (structure excavation and backfill) for bridge, channel, pedestrian signal, and trailhead sign.
  · Form construction and placement
  · Reinforcing steel placement
  · Concrete delivery, placement, and curing
  · Precast plant inspection (not full time) and meetings
  · Girder and precast slab erection
  · Concrete barrier, precast median, sidewalk and railing placement
  · Channel lining replacement
  · Concrete finishing
  · Deck grinding and profiling
  · Determining construction grades including substructure, abutment, deck, and barrier railing
  · Check bidwell finishing machine profile before deck concrete placement
  · Post-installed anchor and epoxy dowel special inspection
  · Preparation and submittal of test summary report
  · Preparation and submittal of final special inspection report
  · Preparation of contract binder. Three copies of a contract binder containing all reports and lab results shall be provided to the City at the end of the project. The binder shall be separated by tabs for each area and contain a CD with PDF files of the reports and lab results.
• Project Management: Project Management shall involve the following items of work:
  · File setup and closeout
  · Weekly progress meeting attendance upon request
  · Coordination and scheduling of site inspections and material testing with the City’s assigned representative(s)
  · Preparation of bridge construction reports and photo log
  · Maintenance of bridge as-built documents through construction
  · Review of contractor maintained redline drawings for as-built plans for bridge
  · Review monthly structure invoiced quantities with City’s representative(s)
  · Assist City of Escondido with review change order proposals upon request

• Project Close-out: Project close-out shall involve the following items of work:
  · File closeout and final material certification
  · Perform final project walk-through and provide list of non-compliant items to City for inclusion on Final Punchlist
  · Prepare as-built record drawings for bridge only
  · Submit completed project binders.

Other requirements:

• Geotechnical consultant/sub-consultant shall review previously prepared geotechnical report and accept findings or offer terms of acceptance for City approval.
• Consultant shall submit monthly payment requests by the 15th day of the month following completed work. The Consultant shall submit certified payroll for the entire period being invoiced for with each payment request. Payment requests will not be reviewed or processed without them.
• Submitted invoices shall be current and up to date. Submitted invoices shall include current work being invoiced for (include the date of work, name of staff member completing work or laboratory work completed, description of work, duration of work completed or number of tests taken, extended values of work and total of all work for the invoicing period), previous total of completed work, and remaining balance of contract. The City must approval the payment request format before the Consultant can invoice for work.
• Work shall be scheduled and completed upon request by the City.
• At the end of each shift, field testing and inspection staff shall prepare and submit copies of all inspection reports and lab test results via Virtual Project Manager (VPM). VPM access will be provided by the City to the awarded Consultant at no charge.
• The Engineer/Inspector shall be present upon request by the City to provide a satisfactory level of monitoring the work. Per Caltrans standard procedures, only the following items of work require continuous inspection during operations:
  · Structural Concrete Placement
  · Pile Driving
  · Precast girder erection operations
• The consultant shall notify the City with each payment request whenever their contract expenditures have exceeded project work completion percentage to date.
El Norte Parkway Street Widening Project
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Notable items:

- Work shall be completed on a time and material, not to exceed basis.
- Prevailing wages shall be paid where applicable.
- Administrative time for the analysis of lab results and preparation of reports shall be included in the test price.
- Contractor shall agree to terms of standard consulting agreement (sample attached). Submitting a proposal shall indicate that the terms of the agreement are acceptable. Any clarifications or excluded items shall be agreed upon prior to submitting the requested information.
- Construction is anticipated to begin in July 2019 with an approximate 6-month schedule.

Proposals shall be less the 10 MB in size, and submitted electronically to msouttere@escondido.org by 5:00pm on Friday, June 25, 2019. The City has established a budget for these services in the amount of $80,000.

If you have any questions concerning the scope of the project, please send me an email.

Sincerely,

Matthew Souttere
Associate Engineer
City of Escondido
msouttere@escondido.org
City of Escondido
San Diego County, California

CONTRACT DOCUMENTS AND SPECIAL PROVISION SPECIFICATIONS

for:

El Norte Parkway Improvement Project

Questions Concerning This Project
Should be Directed to:
Matt Souttere - msouttere@escondido.org

Or

CITY OF ESCONDIDO
Attn: Matt Souttere, Project Manager
201 North Broadway, Escondido, California 92025

PROPOSALS WILL BE RECEIVED at the Office of the
City Clerk, City Hall, 201 North Broadway,
Escondido, California 92025
By 2:00 p.m. on the 23rd day of May, 2019.
CITY OF ESCONDIDO

NOTICE INVITING SEALED BIDS

EL NORTE PARKWAY IMPROVEMENT PROJECT

PUBLIC NOTICE IS HEREBY GIVEN:

That the City Clerk, on behalf and as authorized by the City of Escondido, will accept sealed bids for this project. A sealed bid must be clearly marked with the name of the project and time-stamped at the City Clerk’s Office, 201 N. Broadway, 2nd Floor, Escondido, CA 92025, by 2:00 p.m. on the 23rd day of May, 2019, to be considered timely. **Bidder assumes the risk that mailed bids will be promptly delivered to the City Clerk and time-stamped prior to the deadline.**

A mailed bid shall be double wrapped with an external shipping envelope that contains the separately sealed bid documents. The shipping envelope will be opened upon receipt. The shipping envelope of a mailed bid should be addressed as follows:

City Clerk
Attn: SEALED BID – El Norte Parkway Improvement Project
201 North Broadway
Escondido, CA 92025-2798

All sealed bid documents must be enclosed in a separate envelope and clearly marked, using Times New Roman size 18 font, as follows:

**SEALED BID**

El Norte Parkway Improvements Project

OPEN ON: May 23, 2019

The City reserves the right to reject any bid that does not follow the exact procedures provided in this Notice.
A. PROJECT SUMMARY:

1. DESCRIPTION OF WORK.

The work under this contract (“Work”) is necessary for and incidental to the execution and completion of all Work indicated in the Contract Documents for:

El Norte Parkway Improvements Project

Drawings and General Provisions of the Contract, including Supplemental General Conditions, Special Provisions and other Specification Sections, apply to this Section.

The Work under this contract includes the furnishing of labor, materials, tools and equipment, which is required for the completion of the project in accordance with the provisions of the Contract Documents.

2. WORK COVERED BY CONTRACT DOCUMENTS

The work consists generally of construction including: Construction of medians with curbs, colored stamp concrete, top soil, irrigation and landscaping. Construction of bridge improvements with predrilled and driven piles, abutments, "T" girders, reinforced concrete slab, concrete barriers, fences and gates. Asphalt digouts and overlays. Traffic signal modifications, new traffic signal for bike path crossing, striping, installation, maintenance, and removal of traffic control devices, compliance to all applicable storm water pollution prevention requirements and installation of Traffic Controls.

Lead Agency: City of Escondido.

The work will be constructed under a single prime contract.

3. WORK SEQUENCE

The work will be conducted per the schedule set forth by the contractor.

The CONTRACTOR shall coordinate the construction schedule and operations with the City.

B. PLANS AND SPECIFICATIONS:

All of the above Work is to be done under contract in accordance with those certain plans, specifications and drawings as authorized by the City Council of the City of Escondido.
C. **BONDS:**

1. The CONTRACTOR will be required to furnish with the contract a Faithful Performance Bond in the amount of one hundred percent (100%) of the aggregate amount of the bid and a Labor and Material Bond in the amount of one hundred percent (100%). The CONTRACTOR will also furnish certificates of insurance evidencing all insurance coverage required by the Specifications has been secured.

2. Bid Security must be submitted with the bid proposal. (See Section G of this notice)

D. **STATE OF CALIFORNIA LABOR CODE AND APPLICABLE LAWS**

The CONTRACTOR shall, in performance of the Work and improvement, conform to the State of California Labor Code and other laws applicable thereto.

1. **Prevailing Wages:**

NOTICE is hereby given that in accordance with the provisions of California Labor Code Sections 1770, 1773, 1773.1, 1773.6 and 1773.7, as approved by City of Escondido Resolution No. 77-30, the Director of the Department of Industrial Relations has determined the general prevailing rate of per diem wages in accordance with the standards set forth in Section 1773 for the locality in which the Work is to be performed. It shall be mandatory upon the CONTRACTOR to whom the Work is awarded and upon any subcontractor under the CONTRACTOR to pay not less than said specified rates to all workmen employed by them in the execution of the Work. Prevailing wage rates are available on the Internet at ([http://www.dir.ca.gov/DLSR/PWD](http://www.dir.ca.gov/DLSR/PWD)).

2. **Payroll Records:**

NOTICE is hereby given that pursuant to Section 1776 of the Labor Code, the prime CONTRACTOR is responsible for maintaining accurate payroll records of all employees, including all subcontractors, on said public Work. Certified copies of all payroll records shall be submitted to Field Engineering Office on a weekly basis via Virtual Project Manager (VPM).

3. **Apprentices:**

NOTICE is hereby given that pursuant to Section 1777.5 of the Labor Code, the prime CONTRACTOR is responsible for Code compliance for all apprentice-able occupations.

"Contractor shall review and take affirmative steps to comply with California Labor Code Section 1777.5 regarding employment of registered apprentices. The entire responsibility for compliance with
4. **License Requirement:**

   a. The Contractor shall possess a valid State of California Contractor’s License issued by the State Contractor’s License Board. The license shall be current, valid and in good standing at the time the contract is awarded to the Contractor and remain in effect throughout the duration of the project.

   The Contractor shall possess a “Class A” Contractor’s License for this project.

   b. All subcontractors employed on this project by the Contractor shall possess current and valid State of California Contractor’s License issued Contractor’s Licenses applicable for the work they are performing on the project. The licenses shall be in effect for the duration of the time they are employed on the project.

   c. The Contractor and all subcontractors employed on this project shall obtain City of Escondido Business Licenses prior to performing and through completion of any work associated with this project. A copy of the Contractor’s City of Escondido Business License shall be submitted to the Field Engineering Inspector at the project pre-construction meeting and a copy of each subcontractor’s City of Escondido Business License shall be submitted to the Field Engineering Inspector prior to the subcontractor starting work on the project.

E. **PRIME CONTRACTORS:**

The Prime Contractor awarded the contract to complete this project must demonstrate that fifty-one percent (51%) of the scheduled work will be completed using the Prime Contractor’s own employees. Scheduled work identified as Specialty Work may be excluded from this calculation. Specialty Work is defined as street lighting systems, traffic signal systems, landscaping, irrigation systems, sewer, water, pre-cast paving units, stamped concrete, masonry, iron or steel, and pavement markings. The Contractor may perform Specialty Work if he/she chooses. The subcontractors employed on the site at no time shall perform more than forty-nine percent (49%) of the scheduled work after the adjustments have been made for the Specialty Work. Specialty items have been designated in the bid schedule with an “(S)”.

F. **PAYMENT:**

Payments will be made in cash to the CONTRACTOR in accordance with the provisions of the Specifications and on itemized estimates, duly certified, and then verified by the
CITY, based on labor and materials incorporated into said Work during the preceding month by the CONTRACTOR.

G. **BID SECURITY:**

All proposals or bids shall be accompanied by a cashier's or certified check, payable to the order of the CITY of Escondido amounting to ten percent (10%) of the bid, or by a bond in said amount and payable to said CITY, signed by the bidder and a corporate surety, or by the bidder and two sureties who shall justify before any officer competent to administer oaths, in double said amount over and above all statutory exemptions. Said check shall be forfeited or said bond shall become payable if the bidder depositing the same does not, within fifteen (15) days after written notice, execute the contract.

H. **AWARD AND EXECUTION:**

Execution of the contract includes providing the CITY with all required bonds, evidence of insurance coverage, or any other documentation required by the contract.

The CONTRACTOR shall execute the contract within fifteen (15) days after it has been notified in writing of award of contract, shall commence construction immediately after a Notice to Proceed, and shall complete all the Work and improvements within **one hundred and twenty (120) working days.**

The City Council hereby reserves the right to reject any and all proposals, delete any site in which installation costs seem prohibitive, to waive any irregularity, and to award the contract to other than the lowest bidder. No bidder may withdraw its bid for a period of ninety (90) days after the bid opening.

I. **BIDS:**

Proposals shall be submitted on the forms prepared and furnished for that purpose and which may be obtained via the City’s website ONLY. Bidders may download the Project Documents from the City of Escondido website at “No Cost”. Bidders shall make sure to register as a bidder to receive any Addenda that may be published. Bids submitted by unregistered bidders will be considered nonresponsive. No paper copies will be available from the City. **BIDDERS SHALL PRINT AND FILL OUT THE REQUIRED BID DOCUMENTS TO BE SUBMITTED AS LISTED ON THE TABLE FOUND IN THE “INSTRUCTION TO BIDDERS” PARAGRAPH 31.** For further information or bidding instructions and requirements, please contact the Office of Director of Public Works, 201 North Broadway, Escondido, CA 92025 2798, phone (760) 839 4651 or email the project manager, **Matt Souttere** at **msouttere@escondido.org.**

J. **STIPULATED RATES AND MARK-UPS FOR EXTRA WORK:**

All bidders have an equal opportunity to review the stipulated rates and mark-ups for extra Work set forth in Article 11 of the Contract General Conditions. All bidders acknowledge that the CITY may make changes to the Work, or suspend the Work and no
matter how many changes, such changes or suspension are within the contemplation of the parties and will not be a basis for a compensable delay.

Date: City Clerk, Zackary Beck
City of Escondido, State of California
SECTION A-00100 - INSTRUCTIONS TO BIDDERS

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1. DEFINED TERMS.

1.1 Terms used in these Instructions to Bidders and the Notice Inviting Sealed Bids which are defined in the General Conditions have the meanings assigned to them in the General Conditions. The term "Bidder" means one who submits a Bid directly to the City, as distinct from a sub-bidder, who submits a price or quote to a Bidder.

1.2 Where "the City" is used herein, it shall be understood that the City of Escondido, San Diego County, California, is intended.

1.3 Where "the ENGINEER" is used herein, please reference the “Definitions” in the General Conditions, and, where utilized, the corresponding section in the supplementary General Conditions.

2. SECURING DOCUMENTS. The Project Plans and Specifications are available as a free download from the City of Escondido’s website:

“https://www.escondido.org/design-capital-improvement-projects.aspx”

“Related Links”

“List of Advertised Projects”

“El Norte Parkway Improvement Project”

Make sure that you register as a bidder on the website to ensure that you receive any addenda or updates.

3. INTERPRETATIONS AND ADDENDA.

3.1 All questions about the meaning or intent of the Project Documents are to be directed to the City. If any bidder should find discrepancies in, or omissions from the plans, specifications or other proposed contract documents or if bidder should be in doubt as to the true meaning of any part thereof, bidder shall at once make a written request to the City via one of the following: by e-mail, msouttere@escondido.org; or by FAX, (760) 839-4597, for correction, clarification, or interpretation of the point or points in question. Questions submitted via the City’s bidding system, “ebidboard”, will not be answered. Additions, deletions, or revisions to the Project Documents considered necessary by the City in response to such questions will be issued by Addenda emailed or faxed to all parties recorded by the City as having received the Project Documents. The City will do its best to answer submitted questions that are not clearly defined in available project documents, as so deemed by the City, and submitted before 5:00 p.m. on the Friday before the bid, however, all questions may not be answered. Only answers to such questions issued by
formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

3.2 Addenda may also be issued to make additions, deletions, or revisions to the Contract Documents. The effect of all addenda to the Project Documents shall be considered in the bid and said addenda shall be made a part of the Project Documents and shall be returned with them. Before submitting a bid, bidders shall inform themselves as to whether or not any addenda have been issued, and failure to cover any such addenda issued may render a bid informal and result in its rejection. To be considered responsive, bids must acknowledge all issued addenda.

3.3 Bidders shall make no special interpretation or inference of intent from differing formats in the Technical Specifications.

4. BIDDER’S EXAMINATION OF PROJECT DOCUMENTS AND SITE.

4.1 Before submitting a proposal, bidders shall examine the drawings, read the specifications, the form of contract, and other Project Documents. They shall visit the site of the proposed Work, examine the building, or buildings, streets, if any, and any Work that may have been done thereon. They shall fully inform themselves of all conditions, in, at, and about the site, the building or buildings, streets, if any, and any Work that may have been done thereon. Bidders will be charged with knowledge of all facts which can be observed from a thorough pre-bid site inspection, including access to/from the site, storage of materials, opportunities, and physical characteristics.

Pursuant to Public Contract Code Section 1104:

A. Bidders shall not be required to assume responsibility for the completeness and accuracy of architectural or engineering drawings and specifications;

B. However, bidders shall be required to review architectural or engineering drawings and specifications prior to submission of their bids and to report any errors and omissions to the City;

C. The review shall be confined to the bidder’s capacity as a bidder and not as a licensed design professional;

D. To carefully examine the character, quality and quantities indicated in the Work;

E. To carefully examine the materials to be furnished;

F. To visit the site to become familiar with local conditions that may affect cost, progress, or performance, of the Work;
G. To consider federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

H. To study and carefully correlate the Bidder's observations with the Project Documents, and again, to report in writing any disparities.

4.2 Reference is made to the Supplementary General Conditions for identification of:

A. Those reports of explorations and tests of subsurface conditions at the site which have been utilized by the ENGINEER in the preparation of the Project Documents.

B. Those drawings of physical conditions in or relating to existing surface and subsurface conditions (except Underground Utilities) which are at or contiguous to the site and have been utilized by the ENGINEER in the preparation of the Project Documents.

C. Those environmental reports or drawings relating to known Asbestos, Hazardous Waste, PCBs, Petroleum, and/or Radioactive Materials identified at the site which have been utilized by the ENGINEER in the preparation of the Project Documents.

4.3 The plans and other Project Documents show conditions as they are believed to exist, but it is not inferred that all the conditions shown do actually exist, nor shall the City, their officers, employees or agents be liable for any costs sustained by the CONTRACTOR as a result of any variance between conditions shown on the contract documents, and actual conditions revealed during examination or progress of the Work. The City makes no representation as to the completeness of the reports or drawings referred to in Paragraphs 4.2A, 4.2B, and 4.2C above or the accuracy of any data or information contained therein. The Bidder may rely upon the accuracy of the technical data contained in such reports and drawings. However, the Bidder may not rely upon any interpretation of such technical data, including any interpretation or extrapolation thereof, or any non-technical data, interpretations, and opinions contained therein.

4.4 Copies of reports and drawings referred to in Paragraph 4.2 will be made available by the City to any Bidder on request, for a fee amounting to the cost of duplication. Those reports and drawings are not part of the Project Documents.

4.5 Information and data reflected in the Project Documents with respect to Underground Utilities at or contiguous to the site are based upon information and data furnished to the City and the ENGINEER by the owners of such Underground Utilities or others, and the City does not assume responsibility for the accuracy or completeness thereof.

4.6 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders on subsurface conditions, Underground Utilities, and other
physical conditions, and possible changes in the Project Documents due to differing conditions appear in Article 4 of the General Conditions, A-00700.

4.7 Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the Work and which the Bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price, and other terms and conditions of the Project Documents. To the extent any Bidder wishes to conduct any evaluation of subsurface site conditions, Bidder shall propose the same to City along with a detailed written proposal (which shall include a comprehensive explanation of the exploration sought to be performed (e.g., who, what, where, when, etc.), along with a certificate of insurance naming the City as an express additional insured). The City, in its absolute discretion, shall review the proposal and issue a written response within five (5) working days of receipt. No site exploration shall be permitted within ten (10) working days of the bid date. Articles 2, 4, 5, 6, 13 and 16 of the General Conditions shall be applicable to any such effort. If any prospective bidder performs or causes to be performed any such subsurface inspection, and is awarded the contract, all information derived from such investigation shall be disclosed in writing to the City within ten (10) days of award.

4.8 The City will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests, and studies as each Bidder deems necessary for submission of a Bid. Location of any excavation or boring shall be subject to prior approval of the City and applicable agencies. Bidder shall fill all holes, restore all pavement to match existing structural section, and shall clean up and restore the site to its former condition upon completion of such explorations. The City requires the CONTRACTOR to obtain an encroachment permit, from the Field Engineering Office, with insurance as set forth in the requirements for application for encroachment permit and traffic control plan for exploration in the City right-of-way.

4.9 The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by the CONTRACTOR in performing the Work are identified in the Project Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the CONTRACTOR.

4.10 The submission of a Bid will constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of this Paragraph 4 and the following:
A. That the Bid is premised upon performing the Work required by the Project Documents without exception and such means, methods, techniques, sequences, or procedures of construction (if any) as may be required by the Project Documents; and

B. That Bidder has given the City written notice of all conflicts, errors, ambiguities, and discrepancies in the Project Documents; and

C. That the Project Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

5. PROPOSALS.

5.1 Bids to receive consideration shall be made in accordance with the following instructions:

A. Bids shall be made only upon the forms attached to and forming a part of these Specifications; all bid items shall be properly filled out; numbers shall be stated both in words and in figures and the signatures of all persons signing shall be in longhand in BLUE INK. Where there is conflict in the words and figures, the words shall govern.

B. All prices and notations must be in ink or typewritten. No erasures will be permitted. Mistakes may be crossed out and corrections typed or written in with ink by the persons or persons signing the bid.

C. Bids shall not contain any recapitulation of the Work to be done. Alternative proposals will not be considered unless called for in the specifications. No oral, telegraphic, facsimile, or telephonic proposals or modifications will be considered.

D. The City may require any bidder to furnish a statement of experience, financial responsibility, technical ability, equipment, and references properly and fully filled out.

E. Each bidder shall list subcontractors on the form accompanying the proposal, in accordance with Public Contract Code Section 4100-4114, the “Subletting and Subcontracting Fair Practices Act.”

1. The name and location of the place of business of each subcontractor who will perform Work or labor or render service to the bidder in or about the construction of the Work or improvement, or a subcontractor licensed by the state of California who, under subcontract to the bidder, specially fabricates and installs a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in an
amount in excess of one-half of one percent (1/2%) of the bidder's total bid.

2. The portion of the Work (in sufficient detail) which will be done by each such subcontractor. If the bidder fails to specify a subcontractor for any portion of the Work to be performed under the contract in excess of one-half of one percent (1/2%) of the bidder's total bid, the bidder agrees to perform that portion itself. The successful bidder shall not without the City’s consent:
   a. Substitute any person as subcontractor in place of the subcontractor designated in the original bid.
   b. Permit any subcontract to be assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the bid.
   c. Sublet or subcontract any portion of the Work in excess of one-half of one percent (1/2%) of the total bid as to which the original bid did not designate a subcontractor.

F. Unless an exception is called out otherwise in the bid specifications, the City requires that bidders must be properly licensed contractors who will perform no less than 51% of the value (as reasonably determined by the City) of the scheduled work using the bidder's own employees. No more than 49% of the scheduled work may be performed by subcontractors.

G. Bids shall be delivered to the City Clerk on or before the day and hour set for the opening of bids in the “Notice Inviting Sealed Bids”, which bids shall be enclosed in a sealed envelope and bearing the title of the Work and the name of the bidder. If bids are mailed to the City without bearing the title of the Work to be done, they will be deemed not to have been delivered by the day and hour set forth in the notice. Note regarding facsimiles: EXCEPT FOR BID SECURITY, all documents submitted before the bid opening may be in the form of facsimiles which have been sent elsewhere and sealed before filing with the City. (Any bidder who uses or attempts to use the City’s facsimile equipment will be disqualified immediately.) The originals of the faxed documents must be mailed to the City, postmarked the same as the bid opening, via certified mail, return receipt requested, or hand-delivered to the City by the close of business on the day of the bid opening.

H. Any bid failing to comply with the requirements of this Section, A-00100, or any other requirements of these specifications, may be considered as having modified these specifications and on that basis may be rejected. Such determination shall be made by the Escondido City Council upon consideration of the entire bid proposal and only if the Escondido City Council makes a finding that the deviation in such bid is so substantial as
to render the bid different than that requested and at variance with the Specifications for the project.

I. The City Clerk will publicly open the bids as soon after the hour set as will be possible. Bidders or their authorized representatives are invited to be present. The City is allowed the number of days set forth in Paragraph 17 “AWARD OF CONTRACT AND EXECUTION OF AGREEMENT OR REJECTION OF ALL BIDS” to make a decision in that regard.

6. CERTIFICATES.

6.1 Bids by corporations must be executed in the corporate name by the president, a vice-president, or other duly authorized corporate officer. Such Bid shall be accompanied by evidence of authority to sign, attested by the secretary or assistant secretary, and with the corporate seal affixed. The corporate address and state of incorporation must appear below the signature.

6.2 Bids by partnerships must be executed in the partnership name and be signed by a managing partner, accompanied by evidence of authority to sign, and his/her title must appear under the signature and the official address of the partnership must appear below the signature.

6.3 Bids by joint ventures must be executed in the joint venture name and be signed by a joint venture managing partner, accompanied by evidence of authority to sign, and his/her title must appear under the signature and the official address of the joint venture must appear below the signature.

7. DISQUALIFICATION OF BIDDERS. More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the City believes that any Bidder is interested in more than one Bid for the Work contemplated, all Bids in which such Bidder is interested will be rejected. If the City believes that collusion exists among the Bidders, all Bids will be rejected. A party who has quoted prices to a Bidder is not hereby disqualified from quoting prices to other Bidders, or from submitting a Bid directly for the Work.

8. QUANTITIES OF WORK. The quantities of Work or material stated in unit price items of the Bid are supplied only to give an indication of the general scope of the Work; the CITY does not expressly or by implication agree that the actual amount of Work or material will correspond therewith, and reserves the right after award to increase or decrease the quantity of any unit price item of the Work by an amount up to and including twenty-five percent (25%) of any Bid item, without a change in the unit price, and shall include the right to delete any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed twenty-five percent (25%) of the Bid price.

9. SUBSTITUTION OF MATERIALS: All materials are mentioned as standards. Should a Contractor or Bidder desire to substitute materials or methods for those specified, the Contractor or Bidder shall follow the guidelines stated herein, and in accordance with the
Public Contract Code Section 3400. Each review of a substitution request by the City or its consultants will be charged to the Contractor or Bidder at an hourly rate of $125/Hour.

Substitutions may only be submitted to the City in writing, and only to the person referenced in Paragraph 3.1 of this section. Substitutions from anybody other than a contractor/subcontractor/bidder registered in the City’s system will not be accepted.

Prior to Bid Opening: The Contractor or Bidder must ensure that proposed substitutions of materials by the Bidder are submitted to the City office fourteen (14) calendar days prior to the Bid Opening for review and possible approval of any equipment or materials thought to be equal to or better than those specified in the drawings or specifications. Proposed substitutions shall be submitted via e-mail to msouttere@escondido.org. No submission of Substitutions will be allowed after the fourteen (14) calendar day period noted above, except as stated in Article 6.15 of the General Conditions. An Addendum will be issued at a minimum of three (3) calendar days prior to Bid Opening including all equipment and materials deemed equivalent to those specified and approved by the City. Submittals must include comparative spec-data for each item of measurement of that specified equipment or material, and the proposed substitution. Information submitted of the proposed “or equal” shall be sufficiently detailed in the same units of measure as to allow the City to compare every aspect/feature of the proposed substitute in an efficient manner. Submittals without such detailed information will be automatically rejected, and cannot be resubmitted unless the time constraint listed above can still be achieved.

10. COMPETENCY OF BIDDERS. In selecting the lowest responsive, responsible Bidder, consideration will be given not only to the financial standing but also to the general competency of the Bidder for the performance of the Work covered by the Bid. To this end, each Bid shall be supported by a statement of the Bidder's experience as of recent date on the form entitled "INFORMATION REQUIRED OF BIDDER" bound herein.

11. BID SECURITY.

11.1 Each bidder must submit with the bid either a properly certified check upon some responsible bank, payable to the City of Escondido, or an approved corporate surety bond payable to the City of Escondido, for a sum of not less than ten percent (10%) of the aggregate sum of the bid, described by an actual dollar value, which check or bond, and the money represented thereby, shall be held by the City as a guarantee that the bidder, if awarded the contract, will in good faith enter into such contract and furnish the required bonds. All bid bonds shall be on the form provided in these specifications.

11.2 In the event the successful bidder fails, neglects, or refuses to enter into the contract to perform the Work. Said check or bond shall be given as a guarantee that the bidder will enter into the contract if awarded the Work, and in case of
refusal or failure to enter into said contract, the check or bond, as the case may be, shall be payable to the Owner and retained as liquidated damages.

11.3 A bid received and not accompanied by such certified check or approved bond will be rejected.

12. BONDS.

12.1 The successful bidder will be required to furnish a Labor and Materials Bond simultaneously with the execution of the Agreement in a sum not less than one hundred percent (100%) of the total amount payable by the terms of the contract, and a Faithful Performance Bond in a sum not less than one hundred percent (100%) of the amount of the contract; said bonds shall be secured from a surety company duly licensed and admitted in the State of California, with a minimum rating as described in Article 5 of the General Conditions and with a responsible history satisfactory to the City Attorney. All bonds shall be of the form prescribed by the City, NOT on a bonding company's standard form. Surety companies, to be acceptable to the City, must be authorized to do business in the State of California and must be sufficient as set forth in the California Code of Civil Procedure.

12.2 Bidder may request a payment retention of twenty percent (20%) (five percent (5%) is standard) in lieu of providing a Labor and Material Bond and Faithful Performance Bond for any bid amount of $25,000.00 or less.

13. INSURANCE REQUIREMENTS. For an explanation of the City’s insurance requirements for this project, please refer to Article 5 of the General Conditions.

14. DISCREPANCIES IN BIDS. In the event there is more than one Bid item in a Bid Schedule, the Bidder shall furnish a price for all Bid items in the Schedule, and failure to do so will render the Bid non-responsive and shall cause its rejection. In the event there are unit price Bid items in a Bidding schedule and the amount indicated for a unit price Bid item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly, and the BIDDER shall be bound by said correction. In the event there is more than one Bid item in a Bid Schedule and the total indicated for the Schedule does not agree with the sum of the prices Bid on the individual items, the prices Bid on the individual items shall govern and the total for the Schedule will be corrected accordingly, and the Bidder shall be bound by said correction.

15. MODIFICATIONS AND UNAUTHORIZED ALTERNATIVE BIDS. Unauthorized conditions, limitations, or provisos attached to the Bid shall render it informal and may cause its rejection as being non-responsive. The Bid forms shall be completed without interlineations, alterations, or erasures in the printed text. Alternative Bids will not be considered unless called for. Oral, telegraphic, or telephonic Bids or modifications will not be considered.
16. WITHDRAWAL OF BID. The Bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its properly authorized representative. Such written request must be delivered to the place stipulated in the Notice Inviting Sealed Bids for receipt of Bids prior to the scheduled closing time for receipt of Bids. The withdrawal of a bid does not prejudice the right of a bidder to file a new bid before the bid opening.

17. AWARD OF CONTRACT AND EXECUTION OF AGREEMENT OR REJECTION OF ALL BIDS.

17.1 Rejection of any or all proposals, to contract work with whomever and in whatever manner, to abandon Work entirely (or in part), and/or to waive any informality in receiving of bids is reserved as the right of the City. Before the contract is awarded, the City may at its sole discretion require from the proposed Contractor further documentation, information and/or data of the reasonable qualifications of such contractor to faithfully, capably, and reasonably perform such proposed contract and may consider such documentation, information and/or data before making its decision on the award of such proposed contract. The bidder whose responsible bid is the next highest to that which is subject of the award shall extend the award of a contract by twenty (20) days.

17.2 The contract shall be awarded to the lowest responsive and responsible bidder as interpreted by the City and specified herein and shall be entered into by the successful bidder within fifteen (15) days after being notified by the Owner. The award, if made, will be made within ninety (90) days after the opening of proposals, or within twenty (20) days of final resolution of any bid protest(s), whichever is longer. Bids submitted shall remain open for acceptance in accordance with the foregoing sentence. The Contract for the Work will be awarded to the lowest responsive, responsible bidder complying with these instructions and with the "Notice Inviting Sealed Bids." The Escondido City Council, however, reserves the right to reject any or all bids, and to waive any informality in the bids received.

17.3 In accordance with Section 5101 of the Public Contract Code a bidder shall not be relieved of the bid except by consent of the Escondido City Council nor shall any change be made in the bid because of mistake, but the bidder may bring an action against the City in a court of competent jurisdiction in North San Diego County for the recovery of the amount forfeited.

17.4 The bidder to whom award is made shall execute the written Agreement with the City and furnish the stipulated bonds, evidence of insurance, and any other required documents (see Paragraphs 4, 12 and 13 of these instructions) within fifteen (15) calendar days after first written notice that the contract has been awarded. The agreement shall be on the form of the "Public Improvement Agreement" attached herein and forming a part of these specifications. Failure to do so as required shall expose the bidder to liability for all damages incurred, including the difference in price (bid) of the next lowest, responsive, responsible
bidder, and all costs and attorney’s fees incurred to contract with another, including costs and fees to acquire judicial authorization to do so.

17.5 If the bidder to whom the award is made fails to enter into the contract as herein provided, the award may be nullified and an award may be made to the next lowest responsible bidder; and such bidder shall fulfill every stipulation embraced herein, as if that bidder were the party to whom the first award was made.

17.6 A Corporation to which an award is made shall furnish evidence of its corporate existence and evidence that the officer signing the contract and bonds for the corporate is duly authorized to do so.

17.7 Any proposal which, in the opinion of the City, is so unbalanced between the various contract items as to be detrimental to the interest of the City will be rejected.

18. RETURN OF BID SECURITY. Within fourteen (14) days after award of the contract, the City will, if requested, return the Bid securities accompanying such Bids that are not being considered in making the award. All other Bid securities will be held until the Agreement has been finally executed. They will then be returned, if requested, to the respective Bidders whose Bids they accompany.

19. LIQUIDATED DAMAGES. Provisions for liquidated damages are set forth in the Agreement.

Liquidated damages schedule:

If the project is delayed one (1) working day or more, the rate shall be $500/calendar day.

20. STIPULATED PRICES FOR EXTRA WORK. The Bidder’s attention is directed to the General Conditions for stipulated equipment rental rates (State of California Business, Transportation, and Housing Agency – State of California Department of Transportation (‘Caltrans’) Construction Program Labor Surcharge and Equipment Rental Rates), stipulated labor rates (Prevailing wages) and stipulated mark-ups for overhead and profit (General Conditions Article 11).

21. ENCROACHMENT PERMIT. Prior to beginning work, the Contractor shall obtain a no-fee Encroachment Permit from the Field Engineering Office, 201 N. Broadway, Escondido. CONTRACTOR shall adhere to all requirements and provisions of said Encroachment Permit as though fully set forth herein.

22. LOCAL BUSINESS LICENSE. All CONTRACTORS, including Subcontractors, not already having a City of Escondido business license for the Work contemplated, will be required to secure the appropriate license before a Contract can be executed.

23. WORKERS’ COMPENSATION REQUIREMENT. The Bidder should be aware that in accordance with Section 3700 of the California Labor Code it will, if awarded the Contract,
be required to secure the payment of compensation to its employees and execute the Workers' Compensation Certification in the form contained in these Contract Documents.

24. NONCOLLUSION DECLARATION. All proposals must be accompanied by a completed Noncollusion Declaration. The bidder must certify that the Bid is genuine and is not sham or collusive, or made in the interest of or on behalf of any bidder not named in the bid, and that the bidder has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other possible bidder to refrain from bidding, and that the bidder has not in any manner sought by collusion to secure for itself an advantage over any other bidder.

25. PREVAILING WAGES. The Director of the Department of Industrial Relations of the State of California, in the manner provided by law, has ascertained the general prevailing rate of per diem wages and rate for legal holidays and overtime work as set forth in Article IX of the Agreement. The CONTRACTOR must pay for any labor therein described or classified in an amount not less than the rates specified. Copies of the required rates are on file at the City's business office and are available to any interested party on request.

26. FORM OF CONTRACT. The contract which the successful bidder(s) will be required to execute, if awarded the Work, will be in substantially the form attached to these Instructions.

27. FIELD AND HOME OFFICE OVERHEAD. The attention of all Bidders is directed to all provisions of the Project Documents, and specifically, with respect to overhead expenses, Bidders are reminded that they are to include within bids all field and home office overhead expenses to perform work for the entire contract duration, as expressed in the Project Documents. Failure to do so is at Bidder’s risk and the submission of a bid is an acknowledgement that no claim for extended overhead shall be made for any duration between the actual completion date, less than the full contract duration, which may have been able to be achieved if not for the conduct for which the City bears legal responsibility. Bidder may submit a reasonable schedule in which Bidder projects that it will complete the work under the contract in less time than permitted. If Bidder is unable to complete the work within its own projected time period, but completes the work within the contracted-for duration, Bidder waives any possible claim to or right to collect any additional amount for overhead expenses.

28. CITY HALL HOURS. Bidders are advised that City Hall offices are open Monday through Friday, 8:00 a.m. to 5:00 p.m. The calendar is posted online at www.escondido.org/city-hall-calendar.aspx.

29. BID PROTEST. Bid protests must be received by the Clerk of the City of Escondido no later than 4:00 p.m. on the third working day following the bid opening. Bid protests submitted after that will not be accepted, and are considered null and void. Accepted bid protests shall be in writing and delivered to the City Clerk, with all accompanying documentation that the protesting bidder wants the City to review, including a complete
statement for the basis of the protest, along with legal authority in support, if any. Once submitted, no additional information will be accepted. The party filing the protest shall concurrently transmit a copy of the protest and accompanying documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Documentation providing confirmation that each party received bid protest information shall be included with information submitted to the City. Such parties shall include all other Bidders. Not doing so is cause for immediate rejection of the submitted protest.

The City shall review and respond in writing to such protest within five (10) working days thereafter. The written determination of the City shall be final, with no further internal rights of appeal. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder’s sole and exclusive remedy in the event of Bid protest. Failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceeding against the City of Escondido.

30. STANDARD SPECIFICATIONS. The Project Documents/Contract Documents are defined in the attached General Conditions. The “Green Book” (Standard Specifications for Public Works Construction, 2105 edition and related supplements) shall be used as the standard specification for special provisions. The City’s General Conditions shall take precedence over any reference to Sections 1-9 of the Green Book, unless otherwise noted. The 2015 Caltrans Standard Specifications shall apply to all traffic and bridge related project work. The City’s General Conditions shall take precedence over General Provision Sections of the Caltrans 2015 Standard Specifications and Revised Standard Specifications, unless otherwise noted.
31. **INSTRUCTIONS TO BIDDERS REGARDING SUBMISSION OF PROPOSAL.**

WARNING: Bid proposals, bid bonds, and other bid documents shall be filled out and submitted at the correct time and place. Failure to follow these Instructions to Bidders, Section A-00100, may be cause for rejection of the bid. This page is intended to assist bidders in the submission of bids.

**Documents to be submitted by all bidders:**

<table>
<thead>
<tr>
<th>Title</th>
<th>Bid Forms Page Number(s)</th>
<th>Check ✔</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bid Proposal and Schedule</td>
<td>A00300</td>
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<tr>
<td>Subcontractors</td>
<td>A00400</td>
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<tr>
<td>Information Required of Bidder</td>
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<td>Bidder’s Bond</td>
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<td>Non-Collusion Affidavit</td>
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<tr>
<td>Field and Home Office Overhead</td>
<td>A00400</td>
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</tbody>
</table>

- SECTION CONTINUES ON NEXT PAGE -
32. DOCUMENTS TO BE EXECUTED BY THE BIDDER WHO THE CITY DETERMINES IS THE LOWEST RESPONSIVE AND RESPONSIBLE BIDDER.

**These documents are to be executed by the bidder ONLY upon notification by the City:**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
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<tbody>
<tr>
<td>1 Public Improvement Agreement</td>
<td>A00500</td>
</tr>
<tr>
<td>2 Faithful Performance Bond</td>
<td>A00610</td>
</tr>
<tr>
<td>3 Labor and Material Bond</td>
<td>A00620</td>
</tr>
<tr>
<td>4 City of Escondido Business License</td>
<td>A00630</td>
</tr>
<tr>
<td>5 Workers’ Compensation Certificate</td>
<td>A00660</td>
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<tr>
<td>6 Encroachment Permit Application and Traffic Control Plan</td>
<td>Refer to Appendices, to be submitted to Field Engineering at or prior to the precon.</td>
</tr>
<tr>
<td>7 Escrow Agreement for Security Deposits in Lieu of Retention Form</td>
<td>Refer to the Appendices, to be submitted to Field Engineering at or prior to precon. Refer to Supplemental General Conditions, SGC-14.7A</td>
</tr>
<tr>
<td>8 Storm Water Pollution Protection Plan Permit, SWPPP/ BMPs, all as indicated in the Supplementary General Conditions</td>
<td>These forms, etc. are not included within. They shall be submitted to Field Engineering at or prior to precon.</td>
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</table>

– END OF SECTION –
BID PROPOSAL

EL NORTE PARKWAY IMPROVEMENTS PROJECT

CITY OF ESCONDIDO, SAN DIEGO COUNTY, CALIFORNIA

The Honorable City Council
City of Escondido
201 North Broadway
Escondido, CA 92025-2798

Councilmembers:

The undersigned hereby proposes and agrees to furnish all of the material, labor, equipment, transportation, and services for the construction and completion of the work listed herein, and in strict conformity with the Plans, Specifications, and other contract documents on file at the Office of the City Clerk, Escondido, California, for the lump sum or unit prices listed herein.

Included in this Bid Proposal, are the following documents:

- Bid Schedule
- Designation of Subcontractors
- Information Required of Bidder
- Bidder’s Bond
- Noncollusion Affidavit

Attached please find a certified check, No. _____ of the ______________________________ Bank, for $____________________, which amount is not less than ten percent (10%) of the total amount of this bid; or Bidder’s Bond for ten percent (10%) of the total bid.

The following schedule of estimated quantities of work is included for convenience of bidders and for comparison of bids only, and is not guaranteed to be correct. All bidders are requested to complete this schedule which will be binding on the bidder once the contract is awarded.
## BID SCHEDULE

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Approx. Quantity</th>
<th>Item With Unit Price Written in Words</th>
<th>Unit Price</th>
<th>Amount</th>
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<tbody>
<tr>
<td>1.</td>
<td>1 LS</td>
<td>Mobilization and Demobilization (Not to exceed Seventy Thousand Dollars)</td>
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<td>2.</td>
<td>1 LS</td>
<td>Storm Water and Environmental Control</td>
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<td>3.</td>
<td>1 LS</td>
<td>Construction Staking and Surveying</td>
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<td>4.</td>
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<td>Public Convenience, Safety, and Traffic Control</td>
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<td>5.</td>
<td>1 LS</td>
<td>Clearing and Grubbing Complete and In Place at a price not to exceed Thirty Thousand Dollars</td>
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<td>6.</td>
<td>275 CY</td>
<td>Removal &amp; Disposal of Existing Asphalt Pavement, including Base and Soil Twelve Inches (12”) in Depth, Complete and In Place</td>
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<td>Item No.</td>
<td>Approx. Quantity</td>
<td>Item With Unit Price Written in Words</td>
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| 7.       | 1,465 Tons      | Remove/Replace Existing 6” AC w/Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10 Complete and In Place at ..................................................
|          |                 | .................................................................................. Per Ton |
| 8.       | 162 CY          | Furnish and Install Base Material, Complete and In Place at .............................................
|          |                 | .................................................................................. Per Cubic Yard |
| 9.       | 1 LS            | Construct General Concrete Improvements Complete and In Place at ...........................................
|          |                 | .................................................................................. Per Lump Sum |
| 10.      | 1 LS            | *(S) Construct Pedestrian/Bike Crossing Signal Complete and In Place per Project Plans and Specifications at .................................................................
|          |                 | .................................................................................. Per Lump Sum |
| 11.      | 12,100 SF       | (S) Construct 4-inch Median Stamped and Colored PCC Slab Complete and In Place at ...........................
|          |                 | .................................................................................. Per Square Foot |
| 12.      | 1 LS            | * Construct Bridge Widening, Complete and In Place per Project Plans at .................................................................
<p>|          |                 | .................................................................................. Per Lump Sum |</p>
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Approx. Quantity</th>
<th>Item With Unit Price Written in Words</th>
<th>Unit Price</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.</td>
<td>8 EA</td>
<td>Adjust Existing Valve Cans and Cover to Grade Complete and In Place at .................&lt;br&gt;...................................................... Per Each</td>
<td></td>
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</tr>
<tr>
<td>14.</td>
<td>6 EA</td>
<td>Adjust Existing Manhole Sewer and Storm Drain Boxes Ring and Cover to Grade Complete and In Place at ..................&lt;br&gt;...................................................... Per Each</td>
<td></td>
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<tr>
<td>15.</td>
<td>1 LS</td>
<td>Furnish and Install Dry Utility Systems Complete and In Place at..&lt;br&gt;...................................................... Per Lump Sum</td>
<td></td>
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</tr>
<tr>
<td>16.</td>
<td>5 EA</td>
<td>Furnish and Install Future 12” Water Main Infrastructure Complete and In Place at ....&lt;br&gt;...................................................... Per Each</td>
<td></td>
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<tr>
<td>17.</td>
<td>1 LS</td>
<td>Construct SDG&amp;E Gas Main Infrastructure Complete and In Place at..&lt;br&gt;...................................................... Per Lump Sum</td>
<td></td>
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</tr>
<tr>
<td>18.</td>
<td>1 LS</td>
<td>Relocate Two Existing Bollards and Chain to Property Line Complete and In Place at ......&lt;br&gt;...................................................... Per Lump Sum</td>
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<tr>
<td>19.</td>
<td>1 LS</td>
<td>(S) Furnish and Install Permanent Irrigation System Complete and In Place at..&lt;br&gt;...................................................... Per Lump Sum</td>
<td></td>
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<tr>
<td>Item No.</td>
<td>Approx. Quantity</td>
<td>Item With Unit Price Written in Words</td>
<td>Unit Price</td>
<td>Amount</td>
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| 20.     | 1 LS            | (S) Furnish and Install Landscaping Complete and In Place at ...............................................................
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| 21.     | 1 LS            | Remove Existing Asphalt Berm Complete and In Place at ...............................................................
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| 22.     | 2 EA            | (S) Furnish and Install Project Information Signs Complete and In Place at ..........................................
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| 23.     | 1 LS            | Fabricate, Furnish and Install Escondido Creek Trailhead Entry Sign Complete and in Place at ....................
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**SUBTOTAL BASE (Items 1 thru 23 inclusive)**

(Words) $__________________ (Figures)

**ADDITIVE ALTERNATE ITEM I**

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<tr>
<th>24.</th>
<th>2625 Tons</th>
<th>ADDITIVE ALTERNATE ITEM 1 –ADD 0.2’ Overlay Over Roadway per project plans and specifications</th>
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City of Escondido
El Norte Parkway Improvement Project

BID PROPOSAL
Page A-00300-5
<table>
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<tr>
<td>25.</td>
<td>4610 LF</td>
<td>ADDITIVE ALTERNATE ITEM 1 – ADD 12’ Wide Taper per project plans and specifications</td>
</tr>
<tr>
<td>26.</td>
<td>15 EA</td>
<td>ADDITIVE ALTERNATE ITEM 1 – ADD Adjust Ex. Manhole Sewer and Storm Drain Boxes Ring and Cover to Grade per project plans and specifications</td>
</tr>
<tr>
<td>27.</td>
<td>15 EA</td>
<td>ADDITIVE ALTERNATE ITEM 1 – ADD Adjust Ex. Valve Cans and Cover to Grade per project plans and specifications</td>
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**SUBTOTAL ALTERNATE BID ITEM 1 (Items 24 thru 27 inclusive)**

- **(Words)** $__________________
- **(Figures)**

**ADDITIVE ALTERNATE ITEM 2**

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<tr>
<td>28.</td>
<td>198,930 SF</td>
<td>ADDITIVE ALTERNATE ITEM 2 – ADD Type II Slurry Treatment Over Roadway</td>
</tr>
<tr>
<td>29.</td>
<td>15,000 LF</td>
<td>ADDITIVE ALTERNATE ITEM 2 – ADD Crackfill to Project</td>
</tr>
<tr>
<td>Item</td>
<td>Quantity</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>30.</td>
<td>1,536 Tons</td>
<td>ADDITIVE ALTERNATE ITEM 2 – ADD Additional AC Depth Replacement to project</td>
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**ADDITIVE ALTERNATE ITEM 2**

<table>
<thead>
<tr>
<th>Description</th>
<th>Per Square Foot</th>
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**SUBTOTAL ALTERNATE BID ITEM 2**

$(\text{Words}) \quad \$\text{(Figures)}$

<table>
<thead>
<tr>
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<th>Description</th>
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</thead>
<tbody>
<tr>
<td>31.</td>
<td>1 LS</td>
<td>ADDITIVE ALTERNATE ITEM 3 - Alternate Method of Dewater Release</td>
</tr>
</tbody>
</table>

**ADDITIVE ALTERNATE ITEM 3**

<table>
<thead>
<tr>
<th>Description</th>
<th>Per Lump Sum</th>
</tr>
</thead>
</table>

**SUBTOTAL ALTERNATE BID ITEM 3**

$(\text{Words}) \quad \$\text{(Figures)}$

**TOTAL BASE and ALTERNATE BID**

$(\text{Words}) \quad \$\text{(Figures)}$

The extension of the unit prices and totals are for the convenience of the City to assist in announcing the apparent low bidder, but shall not be used to officially determine a low bidder. The City of Escondido shall verify the actual extended amounts from submitted unit and lump sum prices to officially determine the lowest bid price. Where additive or deductive alternate bid items have been listed in the schedule, the City of Escondido has stated in advance which additive or deductive items shall be included with the Total Bid to determine the lowest bid price, but shall reserve the right to award ONLY Base Bid work or Base Bid and any combination of Additive or Deductive Alternate items.
The City will use the Total Base and all Additive Alternate Bid Items to determine a low bidder. Any reference elsewhere in these specifications shall now match this information.

Item descriptions are provided to give a general idea of bid items of work. For a complete description of all work included within a bid item, please refer to the remainder of the contract documents.

At the preconstruction meeting the awarded contractor shall provide a detailed cost breakdown for each Lump Sum bid item to the City, per General Conditions Section 14.3. The breakdown shall include all equipment, material, labor, markup costs, etc. used to determine each bid items value that makes up the total bid amount, unless otherwise approved by the City. Work on the project cannot commence until the City has received the Contractor provided breakdown and deemed it acceptable.

Note(s)
* The Contractor is referred to the attachments/appendices for a Bid Item List of work associated with this bid item. This list is provided for the Contractor’s convenience only, and is not to be used to determine bid price. Payment shall be made based on the price bid, which shall include all items required to complete the work, irrespective of the Bid List information.

**MEASUREMENT AND PAYMENT OF BID ITEMS**

**SCOPE.** Part 1 of this section defines the bid items noted in the Bid Schedule, and describes measurement and payment provisions for each of the bid items.

Payment for all items of the Bid Schedule whether lump sum or unit price shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Requirements of the California Division of Industrial Safety and the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs shall be included in the prices named in the Bid Schedule for the various appurtenant items of work.

If written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned within ninety (90) days after the date of opening of the bids, or within twenty (20) days of bid protest resolution (whichever is greater), or any time thereafter before this bid is withdrawn, the undersigned will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in substantially the form attached to these contract documents, and give Performance and Payment Bonds in accordance with the specifications and bid as accepted.
The undersigned hereby designates as his office to which such notice of acceptance may be mailed or delivered:

____________________________________________________________________________________

____________________________________________________________________________________

Our Public Liability and Property Damage Insurance is placed with ______________________________

____________________________________________________________________________________

Our Workers' Compensation Insurance is placed with ________________________________

____________________________________________________________________________________

Circular letters, bulletins, addenda, etc., bound with specifications or issued during the time of bidding are included in the proposal, and, in completing the contract, they are to become part thereof.
The receipt of the following addenda to the Project Documents (if any) is acknowledged:

Bid Addendum _______ Date _______ Bid Addendum _______ Date _______
Bid Addendum _______ Date _______ Bid Addendum _______ Date _______
Bid Addendum _______ Date _______ Bid Addendum _______ Date _______

This bid may be withdrawn at any time prior to the scheduled time for the opening of bids or any authorized postponement thereof.

Note: Each bid must give the full business address of the bidder and be signed by him with his usual signature. Bids by partnerships must furnish the full name of all partners and must be signed in the partnership name by one of the members of the partnership, or by an authorized representative, followed by the signature and designation of the person signing. Bid by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. When requested by the Owner, satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

In signing this Bid Proposal below, the bidder acknowledges that:

1. The plans and other Project Documents show conditions as they are believed to exist, but it may not be inferred that all the conditions shown do actually exist, nor shall the City, their officers, employees or agents be liable for any costs sustained by the Contractor as a result of any variance between conditions shown on the contract documents, and actual conditions revealed during examination or progress of the Work. (See Instructions to Bidders, Section 4.3).

2. Bidder has complied with the following:
   A. The Bid is premised upon performing the Work required by the Project Documents without exception and includes such means, methods, techniques, sequences, or procedures of construction (if any) as may be required by the Project Documents;
   B. Bidder has given the City written notice of all conflicts, errors, ambiguities, and discrepancies in the Project Documents;
   C. The Project Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work. (See Instructions to Bidders, Section 4.10).

3. Any bid failing to comply with the requirements of this Proposal, with Section A-00100, or any other requirements of these bid specifications, may be considered as having modified these specifications and on that basis may be rejected. (See Instructions to Bidders, Section 5.1.G).

4. The CITY does not expressly or by implication agree that the actual amount of Work or material will correspond with unit price items, and reserves the right after award to increase or decrease the quantity of any unit price item of the Work by an amount up to and including twenty-five percent (25%) of any Bid item, without a change in the unit price, and shall include the right to delete any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed twenty-five percent (25%) of the Bid price. (See Instructions to Bidders, Section 8).
5. Rejection of any or all proposals, to contract work with whomever and in whatever manner, to abandon Work entirely (or in part), and/or to waive any informality in receiving of bids is reserved as the right of the City. (See Instructions to Bidders, Section 17.1).

6. The contract shall be awarded to the **lowest responsive and responsible bidder as interpreted by the City** and shall be entered into by the successful bidder within **fifteen (15) calendar days** after being notified by the Owner. (See Instructions to Bidders, Section 17.2).

Before submitting a Bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the Work and which the Bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price, and other terms and conditions of the Project Documents. (See Instructions to Bidders, Section 4.7).

**In submitting and signing this bid, the person(s) signing below acknowledge the following:**

If awarded the contract, the undersigned agrees to sign said contract and furnish the necessary bonds and other required documents, in the form required, within 15 calendar days after the first written notice that the contract has been awarded to him or her.

The undersigned has checked carefully all of the prices quoted and understands that the City of Escondido will not be responsible for any errors or omissions on the part of the undersigned in making up this Bid Proposal.

The undersigned declares that he has carefully examined the location of the proposed work, the Contract Documents, plans and specifications, has read and understood the Contract and Bid Documents, and all bid documents and materials, and hereby proposes to furnish all materials and do all the work required to complete the said work in accordance with said plans and specifications, for the unit and lump sum prices set forth in the preceding bid schedule.

**Signatures shall be in BLUE ink.**

Dated ______________________, 20____

Signed (use BLUE ink) ____________________________________________

Print or Type Name: ________________________________________________

Business Address: ________________________________________________

____________________________________________________________

Phone Number: _________________________________________________

FAX Number: ___________________________________________________

Contractor's License Number: ______________________________________
Additional Signature Lines if Applicable:

Signed  
Print or Type Name  
Business Address  

Signed  
Print or Type Name  
Business Address  

Signed  
Print or Type Name  
Business Address  

State of Incorporation if Applicable  

□ Evidence of authority to bind corporation is attached.
DESIGNATION OF SUBCONTRACTORS

In accordance with Section 4100-4114 of Public Contract Code the “Subletting and Subcontract Fair Practices Act”, the bidder shall herein set forth the name, California contractor’s license number, California Department of Industrial Relations (“DIR”) registration number, and business location of each subcontractor who will perform work or labor or render service on this project as described in Paragraph 5.1.E of the Instructions To Bidders. **If there will be no subcontractors, write “NONE”**

<table>
<thead>
<tr>
<th>No.</th>
<th>SUBCONTRACTOR</th>
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<tbody>
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<td>1</td>
<td>Name:</td>
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<td>Address:</td>
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<td>Phone No.</td>
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<td>Contractors License No.</td>
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<td>Type &amp; Description of Work or Line Item of Work:</td>
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<td>Dollar Amount of Subcontract $</td>
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<td>Contractors License No.</td>
</tr>
<tr>
<td></td>
<td>Contractor’s DIR Registration No.</td>
</tr>
<tr>
<td></td>
<td>Type &amp; Description of Work or Line Item of Work:</td>
</tr>
<tr>
<td></td>
<td>Dollar Amount of Subcontract $</td>
</tr>
</tbody>
</table>

Please attach additional sheets if needed
**INFORMATION REQUIRED OF BIDDER, GENERAL INFORMATION, JOB REFERENCES & CLAIMS**

Bidder shall furnish the following information. Additional sheets may be attached if necessary.

1. **Address:** __________________________________________________________________
2. **Type of Firm:** Individual ___ Partnership ___ Corporation ___
3. **Telephone:** __________________________
4. **Contractor's License:** State___ License No.__________ Classes _______ Exp. Date______
5. **Contractor’s DIR Registration No.** ___________________________________________
6. **Names and titles of all members/officers of the firm:**
   ____________________________________  __________________________________
   ____________________________________  __________________________________
   ____________________________________  __________________________________
7. **Number of years as a contractor in construction work of this type:**__________
8. **All bidders shall list in chronological order, most recent first, the last five completed projects of all types:**

<table>
<thead>
<tr>
<th>No.</th>
<th>LIST LAST FIVE (5) COMPLETED PROJECTS OF ALL TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name and description:</td>
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<td></td>
<td>Address:</td>
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<td></td>
<td>Owner’s Name:</td>
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<td>Owner’s Address:</td>
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<td></td>
<td>Owner Contact Person:</td>
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<td></td>
<td>Phone No.</td>
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<td></td>
<td>Engineer:</td>
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<td></td>
<td>Phone No.</td>
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<td></td>
<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<tr>
<td></td>
<td>Value of the Work $</td>
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<tr>
<td>2</td>
<td>Name and description:</td>
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<td>Address:</td>
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<td>Owner’s Name:</td>
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<td></td>
<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<tr>
<td></td>
<td>Value of the Work $</td>
</tr>
</tbody>
</table>
Completed Projects continued:

<table>
<thead>
<tr>
<th></th>
<th>Name and description:</th>
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<tr>
<td>3</td>
<td>Address:</td>
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<tr>
<td></td>
<td>Owner’s Name:</td>
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<td></td>
<td>Owner’s Address:</td>
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<td></td>
<td>Owner Contact Person:Phone No.</td>
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<td></td>
<td>Engineer:</td>
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<td></td>
<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<td></td>
<td>Value of the Work $</td>
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<td>4</td>
<td>Address:</td>
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<td></td>
<td>Owner’s Name:</td>
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<td>Owner’s Address:</td>
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<td></td>
<td>Owner Contact Person:Phone No.</td>
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<td></td>
<td>Engineer:</td>
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<td></td>
<td>Engineer’s Address:</td>
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<tr>
<td></td>
<td>Date Completed (NOC):</td>
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<td></td>
<td>Value of the Work $</td>
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<tr>
<td>5</td>
<td>Address:</td>
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<td></td>
<td>Owner’s Name:</td>
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<td></td>
<td>Owner’s Address:</td>
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<td></td>
<td>Owner Contact Person:Phone No.</td>
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<td>Engineer:</td>
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<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<td></td>
<td>Value of the Work $</td>
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</tbody>
</table>
9. List three projects completed by the **Prime Contractor** in the last five years that most resemble this project in scope and value:

<table>
<thead>
<tr>
<th>No.</th>
<th>LIST THREE (3) COMPLETED SIMILAR PROJECTS</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Name and description:</td>
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<td>Address:</td>
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<td>Owner’s Name:</td>
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<td>Owner’s Address:</td>
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<td></td>
<td>Owner Contact Person: Phone No.</td>
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<td></td>
<td>Engineer: Phone No.</td>
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<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<td></td>
<td>Value of the Work $</td>
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<tr>
<td>2</td>
<td>Name and description:</td>
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<td>Address:</td>
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<td>Owner’s Name:</td>
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<td>Owner’s Address:</td>
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<td>Owner Contact Person: Phone No.</td>
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<td>Engineer: Phone No.</td>
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<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<td></td>
<td>Value of the Work $</td>
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<tr>
<td>3</td>
<td>Name and description:</td>
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<td>Address:</td>
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<td>Owner Contact Person: Phone No.</td>
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<td>Engineer: Phone No.</td>
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<td></td>
<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
</tr>
<tr>
<td></td>
<td>Value of the Work $</td>
</tr>
</tbody>
</table>
10. List two projects completed by the **Bridge Contractor/Subcontractor** in the last ten years that most resemble this project in scope and value, and used Caltrans requirements for bridge construction:

<table>
<thead>
<tr>
<th>No.</th>
<th>LIST TWO (2) COMPLETED SIMILAR PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<tr>
<td></td>
<td>Name and description:</td>
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<td>Address:</td>
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<td>Owner’s Name:</td>
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<td>Engineer:</td>
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<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
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<tr>
<td></td>
<td>Value of the Work $</td>
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<tr>
<td>2</td>
<td></td>
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<tr>
<td></td>
<td>Name and description:</td>
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<td>Engineer’s Address:</td>
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<td></td>
<td>Date Completed (NOC):</td>
</tr>
<tr>
<td></td>
<td>Value of the Work $</td>
</tr>
</tbody>
</table>
11. Bidders must submit a list of all Claims equal to or greater than $100,000.00, which have been submitted by the Bidder in the last five (5) years. Please identify claims were paid by placing an * next to the claim amount.

<table>
<thead>
<tr>
<th>No.</th>
<th>LIST ALL CLAIMS GREATER THAN $100,000.00 IN THE LAST 5 YRS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
<tr>
<td>2</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
<tr>
<td>3</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
<tr>
<td>4</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
<tr>
<td>5</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
<tr>
<td>6</td>
<td>Date: &lt;br&gt;Project: &lt;br&gt;Location: &lt;br&gt;Owner: &lt;br&gt;Purpose of Claim: &lt;br&gt;Claim Amount $</td>
</tr>
</tbody>
</table>

Attach additional sheets if needed.
12. Have you ever failed to complete a project? If so, explain:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

13. Have you ever been terminated for default or convenience? If so, explain in detail:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

14. Person(s) who inspected site of the proposed work for your firm:

Name(s): ___________________________________________________________

Date of Inspection: _________________________________________________

15. NOTE: If requested by the City, the bidder shall furnish an audited financial statement, references, and other information, sufficiently comprehensive to permit an appraisal of the current financial condition.

All representations are made under penalty of perjury.

Signed: _________________________  Signed: _________________________

Signed: _________________________  Signed: _________________________

The signatures appearing above must be the same as those affixed to the Bid Proposal on the preceding pages.
KNOW ALL MEN BY THESE PRESENT, that we, ________________________, as Principal and ________________________, as Surety, are held and firmly bound unto the CITY OF ESCONDIDO, CALIFORNIA ("City") in the penal sum of ten percent (10%) OF THE TOTAL AMOUNT OF THE BID OF THE PRINCIPAL submitted to the City for the work described below, lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors jointly and severally, firmly by these presents. If the penal sum is expressed as a percentage rather than in dollars, Surety waives any and all claims it may have against City at law or in equity regarding the amount of this bond.

The condition of this obligation is such that whereas the Principal has submitted the accompanying bid incorporated herein, dated _______________________, 20__, for the

EL NORTE PARKWAY IMPROVEMENTS PROJECT

Now, THEREFORE, if the Principal shall not withdraw said bid within ninety (90) days after the opening of the same or within twenty (20) days of any bid protest being resolved, whichever is greater, and shall within fifteen (15) calendar days after the first written notice that the contract has been awarded to him enter into a written contract with the City in accordance with the bid as accepted, and if the Principal shall give the required bonds with good and sufficient surety or sureties for the faithful performance and proper fulfillment of such contract and for the protection of laborers and material men, or in the event of the withdrawal of said bid within the periods specified, or the failure to enter into said Contract and give such bonds within the time specified, if the Principal shall within sixty (60) days after request by the City pay the City the difference between the amount specified in said bid and the amount for which the City may procure the required work and/or supplies, if the latter amount be in excess of the former, then the above obligation shall be void and no effect, otherwise to remain in full force and effect.

In the event suit is brought upon this bond by City and judgment is recovered, the surety shall pay all costs incurred by the City in such suit, including reasonable attorney’s fees. These costs shall be in excess to the penal sum amount.

IN WITNESS WHEREOF the parties have executed this instrument under their several seals this _____ day of _______________________, 20__, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.
*NOTE: This form is not to be used where bidder's security is provided by deposit of cashier's check, cash, or certified check. If the penal sum is expressed as percentage, Surety waives any and all claims it may have at law or in equity against City regarding the amount of this bond.

Two Witnesses (if individual) 

__________________________________________________________________________

By: _______________________________________________________________________

Title: _____________________________________________________________________

ATTEST: (if corporation)

__________________________________________________________________________

Title

Corporate Seal

__________________________________________________________________________

Surety

By: _______________________________________________________________________

Title: _____________________________________________________________________

ATTEST:

__________________________________________________________________________

Title

Corporate Seal

NOTE: Signature of those executing Surety must be properly acknowledged by a Notary Public.

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
MICHAEL R. MCGUINNESS, City Attorney

By: _______________________________________________________________________

City of Escondido
El Norte Parkway Improvement Project

BID FORMS
Page A-00400-10
NONCOLLUSION DECLARATION
TO BE EXECUTED BY BIDDER
AND SUBMITTED WITH BID

The undersigned declares:

I am the _____________________ of _________________, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _______, at ________________, __.

___________________________________        ___________________________________
Signature  Signature

Title ___________________________        Title ___________________________

Of ___________________________        Of ___________________________

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
MICHAEL R. MCGUINNESS, City Attorney

By: _______________________________
FIELD AND HOME OFFICE OVERHEAD

The attention of all Bidders is directed to all provisions of the Project Documents, and specifically, with respect to overhead expenses, Bidders are reminded that they are to include within bids all field and home office overhead expenses to perform work for the entire contract duration, as expressed in the Project Documents. Failure to do so is at Bidder’s risk and the submission of a bid is an acknowledgement that no claim for extended overhead shall be made for any duration between the actual completion date, less than the full contract duration, which may have been able to be achieved if not for the conduct for which the City bears legal responsibility. Bidder may submit a reasonable schedule in which Bidder projects that it will complete the work under the contract in less time than permitted. If Bidder is unable to complete the work within its own projected time period, but completes the work within the contracted-for duration, Bidder waives any possible claim to or right to collect any additional amount for overhead expenses.

In submitting a bid for this project, I agree to the above terms.

______________________________
Signature of Bidder

______________________________
Date:
PUBLIC IMPROVEMENT AGREEMENT

This “Agreement”, dated the _______ day of _____________________, 20____, in the County of SAN DIEGO, State of California, is by and between THE CITY OF ESCONDIDO (hereinafter referred to as "CITY"), and ___________________________________________ (hereinafter referred to as "CONTRACTOR").

The CITY and the CONTRACTOR, for the consideration stated herein, agree as follows:

1. The complete contract includes all of the Project Documents described in the General Conditions, which are incorporated by reference. The Project Documents are complementary, and what is called for by any one shall be as binding as if called for by all.

2. CONTRACTOR shall perform, within the time set forth in Paragraph 4 of this Agreement, everything required and reasonably inferred to be performed, and shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services as described in the complete contract and required for construction of EL NORTE PARKWAY IMPROVEMENT PROJECT

All of said work to be performed and materials to be furnished shall be completed in a good workmanlike manner, free from defects, in strict accordance with the plans, drawings, specifications and all provisions of the complete contract as hereinabove defined. The CONTRACTOR shall be liable to the CITY for any damages and resulting costs, including consultants’ costs, arising as a result of a failure to fully comply with this obligation, and the CONTRACTOR shall not be excused with respect to any failure to so comply by any act or omission of the Architect, Engineer, Inspector, or representative of any of them, unless such act or omission actually prevents the CONTRACTOR from fully complying with the requirements of the Project Documents, and unless the CONTRACTOR protests at the time of such alleged prevention that the act or omission is preventing the CONTRACTOR from fully complying with the Project documents. Such protest shall not be effective unless reduced to writing and filed with the CITY within three (3) working days of the date of occurrence of the act or omission preventing the CONTRACTOR from fully complying with the Project documents.

3. CITY shall pay to the CONTRACTOR, as full consideration for the faithful performance of the contract, subject to any additions or deductions as provided in the Project documents, the sum of ________ Dollars ($__________________________).

4. The Work shall proceed in accordance with Article 2 of the General Conditions, and shall be completed within one hundred and twenty (120) working days from the date specified in the Notice to Proceed.

5. Time is of the essence. If the work is not completed in accordance with Paragraph 4 above, it is understood that the CITY will suffer damage. It being impractical and infeasible to determine the amount of actual damage(s), in accordance with Government Code Section 53069.85, it is agreed that CONTRACTOR shall pay to CITY as fixed and liquidated damages, and not as a penalty, the
sum(s) indicated in the LIQUIDATED DAMAGES SCHEDULE below for each calendar day of delay until work is completed and accepted. This amount shall be deducted from any payments due to or to become due to CONTRACTOR. CONTRACTOR and CONTRACTOR'S surety shall be liable for the amount thereof. Time extensions may be granted by the CITY as provided in the General Conditions.

Liquidated damages schedule:

If the overall project is delayed one (1) working day or more, the rate shall be $500/calendar day.

Acknowledged:

Initials of Principal

6. In the event CONTRACTOR, for a period of ten (10) calendar days after receipt of written demand from CITY to do so, fails to furnish tools, equipment, or labor in the necessary quantity or quality, or to prosecute said work and all parts thereof in a diligent and workmanlike manner, or after commencing to do so within said ten (10) calendar days, fails to continue to do so, then the CITY may exclude the CONTRACTOR from the premises, or any portion thereof, and take possession of said premises or any portion thereof, together with all material and equipment thereon, and may complete the work contemplated by this Agreement or any portion of said work, either by furnishing the tools, equipment, labor or material necessary, or by letting the unfinished portion of said work, or the portion taken over by the CITY to another contractor, or demanding the surety hire another contractor, or by any combination of such methods. In any event, the procuring of the completion of said work, or the portion thereof taken over by the CITY, shall be a charge against the CONTRACTOR, and may be deducted from any money due or to become due to CONTRACTOR from the CITY, or the CONTRACTOR shall pay the CITY the amount of said charge, or the portion thereof unsatisfied. The sureties provided for under this Agreement shall become liable for payment should CONTRACTOR fail to pay in full any said cost incurred by the CITY. The permissible charges for any such procurement of the completion of said work should include actual costs and fees incurred to third party individuals and entities (including, but not limited to consultants, attorneys, inspectors, and designers) and actual costs incurred by CITY for the increased dedication of time of CITY employees to the Project.

7. To the fullest extent permitted by law, the CONTRACTOR agrees to and does hereby agree to fully defend, indemnify and hold the CITY, its governing board, officers, agents, Project design team members (architect and consulting engineers), consultants, attorneys, and employees harmless of and from each and every claim, assertion, action, cause of action, arbitration, suit, proceedings, or demand made, and every liability, loss, judgment, award, damage, or expense, of any nature whatsoever (including attorneys' fees, consultant costs), which may be incurred by reason of:

(a) Asserted and/or actual liability arises from claims for and/or damages resulting from damages for:

(1) Death or bodily injury to persons.
(2) Injury to, loss or theft of tangible and/or intangible property/ e.g. economic loss.
(3) Any other loss, damage or expense arising under either (1) or (2) above, sustained by the CONTRACTOR upon or in connection with the work called for in this Project,
except for liability resulting from the sole active negligence, or willful misconduct of the CITY.

(b) Any injury to or death of any person(s) or damage, loss or theft of any property caused by any act, neglect, default or omission of the CONTRACTOR, or any person, firm, or corporation employed by the CONTRACTOR, either directly or by independent contract, arising out of, or in any way connected with the work covered by this Agreement, whether said injury or damage occurs on or off City property.

(c) Any and all liabilities, claims, actions, causes of action, proceedings, suits, administrative proceedings, damages, fines, penalties, judgments, orders, liens, levies, costs and expenses of whatever nature, including reasonable attorneys’ fees and disbursements, arising out of any violation, or claim of violation of the San Diego Municipal Storm Water Permit (Order No. 2001-01), and updates or renewals, of the California Regional Water Quality Control Board Region 9, San Diego, which the CITY might suffer, incur, or become subject by reason of or occurring as a result of or allegedly caused by the construction, reconstruction, maintenance, and/or repair of the work under this Agreement.

The CONTRACTOR, at CONTRACTOR’s own expense, cost, and risk shall defend any and all actions, suit, or other proceedings that may be brought or instituted against the CITY, its governing board, officers, agents or employees, on any such claim, demand or liability, and shall pay or satisfy any judgment that may be rendered against the CITY, its governing board, officers, agents or employees in any action, suit or other proceedings as a result thereof.

8. CONTRACTOR shall take out, prior to commencing the work, and maintain, during the life of this contract, and shall require all subcontractors, if any, of every tier, to take out and maintain:

(a) General Liability and Property Damage Insurance as defined in the General Conditions in the amount with a combined single limit of not less that $3,000,000 per occurrence.

(b) Course of Construction / Builder’s Risk Insurance. See Article 5.2 of General Conditions.

(c) Insurance Covering Special Hazards: The following special hazards shall be covered by rider or riders to the above-mentioned public liability insurance or property damage insurance policy or policies of insurance, or by special policies of insurance in amounts as follows:

   (1) Automotive and truck where operated in amounts as above
   (2) Material hoist where used in amounts as above

(d) Workers’ Compensation Insurance.

(e) Each insurance policy required above must be acceptable to the City Attorney, as follows:

   (1) Each policy must name the CITY specifically as an additional insured under the policy on a separate endorsement page, with the exception of the workers’ compensation and the Errors and Omissions policies.

   (2) Each policy must provide for written notice within no more than thirty (30) days if cancellation or termination of the policy occurs. Insurance coverage must be provided by an A.M. Best's A-rated, class V carrier or better, admitted
in California, or if non-admitted, a company that is not on the Department of Insurance list of unacceptable carriers.

(3) All non-admitted carriers will be required to provide a service of suit endorsement in addition to the additional insured endorsement.

(f) In executing this Agreement, CONTRACTOR agrees to have completed insurance documents on file with the CITY within 14 days after the date of execution. Failure to comply with insurance requirements under this Agreement will be a material breach of this Agreement, resulting in immediate termination at CITY’s option.

9. This Agreement is subject to California Public Contract Code Section 22300, which permits the substitution of securities for any monies withheld by the City under this Agreement, and permits the CONTRACTOR to have all payments of earned retentions by the City paid to an escrow agent at the expense of the CONTRACTOR.

10. Each and every provision of law and clause required by law to be inserted in this Agreement or its attachments shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Agreement shall forthwith be physically amended to make such insertion or correction, without further changes to the remainder of the Agreement.

11. The complete contract as set forth in Paragraph 1 of this Agreement constitutes the entire Agreement of the parties. No other agreements, oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by both parties and pursuant to action of the Escondido City Council.

12. CONTRACTOR shall comply with those provisions of the Labor Code requiring payment of prevailing wages, keeping of certified payroll records, overtime pay, employment of apprentices, and workers' compensation coverage, as further set forth in the General Conditions, and shall file the required workers' compensation certificate before commencing work. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. CONTRACTOR shall post any job site notices required by regulation.

13. The terms “Project Documents” and/or “Contract Documents” where used, shall refer to those documents included in the definition set forth in the General Conditions made a part hereof.
IN WITNESS WHEREOF, this Agreement has been executed on behalf of CITY by its officers thereunto authorized and by CONTRACTOR, the date and year first above written.

CITY OF ESCONDIDO
a municipal corporation
201 North Broadway
Escondido, CA  92025

By: __________________________________ By: __________________________________
Zachary Beck, City Clerk Paul McNamara, Mayor

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
MICHAEL R. MCGUINNESS, City Attorney

By: ________________________________

CONTRACTOR

By: ________________________________ By: ________________________________
Signature                                           Signature*

Print Name                                           Print Name

Title

(Second signature required only for corporation)

By: ________________________________
Signature**

Print Name

Title

(CORPORATE SEAL OF CONTRACTOR, if corporation)

Contractor's License No.

Tax ID/Social Security No.

*If CONTRACTOR is a corporation, the first signature must be by one of the following officers of the corporation: Chairman of the Board, President, or any Vice President.

**If CONTRACTOR is a corporation, the second signature must be by a different person from the first signature and must be by one of the following officers of the corporation: Secretary, any Assistant Secretary, the Chief Financial Officer, or any Assistant Treasurer.
SECTION A-00610 - FAITHFUL PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENT,

That _________________________________________________________ ("Contractor") and
__________________________________ ("Surety") are held and firmly bound unto the CITY OF
ESCONDIDO ("Owner") in the sum of ________________________________________
_______________________ Dollars, for the payment of which sum well and truly to be made,
we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and
severally, firmly by these presents.

WHEREAS, Contractor has been awarded and is about to enter into a contract with Owner to
perform all work required under the Bid Schedule(s) of the Owner's specifications entitled,

EL NORTE PARKWAY IMPROVEMENT PROJECT

WHEREAS, the provisions of the Contract are incorporated by reference into this Faithful
Performance Bond and shall be part of Surety’s obligation hereunder.

NOW THEREFORE, if Contractor shall perform all the requirements of said contract required to
be performed on his part, at the times and in the manner specified herein, then this obligation
shall be null and void, otherwise, it shall remain in full force and effect.

PROVIDED, that

(1) Any alterations in the work to be done or the materials to be furnished, which may be
made pursuant to the terms of the Contract, shall not in any way release Contractor or
Surety thereunder;

(2) Any extensions of time granted under the provisions of Contract shall not release either
Contractor or Surety from their respective obligations to Owner;

(3) Notice of any such alterations or extensions of the Contract is hereby waived by Surety;

(4) Any payments (including progress payments) made on behalf of Owner to Contractor
after the scheduled completion of the work to be performed pursuant to the Contract shall
not release either Contractor or Surety from any obligations under the Contract or this
Faithful Performance Bond, or both, including any obligation to pay liquidated damages
to Owner; and

(5) To the extent Owner exercises its rights pursuant to this Bond, Owner shall be entitled to
demand performance by the surety and be further entitled to recover, in addition to all
other remedies afforded by law, its reasonably incurred costs to complete the work,
attorney’s fees and consultant costs, as well as actual costs incurred by OWNER for the
increased dedication/commitment of time of OWNER employees to the Project. These costs shall be in addition to the penal sum of the bond.

SIGNED AND SEALED, this _____ day of____________________, 20___.

_________________________________________  ______________________________
Contractor  Surety

_________________________________________
Address

_________________________________________
Phone No.

(SEAL)

BY ___________________________ ______________________________
Signature  Signature

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
MICHAEL R. MCGUINNESS, City Attorney

By: _______________________________

City of Escondido  FAITHFUL PERFORMANCE BOND
El Norte Parkway Improvement Project  PAGE A-00610-2
SECTION A-00620 - LABOR AND MATERIAL BOND

KNOW ALL MEN BY THESE PRESENT,

That __________________________________________________________ as Contractor, and ______________________________________________________ as Surety, are held and firmly bound unto the CITY OF ESCONDIDO, hereinafter called Owner, in the sum of ______________________________________ dollars, for the payment of which sum well and truly to be made, we bind ourselves our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has been awarded and is about to enter into the annexed contract with said Owner to perform all work required under the Bid Schedule(s) of the Owner's specifications entitled,

EL NORTE PARKWAY IMPROVEMENT PROJECT

NOW THEREFORE, if said Contractor, or subcontractor, fails to pay for any materials, equipment, or other supplies, or for rental of same, used in connection with the performance of work contracted to be done, or for amounts due under applicable State law for any work or labor thereon, or for amounts due under the Unemployment Insurance Code, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Contractor and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such labor, said Surety will pay for the same in an amount not exceeding the sum specified above, and, in the event suit is brought upon this bond, a reasonable attorney's fee to be fixed by the court. This bond shall inure to the benefit of any persons, companies or corporations entitled to file claims under applicable State law.

PROVIDED, that any alterations in the work to be done or the materials to be furnished, which may be made pursuant to the terms of said contract, shall not in any way release either said Contractor or said Surety thereunder, nor shall any extensions of the time granted under the provisions of said contract release either said Contractor or said Surety, and notice of such alterations or extensions of the contract is hereby waived by said Surety.
SIGNED AND SEALED, this ______ day of____________________, 20__. 

____________________________________  ______________________________________
Contractor                                          Surety

____________________________________
Address

____________________________________
Phone No.

(SEAL)
BY ____________________________________

Signature                                        Signature

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

APPROVED AS TO FORM:

OFFICE OF THE CITY ATTORNEY
MICHAEL R. MCGUINNESS, City Attorney

By: _______________________________
SECTION A-00630 - CITY OF ESCONDIDO BUSINESS LICENSE

In accordance with Municipal Code Section 16, the successful bidder is required to obtain a City of Escondido Business License prior to execution of contract.

The following information must be submitted to the City Clerk prior to execution of contract:

City of Escondido Business License No. _________________________________
Expiration Date _____________________________________________________
Name of Licensee ___________________________________________________
SECTION A-00660 - WORKERS' COMPENSATION INSURANCE CERTIFICATE

If self-insured for Workers’ Compensation, the Contractor shall execute the following form as required by the California Labor Code, Sections 1860 and 1861:

I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, Sections 1860 and 1861, and I will comply with such provisions before commencing the performance of the work of the contract.

Dated: __________________________  Contractor

By: ____________________________  Signature
SAMPLE NOTICE
(REQUIRED UNDER GENERAL CONDITIONS, ARTICLE 6.1.B)

TO THE PEOPLE ON THIS STREET OR AFFECTED STREETS:

WITHIN THE NEXT FEW DAYS, WORK WILL BE STARTED ON THE FOLLOWING PROJECT:
EL NORTE PARKWAY IMPROVEMENT PROJECT

The work may cause some inconvenience, but will be of permanent benefit.

We shall appreciate your cooperation in the following matters:

1. Please be alert when driving or walking in the construction area.

2. Tools, materials and equipment are attractive to children. For the safety of the children, please keep them away.

3. Please report all inconvenience to the superintendent on the job, or to the City of Escondido Field Engineering Inspection Office, 760-839-4664. The name and phone number of the Contractor are given below.

This work is being performed for the City of Escondido by:

The project superintendent’s name and contract information is:

We will endeavor to complete this work as rapidly as possible and with a minimum of inconvenience to you.
SECTION A-00700 - GENERAL CONDITIONS

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ARTICLE 1 – DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated in this Article 1, with meanings applicable to both the singular and plural forms thereof. Descriptions of these terms are binding, and form an integral part of these General Conditions.

Addenda – Written or graphic representations issued prior to the opening of Bids which make additions, deletions, or revisions to the Contract Documents.

Agreement – The written Public Improvement Agreement Contract between the City and the CONTRACTOR covering the Work to be performed; other documents are attached to the Agreement and made a part thereof as provided therein.

Application for Payment – The form accepted by the City which is to be used by the CONTRACTOR to request progress payments or final payment and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

Approval – The written authorization by the Engineer or City for specific applications. Approvals required by the Escondido City Council shall mean the approval of a specific resolution by that Council.

Asbestos – Any material that contains more than one percent (1%) asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

As directed, accepted, rejected, approved, or others of similar meaning which authorize any exercise of judgment shall be distinctly understood to mean that such power to direct, accept, reject, and approve shall be vested only in the City and/or the Engineer.

As shown, as indicated, and as detailed refer to drawings accompanying the specification.

Bid – The offer or proposal of the Bidder, submitted on the prescribed form, setting forth the price or prices for the Work.

Bonds – Bid, performance, and Payment Bonds as well as other instruments of security.

Called For – As called for, shown, noted, and/or indicated in the specifications and/or drawings.

City – The City of Escondido with whom the CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

Clarification – A document issued by the Engineer to the CONTRACTOR that interprets the requirement(s) and/or design intent of the Contract Documents, which may not represent an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times.

Competent Person – "One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and has authorization to take prompt corrective measures to eliminate them." Excerpt from the California Occupational Safety and Health Standards Board.

Confined Space – "Confined space means a space that:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work;
2. Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and
3. Is not designed for continuous employee occupancy." Excerpt from Title 8, General Industry Safety Orders Section 5157.

Construction Administration Documents: Terms, uses and protocols– Notwithstanding any other provisions in the General Conditions, the following terms and definitions shall be used.

1. **CCD** – The term "CCD" shall mean Construction Change Directive. The CCD is a written instrument prepared by the City or its designee and submitted to the CONTRACTOR. The CCD is a written order directing a change in the Work and stating the required pricing method, if any, in the contract sum, and the Contract Time adjusted to reflect a previously approved Fragnet, if any. The CCD, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions, or other revisions within. The CCD shall become
effective when the City has signed the CCD (CONTRACTOR signature is not required). If the CCD results in additional time, the CONTRACTOR shall provide a Fragnet Submittal within **fourteen (14) days**. If the Fragnet Submittal is approved, the Contract Time adjustment shall be incorporated into originating CCD, or incorporated into a separate CCD and/or a Change Order (CO). The approved Fragnet, if any, shall become incorporated into the next monthly schedule update to reflect the time impact(s).

(2) **CO** – The term "CO" shall mean Change Order. The Change Order shall state the change in Work and the contract sum and/or time adjustments, if any. RFP's, FO's and/or CCDs may be incorporated into a Change Order after any adjustments in the contract sum and/or time have been reviewed and accepted by the City. The Change Order and items contained therein cannot be incorporated into the progress payments until the Change Order has been fully executed and accepted by the Contractor and the City.

(3) **COR** – The term "COR" shall mean Change Order Request. The COR is a written instrument prepared by the CONTRACTOR and submitted to the City. The COR is the CONTRACTOR's method for requesting the full and complete terms for changes in the contract sum and/or time, if any. All of the terms of the COR need to be presented without reservations so that the City and/or Engineer can consider the full impact of the COR. The request shall provide an explanation of the basis for entitlement referenced by or based on the Contract Documents. The City shall endeavor to respond to the COR on or within **twenty-one (21) days** of receipt.

(4) **FO** – The term "FO" shall mean Field Order. A Field Order may be approved by the Inspector, at the City's discretion. A written order signed by the City, which may or may not involve a change in the Work, without invalidating the Contract, within the general scope of the Contract. If the FO results in additional time, the CONTRACTOR shall provide a Fragnet Submittal within **fourteen (14) days**. If the Fragnet Submittal is approved, the Contract Time adjustment shall be incorporated into the next monthly schedule update to reflect the time impact, if any.

(5) **RFI** – The term "RFI" shall mean Request for Information. An RFI is a written instrument prepared by the CONTRACTOR and submitted to the City or its designee. An RFI shall be considered a tool for requesting additional information above and beyond that which is available in the Contract Documents and all reference standards, as well as fulfilling the Contract coordination requirements for which the CONTRACTOR is obligated to perform. The RFI shall not be used for requesting design and/or material substitutions.

Prior to issuing an RFI, the CONTRACTOR, Subcontractors, material suppliers and the like shall thoroughly review the Contract Documents and refer to all reference standards for the information sought.

When submitting an RFI, the document shall specify the date issued and the date the information is needed by. However, the contractual response time shall be **fourteen (14) days** from the date the City or its designee receives the RFI. The CONTRACTOR shall plan its work and submit questions in sufficient time to accommodate the response time. For those contracts requiring a CPM schedule, the CONTRACTOR shall include in the RFI the CPM Activity Number and the originating Subcontractor.

The CONTRACTOR shall make efforts to coordinate the work in a timely fashion so as to alleviate priority RFIs. If the RFI is considered a priority, the CONTRACTOR shall state the word "Priority" on the document, and the CONTRACTOR shall provide weekly
RFI Priority Schedules. The CONTRACTOR shall issue and maintain weekly RFI Priority Schedules.

The RFI Priority Schedule shall include a listing of pending requests, including the most current request, which ranks the RFIs in order of priority. The Engineer shall endeavor to respect the CONTRACTOR's requested order of priorities and requested response dates.

The Engineer's response to the RFI shall be considered a Supplemental Instruction (SI) in which the contract sum and/or time is not altered. If the RFI response alters the contract sum and/or time, a Construction Change Directive (CCD) or a Request for Proposal (RFP) may be issued for the changed condition(s).

Should the CONTRACTOR determine the response to the RFI creates changes in the contract sum and/or time, the CONTRACTOR must submit a Change Order Request (COR) to the City for review and decision along with a Fragnet if required.

(6) RFP – The term "RFP" shall mean Request for Proposal. The RFP is a written instrument prepared by the City and submitted to the CONTRACTOR. The RFP is a request for changes in the contract sum and/or time, and a proposal for potential change in contract conditions, for which the contract sum and/or time may or may not be affected. The CONTRACTOR shall provide the full and complete terms of the request in a Change Order Request (COR) within fourteen (14) days: If the RFP results in added time, the CONTRACTOR shall provide a Fragnet Submittal within the same fourteen (14) days. If the City accepts the full terms of the RFP, the RFP shall be incorporated into a Construction Change Directive (CCD) and/or a Change Order (CO), and/or a Field Order (FO) and the approved Fragnet, if any, shall become incorporated into the next monthly schedule update to reflect the time impact(s).

(7) SI – The term "SI" shall mean Supplemental Instruction. The SI is a written instrument prepared by the Engineer and submitted to the CONTRACTOR. The SI can order changes in the Work that do not affect the contract sum and/or time. Supplemental Instructions can also be made in an RFI response by issuing a formal SI document or by written letter from the City's or its designee's office.

**Contract Price** – The total monies payable by the City to the CONTRACTOR under the terms and conditions of the Contract Documents.

**Contract Time** – The duration of the Project as defined in the Agreement.

**Contractor** – The individual, partnership, corporation, joint venture, or other legal entity with whom the City has executed the Agreement.

**Day** – Days shall be considered calendar days and measured from midnight to the next midnight.

**Defective work** – Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or Work that has been damaged prior to the final payment.

**Deficiency List** – A list maintained by the City, representing an ongoing list of items that do not conform to the Contract Documents. The Deficiency List is added to the Punch-List when the CONTRACTOR asserts that the Work is complete.

**Deficiency Notice** – A notice from the City to the CONTRACTOR describing work that does not conform to the Contract Documents.

**Delay Days** – Delay Days shall be considered working days. Assuming a 5-day workweek, delay days shall be converted into calendar days by a factor of 1.4. Hence 10 Delay Days equal 14 Calendar Days. Delay Days will be evaluated and identified as one of the three categories listed below. Excusable delays will create adjustments in the Contract Time. Compensable delays will create
adjustments in both the contract sum and Contract Time. In the event of concurrent delays caused by the City and CONTRACTOR or its subcontractors, material men or suppliers, no delay damages are recoverable by either the City or the CONTRACTOR, but an extension in time shall be granted for each contemporaneous Delay Day occurring on the critical path. Contemporaneous delays shall be evaluated using a schedule fragnet(s), schedule updates, daily reports, notices, and any other records of delaying events. In the event of a delay, the CONTRACTOR shall provide a Notice of Delay in accordance with Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE" and submit a schedule fragnet depicting the delay with all substantiating documentation within fourteen (14) days of the event.

<table>
<thead>
<tr>
<th>Excusable &amp; Compensable</th>
<th>Excusable &amp; Non-Compensable</th>
<th>Inexcusable</th>
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| Delays caused by the City, the Engineer, or the City's separate Contractor(s). | 1. Unusual weather  
2. Strikes or labor shortages  
3. Acts of God  
4. Fires, war, acts of government & pestilence  
5. Unusual and unanticipated delays in manufacturing and/or deliveries of materials and/or equipment  
6. Concurrent Delays | Delays caused by the CONTRACTOR, Subcontractor(s), material-men or suppliers. |

(1) **Concurrent Delay** – Delays caused by both the Contractor and the City and occurring at the same time; existing together, relating to same activity or activities, and affecting the critical path.

(2) **Contemporaneous Delay** – Delays existing or happening in the same period of time.

**Drawings** – The drawings, plans, maps, profiles, diagrams, and other graphic representations which indicate the character, location, nature, extent, and scope of the work and which have been prepared by the Engineer and are included and/or referred to in the Contract Documents. Shop Drawings are not Drawings as so defined.

**Effective Date of the Agreement** – The Effective Date is indicated in the Agreement, but if no such date is indicated, the Effective Date is when the Agreement is signed and delivered by the last of the two parties.

**Engineer** – The individual, partnership, corporation, joint venture, or other legal entity designated by the City, if any is so designated, in the Supplementary General Conditions. Such designation may include more than one individual or entity, and may be changed by the City with written notification to the CONTRACTOR.

**Engineer of Work** - The responsible Engineer who wet stamped and signed the Contract Specifications and Drawings. The responsibilities of the Engineer of Work are set forth in California Business and Professions code and other laws as may be applicable. The responsibilities under law of the Engineer of Work are not modified by these General Conditions.

**Fragnet** – Also known as a "Sub-network." Refer to the specification section titled CONSTRUCTION SCHEDULING for the definition of a Fragnet and the requirements thereof. A Fragnet will be required for time impact analysis and time extensions. CONTRACTOR's failure to provide a Notice of Delay within 24 hours, and submit a Fragnet for time impact analysis and time extension(s) on or within 14 days of the delaying event, shall forfeit and invalidate all considerations for time and/or payment. (Refer to the definition of "Delay Days" for additional information.) The costs to prepare Fragnets and schedule updates resulting from approved Fragnets.
are part of the Work, regardless of number and difficulty. The City will provide a response to the Fragnet on or within 14 days.

**Hazardous Waste** – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6906), as amended from time to time.

**Inspector** – The City's appointed representative(s) for inspection of in-progress or completed Work.

**Laws and Regulations; Laws or Regulations** – Any and all applicable laws, rules, regulations, ordinances, codes, and/or orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.

**Materials** – Materials incorporated in the project or used or consumed in the performance of the Work.

**Milestone** – A principal event specified in the Contract Documents relating to an intermediate completion date of a separately identifiable part of the Work or a period of time within which the separately identifiable part of the Work should be performed prior to Project Completion of all the Work.

**Notice of Award** – The written notice by the City to the apparent successful bidder stating that, upon compliance by the apparent successful bidder with the precedent conditions enumerated therein within the time specified, the City will enter into an Agreement.

**Notice of Completion** – A form signed by the City indicating that the Work is Complete ("Project Completion") and stating the date of completion. After acceptance of the Work by the City's governing body, the Escondido City Council, and due authority is given to the Deputy Director of Public Works, the form is signed by the Deputy Director of Public Works and filed with the San Diego County Recorder. This filing starts the 30-day lien filing period on the Work.

**Notice to Proceed** – The written notice issued by the City to the CONTRACTOR authorizing the CONTRACTOR to proceed with the Work and establishing the date of commencement of the Contract Times.

**Partial Utilization** – Use by the City of a completed part of the Work for the purpose for which it is intended prior to Project Completion.

**Project** – The total construction project of which the Work to be provided under the Contract Documents may be the whole or a part as indicated elsewhere in the Contract Documents.

**Project Completion** – The acceptance by the Escondido City Council of the Work of improvement (as in the Notice of Completion).

**Project Documents and/or Contract Documents** – Includes collectively, to wit: Notice Inviting Sealed Bids/Notice to Contractors, Instructions to Bidders, Bid Form, Designation of Subcontractors, Workers' Compensation Certificate, Change Orders, Shop Drawing Transmittals, Information Required of CONTRACTOR, Non-collusion Affadavit, Faithful Performance Bond, Payment Bond, Insurance Certificates, Guarantees, General Conditions, Supplementary General Conditions, Special Conditions, Plans, Drawings, Specifications, the Agreement and all modifications, addenda, and amendments thereto.

**Provide** – Term shall include "provide complete in place," that is, "furnish and install."

**Punch–List** – A list generated by the Engineer, in conjunction with the City, of missing work, of damaged existing facilities, and a list of any and all work described by the Contract Documents that has not been completed in conformance with the Contract Documents. A Punch-List may be amended by the City from time to time based on the results of CONTRACTOR re-work and the discovery of additional non-conforming work.

**Resident Project Representative** – The authorized representative of the City/Engineer who is assigned to the Site or any part thereof.

**Safety Orders/Records** – Those issued by the Division of Industrial Safety and OSHA standards for construction.

**Samples** – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

**Shop Drawings** – All drawings, diagrams, illustrations, schedules, and other data which are specifically prepared by or for the CONTRACTOR and submitted by the CONTRACTOR to illustrate some portion of the Work.
Site – The physical locale where the Project is to be constructed, including all public rights-of-way, utilities, improvements, and shall be limited solely by formal, recorded property lines adjacent to the physical locale where the Project is to be constructed.

Specifications – Those technical or additional project management provisions that are binding on the Work as described in the Supplementary General Conditions.

Stipulated Prices or Markups – Prices or markups set forth as a condition of the Contract.

Stop Notice – A legal remedy for subcontractors and suppliers who contribute to public works but who are not paid for their work, which secures payment from construction funds possessed by the City. The Stop Notice may also be issued by public entities, such as the department of Labor, as a notice to withhold due to failure to pay the required wages to workers.

Subcontractor – A licensed entity of any tier (whether having a direct contractual relationship with Contractor or another Subcontractor) that provides labor to the Project and/or furnishes material worked to a special design according to plans, drawings, and specifications of this work, but does not include one who merely furnishes material not so worked.

Supplementary General Conditions – The part of the Contract Documents which make additions, deletions, or revisions to these General Conditions.

Supplier – A manufacturer, fabricator, distributor, material-man, or vendor having a direct contract with the CONTRACTOR or with any Subcontractor to furnish materials, equipment, or product to be incorporated in the WORK by the CONTRACTOR or any Subcontractor.

Surety – The person, firm, or corporation that executes as surety the CONTRACTOR's Bid Security, faithful performance bond and/or payment bond.

Utilities – All pipelines, conduits, ducts, cables, wires, tracks, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground or above the ground to furnish any of the following services or materials: water, sewage, sludge, drainage, fluids, electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, traffic control, or other control systems.

Work – The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents.

Workers – Workers include laborers, workers, and mechanics.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 DELIVERY OF BONDS AND INSURANCE CERTIFICATES. When the CONTRACTOR delivers the signed Agreement to the City, the CONTRACTOR shall also deliver to the City such Bonds and insurance policies and certificates and documents as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

2.2 COPIES OF DOCUMENTS. The City will furnish to the CONTRACTOR as many copies of the Contract Documents specified in the Instructions to Bidders. Additional copies will be provided, upon request, at the cost of duplication.

2.3 ESCROW OF BID DOCUMENTS

A. SCOPE:

1. The CONTRACTOR shall submit, within ten (10) days after the award of contract one (1) copy of all documentary information generated in preparation of the bid price for the project. This material is hereinafter referred to as the "Escrow Bid Documents." The Escrow Bid Documents will be held in escrow for the duration of the contract.
2. The CONTRACTOR agrees that the Escrow Bid Documents constitute all of the information used in preparation of the bid, and that no other bid preparation information will be considered in resolving claims.

3. Nothing in the Escrow Bid Documents shall change or modify the terms or conditions of the Contract.

B. PROPERTY: The Escrow Bid Documents are and will always remain the property of the CONTRACTOR, subject only to joint review by the City and the CONTRACTOR, as provided in paragraph (G) "EXAMINATION." The City stipulates and expressly acknowledges that the Escrow Bid Documents constitute trade secrets and are proprietary and confidential. This acknowledgment is based on the City's express understanding that the information contained in the Escrow Bid Documents is not known outside the CONTRACTOR's business, is known only to a limited extent and only by a limited number of employees of the CONTRACTOR, is safeguarded while in CONTRACTOR's possession, is extremely valuable to CONTRACTOR and could be extremely valuable to CONTRACTOR's competitors by virtue of it reflecting CONTRACTOR's contemplated techniques of construction. The City acknowledges that the CONTRACTOR expended substantial sums of money in developing the information included in the Escrow Bid Documents and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. The City further acknowledges that the Escrow Bid Documents and the information used in the CONTRACTOR's business were intended to give the CONTRACTOR an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. The City agrees to safeguard the Escrow Bid Documents and all the information contained therein against disclosure to the fullest extent permitted by law.

C. PURPOSE: Escrow Bid Documents will be used to assist in the negotiation for the settlement of claims. They will not be used for evaluation of the CONTRACTOR's anticipated methods of construction or to assess the CONTRACTOR's qualification for performing the Work.

D. FORMAT AND CONTENTS:

1. CONTRACTOR may submit Escrow Bid Documents in the usual cost-estimating format. Escrow Bid Documents shall be adequate to enable complete understanding and proper interpretation for their intended use.

2. Escrow Bid Documents shall clearly itemize the estimated costs of performing the Work. Items shall be separated into sub-items as required to present a complete and detailed cost estimate and allow a detailed cost review. The Escrow Bid Documents shall include all quantity takeoffs, labor, equipment, calculations of rate production and progress, copies of quotations from Subcontractors and suppliers, memoranda, narratives, consultant's reports, add/deduct sheets, and all other information used by the CONTRACTOR to arrive at the prices contained in the bid proposal. Estimated costs shall be broken down into the CONTRACTOR's usual estimate categories such as direct labor, repair labor, material, equipment, construction equipment operation, construction equipment ownership, expendable materials, materials and Subcontractor cost as appropriate. Plant and equipment, indirect costs shall be detailed in the CONTRACTOR's usual format. The CONTRACTOR's allocation of plant and equipment, indirect costs, contingencies, markup and other items shall be included.

3. All costs shall be identified for all items. Sub-items amounting to less than $10,000.00 estimated unit costs are acceptable without a detailed cost estimate,
provided that labor, equipment, materials, construction equipment, expendable materials and subcontracts, as applicable, are included, provided that indirect costs, contingencies, and markups, as applicable, are allocated.

4. Bidding materials provided by the City shall not be included in the Escrow Bid Documents unless needed to comply with the requirements of this specification.

E. SUBMITTAL:

1. The Escrow Bid Documents shall be submitted by the CONTRACTOR in a sealed container(s) within **10 days** after the day of award of the contract. The container shall be clearly marked on the outside with the CONTRACTOR's name, date of submittal, project name and the words "Escrow Bid Documents."

2. The Escrow Bid Documents shall be accompanied by an index to inventory the contents of the submittal and a Bid Documentation Certification, signed by the individual who executed the bidding proposal, stating that the material in the Escrow Bid Documents constitutes all documentary information used in preparation of the bid and that he/she has personally examined the contents of the Escrow Bid Documents container and has found that the documents in the container(s) are complete and organized as shown by the CONTRACTOR's index.

3. The City shall examine the index. This examination is to ensure that the index is detailed and complete and conforms to the "format and contents" as stated in paragraph (D) above. If all the documentation required in paragraph (D) "FORMAT AND CONTENTS" has not been indexed in the original submittal a revised index shall be submitted at the CITY's discretion. Timely submission of complete Escrow Bid Documents is an essential element of the CONTRACTOR's responsibility. Failure to provide the necessary Escrow Bid Documents may be sufficient cause for the CITY to assess damages under the contract. If the CONTRACTOR's proposal is based on subcontracting any part of the Work, each Subcontractor, whose total subcontract price exceeds the lesser of five percent (5%) of the total contract price proposed by the CONTRACTOR or $200,000 shall provide separate Escrow Bid Documents to be submitted with those of the CONTRACTOR. These submittals will be examined in the same manner and at the same time as the examination described above. If the CONTRACTOR wishes to subcontract any portion of the Work or requests substitutions of any Subcontractor after award, the CITY retains the right to require the CONTRACTOR to submit Escrow Bid Documents from the proposed Subcontractor before the subcontract or substitution is approved.

F. STORAGE: The escrow bid documents will be placed in escrow, for the life of the contract, in a mutually agreeable institution. The city will pay the cost of storage.

G. EXAMINATION:

1. The Escrow Bid Documents shall be examined by the City, the Engineer and CONTRACTOR, at any time deemed necessary by either the City or the CONTRACTOR, to assist in the negotiation for the settlement of claims.

2. Examination of the Escrow Bid Documents is subject to the following conditions:

   a. As trade secrets, the Escrow Bid Documents are proprietary and confidential as described in paragraph (B).
b. The City and the CONTRACTOR shall each designate, in writing to the other party and a minimum of five (5) days prior to examination, representatives who are authorized to examine the Escrow Bid Documents. No other person shall have access to the Escrow Bid Documents.

c. Access to the Escrow Bid Documents under this paragraph will take place only in the presence of duly designated representatives of both the City and the CONTRACTOR.

H. FINAL DISPOSITION: The escrow bid documents will be returned to the contractor at such time as the contract has been completed and final settlement has been achieved.

2.4 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED. The Contract Times will start to run on the commencement date stated in the Notice to Proceed.

2.5 STARTING THE WORK

A. The CONTRACTOR shall begin to perform the Work on the commencement date stated in the Notice to Proceed, but no Work shall be done at the Site prior to said commencement date. The Work shall be commenced immediately after Notice to Proceed, and shall be diligently prosecuted until completion.

B. Before undertaking each part of the Work, the CONTRACTOR shall review the Contract Documents in accordance with Article 3 of these General Conditions.

2.6 CONTINUING THE WORK. The CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the City. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the CONTRACTOR and the City may otherwise agree in writing.

2.7 PRECONSTRUCTION MEETING. A preconstruction meeting shall be called after the award and execution of the Contract and prior to construction. The CONTRACTOR (a Principal and Project Superintendent) shall attend. The CONTRACTOR shall plan on spending no less than four (4) hours of time with Subcontractor(s) and project superintendent(s) for this meeting.

2.8 CITY OBSERVED HOLIDAYS. CONTRACTOR is required to observe City holidays. The City observes the following holidays:

1. New Years Day
2. Martin Luther King, Jr. Day
3. Presidents' Day
4. Memorial Day
5. Independence Day
6. Labor Day
7. Veterans Day
8. Thanksgiving Day
9. Day after Thanksgiving
10. Christmas Day
ARTICLE 3 – INTENT AND USE OF CONTRACT DOCUMENTS

3.1 CONTRACTOR MUST REVIEW CONTRACT DOCUMENTS, DRAWINGS AND SPECIFICATIONS

A. Drawings and Specifications are intended to be complementary (that which is required by one shall be required by the other; to the extent there is more than one reference which exists, the reference requiring the more stringent and/or best standards and requirements shall be furnished and installed) and delineate and describe the Project and its component parts to such a degree as will enable a skilled and competent CONTRACTOR to intelligently bid upon the Work, coordinate the Work and to carry out the Work to a successful conclusion. If, as and to the extent that Public Contract Code section 1104 is deemed to apply after the Award of Contract, CONTRACTOR shall not be required to assume responsibility for the completeness and accuracy of architectural or engineering plans and specifications, notwithstanding any other provision in the Project Documents, except to the extent that CONTRACTOR discovered or should have discovered and reported any errors and omissions to the City, including but not limited to as the result of any review of the plans and specifications by CONTRACTOR required by the Instructions to Bidders or other Project Documents, whether or not actually performed by CONTRACTOR.

B. Drawings and Specifications are intended to comply with all laws, ordinances, rules and regulations of constituted authorities having jurisdiction, and where referred to in the Project Documents, these laws, ordinances, rules and regulations shall be considered as a part of the Agreement within the limits specified. The CONTRACTOR shall bear all expenses of correcting Work done contrary to applicable laws, ordinances, rules and regulations and if the CONTRACTOR performed the Work (1) without first consulting the City for further instructions regarding the Work, or (2) disregarded the City's instructions regarding the Work.

C. Questions regarding interpretation of drawings and specifications shall be submitted in writing to be clarified by the City; provided, however, that in the event the City determines that CONTRACTOR's requests for information (RFI's) are not justified or do not reflect adequate or competent supervision, coordination, and/or knowledge by the CONTRACTOR or its Subcontractors, CONTRACTOR shall be required to pay the City's reasonable and customary fees in processing and responding to such requests. Should the CONTRACTOR commence Work or any part thereof without seeking clarification, and/or performing its own coordination obligations, the CONTRACTOR waives any claim for extra Work or damages as a result of any ambiguity, conflict or lack of information.

D. Figured dimensions on drawings shall govern, but Work not dimensioned or mis-described shall be as directed. Work not particularly shown, mis-described or specified shall be the same as similar parts that are shown or specified. Large scale drawings shall take precedence over smaller scale drawings as to shape and details of construction. Specifications shall govern as to materials, workmanship, and installation procedures. Drawings and specifications are intended to be fully cooperative and to agree. If through the process of contract-required coordination, CONTRACTOR observes that drawings and specifications are in conflict, CONTRACTOR shall promptly notify the City in writing, and any necessary changes shall be adjusted as provided in Article 10 titled CHANGES IN THE Work; provided, however, that the specification calling for the higher quality material or workmanship shall prevail without additional cost to the City.
E. Materials or Work described in words, which so applied, have a well known technical or trade meaning shall be deemed to refer to such recognized standards.

F. It is not the intention of the Agreement to go into detailed descriptions of any materials and/or methods commonly known to the trade under "trade name" or "trade term." The mere mention or notation of such "trade name" or "trade term" shall be considered a sufficient notice to CONTRACTOR that it will be required to complete the Work so named with all its incidental and accessory items according to the best practices of the trade.

G. The naming of any material and/or equipment shall mean furnishing and installing, including all incidental and accessory items thereto and/or labor necessary to achieve full and complete functioning of the material and/or equipment according to the best practices of the trade(s) involved, unless specifically noted otherwise.

3.2 AGREEMENT TO THOROUGHLY REVIEW DETAIL DRAWINGS AND INSTRUCTIONS

A. All parts of the described and shown construction drawings shall be of the best quality of their respective kinds and in executing the Agreement, the CONTRACTOR agrees to use all diligence to become fully informed as to the required construction and finish, and in no case to proceed with the different parts of the Work without obtaining first from the City such directions and/or drawings as may be necessary for the proper performance of the Work.

B. In case of ambiguity, conflict, or lack of information, the City shall furnish additional instructions by means of drawings or otherwise, as necessary for proper execution of the Work. All such drawings and instructions shall be consistent with Project Documents, true developments thereof, and reasonably inferable therefrom. Such additional instructions shall be furnished with reasonable promptness, provided that CONTRACTOR informs the City of the relationship of the request to the critical path of construction. Refer to the term, use and protocol of an RFI defined in Article 1 entitled "Definitions" under "Construction Administration Documents."

C. Work shall be executed in conformity therewith and CONTRACTOR shall do no Work without proper drawings and instructions.

D. The City may furnish necessary additional details to more fully explain the Work, which details shall be considered as part of the Project Documents.

E. Should any details be more elaborate, in the opinion of the CONTRACTOR, than scale drawings and specifications warrant, CONTRACTOR shall give written notice thereof to the Engineer within 21 days of receipt. In case no notice is given to the Engineer within 21 days, it will be assumed the details are reasonable development of the scale drawings. In case proper notice is given, then it will be considered, and if found justified, the Engineer will either modify the drawings or shall recommend a change order for any extra Work that may be involved.

F. If it is found at any time, before or after completion of the Work, that the CONTRACTOR has varied from the drawings and/or specifications, in materials, quality, form, finish, or in the amount or value of the materials and labor used, the City shall take the issue under advisement and consider the following options:

1. That all such improper Work should be removed, remade, replaced, and all Work disturbed by these changes be made good at the CONTRACTOR's expense; or
2. That the City deduct from any amount due CONTRACTOR, the sum of money equivalent to the difference in value between the Work performed and that called for by the drawings and specifications. The City shall determine such difference in value. The City, at its option, may pursue a recommendation made by the Engineer.

3.3 REFERENCED STANDARD. No provision of any referenced standard specification, manual or code shall be effective to change the duties and responsibilities of the City, the CONTRACTOR, the Engineer, or any of their consultants, agents, or employees, from those set forth in the Contract Documents, nor shall it be effective to assign to the City, Engineer, or any of Engineer's consultants, agents, or employees any duty or authority to direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.4 AMENDING CONTRACT DOCUMENTS. The Contract Documents may be amended only in writing to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by a Change Order (pursuant to Article 10-CHANGES IN THE WORK).

3.5 NO ASSIGNMENT. The CONTRACTOR shall not assign, transfer, convey, sublet or otherwise dispose of this Agreement or of its rights, title or interest in or to the same or any part thereof. If the CONTRACTOR shall assign, transfer, convey, sublet or otherwise dispose of the Agreement or its right, title or interest therein, or any part thereof, such attempted or purported assignment, transfer, conveyance, sublease or other disposition shall be null, void and of no legal effect whatsoever; and the Agreement may, at the option of the City, be terminated, revoked and annulled, and the City shall thereupon be relieved and discharged from any and all liability and obligations growing out of the same to the CONTRACTOR, and to its purported assignee or transferee.

3.6 REUSE OF DOCUMENTS. Neither the CONTRACTOR, nor any Subcontractor or Supplier, nor any other person or organization performing any of the Work under a contract with the City shall have or acquire any title to or ownership rights in any of the Drawings, Technical Specifications, or other documents used on the Work, and they shall not reuse any of them on the extensions of the Project or any other project without written consent of City.

ARTICLE 4 – SITE OF THE WORK

4.1 AVAILABILITY OF LANDS. The City will furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the City, unless otherwise provided in the Contract Documents. Nothing contained in the Contract Documents shall be interpreted as giving the CONTRACTOR exclusive occupancy of the lands or rights-of-way provided. The CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment; provided, that the CONTRACTOR shall not enter upon nor use any property not under the control of the City until a written temporary construction easement agreement has been executed by the CONTRACTOR and the property owner, and a copy of said easement furnished to the Engineer prior to said use; and, neither the City nor the Engineer will be liable for any claims or damages resulting from the CONTRACTOR's trespass on or use of any such properties. The CONTRACTOR shall provide the City with a signed release from the property owner confirming that the lands have been satisfactorily restored upon completion of the Work.
4.2 SOILS INVESTIGATION REPORT & CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS

A. SUBSURFACE EXPLORATIONS: Reference is made to the Supplementary General Conditions for identification of those reports of explorations and tests, if any, of subsurface conditions at the Site that have been utilized by the City or its Engineer in the preparation of the Contract Documents.

B. SOILS INVESTIGATION REPORT. When a soils investigation report has been prepared or referenced by the City or its Engineer to assist with the design of the facility, such report is available for the CONTRACTOR's use in preparing its bid and Work under this Agreement. All soil and test-hole data, water table elevations, and soil analyses shown on the drawings or included in the Specifications apply only at the location of the test holes and to the depths indicated. Geotechnical reports for the test holes, if any, which have been drilled are available from the City. Any additional subsurface exploration shall be done by the CONTRACTOR or Bidder at their own expense. The indicated elevation of a water table is that which existed on the date when test holes were made and the level of the groundwater was determined. It is the CONTRACTOR's responsibility to determine the level of ground water or water table at the time of project construction. A difference in elevation between the level of ground water or water table indicated on the soil boring logs and groundwater actually encountered during construction is a risk of the CONTRACTOR's bid amount, and will not be considered as a basis for extra Work or additional compensation.

C. CONTRACTOR SHALL NOTIFY THE CITY OF UNKNOWN CONDITIONS. If, during the course of Work under this Agreement, CONTRACTOR encounters subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in contract activities of the character provided for in the Contract Documents, then CONTRACTOR shall notify the City of the discovery of the condition before the condition is materially changed, disturbed and/or covered, and before any additional Work is performed. The CONTRACTOR must notify the City, in writing of unforeseen conditions, or differing Site conditions, promptly upon their discovery and before they are disturbed. Reference Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE".

D. WARNING: THE CITY DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. SOILS INVESTIGATION REPORTS ARE PROVIDED FOR CONTRACTOR'S INFORMATION ONLY. THE CITY OF ESCONDIDO DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION. IF ANY CONTRACTOR WISHES TO PERFORM A PRE-BID SITE INSPECTION, WHICH INCLUDES SOILS TESTING, A METHOD TO DO SO IS AVAILABLE AND IS DESCRIBED IN PARAGRAPHS 4.7 and 4.8 OF THE "INSTRUCTIONS TO BIDDERS".

4.3 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

A. The information and data indicated in the Contract Documents with respect to existing underground Utilities at or contiguous to the Site are based on information and data furnished to the City or the Engineer by the owners of such underground Utilities. The Contract plans depict the various utilities as they are believed to exist, however, the
CONTRACTOR shall not rely on the locations and depths indicated. The CONTRACTOR shall comply with California Government Code Section 4216 ("Section 4216"). The CONTRACTOR shall determine the location and depth of all utilities that are indicated and those that are not indicated as follows:

1. As provided in Section 4216, at least **2 working days** prior to commencing any excavation, but not more than **14 calendar days**, the CONTRACTOR shall contact the regional notification center (Underground Service Alert of Southern California) and obtain an inquiry identification number. Refer to Article 6.28.

2. Where underground main distribution conduits such as water, gas, sewer, electric power, telephone, or cable television are shown on the Plans, the CONTRACTOR shall assume that every property parcel will be served by a service connection of each type of utility.

3. Section 4216 does not require the Local Agency to mark out non-pressurized sewer lines, non-pressurized storm drains or other non-pressurized drain lines.

4. The California Department of Transportation, CALTRANS, is not required by Section 4216 to become a member of the regional notification center. The CONTRACTOR shall call CALTRANS directly for location of its subsurface installations.

5. The CONTRACTOR shall determine the location and depth of all utilities (the top and the bottom), including joint trenches and service connections, which have been marked by the respective owners and which may affect or be affected by its operations. The CONTRACTOR shall determine the location and depth of all utilities not required to be marked out by the Local Agency.

6. The CONTRACTOR shall further determine the location and depths of all utilities that were not known or indicated on the project plans, but, after CONTRACTOR compliance with Section 4216, were marked out by the utility owners.

7. The CONTRACTOR shall not assume that existing utilities are buried at depths and locations specified in the pertinent standard drawings. In Escondido, existing utilities are frequently found at depths and locations that are not in conformance with the existing standard drawings.

8. The CONTRACTOR shall have the responsibility for coordinating as many call-backs of utility owners and CONTRACTOR mobilizations as may be required to determine the exact location, or identity, of all utilities. Utilities that are indicated on the Contract plans in a certain location, and are marked out in a different location by the utility owner, are considered by this Contract to be the same utility. The City is not responsible for errors in mark-outs made by the Utility owners.

9. The CONTRACTOR shall have full responsibility for the safety and protection of all existing utilities, to the extent allowed by California Government Code Section 4215, and repairing any damage thereto resulting from the Work. The CONTRACTOR shall use hand tools and/or vacuum equipment and use reasonable care to protect existing utilities.

10. Unknown Utility on the Contract plans, but marked out in the field by the utility owner: The Work of potholing, protecting in place, trenching over or under, repairing the road surface, backfilling with the utility owner's preference of material, plotting on the record drawings, and describing a previously unknown utility is fully contemplated by the City as being a regular occurrence on trenching projects.
11. Unknown utilities not marked out by the utility owner: Should the CONTRACTOR come across utilities that are not known nor marked out by the utility owner, the CONTRACTOR shall immediately call Underground Service Alert and the City. The City is not responsible for the consequences of the failure of a Utility owner to mark out its facilities.

12. Abandoned Utilities. Abandoned utilities are considered as unknown utilities for the purpose of CONTRACTOR payment, unless they are indicated on the project plans.

13. The CONTRACTOR shall call for a "standby inspector" when requested to do so by a utility owner, and follow their direction.

B. Locating Subsurface Installations (excerpted from California Government Code section 4216):

1. The excavator shall determine the exact location of subsurface installations in conflict with the excavation by excavating with hand tools within the area of the approximate location of subsurface installations as determined by the field marking provided in accordance with (California Government Code) section 4216.3 before using any power-operated or power-driven excavating or boring equipment within the approximate location of the subsurface installation, except that power-operated or power-driven excavating or boring equipment may be used for the removal of any existing pavement if there are no subsurface installations contained in the pavement. If mutually agreeable with the operator (the operator is the owner of the Utility in this case) and the excavator (the excavator is the CONTRACTOR in this case), the excavator may utilize power-operated or power-driven excavating or boring equipment within the approximate location of a subsurface installation and to any depth. (Clarification added)

2. If the exact location of the subsurface installation cannot be determined by hand excavating in accordance with subdivision B1, the excavator (the CONTRACTOR) shall request the operator (the owner of the Utility) to provide additional information to the excavator, to the extent that information is available to the operator, to enable the excavator to determine the exact location of the installation. (Clarification added)

4.4 HAZARDOUS MATERIALS

A. The provisions of Articles 4.2, 4.3, and 4.4 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.

B. Reference is made to the Supplementary General Conditions for identification of those reports and drawings relating to Asbestos, Hazardous Waste, PCBs, Petroleum and/or Radioactive Material identified at the Site that have been utilized by the Engineer in the preparation of the Contract Documents, if any.

C. Copies of these reports and drawings may be examined at the office of the City during regular business hours. Please make an appointment. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports and drawings, except for such physical dimensions that can be field verified; however, the interpretation of such technical data, including any interpolation or extrapolation thereof, and opinions contained in such reports and drawings are not to be relied on by the CONTRACTOR.
D. The City shall be responsible for any Asbestos, Hazardous Waste, PCBs, Petroleum, or Radioactive Material uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the Site. The City will not be responsible for any such material brought to the Site by CONTRACTOR, Subcontractors, Suppliers, or anyone else for whom CONTRACTOR is responsible.

4.5 REFERENCE POINTS

A. The City will provide access to the bench-mark book maintained by the City Surveyor, and provide any survey reference material that may be on file. The CONTRACTOR shall furnish all other lines, grades, and bench-marks required for proper execution of the Work.

B. The CONTRACTOR shall preserve all bench marks, stakes, and other survey marks and in case of their removal or destruction by any party, the CONTRACTOR shall be responsible for the accurate replacement of such reference points by personnel qualified under the applicable state codes governing land surveyors. The recording of any replacement corners, or other points, shall be the responsibility of the CONTRACTOR.

ARTICLE 5 – BONDS AND INSURANCE

5.1 BONDS

A. CONTRACTOR shall furnish a surety bond in an amount equal to one hundred percent (100%) of the contract price as security for faithful performance of this Agreement and shall furnish a separate bond in an amount equal to one hundred percent (100%) of the contract price as security for payment to persons performing labor and furnishing materials in connection with this Project. Bonds shall be in the form set forth in these Project Documents.

B. All Bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff, Bureau of Government Financial Operations, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of such agent's authority to act.

C. If the surety on any Bond furnished by the CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Work is located, the CONTRACTOR shall, within seven (7) days thereafter, substitute another Bond and surety, which must be acceptable to the City. No Work shall be performed without Bonds, in a form and issued by a surety acceptable to the City, required by the Contract Documents to be in full force and effect. If one or more of such Bonds shall, at any time, not be in full force and effect, CONTRACTOR shall immediately cease performance until it is in full compliance with the bonding requirements of the Contract Documents and California law. All delays and costs incurred and/or resulting from such occurrence shall be to the exclusive account of CONTRACTOR. Failure of the CONTRACTOR to promptly cure any failure to have the necessary Bonds in full force and effect shall be grounds for termination for default.

D. All Bonds required by the Contract Documents to be purchased and maintained by CONTRACTOR shall be obtained from surety companies that are duly licensed or
authorized in the State in which the Project is located to issue Bonds for the limits so required. Such surety companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary General Conditions.

5.2 LIABILITY, PROPERTY, FIRE, BUILDER'S RISK AND OTHER INSURANCE REQUIREMENTS

A. LIABILITY AND PROPERTY DAMAGE. Before the commencement of the Work and for the minimum amount of limits set forth herein the CONTRACTOR shall purchase from and maintain such commercial general liability insurance per occurrence for bodily injury, personal injury and property damage as set forth in the Agreement and automobile liability insurance per accident for bodily injury and property damage combined single limit as set forth in the Agreement as will protect the CONTRACTOR, and those required to be endorsed as additional insured from claims set forth below, which may arise out of or result from the CONTRACTOR's operations under the Contract and for which the CONTRACTOR may be legally liable, whether such operations are by the CONTRACTOR, by a Subcontractor, by Sub-subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

1. Claims for damages because of bodily injury (including emotional distress), sickness, disease, or death of any person other than the CONTRACTOR's employees. This coverage shall be provided in a form at least as broad as Insurance Services Office (ISO) Form CG 0001 11188;

2. Claims for damages arising from personal or advertising injury in a form at least as broad as ISO Form CG 0001 11188;

3. Claims for damages because of injury or destruction of tangible property, including loss of use resulting there from, arising from operations under the Project Documents; and

4. Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work; and

5. Claims involving blanket contractual liability applicable to the CONTRACTOR's obligations under the Project Documents, including liability assumed by and the indemnity and defense obligations of the CONTRACTOR and the Subcontractors; and

6. Claims involving Operations/Premises and Completed Operations/Products, Independent CONTRACTOR's coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. Coverage for completed operations must be at least as broad as CG 2010 11/85.

B. If commercial general liability insurance or another insurance form with a general aggregate limit is used, the general aggregate limit shall apply separately to the project location (with the ISO CG 2503 or insurer's equivalent endorsement provided to the City).

C. Any deductible or self-insured retention must be declared to and approved by the City. At the option of the City, either the insurer shall reduce or eliminate such deductibles or self-
insured retentions as respects the City, its Board of Trustees, members of its Board of
Trustees, officers, employees, agents and volunteers; or the CONTRACTOR shall
procure a bond guaranteeing payment of losses and related investigations, claim
administration and defense expenses.

D. CONSENT OF INSURER. Partial occupancy or use in accordance with the Contract
Documents shall not commence until the City's insurance company providing property
insurance has consented to such partial occupancy or use by endorsement or otherwise.
The City and the CONTRACTOR shall take reasonable steps to obtain consent of the
insurance company and shall, without mutual consent, take no action with respect to partial
occupancy or use that would cause cancellation, lapse, or reduction of the insurance.

E. FIRE INSURANCE. Before the commencement of the Work, the CONTRACTOR shall
procure, maintain, and cause to be maintained at the CONTRACTOR's expense, fire
insurance on all Work subject to loss or damage by fire and the entire structure on which
the Work of this Contract is to be done to the insurable value thereof. The amount of fire
insurance shall be subject to approval by the City and shall be sufficient to protect the
Project against loss or damage in full until the Work is accepted by the City. Should the
Work being constructed be damaged by fire or other causes during construction, it shall
be replaced in accordance with the requirements of the drawings and specifications without
additional expense to the City.

F. OTHER INSURANCE. The CONTRACTOR shall provide all other insurance required
to be maintained under applicable laws, ordinances, rules, and regulations.

G. COMPLIANCE. In the event of the failure of any CONTRACTOR to furnish and maintain
any insurance required by this Article, the CONTRACTOR shall be in default under the
Contract. Compliance by CONTRACTOR with the requirement to carry insurance and
furnish certificates, policies, Additional Insured Endorsement and Declarations Page
evidencing the same shall not relieve the CONTRACTOR from liability assumed under
any provision of the Contract Documents, including, without limitation, the obligation to
defend and indemnify the City and the Engineer.

H. BUILDER'S RISK/ "ALL RISK" INSURANCE. The Contractor, during the progress
of the Work and until final acceptance of the Work by City upon completion of the entire
Contract, shall maintain Builder's Risk/"All Risk," course-of-construction insurance
satisfactory to City issued on a completed value basis on all outstanding projects and on
all insurable Work included under the Contract Documents. Coverage is to provide
extended coverage and insurance against vandalism, theft, malicious mischief, perils of fire,
sprinkler leakage, civil authority, sonic boom, earthquake, collapse, flood, wind, lightning,
smoke, riot, debris removal (including demolition), and reasonable compensation for the
Engineer's services and expenses required as a result of such insured loss upon the
entire Work which is the subject of the Contract Documents, including completed Work
and Work in progress to the full insurable value thereof. Such insurance shall include the
City and the Engineer as an additional named insured and any other person with an insurable
interest designated.

5.3 PROOF OF CARRIAGE INSURANCE

A. CONTRACTOR shall not commence Work nor shall it allow any Subcontractor to
commence Work under this Agreement until all required insurance certificates and
endorsements have been obtained and delivered in duplicate to and approved by the City.
Such insurance shall be with an insurance company with a minimum rating of "A/VII", as rated by the current edition of Best's Key Rating Guide, published by A.M. Best Co., Oldwick, New Jersey 08858 and admitted or qualified to do business in California.

B. Certificates and insurance policies shall include the following:

1. A clause stating:

   "This policy shall not be canceled or reduced in required limits of liability or amount of insurance until notice has been mailed to City stating date of cancellation or reduction. Date of cancellation or reduction may not be less than 30 days after date of mailing notice."

2. Language stating in particular those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation and reduction notice will be sent, and length of notice period.

3. Separate additional insured endorsement specifically naming the City as a named additional insured under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by the City.

C. In case of CONTRACTOR's failure to provide insurance as required by the Agreement, the City may, at the City's option, take out and maintain at the expense of the CONTRACTOR, such insurance in the name of CONTRACTOR, or Subcontractor, as the City may deem proper and may deduct the cost of taking out and maintaining such insurance from any sums which are due or to become due to the CONTRACTOR under this Agreement.

D. The CONTRACTOR shall purchase and maintain the insurance required under this Article. Such insurance shall include the specific coverages set out herein and be written for not less than the limits of liability and coverages provided in this Article, or required by Laws or Regulations, whichever are greater. All insurance shall be maintained continuously during the life of the Agreement up to the date of Project Completion when all punch-list items have been completed. The CONTRACTOR's liabilities under this Agreement shall not be deemed limited in any way to the insurance coverage required.

1. CONTRACTOR shall have insurance in the following amounts:

   a. Commercial general liability insurance with at least three million dollars ($3,000,000) combined single limit coverage per occurrence for bodily injury and property damage; or, if a general aggregate limit is applicable, either: (i) the general aggregate limit shall specifically apply to the project identified in the bid specifications or to the location of such project which is the subject of these bid specifications with coverage to be no less than three million dollars ($3,000,000), or (ii) the general aggregate shall be at least three million dollars ($3,000,000) combined single limit coverage per occurrence for bodily injury and property damage; and

   b. Automobile liability insurance of three million dollars ($3,000,000) combined single limit per accident for bodily injury and property damage; and

   c. Workers' compensation and employer's liability insurance as required by the California Labor Code, as amended.

2. Each insurance policy required above, except for workers' compensation, shall name the City specifically and separately as an additional insured under the policy on a separate ISO CG 2010 endorsement or equivalent, to the satisfaction of the
City Attorney. The company providing insurance must provide at least 30 days written notice of cancellation or termination, if such cancellation or termination of the policy is to occur prior to the indicated expiration date on the face of the certificate. General and auto liability insurance coverage must be provided by a Best's 'A' rated, Class VII carrier, admitted in California, and shall be in form satisfactory to the City Attorney. Insurance companies that are not admitted in California must be on the list of approved Non-Admitted Insurers able to write in the state of California and must additionally provide a service of suit endorsement. All insurance requirements must be in a form satisfactory to the City Attorney. Failure to comply with insurance requirements under this Agreement or failure to have completed insurance documents on file within 15 working days after CONTRACTOR executes this Agreement shall be a material breach of this Agreement.

3. Workers' Compensation and Employer's Liability In accordance with the provisions of Section 3700 of the California Labor Code, the CONTRACTOR and every Subcontractor shall be required to secure the payment of compensation to its employees. The CONTRACTOR shall provide, during the life of the Agreement, workers' compensation insurance for all of its employees engaged in Work under this Agreement, on or at the site of the Project, and, in case any of its Work is sublet, the CONTRACTOR shall require the Subcontractor similarly to provide workers' compensation insurance for all the latter's employees. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by the CONTRACTOR's insurance. In case any class of employees engaged in Work under this Agreement, on or at the site of the Project, is not protected under the workers' compensation statute, the CONTRACTOR shall provide or shall cause a Subcontractor to provide, adequate insurance coverage for the protection of such employees not otherwise protected before the Subcontractor commences Work. The CONTRACTOR shall file with the City certificates of its insurance protecting workers and a 30 day notice shall be provided to the City before the cancellation or reduction of any policy of CONTRACTOR or Subcontractor. The CONTRACTOR and each Subcontractor shall provide a waiver of subrogation in favor of the City and Engineer.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

None of the following responsibilities, as between City and CONTRACTOR, shall be delegated by CONTRACTOR to another individual or entity.

6.1 COMMUNICATIONS.

A. Written communications shall be directly to the City, however, the City reserves the right to direct the CONTRACTOR to communicate directly with a construction manager or other consultant, and to copy the City with correspondence.

B. Notice to Surrounding Properties. CONTRACTOR must provide Notice of Construction to all property owners and businesses at least 3 days before commencement of such work. A sample form notice is found in the Proposed Contract Documents, at page A-00670-1.

6.2 INDEPENDENT CONTRACTOR. CONTRACTOR is and shall at all times be deemed to be an independent CONTRACTOR and shall be wholly responsible for the manner in which it performs the services required of it by the terms of the Project Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the City and CONTRACTOR or any of CONTRACTOR's subcontractors (of
CONTRACTOR assumes exclusively the responsibility for the acts of its subcontractors (of every tier), suppliers, agents and employees. CONTRACTOR, its subcontractors, suppliers, agents and employees shall not be entitled to any rights or privileges of City employees and shall not be considered in any manner to be City employees. The City shall be permitted to monitor all the activities of the CONTRACTOR to determine compliance with the terms of the Project Documents.

6.3 CONTRACTOR LICENSE. CONTRACTORS are required by law to be licensed and regulated by the Contractors' State License Board. Any CONTRACTOR not so licensed is subject to penalties under the law, and the contract will be considered void pursuant to Section 7028.7 of the Business and Professions Code. Any questions concerning a CONTRACTOR may be referred to the Registrar, Contractors' State License Board, 3132 Bradshaw Road, P.O. Box 2600, Sacramento, CA 95826. CONTRACTOR shall be duly licensed at all times during performance. Substantial compliance shall not be sufficient.

6.4 CONTRACTOR REGISTRATION: CONTRACTOR, as well as any subcontractors, shall be registered pursuant to Cal. Lab. Code § 1725.5 to be qualified to bid on, be listed in a bid proposal, (subject to the requirements of Section 4104 of the Public Contract Code) or engage in the performance of any public work contract that is subject to the requirements of Chapter 1, Part 7, Division 2 of the California Labor Code.

6.5 CHANGE IN NAME AND NATURE OF CONTRACTOR'S LEGAL ENTITY. Before CONTRACTOR makes any change in the name or legal nature of the CONTRACTOR's entity, CONTRACTOR shall first notify the City in writing and cooperate with the City in making such changes as the City may request in the Project Documents.

6.6 CONTRACTOR SUPERINTENDENT. During progress of the Work, CONTRACTOR shall keep on the Work site a competent, English-speaking Superintendent satisfactory to the City. Before commencing the Work herein, CONTRACTOR shall give written notice to the City of the name, qualifications and experience of such Superintendent. If, at any time, the Superintendent is found unsatisfactory by the City, CONTRACTOR shall replace the Superintendent with one acceptable to the City. Superintendent shall not be changed or removed from the project except with written consent of the City, unless a Superintendent proves to be unsatisfactory to CONTRACTOR and ceases to be in its employ, in which case, CONTRACTOR shall notify the City in writing and replace said Superintendent with one acceptable to the City. Superintendent shall represent CONTRACTOR and all directions given to Superintendent shall be as binding as if given to CONTRACTOR. During planned absences longer than one Workday (e.g. vacation), CONTRACTOR shall, at least ten (10) days prior, provide written notice to the City the name of the individual proposed to assume the responsibilities of Superintendent during his/her absence.

6.7 CONTRACTOR SUPERVISION. Without a right to claim additional reimbursement, CONTRACTOR shall staff the project with a sufficient number of experienced, skilled and knowledgeable personnel to meet the needs (both administrative and supervisory) of the Project, and shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the Work in accordance with the Project Documents. CONTRACTOR shall carefully study and compare all plans, drawings, specifications, and other instructions and shall at once report to the City any error, inconsistency or omission which CONTRACTOR or its employees may discover. The CONTRACTOR represents itself to the City as a skilled, knowledgeable, and experienced CONTRACTOR. The CONTRACTOR shall carefully study and compare the Project Documents with each other, and shall at once report to the City any errors, inconsistencies, or omissions discovered. The CONTRACTOR shall be liable to the City for damage resulting from errors, inconsistencies, or omissions in the Project Documents that the CONTRACTOR recognized and which CONTRACTOR knowingly failed to
report and which a similarly skilled, knowledgeable, and experienced CONTRACTOR would have discovered.

6.8 FIELD MEASUREMENTS, LAYOUT, RECORD DRAWINGS AND FIELD ENGINEERING. The CONTRACTOR shall verify all indicated dimensions at its expense before ordering materials or equipment, or before performing Work. The CONTRACTOR shall take field measurements, verify field conditions, and shall carefully compare such field measurements and conditions and other information known to the CONTRACTOR with the Project Documents before commencing Work. Errors, inconsistencies or omissions discovered shall be reported to the City at once. Upon commencement of any item of Work, the CONTRACTOR shall be responsible for dimensions related to such item of Work and shall make any corrections necessary to make Work properly fit at no additional cost to the City. This responsibility for verification of dimensions is a non-delegable duty and may not be delegated to Subcontractors or agents. The CONTRACTOR shall keep up-to-date record drawings of this project through the course of the project. The City shall approve these record drawings periodically, and the release of progress payments may be delayed if the record drawings are not kept up to date. After the project punch-list has been completed, the CONTRACTOR shall supply a single clean set of accurate blue-line (as-built) plans to the City. Failure to submit these as-builts will delay the Final Notice of Completion and final payment.

6.9 DETAILS OF THE WORK. Omissions from the plans, drawings or specifications, or the mis-description of customary and usual details of Work which are manifestly necessary to carry out the intent of the plans, drawings and specifications, or which are customarily performed, shall not relieve the CONTRACTOR from performing such omitted or mis-described Work, but they shall be performed as if fully and correctly set forth and described in the plans, drawings and specifications.

6.10 MEANS AND METHODS. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Project Documents. The CONTRACTOR shall be solely responsible for all safety precautions and programs incidental thereto.

6.11 SUBCONTRACTORS

A. CONTRACTOR agrees to bind every Subcontractor by terms of the Project Documents as far as such terms are applicable to Subcontractor's Work. If CONTRACTOR shall subcontract any part of the Work, CONTRACTOR shall be as fully responsible to the City for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, as it is for acts and omissions of persons directly employed by CONTRACTOR. Nothing contained in Project Documents shall create any contractual relation between any Subcontractor and the City, nor shall the Contract Documents be construed to be for the benefit of any Subcontractor.

B. The City's consent to any Subcontractor shall not in any way relieve CONTRACTOR of any obligations under the Project Documents and no such consent shall be deemed to waive any provision of any Project Document.

C. CONTRACTOR must submit with its bid a Designation of Subcontractors pursuant to the Subletting and Subcontracting Fair Practices Act. If CONTRACTOR specifies more than one Subcontractor for the same portion of Work or fails to specify a Subcontractor, and such portion of the Work exceeds one-half of one percent of the total bid, CONTRACTOR agrees that it is fully qualified to perform and shall perform such Work itself, unless CONTRACTOR provides for substitution or addition of Subcontractors. Substitution or addition of Subcontractors shall be permitted only as authorized under the

D. In accordance with California Business and Professions Code Section 7059, if CONTRACTOR is designated as a "specialty CONTRACTOR" (as defined in Section 7058 of the Business and Professions Code), all of the Work to be performed outside of the CONTRACTOR's license specialty shall be performed by a licensed Subcontractor in compliance with the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Section 4100, et seq.

E. INELIGIBLE SUBCONTRACTOR. Pursuant to Public Contract Code Section 6109, no CONTRACTOR may perform Work on a public works project with a subcontractor who is ineligible to perform Work on the project pursuant to sections 1777.1 or 1777.7 of the Labor Code.

F. A copy of each subcontract, if in writing, or, if not in writing, then a written statement signed by the CONTRACTOR giving the name of the Subcontractor and the terms and conditions of such subcontract, shall be filed with the City before the Subcontractor begins Work. Each subcontract shall contain an express reference to and incorporate the Agreement between the City and the CONTRACTOR and the terms of that Agreement and all parts of the Project Documents shall be made a part of such subcontract insofar as applicable to the Work covered thereby. Each subcontract will provide for termination in accordance with the Article entitled City's RIGHT TO TERMINATE AGREEMENT of these General Conditions. Each subcontract shall provide for its annulment by the CONTRACTOR at the order of the City if in the City's opinion the Subcontractor fails to comply with the requirements of the Project Documents insofar as the same may be applicable to this Work. Nothing herein contained shall relieve the CONTRACTOR of any liability or obligation hereunder.

6.12 DUTY TO PROVIDE FIT WORKERS

A. CONTRACTOR and Subcontractors shall at all times enforce strict discipline and good order among their employees and shall not employ on the Work any unfit person or anyone not skilled in the Work assigned to such person. It shall be the responsibility of CONTRACTOR to ensure compliance with this Article.

B. Any person in the employ of the CONTRACTOR or Subcontractors whom the City or Engineer may deem incompetent, unfit, troublesome or otherwise undesirable shall be excluded from the Work site and shall not again be employed on it except with the written consent of the City.

6.13 OVERTIME.

A. Except as otherwise provided in this Article, the CONTRACTOR shall receive no additional compensation for overtime Work, i.e., Work in excess of 8 hours in any 1 calendar day or 40 hours in any 1 calendar week, even though such overtime Work may be required under emergency conditions and may be ordered by the City in writing. Additional compensation will be paid to the CONTRACTOR for overtime Work only in the event extra Work is ordered by the City and the Change Order specifically authorizes the use of overtime Work and then only to such extent as overtime wages are regularly being paid by the CONTRACTOR for overtime Work of a similar nature in the same locality.

B. All increased or additional costs of inspection and/or testing, performed by or on behalf of the City, during overtime Work by the CONTRACTOR which is allowed solely for the convenience of the CONTRACTOR shall be borne by the CONTRACTOR. The City
has the authority to deduct the costs of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR. Payment for inspection overtime beyond a normal Workday (9 hours), Saturdays, Sundays or Union observed holidays will be deducted from the CONTRACTOR's payment at the rate of One Hundred Twelve Dollars and Fifty Cents ($112.50) per hour (one hour minimum) pursuant to City of Escondido Resolution No. 2007-115(RR).

6.14 MATERIALS AND WORK

A. Except as otherwise specifically stated in this Agreement, CONTRACTOR shall provide and pay for all materials, supplies, tools, equipment, labor, transportation, administration, management, superintendence, temporary constructions of every nature, and all other services and facilities of every nature whatsoever necessary to execute and complete the Project within the specified time.

B. Unless otherwise specified, all materials shall be new and the best of their respective kinds and grades as noted or specified free from defects, and workmanship shall be of excellent quality.

C. Materials shall be furnished in ample quantities and at such times as to insure uninterrupted progress of Work and shall be stored properly and protected as required.

D. CONTRACTOR shall, after issuance of the Notice to Proceed by the City, place orders for materials and/or equipment as specified so that delivery may be made without delays to the Work. CONTRACTOR shall, upon demand by the City, furnish to the City documentary evidence showing that orders have been placed.

E. The City reserves the right, due to any neglect in not complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the Work may be completed by the date specified in the Agreement, and all expenses incidental to the procuring of these materials and/or equipment shall be paid for by the CONTRACTOR.

F. No materials, supplies, or equipment for Work under this Agreement shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. CONTRACTOR warrants good title to all material, supplies, and equipment installed or incorporated in the Work and agrees upon completion of all Work to deliver the premises, together with all improvements and appurtenances constructed or placed thereon by it, to the City free from any claims, liens, or charges. CONTRACTOR further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Agreement shall have any right to any lien upon the premises or any improvement or appurtenance thereon, except that CONTRACTOR may install metering devices or other equipment of utility companies or of political subdivisions, title to which is commonly retained by the utility company or political subdivision. In the event of installation of any such metering device or equipment, CONTRACTOR shall advise the City as to the owner thereof.

G. Nothing contained in this Article, however, shall defeat or impair the rights of persons furnishing material or labor under any bond given by CONTRACTOR for their protection or any rights under any law permitting such persons to look to funds due CONTRACTOR in the hand of the City, and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all
persons furnishing materials or labor when no formal contract is entered into for such materials or labor.

H. Materials and/or equipment and the attendant liability for its protection and safety shall remain with the CONTRACTOR until incorporated in the Work and accepted by the City, no part of the materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work; and CONTRACTOR shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to the City or its authorized representative.

6.15 ACCESS TO CONTRACTOR'S RECORDS. The CONTRACTOR agrees that the City (including the City's designees) have the right to access, review, obtain and copy upon reasonable written notice (which shall be no greater than 3 working days), all Records pertaining to the Agreement and/or the Project, including the bid. The CONTRACTOR agrees to provide the City with any relevant information requested and shall permit the State or the City access to its premises upon reasonable notice for purposes of interviewing employees and inspecting Records. The CONTRACTOR agrees to maintain such Records for a period of 3 years after final payment under the contract. Should the project be funded by the State Revolving Fund, the CONTRACTOR shall maintain records for 20 years.

6.16 CONTRACTOR SUBSTITUTION OF "OR EQUAL" ITEMS

A. CONTRACTOR shall follow all instructions and requirements set forth in the "INSTRUCTIONS TO BIDDERS", for compliance with this Article.

B. Whenever in specifications any materials, process, service or equipment is indicated or specified by brand name, trade name, proprietary name or by name of manufacturer, such specification shall be deemed to be used for the purpose of facilitating description of material, process, service or equipment desired and shall be deemed to be followed by the words "or equal", CONTRACTOR may, unless otherwise stated, offer any material, process, service, or equipment which shall be substantially equal or better in every respect to that so indicated or specified subject to the City's approval.

C. If material, process, service, or equipment offered by CONTRACTOR is not, in the City's sole discretion determined to be, equal or better in every respect to that specified, then CONTRACTOR shall furnish the material, process, service, or equipment specified. The burden of proof as to equality of any material, process, service, or equipment shall rest with CONTRACTOR. This provision authorizing submission of "or equal" substantiating data shall not in any way authorize an extension of time for performance of this Agreement.

D. "Or equal" and substitution requests with substantiating data shall be submitted for consideration no later than 14 calendar days prior to bid opening.

E. The City may choose to allow an "or equal" substitution, if the City determines, in its sole discretion, that the requested substitution is an equal product, and that there is a cost savings resulting in a deductive change order, an increase in the performance with the substituted product, or any other reason deemed by the City to be in the City's best interest to allow the substitution.

F. If a CONTRACTOR initiated material substitution occurs after the Award of Contract, CONTRACTOR must establish that the specified material is no longer being manufactured or available, that the substituted material is the best possible material.
substitution for that which is no longer available, or that there is some other benefit to the City in approving said substitution.

G. If the City allows the substitution anytime after the Award of Contract, the CONTRACTOR will be responsible for reasonable fees incurred by the Engineer or Engineer's consultants in reviewing the proposed substitution which fees may be deducted from progress payments to CONTRACTOR.

H. In the event CONTRACTOR furnishes material, process, service, or equipment more expensive than that specified, any difference in cost of such material, process, service, or equipment so furnished shall be borne by CONTRACTOR. Any engineering, design fees, or approval agencies' fees required to make adjustments in material or Work of all trades directly or indirectly affected by the approved substituted items shall be borne entirely by CONTRACTOR. Any difference in cost between an approved substitution that is lower in cost than the originally specified item shall be refunded by CONTRACTOR to the City.

I. All costs associated with and caused by a CONTRACTOR's "or equal" submittal, including any consequential design changes needed to accommodate the "or equal", and any delay caused to the project schedule resulting from the review of the requested "or equal" submittal shall be borne by the CONTRACTOR.

6.17 PERMITS

A. Unless otherwise provided in the Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all construction permits and licenses from the agencies having jurisdiction, including the furnishing of insurance and bonds if required by such agencies. The enforcement of such requirements shall not be made the basis for claims for additional compensation by CONTRACTOR. When necessary, the City will assist the CONTRACTOR, in obtaining such permits and licenses. The CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. The CONTRACTOR shall pay all charges of utility owners for inspection or connections to the Work. Compensation for all permit fees is included in the Lump Sum payment for Mobilization.

B. The CONTRACTOR shall indemnify, defend and hold harmless the City and its officers, employees and agents from any and all liability arising out of any violation, or claim of violation of the San Diego Municipal Storm Water Permit (Order No. 2001-01), and updates, of the California Regional Water Quality Control Board Region 9, San Diego, which the City might suffer, incur, or become subject by reason of or occurring as a result of or allegedly caused by performance of the Work.

C. Prior to beginning Work, the CONTRACTOR shall obtain a no-fee Encroachment Permit from the office of the City of Escondido Field Engineer, 201 N. Broadway, unless otherwise specified in the Supplemental General Conditions. CONTRACTOR shall adhere to all requirements and provisions of said Encroachment Permit as though fully set forth herein.

D. The CONTRACTOR shall be responsible for complying with the requirements of all permits acquired by the City.
Except for the permits specifically set forth in 'A' above, the CONTRACTOR shall acquire all permits required by Laws or Regulations, including, without limitation, the following specific permits (if applicable):

1. State permits to construct and/or operate sources of air pollution.
2. Certificates and permits are required for sources such as, but not limited to:
   a. Fuel burning equipment
   b. Gasoline and petroleum distillate storage containers
   c. Land disturbing activities
   d. Processing equipment (sand, gravel, concrete batch plant, etc.)
   e. Odors
4. Permit-Required Confined Space
   The workplace in which the Work is to be performed may contain permit-required confined spaces (permit spaces) as defined in 29 CFR 1910.146 and, if so, permit space entry is allowed only through compliance with a confined space entry program meeting the requirements of 29 CFR 1910.146.
5. Others as required in the Supplementary General Conditions.

6.18 PATENT FEES AND ROYALTIES. The CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of the City or the Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed by the City in the Contract Documents. The CONTRACTOR’s indemnification obligation under this Article, for all claims and liabilities arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents shall be in accordance with Article 6.16 of these General Conditions.

6.19 LAWS AND REGULATIONS. The CONTRACTOR shall observe and comply with all Laws and Regulations which in any manner affect those engaged or employed on the Work, the materials used in the Work, or the conduct of the Work. If any discrepancy or inconsistency should be discovered between the Contract Documents and any such Laws or Regulations, the CONTRACTOR shall report the same in writing to the Engineer. Any particular Law or Regulation specified or referred to elsewhere in the Contract Documents shall not in any way limit the obligation of the CONTRACTOR to comply with all other provisions of federal, state, and local laws and regulations. The CONTRACTOR’s indemnification obligations for all claims or liability arising from violation of any such law, ordinance, code, order, or regulation, whether by CONTRACTOR or by its employees, Subcontractors or Suppliers shall be in accordance with Article 6.16 of these General Conditions.

6.20 TAXES. The CONTRACTOR shall pay all sales, consumer, use, and other similar taxes required to be paid by the CONTRACTOR in accordance with the laws and regulations of the place of the Project which are applicable during the performance of the Work.

6.21 USE OF PREMISES. The CONTRACTOR shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site, the land and areas identified in and permitted by the Contract Documents, and the other land and areas permitted by Laws and
Regulations, rights-of-way, permits, and easements. The CONTRACTOR shall assume full liability and responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against the City or the Engineer by any such owner or occupant because of the performance of the Work, the CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim through litigation at the CONTRACTOR's sole liability any expense. The CONTRACTOR's indemnification obligations for all claims and liability, arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any such owner or occupant against the City, the Engineer, their consultants, subconsultants, and the officers, directors, employees and agents of each and any of them to the extent caused by or based upon the CONTRACTOR's performance of the Work shall be in accordance with Article 6.25 of these General Conditions.

6.22 SAFETY AND PROTECTION

A. The CONTRACTOR shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. All persons at the Site and other persons and organizations who may be affected thereby;
2. All the Work materials and equipment to be incorporated therein, whether in storage on or off the Site; and
3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, mailboxes, and utilities not designated for removal, relocation, or replacement in the course of the performance of the Work.

B. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property or to the protection of persons or property from damage, injury, or loss and shall erect and maintain all necessary safeguards for such safety and protection. The CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. CONTRACTOR's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and in accordance with Article 14.11. that the Work is acceptable.

C. During the entire construction period, it shall be the responsibility of the contractor to maintain conditions at the project location so as to meet in all aspects the requirements of the California Code of Regulations, Title 8, Industrial Relations, Chapter 4, Division of Industrial Safety Orders CAL/OSHA. This provision shall cover the CONTRACTOR's employees and all other persons working upon or visiting the project location. To this end, the Contractor shall inform himself and his representatives of CAL/OSHA standards.

D. The CONTRACTOR shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

E. MSDS. Materials that contain hazardous substances or mixtures may be required on the Work. A Material Safety Data Sheet (MSDS.) shall be made available at the Site by the CONTRACTOR for every hazardous product used. Material usage shall strictly conform to OSHA safety requirements and all manufacturer's warnings and application instructions.
listed on the MSDS and on the product container label. The CONTRACTOR shall be responsible for the exchange of every MSDS or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

F. The CONTRACTOR shall notify the City if it considers a specified product or its intended use to be unsafe. This notification must be given to the City prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the Work.

G. CONFINED SPACES. The CONTRACTOR will not enter any confined space without using a Confined Space Entry Permit. The CONTRACTOR shall be responsible for implementing, administering and maintaining a confined space entry program (CSEP) in accordance with Sections 5156, 5157 and 5158, Title 8, CCR.

H. The CONTRACTOR shall provide a COMPETENT PERSON for all excavation operations.

6.23 EMERGENCIES. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, CONTRACTOR, without special instruction or authorization from the City or Engineer, is obligated to immediately act to prevent threatened damage, injury, or loss. CONTRACTOR shall give City prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If City determines that a change in the Contract Documents is required because of the action taken by CONTRACTOR in response to such an emergency, a Change Order will be issued to document the action.

6.24 SUBMITTALS. The City requires submittals for all materials, equipment, parts and systems.

A. SHOP DRAWINGS

1. The City may designate a consultant to receive and review submittals and may require the CONTRACTOR to transmit the submittals to that consultant. Commensurate with the requirements of the project schedule, the CONTRACTOR shall check and verify all field measurements and shall submit to the City six (6) copies, checked, coordinated and approved by CONTRACTOR, of all shop or setting list drawings, schedules, and materials list required for the Work of various trades: If this project consists of any remodel / modernization Work, field dimensions require verification prior to the preparation of the Shop Drawings. The City shall review such drawings, schedules and materials list only for conformance with the design concept of Project and compliance with information given in Project Documents, and return with notations and with guidance as to required corrections within 30 days. CONTRACTOR shall make any corrections required by the City, file three (3) corrected copies with the City, and furnish such other copies as may be needed for construction within 30 days. The City's approval of such drawings, schedules, or materials list shall not relieve CONTRACTOR from responsibility for deviations unless CONTRACTOR has in writing called the City's attention to such deviations at time of submission by clearly writing the phrase "DEVIATION REQUEST" in bold type at the head of the submittal, and secured the City's written approval, nor shall it relieve CONTRACTOR from responsibility for errors in shop drawings or schedules.
2. The City is entitled to additional review time. The additional review time may be required to review complex and difficult submittals, including but not limited to structural steel shop drawings, mechanical equipment, electrical equipment, and special system components and parts. The CONTRACTOR shall breakout critical submittals into separate packages so as to expedite the review process of an individual item. The coordination of the overall submittal packages shall be the responsibility of the CONTRACTOR.

3. Shop Drawings requiring "Deferred Approval" require a substantial amount of time for City review and approval. The Project Documents will identify those shop drawings requiring Deferred Approval, if any. The Contractor shall apply its skill and knowledge to expedite the Deferred Approval(s) from preparation to approval. The Contractor shall schedule the project activities to avoid critical path delays as a result of the Deferred Approval process. Notwithstanding anything to the contrary herein, the CONTRACTOR shall make submittals of all Deferred Approvals to the City within 120 days of the Award of Contract. The City shall review such Deferred Approval submittal, and shall return as approved or disapproved with guidance as to the required corrections within 60 days. If resubmittals are required, the City shall endeavor to review and return the resubmittal within 60 days. CONTRACTOR shall allow sufficient time in its scheduling for corrections and resubmittals of Deferred Approval items in conformance with these requirements.

4. All submittals of shop drawings, catalog cuts, data sheets, schedules and material lists shall be complete and shall conform to contract drawings and specifications. The CONTRACTOR shall prepare layout and coordination drawings to demonstrate the accuracy and fit of the materials and Work.

5. The term "shop drawing" as used herein shall be understood to include, but not be limited to, coordination efforts by CONTRACTOR involving detail design calculations for the development of the Shop Drawing, fabrication and installation drawings, lists, graphs and operating instructions.

6. Shop drawings shall be submitted at a time sufficiently early to accommodate the rate of construction progress required under the Project Documents. CONTRACTOR will be required to pay the City or its consultant's reasonable and customary fees in order to expedite review of Shop Drawings which are not submitted in a timely fashion.

7. All submittals shall be accompanied by an accurately completed transmittal form using the format bound herein, or as approved by the City. Any shop drawing submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for resubmittal. The CONTRACTOR may authorize a material or equipment supplier to deal directly with the City with regard to Shop Drawings. However, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the CONTRACTOR.

8. Normally, a separate transmittal form shall be used for each specific item, scheduled activity task, or class of material or equipment for which a submittal is required. However, due to the critical nature of a submittal, a submittal can be broken into separate sub-submittals in order to obtain the review of a more
9. CONTRACTOR's review and approval of Shop Drawings and submittals shall include the following stamp:

"The CONTRACTOR has reviewed and approved not only the field dimensions but the construction criteria and has also made written notation regarding any information in the Shop Drawings or submittal that does not conform to the Project Documents. This Shop Drawing or submittal has been coordinated with all other shop drawings and submittals received to date by CONTRACTOR and this duty of coordination has not been delegated to Subcontractors, material suppliers, the Engineer, or the architects on this project. The Contractor also indicates that it has not relied upon the dimensions shown on the drawings, specifications and schedules, and that the Contractor has double-checked all dimensions for accuracy and fit.

Signature of CONTRACTOR"

10. Within 30 days after receipt of Shop Drawings, the City will endeavor to return one or more prints of each drawing to CONTRACTOR with City's comments noted thereon. The CONTRACTOR shall make a complete and acceptable submittal to the City by the second submission of drawings. The City shall withhold funds due the CONTRACTOR to cover additional costs of the City's review beyond the second submission and any other costs incurred by the City.

11. If prints of the shop drawing are returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision of said drawing will not be required. If prints of the drawing are returned to the CONTRACTOR marked "MAKE CORRECTIONS NOTED," formal resubmittal of said drawings will not be required. If prints of the drawing are returned to the CONTRACTOR marked "REVISE AND RESUBMIT," the CONTRACTOR shall revise said drawing and shall resubmit six (6) copies of the revised drawing to the City. If prints of the drawing are returned to the CONTRACTOR marked "REJECTED RESUBMIT," the CONTRACTOR shall resubmit six (6) new copies of the drawing to the ARCHITECT. Submittals being resubmitted for revisions or submitted due to previous rejection, the CONTRACTOR shall provide a written response indicating the nature of the correction(s) and/or cloud the revised item(s).

12. Fabrication of an item shall not be commenced before the City has reviewed the pertinent Shop Drawings and returned copies to the CONTRACTOR marked with "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED." Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Project Documents and shall not be taken as the
basis of claims for extra Work. The review of such drawings by the City will be limited to checking for general agreement with the Project Documents, and shall in no way relieve the CONTRACTOR of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Project Documents. Fabricating dimensions, quantities of material, applicable code requirements, and other contract requirements shall be the CONTRACTOR's responsibility.

13. No Work represented by required Shop Drawings shall be purchased or commenced until the applicable submittal has been approved. The Work shall conform to the approved Shop Drawings and all other requirements of the Project Documents. The CONTRACTOR shall not proceed with any related Work which may be affected by the Work covered under Shop Drawings until the applicable Shop Drawings have been approved, particularly where piping, machinery, and equipment and the required arrangements and clearances are involved.

14. Except where the preparation of a Shop Drawing is dependent upon the approval of a prior shop drawing, all shop drawings pertaining to the same class or portion of the Work shall be submitted simultaneously.

15. THE CONTRACTOR SHALL HAVE NO CLAIM FOR DAMAGES OR EXTENSION OF TIME DUE TO ANY DELAY RESULTING FROM THE CONTRACTOR HAVING TO MAKE THE REQUIRED REVISIONS TO SHOP DRAWINGS UNLESS REVIEW BY THE CITY IS DELAYED BEYOND THE TIME PROVIDED HEREIN AND THE CONTRACTOR CAN ESTABLISH THAT IT BEARS NO RESPONSIBILITY FOR CAUSING AND/OR CONTRIBUTING TO THE DELAY AND THAT THE CITY'S DELAY IN REVIEW ACTUALLY RESULTED IN A DELAY TO THE CRITICAL PATH IN THE CONTRACTOR CONSTRUCTION SCHEDULE.

B. PAYROLL SUBMITTALS

1. Copies of all payrolls shall be submitted weekly to the City. Payrolls shall contain the full name, address and social security number of each employee, the employee's correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employee's address and social security number need only appear on the first payroll on which that name appears. The payroll shall be accompanied by a "Statement of Compliance" signed by the employer or the employer's agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those required by the Contract. The CONTRACTOR shall be responsible for the submission of copies of payrolls of all subcontractors. The CONTRACTOR shall ensure that the payrolls match the Daily Work Reports. The CONTRACTOR shall certify that no Work was done on the job if no Work was done on the job.

2. If by the 15th of the month, the CONTRACTOR has not submitted satisfactory payrolls for all Work performed during the monthly period ending on or before the 1st of that month, the City will retain an amount equal to ten percent (10%) of the estimated value of the Work performed (exclusive of Mobilization) during the month from the next monthly estimate, except that this retention shall not exceed $10,000 nor be less than $1,000. Retentions for failure to submit
satisfactory payrolls shall be additional to all other retentions provided for in the Contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

3. The CONTRACTOR shall also submit a second copy of all certified payrolls with all personal information fully redacted. The CONTRACTOR and each subcontractor shall preserve their payroll records for a period of 3 years from the date of completion of the Contract. The form of the certification shall be as follows:

I, ______________________ (print name), the undersigned, am ______________________ (position in business) with the authority to act for and on behalf of __________________________________________________________ (Name of business and/or CONTRACTOR), certify under penalty of perjury that the records or copies thereof submitted and consisting of ______________________ (description, number of pages) are the originals or true, full and correct copies of the originals which depict the payroll record(s) of the actual disbursements by way of cash, check, or whatever form to the individual or individuals named.

Dated: ______________________

Signature: ______________________

C. SUBMITTAL OF HOME OFFICE OVERHEAD. CONTRACTOR shall furnish within 7 days after the Notice to Proceed, a certified statement and detailed calculation from its accountant establishing the job site and pro rata home office overhead rates for CONTRACTOR and major Subcontractors, as determined by the City. Such shall be updated quarterly and filed with the City.

D. SUBMITTAL OF HOURLY RATES. CONTRACTOR shall furnish within 7 days after the Notice to Proceed, a complete listing of CONTRACTORS and Subcontractors hourly labor rates, indicating the direct hourly wage rate, payroll taxes and insurance costs.

E. ESCROW BID DOCUMENTS. The Escrow Bid Documents shall be submitted by the CONTRACTOR in a sealed container(s) within 10 days after the day of award of the contract. The container shall be clearly marked on the outside with the CONTRACTOR's name, date of submittal, project name and the words "Escrow Bid Documents."

F. SWPPP/BMP. CONTRACTOR shall submit the required Storm Water Pollution Prevention Plan or Best Management Practices, before commencement of any Work.

6.25 CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE

A. CONTRACTOR warrants that the Work (which includes all equipment furnished by CONTRACTOR as part of the materials) shall:

1. Be free from defects in workmanship, integration and material; be free from defects in any design performed by CONTRACTOR;
2. Be new, and conform and perform to the requirements stated in the specifications and where detail requirements are not so stated, shall conform to applicable industry standards; and

3. Be suitable for the use stated in the specifications.

B. The warranty period for discovery of defective Work shall commence on the date stamped on the Notice of Completion verifying County recordation and continue for the period set forth in the specifications or for 1 year if not so specified. If, during the warranty period, the Work is not available for use due to defective Work, such time of unavailability shall not be counted as part of the warranty period. The warranty period for corrected defective Work shall continue for a duration equivalent to the original warranty period.

C. The City shall give CONTRACTOR prompt written notice after discovery of any defective or incomplete Work. CONTRACTOR shall correct any such defective or incomplete Work, as well as any damage to any other part of the Work resulting from such defective or incomplete Work, and shall provide repair, replacement, or reimbursement, at its sole expense, in a manner approved by the City and with due diligence and dispatch as required to make the Work ready for use by the City, ordinary wear and tear, unusual abuse or neglect excepted. Such corrections shall include, but not be limited to, any necessary adjustments, modifications, changes of design (unless of City's design), removal, repair, replacement or reinstallation, and shall include all necessary parts, materials, tools, equipment, transportation charges and labor as may be necessary, and cost of removal and replacement of Work shall be performed at a time and in such a manner so as to minimize the disruption to the City's use of the Work.

D. In the event of failure of CONTRACTOR or Surety to commence and pursue with diligence any such repairs or replacements within 10 days after being notified in writing, the City is hereby authorized to proceed to have defects repaired or replaced and made good at the expense of the CONTRACTOR and the Surety who hereby agree to pay any costs and charges therefore immediately on demand.

E. If, in the opinion of the City, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the City or to prevent interruption of operations of the City, the City will attempt to give the written notice required by this Article. If the CONTRACTOR or Surety cannot be contacted or neither complies with the City's requirements for correction within a reasonable time as determined by the City, the City may, notwithstanding the provisions of this Article, proceed to make such correction or provide such attention and the costs of such correction or attention shall be charged against the CONTRACTOR and Surety. Such action by the City will not relieve the CONTRACTOR and Surety of the guarantees provided in this Article or elsewhere in the Project Documents.

F. This Article does not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. CONTRACTOR shall furnish to City all appropriate guarantee or warranty certificates upon completion of the Project or upon request by the City.

G. All guarantees required under this Article shall be in writing on a Guarantee form approved by the City.

H. CONTRACTOR shall provide to the City instruction manuals for all items which require same.
I. Nothing herein shall limit any other rights or remedies available to the City, and any and all written/express guarantees are in addition to rights provided under California law, including the rights granted under Code of Civil Procedure sections 337.1 and 337.15.

J. CONTRACTOR warrants and guarantees that all Work will be in accordance with the Project Documents and will not be defective. The CONTRACTOR shall guarantee all parts of the Work against defective materials or workmanship furnished by the CONTRACTOR for a period of 1 year from the date of final acceptance by the City.

6.26 INDEMNIFICATION

A. To the fullest extent permitted by Laws and Regulations, the CONTRACTOR shall indemnify, defend, and hold harmless the City, the Engineer, their consultants, subconsultants, and the officers, directors, employees, and agents of each and any of them, against and from all claims and liability arising under, by reason of, related, or incidental to the Project Documents or any performance of the Work, but not from the sole negligence or willful misconduct of the City and/or the Engineer. Such indemnification by the CONTRACTOR shall include, but not be limited to, the following:

1. CONTRACTOR shall indemnify, defend, and hold harmless the City and its officers, employees and agents, from all liability or claim of liability arising by reason of injury or damage to persons (including death) and/or property (both tangible and intangible) occurring as a result of Work done pursuant to the terms of this Agreement, and name same as coinsured in any policy in the Contract Documents;

2. CONTRACTOR shall further indemnify, defend and hold harmless the City and its officers, employees and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, administrative proceedings, damages, fines, penalties, judgments, orders, liens, levies, costs and expenses of whatever nature, including reasonable attorneys' fees and disbursements, arising out of any violation, or claim of violation of the San Diego Municipal Storm Water Permit, and updates, of the California Regional Water Quality Control Board Region 9, San Diego, which the City might suffer, incur, or become subject by reason of or occurring as a result of or allegedly caused by work performed by CONTRACTOR.

3. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its employees, or agents in the performance of the Work, or in guarding or maintaining the same, or from any improper materials, implements, or appliances used in its construction, or by or on account of any act or omission of the CONTRACTOR, its employees, or agents;

4. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR's, Subcontractor's, or Supplier's own employees, or agents engaged in the Work resulting in actions brought by or on behalf of such employees against the City and/or the Engineer;

5. Liability or claims arising directly or indirectly from or based on the violation of any Laws or Regulations, whether by the CONTRACTOR, its employees, or agents;
6. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its employees, or agents in the performance of this Agreement of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article, or appliance, unless otherwise specifically stipulated in this Agreement;

7. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the City and/or Engineer or any other parties by the CONTRACTOR, its employees, or agents;

8. Liability or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR, its employees, or agents;

9. Liability or claims arising directly or indirectly from any breach of the obligations assumed in this Agreement by the CONTRACTOR;

10. Liability or claims arising directly or indirectly from, relating to, or resulting from a hazardous condition created by the CONTRACTOR, Subcontractors, Suppliers, or any of their employees or agents, and;

11. Liability or claims arising directly, or indirectly, or consequentially out of any action, legal or equitable, brought against the City, the Engineer, their consultants, subconsultants, and the officers, directors, employees and agents of each or any of them, to the extent caused by the CONTRACTOR's use of any premises acquired by permits, rights of way, or easements, the Site, or any land or areas contiguous thereto or its performance of the Work thereon.

B. The indemnification obligation under this Article shall not be limited in any way by any limitation on the amount or type of insurance carried by CONTRACTOR or by the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR or any Subcontractor or other person or organization under workers' compensation acts, disability benefit acts, or other employee benefit acts.

6.27 CONTRACTOR'S DAILY REPORTS. At the close of each working day, the CONTRACTOR shall submit a daily report to the Inspector, on forms approved by the City, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra Work items. Extra or disputed work shall be specifically described and separated from Contract Work on the report. An attempt shall be made to reconcile the report daily, and the Inspector and the CONTRACTOR shall sign it. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR.

6.28 CONTRACTOR PAYMENTS. To each of its subcontractors, not later than the 5th day following each payment to CONTRACTOR by the City the respective amounts allowed CONTRACTOR on account of Work performed by the respective subcontractor's to the extent of such subcontractor's interest therein. If CONTRACTOR does not pay one or more SUBCONTRACTORS the amount (less retention) applied for and received in a payment application, CONTRACTOR shall return said amount back to the City within 5 days.

6.29 DIAL BEFORE YOU DIG. The CONTRACTOR shall make notification to the regional notification center for utility markouts and keep a record of the inquiry identification number.
The CONTRACTOR shall follow the requirements of California Government Code Section 4216-4216.9. Refer to Article 4.3.

6.30 DOCUMENTS ON WORK. CONTRACTOR shall keep on the job site at all times one legible copy of all Project Documents, including addenda and change orders, and Title 19 of the California Code of Regulations, and all approved drawings, plans, schedules and specifications. Said documents shall be kept in good order and available to the City, Engineer, architect, and all authorities having jurisdiction. CONTRACTOR shall be acquainted with and comply with the provisions of said regulations as they relate to this Project. CONTRACTOR shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly Titles 8 and 17.

6.31 TEMPORARY UTILITIES

A. All utilities, including but not limited to electricity, water, gas, and telephone used on the Work shall be furnished and paid for by CONTRACTOR. CONTRACTOR shall furnish and install necessary temporary distribution systems, including meters, if necessary, from distribution points to all points on the site where the utility is necessary to carry on the Work. Upon completion of the Work, CONTRACTOR shall remove all temporary distribution systems.

B. If this Contract is for a modernization, reconstruction and or an addition to existing building(s),

1. CONTRACTOR may, with written permission of the City, use the City's existing utilities by making prearranged payments to the City for utilities used by CONTRACTOR for construction.

2. CONTRACTOR shall arrange, schedule and pay for all temporary utilities to the entire facility and/or portion(s) of the facility, including but limited to electrical power, water and gas. The entire facility and/or portion of the facility shall be any area that is affected by a utility disruption and/or affects the function and use of the facility.

6.32 SANITARY FACILITIES. The CONTRACTOR shall provide sanitary temporary toilet and hand washing facilities in no fewer numbers than required by law and such additional facilities as may be directed by the Inspector for the use of all workers. The toilet facilities shall be maintained in a sanitary condition at all times and shall be left at the site until removal is directed by the Inspector. Use of toilet facilities in the Work under construction shall not be permitted.

6.33 CLEANING UP

A. For Projects located in the Right-of-Way the CONTRACTOR shall, on a continuous basis, keep Work site free from CONTRACTOR generated debris such as waste, rubbish, and excess materials, dirt, mud, dust, and non-functioning equipment caused by this Work and shall follow the Technical Specifications "TEMPORARY ENVIRONMENTAL CONTROLS & CONSTRAINTS" and "TEMPORARY ENCROACHMENT, MAINTENANCE, AND RESTORATION OF THE CITY RIGHT-OF-WAY".

B. For Building Projects, or projects that are off the street, CONTRACTOR shall at all times keep Work site free from CONTRACTOR generated debris such as waste, rubbish, and excess materials and equipment caused by this Work, at the least on a daily basis. CONTRACTOR shall not leave debris under, in, or about the Work site. Upon completion of CONTRACTOR Work, CONTRACTOR shall clean all interior and exterior materials.
installed by CONTRACTOR, and in addition to, all buildings, including fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected as a direct or indirect result of the CONTRACTOR Work. Such cleaning shall consist of polishing all glass, plumbing fixtures, and finish hardware and similar finish surfaces and equipment. If the project consists of any street improvements (paving / gutter and/or sidewalk surfaces), drain inlets and any pipeline facilities, such Work shall also be free of any debris and sediments.

6.34 WAGE RIGHTS [Job Site Notices]

A. Pursuant to the provisions of the Labor Code, the governing board of the City has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime Work in the locality in which this public Work is to be performed for each craft, classification or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director.") These rates are on file with the Clerk of the City's governing board and copies will be made available to any interested party on request. CONTRACTOR shall post a copy of such wage rates at the Work site.

B. Holiday and overtime Work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above specified rate of per diem wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification or type of worker employed.

C. CONTRACTOR shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the CONTRACTOR or any Subcontractor and such workers.

D. If during the period this bid is required to remain open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of per diem wages in the locality in which this public Work is to be performed, such change shall not alter the wage rates in the Notice Calling for Bids or the contract subsequently awarded.

E. Pursuant to Labor Code section 1775, CONTRACTOR and any subcontractor shall as a penalty to the City, forfeit fifty dollars ($50) for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of per diem wages, determined by the Director, for such craft or classification in which such worker is employed for any public Work done under the Agreement by CONTRACTOR or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commission and shall be based on consideration of the CONTRACTOR's or subcontractor's mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage, or the previous record of the CONTRACTOR in meeting his or her prevailing rate of per diem wage obligations, or the CONTRACTOR's or subcontractor's willful failure to pay the correct prevailing rate of per diem wages. A mistake, inadvertence or neglect in failing to pay the correct prevailing rate of per diem wage is not excusable if the CONTRACTOR or subcontractor had knowledge of his or her obligations under this part. The difference between such prevailing rate of per diem wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of per diem wage shall be paid to each worker.
by the CONTRACTOR or subcontractor.

F. Any workers employed to perform Work on the Project, which Work is not covered by any craft or classification listed in the general prevailing rate of per diem wages determined by the Director shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to Work to be performed by them, and such minimum wage rate shall be retroactive to time of initial employment of such persons in such craft or classification.

G. Pursuant to Labor Code section 1773.1, per diem wages are deemed to include employer payments for health and welfare, pension, and vacation pay.

H. CONTRACTOR shall post at appropriate conspicuous points on the site of the Project, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned.

6.35 HOURS OF WORK

A. As provided in Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code, 8 hours of labor shall constitute a legal day's Work. The time of service of any worker employed at any time by the CONTRACTOR or by any Subcontractor on any subcontract under this Agreement upon the Work or upon any part of the Work contemplated by this Agreement shall be limited and restricted by the Agreement to 8 hours per day, and 40 hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of CONTRACTOR in excess of 8 hours per day and 40 hours during any one week, shall be permitted upon this public Work upon compensation for all hours worked in excess of 8 hours per day at not less than one and one-half times the basic rate of pay.

B. The CONTRACTOR shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by CONTRACTOR in connection with the Work or any part of the Work contemplated by this Agreement. The record shall be kept open at all reasonable hours to the inspection of the City and to the Division of Labor Standards Enforcement, Department of Industrial Relations.

C. Pursuant to Labor Code section 1813, the CONTRACTOR or subcontractor shall pay to the City a penalty of twenty-five Dollars ($25) for each worker employed in the execution of this Contract by the CONTRACTOR or by any Subcontractor for each calendar day during which such worker is required or permitted to Work more than 8 hours in any one calendar day and 40 hours in any one calendar week in violation of the provisions of Article 3 (commencing at section 1810), Chapter 1, Part 7, Division 2 of the Labor Code.

D. Any Work necessary to be performed at the Contractor’s request or due to the Contractor’s actions after the normal working hours of 7:00 a.m. to 4:30 p.m., Monday through Friday, or on weekends or City Holidays, shall be performed without any additional expense to the City. If Contractor seeks to Work after regular working hours, or weekends or holidays, written notice shall be given and costs for inspection, if incurred by the City, shall be reimbursed within 3 days of presentation or the City may issue, unilaterally, a deductive Change Order crediting the same.
APPRENTICES

A. The CONTRACTOR acknowledges and agrees that, if this Agreement involves a dollar amount greater than or a number of working days greater than that specified in Labor Code section 1777.5, this Agreement is governed by the provisions of Labor Code section 1777.5. It shall be the responsibility of the CONTRACTOR to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticing occupations.

B. Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

C. Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the Work of the craft or trade to which he or she is registered.

D. Only apprentices, as defined in section 3077, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at section 3070), Division 3 of the Labor Code, are eligible to be employed on public works. The employment and training of each apprenticeship shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which he or she is training.

E. Pursuant to Labor Code section 1777.5, the CONTRACTOR and any Subcontractors employing workers in any apprenticeship craft or trade in performing any Work under this Agreement shall apply to the applicable joint apprenticeship committee for a certificate approving the CONTRACTOR or Subcontractor under the applicable apprenticeship standards for the employment and training of apprentices.

F. Every CONTRACTOR and Subcontractor shall submit contract award information to the applicable joint apprenticeship committee which shall include an estimate of journeyman hours to be performed under the Agreement, the number of apprentices to be employed and the approximate dates the apprentices will be employed.

G. If the CONTRACTOR or Subcontractor willfully fails to comply with Labor Code Section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

1. Be denied the right to bid on any subsequent project for one year from the date of such determination; and

2. Forfeit as a penalty to the City fifty dollars ($50) per day for each calendar day of noncompliance, which shall be withheld from any payment due or to become due under the terms of this Agreement. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council.

H. The CONTRACTOR and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of apprentices.

I. CONTRACTOR shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and Title 8, California Code of Regulations, section 200 et seq.
Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, San Francisco, California.

6.37 FIRST AID. The CONTRACTOR shall maintain emergency first aid treatment for CONTRACTOR's workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C.A., Sec. 651 et seq.).

6.38 PROTECTION OF PERSONS AND PROPERTY

A. The CONTRACTOR, (on behalf of itself, all Subcontractors and Suppliers (of every tier), shall be responsible for all damages to persons or property (whether furnished or installed, owned or not owned) that occur as a result of its fault or negligence in connection with the prosecution of this Agreement and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and Work performed until completion and final acceptance by the City. The CONTRACTOR shall remove all mud, water, or other elements as may be required for the proper protection and prosecution of its work, including the placement of gravel beds and gravel roads for access to and around the Work. CONTRACTOR shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions. All Work shall be solely at the CONTRACTOR's risk with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code Section 7105.

B. CONTRACTOR shall take, and require Subcontractors to take, all necessary precautions for the safety of workers and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the Work site and to provide a safe and healthful place of employment. CONTRACTOR shall furnish, erect and properly maintain at all times, as directed by the City or Engineer or as required by the conditions and progress of Work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction. CONTRACTOR shall designate a responsible employee, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. The name and position of the person so designated shall be reported in writing to the City by CONTRACTOR. CONTRACTOR shall correct any violations of safety laws, standards, orders, rules, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, such violation shall be corrected immediately by the CONTRACTOR at CONTRACTOR's expense.

C. In an emergency affecting safety of person or of Work or of adjoining property, CONTRACTOR, without special instruction or authorization from the City, architect or Engineer, is hereby permitted to act, at its discretion, to prevent such threatened loss or injury; and CONTRACTOR shall so act if so authorized or instructed by the City, architect or Engineer. Any compensation claimed by CONTRACTOR on account of emergency Work shall be determined by written agreement with the City.

D. CONTRACTOR shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property, mailboxes (including temporary re-location) and structures (including, without limitation, protection from settlement or loss of lateral...
support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

6.39 ACCESSIBILITY REQUIREMENTS: Construction shall be in conformance with all applicable codes per the Department of the State Architect, Title 24 Guidelines for Accessibility by Disabled Persons.

ARTICLE 7 – OTHER WORK

7.1 OTHER CONTRACTS

A. CONTRACTOR is aware that this Project site may be split into several phases, and or separate contracts. The City reserves the right to let other contracts in connection with this Work, and it shall be the duty of the CONTRACTOR to actively schedule and coordinate its Work with the City's forces, City's Contractor(s) and or other multiple prime contracts. No extra costs or delays shall be considered as a result of any such scheduling, coordination and cooperation. CONTRACTOR shall afford other contractors reasonable opportunity for introduction and storage of their materials and execution of their Work and shall properly connect and coordinate its Work with such other contractors.

B. If any part of CONTRACTOR’s Work depends for proper execution or results upon Work of any other Contractor, the CONTRACTOR shall inspect and promptly report to the City in writing any defects in such Work that render it unsuitable for such proper execution and results. CONTRACTOR will be held accountable for damages to the City for that Work which it failed to inspect or should have inspected. CONTRACTOR's failure to inspect and report shall constitute its acceptance of other CONTRACTOR's Work as fit and proper for reception of its Work, except as to defects which may develop in other CONTRACTOR’s Work after execution of CONTRACTOR's Work.

C. To ensure proper execution of its subsequent Work, CONTRACTOR shall measure and inspect Work already in place and shall at once report to the City in writing any discrepancy between executed Work and Project Documents.

D. It is the obligation of CONTRACTOR to ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by City in prosecution of the Project to the end that CONTRACTOR may perform this Agreement in the light of such other contracts, if any.

E. Nothing herein contained shall be interpreted as granting to CONTRACTOR exclusive occupancy at the site of the Project. CONTRACTOR shall not cause any unnecessary hindrance or delay to any other contractor working on the Project. If simultaneous execution of any contract for the Project is likely to cause interference with performance of some other contract or contracts, the City shall decide which contractor shall cease Work temporarily and which contractor shall continue or whether Work can be coordinated so that contractors may proceed simultaneously.

F. If the Project is split into phases then CONTRACTOR has made allowances for any delays or damages which may arise from coordination with contractors for other phases. If any delays should arise from a contractor working on a different phase, CONTRACTOR's sole remedy for damages, including delay damages, shall be against the contractor who caused such damage and not the City. CONTRACTOR shall provide access to contractors for other phases as necessary to prevent delays and damages to contractors working on other phases of construction.
7.2 INTEGRATION OF WORK

A. CONTRACTOR shall perform all cutting, fitting, patching, and preparation of Work as required to make its several parts come together properly, and fit it to receive or be received by Work of other contractors; including both the CONTRACTOR's and City's forces. In the event of clarifications, the CONTRACTOR shall follow all Supplemental Instructions (SI's) given by the City.

B. All costs caused by defective or ill-timed Work shall be borne by CONTRACTOR.

C. CONTRACTOR shall not endanger any Work by cutting, excavating, or otherwise altering Work and shall not cut or alter Work of any other CONTRACTOR without the written consent of the City. CONTRACTOR shall be solely responsible for protecting existing Work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

D. When modifying existing Work or installing new Work adjacent to existing Work, CONTRACTOR shall match, as closely as conditions of the site and materials will allow, the finishes, textures, and colors of the original Work, refinishing existing Work as required, at no additional cost to the City.

ARTICLE 8 – THE CITY’S RESPONSIBILITIES

8.1 COMMUNICATIONS. Except as may be otherwise provided in these General Conditions or the Supplementary General Conditions, the City will communicate directly with the CONTRACTOR.

8.2 OBSERVATIONS ON THE SITE. The City will make observations on the Site during construction to monitor the progress and quality of the Work and to determine, in general, if the Work is proceeding in accordance with the Project Documents. Neither, the City, the Engineer, nor their representatives will be required to make exhaustive or continuous inspections to check the quality or quantity of the Work.

8.3 PROJECT REPRESENTATION. The City may furnish a third party or a City employee to act as Resident Project Representative to assist in observing the performance of the Work.

8.4 CLARIFICATIONS, REQUESTS FOR INFORMATION. The City will issue with reasonable promptness such answers to requests for information (RFI) which shall be consistent with or reasonably inferable from the overall intent of the Project Documents.

8.5 AUTHORIZED VARIATIONS IN WORK. The City may authorize the execution of variations in the Work from the requirements of the Project Documents complying with Articles 10, 11, and 12 of these General Conditions that cover changes in the Work, Contract Price, and Contract Times.

8.6 REJECTING WORK. The City has the authority to reject Work not in accordance with the Contract Documents and will also have authority to require special inspection or testing of the Work as provided in Article 13.

8.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS

A. The City will review all CONTRACTOR submittals.

B. The City's responsibilities for Change Orders are set forth in Articles 10, 11, and 12.

C. The City's responsibilities for Applications for Payment are set forth in Article 14.
8.8 DECISIONS ON DISPUTES. The City will be the interpreter of the requirements of the Contract Documents and of the acceptability of the Work thereunder. Disputes, and other matters relating to the acceptability of the Work and interpretation of the requirements of the Contract Documents pertaining to the performance of the Work shall be determined by the City. Any requests from the CONTRACTOR with respect to changes in the Contract Price or Contract Times shall be resolved in accordance with the requirements set forth in Articles 10, 11, 12 and 17.

8.9 LIMITATION OF CITY’S RESPONSIBILITIES

A. Neither the City's authority to act under this Article or other provisions of the Contract Documents nor any decision made by the City in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the City to the CONTRACTOR, any Subcontractor, any Supplier, any surety for any of them, or any other person or organization performing any of the Work.

B. Whenever in the Project Documents the terms "as ordered," "as directed," "as required," "as allowed," "as reviewed," "as approved," or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper," or "satisfactory," or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of the City as to the Work, it is intended that such requirement, direction, review, or judgment will be solely to evaluate the Work for compliance with the requirements of the Project Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Project Documents, unless there is a specific statement indicating otherwise. The use of any such term or adjective shall not be effective to assign to the City any duty or authority to supervise or direct the performance of the Work.

C. The City shall not supervise, direct or have control or authority over, nor be responsible for CONTRACTOR's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, or for any failure of CONTRACTOR to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The City will not be responsible for CONTRACTOR's failure to perform or furnish the Work in accordance with the Project Documents.

8.10 LANDS, EASEMENTS, AND SURVEYS. The City's duties in respect of providing lands and easements and providing engineering survey data to establish reference points are set forth in Article 4

8.11 REPORTS AND DRAWINGS. The City will identify to the CONTRACTOR copies of reports of physical conditions at the Site and drawings of existing structures which have been utilized in preparing the Contract Documents, in the Supplementary General Conditions.

8.12 SUSPENSION OF WORK. The City's right to stop Work or suspend Work is set forth in Article 15.

8.13 TERMINATION OF AGREEMENT. The City's right to terminate services of the Contractor is set forth in Article 15.

8.14 UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITIONS. The City's responsibility with respect to an undisclosed hazardous environmental condition is set forth in Article 4.4.
ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.1 THE ENGINEER OF WORK

A. The City may retain the Engineer of Work to assist the City with post-design services. The Engineer of Work's status during construction is addressed in the Supplemental General Conditions.

B. The Engineer will make observations on the Site during construction to monitor the progress and quality of the Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Engineer will not be required to make exhaustive or continuous inspections to check the quality or quantity of the Work.

ARTICLE 10 – CHANGES IN THE WORK

10.1 GENERAL

A. CO, FO, CCD. Without invalidating the Agreement and without notice to any surety, the City may at any time or from time to time, order additions, deletions, or revisions in the Work. Such additions, deletions or revisions will be authorized by a Change Order (CO), Field Order (FO) or Construction Change Directive (CCD) as defined in Article 1. Upon receipt of any such document, notwithstanding the issuance, execution, and approval of a Change Order, CONTRACTOR shall promptly proceed to implement the additions, deletions, or revisions in the Work in accordance with the applicable conditions of the Contract Documents. A CO, FO and CCD may be issued to the CONTRACTOR at any time.

B. UNILATERAL CHANGE ORDER If the City and CONTRACTOR fail to agree to the quantification of costs and/or time to be placed into a Bilateral Change Order, the City, at its own discretion, may issue a Unilateral Change Order for those costs and/or time impacts that is deemed appropriate for the changed Work conditions. Notwithstanding the issuance, execution, and approval of a Change Order, the CONTRACTOR shall proceed immediately with the changed Work upon receipt of a Construction Change Directive (CCD), or Field Order (FO). Should the CONTRACTOR disagree with any terms and conditions set forth in an approved Unilateral Contract Change Order, the CONTRACTOR shall submit a written protest to the City within fifteen (15) days after the receipt of the approved Unilateral Contract Change Order. The protest shall state the points of disagreement, and, if possible, the Contract Specification references, quantities and costs involved. If a written protest is not submitted to the City, payment will be made as set forth in the approved Unilateral Contract Change Order, and that payment shall constitute full compensation for all Work included therein or required thereby. Unprotested, approved Unilateral Contract Change Orders will be considered as executed Contract Change Orders as that term is used in Articles 10, 11, and 12.

C. The CONTRACTOR shall not be entitled to an increase in the Contract Price nor an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified, or supplemented by Change Order, except in the case of an emergency.

D. If notice of any change in the Work is required to be given to a surety, the giving of any such notice shall be the CONTRACTOR's responsibility. If the change in the Work affects the Contract Price, the City may require an adjustment to the amount of any applicable Bond and the amount of each applicable Bond shall be adjusted accordingly.
E. If the City and the CONTRACTOR are unable to agree as to the extent, if any, of an increase in the Contract Price or an extension or shortening of the Contract Times that may be allowed as a result of a Field Order, the City may direct the CONTRACTOR to proceed as outlined in Article 11.2. in order to minimize the impact on and delays to the Work, and the CONTRACTOR may make a claim as provided in Articles 11, 12 and 17.

F. The City of Escondido has the sole authority to approve or disapprove or to delegate the approval or disapproval of Contract Change Orders.

10.2 ALLOWABLE QUANTITY VARIATIONS

A. In the event of an increase or decrease in the quantity of any bid item under a unit price contract, the total amount of Work actually done or materials or equipment furnished will be paid for according to the unit price established for such Work under the Contract Documents, wherever such unit price has been established; provided, that an adjustment in the Contract Price may be made for changes which result in an increase or decrease in excess of twenty-five percent (25%) of the estimated quantity of any unit price bid item of the Work.

B. In the event a part of the Work is to be entirely eliminated and no lump sum or unit price is named in the Contract Documents to cover such eliminated Work, the price of the eliminated Work shall be agreed upon by the City and the CONTRACTOR by Change Order. The schedule of values submitted by CONTRACTOR shall be referred to in evaluating the price to be reduced, but shall not be determinative unless both parties agree.

ARTICLE 11 – CHANGE OF CONTRACT PRICE

11.1 GENERAL

A. The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the Work. All duties, responsibilities, and obligations whether implied, inferred or express, assigned to or undertaken by the CONTRACTOR to complete the Work shall be at its expense without change in the Contract Price.

B. The Contract Price may only be changed by a Change Order. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following three ways:

1. UNIT PRICES. Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved;

2. AGREED UPON LUMP SUM. By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Article 11.4; or

3. COST OF WORK. On the basis of the cost of the Work, force account payment (determined as provided in Article 11.2) plus the CONTRACTOR's overhead and profit (determined as provided in Article 11.3).

C. AGREED ENTITLEMENT. When the City is in agreement regarding entitlement due the CONTRACTOR on a particular issue that the CONTRACTOR has brought to the attention of the City with a notice, and finds that there is a clear entitlement for additional compensation, the CONTRACTOR and the City will choose a method to be used for
calculating the value of the extra Work from the three methods described in Article 11.1.B.1, 2, or 3 above.

1. CHANGE USING UNIT PRICES METHOD. When a change in Contract Price using unit prices is applied, described in Article 11.1.B.1 (UNIT PRICES), a Field Order, signed by the City, will be given to the CONTRACTOR. The increase in line item quantities shall be tracked and documented in the daily extra Work report (Article 11.4) which must identify the quantities used/consumed/handled and shall be presented to the City's on-site representative on a daily basis for review, for pertinent comments, and counter-signature. The CONTRACTOR will invoice the City for the line item quantity used for the extra Work following the conditions of Article 14, "PAYMENTS TO CONTRACTOR, RETENTION AND COMPLETION". A reconciliation Contract Change Order will be executed when the final quantities used are known. The Contract Change Order will account for the over or under amount of line item quantities.

2. CHANGE USING AGREED UPON LUMP SUM METHOD. When the payment method described in Article 11.1.B.2 (LUMP SUM) is used, a Field Order or a Contract Change Order, signed by the City, will be given to the CONTRACTOR. The CONTRACTOR will invoice the City for the extra Work following the conditions of Article 14.

3. CHANGE USING FORCE ACCOUNT "COST OF Work" METHOD. When no agreement can be reached on the method of payment for the extra Work, the method described in Article 11.1.B.3 (COST OF WORK), force account payment (determined as provided in Article 11.2) shall be used. A Field Order will be given to the CONTRACTOR, signed by the City, describing the Work. The City reserves the right to place a "not to exceed" amount on the Field Order based on a City cost estimate. If the approximate value of the cost of extra Work approaches the "not to exceed" value, the CONTRACTOR shall notify the City in order to proceed. When the extra Work is completed a Contract Change Order for the accumulated total value of the extra Work shall be executed, should the value of the Work exceed the Field Order allowance. The extra Work shall be documented in the Daily Extra Work Report (Article 11.4).

D. DISAGREEMENT REGARDING ENTITLEMENT. When there is no agreement between the CONTRACTOR and the City on an issue of Work that has not yet been started that the CONTRACTOR has brought to the City pursuant to Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE", and the City does not find that there is any entitlement for additional compensation due the CONTRACTOR, the Work in question may be designated "DISPUTED WORK". During the performance of any such "DISPUTED WORK" the CONTRACTOR shall:

1. Although not to be construed as proceeding under agreed-upon extra Work provisions, the CONTRACTOR shall keep and furnish records breaking down the Work as described in the following Article 11.2. Daily records shall be furnished according to Article 11.4.

2. The CONTRACTOR shall continue with the disputed Work according to Article 2.6.
11.2 COST OF WORK - FORCE ACCOUNT (BASED ON TIME AND MATERIALS)

A. GENERAL: The term "cost of Work" means the sum of all costs necessarily incurred and paid by the CONTRACTOR for labor, materials, and equipment in the proper performance of extra Work. Except as otherwise may be agreed to in writing by the City, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall include the costs itemized in Article 11.3.D.1. to be compensated for as a part of the stipulated overhead and profit allowance.

B. LABOR: The costs of labor will be the actual cost for wages prevailing for each craft or type of workers performing the extra Work at the time the extra Work is done, plus employer payments of payroll taxes, workers compensation insurance, liability insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from federal, state or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. Labor costs for equipment operators and helpers will be paid only when such costs are not included in the invoice for equipment rental. The labor costs for foremen shall be proportioned to all of their assigned Work and only that applicable to extra Work shall be paid. Non-direct labor costs including superintendence shall be considered part of the markup set out in Article 11.3. Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the CONTRACTOR to other workers operating similar equipment already on the Site, or in the absence of such labor, established by collective bargaining agreements for the type of workmen and location of the extra Work, whether or not the operator is actually covered by such an agreement.

C. MATERIALS: The cost of materials reported shall be at invoice or lowest current price at which materials are locally available and delivered to the Site in the quantities involved, plus the cost of freight, delivery and storage, subject to the following:

1. All trade discounts and rebates shall accrue to the City, and the CONTRACTOR shall make provisions so that they may be obtained;

2. For materials secured by other than a direct purchase and direct billing to the purchaser, the cost shall be deemed to be the price paid to the actual supplier as determined by the City. Except for actual costs incurred in the handling of such materials, markup will not be allowed;

3. Payment for materials from sources owned wholly or in part by the purchaser shall not exceed the price paid by the purchaser for similar materials from said sources on extra Work items or the current wholesale price for such materials delivered to the Site, whichever price is lower; and

4. If in the opinion of the City the cost of material is excessive, or the CONTRACTOR does not furnish satisfactory evidence of the cost of such material, then the cost shall be deemed to be the lowest current wholesale price for the quantity concerned delivered to the Site less trade discount. The City reserves the right to furnish materials for the extra Work and no claim will be allowed by the CONTRACTOR for costs and profit on such materials.

D. EQUIPMENT: The CONTRACTOR will be paid for the use of equipment at the rental rate listed for such equipment specified in the current edition of the "Labor Surcharge and Equipment Rental Rates" published by the State of California Business, Transportation & Housing Agency (CALTRANS). Such rental rate will be used to compute payments for
equipment whether the equipment is under the CONTRACTOR's control through direct ownership, leasing, renting, or another method of acquisition. The rental rate to be applied for use of each item of equipment will be the rate resulting in the least total cost to the City for the total period of use. If it is deemed necessary by the CONTRACTOR to use equipment not listed in the publication specified, an equitable rental rate for the equipment will be established by the City. The CONTRACTOR may furnish cost data which might assist the City in the establishment of the rental rate. Payment for equipment shall be subject to the following:

1. All equipment shall, in the opinion of the City, be in good working condition and suitable for the purpose for which the equipment is to be used;

2. Before construction equipment is used on the extra Work, the CONTRACTOR shall plainly stencil or stamp an identifying number thereon at a conspicuous location, and shall furnish to the City a description of the equipment with its identifying number;

3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment which has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer;

4. Individual pieces of equipment or tools having a replacement value of $250 or less, whether or not consumed by use, will be considered to be small tools and no payment will be made therefore.

E. EQUIPMENT RENTAL TIME: The rental time to be paid for equipment on the Site will be the time the equipment is in productive operation on the extra Work being performed and, in addition, will include the time required to move the equipment to the location of the extra Work and return it to the original location or to another location requiring no more time than that required to return it to its original location; except, that moving time will not be paid if the equipment is used on other than the extra Work, even though located at the Site of the extra Work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made for loading and transporting costs when the equipment is used at the Site of the extra Work on other than the extra Work. Rental time will not be allowed while equipment is inoperative due to breakdowns. The rental time of equipment on the Work site will be computed subject to the following:

1. When hourly rates are listed, any part of an hour less than thirty (30) minutes of operation will be considered to be half-hour (1/2 – hour) of operation, and any part of an hour in excess of 30 minutes will be considered 1 hour of operation;

2. When daily rates are listed, any part of a day less than 4 hours operation will be considered to be 1/2 – day of operation. When owner-operated equipment is used to perform extra Work to be paid for on a time and materials basis, the CONTRACTOR will be paid for the equipment and operator, as set forth in this Article.

3. Payment for the equipment will be made in accordance with the provisions in Article 11.
SURETIES: All Work performed hereunder shall be subject to all of the provisions of the Contract Documents and the CONTRACTOR's sureties shall be bound with reference thereto as under the original Agreement. Copies of all amendments to Bonds or supplemental Bonds shall be submitted to the City for review prior to the performance of any Work hereunder.

11.3 OVERHEAD & PROFIT (O&P) PERCENTAGE SCHEDULE. The allowance for overhead and profit must not exceed the values in the Overhead & Profit Schedule table below.

A. For Change Orders, whether additive or deductive and work classified as Extra Work, the allowance for overhead and profit must include full compensation for superintendence, insurance premiums, bond premiums, taxes, field office expense, extended overhead, home office overhead, and any other items of expense e.g., Change Order estimating and preparation cost, claims preparation cost, schedule analysis, project management, and field engineering.

B. Extended overhead must be any and all costs incurred either in the field or at your office resulting from Extra Work excluding direct costs related to direct hourly labor, equipment, or materials necessary to complete the Extra Work.

C. Overhead & Profit Schedule table

<table>
<thead>
<tr>
<th>Component</th>
<th>Overhead</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Material</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Equipment</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>Subcontractor Extra Work</td>
<td>3.5%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

D. Work paid under Allowance Bid items for permits, governmental fees, or direct payments specified in the Contract Documents will not be subject to any markups.

E. When all or any part of the Extra Work is performed by a Subcontractor, the allowance specified herein will be applied to the labor, materials, and equipment costs of the Subcontractor, to which you may add 5% of the Subcontractor's total cost for the Extra Work.

F. Regardless of the number of hierarchical tiers of Subcontractors, the 5% which is your allowance 3.5% (for overhead) and 1.5% (for profit) may be applied one time only to the performing Subcontractor’s total cost.

G. You will only be reimbursed, with 6% markup, for the warranty extensions beyond the time required by the Contract Documents if requested by the City.

H. The O&P Schedule shall be used for "Negotiated Sum" (described in Article 11.1.B.2) and/or "Time and Materials" (described in Article 11.1.B.3) Work. Unit Price Work shall not have the overhead and profit markup applied to the Work, on the basis that the Unit Price includes overhead and profit margins.

CONTRACTOR shall set up separate cost codes for each extra Work item and account for all labor, materials and equipment for each cost code. This includes using said cost codes for all labor expended on extra Work, and coding delivery tickets and P.O.’s as well. The same cost code shall appear on the daily report to account for labor, materials and
equipment devoted/used that day for each extra Work item. Failure to comply with this requirement shall be a waiver of the right to collect the same.

E. IT IS EXPRESSLY UNDERSTOOD THAT THE VALUE OF SUCH EXTRA WORK OR CHANGES, AS DETERMINED BY ANY OF THE AFOREMENTIONED METHODS, EXPRESSLY INCLUDES ANY AND ALL OF CONTRACTOR'S COSTS AND EXPENSES, BOTH DIRECT AND INDIRECT, RESULTING FROM EFFORTS TO IDENTIFY, QUOTE AND/OR NEGOTIATE THE CHANGE(S) AS WELL AS ADDITIONAL TIME REQUIRED ON THE PROJECT, OR RESULTING FROM DELAYS TO THE PROJECT, INCLUDING BUT NOT LIMITED TO ACCELERATION, CUMULATIVE AFFECT OF THE CHANGE(S), EXPEDITING THE WORK, FRAGNETS, ETC.

NO RESERVATION OF RIGHTS, EXPRESS OR IMPLIED, WILL BE PERMITTED OR ALLOWED.

11.4 CONTRACTOR'S DAILY EXTRA WORK REPORT

A. General. At the close of each working day, the CONTRACTOR shall submit a daily report to the Inspector, on forms approved by the City, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, and for other services and expenditures when authorized concerning extra Work items. An attempt shall be made to reconcile the report daily, and the Inspector and the CONTRACTOR shall sign it. The report shall clearly differentiate between extra or disputed Work and Contract Work. In the event of disagreement, pertinent notes shall be entered by each party to explain points that cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the CONTRACTOR. The CONTRACTOR shall organize and forward copies of the CONTRACTOR's and Inspector's reports to the City upon the completion of each "Time and Material" activity.

B. CONTRACTOR shall maintain its records in such a manner as to provide a clear distinction between the direct costs of any extra Work and/or deductive Work and the original Contract Work. This requirement pertains to the costs for wholly or partially approved Change Order Requests (COR's), Construction Change Directives (CCD's), Change Orders (CO's), Field Orders (FO's), and Work CONTRACTOR considers to be potential Change Orders.

11.5 CONTRACTOR SHALL PROVIDE NOTICE. If the CONTRACTOR should claim that any instruction, request, drawing, specification, action, condition, omission, default, or other situation obligates the City to pay additional compensation to CONTRACTOR or to grant an extension of time, or constitutes a waiver of any provision in the Agreement, the CONTRACTOR shall provide written "Notice" to the City within 5 days after sustaining of such damage, or being notified of an adverse decision, and provide within 14 days of the event the factual basis supporting the claim (unless otherwise specified). For requests for additional compensation for alleged changed conditions, such as finding rock, notice shall be made before the condition instigating the notice is disturbed. The written "Notice" shall state the summary points for which the factual bases will support the claim and cite in detail the Project Documents (including plans and specifications) upon which the claim is to be based. CONTRACTOR's failure to notify the City within such a period shall be deemed a waiver and relinquishment of such a claim. If such notice is given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions. In addition, on or before the end of the month for which the claim has been filed, the CONTRACTOR shall also file with the City the WAIVER AND RELEASE FORMS, for which the claim and the amount of the claim is identified. If the claim is
not indicated on the **WAIVER AND RELEASE FORMS**, CONTRACTOR’s claim shall be forfeited and invalidated and it shall not be entitled to consideration for time or payment on account of any such claim.

11.6 **COSTS RELATING TO WEATHER/ FORCE MAJEURE.** The CONTRACTOR shall have no claims against the City for damages for any injury to Work, materials, or equipment, resulting from the action of the elements whether caused by weather, earthquakes, or other natural events. If, however, in the opinion of the City, the CONTRACTOR has made all reasonable efforts to protect the materials, equipment, and Work, the CONTRACTOR may be granted a reasonable extension of Contract Times to make proper repairs, renewals, and replacements of the Work, materials, or equipment. All costs incurred as a result of any force majeure, including abnormally or unusually severe weather, earthquakes or other natural perils shall not be compensable from the City and the risks associated therewith shall be exclusively borne by CONTRACTOR. To the extent CONTRACTOR elects to protect itself from any/all of said risks, it shall insure against the same.

**ARTICLE 12 – CHANGE OF CONTRACT TIMES**

12.1 **GENERAL**

A. Contract times are stated in the Notice Inviting Sealed Bids, Section 00030, The Public Improvement Agreement, and the Supplemental General Conditions, Section 00800, of these Contract Documents.

B. The Contract Times may only be changed by a Change Order. Any claim for an extension of the Contract Times shall be based on written notice delivered by the CONTRACTOR to the City promptly (but in no event later than 24 hours) after the start of the event giving rise to the claim and stating the general nature of the claim. Reference Article 11.5 "CONTRACTOR SHALL PROVIDE NOTICE". Notice of the extent of the claim with supporting data shall be delivered within **5 days** after the start of such event (unless the City allows an additional period of time for the submission of additional or more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR’s written statement that the adjustment claimed is the entire adjustment to which the CONTRACTOR is entitled as a result of said event. All claims for adjustment in the Contract Times will be determined by the City. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this Article 12.1.B. An increase in Contract Times does not mean that the CONTRACTOR is due an increase in Contract Price. Only compensable time extensions will result in an increase in Contract Price.

C. Extra Work executed by the CONTRACTOR in conjunction, simultaneously or concurrently with the Work does not create a compensable time extension.

D. Extra Work executed by the CONTRACTOR during Contract Schedule Float does not create a compensable time extension.

E. The value of time expended on extra Work is fully compensated by the markups for overhead and profit found on the table in Article 11.3.

F. All time limits stated in the Contract Documents are of the essence of the Agreement.

G. When CONTRACTOR is prevented from completing any part of the Work within the Contract Times (or Milestones) due to delay beyond the control of CONTRACTOR, the Contract Times (or Milestones) will be extended in an amount equal to the time lost on the critical path of the Work due to such delay, if a claim is made therefore as provided in Article 12.1.B. Delays beyond the control of CONTRACTOR shall include, but not be limited
to, acts or neglect by the City; acts or neglect of those performing other Work as contemplated by Article 7; and fires, floods, epidemics, abnormal weather conditions, or acts of God. Delays attributable to and within the control of any Subcontractor or Supplier (of any tier) shall be deemed to be delays within the control of the CONTRACTOR.

H. In no event will the City be liable to CONTRACTOR, any Subcontractor, any Supplier, any other person or organization, or to any surety for or employee or agent of any of them, for any increase in the Contract Price or other damages arising out or resulting from the following:

1. Delays caused by or within the control of CONTRACTOR;
2. Delays beyond the control of both the City and CONTRACTOR including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, or acts or neglect by those performing other Work as contemplated by Article 7; or
3. City-caused/responsible delays, concurrent with items 1 and/or 2 above.

12.2 EXTENSIONS OF CONTRACT TIMES FOR DELAY DUE TO WEATHER. The CONTRACTOR's construction schedule shall anticipate delay due to seasonal weather.

12.3 OWNERSHIP OF PROJECT SCHEDULE FLOAT/EARLY COMPLETION SCHEDULE

A. Total Float is the number of days by which a part of the Work in the Construction Schedule may be delayed from its early dates without necessarily extending the Contract Time. Contract Float is the number of days between the CONTRACTOR's anticipated date for early completion of the Work, or specified part, and the corresponding Contract Time. Total float and Contract Float belong to the Project and are not for the exclusive benefit of any party. They shall be available to the City, the construction manager, their consultants, or the CONTRACTOR, to accommodate changes in the Work, or to mitigate the effects of events which may delay performance or completion. The City will monitor and optimize the use of float for the benefit of the Project.

B. IF CONTRACTOR SUBMITS A REVISED SCHEDULE SHOWING AN EARLIER COMPLETION DATE FOR THE PROJECT, THE CITY'S ACCEPTANCE OF THIS REVISED SCHEDULE SHALL NOT ENTITLE CONTRACTOR TO ANY DELAY CLAIM OR DAMAGES DUE TO ANY SUCH REVISED SCHEDULE. CONTRACTOR AND ALL SUBCONTRACTORS SHALL INCLUDE, AS DEEMED APPROPRIATE, SUFFICIENT AMOUNTS TO COVER THE HOME OFFICE AND FIELD OVERHEAD COSTS COMMENSURATE WITH THE PUBLISHED CONTRACT DURATION. FAILURE TO INCLUDE OVERHEAD COSTS IN THEIR BIDS THROUGH THE CONTRACT DURATION SHALL BE AT THE RISK OF CONTRACTOR AND ITS SUBCONTRACTORS.

12.4 EXTENSION OF TIME - LIQUIDATED DAMAGES

A. The CONTRACTOR and the City hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. CONTRACTOR shall be assessed the sum set forth in the Agreement, as liquidated damages for each and every day the Work required under the Project Documents remains unfinished past the time for completion, as set forth in the Agreement, and any extensions of time granted by the City to the CONTRACTOR under the terms of the Project Documents. The CONTRACTOR will pay to the City or the City may retain from amounts otherwise payable to the CONTRACTOR, said amount for each day after failure to meet the requirements of the contract completion as scheduled in the Agreement. For purposes of this article, the Work shall be considered "complete" in accordance with these General Conditions, except that the Work may be considered
complete without formal acceptance by the City Council so long as the City Council, at its next regularly scheduled meeting, accepts the Work.

B. CONTRACTOR shall not be charged for liquidated damages, as set forth above, because of any delays in completion of Work which are not the fault or negligence of CONTRACTOR, including but not restricted to acts of God, as long as CONTRACTOR informs City of such events. As soon as CONTRACTOR become aware of any delay and no later than 14 days from the commencement of the delay, CONTRACTOR shall notify the City in writing of causes of delay in accordance with the contract scheduling specifications. CONTRACTOR shall provide documentation and justification to substantiate the delay and its relation to the Project's critical path. Extension of time shall apply only to that portion of Work affected by the delay, and shall not apply to other portions of Work not so affected.

ARTICLE 13 – INSPECTIONS AND TESTS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

13.1 AUTHORITY OF INSPECTOR. Any Work performed by the CONTRACTOR upon the instructions or comments by the Inspector may be confirmed by the CONTRACTOR, at the CONTRACTOR's option, in writing by the City. Any extra Work performed without the written instruction of the City shall be at CONTRACTOR's sole cost and expense and there will be no delay damages incurred by City for such Work.

13.2 INSPECTION. No Work shall be carried on except with the knowledge of the Inspector(s). The Inspector shall have free access to any or all parts of Work at any time. CONTRACTOR shall furnish Inspector reasonable opportunities for obtaining such information as may be necessary to keep Inspector fully informed respecting progress and manner of Work and character of materials. Inspection of Work shall not relieve CONTRACTOR from any obligation to fulfill the Project Documents. Inspector shall have authority to stop Work whenever provisions of Project Documents are not being complied with and such noncompliance is discovered. CONTRACTOR shall instruct its employees accordingly.

13.3 NOTICE OF DEFECTIVE Work. Prompt notice of Defective Work known to the City will be given to the CONTRACTOR. Defective Work discovered or uncovered will be noticed to the CONTRACTOR as soon as practicable. All Defective Work, whether or not in place, may be rejected, corrected, or accepted as provided in this Article 13. Defective Work may be rejected even if approved by prior inspection.

13.4 ACCESS TO WORK. The City, Engineer, their consultants, subconsultants, other representatives and personnel of the City, independent testing laboratories, and governmental agencies with jurisdictional interests shall have access to the Work at reasonable times for their observation, inspecting, and testing. CONTRACTOR shall provide them proper and safe conditions for such access, including sheeting and shoring as may be necessary, and advise them of CONTRACTOR's Site safety procedures, and programs so that they may comply therewith as applicable.

13.5 INSPECTIONS AND TESTS

A. The CONTRACTOR shall give the City not less than 2 working days notice of readiness of the Work for all required general inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. Specialty inspections shall be scheduled 7 days in advance.
B. The City shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. For inspection, tests, or approvals covered by Articles 13.5.C. and 13.5.D. below;

2. That costs incurred in connection with tests or inspections conducted pursuant to Article 13.5.G. shall be paid for by the CONTRACTOR.

C. If Laws and Regulations of any public body having jurisdiction require any Work (or any part thereof) to be inspected, tested, or approved by an employee or other representative of such public body, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests or approvals; pay all costs in connection therewith; and furnish the City the required certificates of inspection or approval.

D. The CONTRACTOR shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for the City's acceptance of materials or equipment to be incorporated in the Work or acceptance of materials, mix designs, or equipment submitted for approval prior to the CONTRACTOR's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to the City.

E. The City will make, or have made, such inspections and tests as the City deems necessary to see that the Work is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in the Supplementary General Conditions, the cost of such inspection and testing will be borne by the City. In the event such inspections or tests reveal non-compliance with the requirements of the Contract Documents, the CONTRACTOR shall bear the cost of corrective measures deemed necessary by the City, as well as the cost of subsequent reinspection and retesting. Neither observations by the Engineer nor inspections, tests, or approvals by others shall relieve the CONTRACTOR from the CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

F. If any Work that is to be inspected, tested, or approved is covered without written concurrence of the City, it must, if requested by the City, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense.

G. If any Work is covered contrary to the written request of the City, it must, if requested by the City, be uncovered for the City's observation and recovered at the CONTRACTOR's expense.

H. If the City considers it necessary or advisable that covered Work be observed by the City or inspected or tested by others, the CONTRACTOR, at the City's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as the City may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is Defective Work, the CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, including but not limited to, fees and charges of engineers, architects, attorneys, and other professionals. However, if such Work is not found to be Defective Work, the CONTRACTOR will be allowed an increase in the Contract Price, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, the CONTRACTOR may make a request for additional compensation therefore as provided in Articles 10, 11 and 12.
I. All initial tests shall be performed under the direction of the City. All re-testing due to failure shall be performed under the direction of the City, and the cost of all re-testing shall be borne by the CONTRACTOR. The costs and potential loss of productivity to accommodate re-testing shall be borne by the CONTRACTOR.

J. A City Inspector, or designee, may be required on the job site at all times Work is in progress as determined by the City. Inspection will be required by the appropriate agency for the following type of Work: trenching, special or sand bedding, laying pipe, any welding, backfill, compaction and pavement replacement. Special Work hours required by the Contract are considered normal hours.

13.6 THE CITY MAY STOP THE WORK. If Defective Work is identified, the City may order the CONTRACTOR to stop performance of the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the City to stop the Work shall not give rise to any duty on the part of the City to exercise this right for the benefit of the CONTRACTOR or any other party.

13.7 CORRECTION OR REMOVAL OF DEFECTIVE WORK. If required by the City, the CONTRACTOR shall promptly either correct all Defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by the Engineer, remove it from the Site and replace it with non-defective Work. The CONTRACTOR shall bear all direct, indirect, and consequential costs and damages of such correction or removal, including but not limited to fees and charges of engineers, architects, attorneys, and other professionals made necessary thereby.

13.8 ACCEPTANCE OF DEFECTIVE WORK. If, instead of requiring correction or removal and replacement of Defective Work, the City prefers to accept the Defective Work, the City may do so. The CONTRACTOR shall bear all direct, indirect, and consequential costs attributable to the City's evaluation of and determination to accept such Defective Work. If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and the City shall be entitled to an appropriate decrease in the Contract Price.

13.9 THE CITY MAY CORRECT DEFECTIVE WORK

A. If the CONTRACTOR fails within a reasonable time after written notice from the City to correct Defective Work, or to remove and replace Defective Work as required by the City in accordance with Article 13.7, or if the CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if the CONTRACTOR fails to comply with any other provision of the Contract Documents, the City may, after 7 days written notice to the CONTRACTOR, correct and remedy any such deficiency.

B. In exercising the rights and remedies under this paragraph, the City shall proceed with corrective and remedial action. In connection with such corrective and remedial action, the City may exclude the CONTRACTOR from all or part of the Site, take possession of all or part of the Work, and suspend the CONTRACTOR's services related thereto and incorporate in the Work all materials and equipment for which the City has paid the CONTRACTOR whether stored at the Site or elsewhere. The CONTRACTOR shall provide the City, City's representatives, Engineer, and Engineer's consultants access to the Site to enable the City to exercise the rights and remedies under this Article.

B. All direct, indirect, and consequential costs and damages incurred by the City in exercising the rights and remedies under this paragraph will be charged against the CONTRACTOR and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and the City shall be entitled to an appropriate
decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, the City may make a claim therefore as provided in Article 11. Such claim will include, but not be limited to, all costs of repair or replacement of Work of others, destroyed or damaged by correction, removal, or replacement of CONTRACTOR's Defective Work and all direct, indirect, and consequential damages associated therewith.

D. The CONTRACTOR shall not be allowed an extension of Contract Times (or Milestones) because of any delay in the performance of the Work attributable to the exercise by the City of the City's rights and remedies under this paragraph.

13.10 CORRECTION PERIOD

A. The correction period for Defective Work shall be the longer of:

1. One year after the date of final acceptance;
2. Such time as may be prescribed by Laws and Regulations;
3. Such time as specified by the terms of any applicable special guarantee required by the Contract Documents; or
4. Such time as specified by any specific provision of the Contract Documents.

B. If, during the correction period as defined in Article 13.10A above, any Work is found to be Defective Work, the City shall have the same remedies as set forth in Articles 13.7, 13.8, and 13.9 above.

C. Where Defective Work (and damage to other Work resulting therefrom) has been corrected, removed, or replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of 1 year after such correction or removal and replacement has been satisfactorily completed.

ARTICLE 14 – PAYMENTS TO CONTRACTOR, RETENTION AND COMPLETION

14.1 APPLICATION FOR PROGRESS PAYMENT

A. On the 25th of each month, the CONTRACTOR shall submit to the City for review, the Application for Payment filled out and signed by the CONTRACTOR covering the Work completed as of the date of the Application for Payment and accompanied by the appropriate waiver(s) and release upon "Progress Payment" and such supporting documentation as is required by the Project Documents.

B. The Application for Payment shall identify, as a subtotal, the estimated amount of the CONTRACTOR total earnings to date; plus the value of materials stored at the Site, pursuant to Article 14.1.K, which have not yet been incorporated in the Work; and less a deductive adjustment for materials installed which were not previously incorporated in the Work, but for which payment was allowed under the provisions for payment for materials stored at the Site, but not yet incorporated in the Work.

C. The net payment due the CONTRACTOR shall be the above-mentioned subtotal from which shall be deducted five percent (5%) retention and the total amount of all previous payments made to the CONTRACTOR. The City shall have the right to issue joint checks to CONTRACTOR and SUBCONTRACTOR and/or Suppliers.
D. Work completed as estimated shall be an estimate only and no inaccuracy or error in said estimate shall operate to release CONTRACTOR or Surety from any damages arising from such Work or from enforcing each and every provision of this Agreement, and the City shall have the right subsequently to correct any error made in any estimate for payment.

E. CONTRACTOR SHALL NOT BE ENTITLED TO HAVE ANY PAYMENT ESTIMATES PROCESSED OR BE ENTITLED TO HAVE ANY PAYMENT FOR WORK PERFORMED SO LONG AS ANY LAWFUL OR PROPER DIRECTION CONCERNING WORK, OR ANY PORTION THEREOF, GIVEN BY THE CITY OR ENGINEER SHALL REMAIN UNCOMPLIED WITH BY THE CONTRACTOR.

F. The City has discretion to require from the CONTRACTOR any of the following information with the application for payment:

1. Certified payroll covering the period of the prior application for payment;
2. Unconditional waivers and releases from all Subcontractors/suppliers for which payment was requested under the prior application(s) for payment;
3. Receipts or bills of sale for any items.
4. Signature of the Inspector, confirming that the maintenance of the Record Drawings is being kept up-to-date, and that the Record Drawings are not being used as a construction set.

G. NO PAYMENT BY THE CITY HEREUNDER SHALL BE INTERPRETED TO IMPLY THAT THE CITY HAS INSPECTED, APPROVED, OR ACCEPTED ANY PART OF THE WORK. The final payment of 5% of the value of the Work done under this Agreement, if unencumbered, shall be made within 55 days after the City records the Notice of Completion. ACCEPTANCE WILL BE MADE ONLY BY ACTION OF THE ESCONDIDO CITY COUNCIL.

H. Payments for Change Order items can be included into the monthly progress payments, only after the Change Order has been fully executed and approved by the CITY and the CONTRACTOR, and only to the extent that Change Order Work has been performed.

I. The value of materials stored at the Site shall be an amount based upon the value of all acceptable materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing; provided, each such individual item has a value of more than $5,000 and will become a permanent part of the Work. The Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that the CONTRACTOR has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the City's interest therein, all of which will be satisfactory to the City.

J. Unless otherwise provided, on or before making request for final payment of the undisputed amount due under the Agreement, CONTRACTOR shall submit to the City, in writing a summary of all claims for compensation under or arising out of this Agreement which were timely submitted. The acceptance by CONTRACTOR of the payment of the final amount shall constitute a waiver of all claims against the City under or arising out of this Agreement, except those previously made, in a timely manner and in writing, and identified by CONTRACTOR as unsettled at the time of CONTRACTOR's final request for payment.
K. Materials included in the progress payments shall be stored properly and protected as required to prevent damage, including but not limited to, rust, dents, scratches, and decay. Materials stored on-site and subject to payment, shall be gated and secured to prevent theft and/or vandalism. When the CONTRACTOR requests payment for materials not incorporated in the Work, the following terms and conditions shall apply:

1. For permanent materials delivered to the project site, or stored in an approved location off-site, an allowance of one-hundred percent (100%) of the material costs plus freight charges as invoiced may be made. The allowance will be based upon validated invoices or bills for such materials, including freight charges, and a copy thereof shall be made a part of the documented records for the project. All permanent materials approved for payment will have been tested by the City for compliance with the requirements of the Project Documents. Payment will only be made for permanent materials that conform to the requirements of the Project Documents.

2. No allowance shall be made for fuels, form lumber, falsework, temporary structures or other materials of any kind that will not become an integral part of the finished contract.

3. All permanent materials, for which an allowance is requested, shall be stored in an approved manner where damage is not likely to occur. If any of the stored materials are lost or become damaged in any manner, CONTRACTOR shall be responsible for repairing or replacement of such damaged materials. The value of the lost or damaged materials shall be deducted from the CONTRACTOR's subsequent progress payments until replacement has been accomplished.

4. Permanent materials, for which payment has been made, either wholly or partially, shall not be removed from the approved location until such time that it is incorporated into the Work, unless approved by the City and/or the Engineer.

5. The following must accompany the written request for payment of stored materials:
   a. Consent of the Surety specifying the material type and the bid items in which the material is to be used.
   b. Validating invoices showing that payment for the material has been made.
   c. A written statement from CONTRACTOR attesting that the invoices, as submitted do not include charges and/or fees for placing, handling, erecting or any other charges and/or markups other than the actual material cost, sales tax if applicable, and freight charges.
   d. Bill of lading showing delivery of the material.
   e. Inspection test reports, and certifications if required by the Contract Documents.
   f. CONTRACTOR shall obtain a negotiable warehouse receipt, endorsed over to the City for materials and/or equipment stored in an off-site warehouse.
   g. Certificate of insurance clearly indicating that the materials or equipment is fully insured against theft, fire, vandalism, malicious mischief, as well as other coverage required under the Project Documents.

6. Nothing in these General Conditions shall be interpreted as requiring the City to pay for stored materials. The City shall decide on a case-by-case basis whether stored materials can be paid for. Some factors the City will consider are:
CONTRACTOR's ability to meet the Project Schedule and milestones, the effectiveness of CONTRACTOR's quality control plan, how record drawings are being maintained and kept up, the status of the material submittals, and the ongoing cleanliness of the Project and the Project Site. No payment will be made for stored materials that have not been submitted and accepted.

7. If the permanent materials are stored off-site, CONTRACTOR must pay the City's representative's transportation and lodging to see the permanent materials.

8. Full title to the materials and/or equipment shall vest with the City at the time of delivery to the site, warehouse or other storage location.

14.2 UNIT PRICE BID SCHEDULE. Progress payments on account of unit price Work will be based on the number of units completed as determined by the City and/or its representative.

14.3 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN)

A. CONTRACTOR shall furnish on a form approved by the City:

1. Within **10 days** of award of the contract and commensurate with the specification section entitled **CONSTRUCTION SCHEDULES**, provide a detailed preliminary estimate giving a complete breakdown of contract price for each area of the project and/or site, which shall include all Subcontractor/supplier agreements showing the dollar amounts of these agreements to justify the schedule of values, and showing separate line items for the material cost(s) and installation cost(s).

2. A periodical itemized estimate of Work done for purpose of making partial payments thereon, that is until the cost loaded CPM construction schedule has been developed (if required by the Contract).

3. Within **10 days** of a request by City, a schedule of estimated monthly payments which shall be due CONTRACTOR under the **Agreement**.

B. Values employed in making up any of these schedules are subject to the City's written approval and will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from contract price.

1. Unless otherwise agreed in writing, payment for CONTRACTOR's mobilization costs shall be cost loaded as follows:

<table>
<thead>
<tr>
<th>Mobilization Payment Schedule</th>
<th>50% of Mobilization item may be billed for bonding, insurance and yard set-up costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon Mobilization</td>
<td>50% of Mobilization item may be billed</td>
</tr>
<tr>
<td>25%</td>
<td>10% of Mobilization item may be billed</td>
</tr>
<tr>
<td>50%</td>
<td>10% of Mobilization item may be billed</td>
</tr>
<tr>
<td>75%</td>
<td>10% of Mobilization item may be billed</td>
</tr>
<tr>
<td>100% (clean up completed)</td>
<td>20% remaining to pay for de mobilization</td>
</tr>
</tbody>
</table>

14.4 ALLOWANCES

A. The following costs shall be included in all allowances:

1. Cost of the product to CONTRACTOR or Subcontractor, less applicable trade discounts.

2. Delivery to the site.
3. Applicable taxes.

B. CONTRACTOR costs included in the Contract Sum include, but are not limited to;

1. Arrangement of product(s) shipping and handling at site, including unloading, uncrating, and storage.
2. Protection of products from the elements and from damage.
3. Labor for installation, adjustments and finishing products.
4. Product warranties.
5. Scheduling changes and updates.
6. Other expenses required to complete installation.
7. CONTRACTOR and Subcontractor(s) overhead and profit.

C. The adjustments in costs will be made if the net cost is more or less than the specified amount of the allowance. The net cost of the adjustment shall be the amount of the difference between the specified allowance and the actual cost of the material, with the exception of a not-to-exceed fifteen percent (15%) mark-up for overhead and profit. The Contract Sum will be adjusted by Change Order.

1. Submit any claims for anticipated additional costs, or other expenses caused by the selection of the allowance, prior to execution of the Work.
2. Submit documentation for actual additional costs, or other expenses caused by the selection the allowance, prior to execution of the Work.
3. Failure to submit claims within the designated time will constitute a waiver of claims for additional costs.

D. City may separately bid the materials, subject to the specified allowances. The successful bidder will be assigned to CONTRACTOR, and shall be considered a Subcontractor to the CONTRACTOR. Upon assignment, the CONTRACTOR shall all make the necessary submittals, prepare necessary shop drawings and coordinate all related Work. CONTRACTOR shall make all necessary adjustments and revisions to the Project Schedule for such allowances and Subcontractor assignments.

14.5 WAIVER, CONDITIONAL RELEASE, RELEASE OF CLAIMS

A. Commensurate with the statutes of Public Contract Code section 7100 et seq., provisions in public works contracts with public entities which provide that acceptance of a payment otherwise due a CONTRACTOR is a waiver of all claims against the public entity arising out of the Work performed under the contract or which condition the right to payment upon submission of a release by the CONTRACTOR of all claims against the public entity arising out of performance of the public Work are against public policy and null and void. This section shall not prohibit a public entity from placing in a public works contract and enforcing a contract provision which provides that payment of undisputed contract amounts is contingent upon the CONTRACTOR furnishing the public entity with a release of all claims against the public entity arising by virtue of the public works contract related to those amounts. The CONTRACTOR from the operation of the release may specifically exclude disputed contract claims in stated amounts.

B. Neither the City nor original CONTRACTOR by any term of their contract, or otherwise, shall waive, affect, or impair the claims and liens of other persons whether with or without notice except by their written consent, and any term of the contract to that effect
shall be null and void. Any written consent given by any claimant pursuant to this subdivision shall be null, void, and unenforceable unless and until the claimant executes and delivers a waiver and release. Such a waiver and release shall be binding and effective to release the City, construction lender, and surety on a payment bond from claims and liens only if the waiver and release follows substantially one of the forms set forth in this section and is signed by the claimant or his or her authorized agent, and, in the case of a conditional release, there is evidence of payment to the claimant. Evidence of payment may be by the claimant's endorsement on a single or joint payee check that has been paid by the bank upon which it was drawn or by written acknowledgment of payment given by the claimant.

C. No oral or written statement purporting to waive, release, impair or otherwise adversely affect a claim is enforceable or creates any estoppel or impairment of a claim unless:

1. It is pursuant to a waiver and release prescribed herein, or
2. The claimant had actually received payment in full for the claim.

D. This section does not affect the enforceability of either an accord and satisfaction regarding a bona fide dispute or any agreement made in settlement of an action pending in any court provided the accord and satisfaction or agreement and settlement make specific reference to the, stop notice, or bond claims.

E. The waiver and release given by any claimant hereunder shall be null, void, and unenforceable unless it follows substantially the following forms in the following circumstances. Each waiver in this provision shall contain the following language, in at least as large a type as the largest type otherwise on the document:

-ARTICLE CONTINUES ON NEXT PAGE -
1. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce the payment of, a progress payment and the claimant is not, in fact, paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the form:

CONDITIONAL WAIVER AND RELEASE UPON "PROGRESS PAYMENT"

Upon receipt by the undersigned of a check from: ________________
(Maker of Check)
in the sum of $ __ payable to: ________________
(Amount of Check)
(Payee or Payees of Check)

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

________________________ located at: _______________________
(CITY) (Job Description)

to the following extent. This release covers a progress payment for labor, services, equipment, or material furnished to

________________________ through: _________________________
(Your Customer) (Date)

only and does not cover any retention's retained before or after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon Work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment. Before any recipient of the document relies on it, said party should verify evidence of payment to the undersigned.

________________________
(Company Name) (Date)

By: _______________________
(Title)

Exclusions: Listing of Claims, of which Notice has been given:
1. Claim for: ________________ In the amount of: $ ________________
2. Claim for: ________________ In the amount of: $ ________________
3. Claim for: ________________ In the amount of: $ ________________
4. Claim for: ________________ In the amount of: $ ________________
5. Claim for: ________________ In the amount of: $ ________________
2. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce payment of, a progress payment and the claimant asserts in the waiver it has, in fact, been paid the progress payment, the waiver and release shall follow substantially the following form:

**UNCONDITIONAL WAIVER AND RELEASE UPON "PROGRESS PAYMENT"**

The undersigned has been paid and has received a progress payment in the sum of $ ______________ for labor, services, equipment, or material furnished to

______________

(Your Customer)

on the job of: ______________ located at: ____________________________

(CITY) (Job Description)

and does hereby release any mechanic's lien, stop notice, or bond right that the undersigned has on the above referenced job to the following extent. This release covers a progress payment for labor, services, equipment, or materials furnished to

______________ through: ____________________________

(Your Customer) (Date)

only and does not cover any retention's retained before or after the release date; extras furnished before the release date for which payment has not been received; extras or items furnished after the release date. Rights based upon Work performed or items furnished under a written change order which has been fully executed by the parties prior to the release date are covered by this release unless specifically reserved by the claimant in this release. This release of any mechanic's lien, stop notice, or bond right shall not otherwise affect the contract rights, including rights between parties to the contract based upon a rescission, abandonment, or breach of the contract, or the right of the undersigned to recover compensation for furnished labor, services, equipment, or material covered by this release if that furnished labor, services, equipment, or material was not compensated by the progress payment.

__________________________

(Company Name) (Date)

By: _________________________

(Title)

**Exclusions:** Listing of Claims, of which Notice has been given:

1. Claim for: _______________ In the amount of: $ _______________
2. Claim for: _______________ In the amount of: $ _______________
3. Claim for: _______________ In the amount of: $ _______________
4. Claim for: _______________ In the amount of: $ _______________
5. Claim for: _______________ In the amount of: $ _______________

"NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM."
3. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce the payment of, a final payment and the claimant is not, in fact, paid in exchange for the waiver and release or a single payee check or joint payee check is given in exchange for the waiver and release, the waiver and release shall follow substantially the form:

**CONDITIONAL WAIVER AND RELEASE UPON "FINAL PAYMENT"**

Upon receipt by the undersigned of a check from ______________________

in the sum of $ ______________ payable to: ______________________

and when the check has been properly endorsed and has been paid by the bank upon which it is drawn, this document shall become effective to release any mechanic's lien, stop notice, or bond right the undersigned has on the job of

________________________ located at: ______________________

(CITY) (Job Description)

This release covers the final payment to the undersigned for all labor, services, equipment, or material furnished on the job, except for disputed claims for additional Work in the amount of $ ______________

Before any recipient of this document relies on it, the party should verify evidence of payment to the undersigned.

________________________ (Company Name) (Date)

By: ______________________ (Title)

**Exclusions**: Listing of Claims, of which Notice has been given:

1. Claim for: ______________ In the amount of: $ ______________
2. Claim for: ______________ In the amount of: $ ______________
3. Claim for: ______________ In the amount of: $ ______________
4. Claim for: ______________ In the amount of: $ ______________
5. Claim for: ______________ In the amount of: $ ______________
4. Where the claimant is required to execute a waiver and release in exchange for, or in order to induce payment of, a final payment and the claimant asserts in the waiver it has, in fact, been paid the final payment, the waiver and release shall follow substantially the form:

UNCONDITIONAL WAIVER AND RELEASE UPON "FINAL PAYMENT"

The undersigned has been paid in full for all labor, services, equipment or material furnished to:___________________________
(Your Customer)
on the job of:___________________________ located at:___________________________
(CITY) (Job Description)

and does hereby waive and release any right to a mechanic's lien, stop notice, or any right against a labor and material bond on the job, except for disputed claims for extra Work in the amount of $_________________________

________________________________________________________
(Company Name) (Date)

By: _____________________________
(Title)

Exclusions: Listing of Claims, of which Notice has been given:
1. Claim for:___________________________ In the amount of: $___________________________
2. Claim for:___________________________ In the amount of: $___________________________
3. Claim for:___________________________ In the amount of: $___________________________
4. Claim for:___________________________ In the amount of: $___________________________
5. Claim for:___________________________ In the amount of: $___________________________

"NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM."
14.6 RETENTION. The City shall retain 5% percent of the estimated value of the Work done as part security for the fulfillment of the CONTRACT by the CONTRACTOR.

14.7 SUBSTITUTION OF SECURITIES, ESCROW ACCOUNT

A. Pursuant to the requirements of Public Contract Code Section 22300, upon CONTRACTOR's request, the City will make payment to CONTRACTOR of any earned retention funds withheld from payments under this Agreement if CONTRACTOR deposits with the City or in escrow with a California or federally chartered bank acceptable to the City, securities eligible for the investment pursuant to Government Code Section 16430 or bank or savings and loan certificates of deposit, upon the following conditions:

1. CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

2. All expenses relating to the substitution of securities under Section 22300 and under this Article, including, but not limited to the City's overhead and administrative expenses, and expenses of the escrow agent shall be the responsibility of the CONTRACTOR.

3. If CONTRACTOR shall choose to enter into an escrow agreement, such agreement form shall be provided by the City upon request, and which shall allow for the conversion to cash to provide funds to meet defaults by the CONTRACTOR including, but not limited to, termination of the CONTRACTOR's control over the Work, stop notices filed pursuant to law, assessment of liquidated damages or amounts to be kept or retained under the provisions of the Project Documents.

4. Securities, if any, shall be returned to CONTRACTOR only upon satisfactory completion of the Agreement.

B. To minimize the expense caused by such substitution of securities, CONTRACTOR shall, prior to or at the time CONTRACTOR requests to substitute security, deposit sufficient security to cover the entire amount to be then withheld and to be withheld under the General Conditions of this Agreement. Should the value of such substituted security at any time fall below the amount for which it was substituted, or any other amount which the City determines to withhold, CONTRACTOR shall immediately and at CONTRACTOR's expense deposit additional security qualifying under Section 22300 until the total security deposited is no less than equivalent to the amount subject to withholding under the Agreement.

C. In the alternative, under Section 22300, the CONTRACTOR may request City to make payment of earned retentions directly to the escrow agent at the expense of the CONTRACTOR. Also at the CONTRACTOR's expense, the CONTRACTOR may direct investment of the payments in securities, and the CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the contract, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by escrow agent from the City pursuant to the terms of Section 22300. If CONTRACTOR elects to receive interest on monies withheld in retention by the City, CONTRACTOR shall, at the request of any subcontractor, make that option available to the subcontractor regarding any monies withheld in retention by the CONTRACTOR from the subcontractor. If the CONTRACTOR elects to receive any interest on any monies withheld in retention by the City, then the subcontractor shall receive the identical rate of interest received by the
Contractor on any retention monies withheld from the subcontractor by the CONTRACTOR, less any actual pro rata costs associated with administering and calculating that interest. In the event the interest rate is a fluctuating rate, the rate for the subcontractor shall be determined by calculating the interest rate paid during the time that retentions were withheld from the subcontractor. If the CONTRACTOR elects to substitute securities in lieu of retention, then, by mutual consent of the CONTRACTOR and subcontractor, the subcontractor may substitute securities in exchange for the release of monies held in retention by CONTRACTOR. This shall apply only to those subcontractors performing more than five percent (5%) of the CONTRACTOR's total bid. The CONTRACTOR shall not require any subcontractor to waive any provision of this section.

D. If any provision of this Article shall be found to be illegal or unenforceable, then, notwithstanding, the remainder of this Article shall remain in full force and effect, and only such provision shall be deemed stricken.

14.8 CONTRACTOR'S WARRANTY OF TITLE, ASSIGNMENT OF ANTITRUST ACTIONS.

A. Public Contract Code Section 7103.5 provides:

1. In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the CONTRACTOR or Subcontractor offers and agrees to assign to the awarding body (the City) all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the CONTRACTOR, without further acknowledgment by the parties.

2. CONTRACTOR, for itself and all Subcontractors, agrees to assign to the City all rights, title, and interest in and to all such causes of action CONTRACTOR and all Subcontractors may have under the Agreement. This assignment shall become effective at the time the City tenders final payment to the CONTRACTOR, and CONTRACTOR shall require assignments from all Subcontractors to comply herewith.

14.9 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

A. The City's designee will, within 7 days after receipt of each Application for Payment, either indicate approval by counter-signature on the application for progress payment, or return the application to the CONTRACTOR indicating in writing the City's reasons for refusing to recommend payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the application. 30 days after presentation of the Application for Payment with the City's recommendation, the amount recommended will become due and when due, will be paid by the City to the CONTRACTOR.

B. The City may withhold a sufficient amount or amounts of any payment or payments otherwise due to CONTRACTOR, as in its judgment may be necessary to cover:

1. Payments which may be past due and payable for just claims against CONTRACTOR or any Subcontractors, or against and about the performance of Work on the Project.

2. The cost of defective or incomplete or damaged Work which CONTRACTOR has not remedied.
3. Liquidated damages assessed against CONTRACTOR.
4. Penalties for violation of labor laws.
5. The cost of materials ordered by the City pursuant to Article 13.
6. The cost of completion of this Agreement if there exists a reasonable doubt that this Agreement can be completed for the balance then unpaid to CONTRACTOR.
7. Damage caused by CONTRACTOR to another contractor.
8. Site clean-up provided by the City (or others on contract to the city) on behalf of the CONTRACTOR for failure of the CONTRACTOR to provide timely and adequate clean up as required by the Project Documents, in the opinion of the City.
9. Payments to indemnify, defend, or hold harmless the City.
10. Any payments due to the City including but not limited to payments for failed tests, utilities or imperfections.
11. Extra services for the Engineer, including but not limited to, services rendered in the evaluation of CONTRACTOR substitution requests, Requests For Information (RFI's), Change Order Requests (COR's) and Claims.
12. Extra services for the INSPECTOR including but not limited to re-inspection required due to CONTRACTOR's failed tests or installation of unapproved or defective materials and CONTRACTOR's requests for inspection and CONTRACTOR's failure to attend the inspection, and Work performed after regular Work hours, or during weekend and/or holidays.
13. Stop Notices/Liens have been filed in connection with the Work and the City has exercised its discretion to not accept a specific Bond intended to discharge of such Liens.
14. Claims by third party entities and/or individuals.
15. Persistent failure to comply with directions given to perform.
16. Costs and/or damages resulting from delay, termination and/or other causes which increase or which may increase the City's costs in administering the contract.
17. There are other items entitling the City to a set-off against the amount recommended.

The City must give the CONTRACTOR written notice stating the reasons for such action and pay the CONTRACTOR in the next application for progress payment, the amount so withheld, or any adjustment thereto agreed to by the City and CONTRACTOR, when CONTRACTOR corrects to the City's satisfaction the reason for such action.

C. If the above grounds are in the opinion of the City removed by or at the expense of CONTRACTOR, payment shall be made for amounts withheld because of them.

D. PAYMENTS WITHHELD. The City may apply such withheld amount or amounts to payment of such claims or obligations at its discretion. In so doing, the City shall make such payments on behalf of CONTRACTOR. If any payment is so made by the City, then such amount shall be considered as a payment made under contract by the City to CONTRACTOR and the City shall not be liable to CONTRACTOR for such payments.
made in good faith. Such payments may be made without prior judicial determination of claim or obligations. The City will render CONTRACTOR an accounting of such funds disbursed on behalf of CONTRACTOR. To minimize/avoid claims of interference and/or that proposed payment was improper, the City shall endeavor to communicate to CONTRACTOR as to the CONTRACTOR's opinion regarding any proposed payment to a third party individual/entity, prior to City making the same. If CONTRACTOR fails to respond in writing detailing the reason(s) for making any such payment within two (2) working days, City shall have the right, but not the duty, to make any such payment without concern that CONTRACTOR will later claim such payment was improper and/or interfered with CONTRACTOR's relationship and/or prospective economic advantage. In such event, all such claims by CONTRACTOR shall be deemed waived.

E. As an alternative to payment of such claims or obligations, the City, in its sole discretion, may reduce the total contract price as provided in the Article 13.

14.10 PARTIAL OCCUPATION/UTILIZATION

A. The City reserves the right to occupy buildings and/or portions of the site at any time before completion, and such occupancy shall not constitute final acceptance of any part of Work covered by this Agreement, nor shall such occupancy extend the date specified for completion of the Work, nor shall any such occupancy affect any liquidated damages. The City shall have the right to utilize or place into service any item of equipment or other usable portion of the Work prior to completion of the Work. Whenever the City plans to exercise said right, the CONTRACTOR will be notified in writing by the City, identifying the specific portion or portions of the Work to be so utilized or otherwise placed into service.

B. It shall be understood by the CONTRACTOR that until such written notification is issued, all responsibility for care and maintenance of all of the Work shall be borne by the CONTRACTOR. Upon issuance of said written notice of Partial Utilization, the City will accept responsibility for the protection and maintenance of all such items or portions of the Work described in the written notice.

C. The CONTRACTOR shall retain full responsibility for satisfactory completion of the Work, regardless of whether a portion thereof has been partially utilized by the City, and the CONTRACTOR's 1 year correction period shall commence only after the date of Project Completion for the entire Work.

14.11 PROJECT COMPLETION

A. The City shall accept completion of the Agreement and have the Notice of Completion recorded when the entire Work including CONTRACTOR's Punch List(s) and City's final review comments shall have been completed to the satisfaction of the City. The Work may only be accepted as complete by action of the Escondido City Council. Completion means final completion, and the concept of substantial completion shall not apply to this Agreement.
B. However, the City, at its sole option, may accept completion of the Agreement and have the Notice of Completion recorded when the entire Work including individual portions of the Work shall have been completed to the satisfaction of the City, except for minor corrective items, as distinguished from incomplete items.

C. A final walk through of the Project to determine completion of the Agreement and to record the Notice of Completion shall occur only upon a valid claim by CONTRACTOR that the Project is complete except for minor corrective items. Any erroneous claims of completion by CONTRACTOR resulting in a premature walk through shall be at CONTRACTOR's sole cost and expense and the City shall make adjustments to the Contract Price by reducing the amount thereof to pay for any costs incurred by the City due to the erroneous claims by the CONTRACTOR that the Project is complete. Minor corrective items shall be identified in the final walk through of the Project.

D. If the CONTRACTOR fails to complete the minor corrective items prior to the expiration of the 35 day period immediately following recording of the Notice of Completion, the City shall withhold from the final payment an amount equal to twice the estimated cost, as determined by the City, of each item until such time as the item is completed. At the end of such 35 day period, if there are items remaining to be corrected, the City may elect to proceed as provided in the Article 13.

14.12 FINAL APPLICATION FOR PAYMENT. After the CONTRACTOR has completed all of the Work, the punch-list, and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up as-built record documents and other documents, all as required by the Project Documents, and after the Engineer and the City have indicated that the Work is acceptable, the CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective unconditional waiver releases (Reference Article 14.5) by CONTRACTOR and all SUBCONTRACTORS/suppliers that filed preliminary notices of all previous progress payments, conditional waiver and release upon "final payment", and waivers or releases of all Liens arising out of or filed in connection with the Work.

14.13 FINAL PAYMENT AND ACCEPTANCE

A. If, on the basis of the City's observation of the Work during construction and final inspection, and the City's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the City is satisfied that the Work has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the City designee will recommend payment of the final application for progress payment.

B. After acceptance of the Work by the Escondido City Council, the City will make final disposition to the CONTRACTOR of the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the Contract Documents, including the following items:

1. Liquidated damages, as applicable; and

2. Amounts withheld by the City under Article 14.9.B. which have not been released.

C. As a condition of final payment, the CONTRACTOR shall be required to execute a release releasing the City from any and all claims of liability for payment on the Project except for such amounts as may be specifically described and excluded from the release.
14.14 RELEASE OF RETENTION AND OTHER DEDUCTIONS. After recording the Notice of Completion with the San Diego County Recorder's Office to initiate the Lien period, and not more than 55 calendar days thereafter, the City will release to the CONTRACTOR the retention funds withheld pursuant to the Agreement, less any deductions to cover pending claims against the City.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 CITY'S RIGHT TO TERMINATE AGREEMENT

A. If the CONTRACTOR refuses or fails to complete the Work or any separable part thereof with such diligence as will ensure its completion within the time specified or any extension thereof, or fails to complete said Work within such time, or if the CONTRACTOR should file a petition for relief as a debtor, or should relief be ordered against CONTRACTOR as a debtor under Title 11 of the United States Code, or if CONTRACTOR should make a general assignment for the benefit of its creditors, or if a receiver should be appointed on account of its insolvency, or if it should refuse or should fail to supply enough properly skilled workers or proper materials to complete the Work in the time specified, or if CONTRACTOR should fail to make prompt payment to Subcontractors for materials or labor, or disregard laws or ordinances or instructions of the City, or if CONTRACTOR or its Subcontractors should otherwise violate any provision of this Agreement, including, but not limited to, the performance of defective Work, disregard or violate the Laws or Regulations of any public body having jurisdiction; disregard or violate provisions of the Contract Documents or City's instructions; fail to prosecute the Work according to the approved progress schedule; fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Contract Documents; or disregard the authority of the City, then the City may, without prejudice to any other right or remedy, serve written notice upon CONTRACTOR and its surety of City's intention to terminate this Agreement. Such notice shall contain the reasons for such intention to terminate. Unless within seven (7) days after the service of such notice such condition shall cease or such violation shall cease and arrangements satisfactory to the City for the correction thereof have been made, this Agreement shall cease and terminate. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished to the City's satisfaction.

B. In the event of any such termination, the City shall immediately serve written notice thereof upon surety and CONTRACTOR, and surety shall have the duty to take over and perform this Agreement, provided, however, that if surety within 7 days after service upon it of notice of termination does not give the City written notice of its intention to unqualified by honor its duty to take over and perform this Agreement, or does not commence actual, on site performance thereof within 15 days after service of the notice of termination by the City on surety, the City may take over the Work and prosecute it to completion by Agreement or by any other method it may deem advisable for the account and at the expense of CONTRACTOR, and CONTRACTOR and its surety shall be liable to the City for any excess cost or other damages, including the added time devised by City personnel and/or consultants, including attorneys, occasioned by the City thereby. Time is of the essence in this Agreement. If the City takes over the Work as herein above provided, the City may, without liability for so doing, take possession of and utilize in completing the Work such materials, supplies, equipment and other property belonging to the CONTRACTOR as may be on the site of the Work and necessary therefore.
C. If the expense of finishing the Work, including compensation for additional engineering, architectural, managerial, legal, consulting, personnel, and administrative services, shall exceed the unpaid balance of the Agreement, CONTRACTOR and/or its surety shall pay the difference to the City. Expense incurred by the City as herein provided, and damage incurred through CONTRACTOR's default, shall be certified to City by the Engineer, or ARCHITECT if applicable. If the unpaid balance under the Agreement shall exceed the expense of finishing the Work, including compensation for additional architectural, managerial, legal, consulting, personnel, and administrative services, such excess shall be paid to CONTRACTOR or its creditor(s).

D. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the City may then issue the notice of termination.

E. In the event that sufficient funds are not appropriated to complete the Project or the City determines that sufficient funds are not available to complete the Project, the City may terminate or suspend the completion of the Project at any time by giving written notice to the CONTRACTOR. In the event that the City exercises this option, the City shall pay for any and all Work and materials completed or delivered onto the site, and the value of any and all Work then in progress and orders actually placed which cannot be canceled up to the date of notice of termination. The value of Work and materials paid for shall include a factor of fifteen percent (15%) for the CONTRACTOR's overhead and profit and there shall be no other costs or expenses paid to CONTRACTOR. All Work, materials and orders paid for pursuant to this provision shall become the property of the City. The City may, without cause, order CONTRACTOR in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as the City may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

F. The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to the City.

15.2 TERMINATION OF AGREEMENT BY THE CITY FOR CONVENIENCE

A. Upon 7 days written notice to the CONTRACTOR the City may, without cause and without prejudice to any other right or remedy of the City, elect to terminate the Agreement. In such case, the CONTRACTOR shall be paid (without duplication of any items):

1. For completed and acceptable Work executed in accordance with the Contract Documents, prior to the effective date of termination, including fair and reasonable sums for overhead and profit of such Work;

2. For expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. For all reasonable claims, costs, losses, and damages incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. For reasonable expenses directly attributable to termination.

B. CONTRACTOR shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.
ARTICLE 16 – CONSTRUCTION CLAIMS, WAIVER AND RELEASE FORMS, DISPUTES, FALSE CLAIMS ACT.

16.1 CONTRACTOR CLAIMS

A. NOTICE. If the CONTRACTOR shall claim compensation for any damage sustained by reason of the acts of the City or its agents, or if the CONTRACTOR disagrees with the City's or Engineer's/Architect's decisions regarding a CONTRACTOR's Change Order Request (COR), the CONTRACTOR shall provide written "Notice" to the City within 5 days after sustaining of such damage, or being notified of an adverse decision, and provide within 14 days of the event the factual basis supporting the claim (unless otherwise specified). The written "Notice" shall state the summary points for which the factual bases will support the claim and cite in detail the Project Documents (including plans and specifications) upon which the claim is to be based. CONTRACTOR's failure to notify the City within such a period shall be deemed a waiver and relinquishment of such a claim. If such notice is given within the specified time, the procedure for its consideration shall be as stated above in these General Conditions.

B. WAIVER AND RELEASE FORMS. In addition, on or before the end of the month for which the claim has been filed, the CONTRACTOR shall also file with the City the WAIVER AND RELEASE FORMS, for which the claim and the amount of the claim is identified. If the claim is not indicated on the WAIVER AND RELEASE FORMS, CONTRACTOR's claim shall be forfeited and invalidated and it shall not be entitled to consideration for time or payment on account of any such claim.

C. REQUIRED DOCUMENTATION FOR CLAIMS FOR TIME: Fragnet – Sometimes known as a "Sub-network". A Fragnet will be required for time impact analysis and time extensions. CONTRACTOR's failure to provide a "Notice of Delay" within 24 hours, and submit a Fragnet for time impact analysis and time extension(s) on or within 14 days of the delaying event, shall forfeit and invalidate all considerations for time and/or payment. The costs to prepare Fragnets and schedule updates resulting from approved Fragnets are part of the Work, regardless of number and difficulty. The City will provide a response to the Fragnet on or within 14 days from the completed submission.

D. Except for tort claims, all claims by the CONTRACTOR for a time extension, payment of money or damages arising from Work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or as to the amount of payment which is disputed by the City of $375,000 or less, is subject to the settlement and arbitration provisions procedures set forth in Public Contract Code Section 20104, et seq. The text of those provisions are provided in full in Article 17.

E. All of the following claims by the CONTRACTOR are subject to the claim resolution procedures set forth in Public Contract Code Section 9204. The text of that section is provided in full in Article 17.

   1. A time extension;

   2. Payment of money or damages arising from Work done by, or on behalf of, the CONTRACTOR pursuant to the Agreement and payment of which is not otherwise expressly provided for, or CONTRACTOR is not otherwise entitled to; and

   3. Payment of an amount that is disputed by the City.
F. Any claim must be a separate demand sent by registered mail or certified mail with return receipt requested. The CONTRACTOR shall furnish reasonable documentation to support the claim, which shall include all of the materials described in Section 16.1.

G. The City shall conduct a reasonable review of the claim within 45 days and shall provide the CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. The City and the CONTRACTOR may, by mutual agreement, extend the time period for response. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement.

H. If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim because of privity of contract does not exist, the CONTRACTOR may present a claim to the City on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing that the CONTRACTOR present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the City shall furnish reasonable documentation to support the claim, which shall include all of the materials described in Section 16.1. Within 45 days of receipt of this written request, the CONTRACTOR shall notify the subcontractor in writing as to whether the CONTRACTOR presented the claim to the City. If the CONTRACTOR did not present the claim, the CONTRACTOR must provide the subcontractor with a statement of the reasons for not presenting the claim to the City.

16.2 DISPUTES –THE CITY'S AND ENGINEER'S DECISIONS

A. If the CONTRACTOR disputes the City’s written response to the claim, or if the City does not respond to the claim within the time prescribed, the CONTRACTOR may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. The CONTRACTOR must send the demand by registered mail or certified mail, return receipt requested. Upon receipt, the City shall schedule a meet and confer conference within 30 days for settlement of the dispute.

B. If any portion of the claim remains in dispute after the meet and confer conference, the City shall provide the CONTRACTOR a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed within 10 business days following the conclusion of the conference. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement. Any disputed portion of the claim, as identified by the CONTRACTOR in writing, shall be submitted to nonbinding mediation. The City shall conduct a reasonable review of the claim within 45 days and shall provide the CONTRACTOR a written statement identifying what portion of the claim is disputed and what portion is undisputed. The City and the CONTRACTOR may, by mutual agreement, extend the time period for response. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the City issues its written statement.

C. The City and CONTRACTOR shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. The City and the CONTRACTOR shall share the associated costs of mediation equally. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside Section 9204. The mediation
conducted shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

D. Failure by the City to respond to a claim from the CONTRACTOR within the time periods described above or to otherwise meet the time requirements described above shall result in the claim being deemed rejected in its entirety.

E. Amounts not paid in a timely manner as outlined above will bear interest at 7% per year.

16.3 FALSE CLAIMS ACT CERTIFICATION. All claims submitted by the CONTRACTOR shall be accompanied by a notarized certificate containing the following language:

Under penalty of perjury and with specific reference to the California False Claims Act, Government Code Section 12650 et. seq., the undersigned,

______________________________
(name)

______________________________
(title)

______________________________
(company)

hereby certifies that the claim for the additional compensation and time, if any, made herein for the Work on this Contract is a true statement of the actual costs incurred or estimated future costs, and time sought, and is fully documented and supported under the Agreement.

Dated ____________________________

/s/ ________________________________

Subscribed and sworn before me this __________________ day of ______________________

______________________________
Notary Public
My Commission Expires ________________________

Failure to submit the notarized certificate will be sufficient cause for denying the claim.

ARTICLE 17 – MISCELLANEOUS

17.1 GIVING NOTICE

A. Any notice from one party to the other or otherwise under the Agreement shall be in writing and shall be dated and signed by party giving such notice or by a duly authorized representative of such party. Any such notice shall not be effective for any purpose whatsoever unless served in one of the following manners, and copied to the City:

1. If notice is given to the City, by personal delivery thereof to the City or by deposit in the United States mail, enclosed in a sealed envelope addressed to the City, and sent by registered or certified mail with postage prepaid;

2. If notice is given to CONTRACTOR, by personal delivery thereof to said CONTRACTOR or to CONTRACTOR's superintendent at the site of the Project,
or by deposit in the United States mail, enclosed in a sealed envelope addressed to said CONTRACTOR at its regular place of business or at such address as may have been established for the conduct of Work under this Agreement, and sent by registered or certified mail with postage prepaid;

3. If notice is given to the surety or other persons, by personal delivery to such surety or other person or by deposit in the United States mail, enclosed in a sealed envelope, addressed to such surety or person at the address of such surety or person last communicated by the surety or other person to the party giving notice, and sent by registered or certified mail with postage prepaid.

17.2 TITLE TO MATERIALS FOUND ON THE WORK. The City reserves the right to retain title to all soils, stone, sand, gravel, and other materials developed and obtained from excavations and other operations connected with the Work. Unless otherwise specified in the Contract Documents, neither the CONTRACTOR nor any Subcontractor shall have any right, title, or interest in or to any such materials. The CONTRACTOR will be permitted to use in the Work, without charge, any such materials which meet the requirements of the Contract Documents.

17.3 RIGHT TO AUDIT. If the CONTRACTOR submits a claim to the City for additional compensation, the City shall have the right, as a condition to considering the claim, and as a basis for evaluation of the claim, and until the claim has been settled, to audit the CONTRACTOR's Documents and books to the extent they are relevant. This right shall include the right to examine books, records, documents, and other evidence and accounting procedures and practices, sufficient to discover and verify all direct and indirect costs of whatever nature claimed to have been incurred or anticipated to be incurred and for which the claim has been submitted. The right to audit shall include the right to inspect the CONTRACTOR's plant, or such parts thereof, as may be or have been engaged in the performance of the Work. The CONTRACTOR further agrees that the right to audit encompasses all subcontracts and is binding upon Subcontractors. The rights to examine and inspect herein provided for shall be exercisable through such representatives as the City deems desirable during the CONTRACTOR's normal business hours at the office of the CONTRACTOR. The CONTRACTOR shall make available to the City for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the City.

17.4 SURVIVAL OF OBLIGATIONS. All representations, indemnifications, warranties, and guaranties made in, required by or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion and acceptance of the Work or termination or completion of the Agreement.

17.5 CONTROLLING LAW. This Agreement is to be governed by the law of the state of California, in which the Project is located, with venue in North San Diego County.

17.6 SEVERABILITY. If any term or provision of this Agreement is declared invalid or unenforceable by any court of lawful jurisdiction, the remaining terms and provisions of the Agreement shall not be affected thereby and shall remain in full force and effect.

17.7 WAIVER. The waiver by the City of any breach or violation of any term, covenant or condition of this Agreement or of any Agreement provision, ordinance, or law shall not be deemed to be a waiver of any other term, covenant, condition, ordinance, or law or of any subsequent breach or violation of the same or of any other term, covenant, condition, ordinance, or law. The subsequent payment of any monies or fee by the City which may become due hereunder shall not be deemed to be a waiver of any preceding breach or violation by CONTRACTOR or any term, covenant, condition of this Agreement or of any applicable law or ordinance.
17.8 PROHIBITED INTERESTS. No official of the City who is authorized in such capacity and on behalf of the City to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with construction of the Project, shall become directly or indirectly interested financially in this Project or in any part thereof. No officer, employee, Engineer, attorney, architect or inspector of or for City who is authorized in such capacity and on behalf of the City to exercise any executive, supervisory or other similar functions in connection with construction of Project shall become directly or indirectly interested financially in this Project or in any part thereof. CONTRACTOR shall receive no compensation and shall repay the City for any compensation received by or from CONTRACTOR hereunder, should CONTRACTOR aid, abet or knowingly participate in violation of this Article.

17.9 California Public Contract Code § 9204. Legislative findings and declarations regarding timely and complete payment of contractors for public works projects; claims process.

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) “Claim” means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

A. A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

B. Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

C. Payment of an amount that is disputed by the public entity.

(2) “Contractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3) A. “Public entity” means, without limitation, except as provided in subparagraph B., a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

B. “Public entity” shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.
(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2) (A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with mediation.
with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date.
17.10 California Public Contract Code § 20104. Application of article; provisions included in plans and specifications.

(a) (1) This article applies to all public works claims of three hundred seventy-five thousand dollars ($375,000) or less which arise between a contractor and a local agency.

(2) This article shall not apply to any claims resulting from a contract between a contractor and a public agency when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2.

(b) (1) “Public work” means “public works contract” as defined in Section 1101 but does not include any work or improvement contracted for by the state or the Regents of the University of California.

(2) “Claim” means a separate demand by the contractor for (A) a time extension, (B) payment of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.

(c) The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work which may give rise to a claim under this article.

(d) This article applies only to contracts entered into on or after January 1, 1991.

17.11 California Public Contract Code § 20104.2. Claims; requirements; tort claims excluded.

For any claim subject to this article, the following requirements apply:

(a) The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.

(b) (1) For claims of less than fifty thousand dollars ($50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency’s written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.

(c) (1) For claims of over fifty thousand dollars ($50,000) and less than or equal to three hundred seventy-five thousand dollars ($375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses to the claim the local agency may have against the claimant.

(2) If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

(3) The local agency’s written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.

(d) If the claimant disputes the local agency’s written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency’s response or within 15 days of the local
agency’s failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(e) Following the meet and confer conference, if the claim or any portion remains in dispute, the claimant may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

(f) This article does not apply to tort claims and nothing in this article is intended nor shall be construed to change the time periods for filing tort claims or actions specified by Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code.

17.12 California Public Contract Code § 20104.4. Civil action procedures; mediation and arbitration; trial de novo; witnesses.

The following procedures are established for all civil actions filed to resolve claims subject to this article:

(a) Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.

(b) (1) If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act (Title 4 (commencing with Section 2016.010) of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

(2) Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of this article shall be experienced in construction law, and, upon stipulation of the parties, mediators and arbitrators shall be paid necessary and reasonable hourly rates of pay not to exceed their customary rate, and such fees and expenses shall be paid equally by the parties, except in the case of arbitration where the arbitrator, for good cause, determines a different division. In no event shall these fees or expenses be paid by state or county funds.

(3) In addition to Chapter 2.5 (commencing with Section 1141.10) of Title 3 of Part 3 of the Code of Civil Procedure, any party who after receiving an arbitration award requests a trial de novo but does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, pay the attorney’s fees of the other party arising out of the trial de novo.

(c) The court may, upon request by any party, order any witnesses to participate in the mediation or arbitration process.
17.13 California Public Contract Code § 20104.6. Payment on undisputed portion of claim; interest on arbitration awards or judgments.

(a) No local agency shall fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the contract.

(b) In any suit filed under Section 20104.4, the local agency shall pay interest at the legal rate on any arbitration award or judgment. The interest shall begin to accrue on the date the suit is filed in a court of law.
SECTION A-00800 - SUPPLEMENTARY GENERAL CONDITIONS

PART 1 -- GENERAL

These Supplementary General Conditions make additions, deletions, or revisions to the General Conditions as indicated herein, using similar section numbers. All provisions which are not so added, deleted, or revised remain in full force and effect. Terms used in these Supplementary General Conditions which are defined in the General Conditions have the meanings assigned to them in the General Conditions.

SGC-1 DEFINITIONS

The Engineer, Engineer of Work, Inspector and Project Representative shall be those firms or individuals designated in writing from time to time throughout the performance of this Agreement, at the City’s discretion.

The “Project Documents” also include the following:

- 00030 NOTICE INVITING BIDS
- 00100 INSTRUCTION TO BIDDERS
- 00300 BID PROPOSAL
- 00400 BID FORMS
- 00500 PUBLIC IMPROVEMENT AGREEMENT
- 00610 FAITHFUL PERFORMANCE BOND
- 00620 LABOR AND MATERIAL BOND
- 00630 CITY OF ESCONDIDO BUSINESS LICENSE
- 00660 WORKERS’ COMPENSATION INSURANCE
- 00670 SAMPLE NOTICE
- 00700 GENERAL CONDITIONS
- 00800 SUPPLEMENTARY GENERAL CONDITIONS

VARIOUS SPECIAL PROVISIONS

The “Specifications” for this Project also include:

1. Appendix A: Recycling Requirements
2. Appendix B: Storm Water Inspection Form for Construction Activities
3. Appendix C: City of Escondido Encroachment Permit Application
4. Appendix D: Revised Addendum/Updated Geotechnical Report
5. Appendix E: Storm Drain Plaque
6. Appendix F: Escrow Agreement for Security Deposits in Lieu of Retention
7. Attachment A: Escondido Creek Trailhead Entry Sign
8. Attachment B: Project Information Sign
9. Attachment C: Sample Construction Schedule
10. Attachment D: Utility Plans (AT&T, Cox Communication, SDG&E)
11. Attachment E: Bid Item Lists.
12. Attachment F: Project Staging Area
SGC-2.2 COPIES OF DOCUMENTS

DELETE General Condition 2.2 in its entirety and REPLACE with the following: “The City will not provide the CONTRACTOR with hardcopies, compact discs, DVD’s, etc. of the Contract Documents. Please refer to Instructions to Bidders, Item I – Bids, for additional information.”

SGC-2.4 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED

The commencement date stated in the Notice to Proceed shall be no later than twenty-five (25) working days from the fully executed contracted date of the Public Improvement Agreement.

SGC-2.4 STARTING THE WORK

Unless authorized by the City, if no controlling items of work have been performed within ten (10) working days of the commencement date stated in the Notice to Proceed, the CONTRACTOR shall be charged liquidated damages for days in which no work was performed on controlling items. If no work on controlling items continues after fifteen (15) working days from the date stated on the Notice to Proceed, the City will notify the CONTRACTOR’S Bonding Agency that the CONTRACTOR is non-responsive, and request that the Bonding Agency has the work completed.

SGC-2.6 CONTINUING THE WORK

At no time shall the Contractor and/or subcontractors cease work on controlling items. After three consecutive working days of no work on controlling items, the Contractor shall be charged Liquidated Damages for the three days and any adjacent consecutive working days until work recommences on controlling items.

SGC-2.7 PRECONSTRUCTION MEETING

A preconstruction meeting shall be held within ten (10) working days after the award and execution of the Contract and prior to construction. The CONTRACTOR (a Principal and Project Superintendent) shall attend. The CONTRACTOR shall be ready and available to attend within one week of a fully executed contract, and plan on spending no less than four (4) hours of time with Subcontractor(s) and project superintendent(s) for this meeting.

SGC-2.7.1 WEEKLY MEETINGS

The CONTRACTOR shall attend weekly meetings to discuss progress, outstanding RFI’s, submittals and COR’s, and any other issues that may arise.

SGC-4.2 REPORTS OF PHYSICAL CONDITIONS

In the preparation of the Contract Documents, the City has referenced:

A. The following reports of explorations and tests of subsurface conditions at the Site:

Revised Addendum/Update Geotechnical Report
The following drawings of physical conditions in or relating to existing surface and subsurface structures (except Underground Utilities) which are at or contiguous to the Site:

Those provided to Bidder and Contractor at time of bid.

SGC-4.4 HAZARDOUS MATERIALS

In the preparation of the Contract Documents, the Engineer has relied upon:

A. The following reports or drawings relating to Asbestos, PCB's, Petroleum, Hazardous Wastes, and/or Radioactive Materials at the Site:

None

SGC-6.16 PERMITS

A. The City will require the following permits:

1. City Encroachment Permit

SGC-6.39 VIRTUAL PROJECT MANAGER (VPM)

VPM is the City’s project management tool that allows the Prime/General Contractor and City Staff to organize and coordinate project documents, schedules, payments, etc. VPM allows for paperless documentation and project administration. Posted information is available to City and contractor staff at any time using the internet.

The use of VPM by the Contractor is mandatory. The Contractor shall use the following features: Daily Logs—the contractor shall report daily activity here. Change Order Manager—contractor requests for change order must be submitted here. Certified payroll shall be submitted electronically on a monthly basis with each pay application to the Certified Payroll Transmittal. Pay applications shall be submitted electronically to the Pay Application Transmittal. An updated schedule shall be submitted with each pay application to the Schedule Transmittal. Submittals shall be submitted electronically (unless otherwise agreed to by the City Engineer) to the Submittal area. Requests for information (RFIs) shall be submitted electronically in the RFI area.

In order to utilize VPM, the contractor needs a computer, internet access, a digital camera and a scanner. For more information, go to: www.virtual-pm.com. From there, select members and enter Username: eguest, Password: eguest1.

Field Engineering staff is available to guide the Contractor on further use of this convenient tool during the preconstruction meeting, or earlier if desired.
Access to VPM will be provided at no cost to the prime contractor only. A minimum of one username and password will be provided to the Contractor awarded the job for use during the project. Subcontractors shall not have access to VPM.

SGC-9 ENGINEER’S STATUS DURING CONSTRUCTION

SGC-9.2.1. PROJECT REPRESENTATION

A. The City may furnish a third party or a City employee to act as Resident Project Representative to assist in observing the performance of the Work. The City shall designate the name(s) of the individual(s) authorized to act as the Engineer, the Inspector, and/or Project Representative.

B. The Project Representative will act as directed by and under the supervision of the City. The Project Representative's dealings in matters pertaining to the Work shall, in general, be only with the Engineer and the CONTRACTOR, and dealings with Subcontractors shall only be through or with the full knowledge of the CONTRACTOR. Written communication with the OWNER will be only through or as directed by the Project Representative.

SGC-9.2.2. REQUESTS FOR INFORMATION, CONTRACT DOCUMENT CLARIFICATIONS

A Project Representative will issue answers to written Requests for Information (RFI) and Contract Document Clarifications (CDC) from the CONTRACTOR, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. In formulating a response, the Project Representative will reference all the pertinent Specifications.

SGC-9.2.3. AUTHORIZED VARIATIONS IN WORK

The Engineer may not authorize the execution of variations in the Work from the requirements of the Contract Documents on behalf of the City. The Project Representative may authorize such variations, subject to the City Council’s approval.

SGC-9.2.4 REJECTING DEFECTIVE WORK

The Engineer may recommend the rejection of perceived Defective Work, and state the reasons in a technical brief submittal to the City. The final decision on rejecting defective work rests with the City.

SGC-9.2.5. CONTRACTOR SUBMITTALS, CONTRACT CHANGE ORDERS

A. The Engineer will review all CONTRACTOR submittals. The Engineer will provide a technical brief on any “or equal” submittals to the City, including a recommendation to either accept or reject the “or equal” submittal. The CONTRACTOR is responsible for providing information supporting an assertion of “or equal” status for a submittal. The final decision regarding the acceptance of “or equal” items rests with the City.
B. The Engineer will review Requests for Change Orders from the CONTRACTOR and provide a recommendation to accept or reject the Request for Change Order to the City based on the Engineer’s interpretation of the Engineer’s Contract Documents. The initial and final determinations on entitlement for Requests for Change Orders will be made by the City of Escondido, in conjunction with technical information provided by the Engineer.

SGC-9.2.7. LIMITATION ON ENGINEER’S RESPONSIBILITIES

A. The Engineer is specifically not authorized to execute Change Orders or Field Orders without written approval of the City. Should the Contractor proceed with any extra work without obtaining prior written authorization from the Engineer, Inspector, or Project Representative, the CONTRACTOR shall be held responsible for the expenditure caused thereby.

SGC-12.2 EXTENSIONS OF CONTRACT TIME FOR DELAY DUE TO WEATHER

DELETE General Condition 12.2 wording in its entirety and REPLACE with the following: “The City shall be the sole determinant as to whether or not weather has delayed project Work. The Contractor shall submit a written request for a “Non Working Day caused by Weather”, for each day requested, within 48 hours of the requested day(s).”

SGC-12.4A EXTENSIONS OF TIME – LIQUIDATED DAMAGES

Replace the second sentence with the following:

CONTRACTOR shall be assessed the sum set forth in the Agreement, as liquidated damages for each and every calendar day the Work required under the Project Documents remains unfinished past the time for completion, as set forth in the Agreement, and any extension of time granted by the City to the CONTRACTOR under the terms of the Project Documents.

SGC-14.6 RETENTION

No reduction in retention shall be allowed.

SGC-14.7A SUBSTITUTION OF SECURITIES, ESCROW ACCOUNT

If the CONTRACTOR so desires to obtain an Escrow Agreement for Security Deposits in Lieu of Retention, the CONTRACTOR shall submit the Escrow Agreement for Security Deposits in Lieu of Retention form located in the Appendices following the Special Provisions. A completed form shall be submitted to Field Engineering at or before the preconstruction meeting and will not be accepted at a later date.
SPECIAL PROVISIONS

CITY OF ESCONDIDO

El Norte Parkway Improvement Project
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| Appendix C | – City of Escondido Encroachment Permit Application |
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SPECIAL PROVISIONS FOR CIVIL AND LANDSCAPING

1. GENERAL

All work on this project shall conform to the general and special provisions, and to the following:

   http://www.dot.ca.gov/hq/esc/oe/project_plans/HTM/06_plans_disclaim_US.htm.

If there is a conflict between any of the contract documents, the document in the highest order of precedence shall control. The order of precedence, from highest to lowest, shall be as follows:

1. Permits issued by jurisdictional regulatory agencies
2. Change Orders and Supplemental Agreements; whichever occurs last.
3. Contract/Agreement
4. Addenda
5. Bid/Proposal
7. Plans
8. Supplementary General Conditions
9. General Conditions
10. Standard Specifications
11. Reference Specifications

Where reference to a specific standard other than the General Conditions or Green Book is made in these Special Provisions, it shall only apply for that particular item of work unless otherwise stated.

This project consists of work associated with many different types and trades of general engineering work including but not limited to the following:

- Construction of medians with curbs and colored stamped concrete
- Construction of curb, gutter, sidewalk and driveway aprons
- Irrigation and landscaping
- Construction of bridge improvements with predrilled driven piles, abutments, precast concrete “T” girders, reinforced concrete slab, concrete barriers, fencing and gates, railing, and utilities
- Asphalt dig outs, overlays, and pavement treatments
- Pedestrian signal and markings
- Traffic signal modifications
- Application of street striping and markings
- Preparation of plans, installation, maintenance and removal of traffic control devices
- Installation of infrastructure facilities for franchise utility companies
- Installation, maintenance and removal of storm water pollution prevention system to comply with NPDES.

The General Contractor shall have knowledge and experience performing or overseeing all aspects of construction required to complete this project.

Abbreviations most commonly used in this project are found in the SSPWC Section 1-3.2.

The General Contractor and/or its subcontractors shall be qualified for street improvement and landscape/irrigation work to complete all aspects of project work. To be deemed qualified, the Contractor and its Subcontractors shall have satisfactorily completed no less than three projects in the last five years for government agencies, completing all trades/types of work included with this project, and a minimum project size equaling this project’s quantities. Agency contact names, email addresses, phone numbers, and addresses shall be included for the Prime Contractor on the Bid Forms provided during the bidding process, and submitted with each bid. The City is the sole determinant as to whether or not a Contractor and their Subcontractors are qualified. The City’s decision is final.
To be deemed qualified to complete the bridge and related work, the Contractor and its Subcontractors shall have satisfactory completed no less than two bridges using Caltrans Standard Plans and Specifications dated 2010 or later. Agency contact names, phone numbers and addresses shall be included for the Prime Contractor on the Bid Forms provided during the bidding process, and submitted with each bid.

Scheduled work shall comply with timelines and other requirements stated herein to minimize disruption and inconvenience to businesses, residents, schools, vehicular and pedestrian traffic in and around the areas of construction, etc. is required. If the Field Engineering Inspector deems that not all requirements are being met, re-scheduling of work shall be required at no additional cost to the City.

The Contractor is also directed to the project Bid Schedule for estimated quantities of work. Bid Schedule quantities shown are estimates of work to be completed, and have been provided for bidding purposes ONLY. The Contractor is responsible for verifying Bid Schedule quantities prior to initiating work, and reporting all discrepancies greater than ten percent (10%) to the City. Measurements shall be taken at minimum forty-eight (48) hours prior to starting work. Payments to the Contractor shall be based on actual field measurements of work completed, confirmed and approved by the City’s representative. Remaining information about work to be completed as part of this project is included herein.

2. CITY ENCROACHMENT PERMIT

Prior to staging or starting any work in the City’s public right of way, the Contractor shall secure an Encroachment Permit from the City.

A City Encroachment Permit application has been included in the appendices, but can also be obtained from the Field Engineering Division Office or Engineering Services Customer Counter, both located at Escondido City Hall, 201 North Broadway, Escondido, CA 92025. An Encroachment Permit application can also be downloaded online at http://www.escondido.org/Data/Sites/1/media/pdfs/Engineering/EncroachmentPermitApplication.pdf. The permit will be issued at no cost to the Contractor once a completed application and required submittals are received, and shall remain in effect for as long as all the general conditions of the Encroachment Permit are complied with. The Contractor is responsible to review the Encroachment Permit carefully, in its entirety, and understand it’s requirements before placing a bid.

Payment to prepare all required documentation, applications, etc. to obtain a valid City of Escondido Encroachment Permit shall be included in the contract unit price bid for the Mobilization & Demobilization bid item, and no additional payment shall be allowed therefore.
3. CONSTRUCTION/PROJECT SCHEDULE

It is the Contractor’s sole responsibility to prepare and submit a construction schedule in accordance with the requirements of the specifications. The Contractor shall submit a construction schedule to the Field Engineering Inspector at or prior to the preconstruction meeting, indicating the timeline created and proposed by the Contractor to complete all project Work. Work items shown on the schedule shall make use of the entire contract duration provided for in the contract documents.

Construction schedules shall be submitted on 11 X 17 paper, in a bar chart format and shall indicate the critical path/controlling and major work items associated with the completion of the project (including change order time adjustments), and the start and completion dates of each item. Major work items shall be considered as any of the following, and any bid schedule item with an amount in excess of twenty thousand dollars ($20,000):

- Mobilization
- Clearing and Grubbing/Demo/Unclassified Excavation
- Curb & Gutter/Sidewalk/Median Improvements
  - i. Removal
  - ii. Grading
  - iii. Subgrade
  - iv. Replace
- Street Re-construction
  - i. Grinding
  - ii. Paving and overlay
  - iii. Traffic signal loops and cameras
- Construction of Pedestrian/Bike Crossing Improvements
- Traffic signal modification
- Bridge widening
- Striping and signage
  - i. Initial layout / tracking
  - ii Approval of layout / tracking
- Landscape and Irrigation
- Plant establishment period
- SDG&E/Utility coordination work (Refer to item 10)
- Final Clean-up & Demobilization

The submitted construction schedule shall assume standard working hours of 7 a.m. to 4 p.m., and work hours for approved night work from 7 p.m. to 5 a.m. Work hours on Collector and above classified streets shall be 8:30 a.m. to 3:30 p.m. in peak directions. The schedule should take into consideration City recognized holidays, school breaks, peak directional traffic volumes, City events, notification periods required for water shut downs affecting schools, businesses, hospitals, special care facilities, utility forces work, residences, and the schedule
shall be adjusted accordingly. An example of an acceptable construction schedule can be found in the attachments.

No night work is anticipated for this project. Should the Contractor desire to complete work after standard working hours, they shall submit a written request to the Field Engineering Inspector for consideration by the Engineer. Such requests shall include information as to the benefits to the City of completing this work at night versus standard working hours. Approval is not guaranteed.

Should night work be approved, the Field Engineering Inspector will provide written confirmation and an approved Noise Variance from the City Manager's Office prior to starting work. All costs associated with phasing and performing work at night, including but not limited to plant fees, employee overtime, lighting, and additional traffic control devices, shall be included in the contract unit price bid for all work required. The Contractor shall also be responsible for all City staff overtime costs associated with approved night work.

Advance public notification about night work, dates of work, and hours of work shall be made in the form of electronic message boards and associated traffic control for a period of seventy-two hours prior to any such work. No additional compensation shall be allowed for this notification, or others required by the Field Engineering Inspector.

The Contractor shall also provide a three week look-ahead schedule with more specific work information (phase and type of work, etc.) The Contractor shall provide an updated three-week look-ahead schedule at each weekly progress meeting. If a meeting is missed or cancelled, the Contractor is not relieved of this requirement, and shall upload the update via VPM at the regularly scheduled meeting time.

Water shutdowns shall not be performed on Mondays or Fridays. The Contractor shall advise the Field Engineering Inspector a minimum of seventy-two (72) hours before an expected shutdown can be put into effect. A forty-eight (48) hour notification period is required by the Escondido Fire Department prior to any shutdown that will disable any fire hydrant or fire sprinkler system.

After review of the submitted construction schedule by the City, it will be returned to the Contractor as ‘accepted,’ ‘rejected,’ or ‘revise and resubmit.’ If revisions are needed, the City will note any revisions that are required. If the schedule is rejected, the Contractor shall meet the assigned Field Engineering Inspector and discuss required changes prior to re-submittal for review.

Project mobilization, staging and/or construction shall not be allowed to start until a construction schedule complying with the conditions of the contract has been
received from the Contractor and deemed acceptable by the City. Once a project start date is determined and the Notice to Proceed issued, contract days will be expended against the contract whether or not a construction schedule has been accepted by the City.

Once construction has started, an updated construction schedule accurately reflecting project progress shall be submitted with each monthly Progress Payment Request. An updated schedule shall also be required between progress payments if actual work is significantly behind schedule, as deemed so by the Field Engineering Inspector. Failure to submit an updated construction schedule with the monthly Progress Payment Request or as directed by the Field Engineering Inspector will cause the processing of submitted payment requests to be delayed until this requirement is met.

When submitting a monthly progress payment, if the Contractor deems that no revision is necessary, the current schedule shall be submitted with “REVISION NOT NECESSARY” clearly marked in red ink. The Field Engineering Inspector shall review the submitted schedule for accuracy and return the schedule to the Contractor for revisions if the schedule does not accurately reflect actual project progress and future work scheduled thru project completion. The City is the sole determinant of schedule accuracy.

The Contractor shall be familiar with Article 12.4 Extensions of Contract Time-Liquidated Damages of the General Conditions.

Payment for the creation, maintenance and submission of updated construction schedules as noted herein shall be included in the contract unit price bid for the Mobilization & Demobilization bid item, and no additional payment shall be allowed therefore.

4. MOBILIZATION & DEMOBILIZATION

Mobilization and Demobilization shall consist of preparatory work and operations, including, but not limited to creating and maintaining a construction schedule, the movement of personnel, equipment, sanitation facilities, materials, and incidentals to the project site necessary for work on the project, cleaning up and removing equipment and materials at the end of the project, and for all the other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site.

The Contractor shall keep one complete set of the approved Plans/Utility Plans, Specifications, Encroachment Permit, Traffic Control Plans, and approved submittals on the job site at all times, on which they shall record any deviations, encountered items or approved changes made during construction. A sketch shall be provided to the City to show changes in quantities, treatment, location and installation of materials, devices or equipment, or changes in other building or improvement services completed as part of this project. The same such
requirements shall be met and provided to Utility agencies with plans included as part of the contract documents.

The Contractor shall also provide record photographs and detailed information to clearly describe, show, and provide the location of all concealed services, piping, conduit and other equipment or items encountered during the prosecution of project Work. Said information shall be prepared on 8-1/2 x 11” paper for each such item encountered. A photograph shall be on the top half of the page, a clear hand or computer drawing of its location from readily available reference points on the bottom half of the page, and a written description of the item encountered on the back side of the page. Recorded sketches shall conform to SSPWC 308-6.2.1. Information prepared for encountered items shall be reviewed at each weekly progress meeting by the Contractor and Field Engineering Inspector to ascertain the sketches are accurate and current. Failure to maintain accurate, up to date record information shall delay processing of monthly progress payment requests until these requirements are met to the complete satisfaction of the Field Engineering Inspector.

The Contractor shall obtain a construction water meter from the City of Escondido's Utility Department for construction use on this project ONLY. The Contractor is not responsible for the payment of any water charges or for use of the water meter associated with the work necessary to complete this project. The Contractor shall be held liable for any damages to the meter. Any use of the meter on non-project related matters will result in a $1,000 deduction from payment per occurrence on top of identified water use charges, minimum. If offsite water uses cannot be determined, the Contractor shall become responsible for all project water use up to the time of the infraction.

In addition to the above items, payment for Mobilization and Demobilization shall include, but not be limited to the following items as shown on the Plans or specified in these Special Provisions:

1 Conveying and applying water.
2 Dust control.
3 Maintaining mail delivery by providing access for mail or parcel delivery, including temporary relocation of existing mail boxes for project delays caused by the Contractor's actions, as determined by the Field Engineering Inspector.
4 Maintaining access and coordination for trash pick-up service.
5 The Contractor shall repair, replace and reconnect as appropriate, all public improvements that are damaged, relocated, de-pressurized, removed or similarly disable during the course of the project.
6 The Contractor shall effectively remove all mark-out paint used for surveying or to locate substructures before the final inspection of the project. It is the Contractor’s responsibility to remove all mark-out paint in a manner that will not damage or degrade any surface from which paint is removed. "Blacking out" or painting over mark outs on surfaces is not acceptable. Clean up shall also include removal of all staking and surveying markers placed on the job site.

7 Grading and maintaining all-weather ADA compliant pedestrian walking paths, driveways through the construction zones, and providing continuity between bus stops and other pedestrian oriented facilities.

8 Clearing for, providing temporary graded driveways, and continuing maintenance thereof to provide safe, smooth, stable and continuous access to all residences and businesses within the project area and as directed by the Field Engineering Inspector. Asphalt Grindings generated from the project may be used for temporary driveway surfaces unless otherwise approved by the Field Engineering Inspector.

9 Daily maintenance and project appearance, and cleanup of project area upon completion of each day’s work.

10 Street sweeping of all areas affected by project Work shall be performed twice each week during the work and for at least three weeks upon completion of all treatment. The Contractor shall have all said streets swept each Monday and Friday through completion of the project. This work shall be included in the cost of Mobilization and Demobilization.

11 Preparation of work space for SDG&E and its contractor/forces to complete work. The Contractor is directed to Item 10 of these Special Provisions.

Payment for Mobilization & Demobilization shall be made at the contract unit price bid, and paid as per Article 14.3 B (1) of the General Provisions. Payment shall include but not be limited to the obtaining a water meter and accessing construction water for the project, producing documentation for unknown encountered item, the rental of a field storage yard, restroom facilities, etc., items listed above, street sweeping, all items listed elsewhere in these specifications, and removal of equipment and surplus materials and debris from the construction site at the end of the project; and leaving the site in as good or better condition than it was at the beginning of the project.

5. CLEARING AND GRUBBING

This item shall include Clearing and Grubbing for the entire project within the public right-of-way and private properties, and includes all areas of work shown or referred to on the approved project plans.
Clearing and grubbing shall conform to Section 300-1, “Clearing and Grubbing”, and Article 6 of the General Conditions, and per these special provisions, or as directed by the Engineer. Clearing and grubbing shall include the removal of all items as indicated to be removed on the plans, and where project improvements require removal of an item to construct the new improvements.

All trees, stumps, shrubs, roots, and other vegetation within the limits of the project shall be removed and disposed of per Section 300-1, “Clearing and Grubbing”, of the SSPWC, unless otherwise shown or indicated. The Contractor shall tag all trees and bushes identified on the plans and subject to removal, and receive the Field Engineering Inspector's approval prior to their removal.

Existing signs indicated to be removed on the plans or elsewhere in the contract documents shall be returned to the City of Escondido Maintenance Yard located at 474 N. Spruce St. Attention Clement Harris (760) 839-4885. This shall include sign posts in good shape that do not have concrete footings.

Clearing and Grubbing shall also include minor grading for transitioning existing grades to new improvements, drainage control, protection of existing and relocated utility structures prior to and during construction of proposed improvements, conveying and applying water, daily maintenance of project appearance, and cleanup of project area upon completion of work.

The Contractor shall protect all existing public, private and utility company structures or facilities which are adjacent to, or fall within the limits of the work to be completed as part of this contract in accordance with Article 4.3 of the General Conditions. This item shall also include those structures and facilities, which the plans show, or these Specifications indicate to be protected. Any structure or facility to be protected which is damaged as a result of the Contractor's work shall be repaired or replaced at their cost to a condition equal to or better than the original condition, and in compliance with the referenced plans and specifications.

In addition to the above items, payment for clearing and grubbing shall include, but not be limited to, the following items as shown on the Plans or specified in these Special Provisions:

1. Saw cutting of concrete and asphalt concrete at joints, right-of-way and project limits.

2. Removal and disposal of interfering portions of abandoned or to be abandoned utility lines and structures and abandoning pipes and conduits not removed that fall within the limits of excavation for roadway and driveway construction. Abandonment of conduits and structures shall be done per Article 4.3 of the General Conditions, and Sections 306-5 and 307-12.7 of the SSPWC.
3 Removal and disposal of miscellaneous concrete items such as, water meter boxes, utility boxes, covers, and drainage ditches including saw cutting, and removing and disposing of walls and fences as called out on the plans. This shall include stabilizing of remaining fences to the complete satisfaction of the Field Engineering Inspector for later reconnection to adjacent fencing, if so specified on the plans.

4 Removal and disposal of any additional items not specifically mentioned which is encountered within the work limits, and is required to be removed to construct project improvements.

5 Removal and disposal of interfering portions of existing irrigation, vegetation, trees, tree roots, tree stumps, roots, shrubs, ground covers, trash, and debris, trench excavation, sidewalk and driveway construction or designated on the plans to be removed or abandoned. Cutting, plugging and marking existing irrigation lines.

All tree stumps within the right of way project area and at locations shown on the plans need to be completely removed.

6 Applying Water.

7 Dust control.

8 Maintenance of project appearance.

9 Coordination of this work to assist with control of ground and surface water during construction.

10 Cleanup of project area daily and upon completion of work.

11 Advance pot-holing to determine depths of existing storm drains, water mains and gas mains, sewer mains and any other utilities for purposes of installing new water services.

12 Grading and maintaining all-weather ADA compliant pedestrian walking paths, driveways through the construction zones, and providing continuity between bus stops and other pedestrian oriented facilities.

13 Clearing for, providing temporary graded driveways, and continuing maintenance thereof to provide safe, smooth, stable and continuous access to all residences, businesses, and easements within the project area and as directed by the Field Engineering Inspector. Asphalt Grindings generated from the project shall be used for temporary driveway surfaces unless otherwise approved by the Field Engineering Inspector. **Payment for installation and disposal of**
temporary grindings is included in the lump sum price paid to the Contractor for Clearing and Grubbing.

14 Maintaining access for trash pick-up for all properties in the construction area. Assist residents with locating the top of curb for pickup.

15 Cutting back all bushes and tree branches overhanging segments sidewalk and ped-ramp areas being improved or repaired. Trees and bushes shall be adequately trimmed to provide ten feet of overhead clearance and adequate space for installation of forms for proposed improvements, or as directed by the Field Engineering Inspector. All such work shall be performed by person(s) knowledgeable in this work, and approved by a licensed arborist. Signed copies of all arborist recommendations shall be submitted to the City prior to initiating the work.

16 Unless otherwise specified, the Contractor shall remove fencing (posts, footings, gates, etc.) in conflict with project improvements. When attached or connected to existing fencing outside of the project limits of work, the Contractor shall secure/stabilize what remains to the complete satisfaction of the Field Engineering Inspector. Loose chain link fabric shall be rolled up and secured to the closest fence post. Wood fencing shall be removed to the next in place fence post. Any fence openings to previously enclosed and secured areas shall be re-secured by the Contractor as part of this work. Contractor shall legally discard all removed items not identified for salvaging.

17 The Contractor shall repair, replace and reconnect as appropriate, all public improvements and utilities serving any private property, sidewalk under drains, as well as reinstalling and connecting irrigation for private landscaping and re-pressurizing the fire sprinkler system, in the event that the aforementioned items are damaged, relocated, de-pressurized, removed or similarly disabled during the course of the project.

18 The Contractor is responsible for the effective removal of all mark-out paint used to locate substructures before the final inspection of the project. Clean up shall include removal of all utility mark-out paint, staking, and surveying markers placed on the job site. It is the Contractor's responsibility to remove all mark-out paint in a manner that will not damage or degrade any surface from which paint is removed. "Blacking out" or painting over mark outs is not acceptable.

The Contractor shall be responsible to deposit all recyclable material designated as Industrial Recyclable (dirt, asphalt, sand, land clearing brush, and concrete) as identified in City of Escondido Resolution No. 99-444 at a Recycle Center approved by the Field Engineering Inspector. The Contractor shall submit a copy
of all documentation confirming legal disposal of all materials leaving this project site. The City shall cause to withhold the sum of $1,000 from this pay item until all such documentation is received and approved by the City. The Contractor is referred to project appendices for additional information.

The Contractor shall utilize the services of Escondido Disposal Inc. for waste disposal purposes. Access for trash pickup shall be provided to existing properties. Payment for waste service, disposal and handling shall be included in the compensation under Clearing and Grubbing bid line item for all costs and no additional compensation shall be allowed therefore.

All items to be removed unless otherwise indicated on the plans, per these Special Provisions, or as directed by the Field Engineering Inspector, shall be removed and disposed of offsite to a legal dump site.

Section 300-1.4 Payment:

REPLACE this section with the following:

Payment for **Clearing and Grubbing** shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals to complete work in accordance with the referenced plans and specifications, and no additional compensation will be allowed therefore. Payments will be made as follows:

<table>
<thead>
<tr>
<th>Project Completion Percentage</th>
<th>Payment for Clearing and Grubbing Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>When 5% of the Project Sum is billed, then…</td>
<td>50% of Clearing and Grubbing cost can be billed.</td>
</tr>
<tr>
<td>When 50% of the Project Sum is billed, then…</td>
<td>20% of Clearing and Grubbing cost can be billed.</td>
</tr>
<tr>
<td>When 75% of the Project Sum is billed, then…</td>
<td>10% of Clearing and Grubbing cost can be billed.</td>
</tr>
<tr>
<td>When 100% of the Project Sum is billed, then…</td>
<td>20% of Clearing and Grubbing cost can be billed.</td>
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</tbody>
</table>

6. **STORM WATER AND ENVIRONMENTAL CONTROL**

7-8.6.3 Water Pollution Control

Delete the first paragraph and replace with the following:

The Contractor shall retain a QSP who is trained and competent in the use of BMPs that shall be on-site daily to inspect and document the condition of all
BMPs. This person shall be responsible for overseeing all project operations, and evaluating the effectiveness of the BMPs for work in the City’s right-of-way. This person shall modify the BMPs in any area of work as necessary to keep the dynamics of the site in compliance.

The contractor shall implement and maintain such BMPs as are relevant to the work, the project plans, special provisions, and State and Federal regulations. When conflicting, the stricter regulations shall apply. All construction BMPs shall comply with the City’s Municipal Code, NPDES and California Storm Water Quality Association (CASQA), Storm Water Best Management Practice Handbook, Construction, current edition. The QSP shall submit an Erosion Control Plan showing all BMP control measures to the Field Engineering Inspector for approval prior to any construction activities.

BMPs shall be maintained daily and shall be updated or changed at the QSP or Field Engineering Inspector’s direction. The Contractor shall coordinate construction phasing changes with the QSP in advance of any construction activities. General housekeeping shall be maintained daily. Stockpiles that have the potential to erode, blow away in the wind, or contaminate runoff (such as spoils, cold mix, etc.) shall be covered and bermed by the end of every working day. Materials that have the potential to contaminate runoff (such as paint, bags of concrete mix, etc.) shall be stored on pallets, covered, and bermed by the end of every working day. Effective erosion control measures, such as Bonded Fiber Matrix (BFM), and sediment control measures (fiber rolls, gravel bag, etc.) shall be installed at active work areas with exposed soil prior to rain forecasted at 50% or greater probability of producing precipitation and at work areas with exposed soil that are inactive for 14 days.

The Contractor shall begin implementing corrective actions for BMP deficiencies identified by the QSP or Field Engineering Inspector within 72 hours of notification by the QSP or Field Engineering Inspector. If the Contractor does not begin implementing corrective actions within this timeframe, the City may escalate enforcement with, but not limited to, a stop work notice or administrative citation until correct actions are completed.

All equipment must be washed prior to transport to the Project site and must be free of sediment, debris, and foreign matter. Prior to mobilization of equipment to the site, the Contractor shall provide the Field Engineering Inspector documentation that equipment has been washed. All equipment used in direct contact with surface water shall be steam cleaned prior to use. All equipment using gas, oil, hydraulic fluid, or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (e.g., motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment.
Payment for **Storm Water and Environmental Control** shall be at the contract lump sum price bid, and shall include furnishing all labor, tools, materials, and equipment necessary to install and maintain Best Management Practices on the project for the duration of the project to the satisfaction of the Field Engineering Inspector, and no additional compensation will be allowed therefore.

### 7. PROJECT INFORMATION AND ESCONDIDO CREEK TRAILHEAD SIGNS

The Contractor shall furnish and install two project information signs as shown in the project attachments/appendices. The signs shall be mounted and installed per Caltrans 2015 Standard Plan RS2, and placed at each end of the project area, where directed by the Field Engineering Inspector.

Once all project work has been accepted, the Contractor shall remove project signs, clean and return them without the posts to the City’s Public Works Yard, located at 475 N. Spruce St., Escondido, CA 92025. Should the informational signs become damaged or un-usable during construction, the Contractor shall have new signs fabricated that are equivalent in materials, size and quality and delivered to the City, at the Contractor’s expense.

Payment for the **Project Information Signs** shall be made at the contract unit bid price for lump sum, and shall include all fabrication, materials, equipment and labor to breakdown, installation and removal of these signs as described above, and no additional payment shall be allowed therefore.

The Contractor shall fabricate, furnish, and install the Escondido Trailhead Entry Sign as shown in the project attachments. The sign shall be constructed as shown in attachment details and notes, and connected to a provided power source. The Contractor shall provide submittals of all materials, colors, and incidental items for City approval. The final location for construction of the sign shall be approved by the City prior to construction.

Payment for the **Escondido Creek Trailhead Entry Sign** shall be made at the contract unit bid price for lump sum, and shall include all fabrication, materials, equipment and labor for sign installation, extension of conduit to power source, cabling, connection to identified dual meter shown on pedestrian signal plans, and coordination with the City/utilities to energize sign lighting, and no additional payment shall be allowed therefore.

### 8. CONSTRUCTION STAKING AND SURVEYING

The Contractor shall provide construction staking and other surveying services required to complete this project.

All property corner pins or tags, centerline survey monuments, high accuracy monuments (GPS), etc. located within the project boundaries shall be tied out and protected during construction by the Contractors surveyor. The City, as a
courtesy, will provide the Contractor with a list of known monuments within the
project limits at the preconstruction meeting for their use.

The Contractor shall provide the City with two working day advance notice prior
to commencing work on this project. Should the Contractor encounter any
survey monuments, pins, etc. not included on the previously mentioned list within
the project boundaries, the Contractor shall immediately contact the Field
Engineering Inspector, and shall arrange to have the monument position properly
tied out by the Contractors surveyor.

After work in the area is complete and acceptable to the City, the Contractor shall
adjust centerline monument wells to finish pavement surface per C.O.E. M-4-E
before newly constructed improvements will be accepted.

Should a known centerline survey monument, property corner pin or tag, etc. be
damaged or disturbed during construction, the Contractors surveyor shall
complete the necessary work to reestablish the damaged survey monument well
and have a new monument placed at the same position in the surface of the new
construction by a person authorized to practice land surveying in the State of
California. A corner record shall be filed with the County of San Diego for any
survey monument that has been disturbed and replaced. A copy of any corner
records submitted to the county shall be given to the field engineering inspector
prior to project completion.

Payment for Construction Staking and Surveying shall be made at the contract
unit bid price for lump sum, and shall include all equipment, material, labor,
transportation and other necessary items to complete the work as described
herein, and no additional compensation shall be allowed therefore.

9. PUBLIC CONVENIENCE, SAFETY AND TRAFFIC CONTROL

In addition to Article 6 of the General Conditions, the Contractor shall also
conform to Sections 7-10 SAFETY, 600 ACCESS, and 601 WORK AREA
TRAFFIC CONTROL of the SSPWC, and the following revisions and/or
additions. In the event of a conflict between the General Conditions and
SSPWC, the General Conditions shall govern:

Section 7-10.3 Haul Routes:

REPLACE this section with the following:

Haul routes shall be determined and drawings prepared by the Contractor and
submitted with project traffic control plans to the City for approval. No work
requiring delivery or removal of project related materials or equipment shall
commence until there is a City approved haul route. All Contractor and
Subcontractor construction vehicles shall contain a valid, approved haul route
within them until all project Work is complete and accepted by the City
Sections 600-2 and 600-3 Vehicular and Pedestrian Access

DELETE these Sections in their entirety and replace with the following:

“Vehicular and pedestrian access to each residential driveway and pedestrian path shall be maintained at all times when work to prepare and complete street improvements directly in front of a residence, apartment complex, bike/pedestrian path, etc. is not actively underway. If backfill has been completed to the extent that safe access may be provided, and the street is open to traffic, the Contractor shall immediately clear the street and driveways and provide and maintain access. Access shall be smooth with any high/low spots and holes leveled. Any debris that presents a tripping concern shall be removed. Ramped areas shall transition properly to allow for both pedestrian and vehicular use, and shall be maintained as often as necessary to provide access, or as otherwise directed by the Field Engineering Inspector, at no additional cost to the City. The Contractor shall be efficient in performing project work to minimize the inconvenience to affected residents. At no time during pavement preparation or pavement rehabilitation or maintenance operations shall the use of driveways, public use areas, or other vehicle access points be blocked more than three hours. At no time shall sidewalk on both sides of the roadway be closed to pedestrians. If at any time the Field Engineering Inspector deems progress of said work inefficient, he/she shall direct the Contractor to immediately provide access to a residence or area(s) as noted above.”

600-1 General

After the second paragraph, ADD the following:

“The Contractor may not store equipment or materials in the public right-of-way unless the material and equipment is stored in an area approved for such use by the approved Traffic Control and Storm Water Quality Prevention Plans.

Approved and operable sign illumination devices shall be placed on or in close proximity to each sign or device that will be in place during darkness.

The Contractor shall fully define concrete work areas by placing a perimeter of 4-foot high orange plastic safety fencing. Fencing shall be up at all times during construction unless project/construction equipment needs to enter or exit the work area. Contractor shall also provide at minimum a 3-foot buffer zone between motor vehicle traffic and the work area.

600-2 Vehicular Access

The Contractor shall adhere to the following traffic handling requirement during the construction of the project:

1. On streets and areas accessible to pedestrians and to motor vehicles, access for residents, commercial customers, visitors, mail service, trash
service, and emergency vehicles along all roads shall be maintained at all times. The City of Escondido Fire Department, the City of Escondido Police Department, the US Postal Service, and Escondido Disposal Inc. shall be notified when any of the street or its intersections will be reduced, access is limited, or a detour has been approved by the City to facilitate construction. Any approved amendment to the traffic control plans shall also be redistributed to these parties/agencies. Work in these areas shall be scheduled to minimize disruption to these areas/services, etc.

**NOTIFICATIONS**

The Contractor is responsible for notification of agencies, City departments, area residents, businesses, and the general public prior to starting construction.

All notices shall be on the Contractors letter head, and include the name and phone number of the primary contact at the Contractor’s Main Office, the name and phone number of the on-site Project Superintendent, and name and email address of the assigned Field Engineering Inspector. The notice shall clearly identify the Contractor as the primary contact.

All notices shall be in both English and Spanish. The Contractor shall obtain the Field Engineering Inspector’s approval of all notices prior to distribution.

**Notification at Commencement of Work:**

Immediately upon establishment of a Notice to Proceed date, the Contractor shall notify the following agencies and City departments in writing of upcoming work:

**All Utility companies (AT&T, Cox Cable, Crown Castle, and SDG&E)**

**Escondido Disposal, Inc.**

**Escondido Fire Department**

**Escondido Police Department**

**Escondido School Districts (affected elementary / middle / high schools)**

**Escondido Utilities Department**

**North County Transit District**

**U. S. Postal Service (all Escondido offices)**

This notification shall include a brief description of the work to be performed, the Notice to Proceed and Estimated Completion Dates for the project, and anticipated working hours for the project.

**Notification of Residents / Businesses:**

At the same time, the Contractor shall issue a written notification to the following businesses and residents affected by project work:
All residents / businesses within one hundred feet of project work or located on a street affected by the project shall be notified.

The notification shall include a brief description of the work to be performed, the Notice to Proceed and Estimated Completion Dates for the project, and anticipated working hours for the project. It shall also explain that a second notice will be distributed approximately forty-eight (48) hours before actual site mobilization, work, etc. will begin. The notification shall provide a link to the City’s website for further updates and project related information.

On the first working day of each month, the Contractor shall issue notices to the same residents and businesses with project status information. As with the original notification, a link to the City’s website shall be provided.

This notification shall also include street reduction and detour information that will help reduce traffic congestion in the area.

With this notice, the Contractor shall inform owners and occupants of businesses that a portion of their driveway will be temporarily blocked due to paving operations. At no time shall all means of access to a business be blocked at the same time.

At the same time as the issuance / distribution of this Notice, the Contractor shall place “No Parking” signs firmly a-fixed to a barricade or other method approved by the Field Engineering Inspector. Signs placed in residential areas shall be placed at intervals of seventy-five feet unless otherwise specified or approved. “No Parking” signs required by these documents shall clearly state the date and timeline for parking restrictions. The Contractor shall ensure that “No Parking” sign information matches that of the Notice. Should information on “No Parking” signs and the Notice be different, the Contractor shall reschedule work at minimum seventy-two hours from the later posted date, unless otherwise directed or approved by the Field Engineering Inspector, at no additional expense to the City.

Construction activities shall not prevent the use of driveway for more than three (3) hours from start to finish. It is intended that commercial driveway closures will be minimal, with as little disruption to normal business operations as can be achieved, and still perform the work as prescribed.

If work has been canceled or needs to be rescheduled, a notification shall be issued with updated information. Such notifications shall be made when any scheduling change is made, or at the direction of the Field Engineering Inspector.

601-1 General

ADD a third paragraph with the following:
“Submitted traffic control plans should allow at minimum one lane of traffic in each direction at all times for Collector and above designated streets.

601-2 Traffic Control Plan (TCP)

DELETE the first paragraph in its entirety.

REPLACE the third paragraph with the following:

“The TCP shall be drawn to a 1 inch = 40 feet scale on 11 inches by 17 inches sheets, unless otherwise approved."

After the third paragraph, ADD the following:

All Traffic Control Plans and traffic control devices shall conform to the California Manual of Uniform Traffic Control Devices (2014 ed, Rev.1), http://www.dot.ca.gov/hq/traffops/engineering/mutcd/ca_mutcd2014rev1.htm. In addition to these standards, the City requires advance public notification about upcoming work on streets classified as Collector and above. Dates and hours of work shall be provided in the form of electronic message boards for a period of seventy-two hours prior to any such work. Prepared Traffic Control Plans shall be submitted per Section 2-5.3.1 to the Field Engineering Inspector for approval. The City must review and approve all traffic control plans prior to their implementation on the project site. At the discretion and direction of the Field Engineering Inspector, and depending on the degree of significance, changes to the approved plans may require a formal amendment. All Traffic Control Plans shall be prepared and signed by the Contractor's Civil or Traffic Engineer for review and approval by the City. The requirements of MUTCD and these Special Provisions shall be strictly enforced. Storage of project equipment and materials shall be shown on submitted traffic control plans prepared by the Contractor.

601-3 Payment

DELETE this section in its entirety and replace with the following:

Payment for Public Convenience, Safety, and Traffic Control shall be made at the lump sum price bid, and shall include all costs for preparation and implementation of the traffic control plans, installation, maintenance, replacement and/or relocation of signs, barricades, delineators, electronic message boards, warning devices, temporary striping and appurtenances, providing flagmen for handling detours, controlling, or restricting traffic through, in and around the project as required to the satisfaction of the Field Engineering Inspector and any other work necessary to carry out the requirements of public convenience, safety, and traffic control including any changes requested during the course of construction, and no additional compensation will be allowed therefore.
10. TESTING AND SPECIAL INSPECTION

The Contractor shall notify the Field Engineering Inspector at least two (2) full working days before testing or special inspection is needed to allow for timely scheduling of appropriate personnel.

The City of Escondido shall supply personnel to sample, process and test concrete, hot mix asphalt, slurry, soil, and other materials as the Field Engineering Inspector deems necessary to ensure contract compliance and quality assurance. Sampling of materials may happen in the field or at the plant. When at the plant, the Contractor shall facilitate that the City representative has access at all times during plant operation, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant, verifying weights, proportions, and material properties; checking the temperatures maintained in the preparation of the mixtures and for taking samples. Provide assistance as requested for the City to procure any desired samples. All initial tests will be performed at the expense of the City, however any re-testing because of failed initial test results for any reason shall be performed at the expense of the Contractor.

The City of Escondido shall also supply personnel for all special inspections in accordance with City of Escondido and Caltrans standards. All initial inspections will be performed at the expense of the City, however, any re-inspection because of failed initial inspections for any reason shall be performed at the expense of the Contractor.

In addition, all testing and inspection charges for Contractor requested work that is not ready for scheduled testing or inspection will be charged to the Contractor. This includes scheduled work requiring testing or inspection personnel that wait in excess of one hour for work to be ready to test or inspect.

11. UTILITIES

The Contractor shall call (Dig Alert 800-227-2600) for mark-out prior to any excavation. Any conflicts between the proposed work and existing underground facilities shall be reported to the Field Engineering Inspector immediately in order to prepare a design or adjust work as needed. No payment shall be made for any delay caused by failure of the Contractor to report conflicts immediately.

The Contractor shall contact the Field Engineering Inspector for mark-out of existing streetlight facilities at least two full working days prior to beginning any work near or adjacent to any existing streetlight facilities. The Contractor shall be held responsible for the protection and immediate repair of any streetlights and appurtenances damaged by the work.

The Contractor is responsible for the removal of mark out paint as noted in the Mobilization and Demobilization section above.
Construction drawings outlining pavement removal areas have been prepared for this project, however, your attention is directed to the possible existence of underground facilities in the streets included in this project. The Contractor shall take steps to determine the exact location of all underground facility lids, tops, etc. (potholing) prior to performing work that may damage such facilities or interfere with their service, and ensure that all such utility appurtenances within areas of work are raised to be flush with the finish street surface. If the Contractor fails to locate underground facilities or otherwise operates in a manner which results in damage to existing facilities, or fails to bring utility appurtenances flush with the street finish surface, the repairs to damaged utilities in the course of work and work to raise appurtenances to finish surface shall be the Contractor's responsibility, and all costs resulting thereby shall be borne by the Contractor.

The Contractor shall conduct their operation in such a manner as to avoid any unnecessary delay or hindrance to the work being performed by any other forces. Cooperation for this or any other simultaneous, collateral or essential work shall be in conformance with Article 7 of the General Conditions.

The Contractor shall be responsible for any damage to utility facilities resulting from their operations and shall repair or replace them in accordance with the provisions of Articles 4 and 6 of the General Conditions.

All existing utilities shall be carefully uncovered if located within the lines of excavation or existing street improvement removal, and time shall be allowed for the Field Engineering Inspector to field check the location of such utilities to make certain that they will not interfere with the proposed improvements.

When working within the bridge area, and seventy-five feet (75') in each direction of the existing thirty-six inch (36") water main, the Contractor shall take all measures to incorporate methods that reduce ground vibration. The existing water main is old and susceptible to cracked interior linings. Work that causes ground vibration beyond that of pre-drilling and pushing piles to specified depths is strictly prohibited.

Facilities either permanently or temporarily relocated or supported by the owner shall be protected in place by the Contractor.

The Contractor will not be assessed liquidated damages for delay in completion of the project when such delay is caused by failure of the City or the owner of the utility to provide for a timely removal or relocation of, or other work associated with the existing utility facilities. Notwithstanding any of the provisions in Articles 1, 11 & 12 of the General Conditions relative to payment to the Contractor for actual loss due to utility delay for any reason, the Contractor will be entitled to an extension of time as provided in Subsection 6-6, but will NOT be entitled to any other compensation for such delay.
Owners of the various utilities on and near the job site are as follows:

<table>
<thead>
<tr>
<th>UTILITY</th>
<th>OWNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas Lines</td>
<td>San Diego Gas &amp; Electric Company</td>
</tr>
<tr>
<td>Electric Power Lines</td>
<td>San Diego Gas &amp; Electric Company</td>
</tr>
<tr>
<td>Telephone Facilities</td>
<td>AT&amp;T Company</td>
</tr>
<tr>
<td>Water</td>
<td>City of Escondido</td>
</tr>
<tr>
<td>Sewer</td>
<td>City of Escondido</td>
</tr>
<tr>
<td>Cable TV</td>
<td>Cox Communication</td>
</tr>
<tr>
<td>General Cable/Communication</td>
<td>Crown Castle</td>
</tr>
</tbody>
</table>

Full compensation for all costs associated with locating and protecting of existing utilities, and coordination of utility work on site shall be considered as included in the contract unit bid price indicated in the Bid Schedule for the various contract items of work, and no additional compensation shall be allowed therefore.

**AT&T, Cox Communications, and SDG&E Related Work**

The Contractor shall construct the infrastructure of all three utilities per provided utility and bridge plans, these specifications, and bridge specifications. The Contractor is referred to project appendices/attachments included in these specifications for additional information.

The Contractor is responsible for coordinating work, and inspection of work by authorized representatives for these three utilities. At minimum the three following timelines shall be provided to utilities for work affecting their facilities, and shall be reflected in the project schedule, unless otherwise determined / approved at the project preconstruction meeting:

**AT&T**

72 hour advance notice for first inspection of work affecting their facilities.

24 hour notice for on-going (daily) inspections. Should there be more than a three-day lapse of work on their facilities, the Contractor shall again provide 72 advance notice to re-start on-going inspections.

45 Calendar Days – The Contractor shall submit a clean, neatly written, hardcopy set of As-Builts to the project trench inspector for approval within five days of receiving field work approval from the project trench inspector. On the same date of As-Built submittal, a copy of the provided As-Builts shall also be posted on VPM. From the posting date to VPM, the Contractor shall provide the agency forty-five calendar days to approve the submitted As-Builts. Should the As-Builts be returned/rejected for any reason, the forty-five calendar day period shall restart with the resubmittal/posting to VPM. Please note, the City will not process payment for installed utility agency infrastructure without the agency's approval of field work As-Builts. This period shall be reflected on the project construction schedule.
Cox Communications

72 hour advance notice for first inspection of work affecting their facilities.

24 hour notice for on-going (daily) inspections. Should there be more than a three-day lapse of work on their facilities, the Contractor shall again provide 72 advance notice to re-start on-going inspections.

45 Calendar Days – The Contractor shall submit a clean, neatly written, hardcopy set of As-Built’s to the project trench inspector for approval within five days of receiving field work approval from the project trench inspector. On the same date of As-Built submittal, a copy of the provided As-Built’s shall also be posted on VPM. From the posting date to VPM, the Contractor shall provide the agency forty-five calendar days to approve the submitted As-Builts. Should the As-Builts be returned/rejected for any reason, the forty-five calendar day period shall restart with the resubmittal/posting to VPM. Please note, the City will not process payment for installed utility agency infrastructure without the agency’s approval of field work As-Builts. This period shall be reflected on the project construction schedule.

SDG&E

72 hour advance notice for first inspection of work affecting their facilities.

24 hour notice for on-going (daily) inspections. Should there be more than a three-day lapse of work on their facilities, the Contractor shall again provide 72 advance notice to re-start on-going inspections.

15 Working Days – Fifteen working days prior to the delivery of project precast girders, the Contractor shall provide the SDG&E contractor or forces street space within approved staging areas for delivery and fabrication of casing for future gas main. The space shall be adequate for crew members to work, five work trucks, material and equipment to efficiently fabricate and prepare the casing for installation on bridge components. This period shall be reflected on the project construction schedule.

45 Calendar Days – The Contractor shall submit a clean, neatly written, hardcopy set of As-Built’s to the project trench inspector for approval within five days of receiving field work approval from the project trench inspector. On the same date of As-Built submittal, a copy of the provided As-Built’s shall also be posted on VPM. From the posting date to VPM, the Contractor shall provide the agency forty-five calendar days to approve the submitted As-Builts. Should the As-Builts be returned/rejected for any reason, the forty-five calendar day period shall restart with the resubmittal/posting to VPM. Please note, the City will not process payment for installed utility agency infrastructure without the agency’s approval of field work As-Builts. This period shall be reflected on the project construction schedule.
6 Weeks – The Contractor shall provide written notification to the SDG&E trench inspector six weeks in advance notice prior to delivery of prefabricated girders and beginning of abutment construction. Any changes to originally provided delivery and construction dates shall be immediately provided in writing to SDG&E’s trench inspector, and a copy of that correspondence posted on VPM. Failure by the Contractor to provide notification and updates will not be cause for delay of work to be completed by SDG&E representatives. This period shall be reflected on the project construction schedule.

**Future 12” City Water Main**

The Contractor shall construct infrastructure for a future City water main per project bridge plans and details, and specifications.

Payment to **Furnish and Install Dry Utility Systems** shall be made at the contract unit price bid, and shall include all equipment, material, labor, coordination, and incidentals for installation of conduit, boxes, brackets, hangers, sidewalk expansion joints, sleeves and backfilling to provide a complete installation per provided utility and project bridge plans, and no additional compensation shall be allowed therefore. Payment for AT&T, Cox, and SDG&E dry utility facilities shall not be included in the “Construct Bridge Widening” bid item.

Payment to **Furnish and Install Future 12-inch Water Main Infrastructure** shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals for installation of appurtenances, brackets, hangers, sleeves and backfilling to provide a complete installation per project bridge plans and details, and specifications, and no additional compensation shall be allowed therefore. Payment for these improvements shall not be included in the “Construct Bridge Widening” bid item.

Payment to **Construct SDG&E Gas Main Infrastructure** shall be made at the contract unit price bid, and shall include all equipment (see exceptions below), material, labor, coordination, and incidentals for installation of appurtenances, brackets, caps, casing, hangers, sleeves and end caps, and backfilling to provide a complete installation per project bridge plans and details, and specifications, and no additional compensation shall be allowed therefore. SDG&E shall furnish all hangers for installation by the Contractor. SDG&E shall also furnish and fabricate the gas main casing for installation by the Contractor. Work to Construct SDG&E Gas Main Infrastructure shall not be included in the contract unit price bid for the “Construct Bridge Widening” bid item.

12. **PROTECTING AND ADJUSTING UTILITY COVERS AND FRAMES** (ADDITIONAL SCOPE ADDED IN ADDITIVE ALTERNATE ITEM 1)

301-1.6 Adjustment of Manhole Frame and Cover Sets to Grade

*Delete this section in its entirety and replace with the following:*
The Contractor shall use extreme caution when grinding in the area of existing utility covers / lids. Care should be taken not to damage existing structures. Existing water valve cans and covers, test well cans and covers, blow-off cans and covers, monument covers and frames, sewer clean outs and sewer manholes shall be adjusted to the grade of the new finished pavement surface. If an existing structure is at the proper finish grade elevation and the concrete collar is sound, removal of the existing asphalt from the concrete collar is all that will be required, subsequent paving shall match the structure’s grade. Should the concrete collar of a utility lid or cover be damaged or not match the proposed finished pavement grade, the asphalt concrete and P.C.C. collar shall be fully removed, the lid / cover adjusted to grade, and the pavement replaced. Contractor shall take extreme caution to prevent asphalt concrete or other materials from entering valve wells and accumulating around valves. Contractor shall insert a bucket, pale or other acceptable device to collect materials from adjacent grinding or paving operations. Should project materials deposit in the valve well, the Contractor shall remove all such material to the complete satisfaction of the Field Engineering Inspector.

Adjustment of manhole frames, clean outs, blow-off cans, valve covers and other potable water appurtenances shall be raised by close of working day after completing pavement operations. All work to raise or lower utility facilities shall be completed in strict conformance to Escondido Standard Drawings: No. S-1-E, S-2-E, W-4-E, W-9-E, San Diego Regional Standard Drawing M-10, and Subsection 301-1.6 and 302-5.8 of the SSPWC. The Contractor shall contact the various Utility Companies for coordination and adjustment of their facilities.

The caps/covers of all city owned utilities within treated streets shall be cleaned free of all oil and debris, and painted. Manhole covers shall be painted yellow, storm drain covers green, and water valves to match existing. If water valves are not painted, they shall be painted in accordance with SDRSD WV-03.

Payment for Protecting Utility Covers and Frames shall include furnishing all labor, materials, equipment and incidentals necessary to perform the completed work, and shall be included in the contract unit price bid for various items requiring this work, and no additional compensation shall be allowed therefore.

Payment to Adjust Ex. Valve Cans to Grade shall be made at the contract unit price bid and shall include adjusting water valve cans and covers, test well cans and covers, blow-off cans and covers, and monument covers and frames, clean and paint all covers to comply with the City Encroachment Permit. Compensation shall include furnishing all labor, tools, equipment, materials, excavation, storing, recycling, disposal and removal of material offsite, disposal fees and other work required to complete this item of work, and no additional compensation shall be allowed therefore.
INCLUDED IN ADDITIVE ALTERNATE ITEM 1 - Payment for added scope to Adjust Ex. Valve Cans to Grade shall be made at the contract unit price bid and shall include adjusting water valve cans and covers, test well cans and covers, blow-off cans and covers, and monument covers and frames, clean and paint all covers to comply with the City Encroachment Permit. Compensation shall include furnishing all labor, tools, equipment, materials, excavation, storing, recycling, disposal and removal of material offsite, disposal fees and other work required to complete this item of work, and no additional compensation shall be allowed therefore.

Payment to Adjust Ex. Sewer Manhole and SD Box Ring Covers to Grade shall be made at the contract unit price bid, and shall include adjusting sewer clean outs, sewer manhole covers, storm drain ring covers to the grade of the new finished surface, and preparation and painting of lids to comply with the City Encroachment Permit. Compensation shall include furnishing all labor, tools, equipment, materials, excavation, storing, recycling, disposal and removal of material offsite, disposal fees and other work required to complete this item of work, and no additional compensation shall be allowed therefore.

13. TRENCH SAFETY AND SHORING

Trench shoring and excavation shall be in accordance with the State Division of Industrial Safety and the State Labor Code Sections 6705 and 6707. All excavations shall comply with requirements of Section 306-3 of the SSPWC. The California Division of Occupational Safety and Health enforces the requirement that Building and Construction Contractors obtain a permit prior to commencing certain types of hazardous activity, as specified in Section 6500 of the State Labor Code and Section 341 of Title 8 of the California Code of Regulations. A copy of this approved permit shall be given to the Engineering Field Inspector prior to starting any excavation on this project. These activities shall include construction of trenches or excavations which are 5 feet or deeper, and into which a person is required to descend; and the construction or demolition of any building, structure, false work, or scaffolding more than three stories high or the equivalent height. Construction permits are issued by district offices of the division. The San Diego office is located at:
Trench safety and shoring shall pertain to trenches or excavations for the construction of pipes and structures or for any over purpose. Shoring, sheeting, or trench shields shall be utilized in such a manner as to minimize disturbance of the material beneath the pipe crown. Trench sheeting that extends below the crown should either be left permanently in place or consist of adequately supported steel sheets 1-inch thick or less which can be extracted with minimal disturbance to the pipe embedment. When timber sheeting is used for trench support, it shall be cut off at the top of pipe before placing backfill material. Where movable trench shields are used, the following steps shall be followed unless an alternate technique that does not disturb the pipe embedment can be demonstrated:

(a) Excavation of the trench below the elevation of the pipe crown shall be done from inside of the trench shield to prevent the accumulation of loose or sloughed material along the outside of the shield. Excavation of the trench ahead of the shield at an elevation below the pipe crown is not permitted unless approved by the Engineer.

(b) After laying the pipe in the trench, bedding shall be placed in lifts and the shield must be lifted in steps. As the shield is lifted, embedment material shall be shoveled under the shield.

See the sections for "SUBSURFACE CONDITIONS" and "CONTROL OF GROUNDWATER AND SURFACE WATER" within these specifications.

All trench plates shall be recessed to match the adjacent pavement or finished surface.

Payment for Trench Safety and Shoring is included in the various bid items that require trenching in compliance to the referenced plans and specifications, and no additional compensation shall be allowed therefore.

14. **CONTROL OF GROUND AND SURFACE WATER**

There is a possibility of ground water in the excavations. Please review the Revised Addendum/Update Geotechnical Report included in the appendices. The rainy season typically begins October 1st and ends May 1st.

The Contractor shall be responsible for managing surface water by diverting/bypassing surface flow around the work area, including work areas where bare soil has been exposed, by mechanical methods or other means such
that surface flows do not contact grading equipment and graded areas (exposed soil). A surface flow bypass plan shall be developed by the Contractor and submitted to and approved by the Field Engineering Inspector prior to implementation. Should at any time the bypass plan be ineffective, the Contractor shall revise and resubmit a plan for City review and approval. All Costs to make revisions and re-implement the approved plans, including additional equipment or materials required shall be borne by the Contractor.

The Contractor shall also be responsible for design, construction, and operation of a dewatering system for predrilled or otherwise pile excavations required to construct bridge improvements per the contract documents. The Contractor shall estimate ground-water requirements for dewatering, and shall be solely responsible for such estimate. The Contractor shall conduct site and subsurface explorations and investigations as necessary, in the Contractor's opinion, to adequately estimate the conditions encountered.

Disposal of water produced in the dewatering operations shall be treated/filtered by use of a Baker-tank, and pumped into sewer main within the vicinity. When releasing treated water into the City’s sewer system, a City representative shall be present at all times, released quantities shall be metered, and the Contractor shall pay the City’s Utilities Department for said expenses. The Project will reimburse the Contractor for these expenses. In order to use this method of dewatering removal, the following step shall be taken:

1. The water from this site will need to be sampled, and analyzed to assure it meets the limitations for discharge to sewer.

2. The Contractor shall coordinate with the City to collect samples once pile predrilling begins. On average it takes about a week from the time a sample is taken, until the City can validate that the discharge from the site meets discharge standards.

3. A Baker-tank shall be on site to collect any flow perking out once the predrill happens. Any flow discharged from the site will need detention time to allow for the water to settle out.

4. The Baker-tank shall be used for prescreening of all discharge entering sewer, in order to reduce the amount of rocks, dirt, and silt from entering the sewer system.

5. The Contractor shall acquire a meter from the City’s Utilities Department. A refundable deposit is required for use of the meter, which will be returned to the Contractor once the meter is returned undamaged to the Utilities Department. If the meter is damaged, the Contractor is responsible for all costs to repair or replace the meter, as determined by the City. Such expenses will be withheld from the Contractors payment.
6. The Contractor shall comply with all other applicable governmental regulations, in an environmentally safe manner, with due regard to adjacent property and in strict conformance to all applicable water quality regulations.

(Alternate Method of Dewater Release) ONLY if water sample test results prohibit the release of project water into the City’s sewer system, shall the Contractor discard collected water in the following manner:

1. Through use of a Baker-tank, the Contractor shall treat/filter water.

2. The Contractor shall transport filtered water to available City owned land and evenly spread water on dirt areas. Site 1: Empty lot on northwest corner of E. Valley Parkway and Bevin. Site 2: Available space at City Maintenance yard located in the vicinity of Spruce and W. Valley Parkway. Transport equipment shall be free from leaks, leaking valves, etc.

3. Contractor shall evenly spread water over available dirt areas, avoiding overspray onto areas directly feeding into the City’s storm drain system.

Dewatering shall be accomplished to avoid flooding of excavations and maintain the stability of the trench sidewalls and shall be coordinated with the shoring, sheeting, and bracing requirements of the recognized safe shoring and sheeting practices of the appropriate safety codes. In order to minimize encroachment into public traveled-way, the sides of trenches shall not be sloped.

Payment for Control of Surface and Ground Water shall be included in the contract unit price bid for the STORM WATER AND ENVIRONMENTAL CONTROL bid item, and shall include furnishing all equipment, materials, labor, and incidentals to comply with project specifications, and no additional compensation shall be allowed therefore.

INCLUDED IN ADDITIVE ALTERNATE ITEM 3 - Payment for added scope for Alternate Method of Dewater Release shall be made at the contract unit price bid, and shall include furnishing all equipment, material, labor, and incidentals required to comply with project specifications, and no additional compensation shall be allowed therefore.

15. OFF-SITE DISPOSAL

The Contractor shall dispose of all debris from the project at a legal disposal site. The materials removed from the project site which can be recycled shall be brought to a legal Recycle Center approved by the Field Engineering Inspector, and in conformance with the City of Escondido Resolution No. 91-444. Refer to the appendices of these specifications for additional information.

The Contractor shall upload on VPM all receipts that account for all materials hauled off site as to the weight and location taken.
Payment for Off-Site Disposal shall be in conformance above mentioned requirements, and shall be included in the contract unit prices bid for various items requiring this work, and no additional payment shall be allowed therefore.

16. UNCLASSIFIED EXCAVATION AND UNCLASSIFIED FILL

UNCLASSIFIED EXCAVATION

Unclassified excavation shall include excavating, removing, hauling and legally disposing of all materials removed to the depths as outlined in the Contract Documents. Unclassified excavation for this project shall conform to SSPWC Section 300-3, and these specifications.

In addition to the improvement items noted above, this item shall also include saw cutting, collection of saw cutting water/residue, grinding, excavating, relocating items specified, removing of specified improvements, excavating and removing of other existing materials including but not limited to asphalt concrete, concrete, soil, base material, roots and other organic material to within 12 inches of subgrade elevations as necessary to construct the new surface improvements including curb and gutter, sidewalk, curb ramp, driveways, cross gutters, roadway pavement structural section, and other improvements. This shall include storing, hauling and legally disposing of all removed materials offsite, and payment of disposal fees for materials to the complete satisfaction of the Field Engineering Inspector.

The Contractor is solely responsible to call for mark out of all utilities and traffic loops in the streets where the contract documents indicate pavement and other improvements shall be removed and replaced, and protect them in place where they are not identified to be removed. **SPECIAL ATTENTION** shall be given to the existing thirty-six water main fastened to the existing, adjacent bridge. The Contractor shall take precautionary measures to ensure “full” support at the bottom of the pipe at all exposed pipe areas, at all times. No additional compensation shall be made for costs or delays resulting from the Contractor's failure to locate and protect underground utilities.

The Contractor shall locate and tie out all utility lids and covers and frames, including but not limited to manhole lids/frames, valve covers, storm drain covers and frames, and dry utility lids/covers/frames before grinding can take place. Dry utility covers and frames shall be adjusted by each Utility company. Generally two-week notice is required and one week for actual adjustment work by private crews. Other non-City utility covers shall be handled per each individual agency requirements. Contractor shall coordinate the adjustment of utility facilities with the respective Utility Companies. Refer to the Special Provision Section entitled “Protecting and Adjusting Utility Covers and Frames” for additional information.

Contractor shall not avoid asphalt concrete removal in areas with difficult access, such as adjacent to or between clusters of utility valves, etc.
The Contractor shall provide straight and vertical lines along all sides of improvement areas being removed. Cold milled/ground edges will be accepted as long as the finished edges are straight, vertical and plumb, as determined by the Field Engineering Inspector. Spalled edges, or edges determined not to be straight, vertical and plumb as a result of the Contractor’s methods or equipment, as determined by the Field Engineering Inspector, shall be sawcut full depth by the Contractor, at no additional cost to the City.

Should the improvements being removed have a cold or expansion joint that is smooth and straight, as deemed so by the Field Engineering Inspector, a clean removal of the improvement shall be allowed. Should the Contractor’s operation damage or otherwise affect the cold/expansion joint edge, saw-cutting shall be required, at no additional cost to the City.

Removal areas shall be completed in straight lines, in rectangular shapes, and as specified in the contract documents or marked in the field by the Field Engineering Inspector.

The Contractor shall not remove more area of improvement than can be replaced within the same working day. This applies to pavement areas, curbs and gutters, sidewalks, streets, and other included project improvements, unless otherwise approved by the Field Engineering Inspector.

Excavations that may be considered for next day paving by the Field Engineering Inspector shall be only those that are of benefit to the City, its traffic operations, safety concerns and improved pavement construction, etc. Before consideration of next day paving, the Contractor shall demonstrate that traffic control is compliant and adequate for both day and night use, that vehicular and pedestrian access to all facilities and properties has been maintained, any potential safety concerns are addressed, and all above requirements are to the complete satisfaction of the Field Engineering Inspector.

Cold milling equipment shall comply with Section 302-1.2 of the SSPWPC. The equipment shall have a pickup system and conveyor so that cuttings are picked up and deposited directly into trucks without windrowing. The cutters shall remove asphalt paving without tearing or gouging the underlying surface. Cold milling equipment shall have an air quality permit from the County of San Diego prior to use on this project. The Contractor shall provide a copy of this certificate to the City as a submittal. The Contractor is referred to project bridge plans and specifications for Unclassified Excavation associated with bridge improvements, unclassified excavation, limits of work, and payment.

The Contractor shall be responsible for the recycling of all excavated materials designed as “Industrial Recyclables” (dirt, asphalt, sand, concrete and rock) cited in City of Escondido Resolution No. 94-334 at a recycle center approved by the Field Engineering Inspector. The Contractor is referred to project appendices.
Unclassified Excavation shall NOT include the trench excavation for construction of any of the utilities or storm drains that are to be constructed with this project. The excavation, trenching, backfilling, hauling and removal of material for the construction of all underground utilities shall be included in the bid price for the related items of work.

Unless otherwise specified, Payment for Unclassified Excavation shall be included in the contract unit price bid for the various bid items being installed to complete the project work complete, in place, and include full compensation for furnishing all labor, tools, equipment and materials required to complete this item of work including saw-cutting, removal, storing, recycling, hauling and disposal of material offsite, disposal fees, and no additional compensation shall be allowed therefor.

Removal areas for replacement of street improvements shall be as shown on the plans and details. Payment for removal and disposal of these dig out areas shall be made at the contract unit price bid for “Remove/Replace Existing 6” AC w/Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10.” The Contractor is referred to the section entitled “Asphalt Concrete Pavement” for additional information.

Payment for Removal & Disposal of Existing Asphalt Pavement, Base and Soil, Twelve Inches (12”) in Depth shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals to remove existing pavement and base in the of project medians, as shown on the plans and details, and no additional payment shall be allowed therefor.

Payment for Remove Existing Asphalt Berm shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals to complete project work per project Plan Sheet P-2495 (3 of 16) and specifications, and no additional payment shall be allowed therefor.

Payment for Relocate Two Existing Bollards and Chain shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals to complete relocation of bollards and chain per Plan Sheet P-2495 (3 of 16) and specifications, re-paint, and re-install per SDRSD M-16, and no additional payment shall be allowed therefore.

INCLUDED IN ADDITIVE ALTERNATE ITEM 1 - Payment for added scope for 12-foot wide Tapered Cut (0.18 foot to 0.0 foot) Deep Grind shall be made at the contract unit price bid, and shall include all equipment, material, labor, and incidentals to complete project work per project Plan Sheets P-2495 (2-4 of 16) and specifications, and no additional payment shall be allowed therefore.
UNCLASSIFIED FILL

Unclassified fill shall conform to Section 300-4 of the SSPWC, and these specifications.

Unclassified fill shall consist of all fill material, equipment, labor and other items necessary to construct improvements indicated in Contract Documents, transitioning existing improvements to newly constructed improvements, and as otherwise indicated in these contract documents. Where information is provided, fill shall be used to obtain subgrade or other specified grades and elevations. When not shown, the Contractor shall provide, install and compact fill material using equipment, labor and other items necessary to transition existing yards to new or replaced pedestrian ramps, sidewalk, curb and gutter, etc. within acceptable tolerances. Transitions to new and replaced improvements shall be at 2% toward the street unless otherwise shown or specified. Fill placed next to constructed improvements shall be placed and compacted to within one inch of constructed and other adjacent improvement elevations.

Utility trench back-fill shall NOT be included as Unclassified Fill. Utility trench back-fill shall be included in the bid price for the appropriate items of work if provided for on the Bid Schedule.

The Contractor is referred to project bridge plan and specifications for Unclassified Fill associated with bridge improvements, backfilling, limits of work, and payment.

Payment for Unclassified Fill shall be included in the contract unit price bid for various bid items of work requiring it, and shall include furnishing all labor, tools, equipment and materials required to complete work, including transportation, placement, compaction, soil selection, storing, recycling, and no additional payment shall be allowed therefore.

17. UNSUITABLE MATERIAL

Unsuitable material shall be handled in compliance with Section 300-2.2 of the SSPWC, Article 11 of the General Conditions, and these specifications. Removal and disposal of unsuitable material, if authorized in writing by the Field Engineering Inspector, shall be paid for as extra work. Removed areas shall be measured and quantities agreed upon by the Contractor and Field Engineering Inspector.

18. BASE MATERIAL

Aggregate base material used on this project shall be Crushed Aggregate Base Material or Processed Miscellaneous Base Material conforming to Section 200-2 of the SSPWC, 2015 edition.
Should unsuitable material be encountered, it shall be addressed per the “Unsuitable Material” Section included herein.

Subgrade preparation shall be performed per the “Subgrade Preparation” Section included herein.

Placement of approved aggregate base material shall be in strict conformance with Section 301 of the SSPWC - Subgrade Preparation, Treated Material and Placement of Base Materials, and as specified herein.

Payment for the Base Material shall be made at the contract unit price bid, and shall include all material, transportation, loading, tools, subgrade preparation, equipment and labor required for the installation and compaction of the base material (95% relative compaction) in compliance with Section 301-2 of the SSPWC. Payment shall be made based on the calculated volume as determined by the width, depth and length indicated on the project plans or measured in the field, complete and in place and no other compensation shall be allowed therefor.

19. SUBGRADE PREPARATION

Sub-grade preparation for project improvements shall be completed in accordance with Section 301-1 of the SSPWC and these Special Provisions.

301-1.3 Relative Compaction (Revise the following)

Delete in its entirety and replace with: When pavement and/or base or sub-base for pavement is to be placed directly on subgrade material, the top 12 inches of subgrade material shall be compacted to a relative compaction of 95 percent. When base is placed for curb, gutter, cross gutter, driveways or sidewalks are completely removed, the top 6 inches of subgrade material shall be compacted to a relative compaction of 90 percent. When curb, gutter, cross gutter, driveways or sidewalks are to be placed directly on subgrade, the top 12 inches shall be compacted to a relative compaction of 90 percent.

After compaction and trimming, the subgrade shall be firm, hard, and unyielding.

If high moisture content is the result of any action on the part of the Contractor or inaction in protecting the work during the course of the contract, correcting the problem shall be at the sole expense of the Contractor as covered in SSPWC Section 300-2.2.2.

Payment for preparation of subgrade and minor grading will be considered included in contract unit price bid for the various items requiring this work, and no additional payment shall be made therefore.
20. **ASPHALT CONCRETE PAVEMENT**

Asphalt Concrete pavement shall be completed per Sections 203 and 302 of the SSPWC, these Special Provisions, and to the complete satisfaction of the Field Engineering Inspector, unless otherwise indicated.


**203-1.2 Testing Requirements** (Revise the following)

DELETE the first sentence in its entirety, and REPLACE with “Paving asphalt shall be specified by performance grade and shall conform to the requirements shown in Table 203-1.2 (A).

**203-1.3 Test Reports and Certification** (Revise the following)

After the second paragraph, ADD: “Caltrans maintains the program requirements, procedures, and a list of approved suppliers at:

http://www.dot.ca.gov/hq/esc/Translab/fpmcoc.htm”

Performance graded asphalt binder PG 64-10 shall be used in making all hot mix asphalt for placement on this project, and the binder shall conform to SSPWC Sections 203-1 and 203-2.

Asphalt concrete pavement mix aggregate gradation and other requirements used in this project shall comply with Section 400 Asphalt Concrete, Table 400-4.3(C) of the SSPWC.

The hot mix asphalt pavement shall be Class B per SSPWC Table 203-6.4.3 (A) Asphalt Concrete with PG 64-10 binder per Section 203-1 of the SSPWC.

Hot mix asphalt shall be placed in compliance with Section 302-5 Asphalt Concrete Pavement of the Standard Specifications for Public Works Construction with the following exceptions:

a. 302-5.1 General, In the first paragraph, replace “Section 203-6” with “Section 400-4.”

**203-6.1 General** (Revise the following)

Immediately following the first sentence of Paragraph 1, ADD: “Submitted mix designs for this project shall not exceed 15 percent RAP content.”


**302-5.1 General** (Revise the following)
Performance graded asphalt binder used in making hot mix asphalt for placement on this project shall conform to Section 203-1 “Paving Asphalt” of the SSPWC, 2012 Edition.

302-5.3 Prime Coat (Revise the following)

Delete Paragraph 1 in its entirety and replace with the following: “No prime coat shall be required.”

302-5.6.2 Density and Smoothness (Revise the following)

After the first paragraph of this section, ADD: “The finished elevation of the hot mix asphalt pavement surface when draining toward a concrete gutter or any other concrete surface it joins or abuts shall be one quarter 1/4 inch, +/- 1/8 inch, above the lip of the gutter or any other concrete surface it joins or abuts. Gaps, joints or any void between the pavement and the gutter are not acceptable. Pockets of large aggregate clusters are not acceptable and shall be corrected while placed Hot Mix Asphalt is still hot. Said clusters may be sand and sealed while the Hot Mix Asphalt is still hot, if allowed by the Field Engineering Inspector. Excess sand shall be removed from the project area within twenty-four hours of treatment. Pavement installed in an unacceptable manner, as so determined by the City, shall be removed and replaced at the expense of the Contractor.

Prior to placing Asphalt Concrete in the removal areas, all existing loose material shall be removed, concrete surfaces shall be swept and tack coat applied.

302-5.9 Measurement and Payment (Revise the following)

Delete the existing in its entirety and replace with the following:

At the end of each workday where removal and replacement of Hot Mix Asphalt has taken place, the Contractor shall provide the City’s Field Engineering Inspector with all material tickets. Materials adding up to significant material quantity increases above those specified in the contract documents, as determined by the City, without prior approval of work may be rejected for payment.

Payment for “Remove/Replace Existing 6” AC w/Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10” shall be made at the contract unit price bid, and shall include full compensation for the removal of existing pavement and base to specified depths, and all transportation, labor, material, equipment, and incidentals to furnish, place Hot Mix Asphalt Concrete pavement to the lines, grades, thickness, compaction to a minimum of 95% of the theoretical Maximum Unit Weight as determined by ASTM D-2041-03a, and other requirements indicated in these specifications for a complete new product in place to the complete satisfaction of the Field Engineering Inspector, and no additional payment shall be allowed therefore.
INCLUDED IN ADDITIVE ALTERNATE ITEM 1 - Payment for added scope to “Overlay Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10” shall be made at the contract unit price bid for 0.2’ overlay over the existing rehabilitated street surface, and shall include furnishing all transportation, labor, material, equipment, and incidentals to place and compact the Hot Mix Asphalt Concrete pavement to the lines, grades, thickness, compaction to a minimum of 95% of the theoretical Maximum Unit Weight as determined by ASTM D-2041-03a, and other requirements indicated in these specifications for a complete new product in place to the complete satisfaction of the Field Engineering Inspector, and no additional payment shall be allowed therefore.

21. CRACK SEALING

The Contractor shall prepare, provide and install this treatment in accordance with the information included herein:

CRACK SEALING

1) **Cracks to be sealed shall be 1/4” or larger.** Contractor shall seal only transverse, longitudinal, block, or reflective cracks. Contractor shall not seal alligator cracked (Consisting of several broken pieces) areas.

2) All cracks to be sealed that contain weeds/vegetation shall be sprayed at minimum ten days before being prepared for crack sealing. Contractor shall use Roundup or approved equal herbicide. The approved herbicide shall be colored for easy identification of treated areas.

3) All cracks to be sealed shall be completely clean, dry, and free of all loose material, vegetation and any other foreign substances which may cause the sealant not to adhere to the crack wall. The pavement surface shall be swept clean of all foreign and loose material for a minimum of six (6) inches on either side of the crack. The loose material shall be removed from the work area prior to applying the crack sealing material.

4) Cracks shall be cleaned using a hot compressed air lance (HCL) apparatus. The Contractor shall clean and dry all cracks with the HCL immediately before sealing. Air existing in the lance shall be heated to a temperature sufficient enough to remove the oxidized surface from the crack walls. The HCL shall meet the following specification.
   
   i) Compressed air capacity: 40 to 100 CFM, 75 to 150 PSI
   ii) Heated air temperatures: 600 to 2,200 degrees F.
   iii) Exit heated air: 1,000ft/sec
   iv) Propane: 5 to 20 PSI

5) Prior to beginning work, the Contractor shall submit documentation certifying that each HCL apparatus to be used on the project meets the above
specifications. This documentation is required at the start of new projects. If the apparatus certification expires during construction, re-certification is required and documentation shall be resubmitted before crack sealing work on the project can continue.

6) Crack sealant material used shall be Road Works 306, or CRAFCO Polyflex Type 3, or an approved equivalent. Sealant shall be prepared and applied to the pavement cracks in conformance with all manufacturers’ instructions unless otherwise noted in this document.

7) Sealant shall be applied from the bottom of the crack up to the surface in a manner, which does not result in sealant bridging or entrapping air pockets. The sealant shall be applied to a slightly overfilled condition and then leveled with a squeegee. The over band shall not exceed 1-1/2” on either side of the crack.

8) Cracks not cleaned or sealed shall be rejected and all costs incurred for removal and replacement of the rejected areas shall be borne exclusively by the Contractor.

9) **Cracks that have settled shall be brought flush with the street surface by applying a second application of crack sealant prior to application of slurry treatment.** The Contractor shall ensure that areas to receive a second application are clean and ready for additional material, and that applied sealant has adequate time to cure/harden prior to preparation or application of any following surface treatments, or opened to traffic.

INCLUDED IN ADDITIVE ALTERNATE ITEM 2 -Payment for added scope for **Crack Sealing** shall be measured in linear feet (LF), and shall include all labor, materials, tools, equipment and incidentals and for performing all work involved, complete and in place, including spraying of weeds in advance, removing and disposing of the debris material from the pavement cracks, at the contract unit price bid, and no additional compensation will be allowed therefore.

22. **SLURRY – PART 2 - CONSTRUCTION MATERIALS**

Emulsion Aggregate Slurry (EAS) for this project shall conform to Sections 203-5 and 203-5.4 of the SSPWC unless superseded by information contained herein. Submitted OR EQUAL products shall meet these same requirements. Submitted OR EQUAL products are considered a “Substitution of Materials,” and shall be treated per Item 9 of the Instructions to Bidders. Determination of whether or not a product is equal to the specified product shall be at the sole discretion of the City.
If an Equal product is accepted prior to bid, and the Contractor elects to use this product, they shall write "or Equal" on the Bid Schedule submitted as part of their bid. The same product shall be used for all slurry applications.

PART 2 SHALL CONFORM TO PART 2 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EXCEPT FOR THE FOLLOWING REVISIONS AND / OR ADDITIONS.

**REVISE: 203-3.5 Certificate of Compliance**

Delete in its entirety, and replace with: “A Certificate of Compliance conforming to 4-1.5 shall be sent with each load of emulsified asphalt.”

**REVISE: 203-5.1 General**

After the first paragraph **ADD:** “The cured slurry shall have a uniform appearance, fill all cracks, adhere firmly to the surface, and have a skid-resistant surface. The slurry shall cure so that it resists abrasion by slow traffic within sixty minutes after placement, and be fully usable by all types of traffic within two (2) hours.

**ADD: 203-5.1.1 Testing Requirements**

The Contractor is referred to the Item 9, TESTING AND SPECIAL INSPECTION of these specifications.

In addition, Work or material which does not conform to these specifications, although accepted through oversight or otherwise, may be rejected at any time, and shall immediately be removed from the job site. Rejected areas left in place are subject to an extended warranty period of three (3) years. Rejected streets are those completed on the date of failed tests. Prior to submitting written correspondence requesting a final inspection, the Contractor shall provide a street listing for all such streets completed on the date of test failures. A final inspection will not be scheduled until the said list has been submitted by the Contractor and accepted by the City.

Wet Track Abrasion Tests shall be done daily as an indicator to the quality of slurry being placed in the field. If the testing indicates poor quality material which cannot be corrected immediately, the job will be shut down until compliance with specifications can be demonstrated. Should the job be shut down because slurry product being applied does not conform with project requirements for any reason, the Contractor shall submit in writing within twenty-four hours the reason for product nonconformance, the list of affected streets for reasons noted above, and measures to be taken to ensure quality compliance, for City review. Written City approval is required before project slurry work can continue.
Forty-eight (48) hours after the samples are received by the laboratory and prior to a given notice by the City, the Testing Lab shall submit results of testing on VPM for the Contractors use.

**ADD: 203-5.4.2.3 Water**

After the first paragraph, **ADD the following:** “Water used for construction shall be from any potable domestic supply served by the City of Escondido’s water system, and approved by the Field Engineering Inspector. Refer to the Section of MOBILIZATION & DEMOBILIZATION of these specifications for additional information about obtaining a construction meter. If the Contractor uses water from another water entity that serves Escondido, they shall comply with all of their requirements. Payment for all related fees for water usage by the Contractor from a provider other than the City of Escondido’s shall be the sole responsibility of the Contractor. This shall apply to all water used on this project, for any type of work.”

**ADD: 203-5.4.2.4 Latex**

After the end of the paragraph, **ADD the following:** “Latex shall constitute a minimum of 2.5% by weight of Emulsified Asphalt.”

**REVISE: 203-5.4.2.5 Set Control Agents**

**DELETE all language after the words “aluminum sulfate,”** and **REPLACE with the following:** “only.”

**PART 3 – SLURRY -CONSTRUCTION METHODS**

**PART 3 SHALL CONFORM TO PART 3 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION EXCEPT FOR THE FOLLOWING REVISIONS AND/OR AND ADDITIONS:**

**ADD: 302-4.2 Aggregate Stockpile**

After the first paragraph, **ADD the following:** “Arrangements for these sites shall be the responsibility of the Contractor. If on private property, a written agreement shall be provided to the Engineer prior to commencing operations. For purposes of this contract, the construction zone is defined to be the stockpile area, the area to be sealed, and all streets and public rights-of-way in between.”

**REVISE: 302-4.8 Spreading and Application**

**DELETE the first sentence in its entirety and REPLACE with the following:** “All streets to receive slurry treatment that contain weeds/vegetation shall be sprayed at minimum ten days before slurry treatment shall be applied. Contractor shall use Roundup or approved equal herbicide. The approved
herbicide shall be colored for easy identification of area treated. In preparation for slurry, the Contractor shall have completed all weed/vegetation removal, and crack sealing of streets where slurry is being applied. All paint shall be removed prior to application of this surface treatment. All thermoplastic markings and RPM’s shall be removed unless otherwise directed. The Contractor shall also remove all oil and grease spots using and approved asphalt oil spot cleaner and/or approved sealant, or by any other method approved by the Field Engineering Inspector. Prior to spreading, the Contractor shall clean the existing pavement areas to be treated with a Regenerative Air Street Sweeper, to the complete satisfaction of the Field Engineering Inspector.”

INCLUDED IN ADDITIVE ALTERNATE ITEM 2 - Payment for added scope for Slurry -Type II EAS or approved equal shall be paid at the contract unit price bid, and shall include full compensation for furnishing all labor, materials, tools, equipment, incidentals, and performing all the work involved in preparation for and applying the slurry, complete in place, including testing for and furnishing mix design, cleaning the surface, weed abatement, furnishing added mixing water and set-control additives, latex, mixing water with aggregates and asphaltic emulsion for coating the pavement, and other incidental work required to provide a complete treatment as specified in these special provisions, and as directed by the Field Engineering Inspector. Corrective Action for noncompliance shall conform to 302-4.6.4.2 of the SSPWC. No partial payments will be made for preparation work associated with this item. Payment shall only be made upon application and acceptance of the slurry treatment.

23. **PORTLAND CEMENT CONCRETE**

Portland Cement Concrete (PCC) shall meet the requirements of Section 201-1.1.2 and 400-3 of the SSPWC, and shall be installed per Section 303-5 unless otherwise specified.

The Coarse Aggregate for PCC shall meet the requirements of Section 200-1.4. of the SSPWC. The sand for PCC shall meet the requirements of Section 200-1.5.3. of the SSPWC.

Subgrade preparation shall conform to the Subgrade Preparation Section above.

Portland Cement Concrete used for all median curb, curb and gutter, stamped median concrete, sidewalks, pedestrian ramps, driveway approaches, driveway aprons and thrust blocks shall be 520-C-2500 with a maximum four (4”) inch slump and in conformance with Table 201-1.1.2(A) of the SSPWC, unless otherwise indicated.

Portland Cement Concrete used for all cross gutters shall be shall be 560-C-3250 with a maximum four (4") inch slump, and in conformance with Table 201-1.1.2(A) of the SSPWC.”
Contractor is directed to the bridge plans and specifications for all bridge related concrete work, limits of work, inclusive items, and payment.

24. SIDEWALK

Sidewalk shall be constructed in conformance with San Diego Regional Standard Drawings G7, G9, G10, G-11, Escondido Standard Drawing G-6-E, and per these specifications.

Construction of ramps adjacent to type G-14D driveway openings shall be constructed per RSD G-14D, RSD G-7, RSD G-11 and Escondido Design Standards and Standard Drawings G-6-E. These ramps do not require tactile detectable tile modules installed, but do require the score lines and curbs as shown in the above mentioned references. Sidewalk behind driveway aprons shall be constructed in conformance with the above noted standards.

Water meter boxes located within areas of sidewalk replacement shall be brought level/flush with adjacent sidewalk finish surface. If during removal of existing sidewalk or installation of new sidewalk the existing water meter box(es) is/are damaged as a result of Contractor negligence, the water meter box(es) shall be replaced at the expense of the Contractor. Contact the Field Engineering Inspector to schedule delivery of a new, replacement water meter box.

Measurements for sidewalk pay quantities shall be taken from the back of curb to the back of walk and between the limits of driveways, ramps, catch basins, planters, etc. by the Field Engineering Inspector.

The Contractor is directed to the bridge plans and specifications for all bridge related concrete work, limits of work, inclusive items, and payment.

Payment for removal and construction of 4 inch thick sidewalk shall be paid for at the contract unit price bid for General Concrete Improvements, and shall include all transportation, equipment, materials, labor and incidentals necessary to remove and dispose of existing, damaged sidewalk improvements, preparation of the sidewalk sub-grade, furnish and install concrete forms, adjusting existing utility boxes (water meters, etc.) to grade, furnish and place the concrete, finishing the concrete, protecting placed concrete, constructing PCC ramps parallel with the sidewalk and sidewalk behind driveway aprons, placing wide border (score lines) and ramp per RSD G-32, placing standard scoring, expansion or weakened plane joints, apply curing compound, removing the forms for a complete sidewalk installation in conformance with these plans and specifications, and no additional payment shall be allowed therefore.
25. **CONCRETE CURB AND GUTTER, MEDIAN CURB, CROSS GUTTERS, DRIVEWAYS AND ADJACENT RAMPS, AND PEDESTRIAN ACCESS RAMPS**

Concrete items as listed above shall be constructed in accordance with Section 303-5 of the SSPWC, referenced San Diego Regional Standard Drawings, and as listed herein. Slab thickness and curb heights shall be as shown on the San Diego Regional Standard Drawings, and City of Escondido Design Standards and Standard Drawings. Sub-grade preparation shall be completed per the section entitled “Subgrade Preparation” above.

### 303-5.5.2 Curb (Revise)

The last sentence of the second paragraph shall be deleted in its entirety and REVISED to read: “The name of the Contractor and the year in which the improvement is constructed shall NOT be stamped in the completed work.”

Payment for the construction of PCC curb and gutter, and median curb shall be made at the contract unit price bid for General Concrete Improvements, including transition sections where the curb face varies (such as at pedestrian ramps, at curb returns, at cross-gutters, driveways, and adjacent to curb inlets); and shall include all transportation, equipment, materials, labor and incidentals required to remove and dispose of existing improvements specified for removal, prepare the sub-grade, furnish and install concrete forms, furnish and place concrete, place finish the concrete and placing standard scoring and expansion or weakened plane joints, applying curing compound, protecting the concrete until cured, removing the forms, backfilling the edges of the curb and gutter, for a complete installation of the curb and gutter in conformance to the plans, specifications and San Diego County Regional Standard Drawing G-2, and no additional payment shall be allowed therefore.

Driveway aprons shall be replaced at the same width and alignment, unless otherwise shown on the plans or directed by the Field Engineering Inspector. Driveway grades indicated in the details may be adjusted to meet the existing field conditions at the time of construction, upon approval of the Field Engineering Inspector at no additional cost to the City.

Sub-grade preparation shall be completed per the section entitled “Subgrade Preparation” above. Where a section of PCC private driveway is to be constructed beyond the driveway apron, 1/4” expansion joint filler material shall be installed at the back of the driveway apron at the Right-of-Way / Property line.

Note: All PCC driveway aprons and miscellaneous driveway concrete shall be constructed one half at a time to allow residents and businesses access to their properties where at all possible, unless written approval from affected resident is received, and a copy provided to the City. Should the driveway apron be constructed one half at a time, the Contractor shall construct a keyed joint per
SDRSD G-10. Every effort shall be made to provide safe, convenient parking to each residence while the new improvements are being constructed expeditiously.

Curb and gutter along the width of driveways is paid for under the **General Concrete Improvement** bid item.

**The Contractor is directed to the bridge plans and specifications for all bridge related concrete work, limits of work, inclusive items, and payment.**

Payment for the construction of 5.5-inch thick concrete driveway (SDRSD G-14D) shall be at the contract unit bid price for General **Concrete Improvements**, and shall include all transportation, equipment, materials, labor and incidentals required to remove and legally dispose of identified improvements, prepare the sub-grade, furnish and install the concrete forms, furnish and place the concrete, finish the concrete, place expansion, weakened plane joints or keyed joints, apply curing compound, protect the concrete until cured, remove the forms and backfill the edges of the driveways, for complete construction of the 5.5 thick PCC driveway in conformance to the San Diego County Regional Standard Drawing G-14B and these specifications, and no additional payment shall be allowed therefore.

Removing existing 12-inch wide asphalt pavement along the gutters or ramps edge and replacing it for a smooth surface transition shall be paid for using **Asphalt Concrete Pavement** bid item entitled “**Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10**”.

**Article 10 of the General Conditions regarding increases/decreases of more than 25 percent shall not apply to the bid price indicated in the Bid Schedule for this line item, regardless of the increase or decrease in actual quantity relative to the quantity indicated in on the Bid Schedule. There will be no adjustment in the unit price payment made to the Contractor:**

Payment for the construction of PCC curb ramps shall be at the contract unit bid price for General Concrete Improvements. It shall be the Contractor’s responsibility to remove existing improvements and construct the appropriate type of ramp from those available in the San Diego Regional Standard Drawings, or Caltrans Standard Plan A88A if within the State’s Right of Way. The Contractor shall verify with the Field Engineering Inspector that the ramp type selected is acceptable prior to the start of the demo of the existing improvements. The price bid shall include the concrete areas, curb, gutter, and including furnishing and installing tactile detectable tile modules **colored COLONIAL RED and size 36”X 48”** as shown on the correct Standard, and per these specifications; and shall include all transportation, equipment, materials, labor and incidentals necessary to remove and legally dispose of identified improvements, prepare the curb ramp sub-grade, furnish and install the concrete forms for the ramp, furnish and place the concrete, furnish and place expansion material or construct weakened joints, finish the concrete, apply curing.
compound, protect the concrete until cured, remove installed forms and backfill the edges of the ramps for a complete construction of the PCC curb ramp in conformance with applicable Standards, these specifications, and no additional payment shall be allowed therefore.

Removing existing 12-inch wide asphalt pavement along the gutters or ramps edge and replacing it for a smooth surface transition shall be paid for using Asphalt Concrete Pavement bid item entitled “Hot Mix Asphalt Concrete Type III, Class B2 PG 64-10”.

**Article 10 of the General Conditions regarding increases/decreases of more than 25 percent shall not apply to the bid price indicated in the Bid Schedule for this line item, regardless of the increase or decrease in actual quantity relative to the quantity indicated in on the Bid Schedule. There will be no adjustment in the unit price payment made to the Contractor:**

Payment for all concrete work listed above shall also include minor excavation or fill, re-compaction of subgrade, removing and disposing of existing roots to depth of 12-inches below ground, and no additional compensation shall be allowed therefore.

All concrete repairs and improvements shall be completed prior to placement of adjacent asphalt concrete.

26. **CONCRETE MEDIAN**

Colored stamped concrete median shall be constructed in accordance with Sections 303-6 and 303-7 of the SSPWC, and as shown on the plans and details.

Payment for the “Construct 4 inch Median Stamped and Colored PCC Slab” shall be at the contract unit price bid per square foot and shall include all transportation, equipment, materials, labor and incidentals necessary to prepare the sub-grade, furnish and install concrete forms, furnish and place concrete, finish the concrete, placing expansion or weakened plane joints, furnish and apply curing compound, protect the concrete until cured, remove installed forms and backfill adjacent areas, and no additional payment shall be allowed therefore.

27. **LANDSCAPING AND IRRIGATION**

Landscaping and Irrigation shall be constructed in accordance with Sections 800 and 801 of the SSPWC, referenced San Diego Regional Standard Drawings, project plans, and as listed herein.
The City of Escondido shall inspect all trees proposed for use on this project prior to installation. Any trees found to be diseased or not otherwise acceptable by the City shall be replaced by the Contractor at no additional cost to the City.

800-1 LANDSCAPING MATERIALS

800-1.1.1 General -DELETE this item in its entirety, and replace it with the following: “Topsoil shall be Class "C", and transported from the source to its final position on-site unless stockpiling is approved in writing by the Field Engineering Inspector. It is anticipated that 1,000 cubic yards of top soil will be need for median work.

Planting Backfill shall be accurately measured and thoroughly mixed, consisting of the following:

Soil from Plant Pit 2 parts

Organic Soil Amendment 1 part

Iron Sulfate 1 lb. per cubic yard of mix

Gypsum 15 lbs. per cubic yard of mix

Pre-Plant Fertilizer 5 lbs. per cubic yard of mix

Soil Sulfur 1 lb. per cubic yard of mix

Under Section 800-1.2 -Soil Fertilizing and Conditioning Materials. (Modify 800-1.2.3 Commercial Fertilizer and add the following new Sections)

Pre-Plant Fertilizer. Pre-Plant Fertilizer shall be a controlled release type having a 1-10-10 CRF formula. The fertilizer shall be a commercial grade granular, "pre-plant" fertilizer with one-half of the contained nitrogen readily available for initial feeding. The remaining half of the nitrogen and all of the contained potash shall be derived from non-leaching, coated, controlled release elements for sustained feeding of four to six months, in a slowly soluble, non-burning form. The fertilizer shall have the following guaranteed analysis:

Nitrogen 1% Minimum
Phosphoric Acid 10% Minimum
Potash 10% Minimum

Soil Sulfur. Soil Sulfur shall be 98% elemental sulfur.

Gypsum. Gypsum shall be commercially packaged gypsum with the active ingredient (calcium sulfate) at 95% minimum by volume.
Iron Sulfate. Iron sulfate shall be a long lasting pelleted, uniform in composition, suitable for application with approved equipment. It shall contain the following minimum available percentages by weight:

- Nitrogen 1%
- Iron 12%
- Zinc 1%
- Total Combined Sulfur 17%
- Sulfate Sulfur 7%
- Calcium 3%
- Magnesium 1.5%
- Cobalt .004%
- Copper .06%

Warning: Some fertilizers contain cleated iron which has caused staining of concrete surfaces in other projects. The Contractor shall be responsible for cleaning such fertilizers from concrete after application or removing all iron stains from concrete by sandblasting at no additional costs.

5 Post-Plant Fertilizer shall be a commercial fertilizer planting tablets having a 20-10-5 formula with the following guaranteed analysis:

- Nitrogen 20%
- Phosphoric Acid 10%
- Potash 5%

800-1.2.4 Organic Soil Amendment –Delete the first sentence in its entirety, and REVISE to read:

“Organic soil amendment shall be Type 1 as described herein.”

800-1.2.5 Mulch –At the end of the section ADD the following:

“Mulch for the trees shall be Type 5 (Fir Bark Chips), graded to acorn size (1/2-inch to 1 1/4-inch), clean and free of debris, weeds, or seeds. Contractor shall submit 1/3 cubic foot sample for approval. Contractor shall add 3-inch thick mulch 24-inches radius around the tree to the satisfaction of the Field Engineering Inspector. The mulch may be waived depending on field conditions such as lawn areas.”

800-1.4.2 Trees -At the end of the section ADD the following:

“The Field Engineering Inspector or other assigned City representative shall be the sole judge as to acceptability of each plant. Trees which are even moderately “overgrown” or substandard or are showing signs of decline or lack of
vigor are subject to rejection. The size of the plants shall correspond with that normally expected for species and variety of commercially available nursery stock, or as specified in the special conditions or Plans. Trees larger in size than specified may be used upon written approval of the Field Engineering Inspector, at no additional cost to the City. If the use of larger trees is approved, the ball of earth and spread or roots for each plant shall be increased proportionately.

All trees not conforming to the requirements herein specified shall be considered defective, and such trees whether in place or not, shall be marked as rejected and immediately removed from the site and replaced with new trees by the Contractor at their sole expense.

Upon request of a resident, the Field Engineering Inspector reserves the right to change the type tree to be furnished, prior to planting the tree. Should such a request be made prior to delivery of the locations tree, no additional compensation shall be due the Contractor. Should such a request happen after delivery of the tree, the Contractor shall provide costs for replacing the tree to the Field Engineering Inspector for approval.

Under Section Headers, Stakes and Ties refer to Section 800-1.5.3 Tree Stakes of the SSPWC. Tree stakes shall be 2-inches nominal size diameter lodge pole pine post, 10-feet in length and held in place by split plastic hose ties to be “Cinch Tie” by V.I.T. or equal. Stake and guy trees as specified on project plans.

801-6 Maintenance and Plant Establishment (Delete paragraph five in its entirety and replace with the following):

After planting is completed, a field notification will be issued to the Contractor to establish the effective beginning date of the plant establishment period. The plant establishment period shall extend for the duration of the project or for a period of ninety calendar days, whichever is greater. Sixty days after start of the Plant Establishment Period, each tree shall be trimmed/laced. It shall be extended by the Field Engineering Inspector if planted trees are improperly maintained, planted items are stressed or otherwise determined to be unhealthy by the City, and/or other corrective work becomes necessary.

801-6.1 Guarantee

Add the following: The Contractor shall guarantee all trees for the period extending from installation through completion of the Plant Establishment Period, as outlined above. If during this period the City deems a project tree unhealthy, they will contact the Contractor, and they shall take all necessary measures to bring the tree back to health for a minimum of ninety days. These continued responsibilities include watering, additional fertilizing and protection from the elements. Any tree that still appears unhealthy and/or has not survived at the end of this extended period, as determined by the City, shall be replaced at the sole expense of the Contractor. The Contractor will then be required to maintain
the newly planted tree for an additional ninety calendar days at its sole expense. The replacement tree will again be evaluated at the end of the ninety calendar day period. If acceptable, the Contractor has fulfilled their responsibility. If not, the process as outlined in this section shall recommence until a tree is accepted by the City, at the sole expense of the Contractor.

One week prior to completion of the Plant Establishment Period, the Contractor shall prepare door knocker notifications to notify residents and tenants that maintenance of the new trees is ending, and that ongoing maintenance shall be completed by the resident. The notification shall include the date Contractor maintenance will end and resident maintenance shall begin, the benefits of proper maintenance, the benefits of neighborhood trees, and recommended watering requirements. The Contractor shall submit a draft notice for Field Engineering Inspector approval prior to distribution to residents.

801-8 PAYMENT

Payment for Furnish and Install Landscaping shall be made at the contract lump sum unit price bid, and shall include furnishing all transportation, equipment, materials, labor and incidentals necessary to prepare all landscaped areas to be planted, application of fertilizers and amendments, installation of all plants, maintenance, water, trimming, lacing and other requirements of project plans and specifications for a complete installation, and no additional payment shall be allowed therefore.

Payment for Furnish and Install Permanent Irrigation System shall be made at the contract lump sum unit price bid, and shall include furnishing all transportation, equipment, materials, labor and incidentals necessary to construct the install all components of the irrigation system, test, maintain, program the controller, connect water and electric services, and complete all other requirements of project plans and specifications for a complete installation, and no additional payment shall be allowed therefore.
CONSTRUCTION OF TRAFFIC SIGNALS AND SAFETY LIGHTING, ROADWAY MARKINGS, AND SIGNING SPECIAL PROVISIONS
CITY OF ESCONDIDO

SPECIAL PROVISIONS FOR CONSTRUCTION OF

TRAFFIC SIGNALS AND SAFETY LIGHTING,

ROADWAY MARKINGS, AND SIGNING

(For these Special Provisions ONLY)   Revised on:  March 13, 2019

By: Ali Shahzad, PE (Traffic)

Associate Engineer

Last template update: 3/13/19
SPECIAL PROVISIONS FOR CONSTRUCTION OF

TRAFFIC SIGNALS AND SAFETY LIGHTING,

ROADWAY MARKINGS, AND SIGNING

1.) DESCRIPTION OF WORK

The work governed by these Special Provisions consists of furnishing and installing, modifying, salvaging, and/or relocating traffic signals, street lighting systems, flashing beacons, signs, and roadway markings (including raised pavement markers); and other ancillary work shown on the Plans. Said work shall conform to the provisions in:

(a.) Section 86, "ELECTRICAL WORK";
(b.) Section 87, "ELECTRICAL SYSTEMS";
(c.) Section 84, “MARKINGS”;
(d.) Section 81, “MISCELLANEOUS TRAFFIC CONTROL DEVICES”;
(e.) Section 82, “EXISTING ROADSIDE SIGNS AND MARKERS”; and
(f.) Section 15, “EXISTING FACILITIES”;

of the Caltrans 2015 Standard Specifications, Caltrans 2015 Revised Standard Specifications (4-20-18), and these Special Provisions.

PAYMENT

Payment for all work included on project pedestrian signal and signage and striping plans and specifications shall be included in the bid item for Construct Pedestrian/Bike Crossing Signal, and shall be made at the contract unit price bid, and shall include all equipment, material, labor, incidentals, and coordination to furnish and install all specified controller assembly units, auxiliary equipment, vehicle detector sensor units, control units and amplifiers, striping and signage, street light pole foundation abandonment, removing and replacing signage and striping, and other items shown on project plans or identified in project specifications, and no additional compensation shall be allowed therefore.

2.) EQUIPMENT LIST AND DRAWINGS

Equipment list and drawings of electrical equipment and material shall conform to the provisions in Section 86-1.01C, "SUBMITTALS" of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.
The Contractor shall furnish a maintenance manual and an operations manual for all controller assembly units, auxiliary equipment, vehicle detector sensor units, control units and amplifiers which are to be supplied as a part of this contract. The maintenance manual and operations manual may be combined into one manual. The maintenance manual or combined maintenance and operations manual shall be submitted at the time the equipment is delivered for testing or, if ordered by the Engineer, prior to purchase. The maintenance manual shall include, but need not be limited to, the following items:

A. Specifications
B. Design Characteristics
C. General Operation Theory
D. Function of all Controls
E. Troubleshooting Procedure (diagnostic routine)
F. Block Circuit Diagram
G. Geographical Layout of Components
H. Schematic Diagrams
I. List of Replaceable Component Parts with Stock Numbers

3.) SCHEDULING OF WORK

Scheduling of work shall conform to these Special Provisions.

The construction of new or modified signals, when performed in conjunction with roadway or other improvements, shall be coordinated with said other work to minimize the downtime of the existing signals or intersection control devices.

Traffic signals shall not be placed into operation on a Friday, Saturday, or Sunday.

The Contractor shall schedule work to accommodate those special events and holidays noted in these contract documents or specified by the Engineer.

Any restrictions upon closure of driveways stated elsewhere in these contract documents or in the Encroachment Permit shall also apply to all phases of furnishing, installing, and/or modifying traffic signals and safety lighting. Said restrictions shall have same force and effect as though fully restated herein.

No shutdowns of existing traffic signals will be permitted during peak commuter and / or school arrival / dismissal times, as determined by the Field Engineering Inspector.
New traffic signal poles and equipment thereon shall be installed and operational prior to disconnection and disassembly of existing traffic signal equipment.

**SPECIAL REQUIREMENTS** for scheduling of work and for controlling of vehicular, bicycle, and pedestrian traffic may be required by the Field Engineering Inspector due to the high volumes thereof associated with the proximity of certain school(s). If so directed, the Contractor must adhere to additional precautions during the peak traffic-volume times of 7:00 a.m. to 8:00 a.m. and 2:00 p.m. to 3:00 p.m.

1. All existing sidewalks and walkways shall remain open and unobstructed at all times.

2. Access to passenger loading zones must be maintained during peak times.

3. No lane closures will be permitted during said peak times, except with the advance permission of the Field Engineering Inspector. Said permission may be revoked if problems of unforeseen type / magnitude result.

4. All lane closures must be in accordance with a separate Traffic Control Plan, subject to the restrictions above and subject to the approval of the Field Engineering Inspector.

### 3.1) TIMELY REPAIR OF DAMAGED TRAFFIC SIGNAL EQUIPMENT

Any Contractor who performs any work in the public right-of-way, who cuts through or otherwise damages existing traffic signal inductive loop detectors, shall within 24 hours provide the City of Escondido Field Engineering Inspector with a SCHEDULE for repair of said loops. Said SCHEDULE shall be subject to review and approval by the City of Escondido.

Contractor shall either replace said inductive loop detectors in kind within 72 hours, or shall furnish, install, and test a video detection system conforming to the requirements of the Section of these Technical Provisions entitled “VIDEO DETECTION” within the time specified in the City-approved SCHEDULE. If it is known in advance that a particular phase of work will damage inductive detector loops, the Contractor will be required to furnish, install, and test the video detection system PRIOR to beginning said phase of work. If the condition of the existing asphalt concrete pavement is not suitable for re-installation of inductive loop detectors, in the opinion of the Field Engineering Inspector, the contractor shall only have the option of installing video detection.

Any Contractor who performs any work in the public right-of-way, who cuts through or otherwise damages existing underground traffic signal and / or lighting conduits, including service and communication / interconnect conduits, shall within 24 hours
provide complete and permanent repair of said conduits, including conductors therein if severed / damaged. Splices in conductors will not be allowed as a permanent repair.

If the Contractor fails to respond within the time frame of the City-approved SCHEDULE, the City of Escondido shall have the right to restore signal detection, either with loops or video as it sees fit, and charge all costs therefor, including administrative costs, to any monies due or deposits / bonds placed by the Contractor. The Contractor is ultimately responsible for compensating the City for all damages, and all additional costs associated therewith, caused by the damage to traffic signal equipment.

4.) FOUNDATIONS

Foundations for traffic signal standards shall conform to the provisions in Section 87-1.03E(3), "CONCRETE PADS, FOUNDATIONS AND PEDESTALS," of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

The locations of all traffic signal standards and cabinets shown on the Plans shall be considered approximate. All locations of signal standards and cabinets proposed on the Plans shall be marked out in the field by a Licensed Land Surveyor per information on the Plans. Said locations are subject to adjustment by the Engineer; the Contractor shall obtain approval of final locations by the Engineer prior to excavation for foundations. After locations have been established and prior to excavation, the Contractor shall tie-out the approved locations and provide the Engineer with lengths and locations of said ties.

In instances where the intended location of traffic signal pole foundations and controller / meter pedestal cabinet foundations may be very close to or may conflict with underground utilities as marked out by Underground Service Alert (USA). For all traffic signal pole locations and/or cabinet locations where USA mark-out indicates the possibility of conflict, the Contractor shall:

A. Pot-hole to determine the exact location of ALL potentially-conflicting substructure(s);

B. Provide dimensions precisely locating said underground conflicts(s) and mark surface improvements directly over said pot-holed utilities;

C. Allow at least three full working days for Engineer of Work to provide revised pole / cabinet positioning; and

D. Install pole / cabinet foundation per revised positioning, utilizing hand-digging if and where necessary (in the opinion of the Public Works Inspector) to avoid damaging the substructure(s) with powered equipment.

If any existing irrigation facilities are in conflict with the foundation location, the Contractor shall re-route the irrigation facilities outside of the foundation area. Said
re-routing shall preserve, to the extent practical, the functionality of the original irrigation system.

4.1.) **ABANDON STREET LIGHT FOUNDATION(S)**

Where the Plans show existing ornamental street lights to be removed and salvaged or relocated, if the existing street light pole’s foundation is in an area that will be paved or have curb and gutter constructed, the foundation shall be removed in its entirety. If the existing foundation is completely outside the traveled way and curb-and-gutter section, the Contractor shall abandon the existing foundation and maintain existing street light circuit continuity per the attached Plan Sheet 2 of 6 of the traffic plans.

4.2.) **SPECIAL FOUNDATION DETAIL FOR 1A POLES**

Certain 1A pole locations may have underground conflicts which may be mitigated by use of a Special Foundation Detail. The Contractor shall furnish shop drawings for a modified shallow foundation which satisfies Caltrans ES-7B Type 1-A load and install said special foundations where needed, in the opinion of the Field Engineering Inspector.

5.) **TRAFFIC SIGNAL STANDARDS**

Traffic signal standards shall conform to the provisions in Section 86-1.02J and Section 87-1.03J “STANDARDS, POLES, PEDESTALS, AND POSTS” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

5.1) **TRAFFIC SIGNAL MAST ARMS**

Traffic signal mast arms shall conform to the provisions in Section 86-1.02J and Section 87-1.03J, "STANDARDS, POLES, PEDESTALS, AND POSTS" of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

Add the following paragraph of Section 86-1.02J, "STANDARDS, POLES, PEDESTALS, AND POSTS," of the Caltrans 2015 Revised Standard Specifications is hereby amended to read:

Changes in configuration of mast arms may be permitted, provided that the mounting height and stability are maintained, and provided that detailed drawings of mast-arm curvature are submitted, subject to the approval of the Engineer.

Add following paragraph to Section 86-1.02J, "STANDARDS, POLES, PEDESTALS, AND POSTS," of the Caltrans 2015 Revised Standard Specifications is hereby amended to read:

All arms shall be bent to the approximate configuration shown on the Plans, subject to the following requirements. The curvature of the
mast arm shall be distributed evenly over at least 60 percent of the mast arm's total length. When mounted on its standard and fully loaded with all required equipment, the mast arm's angle-to-horizontal shall vary from "theta" (see Standard Plans) to near, but not past, zero (level, horizontal position). Traffic signal mast arms not meeting this requirement will be subject to rejection.

The Contractor shall furnish and install interim-length traffic signal mast arm(s) if / where called for on the Plans. Said interim-length mast arms shall be specially fabricated to provide the correct “theta” angle (see relevant Caltrans Standard Plans) for the required length, compatibility with pole shaft mounting hardware, and provide the structural strength for the required loading.

6.) **CONDUIT**

Conduit shall conform to the provisions in Section 86-1.02B “CONDUIT AND ACCESSORIES” and Section 87-1.03B, "CONDUIT INSTALLATION" of the Caltrans 2015 Revised Standard Specifications, and these Special Provisions.

All conduits, the sizes of which are not shown otherwise on the Plans, shall be minimum 2 inches in diameter.

Unless specified otherwise on the Plans or by the requirements of the Caltrans 2015 Standard Specifications, conduit material may be any one of the five types permitted in the Caltrans Standard Specifications:

1) Type 1 (hot-dip galvanized rigid steel conduit);

2) Type 2 (hot-dipped galvanized and coated rigid steel conduit);

3) Type 3 (rigid non-metallic conduit);

4) Type 4 (liquid-tight flexible metal conduit); or

5) Type 5 (intermediate steel conduit, to be used only where specified on the Plans or in these Special Provisions);

provided, however, that if and where the conduit is to be installed by jacking or water boring, only Type 1 (rigid steel) conduit is acceptable. Type 3 (rigid non-metallic) conduit will be accepted for directional boring method. Insulated bonding bushings will be required on metal conduit.

In addition to the conductors called for in the Conductor Schedule or elsewhere on the Plans, all Type 3 conduit runs not receiving the #8 equipment grounding conductor required by the Caltrans Revised Standard Specifications shall have installed a #12 tracer wire. This wire shall be buried in the terminating pull box and shall terminate.
in the ground buss in the controller cabinet. Also, in addition to all of the above, all conduits to be installed per the Plans shall include a Pull Rope.

After conductors have been installed, the ends of conduits terminating in pull boxes and controller cabinets shall be sealed with an approved type of sealing compound.

Unless otherwise specified on the Plans, all conduit under street pavement may be installed using the "Trenching in Pavement Method" described in Section 87-1.03B(6), "CONDUIT INSTALLATION BY THE TRENCHING-IN-PAVEMENT METHOD" of the Caltrans Revised Standard Specifications, as amended herein. All Type 3 conduit under street pavement SHALL be installed using either this method or directional boring method.

Add the following to Section 87-1.03B(6), "CONDUIT INSTALLATION BY THE TRENCHING-IN-PAVEMENT METHOD" of the Caltrans 2015 Revised Standard Specifications is hereby amended to read:

Conduit depth shall not exceed 610 mm (24 inches) or the sum of the conduit trade diameters plus 530 mm (21 inches), whichever is greater; except that at pull boxes, the trench may be hand-dug to the required depth. The top of the installed conduit shall be at least 300 mm (12 inches) below finish grade.

The conduit shall be placed in the bottom of the trench and the trench shall be backfilled with cement slurry. Cement slurry backfill shall conform to San Diego Regional Standard Drawing G-36. Existing asphalt concrete pavement shall be planned and resurfaced per City of Escondido Standard Drawing G-2-E.

In addition to the above requirements, all conduit to be installed in areas other than under street pavement where trench width is less than 0.45 m (18 inches) shall have their trenches filled up per City of Escondido “Narrow Trench Backfill” detail G-2-E.

Conduit to be installed for traffic signal interconnection shall conform to Caltrans standards for fiberoptic communications.

All service conduit (between service point and meter pedestal) must meet more-stringent standards than those listed herein. Contractor shall determine and comply with all SDG&E requirements relative thereto, including pre-backfill trench inspection by SDG&E.

7.) PULL BOXES

Pull boxes shall conform to the provisions in Section 86-1.02C, "PULL BOXES" and Section 87-1.03C, “INSTALLATION OF PULL BOXES” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.
Delete third and fourth paragraphs in Section 87-1.03C(1) of the Caltrans 2015 Revised Standard Specifications.

All pull boxes, the sizes of which are not shown otherwise on the Plans, shall be minimum #5 size. All pull boxes, the locations of which are not shown on the Plans, shall be placed behind the sidewalk or, if the preceding is impractical, in the sidewalk adjacent to the right-of-way. Boxes shall be outside of driveway or vehichle accessible areas.

All pull box locations shall be considered approximate. The Contractor shall obtain approval of locations by the Engineer prior to construction.

Pull boxes, pull box covers and pull box extensions shall be concrete or approved by the Engineer. Pull boxes shall not be grouted. Six (6) inches of gravel shall be provided underneath all pull boxes, extending six (6) inches past the outer edges thereof on all sides.

Pull boxes and splice boxes installed for traffic signal interconnection shall conform to Caltrans standards for fiberoptic communications.

All pull box lids shall have the appropriate description written into the lid.

8.) **FUSED SPLICE CONNECTORS**

Fused splice connectors shall conform to the provisions in Section 86-1.02N and Section 87-1.03N and , "FUSED SPLICE CONNECTORS," of the Caltrans 2015 Revised Standard Specifications except that connectors shall be installed in the pole base hand hole.

9.) **CONDUCTORS & CABLES**

Conductors shall conform to the provisions in Section 86-1.02F, "CONDUCTORS AND CABLES", and in Section 87-1.03F “CONDUCTORS AND CABLE INSTALLATION” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

Insulation Type THHN or THWN shall be used for individual conductors.

Except as specifically permitted otherwise by the Plans or the Field Engineering Inspector, all control circuit conductors shall be run continuously without splices from a terminal block located in a cabinet, compartment, or signal head, to a similarly located terminal block.
9.1.) **SIGNAL CABLE**

The 3-conductor cable shall be used for pedestrian push buttons and a spare, unless its use for vehicle signals, pedestrian signals, signal spares, video camera power, or photoelectric control is specifically called out on the Plans.

9.2.) **SIGNAL INTERCONNECT CABLE**

A. **Specifications**

Signal Interconnect Cable (SIC) shall be a six (6) paired-conductor communications cable (total 12 conductors) and shall conform to the requirements of REA specification PE-39 (gel-filled cable, solid copper conductors). The conductor gauge shall be 22 AWG or larger.

B. **Installation**

The Contractor shall furnish and install paired-conductor cable as shown on the Plans. The Contractor shall furnish and install all necessary cable, ground rods, grounding conductors, guying, and all other incidentals necessary for furnishing, installing, and connecting the cable.

Multiple installations of interconnect cable shall be grounded by connecting all cable shielding together. The shield shall be connected to ground at one point only - at the intersection controller cabinet nearest the telephone service point. This method of grounding assures a noise-free environment for the communication conductors.

The Contractor shall provide the Engineer with a color coding / identification plan for interconnection cables which must be approved by the City before any installation starts. The approved color / identification plans shall be used throughout the project in all controllers and for underground and aerial splices.

10.) **BONDING AND GROUNDING**

Bonding and grounding shall conform to the provisions in Section 86-1.02F(c)(ii), “BONDING, JUMPERS AND EQUIPMENT GROUNDING CONDUCTORS”, of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

Grounding jumper shall be attached by a 3/16-inch or larger brass bolt in the signal standard or controller pedestal and shall be run to the conduit, ground rod or bonding wire in adjacent pull box.

Grounding jumper shall be visible after cap has been poured on the foundation.
11.) **SERVICE**

Service shall conform to the provisions in Section 86-1.02P, “ENCLOSURES” and Section 87-1.03L, "UTILITY SERVICE," of the Caltrans 2015 Revised Standard Specifications and these Special Provisions. The Contractor is responsible for scheduling with SDG&E for service details.

Furnish and install Type III-BF Service Equipment Enclosure(s) or modified Type III-CF (“dual-socket”) Service Equipment Enclosure(s) with the features, circuits, and breakers shown on the Plans. Where the Plan calls for a Type III-CF enclosure, the second meter shall measure power delivered to the equipment wired thereto (per the proper Meter Pedestal Wiring Diagram) only.

Each safety lighting circuit shall contain a 30-amp, two-pole, 240-volt circuit breaker. The contactor for each safety lighting circuit shall be a 30-amp, two-pole, either a normally-closed, solid-state type or a normally-open, mechanical, electrically-held type. If any circuits are proposed for mid-block street lighting, said circuits shall bypass the intersection safety lighting’s photoelectric control and contactor.

The equipment enclosure manufacturer and/or contractor shall ascertain the current San Diego Gas and Electric Company requirements for Service Cabinet dimensions and appurtenances and are solely responsible for compliance with same.

All service enclosures shall be constructed of anodized aluminum or stainless steel.

If so directed by the Plans, the Contractor shall furnish and install a combination meter pedestal and battery back-up unit (Tesco Model # 24-200 BBS, or approved equal). The Contractor may voluntarily choose this option if there is no direction to the contrary on the Plans. Said combination units shall be accepted by and in full compliance with all requirements of San Diego Gas & Electric Company. Said combination units shall also comply with the other requirements of this Section, the requirements of the Section of these Special Provisions entitled “BATTERY BACK-UP SYSTEMS”, and the Meter Pedestal Wiring Diagram on the Plans (except for addition of BBU power provisions).

Upon approval by the Engineer, Contractor shall contact San Diego Gas and Electric for inspection of conduit and trench for the service run conduit at least 5 working days prior to the inspection date. It shall be the responsibility of the Contractor to obtain San Diego Gas and Electric approval before backfilling. If said approval is not obtained prior to backfilling, Contractor shall provide, at their expense, all necessary materials, equipment and labor to furnish and install the service conductors to the San Diego Gas and Electric standards.
11.1.) TELEPHONE SERVICE

Where called for on the plans, telephone service shall consist of furnishing and installing all materials, labor, tools, equipment, scheduling with AT&T for service details, and other incidental items required to provide the following.

If and where called for on the Plans, the Contractor shall furnish and install a terminal and splice enclosure on the side of the controller cabinet per the attached Drawing #3. The enclosures (cabinets) shall be 12”x12”x6” (WxHxD) and shall be equal to or better than Cooper B-line Systems catalog number 12126 PBRTC. Each enclosure shall be installed with the plywood backing board and shall be furnished with an “SP 60”-type key lock. Contractor shall furnish and install conduit and pull rope, per the Plans and all AT&T requirements, from enclosure to Telephone Service Point. The telephone company will make all of the wiring connections. Contractor shall comply with all service requirements of AT&T and shall coordinate service details and scheduling with same well in advance of need.

NOTE: All telephone service equipment shall be installed, tested, and functioning properly prior to energization of any new traffic signal.

12.) TESTING

Testing shall conform to the provisions of these Special Provisions.

Equipment and materials delivered for testing shall be clearly identified as City of Escondido, and the project location.

The Contractor shall notify the City in writing of the date of delivery for testing at least five working days prior to delivery.

Materials testing, including testing of new controller assembly(ies), will be performed by the City of Escondido, 475 North Spruce, Escondido, CA 92025, Attention: Wayne Thames, (760) 291-7743. Contractor shall arrange to have controller assembly(ies) delivered to the above address, and shall pick up and deliver to job site after testing.

At the City's option, the Contractor shall arrange to have a signal technician, qualified to work on the controller and employed by the controller manufacturer or its representative, present at the time the controller is to be turned on for testing. The 21-day test period shall begin after the controller is turned on by the technician. The technician shall provide suitable training on the operation of the controller.

The controller turn-on shall not be scheduled until all equipment is installed.

Insulation resistance (Megger) test for traffic signal and lighting conductors shall be performed in the following order:
Signals: After conductors are connected to signal head terminals and before connection to controller.

Lighting: Before fuses are installed in fused splice connectors.

Load-side conductors in signal heads shall be disconnected from terminal blocks during the test.

Except for inductive loop detector circuits, the insulation resistance shall not be less than 50 megohms on each signal and lighting circuit.

13.) **PAINTING**

Painting shall conform to the provisions in Section 78-4.08, "PAINTING ELECTRICAL MATERIAL," of the Caltrans 2015 Standard Specifications and these Special Provisions.

The Contractor and manufacturer shall protect the factory applied coating system. Any damage to the factory finish of any painted equipment shall be touched up with a matching color, at the direction of the Engineer.

All traffic signal standards within the City of Escondido downtown area shall be painted “Escondido Green”, color code F/S 24172, or at the direction of the Engineer.

Paint color of all the traffic signal equipment shall be approved by the Engineer.

14.) **CONTROLLER ASSEMBLY**

New controller assemblies, and modifications to existing controller assemblies shall conform to these Special Provisions.

New controllers shall be Model 170E controller unit.

The 412C EPROM module shall be included with each new controller. Each EPROM shall include the BI Tran 233 program, unless a blank 27256 I.C. chip (to be programmed by City personnel) is specifically called out by the Plans.

Each new conflict monitor shall be model 210E. The Red Monitor Kit shall be included. **NOTE:** The contractor shall furnish and install a new conflict monitor for all traffic signal modification projects involving a change in intersection phasing.

Each new or modified controller assembly shall be equipped with #222 detector cards, #200 load switches, #242 DC isolators, #204 plug-in flashers, and (if called for on the Plans) video detection equipment (monitor, processor(s), and extension module(s)) of a quantity that will facilitate the intended phasing and operation per the Plans.
Each new controller shall be provided with one G.D.I. brand Model 400 or equal telephone modem. If a fiberoptic modem is also called for on the Plans, the cabinet shall also be provided with an I.F.S. brand Model D9130 or equal fiberoptic modem.

Each new controller cabinet shall contain a separate terminal strip for loop detector lead-in conductors, pre-wired to connect to the detector bay and labeled accordingly.

Each new controller assembly shall contain a document drawer / shelf immediately below the controller unit. Said drawer shall have a top which is hinged at the back.

Detector sensor units shall comply with the requirements in the Section of these Special Provisions entitled “Detectors.”

The three-circuit, solid-state switching devices for signal light circuits shall be constructed using individual encapsulated solid-state relays.

Each new controller cabinet shall be constructed of anodized aluminum.

Where called for on the plans, Contractor shall install Telephone Service per Section 11.1, TELEPHONE SERVICE, of these Special Provisions.

Contractor shall furnish and install one Communications Terminal Panel in each new Controller Assembly per Section 14.1, COMMUNICATIONS TERMINAL PANEL, of these Special Provisions.

Contractor shall furnish and install one Battery Back-Up System which is in compliance with Section 14.2, BATTERY BACK-UP SYSTEM, of these Special Provisions, for each new traffic signal. If the Plans call for addition of Battery Back-Up System to an existing traffic signal, said System shall comply with Section 14.2.

Emergency Vehicle Pre-Empt (E.V.P.E.) Phase Selectors (2 ea. 2-channel, see Section 15 of these Special Provisions) shall be provided and pre-wired to provide emergency vehicle preemption as shown on the Plans. (Use Slots 12 and 13 of Input File "J.")

Testing of controller assemblies shall be by City personnel; see Section 12. Contractor shall arrange to have controller assemblies delivered to City Yard at 475 N. Spruce Street and pick up and deliver controller assemblies to job site after testing.

14.1.) COMMUNICATIONS TERMINAL PANEL

The Contractor shall furnish and install in each new controller cabinet a Communications Termination Panel containing two terminal blocks. The terminal blocks shall provide a mounting location for communications cable, over-voltage protection devices, and the termination points of the C2P harness and connector.
A. **Panel Construction**

1. The panel shall be fabricated from 0.125 inch sheet aluminum.

2. The panel shall be drilled and tapped as necessary to mount the terminal blocks and other attachments described below, as well as to mount the panel to the EIA rack within the cabinet. Sharp edges or burrs caused by the cutting or drilling process shall be removed. Corners shall be rounded with a ¾" radius.

B. **Communications Cable Terminal Block (CB-1)**

The Communications Cable Terminal Block shall be able to terminate a 6-pair #22AWG communications cable.

C. **Active Pairs Termination Block (CTB-2)**

A six position, dual screw, closed back barrier strip shall be mounted on the Communications Termination Panel. The strip shall be rated at 15 amperes and shall be provided with 6-32 x 1/4 inch nickel plated brass binder head screws.

D. **Over-Voltage Protection**

1. An over-voltage surge protector shall be provided on each of the active communications cable pairs terminating in the cabinet. The protectors shall be installed on the Active Pairs Termination Block (CTB-2).

2. The surge protector shall be a plug-in module capable of clamping the input and output voltage to within plus and minus 8 VDC.

E. **Grounding Stud**

A grounding stud shall be provided on each panel. The stud shall be extended through the panel. The over-voltage protection devices' ground leads shall be attached to the stud on the front side of the panel. A No. 8 AWG copper conductor shall connect to the stud on the back of the panel and shall connect to the cabinet's Equipment Grounding Bus.

F. **C2P Harness and Connector**

A 4-conductor jacketed cable shall be furnished and attached to the CTB-2 terminal block with ring lugs. The cable shall terminate in a standard C2P connector and shall be routed through the cabinet and be of sufficient length to reach the C2S connector on the back of the 170E Controller Unit when the unit is installed in the equipment rack.
G. **Wiring Detail**

The CTB-2 terminal block and the C2 plug shall be wired as shown below:

<table>
<thead>
<tr>
<th>Terminal Block (CTB-2)</th>
<th>C2 Connector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Position</td>
</tr>
<tr>
<td>Audio Protected</td>
<td>1-B</td>
</tr>
<tr>
<td>Audio Protected</td>
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<td>Audio Protected</td>
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<td>(Spare)</td>
<td>5-B</td>
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<tr>
<td>(Spare)</td>
<td>6-B</td>
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</tbody>
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Terminal block positions are numbered: from left to right starting with 1. Terminals on top are denoted A and those on the bottom are denoted B.

H. **Feed-Through Opening**

A feed-through opening, complete with protective grommet shall be provided on the panel to protect the C2P harness. A strain relief device shall also be provided.

I. **Cable-Tie Openings**

Two ¼" diameter holes shall be provided for future installation of cable ties.

J. **Attachment to Equipment Rack**

The panel shall be securely attached to the equipment rack. It shall be mounted below the output file on the 332 cabinet.
14.2) **BATTERY BACK-UP SYSTEM**

Contactor shall furnish and install a Battery Back-up System with each new traffic signal, and with traffic signal modification if so directed by the plans therefor. The batteries shall be housed in a separate, free-standing cabinet, to be field-located near the controller assembly, OR alternatively a combination meter pedestal and battery back-up unit may be furnished and installed (see the section of these Special Provisions entitled “SERVICE”).

All battery back-up systems must be capable of operating in two (2) modes: flash mode (red LEDs) and full normal operation mode (all LED indications). The system shall include a timing circuit allowing automatic switching from full operation to all-red flash at a selectable time interval. NOTE: The system shall arrive initially set-up to automatically switch from full operation to flash mode at 60% battery capacity. The UPS shall have two (2) ea. 5 – 15 receptacles for connecting the controller and other sensitive electronic equipment. The UPS shall include two (2) front panel LCD displays; one to count the number of times the UPS operates on battery and one to count the total elapsed time in battery mode.

All battery back-up systems shall be equipped with all additional equipment required (wiring, relays, isolators, etc.) to enable it to provide and maintain an output signal when the battery back-up system is supplying power to the traffic signal. Said signal shall provide an “Extern3” alarm on the City of Escondido’s QuicNet 4 Plus traffic signal control / monitoring system Alarm Report. Contractor shall coordinate with Field Engineering Inspector and Electrical Services personnel to demonstrate said alarm function to said City personnel’s satisfaction prior to final acceptance.

Battery back-up systems in separate cabinets shall be either Clary Corporation SP Series 1250 LX Traffic UPS, or approved equal. Battery back-up cabinet shall be per Clary Corporation Fabrication Drawing # 162-13242, or approved equal. Minimum dimensions shall be 42” H x 26” W x 14” D. Construction material shall be anodized aluminum or stainless steel. Location shall be in the general vicinity of the Controller Assembly, as specified by City of Escondido Electrical Services personnel.

15.) **EMERGENCY VEHICLE PRE-EMPT SYSTEMS**

Contractor shall furnish and install Emergency Vehicle Pre-Empt (E.V.P.E.) system(s) as directed by the Plans. Said system(s) shall be the “Opticom” system or approved equal. If the Plans specify a particular brand, the Contractor shall install that specified brand.

"OPTICOM" E.V.P.E. systems shall include model 721 Optical Detectors of a quantity as shown on the Plan and mounted per the attached Drawing #2, M762 Phase Selectors, and Optical Detector Cable. Phase Selectors (2 each, 2-channel, Model M762) shall be installed and pre-wired into the Controller Assembly (see Section 14
of these Special Provisions) by the manufacturer / supplier prior to delivery to the City for testing.

Prior to E.V.P.E. detector installation, the contractor shall schedule a meeting with a representative of the E.V.P.E. system manufacturer, to evaluate detector placement. Contractor shall retain flexibility to change mounting locations of E.V.P.E. detectors per suggestions of this representative, and shall do so if so directed by the Field Engineering Inspector.

Emitter assemblies will not be required. The Contractor shall test the system using City-furnished Class II emitter assemblies. The Contractor shall arrange to have a representative of the E.V.P.E. system manufacturer present during system testing.

Two tests shall be conducted; one using a Class I signal emitter and a distance of 1,000 feet between the emitter and the detector, the other using a Class II signal emitter and a distance of 1,800 feet between the emitter and the detector. All range adjustments on the module shall be set to “Maximum” for each test.

Each above test shall be conducted for a period of one hour, during which the emitter shall be operated for 30 cycles, each consisting of a one minute “on” interval and a one minute “off” interval. During the total test period; (1.) the emitter signal shall cause the proper response from the model 170E controller unit during each “on” interval; and (2.) there shall be no improper operation of either the Model 170E controller unit or the monitor during each “off” interval.

Emergency Vehicle Pre-empt System cable shall be as recommended by the manufacturer for their system EXCEPT: “S.O.” type cable is not acceptable, Contractor shall substitute an equivalent cable that is suitable for installation in underground conduits.

16.) **SIGNAL FACES AND SIGNAL HEADS**

Signal faces, signal heads and auxiliary equipment, as shown on the Plans, and the installation thereof, shall conform to the provisions in Sections 86-1.02R and Section 87-1.03R, "SIGNAL HEADS," of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

All new vehicular traffic signal indications (red, yellow, and green; arrow and circular) shall be L.E.D. (Light Emitting Diode) signals, and shall be 300 mm (12 inches) diameter. All vehicle indications shall have backplates.

All signal section housings, visors, louvers, backplates, and mounting assemblies (framework) shall be metal.

All exposed metal signal housings, doors, visors, louvers, backplates, and mounting assemblies / framework shall be electrostatically powder-coated by a City-approved process. The minimum requirements for this process shall be:
1. A 3-to-5 stage pretreatment consisting of:
   a. Degrease
   b. Rinse
   c. Iron phosphate
   d. Rinse
   e. Seal

   NOTE: Items a and c can be combined, thereby eliminating Items c and d and making this a three-stage process.

2. A dry-off cycle for at least ten (10) minutes at 300 degrees to 400 degrees Fahrenheit.

3. Electrostatically applied powder at 75-90KV.

4. Thermal setting cycle for 20 minutes at 400 degrees Fahrenheit.

   All parts shall be coated with an ultraviolet-resistant, polyester powder. The only exception is for items of flat black which can be coated with a self-cleaning flat black epoxy.

   Contractor shall furnish manufacturer's Certificate of Compliance with City-approved powder coating process prior to installation of equipment.

16.1) **L.E.D. VEHICULAR SIGNAL INDICATIONS**

All new red vehicle traffic signal indications, both arrow and circular, shall be 300 mm (12 inch) diameter L.E.D. signals, and shall comply with Section 86-1.02R(4)(b) “LED SIGNAL MODULES” of the 2015 Caltrans Revised Standard Specifications and these Special Provisions.

All new yellow and green vehicle traffic signal indications, both arrow and circular, shall be 300 mm (12 inch) dia. L.E.D. signals. Contractor shall furnish and install either GE Lighting or Dialight brand L.E.D. signals, the model number of which shall be on the Caltrans Authorized Material List, or approved equal.

Contractor shall obtain approval of any “or equal” submittals prior to ordering. The Contractor is referred to Instructions to Bidders Item 9 for additional requirements. Approval will be based upon the submitted product brand and model being listed on the Caltrans Authorized Material List, OR upon certification by an Independent Testing Laboratory that the submitted product and manufacturing processes / quality control therefor both meet the requirements of the Caltrans Purchase Specification for
L.E.D. Yellow and Green Vehicle Signals. Both the Authorized Material List and the Purchase Specification are posted on the Caltrans website.

16.2.) **L.E.D. PROGRAMMED-VISIBILITY SIGNAL INDICATIONS**

All new programmed-visibility vehicle traffic signal indications, both arrow and circular, shall have L.E.D. light sources and shall comply with Section 86-1.02R(4)(a)(ii) “PROGRAMMED VISIBILITY SIGNAL SECTIONS” of the 2015 Caltrans Revised Standard Specifications and these Special Provisions.

Contractor shall furnish and install either GE Lighting brand, or Dialight brand L.E.D. P.V. signal head clusters, the model number of which shall be on the Caltrans Authorized Material List, or approved equal.

Contractor shall obtain approval of any “or equal” submittals prior to ordering. The Contractor is referred to Instructions to Bidders Item 9 for additional requirements. Approval will be based upon the submitted product being listed on the Caltrans Authorized Material List, OR upon certification by an Independent Testing Laboratory that the submitted product and manufacturing processes / quality control therefor both meet the requirements of the Caltrans Purchase Specification for L.E.D. Programmed-Visibility Vehicle Signals. Both the Authorized Material List and the Purchase Specification are posted on the Caltrans website.

17.) **L.E.D. PEDESTRIAN SIGNALS**

Pedestrian signal faces, pedestrian signal heads and auxiliary equipment, as shown on the Plans, and the installation thereof, shall conform to the provisions in Section 86-1.02S and Section 87-1.03S, "PEDESTRIAN SIGNAL HEADS," of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

All new pedestrian signals shall be L.E.D. signals (both red “Upraised Hand” and white “Walking Person” symbols). Symbols shall be side-by-side, and full (not outline) display. Contractor shall furnish and install either GE Lighting brand or Dialight brand, the model number of which shall be on the Caltrans Authorized Material List, or approved equal. Contractor shall obtain approval of any “or equal” submittals prior to ordering. Approval will be based upon the submitted product being listed on the Caltrans Authorized Material List, OR upon certification by an Independent Testing Laboratory that the submitted product and manufacturing processes / quality control therefor both meet the requirements of the Caltrans Purchase Specification for L.E.D. Pedestrian Signals. Both the Authorized Material List and the Purchase Specification are posted on the Caltrans website.

18.) **ACCESSIBLE PEDESTRIAN SIGNALS**

If Accessible Pedestrian Signals (A.P.S.) are called for on the Plans, they shall conform to the provisions in Section 86-1.02T and Section 87-1.03T, “ACCESSIBLE
PEDESTRIAN SIGNALS” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions with the following modifications.

Delete paragraphs 2 to 4 of Section 86-1.02T “ACCESSIBLE PEDESTRIAN SIGNALS” of the Caltrans 2015 Revised Standard Specifications.

Add the following to Section 86-1.02T, “ACCESSIBLE PEDESTRIAN SIGNALS” of the Caltrans 2015 Revised Standard Specifications.

Accessible pedestrian signals must function with Section 14 “CONTROLLER ASSEMBLY” of these Special Provisions.

APS units shall be Polara model iN2 or approved equal. Programmable voice messages indicating the street name of the crossing shall be approved by the Engineer.

19) VEHICLE DETECTION

19.1) INDUCTIVE LOOP DETECTORS

If Inductive Loop Detectors are called for on the Plans, they shall conform to the provisions of Section 86-1.02F(2)(c)(iii), "INDUCTIVE LOOP CONDUCTORS" and Section 86-1.02F(3)(d)(iii), “DETECTOR LEAD-IN CABLES” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

Type E (6 ft. dia.) detector loops which are adjacent to limit lines shall have four (4) windings of loop wire each.

Loop wires shall be Type 2.

Loop detector lead-in cable shall be Type B.

Inductive loop detector sensor units shall be of the two channel type, manufactured by either the I.C.C. Company or the E.D.I. Company.

Loop detector sealant shall be Hot-Melt Rubberized Asphalt Sealant.

Bicycle detector loops shall be 3-foot by 6-foot Type Q, unless shown / sized otherwise on the Plans. Contractor shall have the option of installing two 3’ diameter circular loops in lieu of each 3’x6’ Type Q (bicycle) detector loop shown on the plans, at no extra cost to the City. Both 3’ diameter loops shall be connected to the same DLC at the pull box. The loops shall be separated by 4’ in lieu of typical 10’ spacing. Each loop shall have four windings.

19.1A.) INDUCTIVE LOOP DETECTOR INSTALLATION

Loop detector installation shall conform to the provisions in Section 87-1.03V(2), "INDUCTIVE LOOP DETECTORS,” of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.
Any existing inductive loop detectors which are damaged by the Contractor’s operations shall be replaced within 48 hours; see the Section of these Special Provisions entitled “SCHEDULING OF WORK.”

Prior to loop detector mark-out, Contractor shall insure that all utility covers (manhole lids, gate valve covers, etc.) have been raised to finish grade, and that all final paving and asphalt repair have been completed.

All loop detector locations shall be considered approximate. Detector loop saw slots shall be laid out and painted on the roadway by Contractor. Obtain approval of the Engineer prior to saw-cutting. The additional length of loop wire between loop and lead-in cable shall be twisted together into a pair (at least 2 turns per foot) before being placed in the slot and conduit to termination pull box.

Where sawed slots cross two different types of pavement material or a concrete- or slurry-backfilled conduit trench (see Sec. D-06), or two different panels of P.C.C. pavement, a 3/4-inch PVC pipe shall be installed across the joint, as shown in "Curb Termination Details Type B" on Caltrans Standard Plan ES-5D, to contain the loop conductors and act as an expansion / deflection fitting.

Splices in loop detector circuits shall not be allowed.

19.2. NON-INVASIVE, MAGNETO-INDUCTIVE VEHICLE DETECTORS

If and where the Plans call for non-invasive magneto-inductive vehicle detectors, they shall conform to the requirements of this Section and the notes on the Plans.

Each location shall consist of sensors (2 each for each lane less than 14 ft. in width, and 3 each for each wider lane), mounted in interlocking carrier trays that shall slide freely within a 3-inch-diameter conduit. The sensors shall be capable of converting changes in the vertical component of the earth’s magnetic field into changes in inductance that can be detected by a specialized inductive loop detector sensor unit. The sensors for a particular lane at a particular location shall be connected in series, and connected to a standard Type B Detector Lead-in Cable (BDLC) that connects without splices to the input bay of a standard 332 controller cabinet. The sensors and specialized sensor units shall be capable of detecting all licensable vehicles containing ferromagnetic material when they are within a travel distance of one-half (1/2) of the height of said ferromagnetic material. The sensor shall be suitably sealed for use in 100% humidity environment in the conduit.

The sensor unit shall snap into the carrier. The carrier shall hold and maintain the sensor within 20 +/- degrees of vertical. The carrier shall allow for six (6)-inch sensor spacing increments. The transverse spacing of the sensors for a given lane shall be per the Manufacturer’s recommendations. The centroid of the sensors for a given lane shall be in the center of the lane unless dimensioned otherwise on the Plans. The first carrier (end cap carrier) shall have a rope attached of sufficient strength to assist
in the removal of all the carriers from the conduit. The carrier shall hold up to twelve (12) lead-in cables and the pull rope. The carriers shall enable horizontal placement of detectors to within three (3) inches of the location(s) specified on the plans.

The conduit shall be 3-inch (nominal), Schedule 80 PVC. The conduit shall be installed transversely to the roadway at a nominal centerline depth of 21 inches below the finished roadway surface. Centerline depth shall be maintained between 18 and 24 inches (finish grade to centerline). Deviations in conduit alignment shall be less than 0.25 inches per foot. The outer end of the conduit shall extend three (3) inches into a #6 pull box with extension.

The specialized sensor units shall be per recommendations of the manufacturer of the non-invasive, magneto-inductive vehicle sensors. Contractor shall furnish and install 3M Canoga sensor units or approved equal. Approval of any alternative will be based upon satisfaction of the following provisions, and upon proof of acceptable operation via in-service testing prior to final acceptance of the work. Sensor units shall also be adjustable to function with input from standard inductive loop detectors (Type E) on a per-channel basis. Sensor units shall be mountable in a standard 332 cabinet input file, and shall be capable of providing delay and extension timing, and shall be self-tuning, on all channels. Each sensor unit shall have a single, switched oscillator system to sequentially excite and measure each channel so as to prevent crosstalk between channels within a unit.

Non-invasive, magneto-inductive vehicle sensors will be performance-tested by the Contractor in the presence of the Field Engineering Inspector using a 100-cc-displacement motorcycle. All corrective work necessary to obtain satisfactory performance therewith shall be at the expense of the Contractor.

19.3.) VIDEO DETECTION

If and where the Plans call for video detection, the contractor shall furnish and install a modular (single camera per approach), rack-mounted video detection system conforming to the following requirements.

1. General

This specification sets forth the minimum requirements for a system that detects vehicles on a roadway using only video images of vehicle traffic.

1.1 System Hardware

The video detection system shall consist of one video camera, a video detection processor (VDP) which mounts in a standard detector rack, and a detector rack mounted extension module (EM), for each approach which is to be provided with video detection; and one video monitor. All system hardware assembly shall be performed in the United States.
1.2 System Software

The system shall include software that detects vehicles in multiple lanes using only the video image. Detection zones shall be defined using only a video menu and a pointing device to place the zones on a video image. Up to 24 detection zones per camera shall be available.

2. Functional Capabilities

2.1 The VDP shall process video from one source. The source can be a video camera or video tape player. The video shall be input to the VDP in RS170 format and shall be digitized and analyzed in real time.

2.2 The VDP shall detect the presence of vehicles in up to 24 detection zones per camera. A detection zone shall be approximately the width and length of one car.

2.3 Detector zones shall be programmed via a menu displayed on a video monitor and a pointing device (a three button mouse) connected to the VDP. The menu shall facilitate placement of the detection zones. A separate computer shall not be required for programming detection zones.

2.4 The VDP shall store up to three different detector zone patterns. The VDP can switch to any one of the three different detector patterns within 1 second of user request via menu selection with the pointing device.

2.5 The VDP shall detect vehicles in real time as they travel across each detector zone.

2.6 The VDP shall have an RS232 port for communications with an external computer.

2.7 The VDP shall accept new detector patterns from an external computer through the RS-232 port.

2.8 The VDP shall send its detector patterns to an external computer through the RS-232 port when requested.

2.9 The extension module (EM) shall be available to avoid the need to rewire the detector rack, by enabling the user to plug an extension module into the appropriate slot in the detector rack. The extension module shall be connected to the VDP by a 10 wire cable with modular connectors, and shall output contact closures in accordance with user selectable channel assignments.
3. Vehicle Detection

3.1 A minimum of 24 detection zones shall be supported and each detection zone can be sized to suit the site and the desired vehicle detection region.

3.2 A single detection zone shall be capable to replace multiple loops and detection zone may be ANDed or ORed together to indicate vehicle presence on a single phase of traffic movement.

3.3 Placement of detection zones shall be done by using only a pointing device and a graphical interface built into the VDP to draw the detection zones on the video image from each video camera.

3.4 Up to 3 detection zone patterns shall be saved within the VDP memory and this memory shall prevent loss during power outages.

3.5 The selection of the detection zone pattern for current use shall be done through a menu. It shall be possible to activate a detection zone pattern for a camera from VDP memory and have that detection zone pattern displayed within 1 second of activation.

3.6 When a vehicle is detected crossing a detection zone, the detection zone will flash a symbol on the screen to confirm the detection of the vehicle.

3.7 Detection shall be at least 98% accurate in good weather conditions and at least 96% accurate under adverse weather conditions (rain, snow, or fog). Detection accuracy is dependent upon site geometry, camera placement, camera quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to camera location or quality.

3.8 Detector placement shall not be more distant from the camera than a distance of ten times the mounting height of the camera.

3.9 The VDP shall provide up to 8 channels of vehicle presence detection through a standard detector rack edge connector and one or more extension modules.

3.10 The VDP shall provide DZR to enable normal detector operation of existing zones except the one being added or modified during the setup process. The VDP shall output a constant call on any detection channel corresponding to a zone being modified.

4. VDP and EM Hardware

4.1 The VDP and extension module shall be specifically designed to mount in a standard detector rack, using the edge connector to obtain power and
provide contact closure outputs. No adapters shall be required to mount the VDP in a standard detector rack. No detector rack rewiring shall be required.

4.2 The VDP and extension module shall operate satisfactorily in a temperature range from -34°C to +60°C and a humidity range from 0%RH to 95%RH, non-condensing.

4.3 The VDP and extension module shall be powered by 24 volts dc.

4.4 VDP power consumption shall not exceed 450 milliamps. The EM power consumption shall not exceed 100 milliamps.

4.5 The VDP shall include an RS232 port for serial communications with a remote computer. This port shall be a “D” subminiature connector on the front of the VDP.

4.6 The VDP shall utilize flash memory technology to enable the loading of modified or enhanced software through the RS232 port and without modifying the VDP hardware.

4.7 The VDP and extension module shall include detector output pin out compatibility with industry standard detector racks.

4.8 The front of the VDP shall include detection indications for each channel of detection that display detector outputs in real time when the system is operational.

4.9 The front of the VDP shall include one BNC video input connection suitable for RS170 video inputs. The video input shall include a switch selectable 75 ohm or high impedance termination to allow camera video to be routed to other devices, as well as input to the VDP for vehicle detection.

4.10 The front of the VDP shall include one BNC video output providing real time video output which can be routed to other devices.

5. Camera

5.1 The video camera used for traffic detection shall be furnished by the VDP supplier and shall be qualified by the supplier to ensure proper video detection system operation.

5.2 The camera shall produce a useable video image of the bodies of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a
useable video image shall be the minimum range from night time to day

time, but not less than the range 0.5 lux to 10,000 lux.

5.3 The camera shall use a CCD sensing element and shall output video with
resolution of not less than 350 lines vertical and 380 lines horizontal.

5.4 The camera shall include auto-iris control or automatic electronic shutter
control based upon average scene luminance.

5.5 The camera shall include a variable focal length lens with variable focus
and zoom that can be adjusted, without opening up the camera housing, to
suit the site geometry.

5.6 The camera electronics shall include AGC to produce a satisfactory image
at night.

5.7 The camera shall be housed in an environmentally sealed enclosure.

5.8 The camera enclosure shall be equipped with a sun shield that prevents
sunlight from directly entering the lens. The sunshield shall include a
provision for water diversion to prevent water from flowing in the cameras
field of view. The camera enclosure with sunshield shall be less than 6”
diameter, less than 26” long, and shall weigh less than 12 pounds when the
camera and lens are mounted inside the enclosure.

5.9 The camera enclosure shall include a thermostatically controlled heater to
assure proper operation of the lens iris at low temperatures and prevent
moisture condensation on the optical faceplate of the enclosure.

5.10 When mounted outdoors in the enclosure, the camera shall operate
satisfactorily in a temperature range from -34°C to +60°C and a
humidity range from 0% RH to 100% RH.

5.11 The camera shall be powered by 120 VAC 60 Hz. Power consumption
shall be less than 40 watts under all conditions. NOTE: All video cameras
shall be individually fused.

5.12 Recommended camera placement shall be 33 feet (or 10 meters) above the
roadway, and over the traveled way on which vehicles are to be detected.
The camera shall view approaching vehicles at a distance not to exceed
350 feet for reliable detection.

5.13 The camera enclosure shall be equipped with separate, weather-tight
connections for power and video cables at the rear of the enclosure to
allow diagnostic testing and viewing of video at the camera while the
camera is installed on a mast arm or pole. Video and power shall not be
connected with the same connector.
5.14 The video signal output by the camera shall be in RS170 format.

5.15 The video signal shall be fully isolated from the camera enclosure and power cabling.

6. Installation

6.1 Coaxial cable for transmission of video signals shall be Belden #8281 or equivalent. This cable shall be suitable for installation in conduit or overhead with appropriate span wire. BNC plug connectors should be used at both the Camera and Cabinet ends. The coaxial cable, BNC connector and crimping tool shall be approved by the supplier of the video detection system and the manufacturer’s instructions must be followed to ensure proper connection.

6.2 The power cabling shall be 16 AWG three conductor cable. The cabling shall comply with the National Electric Code, as well as local electrical codes. NOTE: “S.O.” type cable is not acceptable, Contractor shall substitute an equivalent cable that is suitable for installation in underground conduit.

6.3 The video detection system shall be installed as recommended by the supplier and as documented in installation materials provided by the supplier. NOTE: The Contractor shall arrange to have a representative of the video detection manufacturer present during camera mounting.

7. Warranty

7.1 The video detection system shall be warranted to be free of defects in material and workmanship for a period of two years from date of shipment from the supplier’s facility. During the warranty period, the supplier shall repair with new or refurbished materials, or replace at no charge, any product containing a warranty defect provided the product is returned FOB to the supplier’s factory or authorized repair site. Product repaired or replaced under warranty by the supplier will be returned with transportation prepaid. This warranty does not apply to products damaged by accident, misuse, abuse, improper operation, service by unauthorized personnel, or unauthorized modification.

7.2 In recognition of the substantial influence on video detection performance exerted by the quality of the physical installation, including selection of locations for cameras as well as cabling and connector integrity, no warranty of merchantability or fitness for purpose is made for the video detection system. Under no circumstances shall supplier be liable for any loss or damage, whether direct, indirect, special, incidental, or
consequential, to the contracting agency or any third party arising out of the use or inability to use the products.

7.3 The foregoing warranties are expressly made in lieu of all warranties expressed or implied and are the sole remedy of customers.

7.4 During the warranty period, technical support shall be available from the supplier via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory certified personnel or factory-certified installers.

7.5 During the warranty period, updates to VDP software shall be available from the supplier without charge.

8. Maintenance and Support

8.1 The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the video detection system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier’s then current pricing and terms of sale for said parts.

8.2 The supplier shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier’s then current pricing and terms of sale for on site technical support services.

8.3 Installation or training support shall be provided by a factory authorized representative.

8.4 All product documentation shall be written in the English language.

20.) PEDESTRIAN PUSH BUTTON ASSEMBLIES

Pedestrian push buttons shall conform to the provisions in Section 86-1.02U and Section 87-1.03U, "PUSH BUTTON ASSEMBLIES," of the Caltrans Revised Standard Specifications and these Special Provisions.

Pedestrian push button assemblies shall be Type B. Instructional signs therefor shall be 9" x 12" nominal size for Type 19 and larger poles, and shall be 5" x 7" nominal size for other poles. The instructional signs shall conform to the latest version of CA MUTCD.

21.) LUMINAIRES

Luminaires on traffic signal standards shall be LED type and conform to the City of Escondido Standard Drawing E-1-E and these Special Provisions.
Photoelectric control shall be Type II. The photoelectric cell therefor shall be Fisher-Pierce brand; mount on top of pole so designated in the Pole and Equipment Schedule on the Plan. The contactor therefor shall be the “electrically-held” type.

22.) TRAFFIC-SIGNAL-MOUNTED SIGNS AND MOUNTING BRACKETS

Mast arm mounted street name signs and left turn control signs shall be furnished and installed, or relocated, per the Plans.

Street Name Signs

Street name signs shall be 12 inch upper case and 9 inch lower case white reflective letters and border on a green background. The general sign composition shall follow the G7(CA) sign. The message size and letter style shall conform to M.U.T.C.D. Standards (Series D or thicker). The legend shall be as shown on the Plans or as otherwise approved by the Engineer. The sign size shall be as shown in the Caltrans Standard Plans.

Sign material shall be white cut-out letters and border on green sheeting. Use High Intensity Prismastic Sheeting.

All signs shall be double-faced unless specifically called-out otherwise on the Plans.

Each street name sign shall be G7 blade type with blanks 0.125” aluminum per Caltrans Specifications.

Mounting Brackets for Street Name Signs

NOTE: The following examples and dimensions / adjustment ranges thereon notwithstanding, it is the Contractor's and Supplier's joint responsibility to insure that the mounting brackets furnished and installed for street name signs can be adjusted so that the street name signs are level; and it is the Contractor's responsibility to install signs level and mounting brackets plumb.

Mounting brackets for street name signs shall be fabricated of galvanized or stainless steel and may be of three types or as approved by the Engineer:

1. Mounting brackets similar to Caltrans Standard Standards; or

2. Drawing No. 1 as shown attached to this Specification; or

3. A modification of #1 or #2 above to include a three-piece telescoping "L" bracket, subject to approval of the Engineer (Safeway Signs EZ-L or approved equal).

All street name sign brackets for this project shall be of the same type.
Left or U-Turn Control Signs

Left turn control signs to be furnished and installed shall be of the size and Series shown on the Plans. The signs shall be installed prior to energizing the signal.

Mounting Brackets for Turn Control Signs

Brackets for mounting left turn control signs shall be in accordance with detail U of Caltrans Standard Plan Sheet RSP ES-7N, or as otherwise approved by the Engineer.

23.) SALVAGE EXISTING TRAFFIC SIGNAL CONTROL AND LIGHTING EQUIPMENT

Salvaging existing traffic signal control and lighting equipment shall conform to the provisions of the Caltrans 2015 Revised Standard Specifications and these Special Provisions.

Existing traffic signal and / or ornamental street light standards that are to be salvaged per the Plans shall be delivered to the City Yard at 475 North Spruce Street. Other miscellaneous equipment thereon may also need to be salvaged.

Existing foundations for salvaged or relocated street lights shall be removed or abandoned in accordance with the Section of these Special Provisions entitled “ABANDON STREET LIGHT FOUNDATION(S).” Existing foundations for salvaged or relocated traffic signal standards shall be removed per Caltrans Standard Specifications. The Contractor shall remove and replace all sidewalk adjacent to the existing foundation to the nearest score line or expansion joint.

24.) ROADWAY MARKINGS

Roadway Markings, and the removal thereof, shall be performed as directed by the Plans, in accordance with Section 84, “MARKINGS,” and Section 15, "EXISTING FACILITIES," of the Caltrans 2015 Revised Standard Specifications, and these Special Provisions.

The Contractor shall remove all existing pavement markings and traffic striping, including existing raised pavement markers adjacent thereto, prior to placement of final treatment (overlay or slurry). The wet sandblasting method will be required, except where existing material is thermoplastic; in this latter case, grinding and skin-patching will be acceptable. Overlay or Slurry seal shall be specified on the plans for the entire length of removed delineation.

Contractor shall lay-out and paint new traffic stripes and pavement markings as directed on the Plans. Material for all new traffic stripes and bike lane markings shall be paint. All other pavement markings and legends shall be thermoplastic. Contractor shall be solely responsible for insuring that all materials and installation
procedures used comply with all applicable Federal, State, Regional, and Local regulations therefor.

The Engineer shall approve the Contractor’s alignment and layout for traffic stripes and pavement markings prior to painting. The Contractor shall allow at least two (2) full working days for inspection by the Engineer prior to painting. If the Engineer requires any corrections to alignment / layout, the Contractor shall make such corrections and allow for another two (2) full working days for re-inspection. Any traffic stripes or pavement markings painted without approval of the Engineer shall be removed and re-painted at the Contractor’s expense.

City of Escondido pavement markings that are different from Caltrans standard pavement markings shall be painted using City of Escondido stencils. The Contractor shall verify with the Engineer which pavement markings (if any) require the use of City stencils. Where required, the Contractor shall make arrangements with the Engineer to borrow City of Escondido stencils.

Nothing in these Special Provisions shall relieve the Contractor from their responsibilities as provided in PUBLIC CONVENIENCE, SAFETY AND TRAFFIC CONTROL of the civil Special Provisions.

25.) RAISED PAVEMENT MARKERS

Raised pavement markers and the installation thereof, shall be in accordance with Section 81, "MISCELLANEOUS TRAFFIC CONTROL DEVICES," of the Caltrans Standard Specifications and these Special Provisions.

Within 48 hours of completion of painting of new traffic striping and markings, the Contractor shall furnish and install new raised pavement markers on the new striping, as shown on the Plans and the Caltrans Standard Plans and Detail Numbers referenced thereon.

If, for any reason, there will be a period of time after removal of existing striping and painting of new striping, during which public traffic will use all or a portion of any roadway in the project area, the Contractor shall provide temporary delineation with "chip seal markers" (Henberger Company, white (one-way), Type W, and yellow (two-way), Type Y, Temporary Pavement Markers, both types with reflective strips; or approved equal). These markers shall be either white or yellow, as directed by the Public Works Inspector, and shall be on maximum 24-foot centers. The markers will be placed either on the old lines which were just removed or on the layout lines for the new striping, as directed by the Public Works Inspector. The furnishing and installing of these markers shall be in addition to any other delineation (cones, signs, barricades, etc.) which are required for public safety. After the Contractor has painted the new striping, the Contractor shall remove and dispose of these temporary markers.
Nothing in these Technical Provisions shall relieve the Contractor from his responsibilities as provided in PUBLIC CONVENIENCE, SAFETY AND TRAFFIC CONTROL of the Civil Special Provisions.

26.) SIGNING

Signing shall be in accordance with Section 82, “SIGNS AND MARKERS”, of the Caltrans Standard Specifications and these Special Provisions.

Contractor shall remove and salvage, relocate, and / or furnish and install traffic signs as directed on the Plans.

All signs to be removed and salvaged shall be delivered to the City Yard at 475 N. Spruce Street. Contractor shall protect said signs, and is responsible for any damage thereto between start of Contract work and delivery of signs to City.

All new signs that are to be installed on new posts, and all existing signs that are to be relocated (except to street light poles), shall be permanently mounted per San Diego Regional Standard Drawing # M-45. All new signs, and all existing signs to be relocated, that are to be mounted on street light poles shall be mounted using 2 – 3/4” stainless steel clamps and ¼” stainless steel capscrews. Bottom of signs shall be a minimum of seven (7) feet above adjacent ground / sidewalk.

Nothing in these Special Provisions shall relieve the Contractor from his responsibilities as provided in PUBLIC CONVENIENCE, SAFETY AND TRAFFIC CONTROL of the civil Special Provisions.
The special provisions contained herein have been prepared by or under the direction of the following Registered Persons.

STRUCTURES

REGISTERED CIVIL ENGINEER
<table>
<thead>
<tr>
<th>2010 SSP No.</th>
<th>Owner Code</th>
<th>Category &amp; Date</th>
<th>Description</th>
<th>Instructions</th>
<th>Editing Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>StdPln</td>
<td>OE</td>
<td>A 07-19-13</td>
<td>Standard Plans List</td>
<td>USE WITH 2010 STANDARDS.</td>
<td></td>
</tr>
<tr>
<td>SP_TEMPLE</td>
<td>OE</td>
<td>A 07-19-13</td>
<td>Insert special provisions between ……</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-4.01C(1)</td>
<td>BR</td>
<td>A 04-19-13</td>
<td>Use if a written description of bridges or portions of bridges to be removed is desired instead of or in addition to what is shown.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-3.04</td>
<td>BR</td>
<td>A 01-18-13</td>
<td>Use for structure excavation and backfill payment clauses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49-1.01D(5)</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>Use when steel piling is to be embedded into rock and the top of rock elevations vary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49-1.03</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>Use for expected difficult pile installation and the management of hazardous waste, contaminated materials, and naturally occurring asbestos (including serpentine rock). Use this SSP for all types of pile installation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49-2.01C(4)</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>Use for driven piles when predrilling is required.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-1.01C(1)</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>Use if new bridge decks are within 100 feet of a residence, business, or public space.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-1.03F(5)(b)(i)</td>
<td>BR</td>
<td>A 04-19-13</td>
<td>Use for new bridge decks and approach slabs. Do not use in freeze-thaw areas.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51-4_X</td>
<td>TYLI</td>
<td>04-22-14</td>
<td>Use in all District 07, 08, 11, and 12 projects.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>59-6.03</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>Painting Concrete</td>
<td>Use with painted concrete surfaces.</td>
<td></td>
</tr>
<tr>
<td>83-1.02G(4)</td>
<td>TYLI</td>
<td>04-22-14</td>
<td>Ornamen tal Railing</td>
<td>Use to describe ornamental railing</td>
<td></td>
</tr>
<tr>
<td>87-2</td>
<td>PM</td>
<td>A 05-20-11</td>
<td>--</td>
<td>Use in all District 07, 08, 11, and 12 projects.</td>
<td></td>
</tr>
<tr>
<td>90-2.02B</td>
<td>BR</td>
<td>A 05-20-11</td>
<td>--</td>
<td>Use for minor concrete.</td>
<td></td>
</tr>
</tbody>
</table>
ORGANIZATION

Special provisions are under headings that correspond with the main-section headings of the *Standard Specifications*. A main-section heading is a heading shown in the table of contents of the *Standard Specifications*.

Each special provision begins with a revision clause that describes or introduces a revision to the *Standard Specifications* as revised by any revised standard specification.

Any paragraph added or deleted by a revision clause does not change the paragraph numbering of the *Standard Specifications* for any other reference to a paragraph of the *Standard Specifications*.

---

DIVISION II  GENERAL CONSTRUCTION

15  EXISTING FACILITIES

Add to section 15-4.01C(1):

Remove the following bridges or portions of bridges:

<table>
<thead>
<tr>
<th>Bridge no.</th>
<th>Description of work</th>
</tr>
</thead>
<tbody>
<tr>
<td>57C0356</td>
<td>Concrete barrier and railings as shown.</td>
</tr>
</tbody>
</table>

---

DIVISION III  GRADING

19  EARTHWORK
Add to section 19-3.04:
Pervious backfill material placed within the limits of payment for bridges is paid for as structure backfill (bridge).

DIVISION VI STRUCTURES

49 PILING

Replace the 1st and 2nd paragraphs of section 49-1.01C(2) with:
Reserved

Replace section 49-1.01D(5) with:
Perform test borings at the locations shown in the following table:

<table>
<thead>
<tr>
<th>Bridge no.</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>57C0356</td>
<td>Abutments 1 and 2</td>
</tr>
</tbody>
</table>

Notify the Engineer at least 15 days before drilling test borings.

Drill test borings by rotary drill methods to the specified tip elevation shown in the presence of the Engineer. Test borings must be at least 3 inches in diameter.

After test borings have been completed, allow 20 days for the Engineer to notify you of confirmation of or revisions to the piles. Do not fabricate or manufacture to length steel piling until you have been notified.

Add to section 49-1.03:

Expect difficult pile installation due to the conditions shown in the following table:

<table>
<thead>
<tr>
<th>Pile location</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridge no.</td>
<td>Support location</td>
</tr>
</tbody>
</table>
| 57C0356       | Abutment 1 and Abutment 2        | Vibration limits at waterline; granitic rock

Add to section 49-2.01A(3)(a):
Submit calculations for estimated vibrations at the existing 36-inch diameter waterline based on the proposed driving system.
Replace "Reserved" in section 49-2.01A(4)(a) with:
The Department performs vibration monitoring of the existing 36-inch diameter waterline. If vibration limits are exceeded suspend pile driving. If pile driving is suspended submit a mitigation plan that includes corrective measures and allow the Department 10 days for review.

Add to section 49-2.01C(5):
Vibrations at the existing 36-inch diameter waterline must not exceed 0.2-inch per second.

Delete the 1st paragraph of section 49-2.01C(4)

Add to section 49-2.01C(4):
Drive piles in predrilled holes at the locations and to the bottom of hole elevations shown in the following table:

<table>
<thead>
<tr>
<th>Bridge name or number</th>
<th>Abutment no.</th>
<th>Bent no</th>
<th>Bottom of hole elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>57C0356</td>
<td>1</td>
<td>N/A</td>
<td>696 ft</td>
</tr>
<tr>
<td>57C0356</td>
<td>2</td>
<td>N/A</td>
<td>696 ft</td>
</tr>
</tbody>
</table>

51 CONCRETE STRUCTURES

Add to section 51-1.01C(1):
If the methacrylate crack treatment is performed within 100 feet of a residence, business, or public space, submit a public safety plan that includes the following:

1. Public notification letter with a list of delivery and posting addresses. The letter must describe the work to be performed and state the treatment work locations, dates, and times. Deliver the letter to residences and businesses within 100 feet of overlay work and to local fire and police officials not less than 7 days before starting overlay activities. Post the letter at the job site.
2. Airborne emissions monitoring plan. A CIH certified in comprehensive practice by the American Board of Industrial Hygiene must prepare and execute the plan. The plan must have at least 4 monitoring points including the mixing point, application point, and point of nearest public contact. Monitor airborne emissions during overlay activities.
3. Action plan for protecting the public if levels of airborne emissions exceed permissible levels.
4. Copy of the CIH's certification.

After completing methacrylate crack treatment activities, submit results from monitoring production airborne emissions as an informational submittal.

Replace the 1st paragraph in section 51-1.03F(5)(b)(i) with:
Texture the bridge deck surfaces longitudinally by grinding and grooving.
Replace item 3 in the list in the 4th paragraph of section 51-4.03B with:

3. Except for box girders, a minimum of 3/4 inch of deck slab concrete is maintained between deck slab reinforcement and the top of PC I and double T girders

Add to the 2nd paragraph of section 51-4.01C(2):
Include PC concrete removable median slabs in the girder erection work plan.

Add section 51-4.01C(5) Removable Median Slabs
For PC concrete removable median slabs, shop drawings must include:

1. Panel dimensions
2. All materials
3. Reinforcement
4. Coil inserts and locator plugs
5. Neoprene strips

Add to section 51-4.01D:
Test panels for PC concrete removable median slabs must be:

1. Constructed at the precast plant location
2. Full size
3. Constructed and finished using the personnel, materials, equipment, and methods to be used in the work
4. Permanently labeled by a method authorized by the Engineer
5. Authorized before starting work

Test panels may be removed from the precast plant and incorporated into the median upon completion of all production panels and when authorized by the Engineer.

Add to section 51-4.02A:
The neoprene strip must comply with the specifications for neoprene in section 51-2.04B.
The neoprene adhesive must comply with Federal Specification MMM-A-121.
Neoprene strip surfaces where adhesive is to be applied must have a cloth finish or a buffed finish. Surfaces must be clean and dry when the neoprene adhesive is applied.
Provide coil inserts and insert locator plugs as shown.

Add section 51-4.02B(8) Removable Median Slabs
Before curing activities, the top surface of each PC concrete removable median slab must be deep stamped with fieldstone pattern. Pattern must be continuous across adjacent panels.

You may use an aggregate grading complying with the specifications for the 1/2-inch maximum combined aggregate grading and the 1/2 inch x No. 4 primary aggregate size in section 90-1.02C(4).

Add section 51-4.03H Removable Median Slabs
Carefully handle, store, transport, and erect PC concrete removable median slabs to avoid twisting, racking, or other distortion that would result in cracking or damage to the members.
Handle, store, transport, and erect PC members such that the points of support and directions of the reactions with respect to the member are approximately the same as when the member is in its final position.

Concrete Painting must comply with section 59-6.

Abrasive blast clean the concrete surfaces to receive a neoprene strip. Allow the cleaned surfaces to air dry 24 hours before applying the adhesive.

Apply the adhesive to the concrete bridge deck and neoprene strip at the manufacturer's recommended rate. Let the adhesive dry to an aggressive tack. Apply the neoprene strip to the concrete surface and roll in both directions to obtain a tight bond.

---

**59 PAINTING**

Replace section 59-6.02 with:

Coatings must comply with section 91-4.05.

Add to section 59-6.03:
The painted concrete must be San Diego Buff.

---

**DIVISION IX  TRAFFIC CONTROL FACILITIES**

**83 RAILINGS AND BARRIERS**

Add to section 83-1.02G(4) Ornamental Railing

Ornamental railing consists of tubular steel members, post caps, anchor bolts, hardware, and fittings.

Submit shop drawings for the railing. The shop drawings must include the railing layout, and complete details for the construction of the work including methods of construction, sequence of shop and field assembly, and installation procedures.

Tubular steel members consisting of posts, pickets, and horizontal rails must be standard steel pipe complying with ASTM A 53, Grade B.

Steel plates, and bars must comply with ASTM A36.

Post caps must be steel. Post caps and other closures must be watertight.

Mechanical expansion anchors for attaching the railing to supporting concrete members must comply with the specifications for concrete anchorage devices in section 75-1.03C.
Field measure controlling dimensions before fabricating.

Install shims at posts, where necessary, to provide uniform bearing and conformance with the horizontal lines and vertical grade lines. Shims at steel posts must be commercial quality, galvanized sheet steel.

Carefully handle materials to avoid bending, braking, abrading, or otherwise damaging the parts. Do not use manufacturing, handling, or installation methods that damage or distort the members or damage the galvanizing.

Railing must be carefully erected true to line and grade. Posts must be vertical within a tolerance not to exceed 0.02 foot in 10 feet and set in sockets or on mortar pads.

---

**DIVISION X MATERIALS**

**87 MATERIALS—GENERAL**

Replace section 87-2 with:

**87-2 AGGREGATE**

**87-2.01 GENERAL**

**87-2.01A Summary**

Section 87-2 includes specifications for furnishing aggregate.

**87-2.02 MATERIALS**

**87-2.02A General**

Do not use air-cooled iron blast furnace slag to produce aggregate.

Do not use aggregate produced from slag resulting from a steel-making process.

---

**90 CONCRETE**

Add to section 90-2.02B:

You may use rice hull ash as an SCM. Rice hull ash must comply with AASHTO M 321 and the chemical and physical requirements shown in the following tables:

<table>
<thead>
<tr>
<th>Chemical property</th>
<th>Requirement (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon dioxide (SiO$_2$)</td>
<td>90 min</td>
</tr>
<tr>
<td>Loss on ignition</td>
<td>5.0 max</td>
</tr>
<tr>
<td>Total alkalies as Na$_2$O equivalent</td>
<td>3.0 max</td>
</tr>
<tr>
<td>Physical property</td>
<td>Requirement</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>Particle size distribution</td>
<td></td>
</tr>
<tr>
<td>Less than 45 microns</td>
<td>95 percent</td>
</tr>
<tr>
<td>Less than 10 microns</td>
<td>50 percent</td>
</tr>
<tr>
<td>Strength activity index with portland cement(^b)</td>
<td></td>
</tr>
<tr>
<td>7 days</td>
<td>95 percent (min percent of control)</td>
</tr>
<tr>
<td>28 days</td>
<td>110 percent (min percent of control)</td>
</tr>
<tr>
<td>Expansion at 16 days when testing project materials under ASTM C 1567(^c)</td>
<td>0.10 percent max</td>
</tr>
<tr>
<td>Surface area when testing by nitrogen adsorption under ASTM D 5604</td>
<td>40.0 m(^2)/g min</td>
</tr>
</tbody>
</table>

\(^a\)SiO\(_2\) in crystalline form must not exceed 1.0 percent.

\(^b\)When tested under AASHTO M 307 for strength activity testing of silica fume.

\(^c\)In the test mix, Type II or V portland cement must be replaced with at least 12 percent rice hull ash by weight.

For the purpose of calculating the equations for the cementitious material specifications, consider rice hull ash to be represented by the variable \(UF\).
END OF SPECIAL PROVISIONS
APPENDIX A

Recycling Requirements
Recycling Requirements

The Escondido Municipal Code includes provisions for mandatory recycling of various waste streams. Chapter 14, section 14-64 defines “Industrial Recyclables” as recyclables from industry/construction waste streams to include dirt, asphalt, sand, land clearing brush, concrete, and rock. These items are also listed in Resolution 94-334 Designation of Mandatory Recyclable Materials.

In addition to the materials listed above, contractors are encouraged to recycle as much waste as feasible from new construction and demolition projects. Steel scrap, copper, and cardboard are typically high-yield recyclables, while markets vary for items such as drywall and roofing tile.

Escondido’s exclusive franchised hauler for residential, commercial, and industrial generators within Escondido, Escondido Disposal, will assist contractors in identifying recycling resources in addition to providing for the collection and transporting of such materials. To establish service for your project, please call Escondido Disposal at 760-745-3203. Escondido Disposal is located at 1044 W. Washington Avenue in Escondido.

There are various agencies that assist with the identification of recycling opportunities. Some of these agencies include:

City of Escondido Recycling Division
760-839-4342

County of San Diego Department of Public Works/Recycling
858-874-4285
www.sdcounty.ca.gov

California Integrated Waste Management Board
www.ciwmb.ca.gov

- Construction and Demolition Recycling (including database of recyclers)
  www.ciwmb.ca.gov/condemo/
  916-341-6534

CalMax
Free online materials-exchange service operated by California Integrated Waste Management Board
877-520-9703
www.calmax.org
APPENDIX B

Storm Water Inspection Form for Construction Activities
INTENTIONALLY LEFT BLANK
Storm Water Inspection Form for Construction Activities

☐ Notice of Correction  ☐ Stop Work Notice  ☐ Notice of Violation*

*Please be advised that non-compliance with this notice may result in referral to the San Diego Regional Water Quality Control Board.

<table>
<thead>
<tr>
<th>Project Address:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspector Name:</td>
<td>Time: AM / PM</td>
</tr>
<tr>
<td>Site Contact:</td>
<td>Phone #:</td>
</tr>
</tbody>
</table>

Is the site subject to the State General Permit?  □ Yes  □ No

Does the site maintain a SWPPP?  □ Yes  □ No

Is the Project SWPPP on site?  □ Yes  □ No

**Inspection Type:**
☐ Routine site inspection  ☐ Follow-up inspection  ☐ Post rain event
☐ Complaint Investigation  ☐ Prior to forecast rain event  ☐ Pre rainy season

### Required Best Management Practices (BMPs)

<table>
<thead>
<tr>
<th>BMP (CASQA Reference)</th>
<th>BMP(s) in place?</th>
<th>Corrective Action Required?</th>
<th>Installation or Implementation Required?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good Housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material Storage (WM-1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Spill Control/Containment (WM-4)</td>
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<tr>
<td>Stabilized Entrance/Exit (TC)</td>
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<tr>
<td>Dust Control (WE-1)</td>
<td></td>
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<tr>
<td>Material Washout Area(s) (WM-8)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Storm Drain Inlet Protection (SE-10)</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Vehicle Storage/Maintenance (NS)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Street Maintenance (TC)</td>
<td></td>
<td></td>
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<tr>
<td>Stockpile Maintenance (WM-3)</td>
<td></td>
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<tr>
<td>Slope/Soil Stabilization (EC)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Silt Fencing (SE-1)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Fiber Rolls (SE-5)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gravel Bags/Check Dams (SE-6)</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Portable Toilet (WM-9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWPPP Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visual observation of actual or potential discharge of sediment or construction material from the site:

☐ Yes  ☐ No

If yes: ____________________________

General Observations and Conditions of Concern

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

**Summary of Violations and Corrective Actions**

☐ Violation of State General Construction Permit and/or Storm Water Ordinance: ____________________________

☐ No Violations Have Been Noted, But Corrective Actions Are Required By: ____________________________

Received by (signature): ____________________________  Date: ____________________________
APPENDIX C

City of Escondido Encroachment Permit Application
**ENCROACHMENT PERMIT**

**Project Name:** ____________________________  
**APN/Tract #:** ____________________________

**Contractor:**  
**Name & Phone #:** ____________________________  
**Emergency #:** ____________________________  
**E-Mail:** ____________________________  
**Mailing Address:** ____________________________  
**City, State & Zip:** ____________________________  
**Contractor’s License (Type & #):** ____________________________  
**Escondido Business License #:** ____________________________

**Sub-Contractor:**  
**Name & Phone #:** ____________________________  
**Emergency #:** ____________________________  
**E-Mail:** ____________________________  
**Mailing Address:** ____________________________  
**City, State & Zip:** ____________________________  
**Contractor’s License (Type & #):** ____________________________  
**Escondido Business License #:** ____________________________

**Owner/Developer:**  
**Telephone #:** ____________________________  
**E-Mail:** ____________________________  
**Mailing Address:** ____________________________  
**City, State & Zip:** ____________________________

**Scope of Work or Acts Permitted:**  
__________________________

**Related Projects/Plan Numbers:**  
__________________________

**Contractors Project Number:** ____________________________

**DigAlert:**  
Permittee is required to comply with Sections 4216 through 4216.9 of the Government Code. A DigAlert Identification Number must be issued before a Permit to Excavate will be valid. Please call Underground Service Alert TOLL FREE at 1-800-422-4133, two working days before you dig.

I.D. #: ____________________________

**I hereby acknowledge and agree that:** (1) I have read and understand this permit and the incorporated Encroachment Permit General Provisions; (2) the information contained herein is true and correct; (3) I will comply with all City Ordinances, City Standard Specifications and the terms, conditions and restrictions of this permit; and (4) I will pay all back charges resulting from work performed by City forces or the City’s contractors in correcting or repairing incomplete work, unsafe conditions, flood damages, siltation, erosion, clean-up of haul routes, dust control from the project site, or other damages arising out of work related to this Permit. Permission is hereby granted to the City and/or its agents to enter upon the project site to perform emergency work when necessary or to ensure compliance with the Permit.

I declare under the penalty of perjury that the foregoing is true and correct.

**Signature of Permitee, Owner or Authorized Agent:** ____________________________

**Date:** ____________________________

---

**EMPLOYEE USE ONLY**

**Received By:** ____________________________  
**Date:** ____________________________  
**TCP:** Required/Not Required/Approved

**Fee:** ____________________________  
**Security:** ____________________________  
**Receipt:** ____________________________

**Approved By:** ____________________________  
**Date:** ____________________________

*For: Julie Procopio, Director of Engineering Services/City Engineer*

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**24 HOUR NOTICE IS REQUIRED PRIOR TO PRE-CONSTRUCTION MEETING**
APPLICATION GUIDELINES

1. Approval of work to be done is required from the Field Engineering Office or Planning Department if it is not covered under signed Improvement Plans.

2. The Contractor used for the work being done, must have a City of Escondido Business License, as well as a valid State Contractor's License appropriate for the work being done.

3. Submitting Permit – submittal must include the application page, traffic control (if required) and the original of the Certificate of Liability Insurance for the applicant. Otherwise, the permit will not be reviewed until application packet is complete.

4. Time Frame – approval ranges from 4 to 6 working days or up to several weeks, depending on the nature of the application and if the permit application was complete at time of submittal.

5. Traffic Control – if the work to be performed impedes traffic, whether it be pedestrian or vehicular, a Traffic Control Plan is required. Please refer to the Traffic Control Plan Checklist within these guidelines.

6. Monitoring Wells – require a Cash Deposit in the amount of $2,000 per well. This deposit will be held by the City until successful closure is obtained from County authorities.

7. Water Construction Fees – considered to be a Cash Deposit and the City requires separate payment. Water Meters are not applied to the encroachment permit.

8. Certificate of Liability Insurance – Original of the Certificate of Insurance, (City will not accept faxes or copies), which must include:
   i. General Liability Insurance in the amount of:
      a. $300,000 for driveway replacement, sidewalk construction and landscape,
      b. $1,000,000 for pools/spas,
      c. $2,000,000 all other work
      d. Cancellation notification of thirty (30) days
      e. Separate Endorsement which specifically names the City as Additionally Insured.
      f. Insurance Company must have a minimum of "A" rating and a "V" or better financial rating by Best's Key Rating Guide. Insurance Company must be a California admitted carrier.
      g. If Insurance Company is a "Surplus Line Carrier," they must provide the City with a "Service of Suit Endorsement."
      h. Insurance for Owner/Builder

9. Permit fees for approved applications are based on EMC §§ 23-8 through 23-14. There are no additional fees for permits which are for work covered under approved, signed Improvement Plans. See attached Fee Schedule.

10. In signing the Encroachment Permit, the applicant agrees to indemnify, defend and hold harmless the City and its officers, employees and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, administrative proceedings, damages, fines, penalties, judgments, orders, liens, levies, costs and expenses of whatever nature, including reasonable attorneys' fees and disbursements, arising out of any violation, or claim of violation of the San Diego Municipal Storm Water Permit (Order No. R9-2007-0001), and updates, of the California Regional Water Quality Control Board Region 9, San Diego, which the City might suffer, incur, or become the subject by reason of or occurring as a result of or allegedly caused by the work under this Permit.
A Traffic Control Plan ("TCP") shall be required for all work performed within the public right-of-way. Each TCP shall be developed with both the CALTRANS Manual of Traffic Control Devices for Construction and Maintenance Work Zones and the Standard Specifications for Public Works Construction, latest edition. Data to be included on a TCP will vary depending upon the complexity of the project, the volume of traffic affected and the roadway geometrics where the construction is being performed. The TCP must clearly depict the exact sequence of the construction operation(s), the construction to be performed and the traveled way that will be utilized by all movements of traffic during each phase of construction. Multiple phases of construction will require a separate TCP for each different construction phase or operation.

The checklist should be used as a guide to ensure that all of the basic elements are included on the TCP. This will help expedite the plan review process. Following the submittal of the TCP, all submittals deemed complete shall be reviewed within two (2) weeks. A TCP that does not include each of the appropriate elements listed below will be deemed incomplete and returned for revision and re-submittal. The TCP shall be submitted in a timely manner to allow for the specified review period. It is important to note that each TCP must be developed specific to the actual construction work zone location. Each TCP must include on the plan a description of the work to be performed using that particular TCP.

### TRAFFIC CONTROL PLAN CHECKLIST

- TCP shall be drawn on 11" x 17" sheets and stamped by a Registered Civil Engineer or Registered Traffic Engineer unless otherwise approved by the Field Engineering Office.
- Indicate Contractor's name, address and telephone number. Include name and telephone number of the 24-hour contact person representing the Contractor.
- Indicate north arrow and scale or "Not to Scale" (NTS).
- Show all nearby streets with street names to assure proper orientation.
- Show existing traffic signals and existing regulatory signs, as applicable.
- Show existing striping, pavement markings, painted crosswalks and bike lanes.
- Show existing curbs, gutters, sidewalks, manholes, driveways and intersections in the construction work zone, including areas affected by taper transition.
- Indicate total roadway widths. Dimension existing striping from edges of pavement.
- Indicate posted speed limits.
- Show location and dimensions of the construction work zone.
- Show staging area and materials storage area, as appropriate.
- Indicate locations of construction signs, as appropriate.
- Label all taper lengths and widths, delineator spacing and sign spacing.
- Road closures will require approval from the City.
- Use a legend to define all symbols and designate them with CALTRANS nomenclature.
- Show all parking restriction zones and signs, as appropriate, including Bus Stop locations.
- Signs and barricades will be required to direct pedestrians through or around the construction work zone and shall be shown on the TCP.
- Indicate on the plan the duration of the construction work and subsequent traffic control.

**OR**

- In place of having a plan drawn, you may use the San Diego Area Regional Standard Drawings (SDARSD).
- The cover sheet, TCP-5, is **required** with your traffic control plan.
- Choose a drawing that matches your site completely; modifications are not permitted.
- SDARSD are to be submitted on 8.5" x 11".
- Indicate speed limits, sign/cone spacing, and taper lengths.

1. The City Engineer or his representative has the authority to revoke the permit should the Permittee fail to ensure public safety.

2. All traffic control devices shall be removed from view when not in use.

3. Work hours shall be restricted to between 8:30 a.m. to 3:30 p.m. unless approved otherwise.

4. Traffic control devices are to be placed by a person trained in traffic control and are to be checked, and maintained as necessary, periodically throughout the day. Failure to maintain traffic control devices may result in Encroachment Permit revocation.

5. Trenches must be backfilled or plated during non-working hours. Contractor to provide recessed steel plates per Encroachment Permit and signage denoting "Trench Plate Ahead" for on-coming traffic; all requirements set forth in the Encroachment Permit General Provisions #27 and Escondido Standard Drawings.

6. Pedestrian controls shall be provided as shown on the plans.

7. Temporary “NO PARKING” signs will be posted 72 hours prior to commencing work which indicate the day(s) of the week and hours of the day that the work is to be performed.

8. Access to driveways will be maintained at all times unless other arrangements are made and previously approved by a City Engineer or his representative.

9. The Contractor shall replace, within 72 hours, all traffic signal loop detectors damaged during construction.

10. All striping removed or damaged will be replaced by the Contractor within 24 hours (or replaced with temporary tape).

11. All workers shall be equipped with a reflective safety vest type and a type III for night time operations. All flaggers shall also be equipped with a hard hat, C28 “Stop/Slow” paddle and shall be trained in the proper fundamentals of flagging traffic.

12. Any work that disturbs normal traffic signal operations shall be coordinated with the City 48 hours prior to beginning of construction.

13. The Contractor shall maintain all traffic control devices 24 hours per day and 7 days per week.

14. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved by the City.

15. All night work will require written approval from the City Manager. Lane closures, road detours, road closures, and traffic signal modifications associated with overnight construction activities will require warning signs to be placed at least one week in advance of starting construction.

16. A flashing arrow board shall be required on all arterial street lane closures.

17. When required, electronic message boards must be in place a minimum of 72 hours in advance of starting construction.

18. Deviations in the actual placement of traffic control devices relative to the approved Traffic Control Plan are prohibited. Changes must be submitted, in writing, to the city in the required plan format by the Permittee and approved prior to implementation. All Traffic Control Plans must be signed by a professional Traffic Engineer licensed in California, unless otherwise requested by the city.

19. Detection loops that may be affected by any proposed construction or conduit work shall be replace with video camera detection subject to approval by the City Engineer. Signal plans shall be modified and contractor shall first coordinate and install the video camera detection system per City’s specifications and requirements prior to disturbance and destruction of existing traffic detection signal devices. — City of Escondido Street Design Standard, Section 12.

20. If the permit applicant determines that conduit installation will be by the boring machine method, the trench patch for the utility observation excavation will be the same as for open trench excavation method. This will provide a single continuous surface restoration eliminating the multiple penetration into the public roadway. Refer to Escondido Standard Drawing M-3-E.

21. Notification to local businesses/residences is necessary in advance of any work performed in front of that business/residence. This includes any excavation or trenching, concrete/asphalt restoration, and disturbance of the landscape area located in the right of way.
1. **ACCEPTANCE OF PROVISIONS:** It is understood and agreed to by the Permittee that by signing the permit application and by paying the permit application fees, all conditions and provisions contained herein are agreed to and shall be complied with for the duration of the work proposed.

2. **NO PRECEDENT ESTABLISHED:** This permit is granted with the understanding that this action is not to be considered as establishing any precedent on the question of the expediency of permitting any certain kind of encroachment to be erected within the right-or-way of City streets. No work shall start until the Permittee has attended a DRE construction meeting with the Field Engineering Inspector. It is the Permittee’s responsibility to schedule this meeting and shall submit to the Field Engineering Inspector a construction schedule in bar chart form detailing the work to be done. Failure to submit a construction schedule will delay start of work.

3. **KEEP PERMIT ON WORK:** This permit, associated construction and traffic control plans shall be kept at the site of the work and must be shown to any representative of the Grantor or any Law Enforcement Officer on demand.

4. **PERMIT FROM OTHER AGENCIES:** The party or parties to whom this Permit is issued, shall, whenever the same is required by law, secure the written order or consent to any work hereunder from the Public Utilities Commission of the State of California or any other public board having jurisdiction, and this permit shall be suspended in operation unless and until such order or consent is obtained.

5. **PROTECTION OF TRAFFIC:** Adequate provision shall be made for the protection of the traveling public. A Traffic Control Plan must be submitted to and approved by the City prior to start of any work in the right-of-way. Unless waived by the City, all plans shall be stamped by a registered civil or traffic engineer. All warning signs and safety devices used by the Permittee to perform the work shall conform to the requirements contained in the current California manual on “Uniformed Traffic Control Devices For Streets & Highways” (FHWA’s MUTCD 2014 Edition, as amended for use in CA) and Section 7-10 of the most current edition adopted for use in the City of Escondido of the “Standard Specifications for Public Works Construction”. Devices must be present on the site prior to beginning any work which affects the traveling public.

6. **HOURS OF WORK:** Hours of work are restricted to Monday through Friday between 7 a.m. and 6 p.m. or as otherwise indicated on the approved permit or traffic control plans. No work in the public right-of-way is permitted on Saturdays, Sundays or City recognized holidays without written consent from the City Manager.

7. **MINIMUM INTERFERENCE WITH TRAFFIC:** All work shall be planned and carried out so that there will be the least possible inconvenience to the traveling public, except for the specific work permitted.

8. **STORAGE OF MATERIAL:** No material/equipment shall be stored within ten feet (10’) from the edge of the pavement or traveled way or within the shoulder line where the shoulders are wider than ten feet (10’) unless special permission is granted on the permit.

9. **CLEANUP RIGHT OF WAY:** Upon completion of the work, the right-of-way is to be returned to a debris free condition. All construction debris is to be removed from the site and disposed of in a legal manner. The permittee is responsible for restoring, replacing the landscaping to a like kind at the completion of the project, this includes the restoration of the irrigation system. The permittee is responsible for the removal of all mark-out paint used to identify the location of existing utilities. The method of paint removal shall not damage or alter the texture of the surface of the improvement from which the paint is removed. The cleanup of asphalt material placed during paving operations from the utility lids/manhole covers is required. Repaint Water Lids “White” and Sewer Manhole covers “Traffic Yellow”.

10. **STANDARDS OF CONSTRUCTION:** All work shall conform to the most recent adopted editions of the City of Escondido Design Standards and Standard Drawing, 4.2.2014 Edition, Standard Specifications for Public Works Construction (Greenbook) and the San Diego Regional Standard Drawings, most recent edition.

11. **SUPERVISION OF GRANTOR:** All the work shall be done subject to the supervision of, and to the satisfaction of, the Grantor.

12. **INDEMNITY AND INSURANCE:** The Permittee agrees to indemnify, defend and hold harmless the City of Escondido, its officers, agents, and employees any and all loss, damage, liability, cost or expense, however same may be caused, that may arise during or as a part of this Permit, whether the liability, loss or damage is caused by, or arises out of, the negligence of the City, its officers, agents, or employees, or otherwise. The Permittee shall provide proof of insurance and shall maintain in full force and effect while operating under the Permit, a comprehensive liability insurance policy which shall include bodily injury and property damage as prescribed by law. The general liability policy shall name the City as additional insured with respect to the permit and shall be in a form satisfactory to the City Attorney. The failure to provide or maintain insurance shall be
considered a material breach of the conditions of this Permit and shall render the Permit null and void.

13. CARE OF DRAINAGE: If the work herein contemplated shall interfere with the established drainage, ample provision shall be made by the Permittee to provide for it, as may be directed by the Grantor.

14. SUBMIT LOCATION PLAN: Upon completion of underground or surface work of consequence, the Permittee shall furnish a detailed and dimensioned plan to the Grantor’s office, showing location and details of construction.

15. MAINTENANCE: The Permittee agrees by the acceptance of the Permit, to exercise reasonable care to maintain properly an Encroachment placed by it in the streets and to exercise reasonable care in inspecting for and immediately repairing and making good any injury to any portion of the streets which occurs as a result of the maintenance of the encroachment in the streets, or as a result of the work done under this Permit, including any and all injury to the streets which would not have occurred had such work not been done or such encroachment not placed thereon. The Permittee shall be responsible for the removal of all construction related graffiti; including the maintenance of construction signs, construction equipment and buildings.

16. TUNNELING: No tunneling will be permitted unless approved, in writing, by the Director of Engineering Services or his representative.

17. DEPTH OF PIPES: There shall be a minimum of thirty-six inches (36") of cover over all pipe or conduit.

18. BACKFILLING: Backfill requirements shall conform to the applicable sections of the current applicable Standard Drawing G-1-E, G-2-E, G-3-E and G-4-E unless otherwise directed, in writing, by the Director of Engineering Services or his representative.

19. PRESERVE SURFACING MATERIAL: Whenever a gravel or crushed rock surface is trenched, such material shall be placed to one side and when backfilling is started, the rock material shall be replaced to its original position.

20. MAINTAIN SURFACE: The Permittee shall maintain the surface over structures placed hereunder in accordance with the Design Standards and Standard Drawings of the City of Escondido. If the Grantor determines that the surface is not being properly maintained, the Grantor may, after giving 24 hour notice (either verbal or written) to correct the condition, cause corrections to be made either by employees of the Grantor or a private contractor. In cases of imminent hazard (as determined by the Grantor), no advance notice will be necessary. All expenses incurred by the Grantor in effecting corrections (including any appropriate markups or surcharges) shall be borne by the Permittee. In every case, the Permittee shall be responsible for restoring any portion of the street which has been excavated or otherwise disturbed to its former condition as may be possible.

That portion of the work within the City right-of-way shall be prosecuted to completion as rapidly as possible, including replacement of street, sidewalk or other surfacing. Any changes in this order of work shall be approved by the Engineering Services Department.

21. Traffic shall not be diverted nor interrupted without prior approval of the Engineering Services Department. Nor shall any traffic control device be placed in the right-of-way prior to the issuance of an approved Encroachment Permit and approved Traffic Control Plan.

22. SHOULD THE ENGINEERING SERVICES DEPARTMENT REPRESENTATIVE FIND WORK IN PROGRESS PRIOR TO HIS NOTIFICATION, HE SHALL STOP SAID WORK FOR A PERIOD NOT LESS THAN THE REMAINDER OF THAT WORKING DAY.

23. Care shall be used to avoid interference with existing underground facilities.

24. Workers shall wear CAL OSHA approved safety apparel while performing all work associated with this permit.

25. The work shall be done in one lane of the street at a time; at least one lane in each direction of the pavement width shall be in good condition and open to traffic throughout the work, unless otherwise approved, in writing, by the Director of Engineering Services or his representative.

26. By acceptance of this permit, the Permittee agrees to pay laboratory costs in connection with the necessary tests as may be required by the Engineering Services Department representative to determine the quality of the materials used and/or the in-place compaction.

27. ALL OPEN TRENCHES WITHIN THE IMPROVED AREA SHALL BE BACKFILLED, COMPACTED AND TEMPORARY REPAIRS MADE TO THE SURFACING BEFORE LEAVING THE JOB SITE AT THE END OF THE WORKING DAY. IN THE EVENT THAT STEEL PLATES ARE USED, THEY MUST BE RECESSED INTO THE EXISTING ROADWAY SURFACE USING AN ASPHALT GRINDER TO PROVIDE A SMOOTH DRIVING SURFACE. CONTRACTOR TO PROVIDE SIGNAGE DENOTING “TRENCH PLATE AHEAD” FOR ON-COMING TRAFFIC.

28. All overhead cables installed within the City right-of-way shall conform to “Rules for Overhead Electrical Line Construction, General Order No. 95, of the Public Utilities Commission”.

29. The poles/anchors shall be located at the back of the street sidewalk unless otherwise specified, clear of
traveled ways, drainage channels and/or areas maintained by power equipment.

30. The Permittee’s Surety Bond, as shown on the face of the Permit, shall be on file with the Engineering Services Department prior to beginning work. Cancellation or expiration of the bond will immediately cancel this Permit.

31. All work shall be coordinated with any C.I.P. Project in the area and under no circumstances shall the work granted herein interfere. All standards of construction shall be identical to similar work performed under adjacent street contract.

32. The Permittee agrees that if the Engineering Services Department representative or Law Enforcement Office determines that inadequate barricading, traffic control sign and dust alleviation exists, and the Permittee or his authorized agent cannot be located, then the City has the right to order the proper corrective measures to be taken at the Permittee’s own expense.

33. The Permittee shall be responsible to submit to the Director of Engineering Services, prior to starting any trenching and/or excavation which is five feet (5') or more in depth, a plan showing the method of shoring, which shall conform to the State Division of Industrial Safety. Where the work to be done exceeds any excavation five feet (5') or greater in depth, the Permittee shall be required to submit a detailed plan of shoring, bracing or sloping to be used which has been prepared by a Registered Civil Engineer, and a copy of his CAL OSHA trenching permit. Under no condition shall shoring, bracing or sloping be less effective than that required by the Construction Safety Order of the Division of Industrial Safety.

34. Wherever sidewalk is removed, dry, granular material shall be maintained smooth within the subsequent excavated area and either brought to the original grade or smoothly ramped at each end of the excavation. Barricades with flashing beacons shall be installed as necessary to warn pedestrians. Removed panels will be temporarily restored by the close of work using G-3-E material specifications.

35. The Contractor shall call (Dig Alert 800-227-2600) for mark-out prior to excavation. Contractor shall pothole all existing underground utilities identified in the work area well in advance of utility construction in order to identify conflicts and to adjust the proposed improvements location as needed in the field. By law the Contractor shall take steps to determine the exact location of all underground facilities (potholing) prior to doing work that may damage such facilities or interfere with their service. If the Contractor fails to pothole to locate underground facilities or otherwise operates in a manner which results in damage to existing facilities, as determined by the Field Engineering Inspector, the repairs to damaged utilities in the course of work shall be the Contractor’s responsibility and all costs resulting thereby shall be borne by the Contractor.

36. All underground utility trenches located in paved areas shall be backfilled and compacted to 95% relative compaction. Otherwise, 90% relative compaction is required. The Permittee shall provide the results of compaction tests taken at locations specified by the Engineering Services Field Inspector and in his presence. THE COSTS OF THESE TESTS ARE PAID BY THE PERMITTEE.

37. The City of Escondido "Policy Statement for Landscape Screens" will be enforced for all above grade utility vaults which are installed at single family and multi-family unit locations.

38. FUTURE MOVING OF INSTALLATION: It is understood by the Permittee that whenever construction, reconstruction, or maintenance work on the street may require the installation provided for herein, shall, upon request of the Grantor, be immediately moved by and at the sole expense of the Permittee.
This form must be submitted with all Construction Permit Applications

SECTION 1. Required Information

<table>
<thead>
<tr>
<th>Grading Permit Application Number:</th>
<th>Project Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project address or location:</td>
<td>QSP Contact Information:</td>
</tr>
<tr>
<td>APN #:</td>
<td>Phone # of 24 hr. project contact:</td>
</tr>
<tr>
<td>Name of 24 hr. project contact:</td>
<td></td>
</tr>
</tbody>
</table>

| Estimated project start date:    | Estimated project finish date: |
|                                  | Estimated grading start date:  |
|                                  | Estimated grading finish date: |

Estimated amount of disturbed acreage _____ acres

If equal to or greater than one (1) acre, you must also provide a WDID number from the SWRCB: ____________________________

Are there any watercourses or waterbodies within 200 feet of the limits of soil disturbance?  YES_______  NO __________

SECTION 2. Best Management Practices

Best Management Practices

The goal of storm water management planning is to reduce pollution to the maximum extent practicable by implementing Best Management Practices (BMPs). The following are minimum BMPs that should be implemented:

1) Erosion control practices
2) Velocity reduction
3) Sediment control practices
4) Offsite sediment tracking control
5) General site and materials management

BMPs from each of the five categories must be used together as a system in order to prevent erosion, sediment, wastes, spills, and residues from leaving the site. When properly implemented, monitored and maintained, BMPs will function to prevent pollutants (including sediment) from leaving the site. It is the responsibility of the property owner and the contractor to implement all necessary BMP’s to comply with the Erosion Control Plan, the City of Escondido's Municipal Code, and any State requirements.

SECTION 3. Certification

The following certification must be signed before a Construction Permit will be issued.

I have read and understand that the City of Escondido has been required to adopt minimum requirements for storm water management of construction activities. I certify that I shall implement the BMPs required to effectively minimize the potentially negative impacts of this project's construction activities on water quality. I further agree to install, monitor, maintain or revise the selected BMPs to ensure their effectiveness.

I agree to indemnify, defend and hold harmless the City and its officers, employees and agents from and against any and all liabilities, claims, actions, causes of action, proceedings, suits, administrative proceedings, damages, fines, penalties, judgments, orders, liens, levies, costs and expenses of whatever nature, including reasonable attorneys' fees and disbursements, arising out of any violation, or claim of violation of the San Diego Municipal Storm Water Permit (Order No. 20013-0001 and NPDES No. CAS0109266), and updates, of the California Regional Water Quality Control Board Region 9, San Diego, which the City might suffer, incur, or become the subject by reason of or occurring as a result of or allegedly caused by the activities subject to this Plan.

I also understand that non-compliance with the City's Grading and Erosion Control Ordinance may result in enforcement by the City, including fines, cease and desist orders or other actions.

Property owner ___________________________________________  Date ___________
ADDITIONAL INSURED
(SAMPLE)

Policy Number: _______________ Commercial General Liability

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS
(FORM B)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization: City of Escondido
201 N. Broadway
Escondido, CA  92025

(If no entry appears above, information required to complete this endorsement will be shown in
the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured, the person or
organization shown in the Schedule but only with respect to liability arising out of “your work” for
that insured by or for you.
Endorsement for Service of Suit Clause

It is agreed that in the event of the failure of the company to pay any amount claimed to be due under the terms and conditions of this policy, the company, at the request of the insured, will submit to the jurisdiction of any court of competent jurisdiction within the United States of America and will comply with all requirements necessary to give such court jurisdiction.

Pursuant to any statute or regulation of any state or territory of the United States of America, the company hereby designates the superintendent, commissioner or director of insurance or other officer, specified for that purpose in the statute or regulation or his successor or successors in office, as its true and lawful attorney upon whom may be served any lawful process in any action, suit or proceeding instituted by or on behalf of the insured arising out of this contract of insurance.

Policy Number: __________________________________________

Insured:__________________________________________________

Effective: ________________________________________________

Countersignature of
Authorized Representative:__________________________________
APPENDIX D

Revised Addendum/Updated Geotechnical Report
INTENTIONALLY LEFT BLANK
GEOTECHNICAL EVALUATION
EL NORTE PARKWAY BRIDGE WIDENING
ESCONDIDO, CALIFORNIA

PREPARED FOR:
City of Escondido
201 North Broadway
Escondido, California 92025

PREPARED BY:
Ninyo & Moore
Geotechnical and Environmental Sciences Consultants
5710 Ruffin Road
San Diego, California 92123

June 25, 2008
Project No. 106324001
June 25, 2008
Project No. 106324001

Mr. Samuel Cottrell
City of Escondido
201 North Broadway
Escondido, California 92025

Subject: Geotechnical Evaluation
El Norte Parkway Bridge Widening
Escondido, California

Dear Mr. Cottrell:

In accordance with your request and authorization, we are pleased to submit this geotechnical evaluation report for the proposed El Norte Parkway Bridge Widening to be constructed over Escondido Creek in Escondido, California. This report presents our geotechnical findings, conclusions, and recommendations for the project. We appreciate the opportunity to be of service on this project.

Respectfully submitted,

NINYO & MOORE

Ronald D. Hallum, C.E.G.
Senior Geologist
RDH/AB/JG/RI/kh

Distribution: (5) Addressee

Andres Bernal, G.E.
Senior Project Engineer
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1. **INTRODUCTION**

This report presents the results of our geotechnical evaluation for the proposed widening of the existing El Norte Parkway (currently Washington Avenue) Bridge over Escondido Creek in northeastern Escondido (Figure 1). The objective of this evaluation was to assess the prevailing soil and geologic conditions at the site, evaluate the engineering properties of the soils encountered, and provide recommendations relative to the geotechnical aspects of the proposed improvements.

2. **SCOPE OF SERVICES**

The scope of services included the following:

- Review of readily available background data, including topographic maps, geologic maps and literature, in-house proprietary data, and stereoscopic aerial photographs.

- Performance of a subsurface evaluation consisting of drilling two, 8-inch diameter exploratory borings to approximate depths of up to 70.4 feet below the existing ground surface. Relatively undisturbed and bulk samples were obtained at selected intervals from the borings. The soil samples were then transported to our laboratory for testing.

- Performance of geotechnical laboratory testing on selected samples.

- Preparation of this report presenting our findings, conclusions, and recommendations regarding the geotechnical design and construction aspects of the project.

3. **SITE AND PROJECT DESCRIPTION**

The site is located in eastern Escondido along El Norte Parkway (currently Washington Avenue), approximately 1,100 feet west of Valley Center Road and 3,500 feet south of Dixon Lake. An existing 40-foot-wide and 60-foot-long, concrete, two-lane vehicular bridge currently crosses the Escondido Creek at this location. The southerly flowing Escondido Creek concrete lined channel at the project site is approximately 65 feet wide. The banks along the eastern and western sides of the channel are relatively level at elevations of approximately 710 to 715 feet above mean sea level (MSL). The eastern side of the channel is adjacent to Ryan Park and the western side of the channel is adjacent to private residences. We understand that the project will include construction of a two-lane bridge to the north of the existing bridge with similar construction and dimensions as the existing concrete bridge.
4. **SUBSURFACE EXPLORATION AND LABORATORY TESTING**

Our subsurface exploration was conducted on April 24 and 28, 2008 and consisted of drilling, logging, and sampling two 8-inch diameter borings. Borings B-1 and B-2 were drilled north of the existing bridge on the western and eastern banks of the Escondido Creek channel, respectively. The borings were drilled with a truck-mounted, hollow-stem auger drill rig to approximate depths of up to 70.4 feet below the existing grades. Drive and bulk soil samples were obtained from the borings. The samples were then transported to our geotechnical laboratory for testing. The approximate locations of the exploratory borings are shown on Figure 2 and the boring logs are presented in Appendix A.

Laboratory testing of representative soil samples included in-situ moisture and dry density, grain size analyses, consolidation, shear strength, R-value, and soil corrosivity. The in-situ moisture content and dry density test results are shown at the corresponding sample depths on the boring logs in Appendix A. The results of the other laboratory tests performed are presented in Appendix B.

5. **GEOLOGY AND SUBSURFACE CONDITIONS**

Our findings regarding regional and site geology and groundwater conditions at the subject site are provided in the following sections.

5.1. **Regional Geologic Setting**

The project area is situated in the Peninsular Ranges Geomorphic Province. This geomorphic province encompasses an area that extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California (Norris and Webb, 1990). The province varies in width from approximately 30 to 100 miles. In general, the province consists of rugged mountains underlain by Jurassic metavolcanic and metasedimentary rocks, and Cretaceous igneous rocks of the southern California batholith.

5.2. **Site Geology**

Geologic units encountered during our subsurface exploration included fill, alluvium, and granitic rock. The following sections provide a generalized description of the materials encountered. More detailed descriptions are presented on the boring logs in Appendix A.
5.2.1. Fill

Fill soils were encountered to depths of approximately 1½ feet in our borings. As encountered, the fill soils generally consisted of dark brown and reddish brown, damp, medium dense, silty fine sand.

5.2.2. Alluvium

Alluvium associated with fluvial deposition from Escondido Creek was encountered underlying the fill to approximate depths of up to 69½ feet. As encountered, the material generally consisted of brown to dark brown, loose to dense, silty sand and sandy silt, with scattered interlayers of clayey silt and fine gravel.

5.2.3. Granitic Rock

Granitic bedrock materials of the Cretaceous-age southern California batholith were encountered underlying the alluvium in our borings. The material was observed to consist of reddish-brown to dark brown, weathered granitic rock. The rock in the area has been mapped as “Granite of Dixon Lake” (Kennedy and Tan, 2005) and is described as a “very fine-grained, sub-porphyry, leucocratic biotite granite.”

5.3. Groundwater Conditions

Groundwater was encountered in both of our borings at a depth of approximately 16 feet below the existing surface grades. Groundwater levels may fluctuate due to variations in ground surface topography, subsurface geologic conditions and structure, rainfall, irrigation, release of water from Dixon Lake and other factors not evident at the time of our subsurface evaluation.

6. GEOLOGIC HAZARDS

In general, hazards associated with seismic activity include strong ground motion, ground surface rupture, liquefaction, and lateral spreading. These considerations and other geologic hazards such as landsliding are discussed in the following sections.
6.1. Faulting and Seismicity

The project area is considered to be seismically active. Our review of readily available published geological maps and literature indicates that there are no known active or potentially active faults (i.e., faults that exhibit evidence of ground displacement in the last 11,000 years and 2,000,000 years, respectively), underlying the proposed site. Major known active faults in the region consist generally of en-echelon, northwest-striking, right-lateral, strike-slip faults. These include the San Andreas, San Jacinto, and Elsinore faults located northeast of the site, and the San Clemente, Newport-Inglewood, Agua Blanca-Coronado Bank, and Rose Canyon faults, located to the west of the site. The locations of these faults are shown on Figure 3.

The closest known active fault is the Julian segment of the Elsinore fault system, which can generate an earthquake magnitude of up to 7.2 (California Geological Survey [CGS], 2003). It is located approximately 13 miles northeast of the project site. The site is not located in a State of California Earthquake Fault Zone.

6.1.1. Strong Ground Motion

A site-specific probabilistic seismic hazard analysis was performed to evaluate anticipated peak ground acceleration using the computer program FRISKSP developed by Blake (2001). A probabilistic analysis incorporates uncertainties in time, recurrence intervals, size, and location (along faults) of hypothetical earthquakes. This method thus accounts for likelihood (rather than certainty) of occurrence and provides levels of ground acceleration that might be more reasonably hypothesized for a finite exposure period. FRISKSP calculates the probability of experiencing various ground accelerations at a site over a period of time and the probability of exceeding expected ground accelerations within the lifetime of the proposed structure from the significant earthquakes within a specific radius of search. For the present case, a search radius of 62 miles (100 kilometers) was selected. The earthquake magnitudes used in this program are based on the current CGS fault model.

In evaluating the seismic hazards associated with the subject site, we have used an attenuation relation proposed by Boore, et al. (1997) for Site Class D corresponding to a soft soil
profile with an average shear wave velocity of 820 feet per second (i.e., 250 meters per second). The earthquake magnitudes used in this program are based on the current CGS fault model. The 2007 California Building Code ([CBC], 2007) recommends that the design of structures be based on the peak horizontal ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years which is defined as the Maximum Considered Earthquake (MCE). The statistical return period for $\text{PGA}_{MCE}$ is approximately 2,475 years. The Design Earthquake ($\text{PGA}_{DE}$) acceleration corresponds to $\frac{3}{5}$ of the $\text{PGA}_{MCE}$, and this value is typically used for residential and commercial structures. The $\text{PGA}_{MCE}$ and $\text{PGA}_{DE}$ for the site were calculated as 0.48g and 0.32g, respectively. Similar values were obtained using the United States Geological Survey ([USGS], 2007) ground motion calculator (web-based).

6.1.2. Liquefaction and Seismically Induced Settlement
Liquefaction is the phenomenon in which loosely deposited, saturated granular soils (located below the water table) with clay contents (particles less than 0.005 mm) of less than 15 percent, liquid limit of less than 35 percent, and natural moisture content greater than 90 percent of the liquid limit undergo rapid loss of shear strength due to development of excess pore pressure during strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to rapid rise in pore water pressure, and it eventually causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near-saturated cohesion less soils at depths shallower than 50 feet below grade. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

The liquefaction potential at the project site was evaluated using subsurface exploration data, groundwater characteristics, laboratory test results, the calculated peak ground acceleration and our experience. Our analysis indicates that relatively granular subsurface soils located below the historic high groundwater table are potentially liquefiable up to a depth of approximately 65 feet below existing grades. We estimate that dynamic settlement of approximately 8 to 10 inches could occur as the result of a major nearby seismic event.
6.1.3.  **Ground Surface Rupture**

Based on our review of the referenced literature and our field evaluation, no active faults are known to cross the project area. Therefore, the potential for ground rupture due to faulting at the site is considered to be low. However, lurching or cracking of the ground surface as a result of nearby seismic events is possible.

6.1.4.  **Lateral Spreading**

Lateral spreading of ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel) but has also been observed to a lesser extent on ground surfaces with very gentle slopes. An empirical model developed by Bartlett and Youd (1995, revised 1999) is typically used to predict the amount of horizontal ground displacement within the site. For a site located in proximity to a free-face, the amount of lateral ground displacement is strongly correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the earthquake epicenter, thickness of the liquefiable layers, and the fines content and particle sizes of the liquefiable layers also affect the amount of lateral ground displacement. Based on the thickness of potentially liquefiable soil layers underlying the bridge, the potential for seismically induced lateral spreading is generally considered high at the site.

6.2.  **Landsliding**

No landslides or indications of deep-seated landslides were noted underlying the site during our field exploration or our review of available geologic literature, topographic maps, and stereoscopic aerial photographs.
7. CONCLUSIONS

Based on our review of the referenced background data, geologic field reconnaissance, subsurface evaluation, and laboratory testing, it is our opinion that the proposed bridge is feasible from a geotechnical standpoint. Geotechnical considerations include the following:

- The active Elsinore fault zone is located approximately 13 miles northeast of the site. Accordingly, the potential for relatively strong seismic accelerations will need to be considered in the project design.
- The on-site relatively loose to medium dense sandy alluvial soils are potentially liquefiable. Seismically induced dynamic settlement, lateral spread, and surface manifestations of liquefaction (e.g., such as ground cracking and sand boils) are significant design concerns for the project. Dynamic total settlement of 8 to 10 inches may occur in a design seismic event.
- Based on our subsurface evaluation and background review, groundwater should be anticipated at an approximate depth of 16 feet or less. Fluctuations in the groundwater level should be expected due to variations in seasonal precipitation and other factors. The contractor should plan for appropriate measures to address the presence of shallow groundwater in excavations.
- Excavation of the fill and alluvial materials should be achievable with heavy-duty earthmoving equipment in good operating condition.
- The on-site soils are generally suitable for re-use as compacted fill.
- The bridge site is underlain by fill soil, alluvium, and granitic bedrock. The alluvium consists of loose to dense silty sands and sandy slits. Recommendations are provided herein for the bridge improvements to be founded on driven precast prestressed concrete piles or pre-drilled cast-in-steel-shell piles.

8. RECOMMENDATIONS

The following recommendations are provided for use in design and construction of the proposed improvements. If additional geotechnical recommendations are needed, please contact this office.

8.1. Earthwork

In general, earthwork should be performed in accordance with the recommendations presented in this report. Ninyo & Moore should be contacted for questions regarding the recommendations or guidelines presented herein. In addition, Typical Earthwork Guidelines for the project are included as Appendix C. In the event of a conflict, the recommendations presented in the following sections of this report should supersede those in Appendix C.
8.1.1. Site Preparation

Site preparation should begin with the removal of vegetation, utility lines, asphalt, concrete, and other deleterious debris from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend to the outside of the proposed excavation and fill areas. The debris and unsuitable material generated during clearing and grubbing should be removed from areas to be graded and disposed of at a legal dumpsite away from the project area.

8.1.2. Excavation Characteristics

Our evaluation of the excavation characteristics of the on-site materials is based on the results of the exploratory borings and our experience with similar materials. In our opinion, the on-site fill and alluvial materials are generally excavatable with heavy-duty earthmoving equipment in good working condition. The on-site granite rock will be difficult to excavate.

8.1.3. Materials for Fill

On-site soils with an organic content of less than approximately 3 percent by volume (or 1 percent by weight) are suitable for use as fill. Fill material should generally not contain rocks or lumps over approximately 4 inches, and generally not more than approximately 40 percent larger than $\frac{3}{4}$ inch. Utility trench backfill material should not contain rocks or lumps over approximately 3 inches in general. Soils classified as silts or clays should not be used for backfill in the pipe zone. Larger chunks, if generated during excavation, may be broken into acceptably sized pieces or disposed of off site. Imported fill material, if needed for the project, should generally be granular soils with a very low to low expansion potential (i.e., an expansion index [EI] of 50 or less as evaluated by American Society for Testing and Materials (ASTM) test method D 4829). Import material should also be non-corrosive in accordance with the Caltrans (2003) corrosion guidelines. Materials for use as fill should be evaluated by Ninyo & Moore’s representative prior to filling or importing.
8.1.4. Compacted Fill

If fill soils are to be used at the site, prior to placement of compacted fill the contractor should request an evaluation of the exposed ground surface by Ninyo & Moore. Unless otherwise recommended, the exposed ground surface should then be scarified to a depth of approximately 8 inches and watered or dried, as needed, to achieve a moisture content generally above the optimum moisture content. The scarified materials should then be compacted to a relative compaction of 90 percent in accordance with ASTM D 1557. The evaluation of compaction by the geotechnical consultant should not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor’s responsibility to notify Ninyo & Moore and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.

Fill materials should be moisture conditioned to generally above the laboratory optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture conditioning of fill soils should be generally consistent within the soil mass. Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill should be prepared to receive fill. Preparation may include scarification, moisture conditioning, and recompaction.

Compacted fill should be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift should be watered or dried as needed to achieve a moisture content generally above the laboratory optimum, mixed, and then compacted by mechanical methods, using sheepfoot rollers, multiple-wheel pneumatic-tired rollers or other appropriate compacting rollers, to a relative compaction of 90 percent as evaluated by ASTM D 1557. Successive lifts should be treated in a like manner until the desired finished grades are achieved.

8.1.5. Fill Placement on Sloping Ground

Fills constructed on sloping ground having an inclination steeper than 5:1 (horizontal:vertical) should be keyed and benched into competent materials. The actual width of the toe keys and
extent of removal of any existing loose surficial soil or other native materials should be evaluated by Ninyo & Moore’s representative in the field during construction. In addition, toe key excavations should be observed by a representative of our firm prior to placing fill.

8.1.6. Drainage

Surface drainage on the site should generally be provided so that water is not permitted to pond. A gradient of 2 percent or steeper should be maintained and drainage patterns should be established to divert and remove water from the site to appropriate outlets.

Care should be taken by the contractor during grading to preserve any berms, drainage terraces, interceptor swales or other drainage devices on or adjacent to the project site. Drainage patterns established at the time of grading should be maintained for the life of the project. The property owner and maintenance personnel should be made aware that altering drainage patterns might be detrimental to foundation performance and long-term stability of slopes.

8.2. Seismic Design Parameters

Design of the proposed improvements should comply with design for structures located in Seismic Zone 4 and should be designed in accordance with the requirements of governing jurisdictions and applicable building codes. Table 1 presents the seismic design parameters for the site in accordance with CBC (2007) guidelines and mapped spectral acceleration parameters (USGS, 2008).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Class</td>
<td>D</td>
</tr>
<tr>
<td>Site Coefficient, F_a</td>
<td>1.036</td>
</tr>
<tr>
<td>Site Coefficient, F_v</td>
<td>1.568</td>
</tr>
<tr>
<td>Mapped Short Period Spectral Acceleration, S_D</td>
<td>1.159g</td>
</tr>
<tr>
<td>Mapped One-Second Period Spectral Acceleration, S_1</td>
<td>0.432g</td>
</tr>
<tr>
<td>Short Period Spectral Acceleration Adjusted For Site Class, S_MS</td>
<td>1.201g</td>
</tr>
<tr>
<td>One-Second Period Spectral Acceleration Adjusted For Site Class, S_M1</td>
<td>0.677g</td>
</tr>
<tr>
<td>Design Short Period Spectral Acceleration, S_DS</td>
<td>0.801g</td>
</tr>
<tr>
<td>Design One-Second Period Spectral Acceleration, S_D1</td>
<td>0.451g</td>
</tr>
</tbody>
</table>
8.3. **Pile Foundations**

Due to the potential for liquefaction and dynamic settlement within zones of loose granular alluvium below the groundwater table, we recommend that the proposed bridge expansion be supported on pile foundations.

We assumed that either driven 14-inch-square precast concrete piles or predrilled 12-inch cast-in-steel-shell (CISS) piles would be used for the project. Soil properties for our pile analyses were developed based on our interpretation of the boring data and results of geotechnical laboratory tests performed on representative samples obtained from our exploratory borings at the site. The soil layer boundaries and the respective soil properties used in our evaluation of pile capacities are summarized in Table 2 below.

**Table 2 – Soil Layer Properties**

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Depth To Layer Bottom (ft)</th>
<th>Buoyant Unit Weight (pcf)</th>
<th>Static Condition</th>
<th>Liquefied Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Angle of Internal Friction (degrees)</td>
<td>Cohesion (psf)</td>
</tr>
<tr>
<td>Sand</td>
<td>10</td>
<td>120</td>
<td>32</td>
<td>0</td>
</tr>
<tr>
<td>Sand</td>
<td>15</td>
<td>110</td>
<td>34</td>
<td>0</td>
</tr>
<tr>
<td>Sand</td>
<td>20</td>
<td>52</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Sand</td>
<td>30</td>
<td>56</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>Sandy Silt</td>
<td>35</td>
<td>58</td>
<td>28</td>
<td>300</td>
</tr>
<tr>
<td>Sandy Silt</td>
<td>45</td>
<td>68</td>
<td>30</td>
<td>700</td>
</tr>
<tr>
<td>Sand</td>
<td>65</td>
<td>54</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>Sand</td>
<td>69</td>
<td>58</td>
<td>35</td>
<td>0</td>
</tr>
<tr>
<td>Weathered Granitic Rock</td>
<td>-</td>
<td>70</td>
<td>42</td>
<td>0</td>
</tr>
</tbody>
</table>

**Notes:**
- ft = feet
- pcf = pounds per cubic feet
- psf = pounds per square foot
- pci = pounds per cubic inch

The relatively granular layers of alluvium located below the groundwater are expected to liquefy to a depth of approximately 65 feet below the surface should the design seismic event occur. The calculated pile capacities include the downdrag forces due to liquefaction during the
design seismic event and are based on a minimum penetration of 5 feet into granitic bedrock material. The pile design loads and recommended lengths were analyzed using the computer program AllPile (2007). Batter piles installed at a 1:4 (horizontal:vertical) inclination are being considered for the project to provide additional lateral resistance. Design loads for vertical and batter piles are equivalent. Table 3 presents the recommended pile tip elevations, design loads and nominal resistances.

Table 3 – Summary of Axial Load Capacities for Single Pile

<table>
<thead>
<tr>
<th>Pile Type</th>
<th>Pile Dimension</th>
<th>Design Load 1 (kips)</th>
<th>Nominal Resistance (kips)</th>
<th>Design Tip Elevation 3 (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Compression</td>
<td>Tension 2</td>
</tr>
<tr>
<td>Precast Concrete</td>
<td>14-inch-square</td>
<td>200</td>
<td>400</td>
<td>150</td>
</tr>
<tr>
<td>Cast-in-Steel-Shell</td>
<td>12-inch diameter</td>
<td>70</td>
<td>140</td>
<td>60</td>
</tr>
</tbody>
</table>

Notes:
1 = A factor of safety of 2.0 was used in obtaining the design load from nominal resistance in compression.
2 = The weight of the pile was not included in our evaluation of uplift resistance (tension).
3 = The design tip elevations are based on an average ground surface elevation of 710 feet MSL.

Lateral load capacities for the proposed piles were evaluated assuming both fixed-head and free-head conditions and for ¼-, ½- and 1-inch of deflection at the pile head. The lateral pile capacity estimates presented in Tables 4 and 5 are based on the soil properties presented in Table 2 for the liquefied condition.

Table 4 – Summary of Single Pile Lateral Load Capacity for 14-inch-square Precast Concrete Pile (75 feet length, 200 kips axial load)

<table>
<thead>
<tr>
<th>Pile Design Parameters</th>
<th>Fixed-Head</th>
<th>Free-Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateral Deflection of Pile Head (inch)</td>
<td>0.25 0.50 1.00</td>
<td>0.25 0.50 1.00</td>
</tr>
<tr>
<td>Design Pile Length (feet)</td>
<td>75 75 75</td>
<td>75 75 75</td>
</tr>
<tr>
<td>Lateral Load (kips)</td>
<td>23.0 39.0 64.5</td>
<td>9.2 15.0 24.2</td>
</tr>
<tr>
<td>Maximum Positive Moment (kips-foot)</td>
<td>24.5 48.5 94.2</td>
<td>31.6 58.0 107.5</td>
</tr>
<tr>
<td>Maximum Negative Moment (kips-foot)</td>
<td>-92.5 -170.0 -310.8</td>
<td>-1.5 -3.3 -7.7</td>
</tr>
<tr>
<td>Depth to Maximum Positive Moment (feet)</td>
<td>8.3 9.1 9.1</td>
<td>5.3 6.1 6.1</td>
</tr>
<tr>
<td>Depth to Maximum Negative Moment (feet)</td>
<td>0.0 0.0 0.0</td>
<td>30.3 30.3 30.3</td>
</tr>
<tr>
<td>Depth to Zero Deflection (feet)</td>
<td>29.5 31.1 31.8</td>
<td>26.5 28.3 30.3</td>
</tr>
</tbody>
</table>
Table 5 – Summary of Single Pile Lateral Load Capacity for
12-inch Cast-in-Steel-Shell Concrete Pile (75 feet length, 70 kips axial load)

<table>
<thead>
<tr>
<th>Pile Design Parameters</th>
<th>Fixed-Head</th>
<th>Free-Head</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateral Deflection of Pile Head (inch)</td>
<td>0.25</td>
<td>0.50</td>
</tr>
<tr>
<td>Design Pile Length (feet)</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>Lateral Load (kips)</td>
<td>15.0</td>
<td>25.4</td>
</tr>
<tr>
<td>Maximum Positive Moment (kips-foot)</td>
<td>14.3</td>
<td>28.2</td>
</tr>
<tr>
<td>Maximum Negative Moment (kips-foot)</td>
<td>-49.4</td>
<td>-90.8</td>
</tr>
<tr>
<td>Depth to Maximum Positive Moment (feet)</td>
<td>6.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Depth to Maximum Negative Moment (feet)</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Depth to Zero Deflection (feet)</td>
<td>23.5</td>
<td>27.3</td>
</tr>
</tbody>
</table>

Maximum moments generated by the indicated deflections are based on geotechnical considerations. We recommend that the maximum moment capacities of the piles be evaluated by the structural engineer. Lateral capacities for pile lengths that are different from those assumed in our analyses may be different than those indicated in the following tables.

For lateral loading, piles in a pile group may be considered to act individually when the center-to-center spacing is greater than 3B (where B is the least dimension of the pile) in the direction normal to loading and greater than 8B in the direction parallel to loading. Table 6 presents the lateral load reduction factors to be applied for various pile spacing for in-line loading.

Table 6 – Lateral Load Group Reduction Factors

<table>
<thead>
<tr>
<th>Center-To-Center Pile Spacing for In-Line Loading</th>
<th>Ratio of Lateral Resistance of Pile in Group to Single Pile</th>
<th>Subgrade Reaction Reduction Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>8B</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>6B</td>
<td>0.81</td>
<td>0.70</td>
</tr>
<tr>
<td>4B</td>
<td>0.58</td>
<td>0.40</td>
</tr>
<tr>
<td>2B</td>
<td>0.44</td>
<td>0.25</td>
</tr>
</tbody>
</table>

8.4. Construction Considerations for Driven Piles

Driven piles should be installed as closely as possible to specified limits of vertical and horizontal alignment. The pile should not be out of plumb by more than 2 percent over the length of the pile. Further, the top of the pile should be within 3 inches of the design location. The pile hammer
should be an approved, steam and/or diesel hammer. It should be capable of developing energy to drive piles at a penetration rate of not less than \( \frac{1}{2} \) inch per blow at the design load. For design loads of 70 and 200 kips, a hammer energy of 45,000 foot-pound or more should be considered.

The site is generally underlain by fill, alluvial deposits and granitic rock. Rocks, hard concretions, or other obstructions were not encountered within the alluvium in the exploratory borings. Hard pile driving conditions are expected when the piles encounter the granitic rock. Pile driving creates ground vibrations and noise that can be disturbing to occupants of nearby buildings during installation. An evaluation of the current conditions of existing adjacent structures may be performed to assess pre-pile driving conditions to compare with post-pile driving conditions. During construction, additional measures can be taken to reduce the potential for vibration-related damage to existing adjacent structures, including pre-drilling the upper portion of the pile length prior to pile driving.

The effect of the pile-driving operations on structures within approximately 50 feet of the site should be evaluated, if applicable. Further, it is prudent to perform pre-construction surveys of the structures within approximately 100 feet or more of the site to reduce the potential for damage claims pertaining to the pile driving. Piles should be driven in accordance with applicable City/County codes and/or Caltrans specifications. Pile-driving acceptance criteria should be evaluated by the pile-driving contractor using the appropriate method and be evaluated by a pilot pile test program prior to the commencement of pile construction.

8.5. **Construction Considerations for Cast-In-Steel-Shell (CISS)**

Construction of CISS piles should be observed by the geotechnical consultant during drilling to evaluate if the piles have been extended to the recommended depths. The steel shell may be advanced by drilling or by driving. It is the contractor's responsibility to take the appropriate measures to provide for the integrity of the drilled holes and to see that the steel shell is clean and straight and that the soil plug is removed to the bottom of the hole prior to the placement of concrete. The steel shell should be checked for alignment and plumbness during installation. The
amount of acceptable misalignment of a pile is approximately 3 inches from the plan location. It is usually acceptable for a pile to be out of plumb by one percent of the depth of the pile.

Groundwater was encountered in the exploratory borings at depths of approximately 16 feet below the ground surface. As a result, we anticipate that groundwater will be encountered during installation of CISS piles. It is recommended that the contractor take appropriate measures during construction to reduce the potential for caving of the drilled holes, including the use of drilling mud. In addition, we recommend placement of concrete by the tremie method to see that the aggregate and cement do not segregate during concrete placement.

8.6. Corrosion
Laboratory testing was performed on representative samples of the on-site soils to evaluate pH and electrical resistivity, as well as chloride and sulfate contents. The pH and electrical resistivity tests were performed in accordance with California Test 643 and the sulfate and chloride content tests were performed in accordance with California Tests 417 and 422, respectively. These laboratory test results are presented in Appendix B.

The results of the corrosivity testing indicated electrical resistivities of 3,820 and 14,070 ohm-cm, soil pH of 6.7 and 7.0, chloride contents of 155 and 290 parts per million (ppm), and sulfate contents of 0.004 and 0.010 percent (i.e., 40 and 100 ppm). Based on the Caltrans (2003) criteria, the project site would not be classified as corrosive, which is defined as a site having soils with more than 500 ppm of chlorides, more than 0.2 percent sulfates or a pH less than 5.5.

8.7. Concrete
Concrete in contact with soil or water that contains high concentrations of soluble sulfates can be subject to chemical deterioration. Laboratory testing indicated sulfate contents of 0.004 and 0.010 percent for tested samples, which is considered to represent a negligible potential for sulfate attack (ACI, 2005). However, due to the variability in the on-site soils, we recommend that Type V cement be used for concrete structures in contact with soil. In addition, we recommend
a water-to-cement ratio of no more than 0.45. We also recommend that 3 inches of concrete cover be provided over reinforcing steel for cast-in-place structures in contact with site soils.

8.8. Preliminary Pavement Design

Based on the results of our subsurface evaluation and our laboratory testing we have used an R-value of 71 as the preliminary basis for the design of pavements for the approaches to the proposed bridge. Actual pavement recommendations should be based on R-value tests performed on bulk samples of the soils that are exposed at the finished subgrade elevations at the completion of the grading operations.

For design, we have assumed Traffic Index (TI) values of 8.0 and 9.0 for site pavements. We recommend that Ninyo & Moore re-evaluate the pavement design, based on actual TI values for El Norte Parkway and the R-value of the subgrade material exposed at the time of construction. The preliminary flexible and rigid pavement sections are as follows:

<table>
<thead>
<tr>
<th>Traffic Index</th>
<th>R-Value</th>
<th>Flexible Pavement Section</th>
<th>Rigid Pavement Section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AC (inches)</td>
<td>Class 2 Aggregate Base (inches)</td>
</tr>
<tr>
<td>8.0</td>
<td>71</td>
<td>5.0</td>
<td>4.0</td>
</tr>
<tr>
<td>9.0</td>
<td>71</td>
<td>6.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

It is recommended that the upper 12 inches of the subgrade and base materials be compacted to a relative compaction of 95 or more percent relative density as evaluated by the current version of ASTM D 1557. The Portland cement concrete used for paving should have a modulus of rupture of 600 psi or more. If traffic loads are different from those assumed, the pavement design should be re-evaluated.
8.9. **Pre-Construction Meeting**

We recommend that a pre-construction meeting be held prior to commencement of grading. The owner or his representative, the agency representatives, the architect, the civil engineer, Ninyo & Moore, and the contractor should be in attendance to discuss the plans, the project, and the proposed construction schedule.

8.10. **Plan Review and Construction Observations**

The conclusions and recommendations presented in this report are based on analysis of observed conditions in widely spaced exploratory borings. If conditions are found to vary from those described in this report, Ninyo & Moore should be notified, and additional recommendations will be provided upon request. Ninyo & Moore should review the final project drawings and specifications prior to the commencement of construction. Ninyo & Moore should perform the needed observation and testing services during construction operations.

The recommendations provided in this report are based on the assumption that Ninyo & Moore will provide geotechnical observation and testing services during construction. In the event that it is decided not to utilize the services of Ninyo & Moore during construction, we request that the selected consultant provide the client with a letter (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore’s recommendations, and that they are in full agreement with the design parameters and recommendations contained in this report. Construction of proposed improvements should be performed by qualified subcontractors utilizing appropriate techniques and construction materials.

9. **LIMITATIONS**

The field evaluation, laboratory testing, and geotechnical analyses presented in this geotechnical report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and
conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified, and additional recommendations, if warranted, will be provided upon request. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no controls.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties’ sole risk.
10. REFERENCES


American Concrete Institute (ACI), 2005, Building Code Requirements for Structural Concrete (ACI 318-05) and Commentary (ACI 318R-05).


Blake, T.F., 20001, FRISKSP (Version 4.00) A Computer Program for the Probabilistic Estimation of Peak Acceleration and Uniform Hazard Spectra Using 3-D Faults as Earthquake Sources.


California Department of Transportation (Caltrans), 2003, Corrosion Guidelines, Version 1.0, Division of Engineering Services, Materials Engineering and Testing Services, Corrosion Technology Branch: dated September.


Mualchin, L., 1996, California Seismic Hazard Map, 1996, Based on Maximum Credible Earthquakes (MCE): California Department of Transportation (Caltrans).

Ninyo & Moore, In-house proprietary information.


United States Geological Survey, 1968 (Photorevised 1975), Valley Center Quadrangle-California, Escondido: 7.5 Minute Series (Topographic): Scale 1" = 2,000'.


<table>
<thead>
<tr>
<th>Source</th>
<th>AERIAL PHOTOGRAPHS</th>
<th>Date</th>
<th>Flight</th>
<th>Numbers</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Department of Agriculture</td>
<td>April 14, 1953</td>
<td>AXN-10M</td>
<td>85 and 86</td>
<td>1:20,000</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX A

FIELD SAMPLING PROCEDURES AND BORING LOGS

Field Procedure for the Collection of Disturbed Samples
Disturbed soil samples were obtained in the field using the following methods.

Bulk Samples
Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

The Standard Penetration Test (SPT) Sampler
Disturbed drive samples of earth materials were obtained by means of a Standard Penetration Test sampler. The sampler is composed of a split barrel with an external diameter of 2 inches and an unlined internal diameter of 1-3/8 inches. The sampler was driven into the ground 12 to 18 inches with a 140-pound hammer free-falling from a height of 30 inches in general accordance with ASTM D 1586. The blow counts were recorded for every 6 inches of penetration; the blow counts reported on the logs are those for the last 12 inches of penetration. Soil samples were observed and removed from the sampler, bagged, sealed and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples
Relatively undisturbed soil samples were obtained in the field using the following methods.

The Modified Split-Barrel Drive Sampler
The sampler, with an external diameter of 3.0 inches, was lined with 1-inch long, thin brass rings with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer, and the number of blows per foot of driving are presented on the boring logs as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass rings, sealed, and transported to the laboratory for testing.
<table>
<thead>
<tr>
<th>DEPTH (ft)</th>
<th>SAMPLES</th>
<th>BLOWS/FOOT</th>
<th>MOISTURE (%)</th>
<th>DRY DENSITY (pcf)</th>
<th>SYMBOL</th>
<th>CLASSIFICATION U.S.C.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Bulk sample.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Modified split-barrel drive sampler.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No recovery with modified split-barrel drive sampler.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sample retained by others.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Standard Penetration Test (SPT).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No recovery with a SPT.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No recovery with Shelby tube sampler.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Continuous Push Sample.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Seepage.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Groundwater encountered during drilling.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Groundwater measured after drilling.</td>
</tr>
</tbody>
</table>

**SM ALLUVIUM:**
- Solid line denotes unit change.
- Dashed line denotes material change.

**Attitudes:** Strike/Dip
- b: Bedding
- c: Contact
- j: Joint
- f: Fracture
- F: Fault
- cs: Clay Seam
- s: Shear
- bss: Basal Slide Surface
- sf: Shear Fracture
- sz: Shear Zone
- sbs: Sheared Bedding Surface

The total depth line is a solid line that is drawn at the bottom of the boring.
### U.S.C.S. Method of Soil Classification

<table>
<thead>
<tr>
<th>Major Divisions</th>
<th>Symbol</th>
<th>Typical Names</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coarse-Grained Soils</strong> (More than 1/2 of soil &gt; No. 200 sieve size)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gravels (More than 1/2 of coarse fraction &gt; No. 4 sieve size)</td>
<td>GW</td>
<td>Well graded gravels or gravel-sand mixtures, little or no fines</td>
</tr>
<tr>
<td></td>
<td>GP</td>
<td>Poorly graded gravels or gravel-sand mixtures, little or no fines</td>
</tr>
<tr>
<td></td>
<td>GM</td>
<td>Silty gravels, gravel-sand-silt mixtures</td>
</tr>
<tr>
<td></td>
<td>GC</td>
<td>Clayey gravels, gravel-sand-clay mixtures</td>
</tr>
<tr>
<td>Sands (More than 1/2 of coarse fraction &lt; No. 4 sieve size)</td>
<td>SW</td>
<td>Well graded sands or gravelly sands, little or no fines</td>
</tr>
<tr>
<td></td>
<td>SP</td>
<td>Poorly graded sands or gravelly sands, little or no fines</td>
</tr>
<tr>
<td></td>
<td>SM</td>
<td>Silty sands, sand-silt mixtures</td>
</tr>
<tr>
<td></td>
<td>SC</td>
<td>Clayey sands, sand-clay mixtures</td>
</tr>
<tr>
<td><strong>Fine-Grained Soils</strong> (More than 1/2 of soil &gt; No. 200 sieve size)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silts &amp; Clays Liquid Limit &lt;50</td>
<td>ML</td>
<td>Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with</td>
</tr>
<tr>
<td></td>
<td>CL</td>
<td>Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean</td>
</tr>
<tr>
<td></td>
<td>OL</td>
<td>Organic silts and organic silty clays of low plasticity</td>
</tr>
<tr>
<td>Silts &amp; Clays Liquid Limit &gt;50</td>
<td>MH</td>
<td>Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts</td>
</tr>
<tr>
<td></td>
<td>CH</td>
<td>Inorganic clays of high plasticity, fat clays</td>
</tr>
<tr>
<td></td>
<td>OH</td>
<td>Organic clays of medium to high plasticity, organic silty clays, organic silts</td>
</tr>
<tr>
<td>Highly Organic Soils</td>
<td>P1</td>
<td>Peat and other highly organic soils</td>
</tr>
</tbody>
</table>

#### Grain Size Chart

<table>
<thead>
<tr>
<th>Classification</th>
<th>Range of Grain Size</th>
<th>U.S. Standard Sieve Size</th>
<th>Grain Size in Millimeters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boulders</td>
<td>Above 12&quot;</td>
<td>Above 305</td>
<td></td>
</tr>
<tr>
<td>Cobble</td>
<td>12&quot; to 3&quot;</td>
<td>305 to 762</td>
<td></td>
</tr>
<tr>
<td>Gravel Coarse</td>
<td>3&quot; to No. 4</td>
<td>76.2 to 4.76</td>
<td></td>
</tr>
<tr>
<td>Gravel Fine</td>
<td>3&quot; to No. 4/4&quot;</td>
<td>76.2 to 19.1</td>
<td></td>
</tr>
<tr>
<td>Gravel 3/4&quot; to 3&quot;</td>
<td>No. 4 to No. 4</td>
<td>19.1 to 4.76</td>
<td></td>
</tr>
<tr>
<td>Sand Coarse</td>
<td>No. 4 to No. 200</td>
<td>4.76 to 0.075</td>
<td></td>
</tr>
<tr>
<td>Sand Medium</td>
<td>No. 4 to No. 10</td>
<td>4.76 to 2.00</td>
<td></td>
</tr>
<tr>
<td>Sand Fine</td>
<td>No. 10 to No. 40</td>
<td>2.00 to 0.420</td>
<td></td>
</tr>
<tr>
<td>Sand Fine No. 40 to No. 200</td>
<td>0.420 to 0.075</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silt &amp; Clay</td>
<td>Below No. 200</td>
<td>Below 0.075</td>
<td></td>
</tr>
</tbody>
</table>

#### Plasticity Chart
<table>
<thead>
<tr>
<th>DEPTH (feet)</th>
<th>Bulk Driven</th>
<th>SAMPLES</th>
<th>BLOWSFoot</th>
<th>MOISTURE (%)</th>
<th>DRY DENSITY (pcf)</th>
<th>SYMBOL</th>
<th>CLASSIFICATION US.C.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SM</td>
<td>FILL: Dark brown, damp to moist, medium dense, silty fine SAND; micaceous.</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SM</td>
<td>ALLUVIUM: Brown, damp, medium dense, silty fine SAND; slightly micaceous.</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slightly reddish brown; loose; fine- to medium-grained; more silt.</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ML</td>
<td>Dark brown, moist to saturated, loose to medium dense, fine sandy SILT; trace clay; micaceous.</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DATE DRILLED**: 4/24/08  
**BORING NO.**: B-1  
**GROUND ELEVATION**: 710' ± (MSL)  
**SHEET**: 1 OF 4  
**METHOD OF DRILLING**: 8" Diameter Hollow-Stem Auger (Tri-County) (Diedrich D-120)  
**DRIVE WEIGHT**: 140 Lbs. (Auto-Trip Hammer)  
**DROP**: 30"  
**SAMPLED BY**: MJBRDH  
**LOGGED BY**: MJBRDH  
**REVIEWED BY**: RI  

**DESCRIPTION/INTERPRETATION**
SM

ALLUVIUM: (Continued)
Mottled dark brown, reddish brown and brown, saturated, medium dense, silty fine SAND; micaceous; friable.

SM+ML

Mottled brown to dark brown, saturated, loose, silty fine SAND interlayered with dark brown to gray mottled with brown, firm, saturated, clayey SILT; micaceous.

1-inch thick layer of poorly graded medium to coarse sand; medium dense.
<table>
<thead>
<tr>
<th>DEPTH (feet)</th>
<th>Bulk Driven</th>
<th>SAMPLES</th>
<th>BLOWS/FOOT</th>
<th>MOISTURE (%)</th>
<th>DRY DENSITY (pcf)</th>
<th>SYMBOL</th>
<th>CLASSIFICATION U.S.C.S.</th>
<th>DATE DRILLED</th>
<th>BORING NO.</th>
<th>GROUND ELEVATION</th>
<th>METHOD OF DRILLING</th>
<th>DRIVE WEIGHT</th>
<th>DROP</th>
<th>SAMPLED BY</th>
<th>LOGGED BY</th>
<th>REVIEWED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>SM+ML</td>
<td>4/24/08</td>
<td>B-1</td>
<td>710' ± (MSL)</td>
<td>8&quot; Diameter Hollow-Stem Auger (Tri-County) (Diedrich D-120)</td>
<td>140 Lbs. (Auto-Trip Hammer)</td>
<td>30&quot;</td>
<td>MJB/RDH</td>
<td>MJB/RDH</td>
<td>RI</td>
</tr>
<tr>
<td>45</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>ALLUVIUM: (Continued)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Mottled brown to dark brown, saturated, medium dense, silty fine SAND interlayered with dark brown to gray mottled with brown, very stiff, saturated, clayey SILT; micaceous.</td>
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<tr>
<td>50</td>
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<td></td>
<td></td>
<td></td>
<td>SW-SM</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gray to dark gray, saturated, medium dense, well graded fine to coarse SAND; with silt; micaceous.</td>
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</tr>
</tbody>
</table>

**BORING LOG**

EL NORTE PARKWAY BRIDGE WIDENING
ESCONDIDO, CALIFORNIA

<table>
<thead>
<tr>
<th>PROJECT NO</th>
<th>DATE</th>
<th>FIGURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>106324001</td>
<td>5/08</td>
<td>A-3</td>
</tr>
</tbody>
</table>
60

SW-SM

ALLUVIUM: (Continued)
Gray to dark gray, saturated, medium dense, well graded fine to coarse SAND; with silt; micaceous.

Tan and gray; dense; 1.5-inch thick layer of silty fine sand; micaceous.

Difficult drilling.

GRANITIC ROCK:
Reddish brown, saturated, weathered GRANITIC ROCK; refusal to further sampling.
Total Depth = 68.5 feet.
Groundwater was measured at a depth of approximately 16 feet in the borehole during drilling.
Backfilled with bentonite grout shortly after drilling on 4/24/08.

Note: Groundwater may rise to a level higher than that measured in the borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
### Boring Log

**Description/Interpretation**

- **Asphaltic Concrete:**
  - Approximately 3 inches thick.

- **Fill:**
  - Reddish brown, damp, medium dense, silty Sand.

- **Alluvium:**
  - Dark brown, damp, loose to medium dense, silty fine Sand.

---

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Blows/foot</th>
<th>Moisture (%)</th>
<th>Dry Density (PCF)</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>14</td>
<td>9.4</td>
<td>109.9</td>
<td>SM</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>3.1</td>
<td>106.2</td>
<td>SM</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
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</tr>
</tbody>
</table>

Dark brown to brown; loose; silty fine to coarse sand; scattered fine gravel; micaceous.
<table>
<thead>
<tr>
<th>DEPTH (feet)</th>
<th>SAMPLES</th>
<th>BLOWS/FOOT</th>
<th>MOISTURE (%)</th>
<th>DRY DENSITY (PCF)</th>
<th>SYMBOL</th>
<th>CLASSIFICATION</th>
<th>U.S.C.S.</th>
<th>DESCRIPTION/INTERPRETATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td></td>
<td></td>
<td>23.5</td>
<td>99.3</td>
<td>SM</td>
<td>ALLUVIUM: (Continued) Brown, saturated, medium dense, silty SAND; micaeous.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>30</td>
<td>7</td>
<td>23.6</td>
<td>106.5</td>
<td></td>
<td>SM+ML</td>
<td>Brown, saturated, loose, silty SAND interlayered with dark gray, saturated, sandy SILT.</td>
<td></td>
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</tr>
<tr>
<td>35</td>
<td></td>
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</table>

**DATE DRILLED:** 4/28/08  **BORING NO.:** B-2

**GROUND ELEVATION:** 710' ± (MSL)  **SHEET: 2 OF 4**

**METHOD OF DRILLING:** 8" Diameter Hollow-Stem Auger (Tri-County) (Diedrich D-120)

**DRIVE WEIGHT:** 140 Lbs. (Auto-Trip Hammer)  **DROP:** 30"
SM+ML

ALLUVIUM: (Continued)
Dark gray, saturated, medium dense, silty SAND interlayered with firm, sandy SILT.
<table>
<thead>
<tr>
<th>DEPTH (feet)</th>
<th>BULK</th>
<th>SAMPLES</th>
<th>MOISTURE (%)</th>
<th>DRY DENSITY (pcf)</th>
<th>SYMBOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SP</td>
</tr>
<tr>
<td>65</td>
<td></td>
<td></td>
<td>17.6</td>
<td>113.3</td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>50/5&quot;</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
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<td></td>
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<td>80</td>
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</table>

**DATE DRILLED**: 4/28/08  
**BORING NO.**: B-2  
**GROUND ELEVATION**: 710' ± (MSL)  
**METHOD OF DRILLING**: 8" Diameter Hollow-Stem Auger (Tri-County) (Diedrich D-120)  
**DRIVE WEIGHT**: 140 Lbs. (Auto-Trip Hammer)  
**DROP**: 30°  
**SAMPLED BY**: BTM  
**LOGGED BY**: BTM  
**REVIEWED BY**: RJ  

**DESCRIPTION/INTERPRETATION**

**ALLUVIUM**: (Continued)
Brown, saturated, medium dense, slightly silty SAND; micaceous.

**GRANITIC ROCK**:  
Mottled light reddish brown to dark brown, saturated, weathered GRANITIC ROCK; difficult drilling.

Total Depth = 70.4 feet.
Groundwater was measured at a depth of approximately 16 feet in the borehole during drilling.
Backfilled with approximately 24 cubic feet of bentonite grout shortly after drilling and capped with concrete on 4/28/08.

**Note**: Groundwater may rise to a level higher than that measured in the borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
APPENDIX B

LABORATORY TESTING

Classification
Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in general accordance with ASTM D 2488-00. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density Tests
The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in general accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis
Gradation analysis tests were performed on selected representative soil samples in general accordance with ASTM D 422. The grain-size distribution curves are shown on Figures B-1 through B-7. These test results were utilized in evaluating the soil classifications in accordance with the USCS.

Consolidation Tests
Consolidation tests were performed on a relatively undisturbed soil sample in general accordance with ASTM D 2435. The sample was inundated during testing to represent adverse field conditions. The percent of consolidation for each load cycle was recorded as a ratio of the amount of vertical compression to the original height of the sample. The results of the test are summarized on Figure B-8.

Direct Shear Tests
Direct shear tests were performed on a relatively undisturbed sample in general accordance with ASTM D 3080 to evaluate the shear strength characteristics of selected materials. The sample was inundated during shearing to represent adverse field conditions. The results are shown on Figure B-9.

Soil Corrosivity Tests
Soil pH, and electrical resistivity tests were performed on a representative sample in general accordance with California Test (CT) 643. The chloride content was evaluated in general accordance with CT 422. The sulfate content was evaluated in general accordance with CT 417. The test results are presented on Figure B-10.

R-Value
The resistance value, or R-value, for site soils was evaluated in general accordance with California Test (CT) 301. Samples were prepared and evaluated for exudation pressure and expansion pressure. The equilibrium R-value is reported as the lesser or more conservative of the two calculated results. The test results are shown on Figure B-11.
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
U.S. STANDARD SIEVE NUMBERS

<table>
<thead>
<tr>
<th>GRAVEL</th>
<th>SAND</th>
<th>FINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse</td>
<td>Fine</td>
<td>Coarse</td>
</tr>
</tbody>
</table>

GRAIN SIZE IN MILLIMETERS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Sample Location</th>
<th>Depth (ft)</th>
<th>Liquid Limit</th>
<th>Plastic Limit</th>
<th>Plasticity Index</th>
<th>D₉₀</th>
<th>D₆₀</th>
<th>D₃₀</th>
<th>Cₙ</th>
<th>Cₛ</th>
<th>Cₜ</th>
<th>Passing No. 200 (%)</th>
<th>USCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• B-1</td>
<td>10.0-11.5</td>
<td>--</td>
<td>--</td>
<td>--</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>39</td>
<td>SM</td>
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</table>

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
<table>
<thead>
<tr>
<th>GRAVEL</th>
<th>SAND</th>
<th>FINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coarse</td>
<td>Fine</td>
<td>Coarse</td>
</tr>
</tbody>
</table>

**U.S. STANDARD SIEVE NUMBERS**

<table>
<thead>
<tr>
<th>PERCENT FINER BY WEIGHT</th>
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<th>90.0</th>
<th>80.0</th>
<th>70.0</th>
<th>60.0</th>
<th>50.0</th>
<th>40.0</th>
<th>30.0</th>
<th>20.0</th>
<th>10.0</th>
<th>1.0</th>
<th>0.1</th>
<th>0.01</th>
<th>0.001</th>
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</table>

**HYDROMETER**

**GRAIN SIZE IN MILLIMETERS**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Sample Location</th>
<th>Depth Limit (ft)</th>
<th>Liquid Limit</th>
<th>Plastic Limit</th>
<th>Plasticity Index</th>
<th>D_{10}</th>
<th>D_{30}</th>
<th>D_{60}</th>
<th>C_{u}</th>
<th>C_{c}</th>
<th>Passing No. 200 (%)</th>
<th>USCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>B-2</td>
<td>10.0-14.0</td>
<td>--</td>
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<td>--</td>
<td>--</td>
<td>33</td>
<td>SM</td>
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</tbody>
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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422-63 (02)
### CONSOLIDATION TEST RESULTS

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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2435-04

**Figure B-8**

- **Seating Cycle**
- **Loading Prior to Inundation**
- **Loading After Inundation**
- **Rebound Cycle**

- **Sample Location**: B-2
- **Depth (ft.)**: 20.0-21.5
- **Soil Type**: SM

**Ninyo & Moore**

**EL NORTE PARKWAY BRIDGE WIDENING**

**ESCONDIDO, CALIFORNIA**

106324001 CONSOLIDATION D-2 @ 20.0-21.5.xls
PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 3080-04
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\(^1\) PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 643  
\(^2\) PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 417  
\(^3\) PERFORMED IN GENERAL ACCORDANCE WITH CALIFORNIA TEST METHOD 422
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PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 2844-01/CT 301
APPENDIX C

TYPICAL EARTHWORK GUIDELINES
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Figure D – Oversized Rock Placement Detail
TYPICAL EARTHWORK GUIDELINES

1. GENERAL
These guidelines and the standard details attached hereto are presented as general procedures for earthwork construction for sites having slopes less than 10 feet high. They are to be utilized in conjunction with the project grading plans. These guidelines are considered a part of the geotechnical report, but are superseded by recommendations in the geotechnical report in the case of conflict. Evaluations performed by the consultant during the course of grading may result in new recommendations which could supersede these specifications and/or the recommendations of the geotechnical report. It is the responsibility of the contractor to read and understand these guidelines as well as the geotechnical report and project grading plans.

1.1. The contractor shall not vary from these guidelines without prior recommendations by the geotechnical consultant and the approval of the client or the client’s authorized representative. Recommendations by the geotechnical consultant and/or client shall not be considered to preclude requirements for approval by the jurisdictional agency prior to the execution of any changes.

1.2. The contractor shall perform the grading operations in accordance with these specifications, and shall be responsible for the quality of the finished product notwithstanding the fact that grading work will be observed and tested by the geotechnical consultant.

1.3. It is the responsibility of the grading contractor to notify the geotechnical consultant and the jurisdictional agencies, as needed, prior to the start of work at the site and at any time that grading resumes after interruption. Each step of the grading operations shall be observed and documented by the geotechnical consultant and, where needed, reviewed by the appropriate jurisdictional agency prior to proceeding with subsequent work.

1.4. If, during the grading operations, geotechnical conditions are encountered which were not anticipated or described in the geotechnical report, the geotechnical consultant shall be notified immediately and additional recommendations, if applicable, may be provided.

1.5. An as-graded report shall be prepared by the geotechnical consultant and signed by a registered engineer and registered engineering geologist. The report documents the geotechnical consultants' observations, and field and laboratory test results, and provides conclusions regarding whether or not earthwork construction was performed in accordance with the geotechnical recommendations and the grading plans. Recom-
mendations for foundation design, pavement design, subgrade treatment, etc., may also be included in the as-graded report.

1.6. For the purpose of evaluating quantities of materials excavated during grading and/or locating the limits of excavations, a licensed land surveyor or civil engineer shall be retained.

1.7. Definitions of terms utilized in the remainder of these specifications have been provided in Section 11.

2. OBLIGATIONS OF PARTIES

The parties involved in the project's earthwork activities shall be responsible as outlined in the following sections.

2.1. The client is ultimately responsible for each of the aspects of the project. The client or the client's authorized representative has a responsibility to review the findings and recommendations of the geotechnical consultant. The client shall authorize the contractor and/or other consultants to perform work and/or provide services. During grading the client or the client's authorized representative shall remain on site or remain reasonably accessible to the concerned parties to make the decisions that may be needed to maintain the flow of the project.

2.2. The contractor is responsible for the safety of the project and satisfactory completion of grading and other associated operations, including, but not limited to, earthwork in accordance with the project plans, specifications, and jurisdictional agency requirements. During grading, the contractor or the contractor's authorized representative shall remain on site. The contractor shall further remain accessible during non-working hours, including at night and during days off.

2.3. The geotechnical consultant shall provide observation and testing services and shall make evaluations to advise the client on geotechnical matters. The geotechnical consultant shall report findings and recommendations to the client or the client's authorized representative.

2.4. Prior to proceeding with any grading operations, the geotechnical consultant shall be notified two working days in advance to schedule the needed observation and testing services.

2.4.1. Prior to any significant expansion or reduction in the grading operation, the geotechnical consultant shall be provided with two working days notice to make appropriate adjustments in scheduling of on-site personnel.
2.4.2. Between phases of grading operations, the geotechnical consultant shall be provided with two working days notice in advance of commencement of additional grading operations.

3. SITE PREPARATION

Site preparation shall be performed in accordance with the recommendations presented in the following sections.

3.1. The client, prior to any site preparation or grading, shall arrange and attend a pre-grading meeting between the grading contractor, the design engineer, the geotechnical consultant, and representatives of appropriate governing authorities, as well as any other involved parties. The parties shall be given two working days notice.

3.2. Clearing and grubbing shall consist of the substantial removal of vegetation, brush, grass, wood, stumps, trees, tree roots greater than ½-inch in diameter, and other deleterious materials from the areas to be graded. Clearing and grubbing shall extend to the outside of the proposed excavation and fill areas.

3.3. Demolition in the areas to be graded shall include removal of building structures, foundations, reservoirs, utilities (including underground pipelines, septic tanks, leach fields, seepage pits, cisterns, etc.), and other manmade surface and subsurface improvements, and the backfilling of mining shafts, tunnels, and surface depressions. Demolition of utilities shall include capping or rerouting of pipelines at the project perimeter, and abandonment of wells in accordance with the requirements of the governing authorities and the recommendations of the geotechnical consultant at the time of demolition.

3.4. The debris generated during clearing, grubbing and/or demolition operations shall be removed from areas to be graded and disposed of off site at a legal dump site. Clearing, grubbing, and demolition operations shall be performed under the observation of the geotechnical consultant.

3.5. The ground surface beneath proposed fill areas shall be stripped of loose or unsuitable soil. These soils may be used as compacted fill provided they are generally free of organic or other deleterious materials and evaluated for use by the geotechnical consultant. The resulting surface shall be evaluated by the geotechnical consultant prior to proceeding. The cleared, natural ground surface shall be scarified to a depth of approximately 8 inches, moisture conditioned, and compacted in accordance with the specifications presented in Section 5 of these guidelines.
4. REMOVALS AND EXCAVATIONS

Removals and excavations shall be performed as recommended in the following sections.

4.1. Removals

4.1.1. Materials which are considered unsuitable shall be excavated under the observation of the geotechnical consultant in accordance with the recommendations contained herein. Unsuitable materials include, but may not be limited to, dry, loose, soft, wet, organic, compressible natural soils, fractured, weathered, soft bedrock, and undocumented or otherwise deleterious fill materials.

4.1.2. Materials deemed by the geotechnical consultant to be unsatisfactory due to moisture conditions shall be excavated in accordance with the recommendations of the geotechnical consultant, watered or dried as needed, and mixed to a generally uniform moisture content in accordance with the specifications presented in Section 5 of this document.

4.2. Excavations

4.2.1. Temporary excavations no deeper than 5 feet in firm fill or natural materials may be made with vertical side slopes. To satisfy California Occupational Safety and Health Administration (CAL OSHA) requirements, any excavation deeper than 5 feet shall be shored or laid back at a 1:1 inclination or flatter, depending on material type, if construction workers are to enter the excavation.

5. COMPACTED FILL

Fill shall be constructed as specified below or by other methods recommended by the geotechnical consultant. Unless otherwise specified, fill soils shall be compacted to 90 percent relative compaction, as evaluated in accordance with ASTM Test Method D 1557.

5.1. Prior to placement of compacted fill, the contractor shall request an evaluation of the exposed ground surface by the geotechnical consultant. Unless otherwise recommended, the exposed ground surface shall then be scarified to a depth of approximately 8 inches and watered or dried, as needed, to achieve a generally uniform moisture content at or near the optimum moisture content. The scarified materials shall then be compacted to 90 percent relative compaction. The evaluation of compaction by the geotechnical consultant shall not be considered to preclude any requirements for observation or approval by governing agencies. It is the contractor’s responsibility to notify the geotechnical consultant and the appropriate governing agency when project areas are ready for observation, and to provide reasonable time for that review.
5.2. Excavated on-site materials which are in general compliance with the recommendations of the geotechnical consultant may be utilized as compacted fill provided they are generally free of organic or other deleterious materials and do not contain rock fragments greater than 6 inches in dimension. During grading, the contractor may encounter soil types other than those analyzed during the preliminary geotechnical study. The geotechnical consultant shall be consulted to evaluate the suitability of any such soils for use as compacted fill.

5.3. Where imported materials are to be used on site, the geotechnical consultant shall be notified three working days in advance of importation in order that it may sample and test the materials from the proposed borrow sites. No imported materials shall be delivered for use on site without prior sampling, testing, and evaluation by the geotechnical consultant.

5.4. Soils imported for on-site use shall preferably have very low to low expansion potential (based on UBC Standard 18-2 test procedures). Lots on which expansive soils may be exposed at grade shall be undercut 3 feet or more and capped with very low to low expansion potential fill. Details of the undercutting are provided in the Transition and Undercut Lot Details, Figure B of these guidelines. In the event expansive soils are present near the ground surface, special design and construction considerations shall be utilized in general accordance with the recommendations of the geotechnical consultant.

5.5. Fill materials shall be moisture conditioned to near optimum moisture content prior to placement. The optimum moisture content will vary with material type and other factors. Moisture conditioning of fill soils shall be generally uniform in the soil mass.

5.6. Prior to placement of additional compacted fill material following a delay in the grading operations, the exposed surface of previously compacted fill shall be prepared to receive fill. Preparation may include scarification, moisture conditioning, and recompaction.

5.7. Compacted fill shall be placed in horizontal lifts of approximately 8 inches in loose thickness. Prior to compaction, each lift shall be watered or dried as needed to achieve near optimum moisture condition, mixed, and then compacted by mechanical methods, using sheepsfoot rollers, multiple-wheel pneumatic-tired rollers, or other appropriate compacting rollers, to the specified relative compaction. Successive lifts shall be treated in a like manner until the desired finished grades are achieved.

5.8. Fill shall be tested in the field by the geotechnical consultant for evaluation of general compliance with the recommended relative compaction and moisture conditions. Field density testing shall conform to ASTM D 1556-00 (Sand Cone method), D 2937-00 (Drive-Cylinder method), and/or D 2922-96 and D 3017-96 (Nuclear Gauge method). Generally, one test shall be provided for approximately every 2 vertical feet of fill placed, or for approximately every 1000 cubic yards of fill placed. In
addition, on slope faces one or more tests shall be taken for approximately every 10,000 square feet of slope face and/or approximately every 10 vertical feet of slope height. Actual test intervals may vary as field conditions dictate. Fill found to be out of conformance with the grading recommendations shall be removed, moisture conditioned, and compacted or otherwise handled to accomplish general compliance with the grading recommendations.

5.9. The contractor shall assist the geotechnical consultant by excavating suitable test pits for removal evaluation and/or for testing of compacted fill.

5.10. At the request of the geotechnical consultant, the contractor shall “shut down” or restrict grading equipment from operating in the area being tested to provide adequate testing time and safety for the field technician.

5.11. The geotechnical consultant shall maintain a map with the approximate locations of field density tests. Unless the client provides for surveying of the test locations, the locations shown by the geotechnical consultant will be estimated. The geotechnical consultant shall not be held responsible for the accuracy of the horizontal or vertical locations or elevations.

5.12. Grading operations shall be performed under the observation of the geotechnical consultant. Testing and evaluation by the geotechnical consultant does not preclude the need for approval by or other requirements of the jurisdictional agencies.

5.13. Fill materials shall not be placed, spread or compacted during unfavorable weather conditions. When work is interrupted by heavy rains, the filling operation shall not be resumed until tests indicate that moisture content and density of the fill meet the project specifications. Regrading of the near-surface soil may be needed to achieve the specified moisture content and density.

5.14. Upon completion of grading and termination of observation by the geotechnical consultant, no further filling or excavating, including that planned for footings, foundations, retaining walls or other features, shall be performed without the involvement of the geotechnical consultant.

5.15. Fill placed in areas not previously viewed and evaluated by the geotechnical consultant may have to be removed and recompacted at the contractor's expense. The depth and extent of removal of the unobserved and undocumented fill will be decided based upon review of the field conditions by the geotechnical consultant.

5.16. Off-site fill shall be treated in the same manner as recommended in these specifications for on-site fills. Off-site fill subdrains temporarily terminated (up gradient) shall be surveyed for future locating and connection.
6. OVERSIZED MATERIAL

Oversized material shall be placed in accordance with the following recommendations.

6.1. During the course of grading operations, rocks or similar irreducible materials greater than 6 inches in dimension (oversized material) may be generated. These materials shall not be placed within the compacted fill unless placed in general accordance with the recommendations of the geotechnical consultant.

6.2. Where oversized rock (greater than 6 inches in dimension) or similar irreducible material is generated during grading, it is recommended, where practical, to waste such material off site, or on site in areas designated as “nonstructural rock disposal areas.” Rock designated for disposal areas shall be placed with sufficient sandy soil to generally fill voids. The disposal area shall be capped with a 5-foot thickness of fill which is generally free of oversized material.

6.3. Rocks 6 inches in dimension and smaller may be utilized within the compacted fill, provided they are placed in such a manner that nesting of rock is not permitted. Fill shall be placed and compacted over and around the rock. The amount of rock greater than 3/4-inch in dimension shall generally not exceed 40 percent of the total dry weight of the fill mass, unless the fill is specially designed and constructed as a “rock fill.”

6.4. Rocks or similar irreducible materials greater than 6 inches but less than 4 feet in dimension generated during grading may be placed in windrows and capped with finer materials in accordance with the recommendations of the geotechnical consultant, the approval of the governing agencies, and the Oversized Rock Placement Detail, Figure D, of these guidelines. Selected native or imported granular soil (Sand Equivalent of 30 or higher) shall be placed and flooded over and around the windrowed rock such that voids are filled. Windrows of oversized materials shall be staggered so that successive windrows of oversized materials are not in the same vertical plane. Rocks greater than 4 feet in dimension shall be broken down to 4 feet or smaller before placement, or they shall be disposed of off site.
7. SLOPES

The following sections provide recommendations for cut and fill slopes.

7.1. Cut Slopes

7.1.1. The geotechnical consultant shall observe cut slopes during excavation. The geotechnical consultant shall be notified by the contractor prior to beginning slope excavations.

7.1.2. If, during the course of grading, adverse or potentially adverse geotechnical conditions are encountered in the slope which were not anticipated in the preliminary evaluation report, the geotechnical consultant shall evaluate the conditions and provide appropriate recommendations.

7.2. Fill Slopes

7.2.1. When placing fill on slopes steeper than 5:1 (horizontal:vertical), topsoil, slope wash, colluvium, and other materials deemed unsuitable shall be removed. Near-horizontal keys and near-vertical benches shall be excavated into sound bedrock or firm fill material, in accordance with the recommendation of the geotechnical consultant. Keying and benching shall be accomplished. Compacted fill shall not be placed in an area subsequent to keying and benching until the area has been observed by the geotechnical consultant. Where the natural gradient of a slope is less than 5:1, benching is generally not recommended. However, fill shall not be placed on compressible or otherwise unsuitable materials left on the slope face.

7.2.2. Within a single fill area where grading procedures dictate two or more separate fills, temporary slopes (false slopes) may be created. When placing fill adjacent to a temporary slope, benching shall be conducted in the manner described in Section 7.2.1. A 3-foot or higher near-vertical bench shall be excavated into the documented fill prior to placement of additional fill.

7.2.3. Unless otherwise recommended by the geotechnical consultant and accepted by the Building Official, permanent fill slopes shall not be steeper than 2:1 (horizontal:vertical). The height of a fill slope shall be evaluated by the geotechnical consultant.

7.2.4. Unless specifically recommended otherwise, compacted fill slopes shall be overbuilt and cut back to grade, exposing firm compacted fill. The actual amount of overbuilding may vary as field conditions dictate. If the desired results are not achieved, the existing slopes shall be overexcavated and reconstructed in accordance with the recommendations of the geotechnical consultant. The degree of overbuilding may be increased until the desired
compacted slope face condition is achieved. Care shall be taken by the contractor to provide mechanical compaction as close to the outer edge of the overbuilt slope surface as practical.

7.2.5. If access restrictions, property line location, or other constraints limit overbuilding and cutting back of the slope face, an alternative method for compaction of the slope face may be attempted by conventional construction procedures including backrolling at intervals of 4 feet or less in vertical slope height, or as dictated by the capability of the available equipment, whichever is less. Fill slopes shall be backrolled utilizing a conventional sheep’s foot-type roller. Care shall be taken to maintain the specified moisture conditions and/or reestablish the same, as needed, prior to backrolling.

7.2.6. The placement, moisture conditioning and compaction of fill slope materials shall be done in accordance with the recommendations presented in Section 5 of these guidelines.

7.2.7. The contractor shall be ultimately responsible for placing and compacting the soil out to the slope face to obtain a relative compaction of 90 percent as evaluated by ASTM D1557 and a moisture content in accordance with Section 5. The geotechnical consultant shall perform field moisture and density tests at intervals of one test for approximately every 10,000 square feet of slope.

7.2.8. Backdrains shall be provided in fill as recommended by the geotechnical consultant.

7.3. Top-of-Slope Drainage

7.3.1. For pad areas above slopes, positive drainage shall be established away from the top of slope. This may be accomplished utilizing a berm and pad gradient of 2 percent or steeper at the top-of-slope areas. Site runoff shall not be permitted to flow over the tops of slopes.

7.3.2. Gunite-lined brow ditches shall be placed at the top of cut slopes to redirect surface runoff away from the slope face where drainage devices are not otherwise provided.

7.4. Slope Maintenance

7.4.1. In order to enhance surficial slope stability, slope planting shall be accomplished at the completion of grading. Slope plants shall consist of deep-rooting, variable root depth, drought-tolerant vegetation. Native vegetation is generally desirable. Plants native to semiarid and arid areas may also be appropriate. Large-leaved ice plant should not be used on slopes. A landscape
architect shall be consulted regarding the actual types of plants and planting configuration to be used.

7.4.2. Irrigation pipes shall be anchored to slope faces and not placed in trenches excavated into slope faces. Slope irrigation shall be maintained at a level just sufficient to support plant growth. Property owners shall be made aware that over watering of slopes is detrimental to slope stability. Slopes shall be monitored regularly and broken sprinkler heads and/or pipes shall be repaired immediately.

7.4.3. Periodic observation of landscaped slope areas shall be planned and appropriate measures taken to enhance growth of landscape plants.

7.4.4. Graded swales at the top of slopes and terrace drains shall be installed and the property owners notified that the drains shall be periodically checked so that they may be kept clear. Damage to drainage improvements shall be repaired immediately. To reduce siltation, terrace drains shall be constructed at a gradient of 3 percent or steeper, in accordance with the recommendations of the project civil engineer.

7.4.5. If slope failures occur, the geotechnical consultant shall be contacted immediately for field review of site conditions and development of recommendations for evaluation and repair.

8. TRENCH BACKFILL

The following sections provide recommendations for backfilling of trenches.

8.1. Trench backfill shall consist of granular soils (bedding) extending from the trench bottom to 1 foot or more above the pipe. On-site or imported fill which has been evaluated by the geotechnical consultant may be used above the granular backfill. The cover soils directly in contact with the pipe shall be classified as having a very low expansion potential, in accordance with UBC Standard 18-2, and shall contain no rocks or chunks of hard soil larger than 3/4-inch in diameter.

8.2. Trench backfill shall, unless otherwise recommended, be compacted by mechanical means to 90 percent relative compaction as evaluated by ASTM D 1557. Backfill soils shall be placed in loose lifts 8-inches thick or thinner, moisture conditioned, and compacted in accordance with the recommendations of Section 5. of these guidelines. The backfill shall be tested by the geotechnical consultant at vertical intervals of approximately 2 feet of backfill placed and at spacings along the trench of approximately 100 feet in the same lift.
8.3. Jetting of trench backfill materials is generally not a recommended method of densification, unless the on-site soils are sufficiently free-draining and provisions have been made for adequate dissipation of the water utilized in the jetting process.

8.4. If it is decided that jetting may be utilized, granular material with a sand equivalent greater than 30 shall be used for backfilling in the areas to be jetted. Jetting shall generally be considered for trenches 2 feet or narrower in width and 4 feet or shallower in depth. Following jetting operations, trench backfill shall be mechanically compacted to the specified compaction to finish grade.

8.5. Trench backfill which underlies the zone of influence of foundations shall be mechanically compacted to 90 percent or greater relative compaction, as evaluated by ASTM D 1557-02. The zone of influence of the foundations is generally defined as the roughly triangular area within the limits of a 1:1 (horizontal:vertical) projection from the inner and outer edges of the foundation, projected down and out from both edges.

8.6. Trench backfill within slab areas shall be compacted by mechanical means to a relative compaction of 90 percent, as evaluated by ASTM D 1557. For minor interior trenches, density testing may be omitted or spot testing may be performed, as deemed appropriate by the geotechnical consultant.

8.7. When compacting soil in close proximity to utilities, care shall be taken by the grading contractor so that mechanical methods used to compact the soils do not damage the utilities. If the utility contractors indicate that it is undesirable to use compaction equipment in close proximity to a buried conduit, then the grading contractor may elect to use light mechanical compaction equipment or, with the approval of the geotechnical consultant, cover the conduit with clean granular material. These granular materials shall be jetted in place to the top of the conduit in accordance with the recommendations of Section 8.4 prior to initiating mechanical compaction procedures. Other methods of utility trench compaction may also be appropriate, upon review by the geotechnical consultant and the utility contractor, at the time of construction.

8.8. Clean granular backfill and/or bedding materials are not recommended for use in slope areas unless provisions are made for a drainage system to mitigate the potential for buildup of seepage forces or piping of backfill materials.

8.9. The contractor shall exercise the specified safety precautions, in accordance with OSHA Trench Safety Regulations, while conducting trenching operations. Such precautions include shoring or laying back trench excavations at 1:1 or flatter, depending on material type, for trenches in excess of 5 feet in depth. The geotechnical consultant is not responsible for the safety of trench operations or stability of the trenches.
9. DRAINAGE

The following sections provide recommendations pertaining to site drainage.

9.1. Roof, pad, and slope drainage shall be such that it is away from slopes and structures to suitable discharge areas by nonerodible devices (e.g., gutters, downspouts, concrete swales, etc.).

9.2. Positive drainage adjacent to structures shall be established and maintained. Positive drainage may be accomplished by providing drainage away from the foundations of the structure at a gradient of 2 percent or steeper for a distance of 5 feet or more outside the building perimeter, further maintained by a graded swale leading to an appropriate outlet, in accordance with the recommendations of the project civil engineer and/or landscape architect.

9.3. Surface drainage on the site shall be provided so that water is not permitted to pond. A gradient of 2 percent or steeper shall be maintained over the pad area and drainage patterns shall be established to remove water from the site to an appropriate outlet.

9.4. Care shall be taken by the contractor during grading to preserve any berms, drainage terraces, interceptor swales or other drainage devices of a permanent nature on or adjacent to the property. Drainage patterns established at the time of finish grading shall be maintained for the life of the project. Property owners shall be made very clearly aware that altering drainage patterns may be detrimental to slope stability and foundation performance.

10. SITE PROTECTION

The site shall be protected as outlined in the following sections.

10.1. Protection of the site during the period of grading shall be the responsibility of the contractor unless other provisions are made in writing and agreed upon among the concerned parties. Completion of a portion of the project shall not be considered to preclude that portion or adjacent areas from the need for site protection, until such time as the project is finished as agreed upon by the geotechnical consultant, the client, and the regulatory agency.

10.2. The contractor is responsible for the stability of temporary excavations. Recommendations by the geotechnical consultant pertaining to temporary excavations are made in consideration of stability of the finished project and, therefore, shall not be considered to preclude the responsibilities of the contractor. Recommendations by the geotechnical consultant shall also not be considered to preclude more restrictive requirements by the applicable regulatory agencies.
10.3. Precautions shall be taken during the performance of site clearing, excavation, and grading to protect the site from flooding, ponding, or inundation by surface runoff. Temporary provisions shall be made during the rainy season so that surface runoff is away from and off the working site. Where low areas cannot be avoided, pumps shall be provided to remove water as needed during periods of rainfall.

10.4. During periods of rainfall, plastic sheeting shall be used as needed to reduce the potential for unprotected slopes to become saturated. Where needed, the contractor shall install check dams, desilting basins, riprap, sandbags or other appropriate devices or methods to reduce erosion and provide recommended conditions during inclement weather.

10.5. During periods of rainfall, the geotechnical consultant shall be kept informed by the contractor of the nature of remedial or precautionary work being performed on site (e.g., pumping, placement of sandbags or plastic sheeting, other labor, dozing, etc.).

10.6. Following periods of rainfall, the contractor shall contact the geotechnical consultant and arrange a walk-over of the site in order to visually assess rain-related damage. The geotechnical consultant may also recommend excavation and testing in order to aid in the evaluation. At the request of the geotechnical consultant, the contractor shall make excavations in order to aid in evaluation of the extent of rain-related damage.

10.7. Rain- or irrigation-related damage shall be considered to include, but may not be limited to, erosion, silting, saturation, swelling, structural distress, and other adverse conditions noted by the geotechnical consultant. Soil adversely affected shall be classified as “Unsuitable Material” and shall be subject to overexcavation and replacement with compacted fill or to other remedial grading as recommended by the geotechnical consultant.

10.8. Relatively level areas where saturated soils and/or erosion gullies exist to depths greater than 1 foot shall be overexcavated to competent materials as evaluated by the geotechnical consultant. Where adverse conditions extend to less than 1 foot in depth, saturated and/or eroded materials may be processed in-place. Overexcavated or in-place processed materials shall be moisture conditioned and compacted in accordance with the recommendations provided in Section 5. If the desired results are not achieved, the affected materials shall be overexcavated, moisture conditioned, and compacted until the specifications are met.

10.9. Slope areas where saturated soil and/or erosion gullies exist to depths greater than 1 foot shall be overexcavated and replaced as compacted fill in accordance with the applicable specifications. Where adversely affected materials exist to depths of 1 foot or less below proposed finished grade, remedial grading by moisture conditioning in-place and compaction in accordance with the appropriate specifications may be attempted. If the desired results are not achieved, the affected materials shall be
overexcavated, moisture conditioned, and compacted until the specifications are met. As conditions dictate, other slope repair procedures may also be recommended by the geotechnical consultant.

10.10. During construction, the contractor shall grade the site to provide positive drainage away from structures and to keep water from ponding adjacent to structures. Water shall not be allowed to damage adjacent properties. Positive drainage shall be maintained by the contractor until permanent drainage and erosion reducing devices are installed in accordance with project plans.
11. DEFINITIONS OF TERMS

ALLUVIUM: Unconsolidated detrital deposits deposited by flowing water; includes sediments deposited in river beds, canyons, flood plains, lakes, fans at the foot of slopes, and in estuaries.

AS-GRADED (AS-BUILT): The site conditions upon completion of grading.

BACKCUT: A temporary construction slope at the rear of earth-retaining structures such as buttresses, shear keys, stabilization fills, or retaining walls.

BACKDRAIN: Generally a pipe-and-gravel or similar drainage system placed behind earth-retaining structures such as buttresses, stabilization fills, and retaining walls.

BEDROCK: Relatively undisturbed in-place rock, either at the surface or beneath surficial deposits of soil.

BENCH: A relatively level step and near-vertical riser excavated into sloping ground on which fill is to be placed.

BORROW (IMPORT): Any fill material hauled to the project site from off-site areas.

BUTTRESS FILL: A fill mass, the configuration of which is designed by engineering calculations, to retain slopes containing adverse geologic features. A buttress is generally specified by a key width and depth and by a backcut angle. A buttress normally contains a back drainage system.

CIVIL ENGINEER: The Registered Civil Engineer or consulting firm responsible for preparation of the grading plans and surveying, and evaluating as-graded topographic conditions.

CLIENT: The developer or a project-responsible authorized representative. The client has the responsibility of reviewing the findings and recommendations made by the geotechnical consultant and authorizing the contractor and/or other consultants to perform work and/or provide services.

COLLUVIUM: Generally loose deposits, usually found on the face or near the base of slopes and brought there chiefly by gravity through slow continuous downhill creep (see also Slope Wash).

COMPACTION: The densification of a fill by mechanical means.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTRACTOR:</td>
<td>A person or company under contract or otherwise retained by the client to perform demolition, grading, and other site improvements.</td>
</tr>
<tr>
<td>DEBRIS:</td>
<td>The products of clearing, grubbing, and/or demolition, or contaminated soil material unsuitable for reuse as compacted fill, and/or any other material so designated by the geotechnical consultant.</td>
</tr>
<tr>
<td>ENGINEERED FILL:</td>
<td>A fill which the geotechnical consultant or the consultant’s representative has observed and/or tested during placement, enabling the consultant to conclude that the fill has been placed in substantial compliance with the recommendations of the geotechnical consultant and the governing agency requirements.</td>
</tr>
<tr>
<td>ENGINEERING GEOLOGIST:</td>
<td>A geologist registered by the state licensing agency who applies geologic knowledge and principles to the exploration and evaluation of naturally occurring rock and soil, as related to the design of civil works.</td>
</tr>
<tr>
<td>EROSION:</td>
<td>The wearing away of the ground surface as a result of the movement of wind, water, and/or ice.</td>
</tr>
<tr>
<td>EXCAVATION:</td>
<td>The mechanical removal of earth materials.</td>
</tr>
<tr>
<td>EXISTING GRADE:</td>
<td>The ground surface configuration prior to grading; original grade.</td>
</tr>
<tr>
<td>FILL:</td>
<td>Any deposit of soil, rock, soil-rock blends, or other similar materials placed by man.</td>
</tr>
<tr>
<td>FINISH GRADE:</td>
<td>The as-graded ground surface elevation that conforms to the grading plan.</td>
</tr>
<tr>
<td>GEOFABRIC:</td>
<td>An engineering textile utilized in geotechnical applications such as subgrade stabilization and filtering.</td>
</tr>
<tr>
<td>GEOTECHNICAL CONSULTANT:</td>
<td>The geotechnical engineering and engineering geology consulting firm retained to provide technical services for the project. For the purpose of these specifications, observations by the geotechnical consultant include observations by the geotechnical engineer, engineering geologist and other persons employed by and responsible to the geotechnical consultant.</td>
</tr>
</tbody>
</table>
GEOTECHNICAL ENGINEER: A licensed civil engineer and geotechnical engineer, registered by the state licensing agency, who applies scientific methods, engineering principles, and professional experience to the acquisition, interpretation, and use of knowledge of materials of the earth's crust to the resolution of engineering problems. Geotechnical engineering encompasses many of the engineering aspects of soil mechanics, rock mechanics, geology, geophysics, hydrology, and related sciences.

GRADING: Any operation consisting of excavation, filling, or combinations thereof and associated operations.

LANDSLIDE DEPOSITS: Material, often porous and of low density, produced from instability of natural or manmade slopes.

OPTIMUM MOISTURE: The moisture content that is considered optimum relative to correction operations obtained from ASTM test method D 1557.

RELATIVE COMPACTION: The degree of compaction (expressed as a percentage) of a material as compared to the dry density obtained from ASTM test method D 1557.

ROUGH GRADE: The ground surface configuration at which time the surface elevations approximately conform to the project plan.

SHEAR KEY: Similar to a subsurface buttress; however, it is generally constructed by excavating a slot within a natural slope in order to stabilize the upper portion of the slope without encroaching into the lower portion of the slope.

SITE: The particular parcel of land where grading is being performed.

SLOPE: An inclined ground surface, the steepness of which is generally specified as a ratio of horizontal units to vertical units.

SLOPE WASH: Soil and/or rock material that has been transported down a slope by gravity assisted by the action of water not confined to channels (see also Colluvium).

SLOUGH: Loose, uncompacted fill material generated during grading operations.
SOIL: Naturally occurring deposits of sand, silt, clay, etc., or combinations thereof.

STABILIZATION FILL: A fill mass, the configuration of which is typically related to slope height and is specified by the standards of practice for enhancing the stability of locally adverse conditions. A stabilization fill is normally specified by a key width and depth and by a backcut angle. A stabilization fill may or may not have a back drainage system specified.

SUBDRAIN: Generally a pipe-and-gravel or similar drainage system placed beneath a fill along the alignment of buried canyons or former drainage channels.

TAILINGS: Non-engineered fill which accumulates on or adjacent to equipment haul roads.

TERRACE: A relatively level bench constructed on the face of a graded slope surface for drainage and maintenance purposes.

TOPSOIL: The upper zone of soil or bedrock materials, which is usually dark in color, loose, and contains organic materials.

WINDROW: A row of large rocks buried within engineered fill in accordance with guidelines set forth by the geotechnical consultant.
**FILL SLOPE OVER NATURAL GROUND**

OUTLET PIPE DRAINS TO A SUITABLE OUTLET IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CIVIL ENGINEER

NATURAL GROUND

3' MIN 2% 15' MIN

10' TYP

BACKDRAIN AND T-CONNECTION (SEE DRAIN DETAIL, FIGURE G)

REMOVE UNSUITABLE MATERIAL

BENCH INCLINED SLIGHTLY INTO SLOPE

SWALE AT TOP OF SLOPE

COMPACTED FILL

**FILL SLOPE OVER CUT**

OUTLET PIPE DRAINS TO A SUITABLE OUTLET IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CIVIL ENGINEER

NATURAL GROUND

20' MIN

2% 10' TYP

BACKDRAIN AND T-CONNECTION (SEE DRAIN DETAIL, FIGURE G)

REMOVE UNSUITABLE MATERIAL

BENCH INCLINED SLIGHTLY INTO SLOPE

SWALE AT TOP OF SLOPE

COMPACTED FILL

**NOT TO SCALE**

*MINIMUM KEY WIDTH DIMENSION. ACTUAL WIDTH SHOULD BE PROVIDED BY GEOLOGICAL CONSULTANT BASED ON EVALUATION OF SITE-SPECIFIC GEOLOGICAL CONDITIONS.

NOTES: CUT SLOPE SHALL BE CONSTRUCTED PRIOR TO PLACEMENT OF FILL. SLOPE DRAINAGE SHOULD BE PROVIDED IN ACCORDANCE WITH RECOMMENDATIONS PRESENTED ON FIGURE E

---

**Fill Slope Over Natural Ground or Cut**

_Figure A_
TRANSITION (CUT-FILL) LOT

NATURAL GROUND

COMPACTED FILL

REMOVE UNSUITABLE MATERIAL

5' MIN.

3' MIN.

OVEREXCAVATE AND RECOMPACT

BEDROCK OR COMPETENT MATERIAL, AS EVALUATED BY THE GEOTECHNICAL CONSULTANT

UNDERCUT LOT

NATURAL GROUND

REMOVE UNSUITABLE MATERIAL

5' MIN.

3' MIN.

COMPACTED FILL

OVEREXCAVATE AND RECOMPACT

BEDROCK OR COMPETENT MATERIAL, AS EVALUATED BY THE GEOTECHNICAL CONSULTANT

NOTE: DIMENSIONS PROVIDED IN THE DETAILS ABOVE ARE APPROXIMATE AND MAY BE MODIFIED IN THE FIELD BY THE GEOTECHNICAL CONSULTANT AS CONDITIONS DICTATE.

NOT TO SCALE

TRANSITION AND UNDERCUT LOT DETAILS

_ Ninyo & Moore _
CANYON SUBDRAIN

NATURAL GROUND

COMPACTED FILL

SEE FIGURE A FOR DETAILS OF BENCHES

REMOVE UNSUITABLE MATERIAL

BEDROCK OR COMPETENT MATERIAL, AS EVALUATED BY THE GEOTECHNICAL CONSULTANT

LOWEST BENCH INCLINED TOWARD DRAIN

SUBDRAIN (SEE DRAIN DETAIL, FIGURE G)

DETAIL OF CANYON SUBDRAIN TERMINATION

DESIGN FINISH GRADE

COMPACTED FILL

SUBDRAIN PIPE

OUTLET PIPE DRAINS TO A SUITABLE Outlet IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CIVIL ENGINEER

CUTOFF WALL CONSTRUCTED OF GROUT, CONCRETE, BENTONITE, OR OTHER SUITABLE MATERIAL AS EVALUATED BY THE GEOTECHNICAL CONSULTANT

FILTER MATERIAL

NON-PERFORATED PIPE

PERFORATED PIPE

10' MIN.

5' MIN.

20' MIN.

NOT TO SCALE

_ Ninoy & Moore _

CANYON SUBDRAIN DETAIL

FIGURE C
WINDROW SECTION

30 S.E. SOIL (FLOODED)

6"-48" ROCK

"V" OR RECTANGULAR TRENCH A MINIMUM OF 2 FEET DEEP AND 5 FEET WIDE EXCAVATED INTO COMPACTED FILL OR NATURAL GROUND

PAD SECTION

ZONE A MATERIAL

15' MIN.

5' MIN.

1

2

BEDROCK OR COMPETENT MATERIAL AS EVALUATED BY GEOTECHNICAL CONSULTANT

ZONE A: COMPACTED FILL WITH ROCK FRAGMENTS NO GREATER THAN 6 INCHES IN DIAMETER.
ZONE B: COMPACTED FILL WITH ROCK FRAGMENTS BETWEEN 6 AND 48 INCHES IN DIAMETER MAY BE PLACED IN STAGGERED WINDROWS UP TO 100' LONG IN THIS ZONE AND SURROUNDED BY GRANULAR SOIL (SO SAND EQUIVALENT) DENSIFIED BY FLOODED. ROCK FRAGMENTS LESS THAN 6 INCHES IN DIAMETER MAY BE PLACED IN COMPACTED FILL SOIL.

NOT TO SCALE

OVERSIZED ROCK PLACEMENT DETAIL

106324001 TEG.doc Rev 12/05
APPENDIX E

Storm Drain Plaque
APPENDIX F

Escrow Agreement for Security Deposits in Lieu of Retention
This Escrow Agreement is made on ________________ and entered into by and between,
(date)

City of Escondido
whose address is 201 North Broadway, Escondido, CA  92025, hereinafter called "Owner," and

Contractor’s Name
whose address is 10540 Prospect Avenue, Santee, CA  92071, hereinafter called "Contractor," and

Bank Name
whose address is 1024 Graves Avenue, El Cajon, CA  92021, hereinafter called "Escrow Agent."

For the consideration hereinafter set forth, the Owner, Contractor, and Escrow Agent agree as follows:

(1) Pursuant to Section 22300 of the Public Contract Code of the State of California, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by Owner pursuant to the Construction Contract entered into between the Owner and Contractor for Neighborhood Group Street Lighting Project in the amount of XXXXXXXXXXX, dated XX/XX/XX (hereinafter referred to as the "Contract"). Section 22300 also addresses securities eligible for investment under this agreement.

Alternatively, on written request of the Contractor, the Owner shall make payments of the retention earnings directly to the Escrow Agent.

When the Contractor deposits the securities as a substitute for Contract earnings, the Escrow Agent shall notify the Owner within 10 days of the deposit. The market value of the securities at the time of the substitution shall be at least equal to the cash amount then required to be withheld as retention under the terms of the Contract between the Owner and Contractor. Securities shall be held in the name of Bank Name, and shall designate the Contractor as the beneficial owner.

(2) The Owner shall make progress payments to the Contractor for those funds which otherwise would be withheld from progress payments pursuant to the Contract provisions, provided that the Escrow Agent holds securities in the form and amount specified above.

(3) When the Owner makes payment of retentions earned directly to the Escrow Agent, the Escrow Agent shall hold them for the benefit of the Contractor until the time that the escrow created under this contract is terminated. At the expense of the contractor, the contractor may direct the investment of the retention payments into securities and the contractor shall receive the interest earned on the investments upon the same terms provided for in this section for securities deposited by the contractor. Upon satisfactory completion of the contract, the contractor shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the owner. All terms and conditions of this agreement and the rights and responsibilities of the parties shall be equally applicable and binding when the Owner pays the Escrow Agent directly. The Contractor hereby agrees to indemnify, defend, and hold the City harmless from loss of funds for any such payment, once City pays the Escrow Agent.

(4) The Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account and all expenses of the Owner. These expenses and payment terms shall be determined by the Owner, Contractor, and Escrow Agent.
(5) The interest earned on the securities or the money market accounts held in escrow and all interest earned on that interest shall be for the sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to the Owner.

(6) The Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from the Owner to the Escrow Agent that Owner consents to the withdrawal of the amount sought to be withdrawn by Contractor.

(7) The Owner shall have a right to draw upon the securities in the event of default by the Contractor. Upon seven days' written notice to the Escrow Agent from the owner of the default, the Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by the Owner.

(8) Upon receipt of written notification from the Owner certifying that the Contract is final and complete, and that the Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all moneys and securities on deposit and payments of fees and charges.

(9) Escrow Agent shall rely on the written notifications from the Owner and the Contractor pursuant to Sections (5) to (8), inclusive, of this Agreement and the Owner and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of the securities and interest as set forth above.

(10) The names of the persons who are authorized to give written notice or to receive written notice on behalf of the Owner and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of Owner: 

<table>
<thead>
<tr>
<th>Title</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature</td>
<td>Signature</td>
</tr>
<tr>
<td>201 N. Broadway, Escondido, CA 92025</td>
<td>Contractor's Address</td>
</tr>
</tbody>
</table>

On behalf of the Escrow Agent:

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Signature</td>
</tr>
</tbody>
</table>

Bank’s Address
At the time the Escrow Account is opened, the Owner and Contractor shall deliver to the Escrow Agent a fully executed counterpart of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

Owner

Title

Name

Signature

Contractor

Title

Name

Signature
ATTACHMENT A

Escondido Creek Trailhead Entry Sign
SITE PLAN

EL NORTE PARKWAY GATEWAY
Escondido, CA

EL NORTE PARKWAY

SCALE: 1" = 10'-0"

REALIGN PAVING
REALIGN STRIPING

GATEWAY GROUND MARKING, INTEGRAL COLOR CONCRETE PAVING, COULD INCLUDE STREET NAME OR INSPIRING QUOTE.

GATEWAY SIGN

Project Number: 19-101
Date: April 1, 2019
PLAN VIEW

- 3" tall raised steel lettering with lighting behind
- 6-1/2" tall raised steel lettering with lighting behind
- Lettering on both faces of sign
- Powder coat painted steel

Existing chain link fence

River rock veneer

Power for lettering illumination to come from meter pedestal at north side of project as shown on sheet 2 of plan T18-0002
ATTACHMENT B

Project Information Sign
Sign Dimensions:
72" W x 36" H - (6.0' W x 3.0' H)

Construction Details:
- 0.063" Anodized Aluminum Panels
- Avery-Dennison T-6500 High Intensity Series
  Prismatic Reflective Sheeting (3M Type IV), or equivalent
- Avery-Dennison T-9500 OmniView Series
  Premium Prismatic Grade Reflective Sheeting
  (3M Type IX Diamond Grade VIP), or equivalent -
  To be used for KeepSanDiegoMoving URL area ONLY
- Avery-Dennison OL-1000
  Premium Anti-Graffiti Overlay Film, or equivalent
- UV Inks to be used without exception

NOTE: Sign production contingent
on approval of full scale proof
using actual materials by Keith Kanzel.
Signage Construction Material Details

- 0.063" Anodized Aluminum Panels
- Avery-Dennison T-6500 High Intensity Series
  Prismatic Reflective Sheeting (3M Type IV), or equivalent
- Avery-Dennison T-9500 OmniView Series
  Premium Prismatic Grade Reflective Sheeting
  (3M Type IX Diamond Grade VIP), or equivalent -
  To be used for KeepSanDiegoMoving URL area ONLY
- Avery-Dennison OL-1000
  Premium Anti-Graffiti Overlay Film, or equivalent
- UV Inks to be used without exception

NOTE: Sign production contingent on approval of full scale proof using actual materials by Keith Kanzel.

Color Palette

Pantone Matching System: PMS 186 – Red
CMYK: C = 11.88% M = 100.00% Y = 91.92% K = 2.83%
RGB: R = 177 G = 19 B = 47

Pantone Matching System: PMS 116 – Yellow
CMYK: C = 0% M = 18.39% Y = 100% K = 0%
RGB: R = 245 G = 205 B = 33

Pantone Matching System: PMS 285 – Blue
CMYK: C = 90.75% M = 52.67% Y = 0% K = 0%
RGB: R = 41 G = 112 B = 202

Pantone Matching System: PMS Black
CMYK: C = 130% M = 30% Y = 40% K = 100%
RGB: R = 0 G = 0 B = 0

Pantone Matching System: PMS 186 – Red
to PMS 116 – Yellow
(Red to Yellow Gradient Used in SANDAG Logo)
ATTACHMENT C

Sample Construction Schedule
<table>
<thead>
<tr>
<th>ID</th>
<th>TASK TITLE</th>
<th>START DATE</th>
<th>FINISH DATE</th>
<th>DUR. (DAYS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Storm Water &amp; Environmental Control (Item 2)</td>
<td>10/16/17</td>
<td>10/20/17</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>Project Information Signs (Item 3)</td>
<td>10/16/17</td>
<td>10/20/17</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Tree Removals (Items 51-52)</td>
<td>10/23/17</td>
<td>11/2/17</td>
<td>9</td>
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<tr>
<td>4</td>
<td>Concrete Work (Items 46-50)</td>
<td>10/25/17</td>
<td>12/19/17</td>
<td>38</td>
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<tr>
<td>5</td>
<td>Additional Concrete Work (If Requested)</td>
<td>12/26/17</td>
<td>12/29/17</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Asphalt Work (Items 5-12)</td>
<td>11/6/17</td>
<td>12/1/17</td>
<td>18</td>
</tr>
<tr>
<td>7</td>
<td>Additional Asphalt Work (If Requested)</td>
<td>12/4/17</td>
<td>12/8/17</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>Plant New Trees (Items 53-54)</td>
<td>11/6/17</td>
<td>11/17/17</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Spray Weedkill</td>
<td>10/10/17</td>
<td>10/17/17</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>Crack Sealing (Item 13)</td>
<td>11/13/17</td>
<td>12/1/17</td>
<td>8</td>
</tr>
<tr>
<td>11</td>
<td>ARM/F or Type 2 Slurry Seal (Item 15)</td>
<td>11/17/17</td>
<td>11/24/17</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>Type 2 Slurry Seal (Item 14)</td>
<td>11/25/17</td>
<td>12/25/17</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Additional Type 2 Slurry Seal (If Requested)</td>
<td>12/8/17</td>
<td>12/18/17</td>
<td>5</td>
</tr>
<tr>
<td>14</td>
<td>Striping (Items 64-65, 99-101)</td>
<td>12/12/17</td>
<td>1/18/18</td>
<td>25</td>
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<tr>
<td>15</td>
<td>Traffic Lane (Items 55-56)</td>
<td>12/19/17</td>
<td>1/19/18</td>
<td>25</td>
</tr>
</tbody>
</table>
ATTACHMENT D

Utility Plans (AT&T, Cox Communication, SDG&E)
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General Conditions for Underground Electric Distribution, Service Systems Construction and Gas Trench

PROJECT WORK ORDER NUMBER AND PROJECT TITLE
EL NORTE PKWY 20C T/C & CABLE
WO#2908150 & WO2908151

CONSTRUCTION / TRENCH INSPECTIONS
PH: 760-432-5805

MARK-OUT 1-800-227-2600

NOTICE

ALL WORK DONE PURSUANT TO THE ATTACHED MUST BE ACCOMPLISHED IN COMPLIANCE WITH THE FEDERAL AND STATE OF CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT.

ONE COPY TO BE KEPT AT PROJECT SITE
1.0 SCOPE OF GENERAL CONDITIONS
2.0 DEFINITION OF TERMS
3.0 CONTRACT DOCUMENTS
4.0 INSPECTION OF WORK AND INTERPRETATION OF CONTRACT DOCUMENTS
5.0 SDG&E'S RIGHT TO DO WORK
6.0 SCHEDULING
7.0 SURVEY AND EASEMENTS
8.0 PAVEMENT REMOVAL AND REPLACEMENT
9.0 EXCAVATIONS
10.0 INSTALLATION OF CONDUIT
11.0 BACKFILL AND COMPACTION
12.0 SUBSTRUCTURES
13.0 CABLE INSTALLATIONS (NEW)
14.0 SAFEGUARDS
15.0 CHANGES IN WORK
16.0 PHASING FOR ENERGIZING
17.0 DRAWINGS AND PRINTS
18.0 RELATIONSHIP OF PARTIES
19.0 FINAL ACCEPTANCE
20.0 WARRANTY
21.0 PERMITS AND LICENSES
22.0 INDEMNITY
23.0 PUBLIC RELATIONS
24.0 UNION LABOR IF APPLICABLE
25.0 RISK OF LOSS OR DAMAGE
26.0 NOTICE OR DEMAND
1.0 SCOPE OF GENERAL CONDITIONS

These General Conditions apply to new underground electric facilities and gas trench where the facilities being installed by an Applicant or by an applicant's contractor are for operations by SDG&E.

2.0 DEFINITION OF TERMS

The following terms in these General Conditions shall be applied as follows:

2.1 "Agent" - Those persons authorized to act for or represent the Applicant or SDG&E.

2.2 "Applicant" - The party or parties contracting with SDG&E for underground facilities and to perform work described in these General Conditions.

2.3 "Contract Documents" - The Contracts, Agreements, Specifications, General Conditions, SDG&E Standards, drawings, permits and other papers for the purpose of construction or pertaining to construction of underground electric facilities and gas trench.

2.4 "Day or Days" - Normal SDG&E work days (Monday through Friday) unless otherwise specified.

2.5 "Excavation" - Trenching, boring, and removal of soil required for the installation of substructures, all necessary backfilling including required imported backfill material and removal of trench spoil, and acceptable surface repair to the local governing authority's specifications.

2.6 "Final Acceptance" - SDG&E's acceptance of all work performed by the Applicant includes "as-built" drawings and reconciliation of all material obtained for SDG&E.

2.7 "Final Grade" - The grade after paving and landscaping are completed.

2.8 "Finish Grade" - The grade shown on plans.

2.9 "Improvements" - The requirements of either the governing municipality or SDG&E which will ensure protection for SDG&E facilities and provide verification of finish grade. Improvements include, but are not limited to, curbs, sidewalks, berms, barricades, bridle or pedestrian paths, raised planters or parking lot berms in residential, commercial, manufacturing, or industrial projects, when these improvements are specified adjacent to SDG&E's facilities.

2.10 "Inspector" - The SDG&E employee assigned to inspect and accept or reject work on the basis of compliance or lack thereof with the Contract Documents, SDG&E standards, specifications and policies.

2.11 "Issued and Released" - When the specifications have been issued to the Construction Department and all related holds (monies, contracts, Right of Ways, etc.) have been removed.

2.12 "Landowner" - Public or private entity, or a natural person or persons, whose property is affected in any way by construction performed by Applicant.

2.13 "Project Coordinator" - The SDG&E employee assigned to coordinate projects through construction. The Project Coordinator will work with the SDG&E Inspector and Applicant to coordinate the scheduling of SDG&E crews.

2.14 "SDG&E" - San Diego Gas & Electric Company (including its contractors, subcontractors, employees, representatives or agents).

2.15 "SDG&E Standards" - SDG&E Gas and Electric Construction Standards, including SDG&E's "Service Guide" (available upon request).
2.16 "Specifications" - The construction drawings (including any revisions, supplements or SDG&E approved field changes) furnished to the Applicant detailing the work be performed.

2.17 "Substructures" - Includes, but are not limited to, manholes, handholes, vaults, pads (for transformers, terminators or fuse cabinets), grounding grids and other structures needed to accommodate cables, connections, transformers and appurtenances.

2.18 "Vault Book" - SDG&E transformer vault specifications.

2.19 "Work" - The performing of all labor and the furnishing and installing of all material and equipment, necessary to accomplish all the duties and obligations imposed by the Contract Documents and Specifications.

3.0 CONTRACT DOCUMENTS

3.1 These Contract Documents are mutually binding on all and the Applicant must be thoroughly familiar with them. Technical trade terminology shall retain well known meanings. All Applicant work responsibility and any work reasonably inferred necessary to produce the intended results, shall be supplied by the Applicant. Specified dimensions (except as provided in section 15.0) shall govern. Work not specified shall be performed in the same manner as similar work specified. Specific details take precedence in the manner of construction.

4.0 INSPECTION OF WORK AND INTERPRETATION OF CONTRACT DOCUMENTS

4.1 All work and materials shall be of SDG&E approved manufacture class or grade specified in the Contract Documents. It shall be the Applicant’s responsibility to thoroughly familiarize all of its Agents with the contents of the Contract Documents and to accurately advise SDG&E of its construction schedule. SDG&E will be represented in the field by an Inspector, and all work and material shall be subject at all times to inspection by the Inspector.

4.2 Applicant is required to call the number on the cover sheet for inspection of his work by 2:30 p.m. one workday prior to the date inspection is requested. The Inspector will inspect each completed stage of Applicant’s work including: trenching, substructure installation, conduit installation, backfill, compaction, and cabling. As each stage is completed, the Inspector will approve it. If SDG&E crews are needed, they will be dispatched as available after the Inspector has verified that the Applicant has satisfactorily performed his portion of the work.

4.3 Any workmanship or material supplied by the Applicant which does not meet the criteria specified in the Contract Documents may be rejected by the Inspector whose decisions shall be final and conclusive. The decision of SDG&E shall be final as to all matters of interpretation of the Contract Documents.

4.4 Any workmanship or material rejected by the Inspector shall be replaced by Applicant at Applicant’s expense. Inspections and final acceptance shall not relieve the Applicant’s obligation to complete the work in accordance with the Contract Documents and SDG&E Standards.

5.0 SDG&E’S RIGHT TO WORK

If the Applicant fails to perform the work in accordance with the standards, within the prescribed time period, or any obligation imposed by the contract documents, SDG&E, except as indicated below, after giving seven days written notice to the Applicant, may take over and finish the Applicant’s work or may correct any defects at the Applicant’s expense. If SDG&E is unable to collect reimbursement for its cost of work after 30 days from completion of the work, the actual cost may be deducted from Applicant’s refundable monies on deposit with SDG&E, or, at its option, SDG&E may recover such cost by claim against the surety on the performance bond furnished by the Applicant.
6.0 SCHEDULING

After receipt of written notification from SDG&E that construction orders have been released and issued, the Applicant shall immediately advise SDG&E of the construction schedule, arrange a pre-construction meeting with the Project Coordinator and verbally confirm the start date two working days in advance of trenching.

6.1 All work by Applicant shall be coordinated with SDG&E in a manner that will permit SDG&E or its Agents to perform its work without delay and in an efficient manner throughout the period of construction without being required to reschedule its construction forces after starting the field installation.

6.2 The Applicant understands that trenching and backfilling must be coordinated with the installation of facilities such as gas piping and/or equipment by SDG&E. The Applicant shall contact the Project Coordinator to avoid SDG&E construction schedule delays. The Inspector will specify the amount of clear open trench for SDG&E work. Inspector and Construction Crew work will be performed during normal business hours. The Applicant shall continue trenching to allow the project to be completed in an efficient manner. Joint trench agreements with other underground utilities must be approved by SDG&E before the start of construction and coordinated to avoid conflicts between construction forces.

6.3 The Applicant should call Underground Service Alert (1-800-277-2600) for mark-out two working days before trenching. The Applicant must locate all existing facilities before construction and protect them throughout the construction period. Gas and electric facilities will not be installed until all wet utilities have been installed and backfilled. Pressurized sprinklers and irrigation lines installed after SDG&E's facilities must maintain the minimum clearances specified in SDG&E Standards.

6.4 Applicant shall report to Project Coordinator any damage to any facilities resulting from the construction and shall file a complete written report with SDG&E of the surrounding circumstances within 24-hours of the incident or by the end of the next working day.

7.0 SURVEY AND EASEMENTS

The Applicant shall be responsible for establishing and maintaining alignment and finish grade for SDG&E substructures and trenches throughout the construction of the project. SDG&E will survey, obtain easements and stake trench positions when easements dictate a definite route on private property, or in a dedicated street position.

8.0 PAVEMENT REMOVAL AND REPLACEMENT

8.1 Applicant agrees, that when trenching or excavating in paved streets or sidewalks, all cutting, removal and replacement of pavement or concrete shall be performed by methods which meet the requirements of all governmental authorities having jurisdiction.

8.2 Applicant agrees that any curtailment or rerouting of traffic necessitated by Applicant's work within streets or sidewalk areas shall be coordinated with all governmental authorities having jurisdiction.

9.0 EXCAVATIONS

9.1 Excavations for substructures shall be made to such dimensions and grade lines as are necessary to perform the work shown by Specifications and to a depth that will provide the ground coverage between the top of the conduit entering the substructures and finish grade directed in the appropriate SDG&E Standards. Applicant shall verify in writing that all substructures are set to finish grade prior to backfilling. The Applicant shall maintain finish grade stakes for all four corners of all substructures until final backfill and compaction has been completed and accepted by Inspector. Should any adjustments to substructures be required due to variations in final grade not previously submitted to SDG&E, all costs for adjustments made by SDG&E shall be borne by the Applicant.
9.2 Trenches shall be excavated in accordance with location and alignment shown on the Specifications and to provide minimum width and depth necessary to install the substructures, electric lines or gas pipe as specified in SDG&E Standards.

9.3 Bottom of excavations and trenches shall be free of rocks, dirt clods and pockets and shall be graded with a base so that sags will not occur in any conduit or gas pipe placed therein as specified in SDG&E Standards.

9.4 Any excavation made to an incorrect depth shall be adjusted to the correct depth and thoroughly compacted by Applicant in accordance with the compaction requirements of the Contract Documents.

9.5 Where excavations occur in soil, which is, in the opinion of the Inspector, unstable and unsuitable for adequately supporting the conduit, gas pipe or substructures, reinforcement shall be required and constructed to accommodate the individual case as determined by SDG&E.

9.6 The Applicant shall not place excavated soil where it would pose a hazard to pedestrian or vehicular traffic or interfere with the installation of SDG&E facilities. The Applicant is responsible for the disposal of all excess soil.

9.7 If SDG&E encounters hazardous or toxic material while performing construction on the project, SDG&E will halt work immediately, and it will be the Applicant's responsibility to remove and or clean up all hazardous toxic material. SDG&E will have no liability or obligation whatsoever to clean up, remove or remediate any hazardous or toxic materials discovered during the course of construction, unless the material were deposited through the negligence of SDG&E.

9.8 The location of all excavation is subject to change as necessitated by conflicts, obstacles, or field conditions revealed by actual examination during construction and Applicant agrees to pay any additional trenching, excavation, backfill, compaction, pavement replacement or other costs required by such changes in location.

9.9 When padmount equipment is to be installed in a location which requires equipment barriers or retaining walls, Applicant shall install them in accordance with SDG&E Standards.

9.10 Retaining walls may be used as an acceptable alternative to establishment of proper grade. They shall be provided and installed at Applicant's expense per SDG&E Standards. If retaining walls are required for any reason during the warranty period, they also shall be provided and installed at Applicant's expense.

10.0 INSTALLATION OF CONDUIT

THE FOLLOWING PROVISIONS APPLY TO APPLICANT'S INSTALLATION OF CONDUIT:

10.1 Conduits shall be installed in the trench in the alignment shown on the Specifications and all material used shall be those specified in SDG&E Standards.

10.2 On approval of Inspector, ground cover may be reduced where the specified minimum ground cover cannot be obtained in crossing over storm drains, foreign substructures, or other obstacles.

10.3 Extreme care shall be exercised to ensure that foreign matter does not enter the conduits during installation, or at any other time thereafter.

10.4 When such responsibilities are shown on the Specifications, cable pole conduits shall be SDG&E approved and installed per SDG&E Standards unless otherwise instructed by the Inspector.
10.5 Manufactured horizontal bends in the conduit shall be installed according to SDG&E Standards. Should field conditions warrant a lesser radius, the Applicant shall obtain SDG&E approval.

10.6 All concrete, unless otherwise permitted by Inspector, shall be ready mixed and shall meet the requirements of SDG&E Standards.

10.7 The installation of conduit by Applicant must be coordinated with SDG&E or its Agent to permit the installation of substructures and any conduit which may be installed by SDG&E. After the substructures are placed in position, the conduits shall be terminated in the substructure per SDG&E Standards.

10.8 Service conduit stubs shall be extended and marked three feet beyond the substructure or retaining wall according to SDG&E Standards.

10.9 Any trench or excavation of 5 feet or more in depth, which will be entered by SDG&E employees, requires spoil to be placed a minimum of 24 inches from edge of excavation. Depths of less than 5 feet require a minimum clearance of 12 inches. Shoring or sloping may be required in depths less than 5 feet and is required for depths 5 feet or more (OSHA).

10.10 Gas and electric facilities in conflict with other construction must be shown on plans provided by Applicant, and SDG&E must be notified prior to trenching.

10.11 Street light circuits, CATV and telephone positions must be verified by the Applicant with each serving agency and installed to their specifications in addition to SDG&E Specifications.

10.12 Each run between substructures, pads, customer's service, risers, etc., shall be one size conduit continuously, i.e., no reducers are allowed except where the conduit enters the substructure or above the ground level on a riser pole. Deviations must be approved by SDG&E.

10.13 All plastic conduit shall comply with SDG&E Standards, identified by manufacturer's marking, and be verified that it is an approved conduit. Conduit found to be defective or not on approved supplier's list shall not be acceptable.

10.14 Installation of electric conduits with concrete substructures must be coordinated with SDG&E. All conduits shall enter a substructure in a horizontal plane, using bottom set of knockouts first, exception being a 3315, 3316 and 3324 manhole in which part of the job package are pages showing conduit placement to assure correct cable training and connections. Conduits shall be terminated in substructures per SDG&E Standards. Open conduit ends shall be sealed during construction to prevent contamination inside conduit. Conduits must be watertight and mechanically sound at entry point.

10.15 Core boring can only be authorized by SDG&E to insure against structural damage. All work must be performed per SDG&E Standards. Conduits used with core boring must be grouted.

10.16 Mandreling of conduit must be performed by the installer in the presence of SDG&E Inspector. The conduit installer must provide a 3/16-inch polypropylene pullrope in each conduit. The rope shall be approved by SDG&E and have a minimum average tensile strength of 720 lbs. Pullrope tails of 24 inches shall be secured at each end of the conduit.
11.0 BACKFILL AND COMPACTION

When Applicant's responsibility under the Contract Documents includes base, shading, backfill and compaction, the following provisions apply:

11.1 Backfill, base and shading shall be made with materials and by methods which will meet the requirements of all applicable codes, ordinances and SDG&E Standards. It must be approved by SDG&E inspector.

11.2 Compaction shall be performed in accordance with governmental agencies and shall have a minimum of 90% relative compaction.

11.3 When gas piping is installed and not energized, shading will be done the same day, if practical, but not later than the following calendar day. Gas mains must be shaded and backfilled before they are energized. Gas services, when energized, must be covered during the same working day. During construction, new service lines must be made safe from normally anticipated hazards. Energized service lines left unattended must have a minimum of 12 inches cover on private property and 18 inches on public property. Completion of the backfill must be made in a timely manner.

11.4 Shading between the different levels of jointly used trench must be compacted with reasonable care to prevent damage to the facilities installed and shall be compacted before proceeding with the next utility installation.

11.5 Soil filled sacks or redwood timber breakers shall be installed across trenches as required by the Inspector in banks exceeding 25% slope. Water diversion berms shall be cut diagonally across trenches and working strips on banks exceeding 35% slope. The Inspector may require cement slurry backfill on slopes as specified in SDG&E Standards.

12.0 SUBSTRUCTURES

12.1 GENERAL

Unless otherwise specified, all substructures, and related hardware including, but not limited to, frames, covers, barrier posts, ladders, ground rods, ground grids and cable supports shall be provided and installed by the party responsible for installing the substructures and shall comply with SDG&E Standards and SDG&E Vault Books. All of the substructures and related hardware used are to be approved by SDG&E. The above facilities, if applicable, will be installed at locations specified by the Specifications and in a manner prescribed by SDG&E Standards.

12.2 PRIMARY MANHOLES AND VAULTS

The location of conduit entrances or recesses and sumps shall be as shown in SDG&E Standards. Manhole or Vault entrances shall be installed as shown on the specifications. Neck extensions shall be ordered with the manhole or vault and shall be adjusted to permit installation of the cover at final grade.

12.3 PRIMARY HANDHOLES

When Applicant's responsibility under the Contract Documents includes all or a portion of the substructures, Applicant shall adjust the top section and lid to final grade per SDG&E Standards. Conduits entering handholes shall be terminated in accordance with section 10.8.

Where any substructures are to be installed by SDG&E or its contractors and Applicant is responsible for excavation, finish grade must be established to within 3 inches before substructure can be set. The top section and lid shall be adjusted to final grade by SDG&E or its contractor if less than a 3-inch adjustment is required. The developer is responsible for
maintaining the excavations for substructures for a period of five days. If SDG&E has not
installed the substructures within the five-day period, SDG&E assumes responsibility for the
excavation.

12.4 TRANSFORMER AND EQUIPMENT PADS AND SECONDARY HANDBOLES

Prior to the installation of these facilities, the Applicant must complete the improvements
adjacent to these facilities including barrier posts. Proper compaction and final grade must
be established by Applicant and inspected by SDG&E for the transformer and equipment
pads. Applicant must complete the required excavation for secondary handholes and site
preparation for pads.

12.5 COMPLETION OF IMPROVEMENTS

The Applicant must complete improvements (including proper compaction, final grade,
excavation and site preparation) adjacent to pads and secondary handholes prior to
scheduling SDG&E crews for installation and energizing of facilities. If improvements are to
be installed in segments, a minimum of 10 feet of improvements fronting electric facilities is
required. Any damaged substructure shall be replaced by the Applicant before the system is
energized.

13.0 CABLE INSTALLATIONS

THE FOLLOWING PROVISIONS APPLY TO APPLICANT'S INSTALLATION OF CABLE:

13.1 It shall be Contractor's responsibility to protect the cable and other material furnished by
SDG&E against damage. Cable pulling methods shall be subject to the approval of the
Project Coordinator. If cable or associated materials are damaged due to Contractor's
negligence or faulty equipment, Contractor shall replace damaged section in a manner
satisfactory to SDG&E and at no additional cost to SDG&E. All sections of cable that are
damaged by the application of grips shall be discarded.

13.2 All cable ends shall be sealed to effectively prevent moisture from entering the cable.

13.3 HANDLING REELS

**Inspection** Contractor shall inspect each reel upon receipt to determine whether or not
visible damage has occurred during transit and/or storage.

**Loading and Unloading** Reels shall be handled in such manner as to prevent smashing,
nicking, cutting or other damage to the cable. When unloading reels from trucks, reels shall
not be dropped to the ground or allowed to roll freely down ramps. Cranes or other
equipment of adequate capacity shall be utilized, and care shall be taken to avoid damage to
the cable or reels.

**Final Inspection** After removing lagging or other protective covering from reels, Contractor
shall examine outside layer of each reel to be sure that the cable is undamaged and that no
nails, staples, or other sharp objects which would damage the cable during unreeeling
protrude on the inside of the reelheads.

**Empty Reels** Contractor shall return all empty returnable reels prior to completion of the
work as instructed by the Project Coordinator. Contractor shall dispose of all empty non-
refundable reels.
13.4 **SPLICES**

Unless otherwise directed, splices shall be made in accordance with SDG&E Standards.

The Project Coordinator shall be present when all primary splices are performed, and shall reject those splices which do not comply with SDG&E Standards. Failure to notify the Project Coordinator is justification for rejection of the splices not performed in the Project Coordinator’s presence.

The tools required for splicing the cable shall be furnished by Contractor and approved by SDG&E.

13.5 **PROOF TESTING**

All primary installations shall be proof-tested prior to permanent connection to the distribution system. The Project Coordinator shall be present during all proof testing. Failure to notify the Project Coordinator is justification for rejection of the tests not performed in the Project Coordinators presence.

The devices and methods utilized by Contractor for proof testing shall depend upon the circuit configuration and type of equipment. Testing methods shall be in accordance with approved SDG&E procedures.

14.0 **SAFEGUARDS**

All material, work, traffic control and work areas shall comply with all applicable Federal, State, and local safety laws or rules that are necessary to protect Applicant’s and SDG&E’s employees, the public, and workmen during the time of construction. Applicant shall take all steps to protect property adjacent to the construction project from damage resulting from work specified and performed hereunder.

15.0 **CHANGES IN WORK**

Modification of the Specifications may be made in writing by mutual agreement between the Applicant and SDG&E. Requests for changes shall be directed to Planner. Such changes may cause delays in construction and require an engineering fee and revision to the Specifications. Costs resulting from work changes are the Applicant’s responsibility under section 20.0. Minor changes for adverse field conditions may be approved in writing at the job site by the Inspector to facilitate construction.

16.0 **PHASING FOR ENERGIZING** (Applies only when cabling is installed by SDG&E)

When SDG&E and the Applicant agree before the completion of final Specifications, portions of the underground facilities may be phased for energizing before Final Acceptance provided the phasing does not delay completion of the entire project, SDG&E retains control of the energized portion, and the energized area is compatible with the system design and SDG&E’s safety practices. Energizing portions of systems shall in no way relieve the Applicant of any of its duties.

17.0 **DRAWINGS AND PRINTS**

17.1 Applicant shall at all times maintain a set of the current Specifications at the job site, and these will at all times be available for Inspection by the Inspector who shall have access thereto on request. Applicant shall maintain at the job site any related project plans (e.g. alignment and finish grade of street improvements) approved by the governmental agencies having jurisdiction.

17.2 Prior to energizing, Applicant shall provide as-built drawings of facilities installed by the Applicant or his contractor per SDG&E Standards.
18.0 RELATIONSHIP OF PARTIES

In assuming and performing the obligations of these Contract Documents, Applicant is acting as an independent contractor. Applicant shall assume full responsibility for the ownership, custody, and control of work and facilities to be constructed. All persons employed by Applicant in connection herewith shall be employees of Applicant. SDG&E's inspections, or any suggestions or objections made by SDG&E shall not constitute or be construed as an exercise of management or supervision over the work, nor shall it be construed as acceptance of the work, or any part thereof, as it progresses, nor shall it limit or affect the right of SDG&E to reject any part or all of the work when completed in case the same does not conform to Contract Documents.

19.0 FINAL ACCEPTANCE

Final acceptance by SDG&E will be made when Applicant has provided "as-built" drawings and satisfactorily completed all work and improvements as called for in the Contract Documents including reconciliation of materials. SDG&E shall notify Applicant in writing of final acceptance of the work. Failure or neglect on the part of SDG&E to reject inferior work during the construction period shall not be construed to imply acceptance of such work nor to preclude its right to reject it. Applicant shall be required to correct all defects which become evident at any time prior to final acceptance of Applicant's work by SDG&E. The cost of all such repairs, material, labor, and overheads shall be borne by Applicant. Ownership, custody, and control of the work and facilities shall pass to SDG&E only upon Final Acceptance.

20.0 WARRANTY

The Applicant expressly represents and warrants that all work performed and all materials used are free from defects of workmanship and conform to the Applicant's Contract obligations. This warranty shall commence upon Final Acceptance and end one year from that date. The Applicant shall pay the actual cost to SDG&E for any breach of this warranty corrected by SDG&E (including labor, material and overheads). If SDG&E is unable to collect for the work after 30 days from completion, the actual cost may be deducted from the Applicant's refundable monies on deposit with SDG&E. SDG&E may recover such cost by claim against the surety on the performance bond furnished by the Applicant.

21.0 PERMITS AND LICENSES

The Applicant shall obtain and pay for all permits and licenses required by governing agencies before starting any work. In the event any governmental agency imposes conditions which necessitate any changes in the trench or conduit system shown on the Specifications, the Applicant agrees not to proceed with any work affected by the conditions until SDG&E has completed the necessary redesign of construction drawings and new agreement documents have been signed by SDG&E and the Applicant. New agreements shall be the standard agreements in effect at the time the changes a made.

22.0 INDEMNITY

Applicant will indemnify, defend, hold SDG&E its employees and agents harmless from any and all claims, demands, loss, liability or expense (including attorneys' fees) for injury to or death of any person, or damage to or destruction of any property, in any way resulting from or connected with the performance of the work by Applicant's Contractor, its agents, employees, or subcontractors regardless of the negligence of SDG&E except in those cases where SDG&E has been solely negligent or SDG&E's willful misconduct caused the damage or injury. For purposes of this indemnification, SDG&E's inspections, objections or comments shall NOT be construed as an exercise of management or supervision.

23.0 PUBLIC RELATIONS

The Applicant shall maintain a good public image. Excess soil, litter and debris around the work area shall be removed during construction. Due precaution shall be observed to avoid damage to lawns, trees, shrubs, flowers, fences and other property. All landowners and tenants shall be notified in advance when work interferes with their use of walks, driveways, roadways or entrances. Any disagreements, problems or adverse criticism in connection with the work from area landowners, tenants, the general public or public officials shall be reported promptly to the Project Coordinator.
24.0 UNION LABOR IF APPLICABLE

If for any reason, any work is performed by Applicant upon facilities that are at the time of work by Applicant, owned and maintained by SDG&E, Applicant agrees that such work shall be done in compliance with the terms and conditions of that amended Agreement between SDG&E and Local Union 465, International Brotherhood of Electrical Workers, or such other agreements as may be entered into between the Applicants' Contractor and bonafide unions of international organizations affiliated with the American Federation of Labor and Congress of Industrial Organizations or other bonafide labor organizations.

25.0 RISK OF LOSS OR DAMAGE

The Applicant must take proper care to protect, and avoid any loss or damage to, material and/or equipment furnished by the Applicant or by SDG&E until Final Acceptance. Any damage, injury or loss shall be repaired, corrected or replaced by the Applicant at his sole expense. If the Applicant fails to do so, SDG&E may complete the work and deduct such costs from any amounts due or to become due to Applicant, or SDG&E may, at its option, recover such cost by claim against the surety on the performance bond furnished by Applicant.

26.0 NOTICE OR DEMAND

Any notices or demand which may or must be given by either party to the other hereunder unless otherwise specified shall be made in writing and shall be deemed to have been duly given when delivered by personal service, or 24 hours after it is deposited for mailing at San Diego, California, by certified United States mail, postage prepaid, addressed as follows, or to such other place as the parties may hereafter in writing direct:

TO UTILITY:

San Diego Gas & Electric Company
P.O. Box 1831
San Diego, CA  92112-4150

TO APPLICANT:

Address _______________________

________________________________________

________________________________________

Attention: ___________________________

Attention: ___________________________
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**Note:** Utilizes estimated cost of related overhead construction.

**Appendix A:** Summary of Work:
- **Base:** 8267-20-001
- **Tax:** 8267-20-001
- **Total:** 8267-20-001

**Appendix B:** See Appendix B for full details.

**Appendix C:** Estimate cost of additional facilities.

**Appendix D:** See Appendix D for full details.
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**Note:**
- Line 1: Amount due on utility line 4 less line 2.
- Line 2: Amount due on utility line 4 less line 2.
- B: Billing - Construction by utility
- C: Net cost to customer
- D: Credit for depreciation (if applicable)
- E: Credit for scrap/salvage (if applicable)
- F: Billing - M/W acquisition by utility - non-refundable
- G: Billing for overhead and construction and removals
- H: Overhead conversion cost

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**Total:** Base $2227

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**Notes:**
- 85221-030-001
- 82/12/12
- 82/12/12
- BPP09925P-RM0730-001

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**Sample:**
- SAN DIRCO GAS AND ELECTRIC
- DPP12345
- 82/12/12
- BPP09925P-RM0730-001

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**Page No:** 1
GENERAL SPECIFICATIONS

VERIFY THE LOCATION OF TELEPHONE SUBSTRUCTURED BEFORE EXCAVATION. CALL 811.
BE RESPONSIBLE FOR ALL TRENCHING AND PROVIDE CONSULT IN THOSE PORTIONS OF
THE TRENCH, 10FEET COMAH AND SEPARATE, AS SPECIFIED BY THE TELEPHONE
COMPANY ENGINEER.
BE RESPONSIBLE FOR THE PLACEMENT OF CONDUIT ACCORDING TO TELEPHONE
COMPANY SPECIFICATIONS AND UNDER THE INSPECTION OF A TELEPHONE COMPANY
TRENCH INSPECTOR.

TELEPHONE COMPANY WILL OCCUPY THE TOP POSITION IN ALL TRENCHES. UNDER NO
CIRCUMSTANCES WILL STRIPURE BE ALLOWED ABOVE THE TELEPHONE COMPANY
POSITION.

THERE WILL BE NO CHANGE IN DESIGN WITHOUT THE CONCORDANCE OF THE TELEPHONE
COMPANY TRENCH INSPECTOR AND ENGINEER.

CONTACT THE TELEPHONE COMPANY TRENCH COORDINATOR 15 DAYS PRIOR TO
CONSTRUCTION TO ESTABLISH A PRE-CONSTRUCTION MEETING DATE 760-889-3063.

TRENCH
1. ALL TRENCH BACKFILL MATERIAL (CLASS B) AND COMPACTED TO BE IN
ACCORDANCE WITH MUNICIPAL/COUNTY SPECIFICATIONS.
2. MINIMUM COVER AS REQUIRED BY GOVERNING AGENCY.
3. MINIMUM CLEARANCE TO BE 12 INCHES FROM ALL TRENCH OCCUPANTS
EXCEPT CATHIER, PER C.P.U.O. ORDER 125.

CONDUIT
1. CONDUIT TO BE 4" TYPE "C" RIGID PLASTIC.
2. ENSURE DUCTS ARE CLEAR AND HAVE MEASURED WIRE TAPE.
3. BENDS, SLEEPS OR GRADE CHANGES THAT HAVE A RADIUS OF 30 FEET OR LESS.
   OR A GRADE CHANGE OF 20 PERCENT OR MORE MUST BE ENGINEERED IN CONCRETE.
   MATERIAL SHALL BE 3 1/2 SACKS 1/4 "ACME" AGGREGATE TYPE 1 CONCRETE.
   4. EACH SECTION TO BE LIMITED TO TWO 90° FACTORY BENDS AND NO MORE
      THAN TWO 90° SLEEPS OF NOT LESS THAN 25 FEET RADIUS. EXCEPTIONS
      MUST BE APPROVED BY TRENCH INSPECTOR.
5. CONDUIT MATERIAL DELIVERED BY AT&T IS TO BE SIGNED FOR AT THE
   JOB SITE.

INSPECTION
1. COORDINATE WITH THE AT&T TRENCH INSPECTOR AND DIRECT ALL
   CONSTRUCTION-RELATED QUESTIONS TO THAT INDIVIDUAL.
2. TRENCH TO BE INSPECTED AND ACCEPTED BY TELEPHONE TRENCH INSPECTOR
   PRIOR TO BACKFILL 760-889-3063.

GROUNDING
1. DEVELOPER TO PROVIDE LATERAL GROUND, PRIORITY AS FOLLOWS:
   A. LATERAL EXTENDED INTO TELEPHONE SERVICE CABINET NO MORE THAN 1".
   B. DEVELOPER INSTALLED #2 GROUND WIRE FROM LATERAL TO TELEPHONE
      SERVICE CABINET. 2# GROUND WIRE FOR INDUSTRIAL OR MULTIPLE DWELLINGS.
   C. CONDUIT FROM LATERAL TO TELEPHONE SERVICE CABINET.
2. THE GROUNDING MEDIUM MUST BE PERMANENTLY ACCESSIBLE BY PLACEMENT OF
   A DOUBLE GANG "S" RING (2). SERVICE CABINET.
1. THE MINIMUM DIMENSIONS OF THE TELEPHONE SERVICE CABINET MUST BE
   11 1/4" x 14" x 4".
   2. NOTHING IS TO BE PLACED ADJACENT TO THE TELEPHONE SERVICE CABINET
      AS TO INTERFERE WITH ITS COMPLETE OPENING AND CLOSING.

SPACE REQUIREMENTS FOR DUCT BUNDLES

CHARLES-14 CLOSURE
14" DIAMETER OUTSIDE DIMENSIONS 32" ABOVE GRADE

CHARLES CWPW CLOSURE
1. MUST ESTABLISH FINAL GRADE BEFORE TELCO CABLE AND
   PEDESTALS ARE PLACED.
2. CONDUITS MUST EXTEND 12" ABOVE GRADE. STRAP CONDUITS
   TOGETHER AT THE SERVICE CABINET.
3. MAINTAIN MINIMUM CONDUIT SEPARATION 16x" INSIDE
   DIAMETER OF CONDUIT.
4. PLACE WEATHERPROOF CAPS ON ENDS OF ALL CONDUITS.
5. MARK OR RECORD STUB LOCATIONS.
6. MAINTAIN 3" SEPARATION FROM ALL POWER TRANSFORMERS AND
   CT FROM ALL POWER TERMINATIONS.

TYPICAL GROUND BED SYSTEM

TRENCH Bypass

CONDUIT TERMINATION AT PEDESTAL

1. MAINTAIN 3" SEPARATION FROM POWER TERMINATIONS.
2. STRAP CONDUIT TOGETHER 6" ABOVE
   DIAMETER-SEE OVERVIEW FOR CLUSTERING
   OF CONDUITS.
3. PLACE WEATHERPROOF CAPS ON ALL
   CONDUITS, MARK OR RECORD STUB LOCATION.

RECOMMENDED BENDING RADIUS FOR GROUNDING WIRE IS 12 INCHES.

CONDITIONS WITHIN 500' 0F 1ST FT TO 2ND TRANSITION POINT (NORMAL) THE SAD WITHIN 500" OF THE O.O.
SIDE OF ANY OTHER AT&T BURIED CABLE PULLING OFF FROM AN EXISTING ROUTE. AT EVERY OTHER AT&T
TERMINAL NOT TO EXCEED 1000' TO GROUND BED. WITHIN 500' OF THE END OF THE CABLE ROUTE
FOR AERIAL PLANT THE AT&T SUPPORTING WIRE/STRAND SHALL BE GROUNDED EVERY
1200 FEET WITH A GROUND BED PER THE DETAIL ABOVE.
LOCATE AND INTERCEPT 2.4" CONDUITS. CONDUITS ORIGINATE 635' AWAY AT PEDESTAL AT NW CORNER OF EL NORTE PKWY AND OAKWOOD CREEK WAY.

EXISTING 2.4" ATT CONDUITS

PL 2.4" CNDTS IN NEW BRIDGE 160'

STUB, PLUG, AND PL EMS MARKER
ATTACHMENT E

Bid Item Lists
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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**TOTAL**
ATTACHMENT F

Project Staging Area
INDEX TO STANDARD PLANS
The following State of California Department of Transportation Standard Plans, dated 2018, are part of these contract drawings:

A3A  ABBREVIATIONS (SHEET 1 OF 3)
A3B  ABBREVIATIONS (SHEET 2 OF 3)
A3C  ABBREVIATIONS (SHEET 3 OF 3)
A10A  LINES AND SYMBOLS (SHEET 1 OF 5)
A10B  LINES AND SYMBOLS (SHEET 2 OF 5)
A10C  LINES AND SYMBOLS (SHEET 3 OF 5)
A10D  LINES AND SYMBOLS (SHEET 4 OF 5)
A10E  LINES AND SYMBOLS (SHEET 5 OF 5)
A10F  LEGEND SOIL (SHEET 1 OF 2)
A10G  LEGEND SOIL (SHEET 1 OF 2)
A10H  LEGEND ROCK
A20C  LIMITS OF EXCAVATION AND BACKFILL BRIDGE
RSP  BG-1  BRIDGE DETAILS
BG-3  BRIDGE DETAILS
B6-10  UTILITY OPENINGS T-BEAM
B11-58  CONCRETE BARRIER TYPE 7325W (SHEET 1 OF 2)
B11-59  CONCRETE BARRIER TYPE 7325W (SHEET 2 OF 2)

INDEX TO STANDARD DRAWINGS
The following San Diego Regional Standard drawings, dated 2019 (SDS), are a part of these contract drawings.

G-2  CURB AND GUTTER - COMBINED

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN


SEISMIC
DESIGN:  Caltrans Seismic Design Criteria, SDC V1.7, May 2013

DEAD LOAD:  Includes 35 psf for future wearing surface

LIVE LOADING:  HL93 and Alternative and Permit Design Load

SEISMIC LOADING:  SDC ARS online

Vs = 890 ft/sec

Moment Magnitude = 7.5

Peak Ground Acceleration = 0.38 g

REINFORCED CONCRETE:

fy = 60,000 psi

fc = 3,600 psi

PRESTRESSED CONCRETE:  See PRESTRESSING NOTES on "GIRDER DETAILS" sheet.

SPECIFICATIONS
Standard Specifications, dated 2018, State of California, Department of Transportation.

PLAN SYMBOLS

INDEX TO BRIDGE PLANS

<table>
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<th>SHEET NO.</th>
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<td>DECK CONTOURS</td>
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<td>3</td>
<td>FOUNDATION PLAN</td>
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<tr>
<td>4</td>
<td>ABUTMENT DETAILS</td>
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<td>GIRDER LAYOUT</td>
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<tr>
<td>11</td>
<td>REMOVABLE CONCRETE MEDIAN DETAILS</td>
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</tbody>
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NOTES:
1. Contour interval = 0.10 ft.
2. Contours do not include stringer.
3. X - Indicates 10' intervals along station line.
4. - Indicates even foot contour.

DECK CONTOUR PLAN

1' = 10'

CONCRETE STRENGTH AND TYPE LIMITS

- Structural Concrete Bridge (f'c = 4000 psi @ 28 days)
- Structural Concrete, Bridge (f'c = 3600 psi @ 28 days)
- Prestressed/Prestressed Concrete Double T Girder, see PRESTRESSING NOTES on "GIRDER DETAILS" sheet.

LONGITUDINAL SECTION

DECK GRADES ABOVE

CONCRETE SLAB 5%
**PRESTRESSING NOTES:**

1. The Jacking Force (P) is the jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.

2. The maximum temporary tensile stress (pinking stress) in the prestressing steel shall not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.

3. Concrete strength:
   - $f'c$ is at time of initial stressing
   - $f'c$ is at 28 days

4. Deflection components are informational and will be used to set screed line elevations.

5. Screed line elevations for deck concrete will be determined by the Engineer.

6. Prestressing strand shall be 270 ksi low relaxation.

---

**PRESTRESS GIRDER TABLE**

<table>
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<tr>
<th>LOCATION</th>
<th>GIRDER LENGTH (L)</th>
<th>DEPTH (D)</th>
<th>NO. OF D.0.6 STRANDS</th>
<th>JACKING FORCE (P)</th>
<th>CONCRETE STRENGTH</th>
<th>MIDSPAN DEAD LOAD DEFLECTION (in)</th>
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<td>ALL GIRDER</td>
<td>50'-6&quot;</td>
<td>2'-4&quot;</td>
<td>18</td>
<td>790 kips (444 kips STRAND)</td>
<td>$f'c$</td>
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---

**ELEVATION**

- Symmetrical about $\xi$ span
- Coarse broom finish. Construction joint between girder and deck slab
- Extends straights. See detail A

---

**TYPICAL GIRDER SECTION**

- $1" = 1'-0"$
- Extends strand, $\xi$ girder
- Chamfer or radius
- Arrive Blast Clean, 1'-0" Min
- With over each stem
- $\xi$ girder

---

**STRAND TEMPLATE AND DEBONDING PATTERN**

- Not to scale
- Legend:
  - Denotes extended strand.
  - Denotes debonded strand.
  - Denotes continuously bonded non-extended strand.

---

**DETAILED A**

- $3" = 1'-0"$
- Extended strand
- 45°
NOTES:
1. All open pipes shall be capped.
2. All posts, pickets & rails shall be Standard pipe.
3. All metal fence components shall be hot dipped galvanized.
Notes:
1. Cut fence post 3" below top of rail/fence. Coat with zinc paint and fill hole with grout.
2. For spacing, see "METAL RAILING DETAILS 1 OF 2" sheet.

Partial Plan of Existing Wingwall and Guardrail

Partial Elevation of Existing Wingwall and Guardrail

NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
REMOVAL LIMITS

H₂ = 1'-0"

36" DIA WATERLINE FOUNDATION, SEE NOTE 2

36" DIA WATERLINE, SEE NOTE 2

NOTES:
1. Limits of removal equal to bottom of abutment footing.
2. Protect 36" dia. waterline and foundations in place.

LEGEND:
- Indicates partial channel lining removal.

CHANNEL LINING DETAIL

1" = 1'-0"

STANDARD DRAWING SHEET

SCALE: 1/4" = 1'-0"
**REMOVABLE CONCRETE**

\[ \frac{1}{8}" = 1' - 0" \]

**SECTION B-B**

\[ \frac{1}{8}" = 1' - 0" \]

**NOTES:**
1. Architectural finish not shown for clarity.
2. Lift inserts shall consist of \( \frac{3}{4}" \) T1 coil insert manufactured by DAYTON SUPERIOR or equivalent, total 4 per median slab.
4. Coat exposed rebar with Zinc-rich paint.

**DETAIL A**

\[ \frac{1}{8}" = 1' - 0" \]

**SECTION A-A**

\[ \frac{1}{8}" = 1' - 0" \]

**MEDIAN CURB DETAIL**

\[ \frac{1}{8}" = 1' - 0" \]

---

**NOTE:**
The contractor shall verify all controlling field dimensions before ordering or fabricating any material.
CITY OF ESCONDIDO

ADDENDUM NO. 1 FOR:

El Norte Parkway Improvement Project

To all holders of Plans and Specifications for the subject project: The following revisions have been made to the plans and specifications and shall be included as part of any Bid proposal.

!! PLEASE NOTE, THE BID DATE REMAINS THE SAME !!

REVISIONS TO THE PLANS:

1. Attachment D – Utility Plans, AT&T / Cox Communication / SDG&E Plan Sheet 2 of 2, DELETE: “New El Norte Parkway Bridge Detail,” and ADD: “Note 1. All conduit through the bridge shall be placed as shown on project bridge plans, Drawing No. P-2485, Sheet 5 of 11, Typical Section.”

2. Bridge Plans, Drawing No. P-2485, Sheet 5 of 11, DELETE Note 5 in its entirety, and replace with: “The Contractor is referred to Item 11 of the project specifications for additional information.”

3. Bridge Plans, Drawing No. P-2485, Sheet 11 of 11, Notes, ADD: “Note 5. The Contractor shall modify removable concrete panels in the area of Station 84+00 to accommodate an existing Air-vac valve for the existing water main fastened to the side of the existing bridge. The Contractor shall reduce rebar spacing shown in Section B-B by half (From #8 bars at 12 inches O.C. to 6 inches O.C., and #8 bars at 18 inches O.C. to 9 inches O.C.) within three feet of the opening. Assume the Air-vac opening will be at the joint of both removable panels in the area of Station 84+00, and that both removable concrete panels will be affected.

REVISIONS TO THE SPECIFICATIONS:

4. Supplemental General Conditions, Page A-00800-1, The “Specifications” for this Project also include:, DELETE: “Item 7 – Attachment A: Escondido Creek Trailhead Entry Sign,” and REPLACE it with “Item 7 – ADDENDUM 1 Attachment A: Escondido Creek Trailhead Entry Sign and Gateway Signage Specifications.” Any reference within these contract documents to Attachment A: Escondido Creek Trailhead Entry Sign shall now refer to these documents. Gateway Signage Specification Sections 10400, 260500,
260519, 260533, and 260553 only apply to fabrication and construction of the Escondido Creek Trailhead Entry Sign.

ADDENDUM 1 Attachment A: Escondido Creek Trailhead Entry Sign and Gateway Signage specifications have been attached for the Contractor’s use.

5. Supplemental General Conditions, SGC-2.4 Starting the Work, REVISE to read: “SGC-2.5 Starting the Work.” All other language shall remain unchanged.

6. Supplemental General Conditions, ADD: “SGC-6.24.A.6 – Immediately following the first paragraph of General Condition 6.24.A.6, add the following second paragraph: Preparation of shop drawings for bridge precast girders, bridge railing, pedestrian signals, trailhead entry sign, and other items with lead times greater than six weeks shall be submitted within thirty calendar days from a fully executed agreement with the City. The Contractor will be charged five hundred dollars per calendar day ($500/calendar day) for late submittals or submittals considered significantly incomplete by the City. Returned submittals shall be re-submitted within fourteen calendar days, and are subject to the same late charges. Said shop drawings shall meet all other requirements of project submittals, and no additional payment shall be allowed for. Any other reference to submittal timelines for these items shall now comply with these requirements and conditions.

Revisions Approved by:

[Signature]

Julie Procopio, City Engineer / Director
of Engineering Services

Date: May 16, 2019

The undersigned acknowledges receipt of Addendum No. 1 and has included same in the proposal. Contractor shall sign this and all other addendums, and this and all other addendums shall be physically attached to the bid package submitted prior to the time of the bid opening. Failure to do so may result in the bid being deemed unresponsive.

RECEIPT ACKNOWLEDGED:

[Signature]  
Date

ADDENDUM 1
ADDENDUM 1 Attachment A: Escondido Creek Trailhead Entry Sign
CONSTRUCTION DOCUMENTS FOR:
ESCONDIDO CREEK TRAILHEAD ENTRY SIGN
FOR THE EL NORTE PARKWAY MEDIANs
CITY OF ESCONDIDO

APPLICABLE STANDARD DRAWINGS & SPECIFICATIONS:
GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 2015, AS AMENDED BY REGIONAL SUPPLEMENT AMENDMENTS

1. BEFORE EXCAVATING, VERIFY THE LOCATION OF ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF RELOCATIONS OR REPLACEMENT OF SUCH SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.

2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL SUBSTRUCTURES, WHETHER SHOWN HEREON OR NOT, AND PROTECT THEM FROM DAMAGE. THE EXPENSE OF RELOCATIONS OR REPLACEMENT OF SUCH SUBSTRUCTURES SHALL BE BORNE BY THE CONTRACTOR.

3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ENFORCE SAFETY MEASURES OR REGULATIONS.

4. LOCATION AND ELEVATION OF ALL EXISTING FACILITIES MUST BE CONFIRMED BY FIELD MEASUREMENT PRIOR TO CONSTRUCTION OF NEW WORK. CONTRACTOR SHALL MAKE EXCAVATIONS AND LOCATE EXISTING UNDERGROUND FACILITIES AND COORDINATE THEIR WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY COMPANIES, ADVISE THEM OF THE PROPOSED WORK, AND PROVIDE ESCONDIDO CITY OF ESCONDIDO IS NOT COVERED IN THE GREENBOOK.

5. THE CONTRACTOR SHALL TAKE ALL PRECAUTIOUS MEASURES TO PROTECT EXISTING IMPROVEMENTS.

6. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATING THEIR WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY COMPANIES, ADVISE THEM OF THE PROPOSED WORK, AND PROVIDE ESCONDIDO CITY OF ESCONDIDO IS NOT COVERED IN THE GREENBOOK.

7. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES PRIOR TO STARTING WORK NEAR COMPANY FACILITIES AND COORDINATE THEIR WORK WITH COMPANY REPRESENTATIVES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE UTILITY COMPANIES, ADVISE THEM OF THE PROPOSED WORK, AND PROVIDE ESCONDIDO CITY OF ESCONDIDO IS NOT COVERED IN THE GREENBOOK.

8. CONTRACTOR SHALL NOTIFY UTILITY COMPANY AND ENGINEERING INSPECTOR IF THERE IS A DISCREPANCY BETWEEN ANY UTILITY SHOWN ON THE PLANS AND THOSE MARKED IN THE FIELD. SHOULD CONTRACTOR PROCEED WITHOUT NOTIFICATION, CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR DAMAGE OF UTILITY.

CAUTION AND UTILITY NOTES:

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AC PAVING TO MATCH EXISTING. 2/L-2.0
12" DEPTH ENHANCED VEHICULAR CONCRETE PAVING SMUDGEE TALL SAND BLASTED TEXT. COLOR SAN DIEGO BUFF. AVAILABLE THROUGH DAVIS COLORS OR APPROVED EQUAL.
GATEWAY SIGN AVAILABLE THROUGH SAN DIEGO ELECTRIC SIGN INC. PH: (619) 258-1775 - CONTACT JIM DOBYNS OR APPROVED EQUAL.
WHITE STRIPING TO MATCH EXISTING.
YELLOW STRIPING TO MATCH EXISTING.
EXISTING CHAINLINK FENCE TO REMAIN, PROTECT IN PLACE.
EXISTING AC PAVING TO REMAIN, REMOVE EXISTING STRIPING AND SEAL COAT.
PROPOSED PAVING TO BE FLUSH WITH GRADE OF EXISTING OR ADJACENT WALKWAYS.

NOTES:
1. CONTRACTOR SHALL REVIEW PLANS AND DETAILS TO ASCERTAIN LOCATIONS NECESSARY TO PROVIDE ELECTRICAL CONNECTIONS TO POWER LIGHTING.
2. PAVING SHALL HAVE FINISHED GRADES SMOOTHED TO ELIMINATE PUDDLING OR STANDING WATER. ALL FINISH SURFACES SHALL MAINTAIN, UNLESS NOTED, A MINIMUM 1% SLOPE AWAY FROM BUILDINGS AND WALLS INTO DRAINAGE STRUCTURES. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICTS MAINTAINING DRAINAGE.
3. NO DEVIATIONS FROM THESE PLANS SHALL OCCUR WITHOUT PRIOR APPROVAL OF THE CITY OF ESCONDIDO.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR LANDSCAPE ARCHITECT'S REVIEW AND APPROVAL FOR DETAILS AS NOTED ON THE PLANS AND SPECIFICATIONS.
5. ANY PROPOSED WORK THAT IS INCONSISTENT WITH COMMON, SAFE CONSTRUCTION PRACTICES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WITH CONSTRUCTION.
6. CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL APPLICABLE FEES TO CONSTRUCT THE PLANS HEREIN.
7. CONTRACTOR SHALL CONTACT CITY OF ESCONDIDO FIELD ENGINEERING INSPECTOR TO VERIFY STAKING OF LAYOUT PRIOR TO INSTALLATION.
8. ANY CREDITS AND/OR DEBITS SHALL BE REPORTED TO OWNER'S REPRESENTATIVE AT TIME OF OCCURRENCE FOR PROPER VERIFICATION AND/OR APPROVAL PRIOR TO COMMENCEMENT OF RESULTING ACTION.
9. CONTRACTOR SHALL CONTACT CITY OF ESCONDIDO FIELD ENGINEERING TO VERIFY STAKING OF LAYOUT PRIOR TO INSTALLATION.
10. ALL VERTICAL SURFACES, UNLESS NOTED OTHERWISE, SHALL RECEIVE AN ANTI-GRAFFITI COATING.
11. DIMENSIONS INDICATED ON PLANS SHALL PREVAIL OVER PLAN SCALE. ALL ANGLES AND CONNECTIONS ARE (90) DEGREES UNLESS NOTED OTHERWISE.

SCHEMATIC DESIGN GROUP

SCALE: 1" = 4'-0"
ENHANCED CONCRETE PAVING

**Inside Paint White**

**Plan**

**Section Enlargement X3**

**Material**

- **Concrete Paving - Per Chart**: Font: AERIAL BOLD, STROKE WIDTH TO BE AT LEAST 3/4". Finish: Powder coated paint, Copper Brown, RAL 8004.
- **Concrete Column Trim - Per Chart**: Font: ARIAL. Paint 6" tall sandblasted text. Center in two coats of exterior paint 6" tall sandblasted text. Center in two coats of exterior paint.
- **Concrete Column Veneer - Per Chart**: Available through Davis Colors or Approved Equal.

**Notes**

- **All Hardware to Be Vandal Resistant**.
- **All Visible Wells to be Grade Smooth**.
- **Center Width of Words in the Center of**
- **Words Shall Extend Across Full Width of**
- **SANDBLAST TEXT INTO CONCRETE 1/4" DEPTH**.
- **BASE PLATE PER SIGN MANUFACTURER**.
- **COMPACTED SUBGRADE**.
- **For Additional Information**
  - (800) 828-0919. WWW.PROTECTOSIL.COM.

**LEGEND**

- **1" X 4" FABRICATED ALUMINUM CABINET WITH POWER SUPPLY ACCESS PANEL ON TOP**.
- **1" SQUARE STEEL PIPES FORM COLUMNS**.
- **3" DEEP FABRICATED ALUMINUM CABINET WITH POWER SUPPLY ACCESS PANEL ON TOP**.

**Electrical Conduit Runs**

- **Conduit runs through concrete footing into sign structure for provide stub out at footing locations**.
- **Electrical conduit runs through concrete footing into sign structure for provide stub out at footing locations**.

**Concrete Paving**

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**Concrete Column Veneer**

- **Concrete Column Veneer - Per Chart**: Available through Davis Colors or Approved Equal.

**Concrete Paving**

- **Concrete Paving**: Powder coated paint, Copper Brown, RAL 8004.
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1. **Splice Details, Structure Tests, and Structural Observations:**
   - Splice details must comply with the California Building Code (C.B.C.) Section 1705.3.
   - Structural observations must comply with the California Building Code (C.B.C.) Section 1705.3.

2. **Concrete Lap Splice Schedule:**
   - Use 3D lap splices for #8 bars and smaller.
   - Use 6D lap splices for #8 bars and larger.

3. **Concrete Protection for Rebars:**
   - Concrete protection for rebars must follow the American Concrete Institute (ACI) 318-19.

4. **Concrete Mix Proportions:**
   - Cement shall comply with ASTM C150, Type II, Class F.
   - Fly ash may be substituted as specified in the concrete mix proportions.

5. **Concrete Placement:**
   - Concrete shall have a minimum slump of 3 inches to ensure proper placement.

6. **Concrete Curing:**
   - Concrete curing shall not be performed until the concrete has achieved a strength of at least 4000 psi.

7. **General Special Inspections:**
   - Special inspections shall be performed as required by the California Building Code (C.B.C.).

8. **Special Inspections Notes:**
   - Observations shall be made in accordance with the California Building Code (C.B.C.).

9. **Concrete Footings:**
   - Footings shall extend to a minimum depth of 1'-6" below low adjacent grade.

10. **Concrete Foundation:**
    - The foundation shall comply with the California Building Code (C.B.C.).
Section 10400
GATEWAY SIGNAGE

PART 1 - GENERAL

1.1 LOCATION:

The work is to be performed at El Norte Parkway, east of Escondido Creek in Escondido, California.

1.2 SCOPE OF WORK:

The Sign Contractor shall perform all work necessary to furnish, deliver and install all items shown on the Design Intent Drawings and specified herein, including preparation of digital files, typefonts and camera-ready art for use in production. The fabricator shall be responsible for developing all signs based on the typical concepts shown in the drawings, including typographical refinements such as margins, kerning, leading, line breaks and spacing, necessary to complete the work.

1.3 INSTRUCTION RELATING TO EXISTING CONDITIONS:

The Sign Contractor shall take measurements at the site and shall check all measurements and grades on the contract drawings or subsequent drawings. Such information given on the contract drawings and in the specifications relative to existing conditions has been obtained from sources believed to be reliable, but shall be subject to verification in the field. The contractor must field verify exact locations and conditions for each sign and notify the City in writing, of any discrepancies, omissions, or clarifications as they affect sign design or location.

1.4 EXAMINATION OF SITE DOCUMENTS:

Before submitting a bid, the Sign Contractor should carefully examine the Design Intent Drawings and Construction Specifications, visit the site and fully inform themselves as to all existing conditions and limitations. Should any discrepancies or omissions from the drawings and specifications be found, or should there be any doubt as to their meaning, he should notify the City at once, in writing.

Sign Contractor shall participate in a pre-production conference with the City's representative and the Landscape Architect to review the contract requirements, clarify the scope and nature of the work as outlined in the Drawings and Specifications, to establish clear lines of responsibility and checkpoints for the performance of the work.

1.5 WORKMANSHIP AND MATERIALS:

The Sign Contractor shall have been continuously engaged in fabrication of similar work for a minimum of five (5) years. The Sign Contractor shall warrant and guarantee that none but experienced workmen will be employed on the work and that all items
fabricated and/or provided by him shall be of the best of their respective kinds. The Sign Contractor certifies that he is able to furnish sufficient forces to ensure prosecution of the work in accordance with approved progress schedules and that he can furnish a work force that can work in harmony with all elements of labor employed in the work and at the site of the work.

1.6 PROTECTION OF WORK AND PROPERTY:

The Sign Contractor shall be responsible for the work until it is accepted by the City, and the Sign Contractor shall cover and protect all items from damage during transportation, storage and installation. If any loss or damage occurs prior to acceptance by the City, the Sign Contractor shall promptly repair or replace the part or parts lost or damaged, as directed by the City, at no cost to the City.

The Sign Contractor shall also be responsible for any loss or damage to the City’s property and to the property of others due to operations under Contract and shall make good, at his own expense and to the complete satisfaction of the City, such loss or damage.

The Sign Contractor shall package materials and supplies in biodegradable packing whenever possible.

1.7 SUPERVISION:

The Sign Contractor shall provide all necessary supervision by a person especially qualified and experienced in handling the work covered in his bid. This individual and his qualifications shall be satisfactory to and approved by the City. The Sign Contractor shall consult with the Landscape Architect should any error or inconsistency develop in the drawings and specifications and if there is any doubt, in no case shall the Sign Contractor proceed with the work without approval. The Sign Contractor shall be entirely responsible for the proper laying-out of his work and for any damages that may occur because of his errors or inaccuracies.

1.8 COORDINATION:

The Sign Contractor shall coordinate all activities related to the work with the City’s designated site superintendent. It shall be the Sign Contractor’s responsibility to meet any construction schedules required by the General Contractors due to related site work.

The Sign Contractor shall also be responsible for coordinating his work with that of all other trades at the job site and for coordinating excavations as necessary to protect below-grade utilities, irrigation lines, telephone lines, and cable TV lines.

1.9 GUARANTEE AND/OR WARRANTY:

The Sign Contractor shall agree to bring all portions of work to entire completion free of
all defects in materials and workmanship for a period of one (1) year from the date of final acceptance of the completed work by the City.

Defects include but are not limited to: electrolytic decomposition; oxidation; dislocation of fasteners, anchors, welds or any other connecting devices; de-lamination; pitting of surfaces or finishes; non-adhesion; warping, canning or other distortions of uniform surfaces; fading or discoloration.

The Sign Contractor also guarantees, within a reasonable time after receipt of written notice thereof, to make good any defects in materials and/or workmanship which may develop within such period for which materials and workmanship are warranted, and to pay or cause to be paid for any damage to other work resulting therefrom, which may develop during the period of one (1) year from the date of final acceptance of the completed work by the City.

1.10 SAMPLES:

Samples shall be labeled on the backside with the Project Name, the Submittal # (i.e. 1, 2 etc.), the Design Intent designation (i.e. P2, V1, etc.), a description (i.e. paint to match DE3544 semi-gloss with anti-graffiti coating, etc.). Sign Contractor shall submit three (3) complete sets of samples of the following to the City for approval prior to fabrication:

A. Typical finished reverse channel letter with required illumination in specified material and finish, as required.

B. Material samples for each designated paint color and surface finish including:

1. Metal:
   Submit actual production sections showing coating color and finish for aluminum and steel (4 samples per color on 4” x 4” squares)

2. Acrylics:
   Submit samples of acrylic / plastic materials for the various applications in their finished state and data describing the materials and finishes.

3. Sealant / Silicone:
   Submit sample of sealant and silicone where color match is required.

4. Inks, paints and lacquers:
   Submit (4) 4” x 4” square samples per finish.

5. Other materials (e.g., PVC, MDO):
   Submit as required.

6. Anti-Graffiti:
   Samples of anti-graffiti coatings on appropriate surfaces.
C. Additional samples for typestyles, materials and finishes as required.

D. Cut-sheets and supplemental information for each type of light fixture to be utilized.

The above samples, when approved, shall establish standards for materials, colors, finishes and quality of workmanship. Completed work shall exactly match the standards established by the approved samples, or work will be rejected. Sample will be given the same time allocation as submittals (see section 6.23, General Conditions and Section 01300).

1.11 SHOP DRAWINGS:

A. Sign Contractor is responsible for obtaining base Drawings from the City or its representatives upon award of contract. Within two (2) weeks after award of Contract, Sign Contractor shall provide the City with locations, sizes and treatments of access panels and backings required for signs. Such information along with estimated sign weights should be represented on the Architectural and Structural Drawings and submitted along with a feed letter confirming electrical requirements for signs to the City and its representatives.

The Sign Contractor is responsible for coordinating all structural drawings with the City and its representatives.

B. Sign Contractor shall submit three (3) complete sets of fully dimensioned Shop Drawings to the City for approval prior to fabrication. The cover shall state the initial submittal date and subsequent revision dates, and identify the package as Submittal 1, Submittal 2, etc. If the Shop Drawings are broken into components and submitted at different times, then in addition, the cover will identify which sign types are included in each submittal. The Shop Drawing shall include a table of contents listing each sign type alphabetically and where it can be found within the drawings. The Shop Drawing submittal shall incorporate all stated elements of the Design Intent Drawings, the stamped structural engineering calculations, and the specifications outlined in Sections 4 and 5 herein. The shop drawings are expected to include additional details that are not shown on the Design Intent Drawings (see C and D below). It is not acceptable for the Sign Contractor to copy/repackage Design Intent Drawings and label them as “shop drawings.” All such submittals shall be rejected.

Any Digital Files of the Design Intent Drawings requested by the Sign Contractor will be sent as is (Mac Illustrator CS3 or PDF). Procurement of typefonts as well as corrections and or adjustments to Digital Files necessary to gain approval of Shop Drawings and Production Art is the sole responsibility of the Sign Contractor.

C. Shop Drawings shall establish the actual detail of all manufactured or fabricated items and shall include specifications for the paint system to be used for signage/graphics as well as specifications for all required electrical fixtures and components. Drawings shall also indicate proper relation to existing work, reflect all structural engineering requirements, and incorporate changes of design or construction, as directed by the City, to suit actual field conditions. In addition, drawings shall indicate internal
structural supports; adhesives; exact location and treatment of seams and joints; thickness of materials; exact location of access panels and safety switches; footing details; and details of installation, including sign attachments. Scaled drawings will show each sign type in elevation and plan dimensioning its position in relationship to the architectural or landscape setting.

D. Shop drawings shall also indicate the source and location of electrical service for each sign installation, as well as complete specifications for all electrical fixtures and components.

E. All shop drawings and construction details must be fully dimensioned. Use 1-1/2" = 1'-0" minimum for construction details.

F. Sign Contractor must continue to revise rejected plans and resubmit until approval is obtained. For initial submittal and re-submittals, the Sign Contractor shall work from one set of drawings (i.e., this one set of drawings must incorporate all previous revisions/adjustments).

G. Drawings not in compliance with all of these requirements shall be rejected.

H. A complete Shop Drawing set and Sign Schedule containing all signs with all revisions/adjustments shall be provided by the Sign Contractor to each party responsible for reviewing installed signs prior to the punch list date.

1.12 PATTERNS AND/OR PHOTO-READY ART:

A. Prior to fabrication, Sign Contractor shall submit full-size letter form and work spacing of all graphics for approval by the Landscape Architect, and include installation / attachment methods as required.

B. Sign Contractor shall be responsible for submitting signs to and gaining approval from all local, state and federal authorities having jurisdiction over the project. Any changes resulting from this process must be reviewed and approved by the City and the Landscape Architect prior to fabrication.

C. If Sign Schedule is provided, Sign Contractor shall alert City and Landscape Architect of any discrepancies between the Schedule and messages being prepared for signs. Approval must be received for all messages prior to fabrication.

1.13 ENGINEERING CALCULATIONS:

Stamped structural engineering calculations shall be provided. The Sign Contractor shall be responsible for reviewing and determining if any additional engineering will be required for this sign type and for resolving any discrepancies that may exist between the engineering and the details of the Design Intent Drawings.

The Sign Contractor shall be responsible for obtaining and paying for structural engineering calculations for any sign types that have not been engineered and for any additional structural engineering that may be required in connection with the work.
engineering affects the size and shape of the intended forms as shown on the Bid Drawings, the Sign Contractor must notify the General Contractor prior to submittal of Shop Drawings. Engineering is to be submitted to the City for approval in conjunction with shop drawing submittal.

City reserves the right to make changes, adjustments, or alterations to the Design Intent Drawings and/or to sign configurations subsequent to distribution of the Contract Documents to bidders. In which case, the selected Sign Contractor shall be responsible for obtaining and paying for any additional engineering that may be required.

Note: All rejected samples, shop drawings, patterns, artwork, engineering, etc. must be revised and re-submitted to the Landscape Architect until approval is obtained. A full set of final plans must be approved and stamped by the City and/or Landscape Architect prior to permit application or sign fabrication.

1.14 AS-BUILT DRAWINGS:

One complete set of drawings reflecting the as-built condition of all signs shall be submitted to the City within 30 days of acceptance of the work. This set of drawings shall incorporate all details of the work - - references to previous drawings or submittals are not acceptable. If Shop Drawings were broken into separate packages, the As Built Drawings must include a comprehensive cover that identifies each sub-package and a comprehensive table of contents that lists all signs alphabetically showing which sub-package and page they can be found on.

Part 2 - MATERIALS

2.1 GENERAL

Use only new materials of brands, types, and model numbers as noted on the drawings, specified herein, or approved equals.

A. Aluminum:

1. Extrusions and rolled material shall have a strength and durability no less than that which is specified in ASTM B 209 for 5005-H15. Sheets shall have a strength and durability no less than that which is specified in ASTM B 221 for 6063-T5. All exposed aluminum shall have a quality finish suitable for painting.

2. Material shall be of highest visual grade, free of mill marks, nicks, pits, gouges and other imperfections.

3. All welds shall be continuous. Where appropriate, exceptions may be granted as part of the shop drawing review. Welding shall be of the correct type to minimize permanent distortion of flat surfaces. Visible welds are to be filled and ground smooth. Welds shall comply with standards established by the American Welding Society, and the Aluminum Association.
4. All visible parts shall be ground smooth and filled before painting so that no grinding abrasions are apparent and there is no distortion of the intended form.

5. All aluminum shall be of sufficient gauge to prevent warping and canning. Warped or canned sign faces or backs shall be unacceptable.

6. Aluminum cabinets shall be welded and finished so as to appear seamless.

7. Where cast aluminum forms meet, seams are to be ground smooth: cast aluminum surfaces are to be bead blasted prior to coating.

8. Where aluminum is in contact with concrete, the aluminum material shall be coated with coal tar epoxy.

9. All seams shall be water-tight.

10. Use Matthews Paint System (or equivalent with City approval).

11. Unless indicated otherwise, all exposed, unpainted aluminum shall be clear-coated (gloss).

B. Steel:

1. All steel material shall adhere to specifications A.1 through A.5 above.

2. All exposed steel shall be urethane coated. Use a high solids, low VOC, two-component aliphatic urethane semi-gloss enamel formulated for use in commercial and industrial applications were color retention and a durable long-lasting coating is required. Apply 3 coats minimum for a dry film thickness of 5 mils.

3. Unless otherwise indicated on the Design Intent Drawings, sheet metal shall be 18 gauge white galvanized for letter faces and 24 gauge white galvanized for letter returns for reverse channel letterforms. All other sheet metal shall be 18 gauge unless otherwise specified.

4. Tube Steel shall conform to ASTM A501 Grade B
Steel Pipe shall conform to ASTM A53 Grade B
Steel rolled shapes shall conform to ASTM A36.

C. Miscellaneous Metal:

1. All metal materials shall be new stock, free from defects impairing strength, durability or appearance, and of such gauge to prevent warping or canning.

2. Surface finish shall be smooth, free of extrusion marks or imperfections. Alloy selected must meet structural requirements of the specific application.

3. Metal materials shall be painted as follows
a. Shop prime coat: zinc chromate primer for steel; acid wash primer for aluminum.

b. Acrylic urethane with semi-gloss finish, minimum 2 mill thick.

D. Acrylic:

1. As referred to in this document, acrylic shall include Plexiglas, Lexan and any other plastic material that may be specified in the Design Intent Drawings.

2. Acrylic material shall be new stock free from defects, and manufactured by Rohm & Haas or approved equivalent.

3. All work or cut edges shall be free of saw marks and chips and shall be polished mechanically with an appropriate compound. Flame polishing shall not be acceptable. Edges shall be square to the face.

4. Where acrylic parts meet or are joined in any manner, surface planes shall be flush and free from gaps.

5. No discoloration from bonding solvent shall be apparent on acrylic sign faces.

E. Adhesive:

1. Type and usage shall be as recommended by the manufacturer for the particular conditions and project requirements.
   a. Identify each type and usage on Shop Drawings.
   b. Include data describing method of application.

2. Adhesives that will fade, discolor, or delaminate as result of exposure to ultraviolet light or heat, or that change the color of or deteriorate the condition of the materials to which they are applied shall not be used. Adhesives must not be seen from public view.

3. All “2-stick” tape shall be VHB by 3M (or equivalent) and used in conjunction with silicone adhesive.

F. Inks, Paints and Lacquers:

1. Inks, paints and lacquers required for silk-screened, engraved, imprinted or other surfaces shall be of the type made for the surface material on which applied and recommended by manufacturer.
   a. Identify each type and usage on Shop Drawings.
   b. Include data describing method of application.

2. Products that will face, discolor or delaminate as a result of exposure to ultraviolet light source or heat therefrom shall not be used.
3. Prepare surfaces per manufacturer’s specifications prior to painting. Include, as a part of this work, prime coats (such as Matthews One-Coat 74-734 and Matthews Metal Pre-Treatment 74-735) and other surface pre-treatments (such as zinc chromate or acid wash), where recommended by the manufacturer for inks, paints and lacquers. Porous material should be filled sanded smooth and primed prior to painting unless indicated otherwise.

4. All paint shall be spray applied. Concrete surfaces may be roller or brushed provided there are no streaks or uneven textures. Pretreatment of surfaces and spray application of paint shall be performed in accordance with manufacturer's specifications.

5. Inks, paints and lacquers shall be applied without pinholes, scratches, peeling, application marks, etc.
   a. Back lighted or internally illuminated panels containing defects that cause light leaks in surface areas intended to be opaque will not be accepted.

6. All paint for metal signage, unless otherwise specified, shall be acrylic aliphatic isocyanate/acrylic polyurethane with ultraviolet (UV) inhibitors and formulated for exterior use in colors specified on the Design Intent Drawings or as otherwise specified by the Landscape Architect. Paint is to be the highest quality recommended by the manufacturer for specific surfaces. For steel surfaces, see section 4.01, B.

7. Paint is to be applied to all interior and exterior surfaces and edges of metal parts and components unless otherwise noted and approved.

8. All finish coats should be semi-gloss unless otherwise specified or approved as part of the Shop Drawings.

G. Letterforms and Spacing:
   1. All letterforms, typestyles and spacing shall be as specified on Design Intent Drawings.
   2. Letterforms with rounded positive or negative corners resulting from the cutting/fabricating process will not be accepted. Corners of fabricated letterforms must be as sharp as intended in the typefont.

H. Graphics:
   1. All graphic images shall be accurately reproduced. Lettering that approximates typestyles shall not be acceptable. Camera-ready or computer-generated layouts and patterns are to be approved for all signs by the Landscape Architect prior to production.

I. Hardware, Fasteners and Gaskets:
1. All exposed hardware shall match adjacent surfaces unless specifically noted otherwise.

2. All dissimilar metals shall be separated with 3M Scotchrap™ All Weather Corrosion Protection Tape to prevent electrolysis. Surface to be prepared with Scotchrap™ Pipe Primer before applying tape.

3. In addition to the tape in (2) above, stainless steel screws or fasteners shall be used to secure ferrous to non-ferrous metals.

4. Unless otherwise specified in the Design Intent Drawings, screws shall be flathead metal. Exposed screws shall be countersunk, and screw heads shall be finished to match the surrounding sign finish and color. Exact locations, sizes, and centers of screws shall be noted on the Shop Drawings.

5. All exposed bolt and screw heads accessible to the public shall be tamper resistant and shall be specified in shop drawing submittal.

J. LED (Light Emitting Diode illumination):

1. Sign Contractor shall use highest quality LED by Nichia, CREE, or equivalent. Minimum life span for White – 50,000 hours; Blue – 50,000 hours; Red – 100,000 hours.

2. Adequate cooling / venting for LED’s and power supply should be used per manufacturer’s recommendations to prevent over heating.

3. LED’s should be arranged to provide even color and lighting with no hot spots or dark areas.

K. Concrete:

1. Concrete footings for freestanding signs shall be approved structural footing mix (1” rock) and prepared per manufacturer’s specifications, with a 28-day compressive strength of not less than 2,500 pounds per square inch. Unless indicated otherwise, footings shall be reinforced with #4 steel re-bar at 12” on center. Provide details in Shop Drawings. Finish of exposed concrete sign base shall be as indicated on Design Intent Drawings and shall be free of any form impressions.

2. Concrete Specifications:

   a. Codes and Standards: ACI 301 “Specifications for Structural Concrete for Buildings”; ACI 311 “Recommended Practice for Concrete Inspection; ACI 318 “Building Code Requirements for Reinforced Concrete”; ACI 347 “Recommended Practice for Concrete Formwork;” ACI 304 “Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete”; Concrete Reinforcing Steel Institute “Manual of Standard Practice”; comply with applicable provisions except as otherwise indicated. Comply with
Building Code requirements which are more stringent than the above. Perform testing as specified in Division 1.

b. Portland Cement: ASTM C 150. Type as specified on the Drawings unless otherwise approved by the Structural Engineer.

c. Aggregates:
   1) Footings: STM C 33, regular concrete.
   2) Flat sheets or Pre-Cast Panels: Use 3/8" pea gravel.

d. Water: Clean, drinkable.

e. Air-Entraining Admixture: ASTM C 260 per approved mix design.


g. Reinforcing Bars: ASTM A 615. Grade 60.

h. Welded Wire Fabric: ASTM A 185: flat sheets only.

2.2 ELECTRICAL FIXTURES:

A. Fluorescent Lighting:
   1. Single pin, high output using “daylight” bulbs or equivalent.
   2. Exact number, spacing and size of lamps and ballasts shall be noted on Shop Drawings.
   3. Lamps shall be accessible for maintenance and replacement.
   4. Exterior lighting shall be weatherproof.

B. Automatic Time Switch:
   1. Where specified, Sign Contractor shall furnish and install a Time Switch for automatic on-off control of sign lighting. Time Switch shall be INTEMATIC ET70000C series or equal.

   2. The electronic Time Switch shall be a solid state digital type capable of distributing set points on independent daily schedules throughout a 7 day time period. The Time Switch shall provide for 5 weekday program entry for typical 5/2 day load control. The Time Switch shall provide astronomic programming and momentary or interval programming for any or all circuits independently. The Time Switch shall provide full year control by providing automatic leap year and daylight saving time adjustment. The Time Switch shall also provide holiday or special day control requirements by providing up to 99 holiday schedules.
3. Where specified, Sign Contractor shall furnish and install a Photo Control for “On-Off” control of sign lighting. Photo Control shall be INTERMATIC K4000 series or equal.

C. Light Fixtures:

1. Unless otherwise noted in the drawings, Sign Contractor shall specify the light fixtures to be used and shall provide cut-sheets and supplemental information (e.g., color, size, mounting detail) for City and/or Architect approval.

D. Ground Lighting:

1. Use Kim vault light fixture LTV32 WW, 70MH120 unless indicated otherwise on the drawings.

2. Position fixtures to provide even illumination across face of sign.

Part 3 – EXECUTION

3.1 ELECTRICAL SERVICE:

A. City shall provide conduit and electrical service within ten feet of each sign location, including junction boxes and dedicated sign circuits as indicated on the electrical drawings. Sign Contractor shall configure the electrical components of signs so as not to exceed the power available at each location. Prior to completion of fabrication, Sign Contractor shall be responsible for verifying that adequate power is available to each location. If adequate power is not available, Sign Contractor shall at no additional cost, adjust sign electrical components as necessary to operate signs using the actual service available at each location.

B. Sign Contractor shall extend conduit and wiring provided at each sign location into the sign structure through the sign footing or other concealed pathway, including any below-grade junction boxes. Electrical runs shall be internalized in sign components, columns, and mounting structures with hollow metal components when available. Visible external electrical fixtures or conduit shall not be allowed. Where field conditions prevent concealment of conduit, sign contractor is to use least visible route. Such exposed conduit will be painted to match background. Electrical cut-off switches shall be flush with the sign surface and on the sign surface facing away from the street or pedestrian entrance unless otherwise indicated on the Design Intent Drawings. Switch plates shall be finished to match surrounding surface.

C. Sign Contractor shall be responsible for effecting the final connection of the electrical components to the electrical service and assuring that the electrical fixtures for each sign are operational.

D. Sign Contractor shall use Underwriter’s Laboratory-approved components, and UL-approved labels shall be affixed to all electrical fixtures.
E. Sign Contractor shall be responsible for coordinating with the City, contractor and their subcontractors as necessary for expeditious performance of all electrical work related to signage.

F. Service-disconnect switches shall be in waterproof boot, installed in custom fabricated, flush mounted switch plate, and positioned away from the street.

3.2 CONSTRUCTION:

A. Signs must be of durable rust-inhibited materials.

B. All formed metal, such as letterforms, shall be fabricated using full-weld construction unless otherwise noted and approved. Formed metal sign components shall be bent on a continuous curve without apparent elbows or kinks.

C. Dissimilar metals shall be separated with non-conductive 3M Scotchrap™ All Weather Corrosion Protection Tape to prevent electrolysis and secured with stainless steel fasteners as required.

D. Paint colors must be reviewed and approved by the City. Color coatings shall exactly match the colors specified on the approved plans.

E. Joining of materials (e.g., seams) shall be finished in such a way as to be tight, secure and unnoticeable (i.e., butted seams). Overlapped seams shall be considered unacceptable. Visible welds shall be continuous and ground smooth. Rivets, screws, and other fasteners that extend to visible surfaces shall be flush, filled, and finished so as to be unnoticeable.

F. Finished surfaces of metal shall be free from canning and warping. Flat surfaces shall have faces of such flatness that when measured from corner to corner along the diagonal, the maximum deviation from the nominal plane of surface shall not exceed 1/16" for measured distances up to 5'-0".

G. All sign finishes shall be free of dust, orange peel, drips, and runs and shall have a uniform surface conforming to the highest standards of the industry.

H. All lighting must match the exact specifications of the approved Design Intent Drawings.

I. Brightness of signs shall be even and consistent in intensity, coverage, and color both within signs and between signs of similar lighting technique and subject to approval by City. All aluminum cabinets to be free from light leaks.

J. All conduit, raceways, crossovers, wiring, ballast boxes, transformers, and other equipment necessary for sign connection shall be concealed. All bolts, fastenings and clips shall consist of enameling iron with porcelain enamel finish; stainless steel, anodized aluminum, brass or bronze; or carbon-bearing steel with painted finish. No black iron materials will be allowed.
K. Underwriter’s Laboratory-approved labels shall be affixed to all electrical fixtures. Fabrication and installation of electrical signs shall comply with all national and local building and electrical codes.

L. Location of all openings for conduit sleeves and support in sign panels shall be indicated by the Sign Contractor on drawings submitted to the City. Sign Contractor shall install same in accordance with the approved drawings.

M. In no case shall any manufacturer’s label be visible from normal viewing angles.

N. Sign permit stickers should be affixed so as not to be visible from the street.

O. All access panels shall be waterproof and concealed from public view. Panels shall be inset so that outer surface of panel aligns flush with outer surface of sign to which it is attached. Attachment shall be by means of counter sunk flat head screws (tamper proof where accessible to public). Paint finish screw heads to match surrounding color.

P. Metal below grade or in contact with grade-level concrete shall be coated with coal tar epoxy.

Q. All metal interior surfaces of internally illuminated sign cabinets to be painted white.

R. All pop rivets where indicated on engineer's drawings shall be submitted with flush rivets where visually exposed.

S. Where design of channel letters is such that the front-edge of the letter return or retainer is visible on the face of the letter, the front edge of the return or retainer shall be painted to match the color of the letter face. The letter return and return edge of retainer shall be the same color.

T. Where trim cap is used, paint trim cap to match color of letter return.

U. Anti-graffiti coating or film to be applied to all signs accessible to the public. Specify brand of anti-graffiti coating and provide cut sheet along with Shop Drawings showing where protection is applied.

V. Openings in sign panels for pop-through letters / graphics must be of sufficient size to accommodate expansion and contraction of acrylic over a 120° F temperature range. Indicate tolerance dimensions on shop drawings.

W. Sign Contractor shall construct signage in such a manner that illuminated forms and cabinets shall be free of lighting leaks.

X. Provide ventilation for internally illuminated sign cabinets and monuments. Openings for ventilation must be louvered, baffled (no light leaks), screened and weather proof. Locate openings away from public view and show on Shop Drawings.

Y. Exterior display cases or cabinet signs must be weatherproof.
3.3 INSTALLATION:

A. Schedule:

All dates for sign installation must be approved in advance and coordinated with the City.

B. Location and Placement:

1. Letters shall be carefully spaced and accurately set in place, both vertically and horizontally, with overall inscription to conform with the Design Intent Drawings and approved templates and patterns.

2. Locations for each ground sign shall be staked by the Sign Contractor. Staked locations must be approved by the City or his designated representative prior to installation.

3. Sign installation shall be coordinated with other work on the site as outlined in Section 2, herein.

4. Unless other arrangements are agreed upon by the City or his representative, all sign locations must be marked and labeled on site with sign identification number for approval prior to installation.

5. All signs must be installed level, plumb and true in relationship to architecture, adjacent installations, and/or established reference points.

6. Installation shall be done in a manner to withstand all actions imposed by wind, water and other environmental forces.

B. Installation Conditions:

1. Working areas are to be left clean and orderly every day during the period of installation. All work is to be coordinated with the General Contractor and other trades working on the site.

2. In case of damage to landscaping material, irrigation lines, or other underground or aboveground equipment, the City and/or General Contractor shall be notified and the repairs shall be made to his satisfaction. All damaged material shall be repaired and left in the same condition as it was found. All grades are to be restored to the original condition.

3. All installations are to comply with approved Shop Drawings.

3.3 ADJUSTMENTS AND REPAIRS:

The Sign Contractor shall repair, or remove and replace with new materials, all damaged units and units not complying with Contact Documents as approved by the Landscape Architect, at no additional cost to the City.
3.4 MAINTENANCE:

Prior to final payment, the Sign Contractor shall provide to the City written instructions for proper maintenance of all signs and signage elements. Instructions shall address periodic cleaning, service access, replacement procedures, and painting. Where applicable, color specifications shall also be provided.

Part 4 - CLEAN UP

4.1 GENERAL:

Prior to final inspection and acceptance by the City, the Sign Contractor shall remove all protective coatings and stickers, clean metal and painted surfaces in accordance with manufacturer’s recommendations, and remove debris from the work site.
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Divisions 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:
   1. Electrical equipment coordination and installation.
   2. Grout.
   3. Common electrical installation requirements.

1.3 CODES, STANDARDS AND REFERENCES


C. ANSI/NFPA 70 – National Electrical Code (NEC), with California amendments (CEC).


E. National Electrical Contractors Association (NECA) - NECA 1: Good Workmanship in Electrical Construction.

F. National Electrical Manufacturers Association (NEMA) –

G. National Electrical Manufacturers Association (NEMA) – NEMA WC26: Bi-national Wire and Cable Packaging Standard.

1.4 **DEFINITIONS**

A. EPDM: Ethylene-propylene-diene terpolymer rubber.

B. NBR: Acrylonitrile-butadiene rubber.

1.5 **COORDINATION**

A. Coordinate arrangement, mounting, and support of electrical equipment:

1. To allow maximum possible headroom unless specific mounting heights that reduce headroom are indicated.
2. To provide for ease of disconnecting the equipment with minimum interference to other installations.
3. To allow right of way for piping and conduit installed at required slope.
4. So connecting raceways, cables, wireways, cable trays, and busways will be clear of obstructions and of the working and access space of other equipment.

B. Coordinate installation of required supporting devices and set sleeves in cast-in-place concrete, masonry walls, and other structural components as they are constructed.

**PART 2 - PRODUCTS**

2.1 **GROUT**

A. Non-metallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, non-metallic aggregate grout, non-corrosive, non-staining, mixed with water to consistency suitable for application and a 30-minute working time.

**PART 3 - EXECUTION**

3.1 **COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION**

A. Equipment: Install to facilitate service, maintenance, and repair or replacement of components of both electrical equipment and other nearby installations. Connect in such a way as to facilitate future disconnecting with minimum interference with other items in the vicinity.

B. Right of Way: Give to piping systems installed at a required slope.
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section. Related Sections include the following:
   1. Section 260500, “Common Work Results for Electrical”.

1.2 SUMMARY

A. This Section includes the following:
   1. Building wires and cables rated 600 V and less.
   2. Connectors, splices, and terminations rated 600 V and less.

1.3 CODES, STANDARDS, AND REFERENCES


B. Occupational Safety and Health Administration (OSHA) – 29 CFR 1910.7: OSHA Occupational Safety and Health Standards.


D. Underwriters Laboratories – UL 467 – Grounding and Bonding Equipment.

E. Underwriters Laboratories – UL 486A – Wire Connectors and Soldering Lugs for Use with Copper Conductors.

1.4 SUBMITTALS

A. Product Data: Provide data for building wire and each cable assembly type. Select each length to complete set of manufacturer’s markings. Attach tag indicating cable size and application information. Provide record documents showing actual locations of components and circuits.

B. Qualification Data: For testing agency.

C. Field quality-control test reports: Indicate and interpret test results for compliance with performance requirements.
D. Provide manufacturer’s instructions for use of ground megger with proposed method indicated

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Contractor will provide an independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the International Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

1. Testing Agency’s Field Supervisor: Person currently certified by the International Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.

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

C. Manufacturers: Shall be specialized in manufacturing products specified in this section with minimum ten years (documented) experience.

D. Comply with CEC.

E. Comply with CCR Title 24, Part 6, California Energy Code.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Product Requirements: Products storage and handling requirements.

B. Deliver wires and cables according to NEMA WC 26.

1.7 COORDINATION

A. Division 1 “Project Management and Coordination”: As required for coordination.

B. Where wire and cable destination is indicated and routing is not shown, determine routing and lengths required.

C. Coordinate layout and installation of wiring and cables with other installations.

1.8 PRECONSTRUCTION TESTING

A. Coordinate with general contractor and owner to test all 600 volt rated existing branch circuiting for continuity.
B. Test ground conductors for separation with any neutral conductors being extended.

C. Visually inspect condition of existing circuits. Report any deficiencies as to conductor type or insulation type. Ensure conductors are copper and insulation is 600 volt rated listed for outdoor use.

PART 2 - PRODUCTS

2.1 CONDUCTORS AND CABLES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work, include, but are not limited to, the following:

1. Alcan Products Corporation; Alcan Cable Division.
3. General Cable Corporation.
4. Senator Wire & Cable Company.
5. Southwire Company.

B. Conductors: Copper. Comply with NEMA WC 70.

C. Conductor Insulation: Types THWN-2 Comply with NEMA WC 70.

D. Type MC or AC Cable shall not be used.

2.2 CONNECTORS AND SPLICES

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. AFC Cable Systems, Inc.
3. O-Z/Gedney; EGS Electrical Group LLC.
4. 3M; Electrical Products Division.
5. Tyco Electronics Corp.

B. Description: Factory-fabricated connectors and splices of size, ampacity rating, material, type, and class for application and service indicated.
PART 3 - EXECUTION

3.1 CONDUCTOR MATERIAL APPLICATIONS
   A. Copper: stranded per Escondido Standards

3.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS
   A. Feeders & Branch Circuits: Type THWN-2 90 degree rated single conductors in raceway.

3.3 INSTALLATION OF CONDUCTORS AND CABLE
   A. Conceal raceways in finished walls, ceilings, and floors, unless otherwise indicated.
   B. Use manufacturer-approved pulling compound or lubricant where necessary. Compound used must not deteriorate conductor insulation. Do not exceed manufacturer’s recommended maximum pulling tensions and sidewall pressure values.
   C. Use pulling means; including fish tape, cable, rope, and basket-weave wire/cable grips that will not damage cables or raceway.

3.4 CONNECTIONS
   A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A.
   B. Make splices and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than un-spliced conductors.

3.5 FIELD QUALITY CONTROL
   A. Tests and Inspections:
      1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

B. Related Sections include the following:

1. Section 260519, “Low Voltage Electrical Power Conductors and Cables”.
2. Section 260526, “Grounding and Bonding for Electrical Systems”.

1.2 SUMMARY

A. This Section includes raceways, fittings, boxes, enclosures, and cabinets for electrical wiring.

1.3 CODES, REFERENCES AND STANDARDS

A. American National Standards Institute (ANSI) – C80.3: Specification for Electrical Metallic Tubing, Zinc Coated (EMT).

B. ANSI/NFPA 70: National Electrical Code, with California Amendments (CEC).


D. National Electrical Contractors Association (NECA) - NECA 1: Good Workmanship in Electrical Construction.

E. National Electrical Contractors Association (NECA) - NECA 101: Standard for Installing Steel Conduits (Rigid, IMC, EMT).


1.4 DEFINITIONS

A. LFMC: Liquid-tight flexible metal conduit.
B. LFNC: Liquid-tight flexible non-metallic conduit.
C. PVC: Polyvinyl Chloride.
D. RNC: Rigid non-metallic conduit.

1.5 SUBMITTALS
A. Product Data: For surface raceways, wire ways and fittings, hinged-cover enclosures, and cabinets.

1.6 QUALITY ASSURANCE
A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in CEC, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

B. Comply with CEC.

PART 2 - PRODUCTS

2.1 NON-METALLIC CONDUIT AND TUBING
A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. AFC Cable Systems, Inc.
2. Anamet Electrical, Inc.; Anaconda Metal Hose.
4. Lamson & Sessions; Carlon Electrical Products.
5. Manhattan/CDT/Cole-Flex.
6. RACO; a Hubbell Company.
7. Thomas & Betts Corporation.

B. RNC: NEMA TC 2, Type EPC-40-PVC, EPC-80-PVC, unless otherwise indicated.

C. Underground bends or sweeps in PVC conduits for vertical risers for feeders and branch circuits shall be according to the following formula, as a minimum: For conduits 2” diameter and smaller, sweep radius shall be six times the diameter; for conduits larger than 2” diameter, sweep radius shall be ten times the diameter.
D. Fittings for RNC: NEMA TC 3; match to conduit or tubing type and material.

2.2 CONDUIT SIZES

A. The minimum conduit size shall be 3/4 inch for lighting and power branch circuit wiring above grade and 1 inch below grade. The minimum “Homerun” conduit size to any panelboard shall be 3/4 inch. For concrete encased duct structures the minimum size shall be 4 inches unless otherwise indicated.

2.3 BOXES, ENCLOSURES, AND CABINETS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Cooper Crouse-Hinds; Div. of Cooper Industries, Inc.
2. Hoffman.
4. O-Z/Gedney; a unit of General Signal.
5. RACO; a Hubbell Company.

2.4 HANDHOLES AND BOXES FOR EXTERIOR UNDERGROUND WIRING

A. Description: Comply with SCTE 77.

1. Exterior handhole to comply with City of Escondido Standard drawing 1-E-1.
2. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
PART 3 - EXECUTION

3.1 RACEWAY APPLICATION

A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
   1. Underground Conduit: Schedule 40 with 80 PVC elbows and risers

B. Minimum Raceway Size: 3/4-inch trade size above grade, 1-inch for underground conduit.

3.2 INSTALLATION

A. Comply with NECA 1 for installation requirements applicable to products specified in Part 2 except where requirements on Drawings or in this Article are stricter.

B. All conduits shall contain an insulated ground wire whether indicated or not. The ground wire shall be sized in accordance with CEC, unless otherwise noted. All conduit systems shall be mechanically and electrically continuous.

C. Complete raceway installation before starting conductor installation.

D. Arrange stub-ups so curved portions of bends are not visible above the finished slab.

E. Install no more than the equivalent of three 90-degree bends in any conduit run except for communications conduits, for which fewer bends are allowed.

F. Raceway Terminations at Locations Subject to Moisture or Vibration: Use insulating bushings to protect conductors, including conductors smaller than No. 4 AWG.

3.3 INSTALLATION OF UNDERGROUND CONDUIT

A. Direct-Buried Conduit:
   1. Excavate trench bottom to provide firm and uniform support for conduit.
   2. Warning Tape: Warning tape shall be 5.5 mil composition film, 6 inches wide, containing one layer of metalized foil laminated between two (2) layers of inert plastic film, specifically formulated for prolonged use underground. Tape shall be highly resistant to alkalis, acids, and other destructive agents found in the soil. Warning tape shall bear a continuous printed message warning of the exact location of underground
installations. The message shall be in permanent ink specifically formulated for prolonged use underground. Tape shall have black letters (minimum ½ inch high) on red background with the message “ELECTRICAL” printed on twelve (12)-inch centers for the entire length of the tape.

3.4 INSTALLATION OF UNDERGROUND HANDBOLES AND BOXES

A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting conduits to minimize bends and deflections required for proper entrances.

B. Unless otherwise indicated, support units on a level 6 inch deep bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

3.5 PROTECTION

A. Provide final protection and maintain conditions that ensure coatings, finishes, and cabinets are without damage or deterioration at time of Substantial Completion.

1. Repair damage to PVC or paint finishes with matching touchup coating recommended by manufacturer.
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. Section Includes:
   1. Identification for conductors.

1.3 QUALITY ASSURANCE
A. Comply with NFPA 70.
B. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.

PART 2 - PRODUCTS

2.1 CONDUCTOR IDENTIFICATION MATERIALS
A. Self-Adhesive, Self-Laminating Polyester Labels: Preprinted 3-mil- (0.08-mm-) thick flexible label with acrylic pressure-sensitive adhesive that provides a clear, weather- and chemical-resistant, self-laminating, protective shield over the legend. Labels sized to fit the conductor diameter such that the clear shield overlaps the entire printed legend.

2.2 IDENTIFICATION SCHEDULE
A. Power-Circuit Conductor Identification, 600 V or Less:
   1. Color-Coding for Phase and Voltage Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors color shall be factory applied. Colors for 240/120-V Circuits are to match existing