

**CITY OF PETALUMA
PETALUMA, CALIFORNIA**

**CONTRACT DOCUMENTS FOR
LUCCHESI TURF FIELD REPLACEMENT**

CITY PROJECT NO. C14502008

(Notice Inviting Bids, Instructions to Bidders, Bid Forms, General Conditions,
Special Provisions, Technical Specifications, Construction Agreement,
Bond Forms, Project Drawings)

CITY OF PETALUMA - SONOMA COUNTY - CALIFORNIA

Questions concerning interpretation of improvement plans, special provisions,
contract documents and bid items shall be directed to:

***Department of Public Works and Utilities
202 N. McDowell Boulevard
Petaluma, CA. 94954
Phone: (707) 778-4546 Fax: (707) 778-4508***

Attention: Josh Minshall, P.E.

Office Hours: Monday thru Thursday - 8:00 to 5:00 p.m.

Bid Opening: March 16, 2023, at 1:00 p.m.

CITY OF PETALUMA
PETALUMA, CALIFORNIA

LUCCHESI TURF FIELD REPLACEMENT

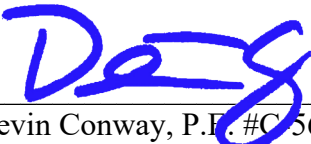
CITY PROJECT NO. C14502008

VERDE DESIGN, INC. – SANTA ROSA - CALIFORNIA




Prepared by: Devin Conway, P.E.
Wes Downing, RLA

Reviewed by:
City of Petaluma


Devin Conway, P.E. #C 56494

February 17, 2023
Date


Josh Minshall, P.E. #C80830

February 23, 2023
Date

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NOTICE INVITING BIDS

1. **RECEIPT OF BIDS:** Sealed Bids will be received at the office of the City Clerk of the City of Petaluma located at 11 English Street, Room 4, Petaluma, CA 94952-2610, until 1:00 PM (*enter time*) on Thursday, March 16, 2023, for the Lucchesi Turf Field Replacement Project. Any Bids received after the specified time and date will not be considered. Fax and other electronically transmitted Bids will not be accepted.
2. **OPENING OF BIDS:** The Bids will be publicly opened and read at 1:00 PM (*enter time*) on Thursday, March 16, 2023 at the above-mentioned office of the CITY. The CITY reserves the right to postpone the date and time for opening of Bids at any time prior to the aforesaid date and time.
3. **COMPLETION OF WORK:** The WORK must be completed with 45 working days after the commencement date stated in the Notice to Proceed.
4. **DESCRIPTION OF WORK:** The WORK includes replacment of the existing synthetic turf field, associated accessibility improvements and replacement of the subsurface drainage system. The drainage system work includes demolition, removal, and disposal of the existing subsurface drainage system and drain rock, and the installation of a new subdrain system, drain rock, and geotextile fabric. The synthetic turf work includes the demolition, removal, and disposal of the existing turf system, site grading and preparation of the new turf base layer, and the installation of a new turf system, such as FieldTurf USA, Inc. Vertex Core synthetic turf, drainage/shock pad, and infill consisting of olive pits and sand obtained by the City through a CMAS purchasing agreement. Additionally, accessibility improvements will include concrete corrections to the existing pathway around the field, parking lot pavement repair, installation of new striping and signage, extension of an existing fence, replacement of non ADA compliant sidewalks, and the installation of a new ADA compliant drinking fountain with water bottle fill station.
5. **SITE OF WORK:** The site of the WORK is located: soccer/lacrosse field at Lucchesi Park.
6. **OBTAINING CONTRACT DOCUMENTS:** The Contract Documents are entitled “Lucchesi Turf Field Replacement Project (C14502008)”.

The Contract Documents may be obtained by 4:00 P.M., Monday through Thursday at the office of Public Works & Utilities, 202 North Mc Dowell Boulevard, Petaluma, CA 94954.

If you would like to receive the bid document via the CITY’s website, at no cost, please go to:

- <https://cityofpetaluma.org/bid-opportunities-2/>
- Fill out the Plan Holder’s form by clicking on the Plan Holder’s form link
- Fill in all fields
- Click on the submit button at the end of the form

Submit the Plan Holder's form on-line automatically puts you on the CITY's Bidders List and you will be notified of any Addendums or information pertaining to the bis by email.

If you would like to purchase bid documents, please call Phone No. (707)-778-4585, Attention: Tiffany Avila, upon payment of \$50.00 (non-refundable) for each set of Contract Documents (including technical specification and accompanying reduced scale drawings). The scale of the reduced drawings is about one-half of the original scale. At the Bidder's request and expense, the Contract Documents may be sent by overnight mail.

- ☐ Full-scale drawings are not available.
- ☒ If full-scale drawings are available and desired, they may be purchased at reproduction cost from Digitech, 1340 Commerce St, STE K, Petaluma, CA, 94954, (707)-769-0410.

7. **BID SECURITY:** Each Bid shall be accompanied by a certified or cashier's check or Bid Bond executed by an admitted surety in the amount of 10% percent of the Total Bid Price payable to the City of Petaluma as a guarantee that the Bidder, if its Bid is accepted, will promptly execute the Agreement. A Bid shall not be considered unless one of the forms of Bidder's security is enclosed with it. Upon acceptance of the Bid, if the Bidder refuses to or fails to promptly execute the Agreement the Bidder's security shall be forfeited to the CITY.
8. **CONTRACTOR'S LICENSE CLASSIFICATION:** In accordance with the provisions of California Public Contract Code Section 3300, the CITY has determined that the CONTRACTOR shall possess a valid Class A license at the time that the Contract is awarded. Failure to possess the specified license shall render the Bid as non-responsive and shall act as a bar to award of the Contract to any bidder not possessing said license at the time of award pursuant to labor Code Section 1725.5, subject to limited legal exceptions.
9. **PREFERENCE FOR MATERIAL:** Any specification designating a material, product, thing, or service by specific brand or trade name, followed by the words "or equal" or "or equivalent" is intended only to indicate quality and type of item desired. Substitute products will be considered prior to award of the Contract in accordance with Section 3400 of the California Public Contract Code. The Bidder will submit data substantiating its request for a substitution of "an equal" item within 14 days following submission of its Bid. Substantiation date will conform to the requirements of the instructions for Proposed Substitutions of "or equal" items contained in the bid Forms. The ENGINEER will make a determination of approval of rejection of the proposed substitution prior to the award of the Contract. No request for substitution of "an equal" items will be considered by the ENGINEER after award of the Contract. This provision does not apply to materials, products, things, or services that may lawfully be designated by a specific brand or trade name under Public Contract Code Section 3400(c).

10. REJECTION OF PROPOSALS: The CITY reserves the right to reject all or any part of all bids submitted, waive informalities and irregularities, and will not, to the extent allowed by law, be bound to accept the lowest bid.

11. BIDS TO REMAIN OPEN: The Bidder shall guarantee the total bid price for a period of 90 calendar days from the date of bid opening.

12. CALIFORNIA PREVAILING WAGE RATE REQUIREMENTS: In accordance with the provisions of California Labor Code Sections 1770, 1773, 1773.1, and 1773.7 as amended, 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. A copy of said wage rates is on file at the office of the City Clerk and is available to any interested party upon request. A copy of the prevailing rate of per diem wages are also online at <http://www.dir.ca.gov/DLSR>. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half. 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 workers employed by them in the execution of the WORK. The Contract will be subject to compliance monitoring and enforcement by the Department of Industrial Relations under labor Code Section 1771.4. Additionally, CONTRACTOR shall post job site notices as required by Labor Code section 1771.4.

13. LABOR COMPLIANCE PURSUANT TO CALIFORNIA LABOR CODE §1771.1: A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirement of Section 4104 of the Public Contract Code or engage in the performance of any contract for public work, as defined in Division 2, Part 7, Chapter 1 of the Labor Code, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time contract is awarded.

14. RETAINAGE FROM PAYMENTS: The CONTRACTOR may elect to receive 100 percent of payments due under the Contract Documents from time to time, without retention of any portion of the payment by the CITY, by depositing securities of equivalent value with the CITY in accordance with the provisions of Section 22300 of the Public Contract Code. Alternatively, the CONTRACTOR may request, and the CITY shall make payment of retentions earned directly to the escrow agent at the expense of CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investments of the payments into securities and the CONTRACTOR shall receive the interest earned on the investments upon the same terms as provided in Section 22300 of the Public Contract Code for securities deposited by the CONTRACTOR. The

CONTRACTOR shall be responsible for paying all fees for the expense incurred by the escrow agent in administering the escrow account and all expenses of the CITY. These expenses and payment terms shall be determined by the CITY's Finance Director or their designee and the escrow agent. Upon satisfactory completion of the WORK, the CONTRACTOR shall receive from the escrow agent all securities, interest, and payments received by the escrow agent from the CITY, pursuant to the terms of Section 22300 of the Public Contract Code. Such securities, if deposited by the CONTRACTOR, shall be valued by the CITY, whose decision on valuation of the securities shall be final. Securities eligible for investment under this provision shall be limited to those listed in Section 16430 of the Government Code, bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters or credit, or any other security mutually agreed to by the CONTRACTOR and the CITY.

15. PAYMENT BOND: Pursuant to and in accordance with California Civil Code Section 9550, a payment bond must be filed if the expenditure for the WORK is in excess of Twenty-Five Thousand Dollars (\$25,000.00).

16. PRE-BID CONFERENCE VISITS: [At least one box below MUST be checked]

- ☐ Check if no pre-bid conference/site is to be held.
- ☐ Mandatory pre-bid conference/site visit to be held: Prospective bidders are required to attend a mandatory pre-bid conference/site visit at (enter time) on , at the , offices at . Prospective bidders that fail to attend the mandatory pre-bid conference/site visit will be ineligible to bid on the project. Following the conference at City offices, City staff and prospective bidders will meet at the project Site.

Transportation to the project site will be the responsibility of prospective bidders. The purposes of the conference/site visit are to discuss the scope of the project and bidding requirements and to acquaint bidders with Site conditions.

No information communicated at the pre-bid conference/site visit may amend the project bidding requirements. Project bidding requirements may only be amended by addenda issued by authorized City officials. Following the pre-bid conference/site visit, prospective bidders may submit detailed technical questions in writing. If warranted, the City may respond to such questions by addenda.

- ☒ Non-Mandatory pre-bid conference/site visit to be held: Prospective bidders are invited to attend a non-mandatory pre-bid conference/site visit at 10:00 AM (enter time) on Tuesday, March 7th, 2023 at the soccer/lacrosse field at Lucchesi Park, 320 N McDowell Blvd, Petaluma, CA, 94954. Following the conference at

City offices, City staff and prospective bidders will meet at the project Site. Transportation to the project site will be the responsibility of prospective bidders. The purposes of the conference/site visit are to discuss the scope

of the project and bidding requirements, and to acquaint bidders with Site conditions.

No information communicated at the pre-bid conference/site visit may amend the project bidding requirements. Project bidding requirements may only be amended by addenda issued by authorized City officials. Following the pre-bid conference/site visit, prospective bidders may submit detailed technical questions in writing. If warranted, the CITY may respond to such questions by addenda.

17. PROJECT ADMINISTRATION: All communications relative to the WORK shall be directed to the ENGINEER prior to opening of the Bids.

18. FINDING OF SUBSTANTIAL COMPLEXITY: Pursuant to Public Contract Code Section 7201(b)(3) the CITY's Public Work's Director has found that the WORK is substantially complex due to: the amount of technical and scientific knowledge needed to complete the project; the amount of resources needed to complete the project including amount of days, workers, and labor; the urgency for project completion; the amount of tasks needed to complete the project; the number of organizational stakeholders needed to satisfy; the environmental complexity of the conditions; and in particular the size and impact of the project (will require full closure of the soccer/lacrosse field and partial closure of the front facing parking stalls at Lucchesi Park); the need for careful demolition around existing concrete and utilities; the need for careful connections of new sub drain lines to existing storm drain lines; the need for careful construction and safety protocols in regard to trench work; the specialty contractor work; and therefore this is a unique project that is not regularly performed and requires a higher retention amount than 5 percent.

Notwithstanding Public Contract Code Section 7201 or any other law or regulation that purports to provide otherwise, public contracting is a quintessential municipal affair, subject to charter cities' home rule power, and the California Constitution grants charter cities supreme authority over municipal affairs, which include public Works, procurement, and the mode of municipal contracting (See, Public Contract Code Section 1100.7 and e.g., *Bishop v. City of San Jose* (1969) 1 C3rd 56)., and it is the courts, not the legislature, that determines which matters are municipal affairs (see, e.g., *California Federal Savings and Loan v. City of Los Angeles* (1991) 54 C3d 1); and

Article X, Section 67 of the Petaluma Charter provides in pertinent part:

...no progressive payments can be provided for or made at any time which, with prior payments, if there have been such, shall exceed in amount at that time ninety percent of the value of the labor done and the materials used up to that time, and no contract shall provide for or authorize or permit or permit the payment of more than ninety percent of the contract price before the completion of the work done under said contract and the acceptance thereof...; and

City charters are documents of limitation and a restriction on the City Council's powers imposed by the voters (see, e.g., *City of Glendale v. Trondsen* (1957) 48 C2d 93) and, as a result, the City Council's contracting power is limited by the retention requirement in Article X, Section 67, and the City Council and City Council and City staff lack the power to provide for public works contract retention other than as specified in the City Charter.

19. GOVERNMENT CODE SECTION 1090: The successful Bidder may be precluded from competing for, or participating in, subsequent contracts that result from or relate to the WORK performed pursuant to this Bid. The ethics laws that apply to the City and all its consultants, contractors, and vendors include California Government Code Section 1090 and following, which prohibits government officials, employees, and contractors from participating in making government contracts in which the official, employee or contractor has a financial interest. Because City contractors always have a financial interest in their City contracts, the Section 1090 prohibition regarding City contractors focuses on whether a contractor is or would be "making a government contract" in a quasi-governmental capacity for purposes of Section 1090. Section 1090 prohibits City contractors from using their role as a contractor to influence how the City spends the public's funds in a way that benefits the contractor. Penalties for violating Section 1090 are severe, and may include felony criminal penalties, permanent disqualification from holding public office in California, disgorgement of any benefit received by the financially interested contractor, civil and administrative penalties, and voiding of the prohibited contract.

NAME: Josh Minshall

ADDRESS: 202 N. McDowell Blvd

Petaluma, CA

94954

PHONE: (707)-776-3785

20. CITY'S RIGHTS RESERVED: The CITY reserves the right to reject any or all bids, to waive any minor irregularity in a bid, and to make awards to the lowest responsive, responsible bidder as it may best serve the interest of the CITY.

CITY: Petaluma

BY: 

DATE: Feb 15, 2023

END OF INVITING BIDS

INSTRUCTIONS TO BIDDERS

1. **DEFINED TERMS.** Terms used in these Instructions to Bidders and the Notice Inviting 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 CITY, as distinct from a sub-bidder, who submits a price or quote to a Bidder.
2. **LOCAL BUSINESS LICENSE.** All CONTRACTORS, including subcontractors, not already having a local business license for the work contemplated, will be required to secure the appropriate license before a Contract can be executed.
3. **INTERPRETATIONS AND ADDENDA.**
 - 3.1 All questions about the meaning or intent of the Contract Documents are to be directed to the ENGINEER. Additions, deletions, or revisions to the Contract Documents considered necessary by the ENGINEER in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the ENGINEER as having received the Contract Documents. Questions received less than 14 days prior to the date of Bids 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 other additions, deletions, or revisions to the Contract Documents.
 - 3.3 Bidders shall make no special interpretation or inference of intent from differing formats in the Technical Specifications.
4. **BIDDER’S EXAMINATION OF CONTRACT DOCUMENTS AND SITE.**
 - 4.1 It is the responsibility of each Bidder before submitting a Bid:
 - A. To examine thoroughly the Contract Documents and other related data identified in the Bidding Documents (including “technical” data referred to below);
 - B. To visit the site to become familiar with local conditions that may affect cost, progress, or performance of the WORK;
 - C. To consider federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the WORK;
 - D. To study and carefully correlate the Bidder’s observations with the Contract Documents; and

- E. To notify the ENGINEER of all conflicts, errors, ambiguities, or discrepancies in or between the Contract Documents and such other related data.
- 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 Contract 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 which have been utilized by the ENGINEER in the preparation of the Contract Documents.
 - C. Those environmental reports or drawings relating to 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 Contract Documents.
 - D. The ENGINEER 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.
- 4.3 Copies of reports and drawings referred to in Paragraph 4.2 will be made available by the CITY to any Bidder on request, if said reports and drawings are not bound herein. Those reports and drawings are not part of the Contract Documents, but the technical data contained therein upon which the Bidder is entitled to rely, are incorporated herein by reference.
- 4.4 Information and data reflected in the Contract Documents with respect to Underground Utilities at or contiguous to the site are based upon information and data furnished to the ENGINEER by the owners of such Underground Utilities or others, and the CITY does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary General Conditions.
- 4.5 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 Contract Documents due to differing conditions appear in Paragraphs 4.2, 4.3, and 4.4 of the General Conditions.
- 4.6 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 Contract Documents.

- 4.7 On request a minimum of 2 working days in advance, the ENGINEER 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 ENGINEER 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. ENGINEER reserves the right to require Bidder to execute an Access Agreement with the CITY prior to accessing the site.
- 4.8 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 Contract 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. Easements for permanent structures or permanent changes in existing structures are to be obtained and paid for by the CITY unless otherwise provided in the Contract Documents.
- 4.9 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 Contract Documents without exception and such means, methods, techniques, sequences, or procedures of construction (if any) as may be required by the Contract Documents;
 - B. That Bidder has given the ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies in the Contract Documents and the written resolution thereof by the ENGINEER is acceptable to the Bidder; and
 - C. That the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the WORK.
5. **BID FORMS.** The Bid shall be submitted on the Bid Forms provided by the City. All blanks on the Bid Forms shall be completed in ink. All names must be printed below the signatures. The Bid shall be submitted in a sealed envelope which shall be plainly marked in the upper left hand corner with the name and address of the Bidder and shall bear the words "BID FOR" followed by the title of the Contract Documents for the WORK, the name of the CITY, the address where Bids are to be delivered or mailed to, and the date and hour of opening of Bids.

- 5.2 The Bid must set forth the name and location of the place of business of each subcontractor who will perform work or labor or render service to the prime contractor in or about the construction of the WORK, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the WORK according to detailed Drawings contained in the plans and specifications, in an amount in excess of one-half of 1 percent of the prime contractor's total bid or, in the case of bids or offers for the construction of streets and highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater.
6. CERTIFICATES.
- 6.1 Bids by corporations must be executed in the corporate name by the president, a vice-president, or other corporate officer. Such Bid shall be accompanied by the enclosed Certificate 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 the enclosed Certificate 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 venture must be executed in the joint venture name and be signed by a joint venture managing partner, accompanied by the enclosed Certificate 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. If a Bidder is not registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5 and Section 1771.1, then the Bid may be rejected as non-responsive.
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 OWNER 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 25 percent of any Bid item in its entirety, or to add additional Bid items up to and including an aggregate total amount not to exceed 25 percent of the Bid price.

9. **SUBSTITUTE OR “OR EQUAL” ITEMS.** Whenever materials or equipment are specified or described in the Contract Documents by using the name of a particular manufacturer and the name is followed by the words “or equal”, the Bidder may write the name of a substitute manufacturer (which the Bidder considers as an “or equal”) in the List of Proposed Substitutions in the Bid Forms. The ENGINEER will make a determination of approval or rejection of the proposed substitution prior to award of the Contract. No request for substitution of an “or equal” item will be considered by the ENGINEER after award of the Contract. The procedure for the submittal of substitute or “or equal” products is contained in the Bid Forms. The Bidder shall not be relieved of any obligations of the Contract Documents or be entitled to an adjustment in the Contract Price in the event any proposed substitution is not approved.
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 including: (a) all projects worked on by the Bidder over the past three (3) years including the contract amount for each project; (b) all complaints made against the Contractor’s license in the past ten (10) years; and (c) all claims and lawsuits presented or filed in the last five (5) years, regardless of the form, regarding any public works project.
11. **SUBMISSION OF BIDS.** The Bid shall be delivered by the time and to the place stipulated in the Notice Inviting Bids. It is the Bidder’s sole responsibility to see that its Bid is received in proper time and at the proper place.
12. **BID SECURITY, BONDS, AND INSURANCE.** Each Bid shall be accompanied by a certified or cashier’s check or approved Bid Bond in the amount stated in the Notice Inviting Bids. Said check or bond shall be made payable to the CITY and shall be given as a guarantee that the Bidder, if awarded the WORK, will enter into an Agreement with the CITY and will furnish the necessary insurance certificates, Payment Bond, and Performance Bond. In case of refusal or failure to enter into said Agreement, the check or Bid Bond, as the case may be, shall be forfeited to the CITY. If the Bidder elects to furnish a Bid Bond as its Bid security, the Bidder shall use the Bid Bond form bound herein. Bid Bonds shall comply with the requirements applicable to payment and performance bonds in the General Conditions.
- 12.1 **BIDDING CAPACITY.** Each Bid shall be accompanied by a list of the projects currently being worked on by Bidder, their size, contract price, scheduled completion date, location, and owner. Additionally, Bidder shall provide certified evidence of its current bonding capacity.
13. **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.

14. **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.
15. **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 Bids for receipt of Bids prior to the scheduled closing time for receipt of Bids.
16. **BID PROTEST.** Any Bid protest must be submitted in writing to the City Manager before 5:00 p.m. on the fifth (5th) working day following Bid opening.
 - A. The initial protest document must contain a complete statement of the basis for the protest, and all supporting documentation.
 - B. The party filing the protest must have actually submitted a Bid for the WORK. A subcontractor of a party submitting a Bid for the WORK may not submit a Bid protest. A party may not rely on the Bid protest submitted by another Bidder, but must timely pursue its own protest.
 - C. The protest must refer to the specific portion of the bid document which forms the basis for the protest.
 - D. The protest must include the name, address and telephone number of the person representing the protesting party.
 - E. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to all other parties with a direct financial interest which may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
 - F. The CITY will give the protested Bidder five (5) working days after the receipt of the protest to submit a written response. The responding Bidder shall transmit the response to the protesting Bidder concurrent with delivery to the CITY.

- G. 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. The Bidder's 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 proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.
- H. If the CITY determines that a protest is frivolous, the protesting bidder may be determined to be non-responsible and that bidder may be determined to be ineligible for future contract awards.
17. **AWARD OF CONTRACT.** Award of the contract, if awarded, will be made to the lowest responsive, responsible Bidder whose Bid complies with the requirements of the Contract Documents. Unless otherwise specified, any such award will be made within the period stated in the Notice Inviting Bids that the bids are to remain open. Unless otherwise indicated, a single award will be made for all the Bid items in an individual Bid Schedule. In the event the WORK is contained in more than one Bid Schedule, the CITY may award Schedules individually or in combination. In the case of two Bid Schedules which are alternative to each other, only one of such alternative schedules will be awarded. The CITY may condition the award upon the Bidder's timely submission of all items required by the Contract Documents, including, but not limited to the executed Agreement, performance, labor and materials, and maintenance bonds, and required certificates of insurance and endorsements.
18. **RETURN OF BID SECURITY.** Within 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. **EXECUTION OF AGREEMENT.** The Bidder to whom award is made shall execute a written Agreement with the CITY on the form of agreement provided, shall secure all insurance, and shall furnish all certificates and bonds required by the Contract Documents within five (5) working days after receipt of Notice of Award from the CITY. Failure or refusal to enter into an Agreement as herein provided or to conform to any of the stipulated requirements in connection therewith shall be just cause for annulment of the award and forfeiture of the Bid security. If the lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the CITY may award the Contract to the second lowest responsive, responsible Bidder. If the second lowest responsive, responsible Bidder refuses or fails to execute the Agreement, the OWNER may award the contract to the third lowest responsive, responsible Bidder. On the failure or refusal of such second or third lowest Bidder to execute the Agreement, each such Bidder's Bid securities shall be likewise forfeited to the CITY.
20. **LIQUIDATED DAMAGES.** Provisions for liquidated damages, if any, are set forth in the Agreement.

21. **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.
22. **NON-COLLUSION AFFIDAVIT.** Bidders must execute the following affidavit and submit the same with his/her bid:
23. **MATERIALS SUPPLIERS LIST.** Bidders and their subcontractors must complete the List of Materials Suppliers and Material Guarantee form provided with the Bid Forms and must submit the completed form with the Bid.

END OF INSTRUCTIONS TO BIDDERS

BID PROPOSAL CERTIFICATE
(if Corporation)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____
_____, a
corporation existing under the laws of the State of _____, held on
_____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as _____
President of the Corporation, be and is hereby authorized to execute the Bid
Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and that his/her
execution thereof, attested by the Secretary of the Corporation, and with the
Corporate Seal affixed, shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of
the corporation this _____, day of _____, 20_____.

Secretary

(SEAL)

BID PROPOSAL CERTIFICATE
(if Partnership)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____
_____,
a partnership existing under the laws of the State of _____, held
on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as the
General Partner of the Partnership, be and is hereby authorized to execute the Bid
Proposal dated _____, 20____, for the _____
project, in the City of Petaluma and that his/her execution thereof, attested by the
_____ shall be the official act and deed of this Partnership.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of
_____, 20____.

Partner

(SEAL)

BID PROPOSAL CERTIFICATE
(if Joint Venture)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

a joint venture existing under the laws of the State of _____,
held on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of the joint venture, be and is hereby authorized to
execute the Bid Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and
that his/her execution thereof, attested by the _____ shall be the
official act and deed of this Joint Venture.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

Managing Partner

(SEAL)

BID PROPOSAL CERTIFICATE
(if Proprietorship)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that _____, as owner of
_____ that I am authorized to execute the
Bid Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and that my execution
thereof shall be the official act and deed of this proprietorship.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of
the corporation this _____, day of _____, 20_____.

Owner

(SEAL)

SECTION I

BID FORMS

(TO BE SUBMITTED WITH BIDS)

BIDDER'S AFFIDAVIT OF NON-COLLUSION SUBMITTED WITH BID

_____, *[Contractor]* hereby declares that:

He or she is _____ *[title/position]* of _____, *[company name]* the party making the foregoing bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that 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 that anyone shall refrain from bidding; that 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, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that 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, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Dated: _____

Signature

Public Contract Code section 7106
Code of Civil Procedure section 2015.5

END OF BIDDER'S AFFIDAVIT OF NON-COLLUSION SUBMITTED WITH BID

BID PROPOSAL CERTIFICATE
(if Corporation)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____
_____, a
corporation existing under the laws of the State of _____, held on
_____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as _____
President of the Corporation, be and is hereby authorized to execute the Bid
Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and that his/her
execution thereof, attested by the Secretary of the Corporation, and with the
Corporate Seal affixed, shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of
the corporation this _____, day of _____, 20_____.

Secretary

(SEAL)

BID PROPOSAL CERTIFICATE
(if Partnership)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____
_____,
a partnership existing under the laws of the State of _____, held
on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as the
General Partner of the Partnership, be and is hereby authorized to execute the Bid
Proposal dated _____, 20____, for the _____
project, in the City of Petaluma and that his/her execution thereof, attested by the
_____ shall be the official act and deed of this Partnership.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of
_____, 20____.

Partner

(SEAL)

BID PROPOSAL CERTIFICATE
(if Joint Venture)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

a joint venture existing under the laws of the State of _____,
held on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as
_____ of the joint venture, be and is hereby authorized to
execute the Bid Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and
that his/her execution thereof, attested by the _____ shall be the
official act and deed of this Joint Venture.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20____.

Managing Partner

(SEAL)

BID PROPOSAL CERTIFICATE
(if Proprietorship)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that _____, as owner of
_____ that I am authorized to execute the
Bid Proposal dated _____, 20____, for the _____
_____ project, in the City of Petaluma, and that my execution
thereof shall be the official act and deed of this proprietorship.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of
the corporation this _____, day of _____, 20_____.

Owner

(SEAL)

PROPOSAL

To the City Council of the City of Petaluma:

The undersigned declares that he/she has carefully examined the location of the proposed work, that he/she has examined the plans and specifications, and read the accompanying instructions to bidders, and hereby proposes to furnish all materials and do all the work required to complete the said work in accordance with said plans, specifications, and special provisions for the unit or lump sum prices set forth in the attached Bid Schedule.

It is understood and agreed that the undersigned shall complete the work of the contract within the time provided for in the Contract Documents and Specifications governing said work.

If awarded the contract, the undersigned hereby agrees to sign said contract and to furnish the necessary bonds, insurance certificates and agreements within five (5) working days after receipt of Notice of Award of said contract from the City.

The undersigned has examined the location of the proposed work and is familiar with the plans, specifications and other contract documents and the local conditions at the place where the work is to be done.

The undersigned has checked carefully all the figures on the attached Bid Schedule and understands that the City will not be responsible for any errors or omissions on the part of the undersigned in making up the bid.

Enclosed find bidder's bond, certified check, or cashier's check no. _____ of the _____ (Company) (Bank) for _____ Dollars (\$_____).

This project requires a Class A California State Contractor's License.

Contractor's License No. _____ License Class _____

Expiration Date of Contractor's License _____

This project requires registration with the California State Department of Industrial Relations.

Public Works Contractor Registration No. _____

Registration Date _____ Expiration Date _____

A bid submitted to a public agency by a contractor who is not licensed and not registered shall be considered non-responsive and shall be rejected by the public agency. The undersigned contractor declares that the contractor's license number, public work contractor registration number, and expiration dates stated herein are made under penalty of perjury under the laws of the State of California.

Contractor: _____

Signed by: _____

Title: _____

Address: _____

Phone: _____

Fax: _____

Email: _____

Dated this _____ day of _____, 20____.

END OF PROPOSAL

BID SCHEDULE

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Synthetic Turf Removal and Disposal	86,660	sf		
2	Clear and Grub	30	sf		
3	Rock/Pipe Removal at Ex Perimeter Drains	80	cy		
4	Flush /Video Existing Drainage System	1	ls		
5	Hardscape Demolition	3,027	sf		
6	Saw Cut	315	lf		
7	Drinking Fountain Demolition	1	ea		
8	Miscellaneous Demolition	1	ls		
9	Tapering of Rock along edges to receive drainage / shock pad	11,621	sf		
10	Fine Grade / stringline field rock base	75,030	sf		
11	Video Existing Storm Line	1	ls		
12	Drain Rock	481	tons		
13	10" Perforated Drain Line	698	lf		
14	6" Storm Drain Line	25	lf		
15	6" Cleanout	2	ea		
16	24" Junction Box	5	ea		
17	Miscellaneous Drainage Installation	1	ls		
18	2" Domestic Water Line	120	lf		
19	3" Sanitary Sewer Line	9	lf		
20	Dry Well	1	ea		
21	Ball Valve	1	ea		
22	Water Meter	1	ea		
23	Backflow Preventer with Enclosure	1	ea		
24	Miscellaneous Water line installation	1	ls		
25	Synthetic Turf Install, Shock Pad/Drain Tile, and Fabric Install	1	ls		
26	Concrete Paving and Rough Grading	2,917	sf		
27	Concrete thickened Edge	157	lf		
28	Synthetic Turf Connection	376	lf		
29	ADA Parking Striping	1	ls		
30	Wheel Stop	3	ea		
31	ADA Parking Sign	2	ea		

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
32	Truncated Domes	1	ea		
33	3' Tall Chain Link Fencing	13	lf		
34	6" Concrete Curb	13	lf		
35	Drinking Fountain - Elkay	1	ea		
36	Root Barrier	360	lf		
37	Tow Away Sign	1	ea		
38	Asphalt Paving (including backfill at Parking)	110	sf		
39	Mobilization and Demobilization	1	ls		
Total Estimated Base Bid					

OPTIONAL BID ITEMS

Item No.	Description	Estimated Quantity	Unit	Unit Price	Total Price
1	Replace Ex Storm Drain line	460	lf		
2	Replace Ex Fencing Fabric	161	lf		

***Note:** In case of error in extension of price into the total price column, the unit price will govern.

<p>Total Amount of Bid (written in words) is: _____</p> <p>_____ Dollars and</p> <p>_____ Cents.</p> <p style="text-align: center;">In the event of discrepancy between words and figures, the words shall prevail.</p> <p style="text-align: center;">\$ _____</p> <p style="text-align: center;">Figures</p>
--

The award of the contract shall be awarded to the lowest price of the total of Base Bid items 1 through 39. Options Bid items should NOT be included in the Base Bid Price.

Address of Bidder

Signature of Bidder

City

Name of Bidder (Print)

Telephone Number of Bidder

Fax Number of Bidder

Contractor's License Number

License's Expiration Date

Addendum Acknowledgement

Addendum No. 1 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 2 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 3 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 4 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 5 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 6 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 7 Signature Acknowledging Receipt: _____ Date: _____

Addendum No. 8 Signature Acknowledging Receipt: _____ Date: _____

LIST OF SUBCONTRACTORS

In accordance with Section 4104 of the Public Contracting Code of the State of California, each bidder shall list below the name and location of place of business of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent of the total contract price or, in the cases of bids or offers for the construction of streets or highways, including bridges, in excess of one-half of 1 percent of the prime contractor's total bid or ten thousand dollars (\$10,000), whichever is greater. In each such instance, the nature and extent of the work to be performed shall be described.

If a prime contractor fails to specify a subcontractor or if a prime contractor specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the prime contractor's total bid, the prime contractor agrees that he or she is fully qualified to perform that portion himself or herself, and that the prime contractor shall perform that portion himself or herself. The subcontracting of work for which no subcontractor was designated in the original bid and which is in excess of one-half of one percent of the total contract price, will be allowed only with the written consent of the City.

Name of Subcontractor	Address of Office, Mill, or Shop	Description of Work to be Performed (also show Bid Schedule Item Number)	Public Works Contractor Registration Number

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

END OF LIST OF SUBCONTRACTORS

LIST OF MATERIAL SUPPLIERS AND MATERIAL GUARANTEE

The bidder is required to name the make and supplier of the material items listed below to be furnished under these specifications. The bidder shall name a manufacturer for each item and the supplier of the item if the supplier is not the manufacturer. The naming of more than one supplier for a single item or naming a supplier followed by the words "or equal" will not be acceptable. Substitution of any listed supplier following submission of this form with the Bid shall only be permitted as authorized by the Engineer pursuant to Section 6.3 of the General Conditions.

Failure to complete this form and submit it with the bid proposal may cause the proposal to be rejected as being incomplete and not responsive to the solicitation.

Item	Supplier & Manufacturer	Address

MATERIAL GUARANTEE

In addition to completion of the list of material suppliers on the Material Suppliers form, the bidder may be required to furnish prior to award of contract, a complete statement of the origin, composition and manufacturer of any or all materials to be used in the construction of the work, together with samples, which samples may be subjected to test, provided for in these specifications or in the Special Provisions to determine their quality and fitness for the work.

END OF
LIST OF MATERIAL SUPPLIERS AND MATERIAL GUARANTEE

QUESTIONNAIRE AND FINANCIAL ASSURANCE STATEMENT

The following statements as to experience and financial qualifications of the Proposer are submitted in conjunction with the proposal as a part thereof, and the truthfulness and accuracy of the information is guaranteed by the Proposer.

The Proposer has been engaged in the contracting business under the present business for _____ years. Experience in work of a nature similar to that covered in the proposal extends over a period of _____ years.

The Proposer, as a contractor, has never failed to satisfactorily complete a contract awarded to contractor, except as follows:

List all claims and lawsuits presented or filed in the last five (5) years, regardless of the form, regarding any public works project:

The following contracts for work have been completed in the last three (3) years for the persons, firm or authority indicated and to whom reference is made:

Year	Type of Work-Size, Length and Contract Amount	Location and For Whom Performed
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The following complaints have been made against the Proposer's contractor's license within the past ten (10) years:

Date: _____ Nature of Complaint _____

Reference is hereby made to the following bank or banks as to the financial responsibility of the proposer:

NAME OF BANK	ADDRESS

Reference is hereby made to the following surety companies as to the financial responsibility and general reliability of the proposer:

NAME OF SURETY COMPANY:

--

I, the undersigned, declare under penalty of perjury under the laws of the State of California, that the foregoing is true and correct.

SIGNATURE OF PROPOSER

DATE

NAME OF PROPOSER

END OF
QUESTIONNAIRE AND FINANCIAL STATEMENT FORM

STATEMENT OF QUALIFICATIONS

The apparent low Bidder shall submit a Statement of Qualifications as specified herein as a submittal to the City within 24 hours of the bid opening.

- A. The following are minimum requirements for the Bidder to be found responsible to perform the Work. Bidder's compliance with the minimum qualification requirements will be measured by the experience of the supervisory personnel who will have responsible charge of the various major components of the Work. If Bidder subcontracts portions of the Work, City, in its determination of whether the minimum qualification requirements have been met, will consider the qualifications of the Subcontractor's supervisory personnel.
 - 1. Five years experience as a continuously operating entity engaged in the performance of similar work.
 - 2. Experience on public works projects, with no history of default termination.
 - 3. Sufficient financial strength, stability and resources as measured by Bidder's equity, debt-to-assets ratio, and capability to finance the Work to be performed.
- B. Owner will notify Apparent Low Bidder in writing of any deficiencies found and will provide Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of Bidder as a business entity.

**SITE VISIT AFFIDAVIT
TO BE EXECUTED
BY BIDDER, NOTARIZED AND SUBMITTED WITH BID**

(To Accompany Bid)

State of California)
) ss.
County of)

_____, **being first duly sworn**, deposes and says that he or
(Contractor's Authorized Representative)

she is

_____ of _____, the party making the foregoing
(Title of Representative) (Contractor's Name)

bid, has visited the Site of the Work as described in the Contract and has examined and familiarized themselves with the existing conditions, as well as all other conditions relating to the construction which will be performed. The submitting of a bid shall be considered an acknowledgement on the part of the Bidder of familiarity with conditions at the site of Work. The Bidder further acknowledges that the site examination has provided adequate and sufficient information related to existing conditions which may affect cost, progress or performance of the Work.

Signature Name of Bidder

BID BOND

We, _____ as Principal, and _____ as Surety, jointly and severally, bind ourselves, our heirs, representatives, successors and assigns, as set forth herein, to the City of Petaluma (herein called "the Owner") for the payment of the penal sum of _____ Dollars (\$_____), lawful money of the United States, which is ten (10) percent of the total amount bid by bidder to the Owner. Principal has submitted the accompanying bid for the construction of the _____ project.

If the Principal is awarded the contract and enters into a written contract, in the form prescribed by the Owner, at the price designated by his bid, and files the bonds required by the Agreement with the Owner, and carries all insurance in type and amount which conforms to the contract documents and furnishes required certificates and endorsements thereof, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Forfeiture of this bond, or any deposit made in lieu thereof, shall not preclude the Owner from seeking all other remedies provided by law to cover losses sustained as a result of the Principal's failure to do any of the foregoing.

Principal and Surety agree that if the Owner is required to engage the services of an attorney in connection with the enforcement of this bond, each shall pay the Owner's reasonable attorney's fees, witness fees and other costs incurred with or without suit.

Executed on _____, _____.

PRINCIPAL

By _____
Signature

Title

Any claims under this bond may be addressed to:

(Name and address of Surety's agent for service of process in California, if different from above)

(Telephone number of Surety's agent in California)

(Attach Acknowledgment)

SURETY

By _____
(Attorney-in-Fact)

NOTICE:

No substitution or revision to this bond form will be accepted. Be sure that all bonds submitted have a certified copy of the bonding agent's power of attorney attached. Also verify that Surety is an "Admitted Surety" (i.e., qualified to do business in California), and attach proof of verification (website printout from the California Department of Insurance website (<http://www.insurance.ca.gov/docs/index.html>) or certificate from County Clerk).

END OF BID BOND

SECTION II

GENERAL CONDITIONS

CITY OF PETALUMA - GENERAL CONDITIONS

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ARTICLE 1 - DEFINITIONS

Whenever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated in this Article 1 which meanings are applicable to both the singular and plural thereof. If a word which is entirely in upper case in these definitions is found in lower case in the Contract Documents, then the lower case word will have its ordinary meaning.

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

Agreement - The written 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 ENGINEER which is to be used by the CONTRACTOR to request progress payments or final payment and which is to be accompanied by such supporting documentations as is required by the Contract Documents.

Asbestos - Any material that contains more than one percent 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.

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 Labor and Materials, and Maintenance Bonds and other instruments of security.

Change Order - A document recommended by the ENGINEER, which is signed by the CONTRACTOR and the CITY, and authorizes an addition, deletion, or revision in the WORK, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

CITY - The City of Petaluma.

Clarification - A document issued by the ENGINEER to the CONTRACTOR that clarifies the requirements(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.

Contract Documents - The Notice Inviting Bids, Instructions to Bidders, Bid Forms (including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates, affidavits and other documentation), Agreement, Performance Bond, Labor and Materials Bond, Maintenance Bond, General Conditions, any Supplementary General Conditions, Special

Provisions, Specifications, Drawings, all Addenda, and Change Orders executed pursuant to the provisions of the Contract Documents. Shop Drawings are not Contract Documents.

Contract Price - The total monies payable by the CITY to the CONTRACTOR under the terms and conditions of the Contract Documents.

Contract Times - The number or numbers of successive calendar days or dates stated in the Contract Documents for the completion of the WORK.

CONTRACTOR - The individual, partnership, corporation, joint-venture, or other legal entity with whom the CITY has executed the Agreement.

Day - A calendar day of 24 hours 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 ENGINEER's recommendation of final payment.

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 date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

ENGINEER - The City Manager or his/her designee.

Field Order - A written order issued by the ENGINEER which may or may not involve a change in the WORK.

Hazardous Waste - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 U.S.C. Section 6906) as amended from time to time.

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.

Lien or Mechanic's Lien - A form of security, an interest in real property, which is held to secure the payment of an obligation. When related to public works construction, Lien or Mechanic's Lien may be called Stop Notice.

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 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 conditions precedent enumerated therein within the time specified, the CITY will enter into an Agreement.

Notice of Completion - A form signed by the ENGINEER and the CONTRACTOR recommending to the CITY that the WORK is Complete and fixing the date of completion. After acceptance of the WORK by the CITY Council, the form is signed by the CITY and filed with the 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 for the purpose for which it is intended prior to completion of all the WORK.

Partial Utilization - Use by the CITY of a completed part of the WORK for the purpose for which it is intended prior to completion of all the WORK.

Petroleum - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.

Project - The total construction project of which the WORK to be provided under the Contract Documents may be the whole, or as part as indicated elsewhere in the Contract Documents.

Record Drawings - Drawings generated by marking a set of Drawings to reflect all of the changes that have occurred during construction of the Project.

Resident Project Representative - The authorized representative of the ENGINEER who is assigned to the Site or any part thereof.

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 WORK.

Site - Lands or other areas designated in the Contract Documents as being furnished by the CITY for the performance of the construction, storage, or access.

Special Provisions - Specific clauses setting forth conditions or requirements peculiar to the work and supplementary to the Standard Specifications.

Specifications - The directions, provisions and requirements set forth in the Standard Specifications as supplemental and modified by the special provisions.

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. In some states, for public property, the Stop Notice remedy is designed to substitute for a mechanic's lien.

Subcontractor - An individual, partnership, corporation, joint-venture, or other legal entity having a direct contract with the CONTRACTOR or with any other subcontractor for the performance of a part of the WORK at the Site.

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

Supplier - A manufacturer, fabricator, distributor, materialman, 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.

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.

Working day - Any day except Saturdays, Sundays and CITY holidays.

ARTICLE 2 – PRELIMINARY MATTERS

2.1 DELIVERY OF BONDS AND INSURANCE CERTIFICATES

- A. 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 as the CONTRACTOR may be required to furnish in accordance with the Contract Documents.

2.2 COPIES OF DOCUMENTS

- A. The CITY will furnish to the CONTRACTOR the required number of copies of the Contract Documents specified in the Supplementary General Conditions.

2.3 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED

- A. The Contract Times will start to run on the commencement date stated in the Notice to Proceed.

2.4 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.
- B. Before undertaking each part of the WORK, the CONTRACTOR shall review the Contract Documents in accordance with Paragraph 3.3.

2.5 PRECONSTRUCTION CONFERENCE

- A. The CONTRACTOR is required to attend a preconstruction conference. This conference will be attended by the CITY, ENGINEER, and others as appropriate in order to discuss the WORK.
- B. The CONTRACTOR's initial schedule submittals for shop drawings, obtaining permits, and Plan of Operation and CPM Schedule will be reviewed and finalized. At a minimum, the CONTRACTOR's representatives shall include its project manager, project superintendent and schedule expert. If the submittals are not finalized at the end of the meeting, additional meetings will be held so that the submittals can be finalized prior to the submittal of the first Application for Payment. No Application for Payment will be processed prior to receiving acceptable initial submittals from the CONTRACTOR.

ARTICLE 3 – INTENT AND USE OF CONTRACT DOCUMENTS

3.1 INTENT

- A. The Contract Documents comprise the entire agreement between the CITY and the CONTRACTOR concerning the WORK. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the State of California .
- B. It is the intent of the Contract Documents to describe the WORK, functionally complete, to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as

being required to produce the intended result will be provided whether or not called for specifically.

- C. When words or phrases which have a well-known technical or construction industry or trade meaning are used to describe work, materials, or equipment such words or phrases shall be interpreted in accordance with that meaning unless a definition has been provided in Article 1 of the General Conditions.

3.2 REFERENCE TO STANDARDS

- A. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code shall be effective to change the duties and responsibilities of the CITY or the CONTRACTOR or any of their consultants, agents or employees, from those set forth in the CONTRACT Documents, nor shall it be effective to assign to CITY 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.

3.3 REVIEW OF CONTRACT DOCUMENTS

- A. If, during the performance of the WORK, CONTRACTOR discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the WORK or of any such standard, specification, manual, or code, or of any instruction of any Supplier, CONTRACTOR shall report it to ENGINEER in writing at once, and CONTRACTOR shall not proceed with the work affected thereby (except in an emergency as authorized by Paragraph 6.13 until a Clarification, Field Order, or Change Order to the Contract Documents has been issued.

3.4 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

A. Unless otherwise noted herein, conflicts or inconsistencies between parts of the Contract will be resolved by the ENGINEER with a Change Order or an Addendum, if required. Addenda and Change Orders bearing the most recent date shall prevail over Addenda or Change Orders bearing earlier dates. Any reference to addenda-changed specifications or drawings shall be considered to have been changed accordingly. In resolving conflicts resulting from errors or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:

1. Change Orders/Addenda (most recent in time take precedence)
2. Agreement and Bond Forms
3. Referenced Standard Specifications
4. Special Provisions
5. Drawings
6. General Conditions
7. Instructions to Bidders
8. Contractor's Bid (Bid Form)
9. Notice Inviting Bids
10. Supplementary General Conditions (if any)
11. Permits from other agencies as may be required by law

B. With reference to the Drawings the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Addenda/Change Order drawings govern over any other drawings
4. Drawings govern over standard drawings

3.5 AMENDING CONTRACT DOCUMENTS

A. The Contract Documents may be amended 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).

3.6 REUSE OF DOCUMENTS

A. 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 no 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

- A. 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 the CITY will not 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 REPORTS OF PHYSICAL CONDITIONS

- A. **Subsurface Explorations:** Reference is made to any Supplementary General Conditions for identification of those reports of explorations and tests of subsurface conditions at the Site that have been utilized by the ENGINEER in the preparation of the Contract Documents.
- B. **Existing Structures:** Reference is made to any Supplementary General Conditions for identification of those drawings of physical conditions in or relating to existing surface and subsurface structures (except underground Utilities referred to in Paragraph 4.3 herein) which are at or contiguous to the Site that have been utilized in the preparation of the Contract Documents.
- C. The CITY makes no representation as to the completeness of the reports or drawings referred to in Paragraph 4.2 A or B above or the accuracy of any data or information contained therein. The CONTRACTOR may rely upon the accuracy of the technical data contained in such reports and drawings. However, the CONTRACTOR may not rely upon any interpretation of such technical data, including any interpolation or extrapolation thereof, or any non-technical data, interpretations, and opinions contained therein.

4.3 PHYSICAL CONDITIONS - UNDERGROUND UTILITIES

- A. **Indicated:** 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 or by others. Unless it is expressly provided in any Supplementary General Conditions the CITY will not be responsible for the accuracy or completeness of any such information or data, and the CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all underground Utilities indicated in the Contract Documents, for coordination of the WORK with the owners of such underground Utilities during construction, for the safety and protection thereof and repairing any damage thereto resulting from the WORK, the cost of all of which are deemed to have been included in the Contract Price.
- B. **Not Indicated:** If an underground Utility is uncovered or revealed at or contiguous to the Site which was not indicated in the Contract Documents and which the CONTRACTOR could not reasonably have been expected to be aware of, the CONTRACTOR shall identify the owner of such underground Utility and give written notice thereof to that owner and shall notify the ENGINEER.

4.4 DIFFERING SITE CONDITIONS

- A. The CONTRACTOR shall notify the ENGINEER, in writing, of the following unforeseen conditions, hereinafter called differing Site conditions, promptly upon their discovery (but in no event later than 14 days after their discovery) and before they are disturbed:
 - 1. Subsurface or latent physical conditions at the Site of the WORK differing materially from those indicated, described, or delineated in the Contract Documents, including those reports discussed in Paragraph 4.2, 4.3, and 4.5.
- B. The ENGINEER will review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto.
- C. If the ENGINEER concludes that because of newly discovered conditions a change in the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the difference.
- D. In each such case, an increase or decrease in the Contract Price or an extension or shortening the Contract Times, or any combination thereof, will be allowable to the extent that they are attributable to any such difference. If the ENGINEER and the CONTRACTOR are unable to agree as to the amount or length thereof, a claim may be made therefor as provided in Articles 11 and 12.

- E. The CONTRACTOR's failure to give notice of differing Site conditions within 14 days of their discovery and before they are disturbed shall constitute a waiver of all claims in connection therewith, whether direct or consequential in nature.

4.5 HAZARDOUS MATERIALS

- A. CITY shall be responsible for any Asbestos, Hazardous Waste, 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. 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.
 - 1. Upon discovery of any Asbestos, Hazardous Waste, Petroleum, or Radioactive Material, the CONTRACTOR shall immediately stop all work in any area affected thereby (except in an emergency as required by Paragraph 6.13) and notify ENGINEER (and therefore confirm such notice in writing). CONTRACTOR shall not be required to resume any work in any such affected area until after CITY has obtained any required permits related thereto and delivered to CONTRACTOR special written notice. Such written notice will specify that such condition and any affected area is or has been rendered safe for the resumption of the work or specify any special conditions under which the work may be resumed safely. If ENGINEER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of adjustment, if any, in Contract Price or Contract Times as a result of such work stoppage or such special conditions under which work is agreed by CONTRACTOR to be resumed, either party may make a claim therefor as provided in Articles 11 and 12.
 - 2. If, after receipt of such special written notice, CONTRACTOR does not agree to resume such WORK based on a reasonable belief it is unsafe, or does not agree to resume such WORK under special conditions, ENGINEER may order such portion of the WORK that is in connection with such hazardous condition or in such affected area to be deleted from the WORK. If ENGINEER and CONTRACTOR cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the WORK then either party may make a claim therefor as provided in Articles 11 and 12. CITY may have such deleted portion of the WORK performed by CITY's own forces or others in accordance with Article 7.
- B. The provisions of Paragraphs 4.2, 4.3, and 4.4 are not intended to apply to Asbestos, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.

4.6 REFERENCE POINTS

- A. The ENGINEER will provide the location and elevation of one bench mark, near or on the Site of the WORK, for use by the CONTRACTOR for alignment and elevation control. Unless otherwise specified in any Supplementary General Conditions, the CONTRACTOR shall furnish all other lines, grades, and bench marks required for proper execution of the WORK.
- B. The CONTRACTOR shall preserve or replace any and all bench marks, section corners, witness corners, 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 surveyor licensed under the applicable state codes governing land surveyors.

ARTICLE 5 – BONDS AND INSURANCE

5.1 BONDS

- A. The CONTRACTOR shall furnish Performance and Labor and Materials Bonds, each in the amount of one hundred percent (100%) of the contract price, as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of completion, except as otherwise provided by Law or Regulation or by the Contract Documents. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions.
- B. The CONTRACTOR shall guarantee the WORK to be free of defects in material and workmanship for a period of one (1) year following the CITY's acceptance of the WORK. The CONTRACTOR shall agree to make, at the CONTRACTOR's own expense, any repairs or replacements made necessary by defects in material or workmanship which become evident within the one-year guarantee period. The CONTRACTOR's guarantee against defects required by this provision shall be secured by a Maintenance Bond, in the amount of ten percent (10%) of the contract price, which shall be delivered by the CONTRACTOR to the CITY prior to acceptance of the WORK. The Maintenance Bond shall remain in force for one (1) year from the date of acceptance of the contracted WORK. The CONTRACTOR shall make all repairs and replacements within the time required during the guarantee period upon receipt of written order from the ENGINEER. If the CONTRACTOR fails to make the repairs and replacements within the required time, the CITY may do the work and the CONTRACTOR and the CONTRACTOR's surety for the Maintenance Bond shall be liable to the CITY for the cost. The expiration of the Maintenance Bond during the one-year guarantee period does not operate to waive or void the one-year guarantee, as set forth herein and in paragraph 6.16 of these General Conditions.

- C. 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.
- D. 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 7 days thereafter substitute another Bond and surety, which must be acceptable to the CITY.
- E. 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 of California 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 INSURANCE

Contractor and any subcontractor shall not commence work under this Agreement until Contractor shall have obtained all insurance required under this paragraph and such insurance shall have been approved by the City Attorney as to form and carrier and the City Manager as to sufficiency, nor shall Contractor allow any contractor or subcontractor to commence work on this contract or subcontract until all similar insurance required of the contractor and/or subcontractor shall have been so obtained and approved. All requirements herein provided shall appear either in the body of the insurance policies or as endorsements and shall specifically bind the insurance carrier.

CONTRACTOR shall procure and maintain for the duration of the contract all necessary insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, the Contractor’s agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Insurance Services Office Commercial General Liability coverage.
2. Insurance Services Office form number CA covering Automobile Liability, code 1 (any auto).
3. Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.
4. [Optional] Such other insurance coverages and limits as may be required by the CITY as follows: _____.

B. Minimum Limits of Insurance

CONTRACTOR shall maintain limits no less than:

1. General Liability: \$2,000,000 per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate liability is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
3. Employer's Liability: Bodily Injury by Accident - \$1,000,000 each accident
Bodily Injury by Disease - \$1,000,000 policy limit
Bodily Injury by Disease - \$1,000,000 each employee

C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions 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 officers, officials, employees, and volunteers; or the CONTRACTOR shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

D. Other Insurance Provisions

The required general liability and automobile policies are to contain, or be endorsed to contain the following provisions:

1. The CITY, its officers, officials, employees, agents and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the CONTRACTOR; products and completed operations of the CONTRACTOR; premises owned, occupied or used by the CONTRACTOR; or automobiles owned, leased, hired or borrowed by the CONTRACTOR. The coverage shall contain no special limitations on the scope of protection afforded to the CITY, its officers, officials, employees, agents or volunteers.
2. For any claims related to this project, the CONTRACTOR's insurance coverage shall be primary insurance as respects the CITY, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the CITY, its officers, officials, employees, agents or volunteers shall be excess of the CONTRACTOR's insurance and shall not contribute with it.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the CITY, its officers, officials, employees, agents or volunteers.
4. The CONTRACTOR's insurance shall apply separately to each insured against whom claim is made or suit is brought except, with respect to the limits of the insurer's liability.
5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the CITY.

E. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII.

F. Verification of Coverage

CONTRACTOR shall furnish the CITY with original endorsements effecting coverage required by this clause. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. The endorsements are to be on forms provided by the CITY. All endorsements are to be received and approved by the CITY before work commences. As an alternative to the CITY's

forms, the CONTRACTOR's insurer may provide complete, certified copies of all required insurance policies, including endorsements effecting the coverage required by these specifications.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.1 COMMUNICATIONS

- A. Written communications with the CITY shall be only through or as directed by the ENGINEER.

6.2 SUPERVISION AND SUPERINTENDENCE

- A. The CONTRACTOR shall supervise, inspect, and direct the WORK competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the WORK in accordance with the Contract Documents. The CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction and all safety precautions and programs incidental thereto. The CONTRACTOR shall be responsible to see that the completed WORK complies accurately with the Contract Documents.
- B. The CONTRACTOR shall designate in writing and keep on the Site at all times during the performance of the WORK a technically qualified, English-speaking superintendent, who is an employee of the CONTRACTOR and who shall not be replaced without written notice to the ENGINEER. The superintendent will be the CONTRACTOR's representative at the Site and shall have authority to act on behalf of the CONTRACTOR. All communications given to the superintendent shall be as binding as if given to the CONTRACTOR.
- C. The CONTRACTOR's superintendent shall be present at the Site at all times while work is in progress and shall be available by phone for emergencies 24 hours per day, 7 days per week. Failure to observe this requirement shall be considered suspension of the WORK by the CONTRACTOR until such time as such superintendent is again present at the Site.

6.3 LABOR, MATERIALS, AND EQUIPMENT

- A. The CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the WORK and perform construction as required by the Contract Documents. The CONTRACTOR shall furnish, erect, maintain, and remove the construction plant and any required temporary works. The CONTRACTOR shall at all times maintain good discipline and order at the Site. Except in connection with the safety or protection of persons or the WORK or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all work at the Site shall be performed during regular working hours, and the

CONTRACTOR will not permit overtime work or the performance of work on Saturday, Sunday, or any federally observed holiday without the CITY's written consent. The CONTRACTOR shall apply for this consent through the ENGINEER in writing a minimum of 24 hours in advance.

- B. Except as otherwise provided in this Paragraph, the CONTRACTOR shall receive no additional compensation for overtime work, i.e., work in excess of 8 hours in any one calendar day or hours in any one calendar week, even though such overtime work may be required under emergency conditions and may be ordered by the ENGINEER in writing. Additional compensation will be paid to the CONTRACTOR for overtime work only in the event extra work is ordered by the ENGINEER 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.
- C. All increased costs of inspection and testing performed 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 cost of all such inspection and testing from any partial payments otherwise due to the CONTRACTOR.
- D. Unless otherwise specified in the Contract Documents, the CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, lubricants, power, light, heat, telephone, water, sanitary facilities, and all other facilities, consumables, and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the WORK.
- E. All materials and equipment incorporated into the WORK shall be of specified quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the CITY. If required by the ENGINEER, the CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the source, kind and quality of materials and equipment. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provisions of any such instructions will be effective to assign to the CITY or any of its consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9 C.
- F. The work, unless otherwise permitted or approved by the ENGINEER, shall be completed with the incorporated use of equipment, materials, and/or products where such are specified. Substitutions and equal alternatives will be permitted as provided in this article; however, neither the request for substitution nor the offer

of alternatives shall in any way by their submittal obligate the CITY to assent to any request or offer. Failure of the CONTRACTOR awarded the work to either submit requests for substitutions or to offer alternatives within the required times provided in this General Condition will be considered as evidence that the work shall be accomplished with trade-named equipment, materials, and/or products as identified in the Specifications and/or the Drawings.

- G. Unless otherwise provided elsewhere in the Contract, all equipment, materials, and/or products incorporated into the work shall be new and, where not specified, shall be of the highest quality of the respective kinds for the intended use, and all workmanship shall meet or exceed applicable construction industry standards and practices. If equipment, materials, and/or products are designated by listing named manufacturers of particular equipment, materials, and/or products followed by the words "or equal," then the CONTRACTOR may furnish the named equipment, materials, and/or products or any equal equipment, materials, and/or products. The first-named manufacturer of particular equipment, materials, and/or products is the basis for the design shown on the Project Drawings. A subsequently named manufacturer or particular equipment, materials, and/or products has been determined to be an acceptable substitution but may require modifications in the Project's design and its ultimate construction to accommodate its use. If such subsequently named items are selected by the CONTRACTOR for incorporation into the work, the CONTRACTOR shall assume all costs required for modifications to the equipment, materials, and/or products, and Project design and construction as may be required for said items' use. Substitutions for an unnamed "equal" item of material shall be permitted upon compliance of the procedures set forth in Paragraph I of this article. If a CONTRACTOR makes use of an unnamed "equal" product as a substitute for a specifically named material or product, the CONTRACTOR shall assume all costs required to make the necessary revisions or modifications to accommodate the use of said unnamed product.
- H. Before beginning the work and within thirty-five (35) calendar days after award of the Contract, the CONTRACTOR shall submit a List of Materials to the ENGINEER for review. The List shall include all items of equipment, materials, and/or products to be incorporated into the work and the names of suppliers with whom purchase orders have been placed. The names on the List shall be arranged in the same order as in the specifications, and shall contain sufficient data to identify precisely the items of equipment, materials, and/or products the CONTRACTOR proposes to furnish. The List shall include Specifications or Drawing references. Once the submission is determined to be acceptable to the ENGINEER, it shall be returned to the CONTRACTOR.
- I. Substitution for those equipment, materials, and/or products specified shall only be permitted when the proposed unnamed "equal" product or material to be furnished is both equal in quality and utility and after the CONTRACTOR has complied with the following provisions: (1) All substitutions shall be reviewed by the ENGINEER. (2) The ENGINEER must approve such substitution in writing prior

to its incorporation into the work. (3) Unless otherwise authorized in writing by the CITY, the CONTRACTOR shall, within thirty-five (35) calendar days of award and prior to placing any purchase orders, but at least thirty (30) calendar days before it requires approval of any such alternative item, submit to the CITY sufficient data, drawings, samples, literature, or other detailed information as will demonstrate to the ENGINEER that the proposed substitute is equal in quality and utility to the equipment, materials and/or products specified.

1. Within thirty (30) calendar days following receipt of all requested information from the CONTRACTOR, the ENGINEER will determine whether the proposed alternative is equal in quality and utility and meets the requirements of the Contract and will inform the CONTRACTOR in writing of such determination. The burden of substantiating the quality and utility of alternatives shall be upon the CONTRACTOR, and the CONTRACTOR shall furnish all necessary information requested and required by the ENGINEER. The ENGINEER will be the sole judge as to the quality and utility of alternative equipment, materials, and/or products, and the ENGINEER's decision shall be final. An acceptance by the ENGINEER of a substitution shall not relieve the CONTRACTOR from complying with the requirements of the Drawings and Specifications. Acceptance by the ENGINEER shall not relieve the CONTRACTOR from full responsibility for the efficiency, sufficiency, and quality and performance of the substitute equipment, materials, and/or products, in the same manner and degree as the equipment, materials, and/or products specified by name.
2. Failure of the CONTRACTOR to submit proposed substitutions for review in the manner described above and within the time prescribed shall be sufficient cause for rejection by the CITY of any other proposed substitutions.
3. In determining whether a proposed product is equal in quality and utility, the ENGINEER is not restricted to such basic issues as performance and durability, but may consider any other issues that the ENGINEER, in the discretion of the ENGINEER, deems appropriate. Said issues may, but are not required to include, nor are they limited to, such additional factors as comparable performance, reliability, efficiency of operation, ease of operation, adaptability, ease of maintenance, capital costs, life-cycle costs, operational characteristics, costs of training personnel, maintenance history, warranties, problems created by the resulting overall warranty system, availability of qualified service, availability of parts, the history of any supplier and compatibility with existing facilities.
4. No one factor or group of factors, including such issues as savings on capital costs, shall be determinative of whether the proposed product or material is equal in quality and utility. The decision of the ENGINEER shall be based

on those factors deemed by the ENGINEER to be relevant and any data, drawings, samples, literature, or other detailed information furnished by the CONTRACTOR with respect to the proposed substitution. Each decision as to whether a product or material is equal in quality and utility shall be made by the ENGINEER on a case-by-case basis.

5. The CONTRACTOR shall be responsible for any and all costs, including consultant costs, incurred by the CITY with respect to the proposed substitution that exceed the costs inherent in the normal and reasonable review of drawings and other standard data, information, and documents concerning any proposed substitution. The CONTRACTOR shall be responsible for this cost, regardless of whether or not the substitution is approved by the ENGINEER.
- J. Unless otherwise provided in the Contract, the title and interest in the right to the use of all water, and the title to all soil, stone, gravel, sand, minerals, timber, and all other materials developed or obtained within the Project limits from operations by the CONTRACTOR or any of its subcontractors, of any of their representatives or employees, and the right to use or dispose of the same are hereby expressly reserved in the CITY; and neither the CONTRACTOR nor any of its subcontractors, nor any of their representatives or employees, shall have any right, title, or interest in or to any part thereof.
- K. All material used under the Contract after it has been attached or affixed to the work or soil and after partial payment has been made therefore shall become the property of the CITY.
- L. In the event that any Indian relics or items possessing archaeological or historical value are discovered by the CONTRACTOR or any of its subcontractors or any of their representatives or employees, the CONTRACTOR shall immediately notify the ENGINEER and await the ENGINEER's decision before proceeding with any work. The CONTRACTOR shall have no property right in such relics and items.
- M. The CONTRACTOR shall be satisfied as to the quantity of acceptable materials or products which may be produced or obtained at local sources, and the CITY will not assume any responsibility as to the quantities or quality of acceptable materials or products available.
- N. The CONTRACTOR, with the permission of the ENGINEER, may use in the proposed construction such stone, gravel, sand, or other material suitable in the opinion of the ENGINEER as may be found in excavation.
- O. Existing equipment, materials, and/or products to be salvaged shall remain the property of the CITY. Salvage to be reinstalled in the work shall be refurbished as required before reinstallation. Other work to be salvaged shall be carefully removed

and handled in such a manner as to avoid damage and shall be delivered to storage at a location designated by the ENGINEER.

6.4 SCHEDULE

- A. The CONTRACTOR shall comply with the schedule requirements in the Special Provisions or as otherwise provided in the Contract Documents.

6.5 SUBSTITUTES OR “OR EQUAL” ITEMS

- A. The CONTRACTOR shall submit proposed substitutes or “or equal” items in accordance with the Bidding Requirements. No request for substitution of an “or equal” item will be considered by the ENGINEER after award of the Contract, except as provided in Paragraph 6.3I herein.

6.6 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- A. The CONTRACTOR shall be responsible to the CITY for the acts and omissions of its Subcontractors, Suppliers, and their employees to the same extent as CONTRACTOR is responsible for the acts and omissions of its own employees. Nothing contained in this Paragraph shall create any contractual relationship between any Subcontractor and the CITY nor relieve the CONTRACTOR of any liability or obligation under the Contract Documents. The CONTRACTOR shall include these General Conditions and the Supplementary General Conditions as part of all its subcontract and supply agreements.

6.7 PERMITS

- A. Unless otherwise provided in any Supplementary General Conditions, the CONTRACTOR shall obtain and pay for all constructions 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 charges of utility owners for inspection or connections to the WORK.

6.8 PATENT FEES AND ROYALTIES

- A. 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 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 ENGINEER in the Contract Documents. The CONTRACTOR's indemnification obligation under this Paragraph 6.8 A. 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 Paragraph 6.16 of these General Conditions.

6.9 LAWS AND REGULATIONS

- A. 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 including, but not limited to, all applicable safety Laws and Regulations. 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 Paragraph 6.16 of these General Conditions.

6.10 TAXES

- A. 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.

6.11 USE OF PREMISES

- A. 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 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 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, its 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 Paragraph 6.16 of these General Conditions.

6.12 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 be responsible for the direction and control of the work assigned and for assuring that all workers on the project understand the hazards of the work involved and the safe work procedures required for each job. The CONTRACTOR shall assure that its subcontractors of all tiers shall, without expense to the CITY, comply with this safety responsibility. No work shall proceed until each worker and subcontractor understands the scope of the work and all safety rules and work procedures to be followed. The CONTRACTOR shall not allow a new employee or new subcontractor to begin work on CITY projects without a full and proper safety orientation. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage 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 and 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, 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 effect 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 ENGINEER has issued a notice to the CONTRACTOR in accordance with Paragraph 14.7 B. that the WORK is acceptable.
- C. 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.

- D. Materials that contain hazardous substances or mixtures may be required on the WORK. A Material Safety Data Sheet shall be made available at the Site by the CONTRACTOR for every hazardous product used.
- E. Material usage shall strictly conform to OSHA safety requirements and all manufacturer's warnings and application instructions listed on the Material Safety Data Sheet and on the product container label.
- F. The CONTRACTOR shall be responsible for the exchange of material safety data sheets 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.
- G. The CONTRACTOR shall notify the ENGINEER if it considers a specified product or its intended use to be unsafe. This notification must be given to the ENGINEER prior to the product being ordered, or if provided by some other party, prior to the product being incorporated in the WORK.
- H. Before starting work, the CONTRACTOR shall submit a written safety program to the CITY. The objective of the safety program shall be accident prevention. Such program shall include, but not be limited to, the following:
 - 1. An organization chart and accompanying narrative which describes the responsibility for employee and public safety of those individuals who control each phase of operations and set forth in writing the policies and procedures to be followed by all personnel. The chart shall also show the CONTRACTOR's internal lines of communication (including subcontractors) for the program.
 - 2. A specific program for communication between the CONTRACTOR and CITY on safety matters. The CONTRACTOR shall also designate one person with whom official contact can be made by the CITY on safety matters.
 - 3. Evidence that the CONTRACTOR has become thoroughly familiar with the potential hazards of the work and applicable federal and state regulations.
 - 4. Specific safety procedures and guidelines for conduct of the Work.
 - 5. The CITY's review, comment upon, and/or acceptance of the CONTRACTOR's safety program and/or plan does not in any way negate the responsibilities of the CONTRACTOR for safety or place any responsibility upon the CITY for such safety. Such review comment and/or

acceptance shall not be construed as limiting in any manner the CONTRACTOR's obligation to undertake any action which may be necessary or required to establish and maintain safe working conditions at the site.

6.13 EMERGENCIES

- A. 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 ENGINEER, is obligated to immediately act to prevent threatened damage, injury, or loss. CONTRACTOR shall give ENGINEER prompt written notice if CONTRACTOR believes that any significant changes in the WORK or variations from the Contract Documents have been caused thereby. If ENGINEER determines that a change in the Contract Documents have been caused thereby. If ENGINEER 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 consequences of such action.

6.14 SUBMITTALS

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the Special Provisions, the CONTRACTOR shall submit to the ENGINEER for review all Shop Drawings and details of all structural and reinforcing steel, equipment, electrical controls, structural fabrications, pipe, pipe joints, special pipe sections, and other appurtenances in accordance with the accepted schedule of Shop Drawing submittals specified in the Special Provisions or as otherwise provided in the Contract Documents.
- B. The ENGINEER'S review will be only to determine if the items covered by the submittals will, after installation or incorporation in the WORK, generally conform to the Contract Documents and with the design concept of the completed Project. The ENGINEER's favorable review shall be obtained before any such items are manufactured or used in the work. The favorable review of Drawings by the ENGINEER shall apply in general design only and shall in no way relieve the CONTRACTOR from responsibility for errors or omissions contained therein. Favorable review by the ENGINEER shall not relieve the CONTRACTOR of its obligation to meet safety requirements and all other requirements of law. The ENGINEER will start reviewing the CONTRACTOR's submittals only after the Notice to Proceed is issued by the CITY with the exception of some unusual long lead items which may require submittals prior to issuing the Notice to Proceed.
- C. The CONTRACTOR shall also submit to the ENGINEER for review all Samples in accordance with the accepted schedule of Sample submittals specified in the Special Provisions or as otherwise provided in the Contract Documents.

- D. Before submittal of each Shop Drawing or Sample, the CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the WORK and the Contract Documents. The CONTRACTOR shall provide submittals in accordance with the requirements of the Special Provisions or as otherwise provided in the Contract Documents.
- E. Shop-drawing submittal and coordination are the responsibility of the prime contractor; this responsibility shall not be delegated in whole or in part to subcontractors or suppliers. Any designation of work "by others," shown on Shop Drawings, shall mean that the work will be the responsibility of the CONTRACTOR rather than the subcontractor or supplier who has prepared the Shop Drawings.

Submittals shall be prepared in such form that data can be identified with the applicable Specification paragraph. The data shall demonstrate clearly compliance with the Drawings and Specifications and shall relate to the specific equipment to be furnished. Where manufacturer's standard drawings are employed, they shall be marked clearly to show what portions of the data are applicable to this Project.

- F. Review of shop-drawing submittals by the ENGINEER has as its primary objective the completion for the CITY of a Project in full conformance with the Drawings and Specifications, unmarred by field corrections, and within the time provided. In addition to this primary objective, shop-drawing review as a secondary objective will assist the CONTRACTOR in its procurement of equipment that will meet all requirements of the Drawings and Specifications, will fit the structures detailed on the Drawings, will be complete with respect to piping, electrical, and control connections, will have the proper functional characteristics, and will become an integral part of a complete operating facility. Acceptance of Shop Drawings and submittals does not constitute a change order to the Contract requirements.
- G. Where the CONTRACTOR is required by these Specifications to make submittals, they shall be submitted to the ENGINEER with a letter of transmittal and in sufficient number of copies to allow a distribution of at least one (1) copy to all parties needing a copy to carry out the provisions of the Specifications, including three (3) copies to be retained by the ENGINEER. The ENGINEER shall determine the appropriate number of such copies required at the time of the preconstruction conference.
- H. Within twenty-five (25) calendar days of receipt by the ENGINEER of each of the CONTRACTOR's submissions and all appurtenant data required for their review, the appropriate number of copies will be returned to the CONTRACTOR with one of the following notations:

1. Resubmittal not required; correction, if any, noted.
2. Correct and resubmit; corrections noted.

Returned copies of Drawings marked with Notation "1" authorize the CONTRACTOR to proceed with the operations covered by such returned copies, provided that such operations be subject to the comments, if any, shown on such returned copies. Returned copies of Drawings marked with Notation "2" shall be corrected, as necessary and required, and shall be submitted in the same manner as before.

- I. When submittals are favorably reviewed, the ENGINEER will retain three (3) copies and will return all other copies to the CONTRACTOR. When submittals are not favorably reviewed, the ENGINEER will retain only two (2) copies and will return all others to the CONTRACTOR. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submission to the ENGINEER at least by the second submission of data. The CITY reserves the right to deduct monies from payments due the CONTRACTOR to cover additional costs of the ENGINEER's review beyond the second submission.
- J. Favorable review by the ENGINEER will not constitute acceptance by the ENGINEER of any responsibility for the accuracy, coordination, and completeness of the Shop Drawings or the items of equipment represented on the Drawings. Accuracy, coordination, and completeness of Shop Drawings shall be the sole responsibility of the CONTRACTOR, including responsibility to back check comments, corrections, and modifications from the ENGINEER's review before fabrication. Supplemental, specific requirements for Shop Drawings and details are contained in the applicable technical sections of these Specifications.
- K. Copies of schedules and Shop Drawings submitted to the ENGINEER for review shall be such as to provide three (3) copies for the ENGINEER's files, and such additional copies as the CONTRACTOR may desire for its own office files and/or for distribution by it to subcontractors or vendors. Exceptions will be noted in specific sections of Specifications. All Shop Drawings and supporting data, catalogs, and schedules shall be submitted as the instruments of the CONTRACTOR, who shall be responsible for their accuracy and completeness. These submittals may be prepared by the CONTRACTOR, subcontractors, or suppliers, but the CONTRACTOR shall ascertain that submittals meet all of the requirements of the Contract, while conforming to structural, space, and access conditions at the point of installation. The CONTRACTOR shall check all submittals before submitting them to the ENGINEER.
- L. The ENGINEER shall check and review schedules, drawings, etc., submitted by the CONTRACTOR only for general design conformance with the concept of the Project and compliance with the Contract. Shop Drawings shall not be used to order products' fabrication or delivery for construction or installation unless

submitted to and favorably reviewed by the ENGINEER. Acceptance by the ENGINEER of any drawings, method of work, or any information regarding materials and equipment the CONTRACTOR proposes to furnish shall not relieve the CONTRACTOR of its responsibility for any errors therein and shall not be regarded as an assumption of risks or liability by the Design ENGINEER or the CITY, or any officer or employee thereof, and the CONTRACTOR shall have no recourse against the CITY under the Contract on account of the failure or partial failure or inefficiency or insufficiency of any plan or method of work or material and equipment so accepted. Such acceptance shall be considered to mean merely that the ENGINEER has no objection to the CONTRACTOR using, upon its own full responsibility, the plan or method of work proposed or furnishing the materials and equipment proposed.

6.15 CONTINUING THE WORK

- A. 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.

6.16 CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE

- A. CONTRACTOR warrants and guarantees that all WORK will be in accordance with the Contract Documents and will not be defective. The CONTRACTOR represents that the WORK performed pursuant to the Contract shall be of the quality specified or of the highest quality if no quality is specified, and shall conform to the Contract Documents. The CONTRACTOR warrants all equipment, material, products, and workmanship furnished and all work performed under the Contract against defects for a period of one (1) year after final acceptance regardless of whether the same were furnished or performed by the CONTRACTOR or by any of its subcontractors or suppliers of any tier.
- B. The CONTRACTOR shall make, at its own expense, all repairs and/or replacements necessitated by defects in the equipment, materials, and/or products and in the workmanship provided by the CONTRACTOR or any of its subcontractors that become evident within the warranty period.
- C. Upon receipt of written notice from the CITY of any breach of warranty during the applicable warranty period, the affected item shall be redesigned, repaired, or replaced by the CONTRACTOR and the CONTRACTOR shall perform such tests as the CITY may require to verify that such redesign, repair, and replacement comply with the requirements of the Contract. The CITY shall have the right to operate and use such equipment, materials, and/or products until they can, without damage to the CITY, be taken out of service for correction or replacement by the CONTRACTOR. As to the redesigned, repaired, or replaced work, the CONTRACTOR warrants such redesigned, repaired, or replaced work against

defective design, equipment, materials, products, and workmanship for a period of one (1) year from and after the date of satisfactory completion of such redesigned, repaired, or replaced work. The CITY reserves the right to require that the CONTRACTOR performs such repair or replacement work.

- D. The CITY also reserves the right to make such repairs or replacements, if, within seven (7) calendar days after the mailing of a notice in writing to the CONTRACTOR and Surety, the CONTRACTOR shall neglect to make or undertake with due diligence the aforesaid repairs or replacements and that Surety within seven (7) calendar days after mailing of a notice in writing of such negligence of the CONTRACTOR shall neglect to make or undertake with due diligence the aforesaid repairs or replacements itself, provided, however, that in the case of an emergency where in the opinion of the CITY delay would cause hazard to health or serious loss or damage, repair may be made without notice being sent to the CONTRACTOR or Surety, and the CONTRACTOR shall pay the cost thereof.
- E. All costs including workforce and materials incidental to such redesign, repair, replacement, and testing, including the removal, replacement, and reinstallation of equipment necessary to gain access and all other costs incurred as the result of a breach of warranty shall be borne by the CONTRACTOR whether performed by the CITY or the CONTRACTOR.
- F. Nothing in this section shall be construed to limit, relieve, or release the CONTRACTOR, subcontractor's, and equipment, materials, and/or products suppliers, and other service providers' liability to the CITY for damages sustained as the result of latent defects in the workmanship, equipment, materials, and/or products done and/or furnished by the CONTRACTOR, its subcontractors, suppliers and/or other service providers.
- G. The Performance Bond shall extend for a period of one (1) year after acceptance of the Contract by the CITY and shall cover the CONTRACTOR's obligations resulting from the warranty requirements herein specified.
- H. CONTRACTOR's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. Abuse, modification, or improper maintenance or operation by persons other than CONTRACTOR, Subcontractors, or Suppliers, or other individual or entity for whom CONTRACTOR is responsible;
 - 2. Normal wear and tear under normal usage.
- I. CONTRACTOR's obligation to perform and complete the WORK in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of WORK that is not in accordance with the Contract

Documents or a release of CONTRACTOR's obligation to perform the WORK in accordance with the Contract Documents:

1. Observations by ENGINEER;
2. Recommendation by ENGINEER or payment by CITY of any progress or final payment;
3. The issuance of a Certificate of Completion by the CITY;
4. Use or occupancy of the WORK or any part thereof by the CITY;
5. Any acceptance by CITY or any failure to do so;
6. Any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice or acceptability by ENGINEER pursuant to Paragraph 14.7 B.;
7. Any inspection, test, or approval by others; or
8. Any correction of Defective Work by CITY.

6.17 INDEMNIFICATION

- A. Contractor shall indemnify, defend with counsel acceptable to City, and hold harmless to the full extent permitted by law, City and its officers, officials, employees, agents and volunteers from and against any and all liability, loss, damage, claims, expenses and costs (including, without limitation, attorney fees and costs and fees of litigation) (collectively, "Liability") of every nature arising out of or in connection with Contractor's performance of the WORK or its failure to comply with any of its obligations contained in this Agreement, except such Liability caused by the active negligence, sole negligence or willful misconduct of the City. Such indemnification by the CONTRACTOR shall include, but not be limited to, the following:
 1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its subcontractors, 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;
 2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR'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;

3. Liability or claims arising directly or indirectly from or based on the violation of any Laws or Regulations, whether by the CONTRACTOR, its subcontractors, employees, or agents;
 4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its subcontractors, 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 specified stipulated in this Agreement;
 5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the CITY or any other parties by the CONTRACTOR, its subcontractors, employees, or agents;
 6. Liability or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR, its subcontractors, employees, or agents;
 7. Liability or claims arising directly or indirectly from any breach of the obligations assumed in this Agreement by the CONTRACTOR;
 8. 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;
 9. 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 area contiguous thereto or its performance of the WORK thereon.
- B. The CONTRACTOR shall reimburse the CITY for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs of appeal) incurred by said CITY in enforcing the provisions of this Paragraph.
- C. The indemnification obligation under this Article 11 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.

- D. Pursuant to California Public Contract Code Section 9201, City shall timely notify Contractor of receipt of any third-party claim relating to this Agreement.

6.18 CONTRACTOR'S DAILY REPORTS

- A. The CONTRACTOR shall complete a daily report indicating location worked, total manpower for each construction trade, major equipment on Site, each Subcontractor's manpower and equipment, weather conditions, and other related information involved in the performance of the WORK. These components will be decided by the ENGINEER.

6.19 CONTRACT DOCUMENTS AND RECORD DRAWINGS

- A. The CONTRACTOR shall keep on the work site a copy of the Contract Documents and shall at all times give the ENGINEER access thereto. Any drawings included in the Specifications shall be regarded as part thereto and of the Contract. Anything mentioned in these Specifications and not shown on the Project Drawings, or shown on the Project Drawings and not mentioned in these Specifications, shall be of like effect as though shown or mentioned in both. The ENGINEER will furnish from time to time such detail drawings, plans, profiles, and information as he may consider necessary for the CONTRACTOR's guidance. It shall be the duty of the CONTRACTOR to see that the provisions of the Contract Documents are complied with in detail irrespective of the inspection given the work during its progress by the ENGINEER. Any failure on the part of the CONTRACTOR to observe the requirements contained in the Contract Documents will be sufficient cause for the rejection of the work at any time before its acceptance.
- B. The CONTRACTOR shall maintain, at the jobsite, one record set of Drawings in good order and clearly marked to show any deviations which have been made from the Drawings, including concealed construction and utility features which are revealed during the course of construction. Marked prints shall be updated at least once each week and shall be available to the ENGINEER for review as to currency prior to developing partial payment estimates. Upon completion of the work, the marked set of prints shall be delivered to the ENGINEER.
- C. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the Record Drawings shall be updated by indicating those portions which are superseded by change order drawings or final shop drawings, and by including appropriate reference information describing the change orders by number and the shop drawings by manufacturer, drawing, and revision numbers.
- D. Requests for partial payments will not be approved if the updated set of Drawings is not in good order or is not kept current. Request for final payment will not be

approved until the complete and correct Record Drawings are delivered to the ENGINEER.

6.20 CLEAN UP

The CONTRACTOR shall, at all times, keep the premises, occupied by it in relation to this Contract, in a neat, clean, and safe condition and at all times provide reasonable access thereto. The CONTRACTOR shall, as a minimum, conduct daily inspections to verify that requirements of this Article are being met.

A. During the progress of the WORK, the CONTRACTOR shall:

1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding drainage or traffic, and providing the required protection of material.
2. Provide adequate storage of all items awaiting removal from the jobsite, observing all requirements for fire protection and protection of the environment.
3. Remove any accumulation of scrap, debris, waste material, and other items not required for construction of this work.
4. Dispose of existing materials and equipment to be demolished and removed and all trash such as broken concrete, wood blocking, shipping containers, etc., resulting from the contract work off the premises occupied by the CONTRACTOR, including CITY property, at the CONTRACTOR's expense. CITY-leased dumpsters and other disposal containers on CITY's property, unless specifically provided by the CONTRACTOR, shall not be used by the CONTRACTOR.
5. Maintain all excavation, embankments, haul roads, permanent access roads, Plant site, waste disposal areas, borrow areas, and all other work areas within contract work limits free from dust, as determined by the ENGINEER. Industry-accepted methods of dust control suitable for the area involved, such as sprinkling, chemical treatment, light bituminous treatment, or similar methods, will be permitted. No separate payment will be made to the CONTRACTOR for dust control.

B. If the CONTRACTOR fails to comply with any of the foregoing, the CITY will transmit written notification of noncompliance. If, within five (5) calendar days of the written notification, the CONTRACTOR fails to comply, cleanup may be undertaken by the CITY at the expense of the CONTRACTOR.

C. Upon completion of any portion of any WORK, the CONTRACTOR shall promptly remove all of its equipment, temporary structures, and surplus

construction and other materials not to be used at or near the same location during later stages of work. Upon completion of any WORK and before final inspection is made, the CONTRACTOR shall unless otherwise specifically directed by the ENGINEER:

1. Remove from the job site all plant, buildings, tools, surplus materials, equipment, forms, rubbish, scrap, debris, and waste.
2. Clean all paved areas on the site. Completely remove all resultant debris.
3. Visually inspect all interior surfaces, and remove all traces of soil, waste material, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only approved cleaning materials and equipment.
4. Restore any improved area used for the CONTRACTOR's work or material storage to its condition at the time the CONTRACTOR moved onto the site or to the satisfaction of the ENGINEER.
5. Schedule final cleaning and improvement restoration to enable the CITY to accept a completely clean and restored project.

6.21 STORM WATER POLLUTION PREVENTION

A. General

1. Prevention - The CONTRACTOR shall prevent the pollution of storm drain systems and creeks on or near the construction project site(s) resulting from the construction operation. The CONTRACTOR shall keep pollution out of storm drains by reducing the possibility of accidental discharge of materials and wastes, by reducing erosion and sedimentation, and by any action as required. The CONTRACTOR shall train all employees and subcontractors on the storm water pollution prevention requirements contained in these Specifications and ensure that all employees and subcontractors are aware of the consequences as described in subsection A.3. below. The CONTRACTOR shall include appropriate subcontract provisions to ensure that these requirements are met by all subcontractors.
2. Notification - If the CONTRACTOR causes or permits the spillage or overflow of any sewage, oil, or petroleum product, hazardous substance, contaminant, or waste that may result in the fluid or substance being discharged directly or indirectly into any storm drains, creeks, wetlands, or other manmade or natural waterways the CONTRACTOR shall notify the CITY as soon as possible to the extent notification can be provided without substantially impeding cleanup or other emergency measures. In no event

shall such notification be later than one hour after knowledge of the occurrence.

3. Cleanup - Immediately upon gaining knowledge of such spillage, overflow, or discharge, the CONTRACTOR shall eliminate the cause of the spillage, overflow, or discharge and take action to minimize any damages. The CONTRACTOR shall also immediately implement a cleanup program. The cleanup, including sampling and testing required by regulatory agencies to determine the nature and level of contamination shall be performed and completed to the satisfaction of the various regulatory agencies involved and the CITY, at the expense of the CONTRACTOR. Any fines, penalties, and/or subsequent actions imposed upon the CITY and/or the CONTRACTOR by regulatory agencies related to the spillage, overflow, or discharge and any subsequent monitoring, testing, and reporting, as required by regulatory agencies, shall also be at the expense of the CONTRACTOR. The CONTRACTOR shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on site. The quantity of cleanup materials shall be appropriate in consideration of the risk of an occurrence of a spill, overflow or discharge.

B. Management of Nonhazardous Material and/or Waste

1. Designated Area - The CONTRACTOR shall propose designated areas of the project site, for approval by the ENGINEER, suitable for material delivery, storage, and waste collection that to the maximum extent practicable are near construction entrances and away from catch basins, gutters, drainage courses, and creeks.
2. Backfill or Excavated Material - The CONTRACTOR shall not allow backfill or excavated material to enter the storm drains or creeks. When rain is forecast within 24 hours or during wet weather, the CONTRACTOR may be required to cover such material with a tarpaulin and to surround the material with sand bags.
3. Street Sweeping - At least once per week or more frequently as directed by the ENGINEER, the CONTRACTOR shall clean and sweep roadways and on-site paved areas of all materials attributed to or involved in the work. The CONTRACTOR shall not use water to flush down streets in place of street sweeping.
4. Disposal - At the end of each working day, the CONTRACTOR shall collect all scrap, debris, and waste material, and dispose of such materials properly. The materials may be stored in the CONTRACTOR's yard in stockpiles or placed in dumpsters. The CONTRACTOR shall inspect dumpsters for leaks and replace or repair dumpsters that leak. The CONTRACTOR shall not discharge water from cleaning dumpsters on site.

The CONTRACTOR shall arrange for regular waste collection before dumpsters overflow.

C. Management of Hazardous Material and/or Waste

1. Storage - The CONTRACTOR shall label and store all hazardous materials, such as pesticides, paints, thinners, solvents, and fuels, and all hazardous wastes, such as waste oil and antifreeze in accordance with all applicable state and federal regulations. The CONTRACTOR shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations. All such materials and wastes shall be covered, as needed, to avoid rainwater becoming polluted with hazardous constituents which could result in potential management of collected rain water as a hazardous waste. The CONTRACTOR shall keep an accurate, up-to-date inventory, including Material Safety Data Sheets (MSDSs), of hazardous materials and hazardous wastes stored on site.
2. Usage - When rain is forecast within 24 hours or during wet weather, the CONTRACTOR shall refrain from applying chemicals in outside areas. The CONTRACTOR shall follow material manufacturer's instructions regarding uses, protective equipment, ventilation, flammability, and mixing of chemicals. The CONTRACTOR shall post warning signs in areas treated with chemicals.
3. Disposal - The CONTRACTOR shall arrange for regular hazardous waste collection to comply with time limits on storage of hazardous wastes. The CONTRACTOR shall dispose of hazardous waste in accordance with all applicable local, state and federal regulations. The CONTRACTOR shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials. The CONTRACTOR shall report any hazardous materials spill to the CITY in accordance with Section A.2 above.

D. Vehicle/Equipment Cleaning, Maintenance, and Fueling

1. General - The CONTRACTOR shall inspect vehicles and equipment arriving on site for leaking fluids and shall promptly repair leaking vehicles and equipment. Drip pans shall be used to catch leaks until repairs are made.

The CONTRACTOR shall comply with federal, state, and city requirements for aboveground storage tanks.

2. Cleaning - The CONTRACTOR shall perform vehicle or equipment cleaning with water only in a designated, bermed area that will not allow rinse water to run off site into streets, gutters, storm drains, or creeks. Soaps,

solvents, degreasers, steam-cleaning equipment, or equivalent methods shall not be allowed.

3. Maintenance and Fueling - The CONTRACTOR shall perform maintenance and fueling of vehicles or equipment in areas that will not allow run-on of storm water or runoff of spills to storm drains and provide for confined clean-up. Examples are working in bermed areas or utilizing drip pans. The CONTRACTOR shall not contaminate the soils or groundwater with such maintenance and fueling activities.

The CONTRACTOR shall use secondary containment, such as a drip pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured, and shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described in Section C.3 above.

E. Dewatering Operations

1. Sediment Control - The CONTRACTOR shall route water through a control measure, such as a sediment trap, sediment basin, or Baker tank, to remove settleable solids prior to discharge to the storm drain system. Straw bales shall be placed in front of storm drain inlets as required. Filtration of the water following the control measure may be required on a case-by-case basis. Approval of the control measure shall be obtained in advance from the ENGINEER. If the ENGINEER determines that the dewatering operation would not generate an appreciable amount of settleable solids, the control measure requirement above may be waived.
2. Contaminated Groundwater - If the project is within an area of known groundwater contamination or if contamination is found, water from dewatering operations shall be tested prior to discharge. If the water quality meets Regional Water Quality Control Board (RWQCB) standards, it may be discharged to a storm drain or creek. Otherwise, the water shall be hauled off site for proper disposal.

F. Paving or Oiling Operations

1. When rain is forecast within 24 hours or during wet weather, the ENGINEER may prevent the CONTRACTOR from paving or oiling the street. The ENGINEER may direct the CONTRACTOR to protect drainage courses by using control measures, such as earth dike, straw bale, and sand bag, to divert runoff or trap and filter sediment.
2. The CONTRACTOR shall prevent saw-cut slurry from entering catch basins and storm drains by limiting the area over which the slurry may spread.

3. The CONTRACTOR shall cover catch basins and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
4. The CONTRACTOR shall not sweep or wash down excess sand (placed as part of a sand seal or to absorb excess oil) into gutters, storm drains, or creeks. The CONTRACTOR shall either collect the sand and return it to the stockpile or dispose of it in a trash container.

G. Concrete, Grout, and Mortar Waste Management

1. Concrete Truck/Equipment Washout - The CONTRACTOR shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks. The CONTRACTOR shall perform washout of concrete trucks or equipment off site or in a designated area on site where the water will flow onto dirt or into a temporary pit in a dirt area. The CONTRACTOR shall let the water percolate into the soil and dispose of the hardened concrete in a trash container. If a suitable dirt area is not available, the CONTRACTOR shall collect the wash water and remove it off site.
2. Exposed Aggregate Concrete Wash Water - The CONTRACTOR shall avoid creating runoff by draining water from washing of exposed aggregate concrete to a dirt area. If a suitable dirt area is not available, the CONTRACTOR shall filter the wash water through straw bales or equivalent material before discharging to a storm drain. The CONTRACTOR shall collect sweepings from exposed aggregate concrete for disposal.

H. Paint Disposal and Clean-up

1. Disposal of Unused Paint - The CONTRACTOR shall carefully use, store and dispose of paint, solvents, chemicals, and waste materials in compliance with all applicable state and federal regulations. The CONTRACTOR shall not dispose of paint to sanitary sewer systems or storm drains. The CONTRACTOR shall utilize other recycling and disposal services as follows:
 - a. “Recycling Centers” and “Waste Disposals” as may be listed in the yellow pages.
 - b. Local household hazardous waste facility if appropriate.

The CONTRACTOR may dispose of small amounts of leftover latex (water-based) paint by applying the paint to the surface of an

item to be discarded and allowing it to dry thoroughly, then disposing of it in a dumpster.

The CONTRACTOR shall store these materials and conduct cleaning of painting equipment and tools in a designated area that will not allow run-on of storm water or runoff of spills. The CONTRACTOR shall not allow wash water from cleaning of painting equipment and tools into streets, gutters, storm drains, or creeks.

2. Disposal of Paint Clean-up Waste - The CONTRACTOR shall remove as much excess paint as possible from brushes, rollers, and equipment before starting cleanup.

- a. The CONTRACTOR shall not discharge cleaning wastes from oil-based paints, buckets, brushes or tools to the sanitary sewer system. The CONTRACTOR shall retain a certified waste hauler to recycle or to dispose of cleaning wastes from oil-based paints at the CONTRACTOR's expense.
- b. The CONTRACTOR may discharge very small amounts of cleaning wastes from brushes, rollers, buckets, and tools contaminated with latex (water-based) paints to the sanitary sewer system provided they do not contain additives with pollutants of concern (e.g., mercury, tributyltin). Brushes, rollers, and tools containing latex paints may be washed over a sink with plenty of water. Buckets containing latex paints shall first be emptied into the original can or discarded as specified in paragraph 1 above. Should excessive amounts of paint or solvent be found in the wastewater discharged, the CONTRACTOR may be subject to enforcement action by the CITY in accordance with the City Codes.
- c. The CONTRACTOR shall not discharge any of these paint clean-up wastes to storm drains, streets, gutters, or creeks.
- d. Waste Disposal - The CONTRACTOR shall dispose of waste thinner, solvent, and sludge from cleaning of equipment and tools as hazardous waste, as described in Section C.3 above. The CONTRACTOR shall dispose of excess thinners, solvents, and oil- and water-based paint as hazardous waste.

- I. Contaminated Soil - If the project is within an area of known soil contamination or evidence of soil contamination is found, the CONTRACTOR shall comply with the requirements of all applicable local, state and federal regulations.

ARTICLE 7 – OTHER WORK

7.1 RELATED WORK AT SITE

- A. The CITY may perform other work related to the Project at the Site by the CITY's own forces, have other work performed by utility owners, or let other direct contracts for such other work. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to the CONTRACTOR prior to starting any such other work.
- B. The CONTRACTOR shall afford each person who is performing the other work (including the CITY's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the WORK with theirs. The CONTRACTOR shall do all cutting, fitting, and patching of the WORK that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. The CONTRACTOR shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will not only cut or alter their work with the written consent of the ENGINEER and the others whose work will be affected.
- C. If the proper execution or results of any part of the CONTRACTOR's work depends upon such other work by another, the CONTRACTOR shall inspect and report to the ENGINEER in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for such proper execution and results. The CONTRACTOR's failure to report such delays, defects, or deficiencies will constitute an acceptance of the other work as fit and proper for integration with the CONTRACTOR's work except for latent or nonapparent defects and deficiencies in the other work.

7.2 COORDINATION

- A. If the CITY contracts with others for the performance of other work at the Site, CITY will have sole authority and responsibility in respect of such coordination, unless otherwise provided in the Supplementary General Conditions.

ARTICLE 8 – CITY'S RESPONSIBILITIES

8.1 COMMUNICATIONS

- A. Except as may be otherwise provided in these General Conditions or the Supplementary General Conditions, the CITY will issue all its communications to the CONTRACTOR through the ENGINEER.

8.2 PAYMENTS

- A. The CITY will make payments to the CONTRACTOR as provided in Article 14.

8.3 LANDS, EASEMENTS, AND SURVEYS

- A. The CITY's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.1 and 4.6.

8.4 REPORTS AND DRAWINGS

- A. The CITY will identify and make available 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 as set forth in Paragraph 4.2.

8.5 CHANGE ORDERS

- A. The CITY will execute Change Orders as indicated in Article 10.

8.6 INSPECTIONS AND TESTS

- A. The CITY'S responsibility for inspections and tests is set forth in Paragraph 13.3.

8.7 SUSPENSION OF WORK

- A. The CITY's right to stop work or suspend work is set forth in Paragraphs 13.4 and 15.1.

8.8 TERMINATION OF AGREEMENT

- A. The CITY's right to terminate services of the CONTRACTOR is set forth in Paragraphs 15.2 and 15.3.

8.9 LIMITATION ON CITY'S RESPONSIBILITIES

- A. 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. CITY will not be responsible for CONTRACTOR's failure to perform or furnish the WORK in accordance with the Contract Documents.

8.10 UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITIONS

- A. CITY's responsibility in respect to an undisclosed hazardous environmental condition is set forth in Paragraph 4.5.

ARTICLE 9 – ENGINEER’S STATUS DURING CONSTRUCTION

9.1 CITY’S REPRESENTATIVE

- A. The ENGINEER will be the CITY’S representative during the construction period. The ENGINEER shall decide any and all questions which may arise as to the quality or acceptability of materials furnished and work performed, and as to the manner of performance and rate of progress of the work; all questions which arise as to the interpretation of the plans and specifications, the proposal and the contract documents therefor; all questions as to the acceptable fulfillment of the contract on the part of the CONTRACTOR; and all questions as to claim and compensation.

9.2 OBSERVATIONS ON THE SITE

- A. 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.

9.3 PROJECT REPRESENTATION

- A. The ENGINEER may furnish a Resident Project Representative to assist in observing the performance of the WORK. The duties, responsibilities, and limitations of authority of any such Resident Project Representative will be as provided in the Supplementary General Conditions.

9.4 CLARIFICATIONS

- A. The ENGINEER will issue with reasonable promptness such written Clarifications of the requirements of the Contract Documents as the ENGINEER may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

9.5 AUTHORIZED VARIATIONS IN WORK

- A. The ENGINEER may authorize variations in the WORK from the requirements of the Contract Documents. These may be accomplished by a Field Order and will require the CONTRACTOR to perform the WORK involved in a manner that minimizes the impact to the WORK and the Contract Times. If the CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Times, the CONTRACTOR may make a claim therefor as provided in Article 11 or 12.

9.6 REJECTING DEFECTIVE WORK

- A. The ENGINEER will have authority to reject Defective Work and will also have authority to require special inspection or testing of the WORK as provided in Article 13.

9.7 CONTRACTOR SUBMITTALS, CHANGE ORDERS, AND PAYMENTS

- A. In accordance with the procedures set forth in the General Requirements, the ENGINEER will review all CONTRACTOR submittals.
- B. The ENGINEER's responsibilities for Change Orders are set forth in Articles 10, 11, and 12.
- C. The ENGINEER's responsibilities for Applications for payment are set forth in Article 14.

9.8 DECISIONS ON DISPUTES

- A. The ENGINEER will be the initial interpreter of the requirements of the Contract Documents and of the acceptability of the WORK thereunder. Claims, disputes, and other matters relating to the acceptability of the WORK and interpretation of the requirements of the Contract Document pertaining to the performance of the work shall be determined by the ENGINEER. Any claims in respect to changes in the Contract Price or Contract Times shall be resolved in accordance with the requirements set forth in Articles 10, 11, and 12.

9.9 LIMITATIONS ON ENGINEER'S RESPONSIBILITIES

- A. Neither the ENGINEER's authority to act under this Article 9 or other provisions of the Contract Documents nor any decision made by the ENGINEER in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of the ENGINEER 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 Contract 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 will be solely to evaluate the WORK for compliance with the requirements of the Contract Documents, and conformance with the design concept of the completed Project as a functioning whole as indicated by the Contract 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 ENGINEER any duty or authority to supervise or

direct the performance of the WORK or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.9 C.

- C. The ENGINEER will not supervise, direct, control, or have authority over or be responsible for the CONTRACTOR's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of the CONTRACTOR to comply with Laws and Regulations applicable to the performance of the WORK. The ENGINEER will not be responsible for the CONTRACTOR's failure to perform the WORK in accordance with the Contract Documents. The ENGINEER will not be responsible for the acts or omissions of the CONTRACTOR nor of any Subcontractor, Supplier, or any other person or organization performing any of the WORK.

ARTICLE 10 – CHANGES IN THE WORK

10.1 GENERAL

- A. 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 or Field Order. Upon receipt of any such document, CONTRACTOR shall promptly proceed to implement the additions, deletions, or revisions in the WORK in accordance with the applicable conditions of the Contract Documents.
- B. 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 and except in the case of uncovering work as provided in Paragraph 13.3.F and G.
- C. The CITY and the CONTRACTOR shall execute appropriate Change Orders covering:
 - 1. Changes in the WORK which are ordered by the CITY pursuant to Paragraph 10.1 A.;
 - 2. Changes required because of acceptance of Defective Work under Paragraph 13.6; and
 - 3. Changes in the Contract Price or Contract Times which are agreed to by the parties under Articles 11 and/or 12, respectively.
- 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 CONTRACTOR agree as to the extent, if any, of an increase in the Contract Price or an extension or shortening of the Contract Times that should be allowed as a result of a Field Order, the CONTRACTOR shall proceed so as to minimize the impact on and delays to the WORK pending the issuance of a Change Order.
- F. 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 should be allowed as a result of a Field Order, the ENGINEER can direct the CONTRACTOR to proceed on the basis of time and materials so as to minimize the impact on and delays to the WORK, and the CONTRACTOR may make a claim as provided in Articles 11 and 12.

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 25 percent 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.

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 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 ways:

1. 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. By mutual acceptance of a lump sum, which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.4; or
 3. On the basis of the cost of work (determined as provided in Paragraph 11.3) plus the CONTRACTOR's overhead and profit (determined as provided in Paragraph 11.4).
- C. Any claim for an increase in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the ENGINEER promptly (but in no event later than 10 days) after the start of the event giving rise to the claim and shall state the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after the start of such event (unless the ENGINEER allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the CONTRACTOR's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of such event. All claims for adjustment in the Contract Price will be determined by the ENGINEER. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 11.1 C.

11.2 COSTS RELATING TO WEATHER

- A. 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. If, however, in the opinion of the ENGINEER, 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.

11.3 COST OF WORK (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 not include any of the costs itemized in Paragraph 11.5.
- 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. Nondirect labor costs including superintendence shall be considered part of the markup set out in Paragraph 11.4.

C. **Materials:** Materials must be specifically authorized by the ENGINEER. 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 rebaters 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 ENGINEER. 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 ENGINEER 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 California Department of Transportation publication entitled "Labor Surcharge and Equipment Rental Rates." 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 above-referenced publication, an equitable rental rate for the equipment will be established by the ENGINEER. The CONTRACTOR may furnish cost data which might assist the ENGINEER 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 ENGINEER, 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 ENGINEER, in duplicate, a description of the equipment and its identifying number;
3. Unless otherwise specified, manufacturer's ratings and manufacturer approved modifications shall be used to classify equipment for 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 \$500 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 30 minutes of operation will be considered to be half-hour of operation, and any part of an hour in excess of 30 minutes will be considered one hour of operation;
2. When daily rates are listed, any part of a day less than 4 hours operation will be considered to be half-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 Paragraphs 3, 4, and 5, following;

3. Payment for the equipment will be made in accordance with the provisions in Paragraph 11.3 D., herein;
 4. 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. A labor surcharge will be added to the cost of labor described herein accordance with the provisions of Paragraph 11.3 B., herein, which surcharge shall constitute full compensation for payments imposed by state and federal laws and all other payments made to or on behalf of workers other than actual wages; and
 5. To the direct cost of equipment rental and labor, computed as provided herein, will be added the allowances for equipment rental and labor as provided in Paragraph 11.4, herein.
- F. **Special Services:** Special work or services are defined as that work characterized by extraordinary complexity, sophistication, innovation, or a combination of the foregoing attributes which are unique to the construction industry. The ENGINEER will make estimates for payment for special services and may consider the following:
1. When the ENGINEER and the CONTRACTOR, determine that a special service or work is required which cannot be performed by the forces of the CONTRACTOR or those of any of its Subcontractors, the special service or work may be performed by an entity especially skilled in the work to be performed. After validation of invoices and determination of market values by the ENGINEER, invoices for special services or work based upon the current fair market value thereof may be accepted without complete itemization of labor, material, and equipment rental costs;
 2. When the CONTRACTOR is required to perform work necessitating special fabrication or matching process in a fabrication or a machine shop facility away from the Site, the charges for that portion of the work performed at the off-site facility may, by agreement, be accepted as a special service and accordingly, the invoices for the work may be accepted without detailed itemization; and
 3. All invoices for special services will be adjusted by deducting all trade discounts. In lieu of the allowances for overhead and profit specified in Paragraph 11.4, herein, an allowance of 15 percent will be added to invoices for special services.

- G. **Sureties;** All work performed hereunder shall be subject to all 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.

11.4 CONTRACTOR'S OVERHEAD AND PROFIT

- A. Extra work ordered on the basis of time and materials will be paid for at the actual necessary cost as determined by the ENGINEER, plus allowances for overhead and profit. No additional mark-ups and/or surcharges will be added to the cost. The allowance for overhead and profit will include full compensation for superintendence, taxes, field office expense, extended overhead, home office overhead, and all other items of expense or cost not included in the cost of labor, materials, or equipment provided for under Paragraph 11.3. The allowance for overhead and profit will be made in accordance with the following schedule:

Overhead and Profit Allowance

Labor.....20 percent
Materials15 percent
Equipment....15 percent

To the sum of the costs and markups provided for in this Article, an additional 2 percent of the sum will be added as compensation for Bonds and insurance.

- B. It is understood that labor, materials, and equipment for extra work may be furnished by the CONTRACTOR or by the Subcontractor on behalf of the CONTRACTOR. 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 the CONTRACTOR may add 5 percent of the Subcontractor's total cost for the extra work. Regardless of the number of hierarchical tiers of Subcontractors, the 5 percent increase above the Subcontractor's total cost which includes the allowances for overhead and profit specified herein may be applied one time only.

11.5 EXCLUDED COSTS

- A. The term "cost of the work" shall not include any of the following:
1. Payroll costs and other compensation of CONTRACTOR's officers, executives, proprietors, partners, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by CONTRACTOR whether at the Site or in CONTRACTOR's principal or a branch office for general administration of the WORK all of

which are to be considered administrative costs covered by the CONTRACTOR's allowance for overhead and profit;

2. Non-direct labor costs, including superintendence, shall be considered part of the markup for overhead and profit, and no additional payment will be allowed for such;
3. Expenses of CONTRACTOR's principal and branch offices other than CONTRACTOR's office at the Site;
4. Any part of CONTRACTOR's capital expenses, including interest on CONTRACTOR's capital employed for the WORK and charges against CONTRACTOR for delinquent payments;
5. Cost of premiums for all Bonds and for all insurance whether or no CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as provided by Paragraph 11.4 above);
6. Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied, and making good any damages to property; and
7. Other overhead or general expense costs of any kind and the cost of any item not specifically and expressly included in Paragraph 11.4.

11.6 CONTRACTOR'S EXTRA WORK REPORT

- A. In order to be paid for extra work, the CONTRACTOR must submit a daily extra work report on the form furnished by the ENGINEER. The form must be completely filled out based on the provisions of Paragraphs 11.3 through 11.5 and signed by the CONTRACTOR and ENGINEER at the end of each work day. Failure to complete the form and obtain appropriate signatures by the next working day after the extra work of the previous day was completed will result in CONTRACTOR's costs for extra work being disallowed.

ARTICLE 12 – CHANGE OF CONTRACT TIMES

12.1 GENERAL

- A. 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 ENGINEER promptly (but in no event later than 10 days) after the start of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within 30 days after the start of such event (unless the ENGINEER 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 ENGINEER. No claim for an adjustment in the Contract Times will be valid if not submitted in accordance with the requirements of this Paragraph 12.1 A. 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.
- B. All time limits stated in the Contract Documents are of the essence of the Agreement.
- C. 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 therefor as provided in Paragraph 12.1.A. Delays beyond the control of CONTRACTOR shall include, but not be limited to, acts or neglect by 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 shall be deemed to be delays within the control of the CONTRACTOR.
- D. In no event will 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 of or resulting from the following:
 - 1. Delays caused by or within the control of CONTRACTOR; or
 - 2. Delays beyond the control of both 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.

12.2 EXTENSIONS OF CONTRACT TIMES FOR DELAY DUE TO WEATHER

- A. The CONTRACTOR's construction schedule shall anticipate delay due to unusually severe weather. The number of days of anticipated delay is set forth in the Supplementary General Conditions.
- B. Contract Times may be extended by the ENGINEER because of delays in excess of the anticipated delay. The CONTRACTOR shall , within 10 days of the beginning of any such delay, notify the ENGINEER in writing and request an extension of Contract Times. The ENGINEER will ascertain the facts and the extent of the delay and extend the Contract Times when, in its judgment, the findings of the fact justify such an extension.

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

13.1 NOTICE OF DEFECTIVE WORK

- A. Prompt notice of Defective Work known to the ENGINEER will be given to the CONTRACTOR. 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.

13.2 ACCESS TO WORK

- A. ENGINEER and other representatives and personnel of 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 and advise them of CONTRACTOR's Site safety procedures and programs so that they may comply therewith as applicable.

13.3 INSPECTIONS AND TESTS

- A. The CONTRACTOR shall give the ENGINEER not less than 24 hours notice of readiness of the WORK for all required inspections, tests, or approvals, and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- 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 Paragraphs 13.3C. and 13.3D. below;

2. That costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.3G. shall be paid as provided in said Paragraph 13.3G.; and
 3. As otherwise provided in the Contract Documents.
- 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 ENGINEER 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 ENGINEER'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 ENGINEER.
- E. The ENGINEER will make, or have made, such inspections and tests as the ENGINEER deems necessary to see that the WORK is being accomplished in accordance with the requirements of the Contract Documents. Unless otherwise specified in any 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 ENGINEER, 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 (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for observation. Such uncovering shall be at the CONTRACTOR's expense unless the CONTRACTOR has given the ENGINEER not less than 24 hours notice of the CONTRACTOR's intention to perform such test or to cover the same and the ENGINEER has not acted with reasonable promptness in response to such notice.
- G. If any WORK is covered contrary to the written request of the ENGINEER, it must, if requested by the ENGINEER, be uncovered for the ENGINEER's observation and recovered at the CONTRACTOR's expense.

- H. If the ENGINEER considers it necessary or advisable that covered WORK be observed by the ENGINEER or inspected or tested by others, the CONTRACTOR, at the ENGINEER's request shall uncover, expose, or otherwise make available for observation, inspection, or testing as the ENGINEER 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 or an extension of the Contract Time, or both, 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 claim therefor as provided in Articles 11 and 12.
- I. No acceptance of equipment, materials, or work shall be construed to result from such inspections by the ENGINEER. Any inspections or tests or waivers thereof shall not relieve the CONTRACTOR of its responsibility for meeting the requirement of the Contract.

13.4 CITY MAY STOP THE WORK

- A. If Defective Work is identified, the ENGINEER 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 ENGINEER to stop the WORK shall not give rise to any duty on the part of the ENGINEER to exercise this right for the benefit of the CONTRACTOR or any other party.

13.5 CORRECTION OR REMOVAL OF DEFECTIVE WORK

- A. If required by the ENGINEER, 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.

13.6 ACCEPTANCE OF DEFECTIVE WORK

- A. 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.

13.7 CITY MAY CORRECT DEFECTIVE WORK

- A. If the CONTRACTOR fails within a reasonable time after written notice from the ENGINEER to correct Defective Work, or to remove and replace Defective Work as required by the ENGINEER in accordance with Paragraph 13.5A., 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 seven 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 and its ENGINEER, access to the Site to enable CITY to exercise the rights and remedies under this paragraph.
- C. All direct, indirect, and consequential cost 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 therefor 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 CITY of CITY's rights and remedies under this paragraph.

13.8 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 Paragraph 13.8A above, any work is found to be Defective Work, the CITY shall have the same remedies as set forth in Paragraphs 13.5, 13.6, and 3.7 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 one year after such correction or removal and replacement has been satisfactorily completed.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 SCHEDULE OF VALUES (LUMP SUM PRICE BREAKDOWN)

- A. The schedule of values or lump sum price breakdown established as provided in the General Requirements shall serve as the basis for progress payments and shall be incorporated into a form of “Application for Payment acceptable to the ENGINEER.

14.2 UNIT PRICE BID SCHEDULE

- A. Progress payments on account of unit price work will be based on the number of units completed.

14.3 APPLICATION FOR PROGRESS PAYMENT

- A. Unless otherwise prescribed by law, on the 25th of each month, the CONTRACTOR shall submit to the ENGINEER for review, the Application for Payment filled out and signed by the CONTRACTOR covering the WORK completed as of the Application for Payment and accompanied by such supporting documentation as is required by the Contract Documents.
- B. The Application for Payment shall identify, as a subtotal, the amount of the CONTRACTOR total earnings to date; plus the value of materials stored at the Site 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 the amount of retainage specified in the Supplementary General Conditions and the total amount of all previous payments made to the CONTRACTOR.
- D. The value of materials stored at the Site shall be an amount equal to the specified percent of the value of such materials as set forth in any Supplementary General Conditions. Said amount shall be 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.
- E. A ten percent (10%) retention of payment amount shall be held by the CITY from the amount of each Application for Payment.
- F. **OPTIONAL:** Partial payments for mobilization/demobilization costs shall be as follows:
 - 1. Thirty-five percent (35%) of the amount bid for mobilization/demobilization or 1.75 percent of the original Contract Price, whichever is less, shall be paid in each of the first two progress payments.
 - 2. The balance of the amount bid for mobilization/demobilization shall be paid upon completion of all WORK on the project.

14.4 CONTRACTOR'S WARRANTY OF TITLE

- A. The CONTRACTOR warrants and guarantees that title to all WORK, materials, and equipment covered by an Application for Payment, whether incorporated in the WORK or not, will pass to the CITY no later than the time of payment, free and clear of all Liens.

14.5 REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT

- A. The ENGINEER will, within 7 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the application to the CITY, or return the application to the CONTRACTOR indicating in writing the ENGINEER'S REASONS FOR REFUSING TO RECOMMEND PAYMENT. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the application. If the ENGINEER still disagrees with a portion of the

application, it will submit the application recommending the undisputed portion of the application to the CITY for payment and provide reasons for recommending non-payment of the disputed amount. Thirty days after presentation of the Application for Payment with the ENGINEER'S recommendation, the amount recommended will (subject to the provisions of Paragraph 14.5B.) become due and when due will be paid by the CITY to the CONTRACTOR.

B. The ENGINEER, in its discretion, may refuse to recommend the whole or any part of any payment. ENGINEER may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in ENGINEER's opinion to protect CITY from loss because:

1. The work is Defective Work or the completed WORK has been damaged requiring correction or replacement.
2. The Contract Price has been reduced by written amendment or Change Order.
3. The CITY has been required to correct Defective Work or complete WORK in accordance with Paragraph 13.7.
4. ENGINEER has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.1 through 15.4 inclusive.
5. Third party claims filed or reasonable evidence indicating probable filing of such claims; or
6. Failure of the Contractor to make payments properly to subcontractors or for labor, materials, or equipment; or
7. Reasonable evidence that the work cannot be completed for the unpaid balance of the contract sum; or
8. Failure of the Contractor to submit an acceptable construction schedule or failure to update the schedule; or
9. Damage to the City or another contractor; or
10. Reasonable evidence that the work will not be completed within the time provided for in the Contract; or
11. Contractor's failure or inability to obtain or maintain insurance coverage and bonds as required by the Contract throughout the course of the job; or

12. Persistent failure to carry out the work in accordance with the Contract; or
 13. Failure to deliver copies of certified payrolls, as specified in Section 17.11, General Conditions.
 14. In addition, the City may deduct from any such payments due the Contractor any amounts the City may be currently or in the future authorized to retain pursuant to federal, state, or local laws or regulations, any amounts due the City from the Contractor, and any other amounts which the City is otherwise authorized to retain as specified in Special Provisions.
- C. The CITY may refuse to make payment of the full amount recommended by the ENGINEER because:
1. Claims have been made against CITY on account of CONTRACTOR's performance or furnishing of the WORK.
 2. Liens have been filed in connection with the WORK, except where CONTRACTOR has delivered a specific Bond satisfactory to CITY to secure the satisfaction and discharge of such Liens.
 3. There are other items entitling CITY to set-off against the amount recommended, or
 4. CITY has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.5B. through 14.5C and 15.1 through 15.4 inclusive.

The CITY must give the CONTRACTOR immediate written notice stating the reasons for such action and promptly pay the CONTRACTOR the amount so withheld, or any adjustment thereto agreed to by CITY and CONTRACTOR, when CONTRACTOR corrects to CITY's satisfaction the reasons for such action.

14.6 COMPLETION

- A. When the CONTRACTOR considers the WORK ready for its intended use, the CONTRACTOR shall notify the ENGINEER in writing that the WORK is complete. The CONTRACTOR shall attach to this request a list of all work items that remain to be completed and a request that the ENGINEER prepare a Notice of Completion. Within a reasonable time thereafter, the CONTRACTOR, and the ENGINEER shall make an inspection of the WORK to determine the status of completion. If the ENGINEER considers the WORK complete, the ENGINEER will prepare and execute and deliver for City Council approval and recordation the Notice of Completion signed by the ENGINEER and CONTRACTOR, which shall fix the date of completion.

14.7 PARTIAL UTILIZATION

- A. 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 ENGINEER, 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 prior to completion of the WORK.

14.8 FINAL APPLICATION FOR PAYMENT

- A. After the CONTRACTOR has completed all of the remaining work items referred to in Paragraph 14.6 and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in the General Requirements), and other documents, all as required by the Contract Documents, and after the ENGINEER has 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 releases or waivers (satisfactory to the CITY) of all Liens arising out of or filed in connection with the WORK.

14.9 FINAL PAYMENT AND ACCEPTANCE

- A. If, on the basis of the ENGINEER's observation of the WORK during construction and final inspection, and the ENGINEER's review of the final Application for Payment and accompanying documentation, all as required by the Contract Documents, the ENGINEER is satisfied that the WORK has been completed and the CONTRACTOR's other obligations under the Contract Documents have been fulfilled, the ENGINEER will, within 14 days after receipt of the final Application for Payment, indicate in writing the ENGINEER's recommendation of payment and present the application to the CITY for payment.
- B. After acceptance of the WORK by the City Council, the CITY will make final payment 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;
 2. Amounts withheld by CITY under Paragraph 14.5B. and C. which have not been released; and
 3. In accordance with Section 17.6, one-and-one-half times the value of outstanding items of correction work or punch list items yet uncompleted or uncorrected, as applicable. All such work shall be completed or corrected to the satisfaction of the ENGINEER as required by the Contract Documents, otherwise the CONTRACTOR does hereby waive any and all claims to all monies withheld by the CITY to cover the value of all such uncompleted or uncorrected items.
- C. Prior to final payment by the CITY, the CONTRACTOR must provide the CITY a fully-executed Conditional Waiver and Release Upon Final Payment in accordance with California Civil Code Section 3262.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.1 SUSPENSION OF WORK BY CITY

- A. The CITY may, at any time and without cause, suspend the WORK or any portion thereof for a period of not more than 90 days by notice in writing to the CONTRACTOR. The CONTRACTOR shall resume the WORK on receipt of a notice of resumption of work. The CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both directly attributable to any suspension if the CONTRACTOR makes an approval claim therefor as provided in Articles 11 and 12.

15.2 TERMINATION OF AGREEMENT BY ENGINEER FOR DEFAULT

- A. In the event of default by the CONTRACTOR, the ENGINEER may give seven days written notice to the CONTRACTOR and the CONTRACTOR's surety of CITY's intent to terminate the Agreement and provide the CONTRACTOR an opportunity to remedy the conditions constituting the default within a specified period of time. It will be considered a default by the CONTRACTOR whenever CONTRACTOR shall:
 - 1. Declare bankruptcy, become insolvent, or assign its assets for the benefit of its creditors;
 - 2. Disregard or violate the Laws or Regulations of any public body having jurisdiction;
 - 3. Fail to provide materials or workmanship meeting the requirements of the Contract Documents;
 - 4. Disregard or violate provisions of the Contract Documents or ENGINEER's instructions;
 - 5. Fail to prosecute the WORK according to the approved progress schedule;
 - 6. Fail to provide a qualified superintendent, competent workmen, or materials or equipment meeting the requirements of the Contract Documents;
 - 7. Disregard the authority of the ENGINEER; or
 - 8. Assign or subcontract any part of the work without the ENGINEER's consent.
- B. If the CONTRACTOR fails to remedy the conditions constituting default within the time allowed, the ENGINEER may then issue the notice of termination.

- C. In the event the Agreement is terminated in accordance with Paragraph 15.2A., herein, the CITY may take possession of the WORK and may complete the WORK by whatever method or means the CITY may select. The cost of completing the WORK will be deducted from the balance which would have been due the CONTRACTOR had the Agreement not been terminated and the WORK completed in accordance with the Contract Documents. If such cost exceeds the balance which would have been due, the CONTRACTOR shall pay the excess amount to the CITY. If such cost is less than the balance which would have been due, the CONTRACTOR shall not have claim to the difference.

15.3 TERMINATION OF AGREEMENT BY CITY FOR CONVENIENCE

- A. Upon seven 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 or 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.

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.

15.4 TERMINATION OF AGREEMENT BY CONTRACTOR

- A. The CONTRACTOR may terminate the Agreement upon 14 days written notice to the ENGINEER whenever:
1. The WORK has been suspended under the provisions of Paragraph 15.1, herein, for more than 90 consecutive days through no fault or negligence of the CONTRACTOR, and notice to resume work or to terminate the Agreement has not been received from the ENGINEER within this time period; or

2. The CITY should fail to pay the CONTRACTOR any monies due him in accordance with the terms of the Contract Documents and within 60 days after presentation to the ENGINEER by the CONTRACTOR of a request therefor, unless within said 14-day period the CITY shall have remedied the condition upon which the payment delay was based.
- B. In the event of such termination, the CONTRACTOR shall have no claims against the CITY except for those claims specifically enumerated in Paragraph 15.3, herein, and as determined in accordance with the requirements of said paragraph.

ARTICLE 16 – GENERAL TERMS

16.1 GIVING NOTICE

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

16.2 TITLE TO MATERIALS FOUND ON THE WORK

- A. 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.

16.3 RIGHT TO AUDIT

- A. If the CONTRACTOR submits a claim to the ENGINEER 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 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 ENGINEER for auditing, all relevant accounting records and documents, and other financial data, and upon request, shall submit true copies of requested records to the ENGINEER.

16.4 SURVIVAL OF OBLIGATIONS

- A. 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.

16.5 CONTROLLING LAW

- A. This Agreement is to be governed by the law of the state in which the Project is located.

16.6 SEVERABILITY

- A. 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.

16.7 WAIVER

- A. The waiver by the CITY of any breach or violation of any term, covenant or condition of this Agreement or of any 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.

ARTICLE 17 – CALIFORNIA STATE REQUIREMENTS

17.1 STATE WAGE DETERMINATIONS

- A. As required by Section 1770 and following, of the California Labor Code, the CONTRACTOR shall pay not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations. Copies of such prevailing rate of per diem wages available file at the office of the City Clerk, which copies shall be made available to any interested party on request. The CONTRACTOR shall post a copy of such determination at each job site.
- B. In accordance with Section 1775 of the California Labor Code, the CONTRACTOR shall, as a penalty to the CITY, forfeit not more than **\$200.00** for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director for the work or craft in which the worker is employed for any public work done under the contract by him or her or by any subcontractor under him or her.

17.2 WORKERS' COMPENSATION

- A. In accordance with the provisions of Section 3700 of the California Labor Code, the CONTRACTOR shall secure the payment of compensation to its employees.
- B. Prior to beginning work under the Contract, the CONTRACTOR shall sign and file with the ENGINEER the following certification:

“I am aware of the provisions of Section 3700 of the Labor Code, which require every employer to be insured against liability for workers’ compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the WORK of this Contract.”
- C. Notwithstanding the foregoing provisions, before the Contract is executed on behalf of the CITY, a bidder to whom a contract has been awarded shall furnish satisfactory evidence that it has secured in the manner required and provided by law the payment of workers’ compensation.

17.3 APPRENTICES ON PUBLIC WORKS

- A. The CONTRACTOR shall comply with all applicable provisions of Section 1777.5 of the California Labor Code relating to employment of apprentices on public works.

17.4 WORKING HOURS

- A. The CONTRACTOR shall comply with all applicable provisions of Section 1810 to 1815, inclusive, of the California Labor Code relating to working hours. The CONTRACTOR shall, as a penalty to the CITY, forfeit \$25.00 for each worker employed in the execution of the 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, unless such worker receives compensation for all hours worked in excess of 8 hours at not less than 1-1/2 times the basic rate of pay.

17.5 CONTRACTOR NOT RESPONSIBLE FOR DAMAGE RESULTING FROM CERTAIN ACTS OF GOD

- A. As provided in Section 7105 of the California Public Contract Code, the CONTRACTOR shall not be responsible for the cost of repairing or restoring damage to the WORK which damage is determined to have been proximately caused by an act of God, in excess of 5 percent of the contracted amount, provided, that the WORK damaged was built in accordance with accepted and applicable building standards and the plans and specifications of the CITY. The CONTRACTOR shall obtain insurance to indemnify the CITY for any damage to the WORK caused by an act of God if the insurance premium is a separate bid item in the bidding schedule for the WORK. For purposes of this Section, the term "acts of God" shall include only the following occurrences or conditions and effects: earthquakes in excess of a magnitude of 3.5 on the Richter Scale and tidal waves.

17.6 NOTICE OF COMPLETION

- A. In accordance with the Sections 3086 and 3093 of the California Civil Code, within 10 days after date of acceptance of the WORK BY THE City Council the ENGINEER will file, in the County Recorder's office, a Notice of Completion of the WORK.

17.7 UNPAID CLAIMS

- A. If, at any time prior to the expiration of the period for service of a stop notice, there is served upon the CITY a stop notice as provided in Sections 3179 and 3210 of the California Civil Code, the CITY shall, until the discharge thereof, withhold from the monies under its control so much of said monies due or to become due to the CONTRACTOR under this Contract as shall be sufficient to answer the claim stated in such stop notice and to provide for the reasonable cost of any litigation thereunder; provided, that if the ENGINEER shall, in its discretion, permit CONTRACTOR to file with the ENGINEER the bond referred to in Section 3196 of the Civil Code of the State of California, said monies shall not thereafter be withheld on account of such stop notice.

17.8 RETAINAGE FROM MONTHLY PAYMENTS

- A. Pursuant to Section 22300 of the California Public Contract Code, the CONTRACTOR may substitute securities for any money withheld by the CITY to insure performance under the Contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the CITY or with a state or federally chartered bank in California as to the escrow agent, who shall return such securities to the CONTRACTOR upon satisfactory completion of the Contract.
- B. Alternatively, the CONTRACTOR may request and the CITY shall make payment of retentions earned directly to the escrow agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the payments into securities and the CONTRACTOR shall receive the interest earned on the investments upon the same terms provided in Section 22300 of the Public Contract Code securities deposited by the CONTRACTOR. The CONTRACTOR shall be responsible for paying all fees for the expenses incurred by the escrow agent in administering the escrow account and all expenses of the CITY. These expenses and payment terms shall be determined by the CITY's Finance Director or his/her designee and the escrow agent. 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 CITY, pursuant to the terms of Section 22300 of the Public Contract Code. The CONTRACTOR shall pay to each subcontractor, not later than 20 days of receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure the performance of the CONTRACTOR.
- C. Securities eligible for investment under Section 22300 shall be limited to those listed in Section 16430 of the Government Code and to bank or savings and loan certificates of deposit, interest bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the CONTRACTOR and the CITY.

17.9 PUBLIC WORKS CONTRACTS; ASSIGNMENT TO AWARDING BODY

- A. In accordance with Section 7103.5 of the California Public Contract Code, the CONTRACTOR and Subcontractors shall conform to the following requirements. 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 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. 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.

17.10 PAYROLL RECORDS; RETENTION; INSPECTION; NONCOMPLIANCE PENALTIES; RULES AND REGULATIONS

- A. In accordance with Section 1776 of the California Labor Code the CONTRACTOR and each Subcontractor shall keep an accurate payroll record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:
 - 1. The information contained in the payroll record is true and correct.
 - 2. The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any work performed by his or her employees on the public works project.
- B. The payroll records shall be certified and shall be available for inspection at all reasonable hours at the principal office of the CONTRACTOR on the following basis:
 - 1. A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request as well as submitted electronically online to the Department of Industrial Relations Labor Commissioner: <https://apps.dir.ca.gov/ecpr/DAS/AltLogin>.
 - 2. A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of the body awarding the contract, the Division of Labor Standards Enforcement, and the Division of Apprenticeship Standards of the Department of Industrial Relations.
 - 3. A certified copy of all payroll records shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through either the body awarding the contract, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided the requesting party shall, prior to being provided the records, reimburse the costs of preparation by the CONTRACTOR, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of the CONTRACTOR.

- C. The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the division.
- D. Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body, the Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of the CONTRACTOR awarded the contract or performing the contract shall not be marked or obliterated.
- E. The CONTRACTOR shall inform the ENGINEER of the location of the records including the street address, city and county, and shall, within 5 working days, provide a notice of change of location and address.
- F. The CONTRACTOR shall have 10 days in which to comply subsequent to receipt of written notice specifying in what respects the CONTRACTOR must comply with this Section. In the event that the CONTRACTOR fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit twenty-five dollars (\$25.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of a subcontractor to comply with this section.

17.11 CULTURAL RESOURCES

- A. The CONTRACTOR's attention is directed to the provisions of the Clean Water Grant Program Bulletin 76A which augments the National Historic Preservation Act of 1966 (16 U.S.C. 470) as specified under Section 01560 - Temporary Environmental Controls, of the General Requirements.

17.12 PROTECTION OF WORKERS IN TRENCH EXCAVATIONS

- A. As required by Section 6705 of the California Labor Code and in addition thereto, whenever work under the Contract involves the excavation of any trench or trenches 5 feet or more in depth, the CONTRACTOR shall submit for acceptance by the ENGINEER, to whom authority to accept has been delegated, in advance of excavation, a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during the excavation, of such trench or trenches. If such plan varies from the shoring system standards established by the Construction Safety Orders of the Division of Occupational Safety and Health, the plan shall be prepared by a

registered civil or structural engineer employed by the CONTRACTOR, and all costs therefore shall be included in the price named in the Contract for completion of the WORK as set forth in the Contract Documents. Nothing in this Section shall be deemed to allow the use of a shoring, sloping, or other protective system less effective than that required by the Construction Safety Orders. Nothing in this Section shall be construed to impose tort liability on the CITY or any of its officers, agents, representatives, or employees.

- B. Excavation shall not start until the CONTRACTOR has obtained a permit from the California Division of Industrial Safety and has posted it at the site.

17.13 CONCRETE FORMS, FALSEWORK, AND SHORING

- A. The CONTRACTOR shall comply fully with the requirements of Section 1717 of the Construction Safety Orders, State of California, Department of Industrial Relations, regarding the design of concrete forms, falsework and shoring, and the inspection of same prior to placement of concrete. Where the said Section 1717 requires the services of a civil engineer registered in the State of California to approve design calculations and working drawings of the falsework or shoring system, or to inspect such system prior to placement of concrete, the CONTRACTOR shall employ a registered civil engineer for these purposes, and all costs therefore shall be included in the price named in the Contract for completion of the WORK as set forth in the Contract Documents.

17.14 REMOVAL, RELOCATION, OR PROTECTION OF EXISTING UTILITIES

- A. In accordance with the provisions with the provisions of Section 4215 of the California Government Code, the CITY shall assume the responsibility for the timely removal, relocation, or protection of existing main or trunkline utility facilities located on the site of any construction project that is a subject of the Contract, if such utilities are not identified by the CITY in the plans and specifications made a part of the invitation for bids. The CITY will compensate CONTRACTOR for the costs of locating, repairing damage not due to the failure of the CONTRACTOR to exercise reasonable care, and removing or relocating such utility facilities not indicated in the plans and specifications with reasonable accuracy, and for equipment on the project necessarily idled during such work.
- B. The CONTRACTOR shall not be assessed liquidated damages for delay in completion of the project, when such delay was caused by the failure of the public agency or the owner of the utility to provide for removal or relocation of such utility facilities.
- C. Nothing herein shall be deemed to require the public agency to indicate the presence of existing service laterals or appurtenances when the presence of such utilities on the site of the construction project can be inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the site of

construction; provided however, nothing herein shall relieve the public agency from identifying main or trunklines in the plans and specifications.

- D. If the CONTRACTOR while performing the Contract discovers utility facilities not identified by the public agency in the Contract Documents it shall immediately notify the public agency and utility in writing.
- E. The public utility, where they are the owner, shall have the sole discretion to perform such repairs or relocation work or permit the CONTRACTOR to do such repairs or relocation work at a reasonable price.

17.15 CONTRACTOR LICENSE REQUIREMENTS

- A. In accordance with Section 7028.15 of the California Business and Professions Code:
- B. It is a misdemeanor for any person to submit a bid to a public agency in order to engage in the business or act in the capacity of a contractor within this state without having a license therefor, except in any of the following cases:
 - 1. The person is particularly exempted from this chapter.
 - 2. The bid is submitted on a state project governed by Section 10164 of the Public Contract Code or any local agency project governed by Section 20103.5 of the Public Contract Code.
- C. If a person has previously been convicted of the offense described in this section, the court shall impose a fine of 20 percent of the price of the contract under which the unlicensed person performed contract work, or four thousand five hundred dollars (\$4,500), whichever is greater, or imprisonment in the county jail for not less than 10 days nor more than six months, or both.
- D. In the event the person performing the contracting work has agreed to furnish materials and labor on an hourly basis, "the price of the contract" for the purpose of this subdivision means the aggregate sum of the cost of materials and labor furnished and the cost of completing the work to be performed.
- E. This section shall not apply to a joint venture license, as required by Section 7029.1 of the California Business and Professions Code. However, at the time of making a bid as a joint venture, each person submitting the bid shall be subject to this section with respect to his or her individual licensure.
- F. This section shall not affect the right or ability of a licensed architect, land surveyor, or registered professional engineer to form joint ventures with licensed contractors to render services within the scope of their respective practices.

- G. Unless one of the foregoing exceptions applies, a bid submitted to a public agency by a contractor who is not licensed in accordance with this chapter shall be considered nonresponsive and shall be rejected by the public agency. Unless one of the foregoing exceptions applies, a local public agency shall, before awarding a contract or issuing a purchase order, verify that the contractor was properly licensed when the contractor submitted the bid. Notwithstanding any other provision of law, unless one of the foregoing exceptions applies, the registrar may issue a citation to any public officer or employee of a public entity who knowingly awards a contract or issues a purchase order to a contractor who is not licensed pursuant to this chapter. The amount of civil penalties, appeal, and finality of such citations shall be subject to Sections 7028.7 and 7028.13 inclusive of the California Business and Professions Code. Any contract awarded to, or any purchase order issued to, a contractor who is not licensed pursuant to this chapter is void.
- H. Any compliance or noncompliance with subdivision (G) of this paragraph shall not invalidate any contract or bid awarded by a public agency during which time that subdivision was in effect.
- I. A public employee or officer shall not be subject to a citation pursuant to this section if the public employee, officer, or employing agency made an inquiry to the board for the purposes of verifying the license status of any person or contractor and the board failed to respond to the inquiry within three business days. For the purposes of this section, a telephone response by the board shall be deemed sufficient.

17.16 DIGGING TRENCHES OR EXCAVATIONS; NOTICE ON DISCOVERY OF HAZARDOUS WASTE OR OTHER UNUSUAL CONDITIONS; INVESTIGATIONS; CHANGE ORDERS; EFFECT ON CONTRACT

- A. If this Contract involves digging trenches or other excavations that extend deeper than four feet below the surface, the following shall apply:
 - 1. The CONTRACTOR shall promptly, and before the following conditions are disturbed, notify the ENGINEER in writing, of any:
 - a. Material that the CONTRACTOR believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
 - b. Subsurface or latent physical conditions at the site differing from those indicated.
 - c. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally

recognized as inherent in work of the character provided for in the contract.

- d. The ENGINEER shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the CONTRACTOR'S cost of, or the time required for, performance of any part of the work shall issue a change order the procedures described in the Contract.
- e. In the event that a dispute arises between the ENGINEER and the CONTRACTOR whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the CONTRACTOR'S cost of, or time required for, performance of any part of the work, the CONTRACTOR shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all work to be performed under the Contract. The CONTRACTOR shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

17.17 RETENTION PROCEEDS; WITHHOLDING; DISBURSEMENT

- A. In accordance with Section 7107 of the Public Contract Code with respects to all contracts entered into on or after January 1, 1993 relating to the construction of any public work of improvement the following shall apply:
 - 1. The retention proceeds withheld from any payment by the CITY from the original CONTRACTOR, or by the original CONTRACTOR from any subcontractor, shall be subject to this paragraph 17.18.
 - 2. Within 60 days after the date of completion of the WORK, including any punch-list WORK, the retention withheld by the CITY shall be released. In the event of a dispute between the ENGINEER and the original CONTRACTOR, the CITY may withhold from the final payment an amount not to exceed 150 percent of the disputed amount. For the purposes of this paragraph, "completion" means any of the following:
 - a. The occupation, beneficial use, and enjoyment of a work of improvement, excluding any operation only for testing, startup, or commissioning, by the CITY, accompanied by cessation of labor on the work of improvement.
 - b. The acceptance by the City Council of the work of improvement.

- c. After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 100 days or more, due to factors beyond the control of the CONTRACTOR.
 - d. After the commencement of a work of improvement, a cessation of labor on the work of improvement for a continuous period of 30 days or more, if the ENGINEER files for record a notice of cessation or a notice of completion.
- 3. Subject to subparagraph 17.18 A.4, within 10 days from the time that all or any portion of the retention proceeds are received by the original CONTRACTOR, the original CONTRACTOR shall pay each of its subcontractors from whom retention has been withheld, each subcontractor's share of the retention received. However, if a retention payment received by the original CONTRACTOR is specifically designated for a particular subcontractor, payment of the retention shall be made to the designated subcontractor, if the payment is consistent with the terms of the subcontract.
- 4. The original CONTRACTOR may withhold from a subcontractor its portion of the retention proceeds if a bona fide dispute exists between the subcontractor and the original CONTRACTOR. The amount withheld from the retention payment shall not exceed 150 percent of the estimated value of the disputed amount.
- 5. In the event that retention payments are not made within the time periods required by this paragraph 17.18, the CITY or original CONTRACTOR shall be subject to a charge of 2 percent per month on the improperly withheld amount, in lieu of any interest otherwise due. Additionally, in any action for the collection of funds wrongfully withheld, the prevailing party shall be entitled to attorney's fees and costs.
- 6. Any attempted waiver of the provisions of this section shall be void as against the public policy of this state.

17.18 TIMELY PROGRESS PAYMENTS; INTEREST; PAYMENT REQUESTS

- A. If the CITY fails to make any progress payment within 30 days after receipt of an undisputed and properly submitted payment request from the CONTRACTOR, the

CITY shall pay interest to the CONTRACTOR equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

- B. Upon receipt of a payment request, the ENGINEER shall act in accordance with both of the following:
 - 1. Each payment request shall be reviewed by the ENGINEER as soon as practicable after receipt for the purpose of determining that the payment request is a proper payment request.
 - 2. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the CONTRACTOR as soon as practicable, but not later than seven days, after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.
- C. The number of days available to the CITY to make a payment without incurring interest pursuant to this paragraph shall be reduced by the number of days by which the CITY exceeds the seven-day requirement set forth above.
- D. For purposes of this paragraph:
 - 1. A “progress payment” includes all payments due the CONTRACTOR, except that portion of the final payment designated by the contract as retention earnings.
 - 2. A payment request shall be considered properly executed if funds are available for payment of the payment request, and payments is not delayed due to an audit inquiry by the financial officer of the CITY.

17.19 PREFERENCE FOR MATERIAL

- A. In accordance with Section 3400 of the California Public Contract Code, the CONTRACTOR will be provided a period prior to award of the contract for submission of data substantiating a request for a substitution of “as equal” item.

17.20 RESOLUTION OF CONSTRUCTION CLAIMS

- A. In accordance with Section 20104 et Seq. of the California Public Contract Code. This paragraph applies to all claims of \$375,000 or less which arise between the CONTRACTOR and the CITY under this Contract for:
1. A time extension;
 2. Payment of money or damages arising from work done by or on behalf of, the CONTRACTOR pursuant to this CONTRACT and payment of which is not otherwise expressly provided for or the CONTRACTOR is not otherwise entitled to; or
 3. An amount the payment of which is disputed by the ENGINEER.
- B. For any claim set out in Paragraphs A.1, 2, or 3 above, the following requirements apply:
1. The claim shall be in writing and include the documents necessary to substantiate the claim and be accompanied by the following certification:

“CONTRACT PROVISION REQUIRING PERSONAL
CERTIFICATION OF ALL CLAIMS:

I, _____, BEING THE _____
(MUST BE AN OFFICER) OF _____ (GENERAL
CONTRACTOR), DECLARE UNDER PENALTY OF PERJURY
UNDER THE LAWS OF THE STATE OF CALIFORNIA, AND
DO PERSONALLY CERTIFY AND ATTEST THAT: I HAVE
THOROUGHLY REVIEWED THE ATTACHED CLAIM FOR
ADDITIONAL COMPENSATION AND/OR EXTENSION OF
TIME, AND KNOW ITS CONTENTS, AND SAID CLAIM IS
MADE IN GOOD FAITH; THE SUPPORTING DATA IS
TRUTHFUL AND ACCURATE; THAT THE AMOUNT
REQUESTED ACCURATELY REFLECTS THE CONTRACT
ADJUSTMENT FOR WHICH THE CONTRACTOR BELIEVES
THE CITY IS LIABLE; AND, FURTHER THAT I AM
FAMILIAR WITH CALIFORNIA PENAL CODE SECTION
12650, ET SEQ. PERTAINING TO FALSE CLAIMS, AND
FURTHER KNOW AND UNDERSTAND THAT SUBMISSION
OR CERTIFICATION OF A FALSE CLAIM MAY LEAD TO
FINES, IMPRISONMENT AND/OR OTHER SEVERE LEGAL
CONSEQUENCES.”

Claims must be filed on or before the date of final payment. Nothing herein is intended to extend the time limit or supersede notice requirements otherwise provided by Contract for the filing of claims.

The claim must include an actual cost documentation, including hours of work performed, equipment operation costs, and labor and overhead costs, which should be established at a standard percentage. Any overhead costs listed when paid, shall provide full and complete payment for any and all overhead, including jobsite overhead, home office overhead, as well as additional costs arising from disruption, resequencing or acceleration. A notice of POTENTIAL CLAIM shall be submitted in advance of the performance of any work, regardless of type, in which the CONTRACTOR may claim an additional cost. CONTRACTOR shall provide prompt notification of any disagreement in quantities of work performed along with a detailed accounting by means of a schedule update demonstrating any delays incurred.

2. For claims of less than fifty thousand dollars (\$50,000), the ENGINEER 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 CITY may have against the CONTRACTOR.

If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the ENGINEER and the CONTRACTOR.

The ENGINEER's written response to the claim, as further documented, shall be submitted to the CONTRACTOR within 15 days after receipt of further documentation or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information, whichever is greater.

3. For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the ENGINEER 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 CITY may have against the CONTRACTOR.

If additional information is thereafter required, it shall be requested and provided upon mutual agreement of the ENGINEER and the CONTRACTOR.

The ENGINEER's written response to the claim, as further documented, shall be submitted to CONTRACTOR within 30 days after receipt of the

further documentation, or within a period of time no greater than that taken by the CONTRACTOR in producing the additional information or requested documentation, whichever is greater.

4. If the CONTRACTOR disputes the ENGINEER's written response, or the ENGINEER fails to respond within the time prescribed, the CONTRACTOR may notify the ENGINEER, in writing, either within 15 days of receipt of the ENGINEER's response or within 15 days of the ENGINEER'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 ENGINEER shall schedule a meet and confer conference within 30 days for settlement of the dispute.
5. Following the meet and confer conference, if the claim or any portion remains in dispute, the CONTRACTOR may file a claim pursuant to 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 CONTRACTOR submits its written claim pursuant to subdivision (a) until the time the claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

C. The following procedures are established for all civil actions filed to resolve claims subject to this article:

1. 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.
2. 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 of 1986 (Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 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.

Notwithstanding any other provision of law, upon stipulation of the parties, arbitrators appointed for purposes of Article 1.5 of Chapter 1 of Part 3 of Division 2 of the California Public Contract Code 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.

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, also pay the attorney's fees of the other party arising out of the trial de novo .

3. The CITY shall not fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in this Contract.
4. In any suit filed under Section 20104.4 of the California Public Contract Code, the CITY 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.

END OF GENERAL CONDITIONS

file name: S:\CIP\Projects\Lucchesi Field Turf Replacement C14502008\Design Turf\420 Plan & Spec Develop\Specs

SECTION III
SPECIAL PROVISIONS

SECTION III

SPECIAL PROVISIONS

- 3-1. DESCRIPTION OF WORK – The project includes the following work items:
- The demolition, removal, and disposal of the existing subsurface drainage system and drain rock.
 - The installation of a new subdrain system, drain rock, and geotextile fabric.
 - The demolition, removal, and disposal of the existing turf system.
 - Site grading and preparation of the new turf base layer.
 - The installation of a new turf system, such as FieldTurf USA, Inc. Vertex Core synthetic turf, drainage/shock pad, and infill obtained by the City through a CMAS purchasing agreement.
 - Accessibility improvements including repairing concrete pathways around the field, parking lot pavement repair, installation of new striping and signage, extension of an existing fence, replacement of non ADA compliant sidewalks, and the installation of a new ADA compliant drinking fountain with water bottle fill station.
- 3-2. ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS – If the CONTRACTOR discovers any errors, omissions, discrepancies, or conflicts in the Contract, he/she shall immediately inform the ENGINEER in writing. The ENGINEER will promptly resolve such matters by issuing addenda or change orders. Failure or delay to act on the part of the ENGINEER shall not constitute a waiver of any right afforded the CITY or the ENGINEER by the Contract or constitute an implied approval. Any work affected by such discoveries that is performed by the CONTRACTOR prior to authorization by the CITY shall be at the CONTRACTOR'S risk.

Unless otherwise noted below, conflicts or inconsistencies between parts of the Contract will be resolved by the ENGINEER with a change order or an addendum, if required. Addenda and change orders bearing the most recent date shall prevail over addenda or change orders bearing earlier dates. Any reference to addenda-changed specifications or drawings shall be considered to have been changed accordingly.

In resolving conflicts, errors, or discrepancies, the order of precedence shall be as follows:

- 1) Change Orders/Addenda (most recent in time takes precedence)
- 2) Agreement and Bond Forms
- 3) Special Provisions
- 4) Technical Specifications
- 5) Drawings
- 6) Standard Specifications (Current Caltrans Standard Specifications)
- 7) General Conditions
- 8) Instructions to Bidders

9) CONTRACTOR'S Bid (Bid Form)

10) Notice Inviting Bids

11) Permits from other agencies as may be required by law.

3-3. COOPERATION - The CONTRACTOR shall not adjust gas, electric, television cable, telephone, Petaluma structures and Sonoma County structures. The CONTRACTOR will notify each agency who will be in turn adjust their own structures at least seven (7) working days prior to covering/burying these facilities at no cost to the CITY. Failure to do so shall result in the CONTRACTOR being liable for the utility agencies' claims. If the adjusted utilities will be embedded in the new sidewalk, the new or adjusted utility boxes shall be concrete. The contractor shall coordinate with the City and utility companies to determine who will provide the concrete boxes if required.

3-4. OBSTRUCTIONS - Attention is directed to Sections 5-1.36D, "Non-highway Facilities", and 15, "Existing Facilities", of the Standard Specifications and these special provisions.

The CONTRACTOR's attention is directed to the existence of certain underground facilities that may require special precautions be taken by the CONTRACTOR to protect the health, safety, and welfare of workmen and of the public. Facilities requiring special precautions include, but are not limited to: conductors of petroleum products, oxygen, chlorine and toxic or flammable gases; natural gas in pipelines greater than 6 inches in diameter or pipelines operating at pressures greater than 60 psi (gage); underground electric supply system conductors or cables either directly buried or in duct or conduit which do not have concentric neutral conductors or other effectively grounded metal shields or sheaths; and underground electrical conductors with potential to ground of more than 300 volts.

The CONTRACTOR shall notify the ENGINEER and the appropriate regional notification center for operators of subsurface installations at least 5 working days prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include but are not limited to the following:

Underground Service Alert
Northern California (USA)
Telephone: 1 (800) 227-2600

If the CONTRACTOR's certain operation is delayed, in the opinion of the ENGINEER, by the discovery of an underground utility not indicated on the plans or not marked by USA, the CONTRACTOR shall be paid a fair and reasonable compensation for the actual loss. Actual loss shall be understood to include no items of expense other than idle time of equipment exclusively used in such operation and necessary payments for idle time of labor exclusively required for such operation only, determined as follows:

- 1) Compensation for idle equipment shall be applied at the reduced Caltrans' Equipment Rental Rates where the right of way delay factor for each

classification of equipment shall be applied to such equipment rental rate. No markup shall be applied for overhead or profit.

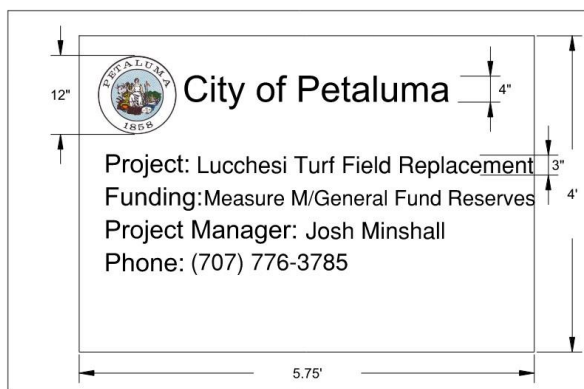
- 2) Compensation for idle time of labor shall be actual wages paid to the workers. No markup shall be added for overhead and profit.
- 3) The time for which such compensation will be paid will not exceed eight (8) hours for each incident.
- 4) The CONTRACTOR shall be granted an extension of time for the delay.
- 5) No monetary compensation will be allowed for delays due to utilities indicated on the plans or marked by USA.

3-5. ORDER OF WORK – The CONTRACTOR shall submit a work plan to the City for review and shall identify proposed order of work to maximize efficiency of construction, minimize impact to the community and maintain safety. The Contractor shall complete a dredge unit prior to advancing to another area.

3-6. PROJECT AND CONSTRUCTION AREA SIGNS – Project sign and construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, “Construction Area Traffic Control Devices”, of the Standard Specifications.

Two (2) project signs with a minimum dimension of 4’X5’3/4”X3/4” plywood bolted to an A-frame barricade shall be furnished, installed and moved from site to site by the Contractor. Letters and numbers shall be black on a white background. The sign information shall be as shown below:

The signs shall be approved prior to fabrication and posted as directed by the Engineer.



Construction area signs will be installed prior to start of construction and maintained in place for the duration of the project by the CONTRACTOR. When installed, the signs shall not extend beyond the street curb alignment into the travel way. Signs shall be repaired or replaced at no cost to the City of Petaluma, if damaged or stolen. The CONTRACTOR shall remove the signs and posts at the completion of the project and with prior approval of the

ENGINEER.

All costs involved in purchasing and installing construction area and project signs shall be considered as included in the Lump Sum price paid for Traffic Control System.

3-7. MAINTAINING TRAFFIC – Attention is directed to Sections 7-1.03, “Public Convenience”, 7-1.04, “Public Safety”, and 12, “Temporary Traffic Control”, of the Standard Specifications and the City of Petaluma Traffic Control Design and Construction Standards Series 700. Nothing in these special provisions shall be construed as relieving the CONTRACTOR from his/her responsibility as provided in said Section 7-1.04.

The Contractor will minimize disruption to all traffic (vehicular, transit, bicycle, and pedestrians) during the allowed work window. During construction, bicyclists will either share the road with vehicular traffic in a signed detour or be provided separate access. In addition, pedestrian access will be maintained at all times during construction. The Contractor shall provide temporary pedestrian curb ramps and clearly mark the temporary crosswalks. The pedestrian path shall be clear of any debris and meet ADA requirements. Driveway access to schools, residents, and businesses will also be maintained at all times.

Lane closures shall conform to the provisions in the section of these special provisions entitled, “Traffic Control System for Lane Closure”.

At least five (5) working days prior to beginning of each phase of construction (i.e., piping installation, paving, pavement repair, concrete construction, etc.), the CONTRACTOR shall:

- A. Notify all adjacent residents, businesses, City of Petaluma Police and Fire, Green Waste Recovery (residential refuse service company), Waste Management Company (industrial refuse service company), and Petaluma Transit by written notices detailing the type, limits, date and the hours of work. Details of the notice shall be submitted to the ENGINEER for review and approval at least five (5) days prior to delivering these notices.
- B. Where required, post streets with temporary "No Parking/Tow Away" signs at 100-foot intervals at least 72 hours in advance in residential districts, and not more than 24 hours in business districts. These signs shall be furnished by the CONTRACTOR and shall state the date; day of week and hour parking is prohibited.

Illuminated traffic cones when used during the hours of darkness shall be affixed or covered with reflective cone sleeves as specified in Section 12-3.10, "Traffic Cones", of the Standard Specifications.

Full compensation for temporary delineation shall be considered as included in the prices paid for the contract in terms of work which obliterated the existing delineation and no separate payment will be made therefore.

When working in or blocking any intersection, the CONTRACTOR shall provide flag persons to direct traffic at that intersection. This is in addition to other required flag persons.

Personal vehicles of the CONTRACTOR's employees shall not be parked on the traveled way, including any section closed to public traffic. The CONTRACTOR, at all times, shall provide flag person(s) to direct delivery trucks and CONTRACTOR's vehicles entering or leaving the public traffic.

The CONTRACTOR shall notify the City of Petaluma of his/her intent to begin work at least 5 days before work is begun. The CONTRACTOR shall cooperate with local authorities relative to handling traffic through the area and shall make his/her own arrangements relative to keeping the working area clear of parked vehicles.

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at 25-foot intervals to a point not less than 25 feet past the last vehicle or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags. The flag tree shall be placed where directed by the ENGINEER.

A minimum of one (paved) reversible traffic lane, not less than 10 feet wide, shall be open for use by public traffic in with minimal delays, flaggers, adequate traffic control, and signing. ***Flashing arrow boards shall be required for any lane closures.***

Day work: No work and/or preparation of work shall be performed between 5:00 p.m. and 7:00 a.m. unless approved by the ENGINEER in writing, except work required under said Sections 7-1.03 and 7-1.04 of the Standard Specifications or specified elsewhere in the special provisions.

Night work: No work and/or preparation of work shall be performed between 10:00 p.m. and 5:00 a.m. unless approved by the ENGINEER in writing, except work required under said Sections 7-1.03 and 7-1.04 of the Standard Specifications or specified elsewhere in the special provisions.

Except as otherwise provided, the full width of the traveled way shall be open for use by public traffic on Saturdays, Sundays, after 4:00 p.m. on Fridays, on designated legal holidays, during the holiday shutdown period (in applicable areas), and when construction operations are not actively in progress.

Designated legal holidays and the holiday shutdown period are outlined in "Hours of Work" of these Special Provisions.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the CONTRACTOR if in the opinion of the ENGINEER public traffic will be better served and the work expedited. Such deviations shall not be adopted until the ENGINEER has indicated his/her written approval. All other modifications will be made by contract change order.

Ten (10) working days prior to commencing construction which will affect existing traffic, the contractor shall submit for review by the Engineer, a Traffic Control Plan on 11"x17" or 22"x34" sheet(s) of paper which contains only information specially related to work zone traffic control. If the Contractor proposes to use the latest edition of California Department of Transportation Manual of Traffic Controls for Construction and Maintenance of Work Zones in lieu of a traffic control plan, in specific work operations, he/she shall submit in writing for consideration which Typical Application Diagram will be used for each work operation. No work shall commence on Public / County / State right of way until a traffic control plan is approved and implemented.

In addition to the traffic control plan, the Contractor shall submit a haul route for approval by the Engineer. The route must minimize traffic on residential streets that are not part of the project. Temporary staging of construction materials shall not occur on streets or areas that are not within the immediate limits of the project.

The Traffic Control Plan shall contain a title block which contains the contractor's name, address, phone number, project superintendent's name, contract name, dates and hours traffic control will be in effect, and a space for review acknowledgement by the City.

The content of the Traffic Control Plan shall include, but not limited to, the following:

- A. Show location and limits of the work zone for each phase or specific operation of construction if requiring different traffic control.
- B. Give dimensions of lanes affected by traffic control that will be open to traffic.
- C. Indicate signing with MUTCD designation, cone placement (including spacing), changeable message signs, flashing arrow boards, pavement markings, and other methods of delineation and reference to appropriate standards and sign designations.
- D. Dimension location of signs and cone tapers.
- E. Location of any and all flagmen, if applicable.
- F. Identify side streets and driveways affected by construction and show how they will be handled.
- G. Show how pedestrian and bicycle traffic will be handled through the construction site during all hours including edge grinding operation.
- H. Show locations of night time lighting if applicable.
- I. Modification to Traffic Signal operations in the vicinity of the project. Contractor shall be responsible for making arrangements with the City's Traffic Signal Technician at least 48 hours in advance before starting any work in or nearby a signalized intersection if any signal operations need to be modified.
- J. Separate Traffic Control Plans shall be prepared for each phase of a construction project and shall be submitted for City's review and approval.

No work except for installation of project identification signs will be allowed to commence prior to approval of the Traffic Control Plan.

Residents, businesses, delivery to businesses, and customer parking shall be notified in writing by the Contractor at least five (5) calendar days prior to any activity that will impact access to their property.

The City of Petaluma Traffic Control Design and Construction Standards (Series 700) shown elsewhere in these specifications are guidelines only. The CONTRACTOR is not relieved from his/her responsibility for submitting his/her own traffic control plan.

The CONTRACTOR's failure to comply with the requirements of this section will be sufficient cause for the ENGINEER to suspend work at no cost to the City.

All costs involved for completing all work described in this section shall be considered to be included in the contract price paid for Traffic Control System and no additional compensation shall be allowed therefore.

3-8. TRAFFIC CONTROL SYSTEM FOR LANE CLOSURE - A traffic control system shall consist of closing traffic lanes in accordance with the details shown on the plans, the City of Petaluma Traffic Control Design and Construction Standards Series 700, the provisions of Section 12, "Temporary Traffic Control", of the Standard Specifications, and the provisions under "Maintaining Traffic" elsewhere in these supplementary general conditions.

The provisions in this section will not relieve the CONTRACTOR from his/her responsibility to provide such additional devices or take such measures as may be necessary to comply with the provisions in Section 7-1.04, "Public Safety", of the Standard Specifications.

During the hours of darkness, as defined in Division 1, Section 280, of the Vehicle Code, portable signs shown on the plans to be illuminated shall be, at the option of the CONTRACTOR, either; illuminated signs in conformance with the provisions in Section 12-3.06B(3), "Portable Signs", of the Standard Specifications; or Reflexite vinyl microprism reflective sheeting signs; or 3M high intensity reflectorized sheeting on aluminum substrate signs or Seibulite Brand Ultralite Grade Series, encapsulated lens retroreflective sheeting signs; or equal.

Each vehicle used to place, maintain and remove components of a traffic control system on arterials and collectors shall be equipped with a Type II flashing arrow sign which shall be in operation when the vehicle is being used for placing, maintaining, or removing said components. The sign shall be controllable by the operator of the vehicle while the vehicle is in motion. The flashing arrow sign shown on the plans shall not be used on the vehicles which are doing the placing, maintaining and removing of components of a traffic control system, and shall be in place before a lane closure requiring its use is completed.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the CONTRACTOR shall immediately repair said component to its original condition or replace said component and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way shall be removed from the traveled way and shoulder. If the CONTRACTOR so elects, said components may be stored at selected central locations, approved by the ENGINEER, within the limits of the City right-of-way.

When traffic is shifted across the centerline, the CONTRACTOR shall provide W57 signs at 300-foot intervals and on both sides of intersections to direct traffic in proper lanes. Flashing arrow boards shall be required for any lane closures on any streets.

The adjustment provisions in Section 4-1.05, "Changes and Extra Work", of the Standard Specifications, shall not apply to the item of traffic control system. Adjustments in compensation for traffic control system will be made only for increased or decreased traffic control system required by changes ordered by the ENGINEER and will be made on the basis of the cost of the increased or decreased traffic control necessary. Such adjustment will be made on a force account basis as provided in Section 9-1.04, "Force Account", of the Standard Specifications for increased work, and estimated on the same basis in the case of decreased work.

Traffic control system required by work which is classed as extra work, as provided in Section 4-1.05 of the Standard Specifications, will be paid for as a part of said extra work.

The contract lump sum price paid for "Traffic Control System" shall include full compensation for furnishing all labor (including flagging costs), materials, signs, tools, equipment and incidentals, and for doing all the work involved in furnishing, placing, operating, maintaining, repairing, replacing, changing messages on a **FOUR** changeable message signs as requested by the Engineer, moving and removing the components of the traffic control system as shown on the plans, as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer.

3-9. WATERING - Watering shall conform to the provisions in Section 17, "Watering", of the Standard Specifications except that full compensation for developing water supply shall be considered as included in the prices paid for various contract items for work involving the use of water and no separate payment will be made therefore. The application of water for dust control will not be considered as extra work under any circumstances. Water can be purchased from the City at current rates provided that the CONTRACTOR meters the water so used with a City furnished meter (a deposit will be required) and a CONTRACTOR furnished valve assembly.

3-10. PROGRESS SCHEDULE - The CONTRACTOR shall submit a schedule which includes all major tasks and milestones to the City of Petaluma, Public Works and Utilities Department for review **at least** ten (10) working days prior to start of work.

After beginning of work, updated schedules shall be submitted. No progress payments will be processed without accepted updated schedules.

Payment for the original schedule and updated, weekly schedules shall be considered to be included in the various items of work and no additional compensation will be allowed therefore.

- 3-11. SUPERINTENDENCE - The CONTRACTOR shall designate in writing and submit to the Project Engineer two (2) working days before starting work, an authorized representative who shall have the authority to represent and act for the CONTRACTOR for the duration of the contract. Any change in the designation shall require prior approval of the ENGINEER.

When the CONTRACTOR is comprised of two (2) or more persons, firms, partnerships or corporations functioning on a joint venture basis, said CONTRACTOR shall designate in writing before starting work, the name of one authorized representative who shall have the authority to represent and act for the CONTRACTOR.

Said authorized representative shall be present, at all times, at the site of work, while work is actually in progress on the contract. When work is not in progress and during periods when work is suspended, arrangements acceptable to the ENGINEER shall be made for any emergency work, which may be required.

If work is in progress and the authorized representative is not on site, the City reserves the right to stop the work at no cost to the City.

Once the work begins, the Superintendent shall keep the ENGINEER informed of the CONTRACTOR's daily schedule. The ENGINEER shall have at least twenty-four (24) hour advance notice of all work, on a daily basis, including SUBCONTRACTOR's work. If the CONTRACTOR fails to notify the ENGINEER, the ENGINEER reserves the right to stop the work at no cost to the City.

In the case of urgency or emergency where the CONTRACTOR's authorized representative is not present on any particular part of the work and where the ENGINEER wishes to give notification or direction, it will be given to and be obeyed by the superintendent or foreperson who may have charge of the particular work or it will be given to and be obeyed by any worker in the area should the superintendent or foreperson not be immediately available.

All costs involved in superintendence shall be included in the contract prices paid for various items of work and no additional payment will be allowed therefore.

- 3-12. SAFETY REQUIREMENT - The CONTRACTOR shall comply with all CAL/OSHA safety requirements. It shall be the CONTRACTOR's sole responsibility for making sure these safety requirements are met and the CONTRACTOR shall fully assume all liabilities for any damages and/or injuries resulting from his or her failure to comply with the safety requirements. Failure on the City's part to stop unsafe practices shall, in no way, relieve the CONTRACTOR of his/her responsibility.

The CONTRACTOR shall first call City of Petaluma Emergency Center at 911, from a regular telephone, and (707) 762-2727 or from a cellular phone (707) 762-4545, if any gas lines or electrical power lines are broken or damaged.

3-13. PROJECT APPEARANCE – The CONTRACTOR shall maintain a neat appearance to the work area.

When practicable, debris developed during construction shall be disposed of concurrently with its removal. Stockpiling on the street shall not be allowed. The CONTRACTOR shall apply for a “stockpiling” permit from the City’s Community Development Department prior to stockpiling more than fifty (50) cubic yards of materials on private property. The CONTRACTOR shall solely be responsible for securing staging and/or stockpiling areas.

The CONTRACTOR shall provide dust control as often as required during the construction and shall clean the roads/streets with street sweepers at least once a day at the end of each working day or more often if safety or appearance conditions warrant. Failure to maintain dust control, street cleaning and/or any required work specified in this section shall result in the City performing the work with other forces and back charge the CONTRACTOR for the costs.

Full compensation for conforming to the provisions in this section, not otherwise provided for, shall be considered as included in prices paid for the various contract items of work involved and no additional compensation will be allowed therefore.

3-14. RESPONSIBILITY FOR DAMAGE - The CONTRACTOR shall indemnify, hold harmless, release and defend the City of Petaluma, its officers, officials, employees and agents from and against any and all liabilities, claims, demands, losses, damages, expenses, costs (including without limitation costs and fees of litigation) of every nature arising out of or in connection with the activities of the CONTRACTOR, his/her subcontractors, employees and agents, except such loss or damage which was caused by the sole negligence or willful misconduct of the CITY, its employees or agents. The CITY may retain so much of the money due the CONTRACTOR as shall be considered necessary, until disposition has been made of claims or suits for damages as aforesaid.

3-15. GUARANTEE OF WORK - Neither the final certificate of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this contract by the City or the public shall constitute an acceptance of work not done in accordance with the contract or relieve the CONTRACTOR of liability in respect to any warranties or responsibility for faulty materials or workmanship. The CONTRACTOR’s attention is directed to Article 5, “Bonds and Insurance”, of the General Conditions.

3-16. NOTICE TO PROCEED, BEGINNING OF WORK, CONTRACT TIME, TIME OF COMPLETION, AND LIQUIDATED DAMAGES – Article 2.3, “Commencement of Contract Times; Notice To Proceed” of the General Conditions is amended to read:

The CONTRACTOR shall begin work within ten (10) working days from the date of Notice To Proceed (NTP) and shall diligently prosecute the same to completion before

the expiration of total allocated working days as specified in the Construction Agreement and/or Invitation to Bid, from the date of starting work. The CONTRACTOR shall complete all of the work directed by the ENGINEER in all parts and requirements within the time set forth. A working day is defined in these specifications.

The CONTRACTOR is on notice that it may take approximately eight (8) weeks from the bid opening to obtain the City Council's award of the contract, to process the construction agreement, and to issue the Notice to Proceed.

The CONTRACTOR shall pay to the City of Petaluma the sum of \$1500 per day for each and every *calendar day's* delay in finishing the work in excess of the number of days prescribed above (and/or in excess of the number of days prescribed for any scheduled operations or works described in the Special Provisions).

A working day is defined as any day, except as follows:

- a. Saturdays, Sundays, and legal holidays
- b. Days on which the CONTRACTOR is prevented by inclement weather or conditions resulting immediately therefrom adverse to the current controlling operation or operations, as determined by the ENGINEER, from proceeding with at least 75 percent of the normal labor and equipment force engaged on that operation or operations for at least 60 percent of the total daily time being currently spent on the controlling operation or operations.

Should the CONTRACTOR prepare to begin work at the regular starting time of any day on which inclement weather, or the conditions resulting from the weather, or the condition of the work, prevents the work from beginning at the usual starting time and the crew is dismissed as a result thereof and the CONTRACTOR does not proceed with at least 75 percent of the normal labor and equipment force engaged in the current controlling operation or operations for at least 60 percent of the total daily time being currently spent on the controlling operation or operations, the CONTRACTOR will not be charged for a working day whether or not conditions should change thereafter during that day and the major portion of the day could be considered to be suitable for those construction operations.

Determination that a day is a non-working day by reason of inclement weather or conditions resulting immediately therefrom shall be made by the ENGINEER. The CONTRACTOR will be allowed 10 days from the issuance of the weekly statement of working days in which to file a written protest setting forth in what respects the CONTRACTOR differs from the ENGINEER; otherwise, the decision of the ENGINEER shall be deemed to have been accepted by the CONTRACTOR as correct. The ENGINEER will furnish the CONTRACTOR a weekly statement showing the number of working days charged to the contract for the preceding week, the number of working days of time extensions being considered or approved, the number of working days originally specified for the completion of the contract, and the number of working days remaining to complete the contract and any time extensions thereof.

3-17. HOURS OF WORK

Weekdays – Weekdays (Monday through Friday) hours shall be from 7:00 a.m. to 5:00 p.m. for all required work except those hours approved by the City of Petaluma or specified in “Order of Work” Section of these special provisions. Work hours for County of Sonoma and Caltrans right of way shall be governed by their respective permit conditions.

Night Hours – Generally, other than emergency work, there will be no night hours allowed for work on this project.

Liquidated Damages in the sum of Fifteen Hundred Dollars (\$1,500) per day will be assessed against the CONTRACTOR if he fails to comply with any of the daily conditions or operations such as maintaining erosion control facilities, job site/street cleanliness and daily cleanup and traffic control and flagging, as described in the General Conditions, these Special Provisions, and the Technical Specifications.

If the CONTRACTOR closes a street or sidewalk without prior notice and approval of the ENGINEER within 24 hours, the associated operation will be shutdown at the CONTRACTOR’s expense.

Holidays - Designated legal holidays are: January 1st, the third Monday in January, the third Monday in February, the last Monday in May, July 4th, the first Monday in September, the second Monday in October, November 11th, Thanksgiving Day, the day after Thanksgiving, December 24th and December 25th. When a designated legal holiday falls on a Sunday, the following Monday shall be a designated legal holiday. When November 11th falls on a Saturday, the preceding Friday shall be a designated legal holiday. The Contractor shall not work on the legal holidays unless approved in writing by the Engineer.

Holiday Shutdown - No work shall be allowed to be performed in the business district (defined by the map on the City of Petaluma web site at <http://cityofpetaluma.net/cdd/pdf/boundaries.pdf>) between Thanksgiving Day, the day after Thanksgiving, and December 25th thru January 3rd of the following year.

- 3-18. RECORD ("AS-BUILT") DRAWINGS – The CONTRACTOR shall furnish Record Drawings of the complete project and procure from the Director of Public Works a full sized set of Contract Drawings. Construction drawings shall be on the construction site at all times while the work is in progress. Drawings shall show approved substitutions, if any, of material including manufacturer's name and catalog number. The Drawings shall be to scale and all indications shall be neat and legible. All information noted on the CONTRACTOR's job-site print shall be transferred to the Record Drawings by CONTRACTOR and all indications shall be recorded in a neat, legible and orderly way. The Record Drawings shall be signed by the CONTRACTOR and turned over to the Director of Public Works before the final acceptance of the project. If the CONTRACTOR fails to provide the City with an acceptable “Record Drawings”, the City shall deduct \$2,000 from the amount due CONTRACTOR.

- 3-19. NOTICE OF POTENTIAL CLAIM - If for any reason the CONTRACTOR deems that additional compensation is due him/her for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized extra work, a Notice of Potential Claim shall be made. The CONTRACTOR shall give the ENGINEER a written Notice of Potential Claim for such additional compensation before work begins on the items on which the claim is based. The notice shall set forth the reasons for which the CONTRACTOR believes additional compensation will or may be due and the nature of the costs involved. The CONTRACTOR shall afford the ENGINEER every opportunity and facility for keeping records of the actual cost of the work. The CONTRACTOR shall keep records of the disputed work in accordance with Contract General Conditions, Section 11.3, "Cost of Work (Based on Time and Materials)."

If such notification is not given or the ENGINEER is not afforded proper opportunity by the CONTRACTOR for keeping strict account of actual cost as required, then the CONTRACTOR hereby agrees to waive any claim for such additional compensation. Such notice by the CONTRACTOR and the fact that the ENGINEER has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the CONTRACTOR shall, within 10 calendar days, submit his/her written claim to the ENGINEER who will present it to the City for consideration in accordance with local laws or ordinances. The CONTRACTOR is directed to Section 17.20 "Resolution of Construction Claims" of the General Conditions.

Any claim for overhead type expenses or costs, in addition to being certified as stated above, shall be supported by an audit report of an independent Certified Public Accountant. Any claim for overhead shall also be subject to audit by the City at its discretion.

Any costs or expenses incurred by the City in reviewing or auditing any claims that are not supported by the CONTRACTOR's cost accounting or other records shall be deemed to be damages incurred by the City within the meaning of the California False Claims Act.

Nothing in this subsection shall be construed as a waiver of the CONTRACTOR's right to dispute final payment based on differences in in-place quantity measurements or computations of unit priced pay items.

- 3-20. PAYMENT FOR MATERIALS ON HAND - At the discretion of the ENGINEER, partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications. Such delivered costs of stored or stockpile materials may be included in the next partial payment after the following conditions are met:
1. The material has been stored or stockpiled and protected at the sole expense of the CONTRACTOR at a location acceptable to the City and in a manner acceptable to the ENGINEER.

2. The CONTRACTOR has furnished the ENGINEER with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
3. The CONTRACTOR has furnished the ENGINEER with satisfactory evidence that the material and transportation costs have been paid.
4. The CONTRACTOR has furnished the City legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
5. The CONTRACTOR has furnished the City evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at anytime prior to use in the work.
6. The CONTRACTOR shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

It is understood and agreed that the transfer of title and the City's payment for such stored or stockpiled materials shall in no way relieve the CONTRACTOR of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications. In no case will the amount of partial payments for materials on hand exceed 70% of the contract price for the contract items in which the material is intended to be used.

3-21. ACCESS TO DRIVEWAYS – All accesses for local businesses and residents shall be maintained at all times. Temporary ramps will be required each night for access to driveways for residences and commercial access. The Contractor shall coordinate with each driveway user as needed.

3-22. ARCHAEOLOGICAL MONITORING – In the event that archaeological materials are found during construction, CONTRACTOR shall notify the ENGINEER immediately and shall temporarily cease work in the area until a determination or investigation of the site can be made by a qualified archaeologist. Archaeologist services shall be provided by the City at no cost to the CONTRACTOR.

3-23. STORM WATER MANAGEMENT, AND SEDIMENT AND EROSION CONTROL – CONTRACTOR shall prepare storm water management, and sediment and erosion control measures for implementation and shall maintain these measures during the construction period as required by the Regional Water Quality Control Board (RWQCB) permit.

If the area to be disturbed by construction activities is more than one acre, the CONTRACTOR shall be required to file a Notice of Intention (NOI), pay the fee, prepare the SWPPP, BMP, etc. as required by RWQCB permit.

Storm water management, and sediment and erosion control shall include, but not be limited to fiber rolls (sediment logs or wattles), straw bales, drain rock, check dams, silt fencing, siltation basins and as required for construction conditions. Measures shall be submitted to the ENGINEER for review seven (7) days prior to start of construction. The

CONTRACTOR shall be responsible for providing the measures that would comply with the RWQCB.

The CONTRACTOR shall also place drain rock bags around storm drain inlets/catch basins, and install drain rock check dams at 50-foot intervals within 100 feet upstream from the inlets/catch basins.

The CONTRACTOR shall comply with all Federal, State and local regulations and ordinances governing storm water pollution prevention.

If required, the CONTRACTOR shall file a Notice of Intent (NOI) with the RWQCB, and shall comply with the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity requirements. The CONTRACTOR shall prepare and implement a Storm Water Pollution Plan (SWPPP). Resources used in developing the SWPPP shall include the "California Storm Water Best Management Practice Handbook for Construction Activity," and the San Francisco Bay Regional Water Quality Control Board's "Information on Erosion and Sediment Controls for Construction Projects." The SWPPP shall be submitted for review and acceptance prior to start of work. The CONTRACTOR shall have an accepted and implemented SWPPP as part of Mobilization. The SWPPP shall, at a minimum, include Best Management Practices (BMPs), acceptable to the City, to address the following:

1. Housekeeping
2. Waste Containment and Control.
3. Minimizing Disturbed Areas.
4. Stabilize Disturbed Areas.
5. Protect Slopes and Channels.
6. Control Site Perimeter.
7. Control of Internal Erosion.
8. Disposal of Storm Water and Ground Water
9. Sediment Control.
10. Liquid Waste Management.
11. Concrete Waste Management.
12. Hazardous Waste Management.
13. Employee and SUBCONTRACTOR Training.

14. Vehicle and Equipment Fueling and Maintenance.

15. Spill Prevention and Control.

16. Contaminated Soil Management.

17. Sawcutting.

18. Paving and Asphalt Work.

19. Street Cleaning.

Employ and utilize environmental protection methods, obtain all necessary permits, and fully observe all local, state, and federal regulations.

All costs involved for completing all work described in this section shall be considered to be included in the contract price paid for Storm Water Management and Sedimentation/Erosion Control and no additional compensation shall be allowed therefore.

3-24. ITEM INCREASES AND DECREASES -

Increased or Decreased Quantities

Increases or decreases in the quantity of a contract item of work will be determined by comparing the total pay quantity of that item of work with the ENGINEER's Estimate therefor.

If the total pay quantity of any item of work required under the contract varies from the ENGINEER's Estimate therefore by 25 percent or less for increases and 25 percent or less for decreases, payment will be made for the quantity of work of the item performed at the contract unit price.

If the total pay quantity of any item of work required under the contract varies from the ENGINEER's Estimate therefor by more than 25 percent for increases and 25 percent for decreases, in the absence of an executed contract change order specifying the compensation to be paid, the compensation payable to the CONTRACTOR will be determined in accordance with the following sections.

Increases of More Than 25 Percent

Should the total pay quantity of any item of work required under the contract exceed the ENGINEER's Estimate therefore by more than 25 percent, the work in excess of 125 percent of the estimate and not covered by an executed contract change order specifying the compensation to be paid therefor will be paid for by adjusting the contract unit price based upon a force account analysis.

The adjustment of the contract unit price will be the difference between the contract unit price and the actual unit cost which will be determined as hereinafter provided, of the total pay quantity of the item. If the costs applicable to the item of work include fixed costs, the fixed costs will be deemed to have been recovered by the CONTRACTOR by the payments made for 125 percent of the ENGINEER's Estimate of the quantity for the item, and in computing the actual unit cost, the fixed costs will be excluded. Subject to the above provisions, the actual unit cost will be determined by the ENGINEER in the same manner as if the work were to be paid for on a force account basis.

When the compensation payable for the number of units of an item of work performed in excess of 125 percent of the ENGINEER's Estimate is less than \$5,000 at the applicable contract unit price, the ENGINEER reserves the right to make no adjustment in the contract unit price if the ENGINEER so elects, except that an adjustment will be made if requested in writing by the CONTRACTOR.

Decreases of More Than 25 Percent

Should the total pay quantity of any item of work required under the contract be less than 25 percent of the ENGINEER's Estimate therefore, an adjustment in compensation pursuant to this Section will not be made unless the CONTRACTOR so requests in writing. If the CONTRACTOR so requests, the quantity of the item performed, unless covered by an executed contract change order specifying the compensation payable therefor, will be paid for by adjusting the contract unit price based upon a force account analysis. In no case shall the payment for that work be less than that which would be made at the contract unit price.

The adjustment of the contract unit price will be the difference between the contract unit price and the actual unit cost, which will be determined as hereinafter provided, of the total pay quantity of the item, including fixed costs. The actual unit cost will be determined by the ENGINEER in the same manner as if the work were to be paid for on a force account basis; or the adjustment will be as agreed to by the CONTRACTOR and the ENGINEER.

The payment for the total pay quantity of the item of work will in no case exceed the payment which would be made for the performance of 25 percent of the ENGINEER's Estimate of the quantity for the item at the original contract unit price.

- 3-25. EXISTING WATER VALVES, MONUMENTS AND MANHOLES – The City shall have access at all times to water valves, monuments, and manholes except immediately following a construction operation as noted below.

Prior to placement of paving, all manholes, monuments, and valves covered by paving, shall be clearly marked in white paint before the close of that work day. Throughout the construction process, the CITY shall have access to manholes, monuments, and valves within 48 hours of any operation affecting the manholes, monuments and valves.

A penalty of Fifty Dollars (\$50) per each valve, monument, and manhole that is not raised, or that the CITY is not provided easy access to, will be assessed against the contractor for each calendar day.

- 3-26. WAGE RATES - The General Prevailing Wage Determination Made by the Director of Industrial Relations Pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.2. The CONTRACTOR can download this information from the web site: <http://www.dir.ca.gov/dlsr/PWD/>

The most current prevailing wage rates available at the time of bid opening shall be used.

- 3-27. STAGING AREA – It is the responsibility of the CONTRACTOR to provide a staging area for equipment and materials. The site and hauling route shall be submitted to the City for approval prior to the commencement of work. The Contractor shall obtain written confirmation from property owners for use of the site.
- 3-28. COORDINATION AND INSTALLATION OF CMAS TURF MATERIALS – It is the responsibility of the CONTRACTOR to ensure that the construction schedule aligns with the procurement of the turf materials purchased through California Multiple Award Schedule (CMAS). The CONTRACTOR shall coordinate with the turf manufacturer, FieldTurf USA, Inc., for the delivery of turf materials. Upon delivery, the CONTRACTOR shall verify that the turf materials delivered match what was purchased, and the CONTRACTOR shall inspect the turf materials to ensure that the products are in new condition without any defects. In addition, the CONTRACTOR shall ensure that the installer possesses a California D-12 Synthetic Products License. See Technical Specifications Section 32 18 13 Turf Company Qualifications.
- 3-29. COORDINATION FOR INSPECTIONS – The CONTRACTOR shall coordinate with the City of Petaluma Public Works and Utilities via Mike Krist (707)-529-1631, and the City of Petaluma Building Department – (707)-778-4479 for any inspections throughout the course of construction.
- 3-30. COORDINATION WITH ELEMENTARY SCHOOL – The CONTRACTOR shall coordinate with the elementary school, Loma Vista Immersion Academy Elementary Charter School, across the street along Maria Dr. The CONTRACTOR shall provide a notice of construction prior to the commencement of work and provide the schedule for work. The CONTRACTOR shall ensure that deliveries do not occur during school pick-up and drop-off times.
- 3-31. CONSTRUCTION SEQUENCE – The CONTRACTOR shall sequence the work to ensure that all concrete work around the field is completed prior the installation of synthetic turf materials. A work schedule from the CONTRACTOR shall be submitted to the City for approval. See Technical Specification Section 01 11 00 Work Sequence and Schedule, and Coordination.
- 3-32. DISPOSAL OF TURF MATERIALS – The CONTRACTOR shall follow the City of Petaluma's Construction Waste Management Plan (CWMP) for disposal of synthetic turf materials and inform the ENGINEER of disposal plans. The CONTRACTOR shall

inform the ENGINEER of plans for disposal if the guidelines from CWMP cannot be achieved and implement best available practices.

SECTION IV
TECHNICAL SPECIFICATIONS

**Lucchesi Park Turf Replacement Project
320 N McDowell Blvd, Petaluma, CA 94954**

PROJECT SPECIFICATIONS

Bid Submittal

February 17, 2023

PREPARED BY:



Verde Design Project No. 2108300
City of Petaluma Project No. C14502008

DOCUMENT 00 01 10

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APPENDIX

END OF DOCUMENT

SECTION 01 11 00

SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this Contract consists of Lucchesi Park Turf Replacement Project including, but not necessarily limited to, the following:
 - 1. Replacement of synthetic turf field with new synthetic turf field.
 - 2. Synthetic turf field drainage Improvements.
 - 3. Installation of new concrete paving
 - 4. Installation of new drinking fountain and associated utility work.
- B. The Work specifically includes all work as represented by the Drawings and Specifications issued for construction and subsequent approved revisions and addenda.
- C. If certain features are not fully shown or called for on the Drawings, their construction shall be of the same character, quality and level of performance as for similar conditions that are shown, called for, or reasonably inferred. Contractor shall confer with City Representative before proceeding.

1.02 RELATED REQUIREMENTS

- A. Section 01 42 00 - References.

1.03 PROJECT LOCATION

- A. 320 N Mcdowell Blvd
Petaluma, Ca 94954

Contractor shall access site via Maria Dr.

- B. The general nature and extent of the work and the appurtenant facilities are shown on the Drawings under the title: Lucchesi Park Turf Replacement Project.
- C. Perform work within the Limit of Work line indicated on the Drawings and per the discretion of the Owner.

1.04 SPECIFICATIONS AND DRAWINGS

- A. The General Conditions, Supplementary Conditions, and Division 01 - General Requirements apply to the Work of all Sections.
- B. Drawings, such as irrigation plans, utility plans, and other utility Drawings, are diagrammatic. Actual runs indicated on the Drawings shall be followed as closely as coordination with the work of other trades will permit. The exact routing of such improvements and locations of equipment shall be governed by site conditions, obstructions, and locations of other utilities as acceptable to the Owner.
- C. In the event that discrepancies arise over dimensions, product references, omissions, or written statements, these conflicts shall be immediately brought to the Owner's attention by the Contractor. If available, this may be accomplished with the use of a "Request for Information" (RFI) form. While awaiting direction or clarification from the Owner, the Contractor shall re-direct work as necessary so as not to cause delay to the project.

- D. If discrepancies arise between the Drawings and Specifications, the order of descending precedence shall be:
 - 1. Specifications.
 - 2. Details on the Drawings.
 - 3. Plans on the Drawings.
- E. Products, materials, labor, etc., installed or performed without proper clarification, or prior to Owner acceptance shall be the Contractor's sole responsibility and shall be removed, repaired, replaced, and/or reinstalled per the Owner's direction at no additional cost to the Owner or its agents.

1.05 CONTRACTOR'S DUTIES

- A. Provide and pay for:
 - 1. Labor, materials, equipment, tools, construction equipment machinery, and other facilities and services necessary for proper execution and completion of the Contract.
 - 2. Water and temporary utilities required for construction excluding any metering and connection fees or charges.
 - 3. Subject to the discretion of the Owners Representative as verified by the Contractor, utilities which are in place and/or are in use by the Owner at the site, excluding telephone, may be utilized by the Contractor, to the extent available, at no cost.
 - 4. Other facilities and services necessary for proper execution and completion of work to provide a facility capable of operation.
 - 5. Legally required sales, consumer, and use taxes.
- B. Permits:
 - 1. The Owner shall obtain and pay for the building permits, utility cut-offs and hook-ups including, but not limited to: water, gas, and electrical meters, sanitary and storm sewer connection fees.
 - 2. The contractor shall obtain and pay for other permits required by Owner, County and other agencies, including but not limited to business licenses and hauling and dumping permits as applicable.
 - 3. Provisions of required permits and licenses, whether obtained by the Owner's Representative or the contractor, shall become a part of the Contract Documents and shall be adhered to by the contractor.
- C. Comply with latest adopted edition of the governing building code and other codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of the work. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these applicable laws, ordinances, rules, and regulations. In case of conflicts between code requirements, the most restrictive shall apply; except that where the requirements of these Specifications exceed code requirements, the Specifications shall govern.
- D. Attend pre-scheduled on-site job conference meetings and/or any special meetings as may be required by the Owner's Representative.
- E. Promptly submit written notice to the Owner's Representative of any observed variance in Contract Documents from legal requirements. Appropriate modifications to Contract Documents will be performed by the Owner's Representative to incorporate such necessary modifications.
 - 1. Contractor shall assume responsibility for work performed and known to be contrary to such requirements.
- F. Enforce strict discipline and good order among the contractor's or sub-contractor's employees per the discretion of the Owner's Representative.
- G. The Contractor shall be held to have examined the site and to have compared it with the Drawings and Specifications, to have carefully examined all of the Contract Documents and to have satisfied itself as to the conditions under which the work is to be performed before entering in this Contract.

1. No allowance shall subsequently be made on behalf of the Contractor on account of an error on its part or its negligence or failure to acquaint itself with the conditions of the site.
- H. Examine site and verify that site conditions are acceptable to begin any work. Verify that work specified elsewhere has been completed to an appropriate stage to begin any applicable work. This includes, but is not limited to, lines, grades and surfaces prepared by others. Notify the Owner's Representative in writing of any irregularities or unacceptable conditions. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.
- I. Throughout the job the Contractor shall be responsible for the general safety of the public and shall take appropriate means at no extra cost to Owner to provide a safe and secure job site to the satisfaction of the Owner's Representative.
- J. Verify all measurements, materials and systems taken from the Drawings and Specifications. Contractor shall be responsible for all investigations, field measurements layouts, and coordination necessary to properly fit, install and complete the work required, including integration of new work into, and with existing.
- K. Contractor shall deliver, receive, store, protect, install and apply materials in accordance with manufacturer's and/or industry specifications and instructions unless specifically modified and shown otherwise in the Contract Documents. Installations shall be tight, smooth, level, straight, true to line, and secure.

1.06 PROTECTION OF PROPERTY, MATERIALS AND WORK

- A. Contractor shall be held responsible insofar as its operations are concerned for the care, protection, and preservation of the adjoining premises, buildings, trees, landscaping, utilities, walks, streets, and adjacent properties from damage resulting from or incidental to this Contract.
- B. Protect existing structures, planted areas and improvements not designated for removal. Damage to existing structures including asphalt paving, utilities, and fixtures shall be replaced to an "as was" or better condition, at Contractor's expense, to the satisfaction of the Owner's Representative.
- C. Materials and equipment, both before and after installation, shall be properly protected by the contractor from the weather and other hazards and kept in a clean and orderly manner.
- D. Utility piping and conduit stub-outs, and parts or equipment left unconnected shall be capped, plugged, or otherwise properly protected by the contractor to prevent damage or the intrusion of dirt or other foreign matter.
- E. Materials and equipment damaged or containing defects developed before acceptance of the work shall be replaced with new at the Contractor's expense.

1.07 WORK SEQUENCE AND SCHEDULE

- A. The sequence and scheduling of the work to be performed by the Contractor shall be subject to review and acceptance by the Owner's Representative. The Contractor shall submit a Submittal Progress Log and Schedule in accordance with Section 01 33 00 - Submittal Procedures prior to starting work. Project schedules shall conform to Specification Section 01 33 00.

1.08 CONTRACTOR'S USE OF PREMISES

- A. Confine operations to areas immediately within the proposed project sites.

1. Develop and utilize construction access and haul routes as per the rules and regulations pertaining to the locale in which the work is to be performed and in accordance with the discretion of the Owner's Representative.
2. Do not encumber site with materials or equipment.
- B. Limit use of premises for work and construction operations to allow for work by other contractors.
 1. Conduct operations so as not to cause unnecessary delay or hindrance to other contractors.
 2. Conduct, adjust, correct, and coordinate work with others to prevent project discrepancies and/or delays.
- C. Assume full responsibility for protection and safekeeping of products stored on premises and work performed until Final Acceptance of the work.
- D. Move stored products under Contractor's control which interfere with operations of the Owner.
- E. Obtain and pay for use of additional storage or work areas needed for construction operations.

1.09 WORK HOURS AND WORK DURING ONGOING ACTIVITIES

- A. Carry on the work as quietly as possible to prevent possible annoyance to adjacent properties. Avoid unnecessary noise at all times. Comply with local noise regulations or requirements. No work, delivery of equipment or materials shall take place between the hours of 5:00 PM and 8:00 AM, or during non-working hours and days without written authorization by the Owner's Representative.
- B. When connecting new utilities to existing, and similar operations, the contractor shall time and coordinate with Owner's Representative, facility operators, and utility companies such operations to minimize interference with existing activities and operations.

1.10 MATERIALS

- A. Unless otherwise noted or scheduled, materials and equipment specified and used in the work of this Contract shall be new, in first class condition, and suited to the intended use.
- B. Materials shall be delivered to the site and stored in original containers sheltered from the elements, but readily accessible for inspection by the Owner's Representative until installed.
- C. Materials of the same general type shall be of the same make and quality throughout the work to provide uniform appearance, operation, and maintenance ease.
- D. Equipment specified by manufacturer's number shall include all controls and accessories listed in catalog as standard equipment. Furnish optional or additional accessories as specified.
- E. Where no specified make of material or equipment is specified, any product by a reputable manufacturer which conforms to the requirements of the Contract Documents may be used with the Owner's Representative's acceptance.
- F. Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products.
- G. Equipment items shall be supported by service organizations, which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the Specified Warranty Period.

1.11 NUISANCE WATER

- A. The Contractor shall protect the work, at all times, from damage and shall take measures to prevent delays in the progress of the work caused by nuisance water, such as rainfall, irrigation water and groundwater.
- B. The Contractor shall dispose of nuisance water using appropriate mechanical means at their sole expense and without adverse effects upon the Owner's, or any other property.
- C. The Contractor shall comply with all applicable non-point source pollution regulations required by the Owner.

1.12 REFERENCE POINTS

- A. The Contractor shall leave existing stakes and reference points in their existing locations unless directed or authorized otherwise by the Owner's Representative. The Contractor shall set additional stakes and reference points as necessary to properly establish horizontal and vertical controls required for the work.

1.13 COORDINATION

- A. The Contractor shall coordinate all items of its work to assure efficient and orderly sequence of installation of construction elements.
 - 1. The Contractor shall make provisions for accommodating items installed by the Owner or under separate contracts.
 - 2. The Contractor shall coordinate and cooperate fully with all other agencies, sub-contractors, or utility company personnel furnishing labor, materials, or services, so that the work, as a whole, shall be executed in the most efficient manner and without conflict or delay.
- B. The Contractor shall verify that characteristics of interrelated operating equipment are compatible and coordinate work having interdependent responsibilities for installing of mechanical, irrigation, or electrical work, which may be indicated diagrammatically on Drawings.
- C. The Contractor shall coordinate space requirements and installation of work, which is indicated diagrammatically on Drawings.
 - 1. Follow routing shown for pipes and conduits as closely as possible, run lines parallel with lines of construction edges whenever possible.
 - 2. Utilize spaces efficiently for other installations, for maintenance, and for repairs.
 - 3. Work out all conditions involving work of all trades in advance of installation. If necessary, and before work proceeds in areas with constricted clearances, prepare supplementary drawings for Owner's Representative review, showing all work in "tight" areas. Provide supplementary drawings and additional work necessary to overcome spatially constricted conditions.
- D. Differences or disputes concerning coordination, interference or extent of work between divisions shall be decided by the Owner's Representative.
- E. Access Doors and Panels: Coordinate access door and panel requirements with each trade installing work to which access must be available to the Owner's Representative from time to time.

1.14 CUTTING AND PATCHING

- A. Contractor shall be responsible for all cutting, fitting, or patching of work which may be required to make its several parts come together properly and fix it to receive or be received by work of other trades.

- B. Costs incurred by defective or poorly timed work shall be borne by the responsible party, as determined by the Owner's Representative. Contractor shall not endanger any work, persons or construction by cutting, digging, or otherwise, and shall not alter the work of any other contractor except as acceptable to the Owner's Representative.
- C. Patching of openings for new installations and openings resulting from the removal or relocation of an installation shall be done with material of the same type adjoining openings and as acceptable to the Owner's Representative.

1.15 CLEANING DURING CONSTRUCTION

- A. Execute daily housekeeping and weekly cleaning operations to keep the work, site, streets, and adjacent properties free from accumulations of waste materials, rubbish, and windblown debris resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove hazardous waste materials, debris, and rubbish from the site periodically and properly dispose of such materials at legal disposal areas.
 - 1. Location of legal disposal sites and all costs incurred from waste disposal and transportation shall be the responsibility of the contractor.
 - 2. Waste material or debris shall not be buried or burned on the site.
- D. The Owner's Representative may, at any time during construction, order general clean-up of the site at no additional cost to the Owner.

1.16 PROJECT COMPLETION

- A. Conform to Section 01 77 00 - Contract Closeout.
- B. The Contractor shall, at completion of the project, leave the installed work properly operating and in a thoroughly clean condition.
- C. Thoroughly instruct the Owner's Representative and any applicable operation and maintenance personnel in the contents of the "operations and maintenance manual." Refer to Section 01 33 00 – Submittal Procedures.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

1.01 SUMMARY

- A. Section Includes: Specific requirements for submission and approval of products other than those specified or noted on the Drawings.
- B. Related Requirements:
 - 1. Section 01 33 00 – Submittal Procedures
 - 2. Other applicable Sections of the Specifications

1.02 DEFINITIONS

- A. Substitutions - General: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitutions for Cause: Changes proposed by Contractor that are required due to changed project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
- C. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.03 INTENT OF SPECIFICATIONS – PRODUCT SELECTION

- A. When a material, article, or process is indicated or specified by trade, patent, proprietary name, or name of manufacturer, the Specification shall be deemed to be followed by the words "or equal, as accepted in writing by the Owner's Representative" and a request for substitution shall be submitted as specified in this Section. Provide only the named product or products where products are specified followed by the words "no substitution." Substitutions are not allowed.
- B. The naming of more than one manufacturer in a Section does not imply that all products produced by the listed manufacturers are acceptable for use on the project. Where more than one proprietary name, process, and product is specified, the Contractor may provide materials or equipment of any one of the manufacturers specified if it is in full compliance with the Contract Documents and is acceptable to the Owner's Representative.
- C. Costs incurred due to requests, changes or revisions resulting from substitutions requiring Drawings or services of the Owner's Representative or Project Consultants to facilitate purchase, installation or erection of any portion of the work shall be borne by the Contractor. A flat hourly rate, as agreed upon, shall be paid by the Contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the Contractor as determined by the Owner's Representative.

1.04 ACTION SUBMITTALS

- A. Procedures: In accordance with Section 01 33 00 – Submittal Procedures.
- B. Substitution Requests:
 - 1. Include sufficient data, drawings, samples, literature, and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.

2. Substitution Request Form. As mutually agreed upon by Architect and Contractor.
3. Documentation:
 - a. Submit a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - b. Sufficient data, drawings, samples, literature, and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.
 - c. Statement indicating why specified product, fabrication, or installation cannot be provided, if applicable or requested.
 - d. Samples for review, if applicable.
 - e. Certificates and qualification data.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Cost information, including a proposal of change, if any, in the Contract Sum.
 - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - j. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

C. Submittal Timing:

1. Prior to Bidding:
 - a. A request for substitutions will be considered if received within 10 calendar days from the bid opening date.
 - b. Approval of substitutions shall be accepted or denied by the City at least 3 calendar days before bid opening.
 - c. If a decision on use of a substitute cannot be made within these time limits, the product specified shall be used.
2. Following Award of Contract:
 - a. Substitutions for Cause: Submit requests immediately on discovery of need for change, but not later than 15 working days prior to time required for preparation and review of related submittals.
 - b. Substitutions for Convenience: Submit within 20 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1.05 CONSIDERATION OF SUBSTITUTIONS

A. General:

1. Materials and equipment for the work shall be the standard product of a manufacturer regularly engaged in the production of such materials and equipment. Product options or substitutions shall not be the basis for any price increase above the original Contract Sum.
2. Substitutions which are equal in quality, efficiency, durability and utility to those specified will be permitted, subject to the following conditions.
3. The Owner's representative shall review such proposed substitutions and determine if a substitution is acceptable. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements.
4. Failure of the Contractor to submit proposed substitutions for review in the manner specified shall be sufficient cause for rejection by the Owner's Representative of any substitutions otherwise proposed.

5. Failure to place orders for specified equipment or material sufficiently in advance of the scheduled date of installation shall not be considered a valid reason upon which the Contractor may base a request for any substitutions or for any deviations from the Contract Documents.
- B. Substitutions for Cause: Owner's Representative will consider Contractor's request for substitution for cause when the following conditions are satisfied. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements:
1. Substitution request is fully documented and properly submitted.
 2. Requested substitution will not adversely affect the Project Construction Schedule.
 3. Requested substitution has received necessary approvals of authorities having jurisdiction, if applicable.
 4. Requested substitution provides specified warranty.
 5. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- C. Substitutions for Convenience: Not allowed, except as otherwise specified.
- D. Action by Owner's Representative:
1. Substitutions shall be favorably reviewed and accepted by the Owner's representative in writing prior to implementation. Favorable review shall not relieve the Contractor from complying with the requirements of the Contract Documents, and the Contractor shall be responsible for all expenses for any changes resulting from acceptable substitutions which affect other parts of the work.
 2. If necessary, Owner's Representative will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution.
 3. Owner's Representative will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 4. Forms of Acceptance: Change Order, Construction Change Directive, or Supplemental Instructions for minor changes in the Work.
- E. The first or only named manufacturer is the basis for the project design and the use of alternative-names, second-names, or unnamed manufacturer's products may require modifications in the project design and construction.
1. Costs incurred due to requests, changes or revisions resulting from substitutions requiring drawings or services of the Owner's representative or project consultants to facilitate purchase, installation or erection of any portion of the work, shall be borne by the contractor. A flat hourly rate, as agreed upon, shall be paid by the contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the contractor as determined by the Owner's representative.
- F. Contractor shall furnish full information concerning the material or articles being proposed for substitution.
1. Testing of a proposed substitute material to assure compliance with the Specifications may be required by the Owner's representative at the contractor's expense.
 2. Samples shall be submitted for review as specified in Section 01 33 00 – Submittal Procedures.
 3. Equipment, material, and articles installed or used by the contractor without required review, shall be at the contractor's risk.
- G. Substitutions shall comply with or exceed all requirements of size, function, structure, durability, and appearance without exception.
1. Use of accepted substitutions shall in no way relieve the contractor from responsibility for compliance with the Contract Documents after installation.
 2. The contractor shall assume all extra costs caused using such substitutions where they affect other work or trades.

TECHNICAL SPECIFICATIONS {replace with Project name}
{Include locations (address or City) if necessary}

SECTION 01 30 00

ALTERNATES

PART 1 - GENERAL

1.01 SUMMARY

- A. Scope of work:
 - 1. Alternate Bids shall state the NET AMOUNT to be ADDED TO or DEDUCTED FROM the BASE BID PRICE or the CONTRACT SUM, as applicable.
 - 2. The changes described in each Alternate shall only become incorporated into the work if the Owner elects to proceed with one or more or any combination of the Alternative and amends the Owner-Contractor Agreement accordingly. Alternate selections may occur prior to the Contract Date, or may, by the Agreement, be deferred for possible selection at a subsequent date.
 - 3. Acceptance or Rejection: Acceptance or rejection of each Alternate Bid is at the discretion of the Owner. None, any, or all Alternate Bid item(s) may be accepted or rejected in any sequence by the Owner.
 - 4. Costs: Include under each Alternate Bid the net amount of all changes in costs, whether additive or deductive, resulting to the work affected by the Alternate Bid item(s).
 - 5. Modifications to the work shall require furnishing and installing the selected Alternate materials and labor to the satisfaction of the Owner's Representative at no additional cost to the Owner other than described in the applicable Alternate Bid.
 - 6. Extent of Alternate Bid Items: Bidders shall determine the full extent of work affected by each Alternate and shall make full and proper allowance for such extent in the preparation of the Alternate Bid.
 - 7. Furnish all labor, materials, equipment, facilities, transportation, and services to complete all work relating to each Alternate listed below.
 - 8. No increase in Contract days or extension of Contract completion schedule shall be made for work required by Alternate Bid improvements.
- B. Related sections can include, but are not necessarily limited to:
 - 1. All applicable sections of the Specifications.

PART 2 - PRODUCTS

- 2.01 ALTERNATE "1": REPLACEMENT OF THE EXISTING PERIMETER STORM DRAIN LINES WITHIN EXISTING FIELD:
 - 1. Furnish all labor, materials, equipment, facilities, transportation, and services to complete all work relating to the removal of the existing perimeter drain lines, stockpiling of field base rock, installation of new storm drain line, backfilling, and replacement and compaction of existing field rock material as described by other applicable portions of the Contract Documents.
- 2.02 ALTERNATE "2": REPLACEMENT OF THE EXISTING PERIMETER FENCING FABRIC.
 - 1. Furnish all labor, materials, equipment, facilities, transportation, and services to complete all work relating to the removal of exiting fence fabric and the installation of new fence fabric described by other applicable portions of the Contract Documents.

PART 3 - EXECUTION

3.01 ADVANCE COORDINATION BY CONTRACTOR

1. Upon Owner acceptance of any Alternate, all personnel and material suppliers affected shall be immediately notified by the contractor as to the nature and extent of additional or lesser work implied by such acceptance.

3.02 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum (ls) for "ALTERNATE #1" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services to complete all work associated with "ALTERNATE #1 including, but not limited to, removal and stockpiling of existing field base rock, trenching and removal of existing storm drain pipe, furnishing and installation of new storm drain pipe, backfilling of existing trench, and replacement and compaction of field base rock as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.
- B. The full contract cost per linear feet (lf) for "ALTERNATE #2" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services to complete all work associated with "ALTERNATE #2 including, but not limited to, removal and off-haul of existing fence fabric, and furnishings and installation of 161 lf of new fencing fabric as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Procedures to be followed in preparing and submitting the following supplementing and superseding those included in the General Conditions.
 - a. Photographic documentation.
 - b. Construction Schedule.
 - c. Submittal Schedule.
 - d. Project directory.
 - e. Product list.
 - f. Shop drawings.
 - g. Design-build engineering design and drawings.
 - h. Product data.
 - i. Samples.
 - j. Procedures for:
 - 1) Action Submittals.
 - 2) Informational submittals.
 - 3) Deferred submittals.
 - 4) Delegated design services.
 - k. Colors and patterns submittals.
 - l. Operating and maintenance manuals.
 - m. Field samples and mockups, including on-site review of materials, colors, and textures.
 - n. Requests for Information (RFI's).
 - 2. Final distribution of submittals.
- B. Related Requirements:
 - 1. Section 01 25 00 - Substitution Procedures.

1.02 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Owner's Representative's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.
- B. Informational Submittals: Written and graphic information and physical samples indicated in individual Specification Sections as informational submittals that do not require Owner's Representative's responsive action.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.03 GENERAL

- A. Comply with the requirements specified in addition to submittal review procedures and requirements of the General Conditions.

- B. Do not commence any portion of the Work requiring submission of a shop drawing, product datum, or sample until the submittal has been reviewed by Owner's Representative and appropriate consultant. Such portions of the Work shall be in accordance with reviewed submittals.

Shop drawings, product data, samples and supporting data shall be prepared by Contractor or its suppliers but shall be submitted to Owner's Representative by Contractor as the instruments of the Contractor.

1. Contractor shall check the drawings of its suppliers as well as its own drawings before submitting them to Owner's Representative.
 2. Contractor shall ascertain that shop drawings, product data, and samples meet all requirements of the Contract Documents and also conform to the structural and space conditions. If shop drawings, product data, and samples show variations from Contract Documents, whether because of standard shop practice or other reasons, Contractor shall make special mention thereof in its letter of transmittal and describe the reasons why there are variations.
 3. Contractor shall be fully responsible for observing the need for and making changes in arrangement and manner of installation of piping, connections, wiring, and similar items that may be required by equipment it proposes to supply, both as pertains to its own work and work affected under other parts, headings, or Divisions of the Contract Documents.
 4. Prior to submittal to Owner's Representative, each shop drawing, product datum, and sample submitted for review shall be stamped, dated, and signed by Contractor, verifying that it has been checked by Contractor to be in accordance with the Contract Documents. Submittals not signed by Contractor will be returned without review by the Owner's Representative.
- C. Miscellaneous systems not specifically specified but installed to meet code requirements or for other reasons are subject to Owner's Representative's review prior to installation.

1.04 COORDINATION OF SUBMITTALS

- A. Prior to submittal, use all means necessary to fully coordinate all material, including, but not necessarily limited to:
1. Determine and verify all interface conditions, catalog numbers and other data.
 2. Coordinate with other trades as required.
 3. Clearly indicate all deviations from requirements of the Contract Documents.
 4. Verify that each item and the submittal conform in all respects with the requirements of the Contract Documents.
- B. The following products do not require further review except for interface within the Work, unless indicated otherwise:
1. Products specified by reference to standard specifications such as ASTM and similar standards.
 2. Products specified by manufacturer's name and catalog model number.
- C. By affixing the Contractor's signature to each submittal, the Contractor certifies that this coordination has been performed.

1.05 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 2. The Contractor may be held liable for delays so occasioned.

1.06 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals.
1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.

2. On resubmittals, reference the original submittal number.
- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each copy of each submittal, and elsewhere as required for positive identification, clearly show the submittal number in which the item was included.
- D. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Owner's Representative for review.
- E. Quality Control Set: Maintain returned final set of submittals at project site, in suitable condition and available for quality control comparisons by Owner's Representative.

1.07 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, necessary approvals, possible revisions, resubmittals, and for placing orders and securing delivery.
- B. In scheduling, allow for review by the Owner's Representative in a timely manner following receipt of the submittal by the Owner's Representative.
- C. Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the Contract completion date.

1.08 SUBSTITUTIONS

- A. Substitution requests shall be written, timely and submitted in accordance with the procedures specified in Section 01 25 00 - Substitution Procedures.

PART 2 - SUBMITTALS

2.01 PROJECT DIRECTORY

- A. After execution of the Contract but prior to commencement of Work, Contractor shall submit to Owner's Representative a Project Directory listing subcontractors and vendors on the Project and giving a brief description of their scope of work, firm name, contact person, address, phone number, and fax number.

2.02 SUBMITTAL SCHEDULE

- A. Contractor shall prepare and submit to Owner's Representative a "Submittal Schedule" when required by the General Conditions showing scheduled dates of submittals and date required for return of submittals to Contractor.
- B. Contractor shall provide in schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary provided it is not a deferred approval item. Based on the number and complexity of submittals at any one time, Owner's Representative's review period may be longer than 10 days.
- C. Dates on "Submittal Schedule" shall be agreed upon by both Owner's Representative and Contractor.

2.03 PRECONSTRUCTION PHOTOGRAPHS

- A. Before commencement of work on the site, take digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by the Owner's Representative.
- B. Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as cracking or other damage caused by demolition, site preparation, and building construction operations.
- C. Submit digital file as specified for Construction Photographs.
- D. Submit before Work begins.

2.04 CONSTRUCTION PHOTOGRAPHS

- A. Provide digital photographs taken weekly of site and construction from beginning of demolition to completion of exterior work. Photographs shall be produced by the contractor in a manner deemed acceptable to Owner's Representative.
- B. Photographs shall:
 - 1. Provide factual presentation.
 - 2. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- C. Views:
 - 1. Consult with Owner's Representative for instructions on views required.
 - 2. View and location for each orientation shall be maintained throughout Project.
- D. Digital File:
 - 1. File Format: Joint Photographic Experts Group (JPEG), unless otherwise directed by Owner's Representative.
 - 2. Minimum Resolution: 2400 x 3000 pixels.
 - 3. Provide digital date/time information in each image file (EXIF metadata).
 - 4. Digital images shall be exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
 - 5. Prints are not required.

2.05 CONSTRUCTION SCHEDULE

- A. In accordance with the General Conditions, prepare a comprehensive schedule of basic operations of the entire Project in the form of a Critical Path (CPM) network or other appropriate method acceptable to Owner's Representative.
 - 1. Indicate critical dates for submission of specified shop drawings, product data, samples, and certificates. Provide in Schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary. No extension of time will be granted because of Contractor's failure to make submittals to allow for review and processing by Owner's Representative in accordance with the accepted milestones. Specific submittals considered by the Contractor to be on the "critical path" shall be indicated on the Schedule.
 - 2. Include decision dates for products specified by allowance and for selection of colors/finishes.
- B. The schedule shall be the basis for establishing starting and completing dates of Work for the Project.
- C. Conform to accepted schedule, and arrange work in such a manner that it will be installed in accordance with the schedule.

- D. Establish a program to reevaluate and update the schedule periodically in accordance with requirements of the Project. Submit first schedule 2 weeks after Notice to Proceed.
- E. Coordinate letting of subcontracts, material purchases, delivery of materials, sequence of operations, and similar activities to conform to accepted schedule, and furnish proof of conformance as may be required by Owner.
- F. In case Owner determines, after consultation with Owner's Representative, that Contractor fails or refuses to take appropriate and necessary measures to complete the Work in accordance with the accepted schedule or within time to which such completion may be extended, the Contract, or any part thereof, may be terminated under the provisions of the General Conditions.
- G. Submit to the Owner's Representative for review, within 45 calendar days after date of the Contract or as allowed by the Schedule, all submittals for equipment, fabrications, and specialty items as listed in each Section of the Specifications.

2.06 SHOP DRAWINGS

- A. Shop drawings shall be drawn to a scale, be completely dimensioned, and be sufficiently large to show all pertinent aspects of the item and its method of connection to the Work, or as specifically indicated elsewhere in other Sections of these Specifications.
- B. Entitle shop drawings with name of the Project and list applicable divisions, sections, article, or reference on each sheet.
- C. Submit separate items on separate sheets.
- D. The reproduction of any Contract Documents for use in a shop drawing submittal is not permitted.
 - 1. If the Contractor requires, it may request drawings/backgrounds from the Owner's Representative to use in its preparation of shop drawings. The Owner's Representative will send drawings, via e-mail, only after the following is completed:
 - a. Contractor to complete a "CAD Release & Indemnity Agreement," or similarly named document, to be provided by Owner's Representative. Sign and return to the Owner's Representative.
 - b. Requests for drawings prepared by consultant of Owner's Representative shall be directed to the office of the respective consultant and are subject to each consultant's firm policies.
 - 2. Review comments of the Owner's Representative or it's consultants will be shown on the copy returned to the Contractor. The Contractor shall make and distribute additional copies as are required for its purposes.
 - 3. The Owner shall be provided with a copy of shop drawing transmittals only if requested.

2.07 PRODUCT DATA

- A. Manufacturer's standard drawings shall be modified to delete information which is not applicable and shall be supplemented to provide additional information where so required.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data shall:
 - 1. Have each copy clearly marked to identify pertinent materials, products, models, finishes, etc.
 - 2. Show clearly standard options included.
 - 3. Show dimensions and clearances required.
 - 4. Show performance characteristics and capacities.
 - 5. Show wiring diagrams and controls, and show necessary rough-in requirements for utility services and connections, where applicable.
 - 6. Include manufacturer's installation instructions on 8.5-inch by 11-inch format.

- C. Identify each item of product data by reference to sheet and detail numbers of Contract Drawings and/or specific reference to Articles or paragraphs of a Specification Section.
- D. Where product data, as submitted, contains extraneous information, unmarked options, or is incomplete, it will be returned to Contractor without review.

2.08 SAMPLES

- A. Contractor shall forward to Owner's Representative, at its own expense, samples designated for use on the Project. Include material, equipment, textures, colors, and fabrics in sizes and quantities as required by the Drawings and Specifications or as requested by Owner's Representative. Where there is an expected range of color or texture variations for the specified item, submit sufficient number of samples to illustrate range.
- B. Submit and resubmit samples until accepted by Owner's Representative.
- C. No review of a sample shall be taken in itself to change or modify the Contract requirement.
- D. Finishes, materials, and workmanship in the completed Project shall match accepted samples.
- E. Samples of value will be returned to Contractor, when requested in writing at time of submittal, for its use in the Project after review, analysis, comparison, or testing as may be required by Owner's Representative.
- F. No samples shall be incorporated into the Work, unless otherwise specified or specific approval is given by Owner's Representative.

2.09 COLORS

- A. Unless the color and pattern are shown or specified, whenever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to Owner's Representative for review and selection.
- B. Completely describe the relative costs and capabilities of each color and pattern, unless available colors and patterns have identical costs and wearing capabilities.

2.10 FIELD SAMPLES AND MOCKUPS

- A. Contractor shall comply with requirements specified in respective Specification Section.

2.11 REQUESTS FOR INFORMATION (RFI'S)

- A. RFIs shall be submitted by the Contractor or by subcontractors to the Contractor who shall then assign the request an RFI number and forward the request on to the Owner's Representative. RFIs from contractors under separate contract with Owner, and performing work concurrently with work under this Contract, shall submit RFIs through the Contractor for coordination.
- B. Subcontractors shall not submit RFIs directly to the Owner's Representative.
- C. Each RFI shall be given a discrete, consecutive number such as "001," "002," "003," etc. Revisions or resubmittal of the same RFI shall maintain the original RFI number but be otherwise identified with a suffix such as "001A" for first revisions, "001B" for second revision, etc.

- D. Contractor shall identify in the RFI the specific issue that the Contractor is requesting information on, where the issue is referred to in the Contract Documents, and what is the Contractor's proposed solution to the apparent conflict. RFIs not addressing these three issues will be rejected.
- E. The Owner's Representative's response to RFIs will confirm a stated interpretation or otherwise interpret the design intent and may include furnishing an alternative conflict resolution.
- F. The Owner's Representative will review and process RFIs in an average of 10 working days. It is acknowledged and understood that some RFIs will take longer to answer than others.
- G. RFI Log: Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Owner's Representative, the Contractor shall furnish copies of the log showing all outstanding RFIs.

PART 3 - EXECUTION

3.01 PROCEDURES FOR ACTION SUBMITTALS

- A. General: Submit as specified in the General Conditions and Specification Sections.
 - 1. Submittals shall be made to Owner's Representative. Submittal of shop drawings via e-mail attachment will be generally accepted, though when requested by Owner's Representative, Contractor shall provide full size and half size shop drawings.
 - 2. Subcontractors shall make submittals to Contractor.
 - 3. Submittals shall not be made directly to the Owner, unless specifically requested, or consultants of the Owner's Representative. Even if a submittal is reviewed and returned by a consultant of the Owner's Representative, such submittal shall be considered as not reviewed if not submitted through the Owner's Representative.
 - 4. If more than one resubmittal of the same item or its component is required, the Contractor will be billed for additional review time and materials at current billing rates of the Owner's Representative.
- B. Unless otherwise agreed or requested, Owner shall be provided with a copy of transmittals only.
- C. Copies required in each Action Submittal shall be as follows unless otherwise mutually agreed or specified in a respective Specification Section:
 - 1. Shop Drawings and Product Data: Digital PDF (Portable Document Format) files via email, ftp site, or other secure file transfer protocol.
 - a. Digital submittals shall be fully compatible with Adobe Acrobat Reader.
 - b. All parties shall view and print with Adobe Acrobat (fully up-to-date) to ensure compatibility, unless agreed upon otherwise.
 - c. Owner's Representative reserves the right to request hard copies of submittals as follows:
 - 1) Shop Drawings: Three sets of bond prints.
 - 2) Product Data: Three sets.
 - 2. Samples:
 - a. Unless otherwise specified, submit samples in the quantity which is required to be returned, plus 2 which will be retained by the Owner's Representative.
 - b. By prearrangement in specific cases, a single sample may be submitted for review and, when reviewed, be installed in the Work at a location agreed upon by the Owner's Representative.
- D. Identification:
 - 1. Properly identify each submittal with name of Project, Contractor, subcontractor, and date.
 - 2. Accompany each submittal by an acceptable transmittal form referring to Project name and Specifications Section number, and paragraph number, when applicable, for identification of each item.
 - 3. Consecutively number shop drawings for each Section of work; retain numbering system throughout all revisions.

4. Allow clear space on each drawing, product datum, and sample for stamp of Contractor and Owner's Representative. Where clear space is not available on samples, submit with tags or stickers attached.
- E. Stamp each shop drawing, product datum, and sample to certify that it has been coordinated and checked for completeness and compliance with requirements of the Work, Project, and Contract Documents.
- F. Review by Owner's Representative:
 1. General:
 - a. Except for finish, color, and other aesthetic matters left to Owner's Representative's decision by Contract Documents, Owner's Representative's review of shop drawings, product data, and samples is only for Contractor's convenience in following work and does not relieve Contractor from responsibility for deviations from requirements of Contract Documents.
 - b. Do not construe review by Owner's Representative as a complete check or relief from responsibility for errors or omissions of any sort in shop drawings or schedules or from necessity of furnishing work required by Contract Documents that may not have been shown on shop drawings.
 - c. Review of a separate item by Owner's Representative does not indicate review of complete assembly in which it functions.
 - d. Review comments of the Owner's Representative (or its consultants) will be shown when it is returned to the Contractor. The Contractor shall make and distribute such copies as are required for its purposes.
 2. Submittals not stamped by Contractor and submittals which, in opinion of the Owner's Representative, are incomplete, contain numerous errors, or have not been checked or have only been checked superficially will be returned to Contractor for resubmittal.
 3. Processing:
 - a. Owner's Representative will review shop drawings, product data, and samples in accordance with agreed upon "Submittal Schedule" and will return them to Contractor imprinted with stamp of the Owner's Representative.
 - b. Notations by Owner's Representative which increase Contract cost or time of completion shall be brought to attention of the Owner's Representative before proceeding with work. Failure to do so will result in the increased costs being borne by the Contractor.
 - c. Each submittal will be stamped indicating appropriate action required of the Contractor.
 - d. If for any reason the Contractor cannot comply with the notations, Contractor shall re-submit submittal. In the transmittal letter accompanying the re-submittal, clearly describe the reason(s) for not being able to comply with the notations.
- G. Consultants' Review:
 1. Submittals requiring review by Owner's Representative or its consultants shall be sent to the Owner's Representative. Owner's Representative will forward submittal to applicable consultant for their review.
 2. Processing shall be in accordance with consultants stamp.
 3. If action required by consultants stamp is not clear, Contractor shall immediately notify the Owner's Representative for a clarification.
 4. If returned submittal also includes stamp by the Owner's Representative, processing shall be in accordance with the Owner's Representative's stamp.
- H. Revisions:
 1. Make revisions pertinent to by comments noted on the submittal.
 2. If the Contractor considers any required revision to be a change, they shall so notify the Owner's Representative as provided for in the General Conditions.
 3. Show each revision by number, date, and subject in a revision block on the submittal.
 4. If for any reason Contractor cannot comply with the notations, Contractor shall resubmit submittal.

- I. Revisions after Review: When a submittal has been reviewed by the Owner's Representative, resubmittal for substitution of materials or equipment will not be considered unless accompanied by an acceptable explanation as to why the substitution is necessary, or unless directed by the Owner.

3.02 PROCEDURES FOR INFORMATIONAL SUBMITTALS

- A. General:
 1. Prepare and submit "Informational Submittals" where required by the Specifications.
 2. Number of Copies: Submit PDF as specified for Action Submittals unless otherwise indicated. Owner's Representative will not return copies.
 3. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
 4. Test and Inspection Reports: Comply with requirements specified in Section 01 45 00 – Quality Control.
- B. The following items shall be considered "Informational Submittals" whether or not identified as such in the respective Specification Sections.
 1. Qualification Data.
 2. Certificates for or from the following:
 - a. Installers.
 - b. Manufacturers.
 - c. Products and materials.
 3. The following Reports:
 - a. Material and Product Test Reports.
 - b. ICC-ES Reports:
 - c. Preconstruction Test Reports.
 - d. Compatibility Test Reports.
 - e. Field Test Reports.
 4. Maintenance Data.
 5. Design Data.
 6. Manufacturer's Instructions.
 7. Manufacturer's Field Reports.
 8. Insurance Certificates and Bond.
 9. Construction photographs as specified .
 10. Material Safety Data Sheets (MSDSs).

3.03 PROCEDURES FOR DEFERRED SUBMITTALS

- A. Deferred Approval submittals shall first be submitted to the Owner's Representative. If the Owner's Representative reviews the submittal with corrections noted, those corrections must be addressed and the submittal returned to the Owner's Representative. Once the Owner's Representative has no comments on a submittal, it will be returned and shall be resubmitted with approval by all government agencies having jurisdiction."
- B. The Contractor shall then submit to these agencies and make revisions required by these agencies until approval by all government agencies having jurisdiction is obtained. See Section 01 11 00 - Summary of Work for further requirements.
- C. When approval has been obtained by all governing agencies having jurisdiction, the approved submittal shall be resubmitted to the Owner's Representative for final approval. It is the responsibility of the Contractor to verify acceptability of government agency required revisions with the Owner's Representative. If the resubmittal to the Owner's Representative includes revisions that had not been previously approved by the Owner's Representative in writing, the Owner's Representative has the right to reject these revisions. It is then the Contractor's responsibility to resubmit to government agencies having jurisdiction to obtain approval of the Owner's Representative's noted corrections.

3.04 PROCEDURES FOR CLOSEOUT AND MAINTENANCE MATERIAL SUBMITTALS

- A. Number of Copies: Two, unless otherwise directed by Owner's Representative.
- B. Comply with additional Closeout Procedures specified for the Project.

3.05 FINAL DISTRIBUTION AFTER REVIEW

- A. In addition to copies of submittals required by Contractor, subcontractors, suppliers, and fabricators, Contractor shall make distribution to:
 - 1. Contractor's jobsite file.
 - 2. Project Record Documents file; see additional requirements specified in Section 01 78 39 - Project Record Documents.

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

1.01 SUMMARY

- A. Section Includes:
 - 1. The codes and regulations applicable to the Work.
 - 2. Code and regulatory abbreviations used in the Specifications.
- B. Related Requirements:
 - 1. Section 01 42 00 - References, Abbreviations, and Definitions; requirements relating to industry standard references used in the Specification Sections.

1.02 APPLICABLE CODES AND REGULATIONS

- A. Codes which apply to this Project include, but are not limited to, the following including additions, changes, and interpretations adopted by the enforcing agency in effect as of the date of these Contract Documents.
 - 1. State of California Code of Regulations (CCR):
 - a. Title 8, Industrial Relations.
 - b. Title 19, Public Safety.
 - c. Title 24, Building Standards Code.
 - 1) Part 2, California Building Code.
 - 2) Part 3, California Electric Code.
 - 3) Part 4, California Mechanical Code.
 - 4) Part 5, California Plumbing Code.
 - 5) Part 6, California Energy Code.
 - 6) Part 9, California Fire Code.
 - 2. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
 - a. Control of Work: Conform to Section 5.
 - b. Control of Materials: Conform to Section 6.
 - 3. The following additional Codes and Standards:
 - a. California Occupational Safety and Health Act Standards (Cal-OSHA).
 - b. Occupational Safety and Health Act (OSHA).
 - c. Air Quality Standards of the Bay Area Air Quality Management District of the California Air Resources Board including emissions and dust during construction.
 - d. Americans with Disabilities Act (ADA) Standards.
 - e. Environmental Regulations including:
 - 1) 22 CCR, Section 66260 et seq.; California Hazardous Waste Management Regulations.
 - 2) 40 CFR, Part 260 et seq.; Hazardous Waste Management System.
 - 3) 42 USC, Section 6901 et seq.; Resource Conservation and Restoration Act (RCRA).
 - 4) National Pollutant Discharge Elimination System (NDPES).
 - f. National Fire Protection Association (NFPA): Standards 13, 24, 72, and 80.
 - g. National Electrical Code (NEC).
- B. All work shall meet or exceed the requirements of the above codes.
- C. References in the Specifications to "code" or to "building code," not otherwise identified, shall mean the foregoing specified codes, together with the additions, changes, amendments, and interpretations adopted by the enforcing agency and in effect on the date of these Contract Documents. Nothing on the Drawings or in the Specifications shall be interpreted as requiring or permitting work that is contrary to these rules, regulations, and codes.

- D. Where other regulatory requirements are referenced in these Specifications, the affected work shall meet or exceed the applicable requirements of such references.
- E. Regulatory requirements referred to shall have full force and effect as though printed in these Specifications.
- F. Where the Drawings or Specifications call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by said laws, codes, rules, and regulations, the provisions of the Drawings and Specifications shall take precedence over said laws, codes, rules, and regulations.

1.03 OTHER APPLICABLE LAWS AND REGULATIONS

- A. All applicable federal, state, and local laws, regulations of governing utility districts, regulations of the state fire marshal, federal, state and local environmental regulations, and the various other authorities having jurisdiction over the construction of the Project shall apply to the Contract throughout and they shall be deemed to be included in the Contract the same as though printed in these Specifications.
- B. Discrepancies between these codes, rules, and regulations and the Contract Documents shall be brought to the attention of the Owner's Representative for resolution.

END OF SECTION

SECTION 01 42 00

REFERENCES, ABBREVIATIONS, AND DEFINITIONS

1.01 SUMMARY

- A. Section Includes:
 - 1. Requirements for standard references used in the various Specification Sections.
 - 2. Standard reference abbreviations used in the Project Manual.
 - 3. Definitions of terms used in the Project Manual.
- B. Related Requirements:
 - 1. Section 01 41 00 - Regulatory Requirements

1.02 STANDARD SPECIFICATIONS

- A. The Contract Documents contain references to various standard specifications, codes, practices, and requirements for materials, work quality, installation, inspections, and tests published and issued by the organizations, societies, and associations. Such references are hereby made part of the Contract Documents to the extent required.
- B. When standard specifications are included by abbreviation and number only, it is assumed that the Contractor is familiar with and has ready access to the specified standards.
- C. When the effective date of a reference standard is not given, it shall be understood that the current edition or latest revision thereof and any amendments or supplements thereto in effect on the date of original issue of these Contract Documents, as indicated on the cover, shall govern the Work.
- D. Reference standards are not furnished with the Contract Documents, because the Contractor, subcontractors, manufacturers, suppliers, and the trades involved are assumed to be familiar with their requirements.
- E. Contractor shall obtain its own copies of required specified referenced publications.
- F. The specification or standard referred to shall have full force and effect as though printed in these Specifications.
- G. In addition to those standards specifically referenced in the Specifications, comply with the accepted industry standards and trade association recommendations for the respective portions of Work.
- H. In the case of difference between referenced standards and the Contract Documents, the most stringent requirements prevail.

1.03 STANDARD SPECIFICATION ABBREVIATIONS

- A. In addition to abbreviations indicated on the Drawings, references in the Project Manual to trade associations, technical societies, recognized authorities, and other institutions may include the following organizations, which are sometimes referred to by only the corresponding abbreviations. Not all abbreviations are listed, and not all listed abbreviations are used.
- B. Abbreviations:
 - 1. AA Aluminum Association
 - 2. AAADM American Association of Automatic Door Manufacturers
 - 3. AAMA American Architectural Manufacturer's Association.
 - 4. AASHTO American Association of State Highway and Transportation Officials

5. ACI American Concrete Institute
6. AEIC Association of Edison Illuminating Companies
7. AIA American Institute of Architects
8. AIEEE American Institute of Electrical and Electronic Engineers
9. AISC American Institute of Steel Construction, Inc.
10. AFI Air Filter Institute
11. AJCHN American Joint Committee on Horticultural Nomenclature
12. AMCA Air Moving and Conditioning Association
13. ANSI American National Standards Institute
14. APA APA - The Engineered Wood Association
15. ARI American Refrigeration Institute
16. ASHRAE American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
17. ASLA American Society of Landscape Architects
18. ASME American Society of Mechanical Engineers
19. ASSE American Society of Sanitary Engineering
20. ASTM American Society for Testing and Materials
21. AWMAC Architectural Woodwork Manufacturers Association of Canada
22. AWPA American Wood Protection Association
23. AWI Architectural Woodwork Institute
24. AWS American Welding Society, Inc.
25. AWWA American Water Works Association
26. BHMA Builder's Hardware Manufacturers Association
27. CBC California Building Code
28. CRA California Redwood Association
29. CSI Construction Specifications Institute
30. CLFMI Chain Link Fence Manufacturers Institute
31. CRSI Concrete Reinforcing Steel Institute
32. CS Commercial Standard of National Bureau of Standards, U.S. Department of Commerce
33. DHI Door and Hardware Institute
34. FGMA Flat Glass Marketing Association
35. FM Factory Mutual
36. FS Federal Specification of General Services Administration
37. GA Gypsum Association
38. ICC-ES International Code Council Evaluation Service, Inc.
39. MIL Military Specification of U.S. Department of Defense
40. NAAMM National Association of Architectural Metal Manufacturers
41. NAAWVS North American Architectural Woodwork Standards
42. NAFM National Association of Fan Manufacturers
43. NBS National Bureau of Standards
44. NEC National Electric Code
45. NEMA National Electrical Manufacturers' Association
46. NFC National Fire Code
47. NFPA National Fire Protection Association
48. NIST National Institute of Standards and Technology
49. NLMA National Lumber Manufacturers Association
50. NSF National Sanitation Foundations
51. PCI Precast Concrete Institute
52. PDI Plumbing and Drainage Institute
53. RIS Redwood Inspection Service [Grading Rules]
54. SDI Steel Deck Institute
55. SDI Steel Door Institute
56. SFPA Southern Forest Products Association
57. SMACNA Sheet Metal and Air Conditioning Contractors' National Association, Inc.
58. State of California:
 - a. Caltrans Business and Transportation Agency, Department of Transportation
 - b. SFM Office of State Fire Marshal

c.	DSA	Division of State Architect.
59.	SSPC	SSPC: The Society for Protective Coatings
60.	TCNA	Tile Council of North America
61.	UL	Underwriters' Laboratories, Inc.
62.	WCLIB	West Coast Lumber Inspection Bureau
63.	WDMA	Window and Door Manufacturers Association
64.	WI	Woodwork Institute
65.	WMMP	Wood Moulding & Millwork Producers Association
66.	WRCLA	Western Red Cedar Lumber Association
67.	WWPA	Western Wood Products Association.

1.04 DEFINITIONS

- A. Reference to Drawings: Where the words "shown", "indicated", "detailed", "noted", "scheduled". or words of similar import are used, it shall be understood that reference is made to the Drawings accompanying these Specifications, unless otherwise noted.
- B. Addendum: The word "Addendum" shall mean written and/or graphic modifications to the Contract documents provided to holders of the Contract Documents prior to the opening of bids. Addenda shall be issued by the Owners Representative.
- C. Alternates: The word "Alternates" shall be understood to mean alternate products, materials, equipment, systems, methods, units of work or elements of the construction, which may, at the Owners option and under the terms established by the Contract Documents, be added to, or deleted from the work.
- D. Approvals: The words "approved", "approval", "acceptable", "acceptance", shall mean acceptance by the Owners Representative is required.
- E. Contract Change Order: The words "Contract Change Order" shall mean a change order authorization to the Contractor, covering changes to the Contract found by the Owner Representative to be necessary for the proper completion or construction for the whole work required by the Contract, and establishing the basis of payment and/or time adjustments for the work affected by the changes, also sometimes referred to as a "Change Order."
- F. Contract Documents: The words "Contract Documents" shall mean the documents contained within the General Conditions, Special Provisions of the Contract, the Drawings, the Specifications, Change Orders, and other modifications issued by the Owners Representative prior to and after execution of the Contract and identified as a Contract Document.
- G. Directions: The words "directed," "designated," and "selected" shall mean the directions, designations, selection, of the Owners Representative, unless otherwise noted.
- H. Drawings: The word "Drawings" shall mean the official Project bid or construction plans, plan details, profiles, typical cross sections, working drawings, shop drawings, supplemental drawings, and/or reproductions thereof, accepted or issued by the Owners Representative, which show the locations, character, dimensions, and details of work to be performed. All such documents are to be considered as a part of the Drawings.
- I. Equals: The words "or equal," "equal to," "approved equal," "or approved equal," "accepted equal," and "equivalent," shall mean "equal to or acceptable in the opinion of the Owners Representative," unless stated otherwise.
- J. Language: Words and phrases requiring an action or performance, such as "perform," "provide," "install," "furnish," "connect," "test," "coordinate," and words and phrases of similar import, shall be understood to be preceded by the phrase "The Contractor shall" unless otherwise stated.

- K. Modifications: The word "modifications" shall mean a written amendment to the Contract signed by both parties to the Construction Contract, a Change Order, a written interpretation issued by the Owners Representative or a written order for a minor change in the work issued by the Owners Representative.
- L. Notice To Proceed: The words "Notice to Proceed" shall mean the written notice issued by the Owners Representative to the contractor fixing the date on which or within which dates the contractor shall start to perform the contractor's obligations under the Contract Documents.
- M. Perform: The word "perform" shall mean that the contractor, at their expense, shall perform all operations including necessary labor, tools, and equipment and further including the furnishing and installation of materials that are indicated, specified, and required to complete such the conditions of the Contract and Contract Documents.
- N. Project: The word "project" shall mean the total construction of the work performed under the Contract Documents.
- O. Provide: The word "provide" shall mean that the Contractor, at its expense, shall furnish and install the work, complete in place and ready for use, including furnishing of necessary labor, materials, tools, equipment and transportation.
- P. Required: The word "required" shall mean "as required to properly complete the work and as required and acceptable to the Owner's Representative" unless otherwise noted.
- Q. Shop Drawings: The words "shop drawings" shall mean drawings, diagrams, schedules, and other data specifically prepared for the work by the contractor or their sub-contractor, manufacturer, supplier, or distributor to illustrate some portion of the work.
- R. Site: The words "Site" or "Sites" shall be understood to mean the property or properties described within the Contract Documents and indicated on the Drawings where the work shall commence.
- S. Substantial Completion: The words "substantial completion" shall mean the time and date when the work, or designated portion thereof, is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the work, or designated portion thereof, for the use for which it was intended, as evidenced by the Owner's Certificate of Substantial Completion. The Certificate of Substantial Completion shall set forth the date on which Substantial Completion is deemed by the Owners Representative in its sole discretion to have occurred. This shall occur only when the site improvements are 100 percent complete and shall exclude correction of final punch list items(s) and the execution of the Landscape Maintenance Period. The issuance of a Certificate of Substantial Completion shall signify the date on which the accounting of Contract "Working Days" or "Calendar Days" is terminated insofar as they may relate to Liquidated Damages.
- T. Work: The word "work" whether capitalized or in lower case, shall be understood to mean labor, materials, or both, and the entire construction encompassed by the Contract Documents.

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Testing and inspection requirements.
 - 2. Testing Agency qualifications.
 - 3. Manufacturer's field services.
- B. Related Requirements:
 - 1. Inspections and Testing Required by Laws, Ordinances, Rules, Regulations, Orders, or Approvals of Public Authorities: Conditions of the Contract.

1.02 TESTING LABORATORY SERVICES

- A. General:
 - 1. Requirements for testing are included in governing codes and described in various Sections of the Specifications.
 - 2. The Owner will employ and pay for the services of an Independent Testing Agency to perform testing and inspection requirements required by code and other tests and inspections when specified to be performed and paid for by the Owner. Employment by the Owner of the Testing Agency shall in no way relieve Contractor's obligations to perform the Work of the Contract.
 - 3. Tests required by the Specifications and not specified or required by Code to be performed and paid for by the Owner shall be performed by a testing laboratory employed and paid for by the Contractor and meeting the qualification requirements specified in this Section.
 - 4. Where no testing requirements are described, but the Owner decides that testing is required, the Owner may require such testing be performed under current pertinent standards for testing. Payment for such testing will be by the Owner.
 - 5. Inspections, tests, and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with the Contract Documents.
- B. Qualification of Testing Agency:
 - 1. Meet "Recommended Requirements for Independent Laboratory Qualification," published by American Council of Independent Laboratories.
 - 2. Meet basic requirements of ASTM E329, "Use in the Evaluation of Testing and Inspection Agencies as Used in Construction."
 - 3. Authorized to operate in the State of California.
- C. Limitations of Authority of Testing Agency: Testing Agencies are not authorized to:
 - 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Approve or accept any portion of the Work.
 - 3. Perform any duties of the Contractor.
- D. Testing Agency Duties:
 - 1. Cooperate, together with Contractor, in notifications, information, scheduling, storage, and access as necessary to meet requirements for service without causing delays on Project.
 - 2. Perform specified inspections, sampling, and testing of materials and methods of construction.
 - 3. Comply with specified standards.
 - 4. Ascertain compliance of materials with requirements of Contract Documents.

5. Notify Owner's Representative and Contractor when test or inspection reveals undesirable conditions, nonconformance, or failure to meet requirements.
6. Promptly submit written report of each test and inspection, with copies to Owner's Representative, Contractor, and governing agencies as required.
 - a. Include all samples taken and tests made, regardless of results.
 - b. Include reports to show specified requirements, and state whether or not test results comply with requirements.
7. Perform additional tests as required by the Owner's Representative.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. It is the Contractor's responsibility to coordinate the services of all testing and inspection required by the separate Specification Sections whether or not to be performed by the Owner's or Contractor's Testing Agency.
- B. Contractor shall furnish promptly, without additional charge, all reasonable facilities; labor and materials necessary for safe, thorough, and convenient inspection; and tests that may be required by the Contract Documents.
- C. Prepare and submit to Owner's Representative a schedule of tests required of the Testing Agencies at least 15 working days in advance of first test. In addition, Contractor shall give minimum 48 hours' notice to the Testing Agency prior to required tests and inspections.
- D. Furnish, prepare, and deliver test samples and specimens as required by the Testing Agency except where such preparation and handling are to be performed by Testing Agency. Contractor shall be solely responsible for delays due to such samples' not being submitted and resubmitted, if necessary, in the time required for tests or inspections before material is incorporated into the Work.
- E. Cooperate with Testing Agency personnel in providing access to materials being tested or inspected.
- F. Make necessary repairs to in-place work caused by removal of required test samples.
- G. Materials furnished and installed on the Project shall be equal to approved test samples in every respect.
- H. Samples which are of value after testing will remain the property of the Contractor, but no such samples shall be incorporated in the Work without written approval of the Owner's Representative.
- I. Costs associated with testing, inspections, and observations due to the following shall be the responsibility of the Contractor:
 1. Re-testing due to failure of initial samples.
 2. Unacceptable changes in sources, lots, or suppliers of materials after original testing established compliance.
 3. Changes in methods or materials of construction by contractor that require testing, inspection, or other related services in excess of those required by original design.
 4. Failure to properly notify the Owner's Representative at critical stages of construction.
 5. Requesting testing, inspection, and/or observation of work not ready.

1.04 QUALITY ASSURANCE

- A. Materials furnished and work performed under the Contract shall be subject to review by the Owner's Representative. The Contractor shall be held strictly to the requirements of the Contract Documents regarding quality of materials, workmanship, and diligent execution of the Contract. Review by the Owner's Representative may include mill, plant, shop, or field review as deemed necessary.

- B. Work performed in the absence of any prescribed inspection or observation may be subject to removal and replacement. In such a case, the entire cost of removal and replacement shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not.

1.05 CONFLICTING REQUIREMENTS

- A. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different to Owner's Representative for a decision before proceeding.
- B. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Owner's Representative for a decision before proceeding.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION OF CONDITIONS

- A. Prior to installing any portion of the work, the Contractor shall examine the site and verify that site conditions are acceptable to begin work of each section.
- B. Verify that work specified elsewhere has been completed to an appropriate stage to begin work of each section.
- C. Materials or products requiring installation under the supervision or inspection of a specific materials manufacturer or manufacturer's representative shall be examined and/or tested, and accepted in writing, by such representative(s) prior to installation of work.
- D. Notify the Owner's Representative immediately in writing of any irregularities or unacceptable conditions and re-direct work to avoid delay.
- E. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.

3.02 TOLERANCES

- A. Tolerances not specifically identified shall meet the written standards and/or recognized commercial tolerances established for the specific materials or product. Refer to Section 01 42 00 - References.

3.03 REQUIRED TESTS AND INSPECTIONS

- A. "Special Inspections" as required by the CBC.
- B. Additional Tests and Inspections: See the various technical Sections of the Specifications.

3.04 FAILURE TO PASS TESTS

- A. Failure of any material or article to pass specified tests will be sufficient cause for refusal to consider any further samples of the same brand or make of that material or article.

- B. Where an individual material is to be part of an assembly with other materials for incorporation in the Work, failure of the material to pass specified tests or to conform to indicated standards will be sufficient cause for its rejection and removal and replacement, regardless of whether tests or inspections have been made or not in an assembled or in an unassembled condition.
- C. When tests indicate non-compliance, the Contractor shall pay all direct and indirect costs of subsequent re-testing until compliance is established.

3.05 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification Sections, Contractor shall require supplier or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balancing of equipment as applicable, and to make appropriate recommendations. Contractor is responsible for proper notification of manufacturer's representative before installation of applicable work and for obtaining necessary inspection certificate stating that installation was observed and approved.
- B. Product Performance Verification: The supplier of products specified based on performance criteria shall, at the request of the Agency, inspect the installed product and certify conformance of the product to specified criteria under the installed conditions.
- C. Manufacturer's representative shall submit written report to the Owner's Representative listing observations and recommendations.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Temporary facilities and controls needed for the Work during construction including, but not necessarily limited to:
 - 1. Temporary utilities.
 - 2. Sanitary facilities.
 - 3. Enclosures such as coverings, barricades, and fences.
 - 4. Site security.
- B. Related Requirements:
 - 1. Equipment normally furnished by individual trades in execution of their portions of the Work shall comply with requirements of pertinent safety regulations.
 - 2. Permanent installation and hookup of utility lines are included under other Sections.

1.02 SELECTED REFERENCE AND REGULATORY REQUIREMENTS

- A. National Fire Protection Association (NFPA):
 - 1. 10 - Portable Fire Extinguishers.
 - 2. 241 - Safeguarding Building Construction and Demolition Operations.
- B. City of Petaluma Construction Standards.
- C. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 GENERAL

- A. Furnish, install, and pay for meters, equipment, wiring, and piping necessary to provide such utilities.
- B. Additional requirements for construction facilities and temporary controls are included in the General Conditions.
- C. Provide written notification to the Owner to request use of new building equipment for temporary facilities. New building equipment shall not be used for temporary facilities without prior written approval from Owner.

1.04 REQUIREMENTS FOR REGULATORY AGENCIES

- A. Comply with applicable standards referenced in Section 01 42 00 - References, Abbreviations, and Definitions.
- B. All facilities shall be provided and maintained by the contractor in accordance with Cal-OSHA and applicable laws and ordinances.
- C. Contractor shall:
 - 1. Take suitable steps to ensure that public utilities encountered in connection with the Work will not be damaged.

2. Send notices, make necessary arrangements, and provide services required for the care of gas mains, water pipes, sewer pipes, conduits, cables, and other equipment or property.
3. Arrange with utility companies for fees required to move or remove their meters, poles, cables, guy wires, or equipment in or set under the property which will interfere with the construction work or which will not be required in the new construction.

PART 2 - TEMPORARY FACILITIES AND CONTROLS

2.01 MATERIALS

- A. General: Materials may be new or used but shall be adequate in capacity for the required usage, shall not create unsafe conditions, and shall not violate requirements of applicable codes and standards.
- B. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order to preclude hazard to occupants and premises.

2.02 UTILITY SERVICES

- A. Power and Lighting: Furnish, install, and maintain temporary wiring, poles, meter board, service entrance switch, lamps, and equipment as necessary to provide temporary lighting and power for the construction site.
 1. Pay all costs for temporary electrical systems required for construction.
 2. Source of power shall be at location on site acceptable to the Owner's representative. Required temporary transmission lines shall be arranged by contractor in conjunction with the appropriate utility company.
- B. Water:
 1. Install temporary piping and valves downstream from permanent (new) meter locations as acceptable to the Owner's representative. No temporary water services shall be installed prior to meter installation without prior Owner review and acceptance.
 2. Temporary water facilities shall be installed with an acceptable reduced pressure backflow prevention unit furnished and installed by the contractor.
 3. Locate temporary sources of water route, and construct pipelines so that they do not create a hazard or interfere with public access, traffic, or construction operations.
 4. Design and construct such pipelines.
- C. Utility Costs for Contractors: Distribution of temporary utility services to sub-contractors shall be Contractor's responsibility and cost.

2.03 CONTRACTOR'S FIELD OFFICE

- A. The Contractor shall provide and maintain the following minimum facilities and equipment in the field office:
 1. Door top type jobsite desk or equivalent horizontal desk surface for drawings.
 2. Adequate storage facilities.
 3. A laptop or other portable device for internet access and to transmit and receive information to and from the Architect.
 4. Digital camera, with downloading interface, for purposes of communicating field conditions.
 5. Additional facilities and equipment as required by the Architect.

2.04 TEMPORARY TELEPHONE AND INTERNET SERVICE

- A. Contractor shall arrange, provide, and pay for the following temporary service at the site.

1. A cell phone line and phone for the Contractor's Superintendent.
2. Internet access for laptop or another acceptable internet access device.

2.05 TEMPORARY SANITARY FACILITIES

- A. Provide, pay for, install, and maintain, for duration of the Work, necessary enclosed toilet and sanitary facilities for construction personnel.
 1. Sanitary facilities shall be provided, maintained with supplies as required for the number of construction personnel in compliance to local regulations.
 2. Locate such facilities a reasonable distance from all working areas.
- B. New or existing restroom facilities, if available, shall not be used by construction personnel except with written permission from the Owner.

2.06 FIRST AID

- A. Provide and maintain first aid supplies as required Cal-OSHA and applicable local ordinances.
- B. Make arrangements with local emergency center and nearest hospital to receive personnel requiring medical attention, including emergencies. Information for emergency center shall be conspicuously displayed at the construction office when an office is required on the Project.

2.07 STORAGE ENCLOSURES

- A. Provide sheds and enclosures necessary for storing applicable materials and equipment.
- B. Enclosures shall be conveniently located, substantially and neatly constructed, and weather tight.
- C. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- D. For exterior storage of fabricated products, place on sloped supports, above ground.
- E. Provide off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent contamination by foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- J. Hazardous or Flammable Materials:
 1. Use and store hazardous or flammable chemicals, liquids, or gases brought into the Project site in approved containers, conforming to local, state, and national fire codes.
 2. Use hazardous materials in a manner that will prevent their accidental release into other areas.
 3. Do not discard hazardous materials into the jobsite waste-disposal facilities.
 4. Remove empty containers from the premises immediately and disposed of in a legal manner.

2.08 STAGING AND HOISTS

- A. Furnish and maintain hoists, staging, rigging, and runways required in the execution of the Work.
- B. Erect, equip, and maintain temporary work in accordance with the statutes, laws, ordinances, rules, or regulations of the state or other authorities and state-approved insurance companies having jurisdiction.

2.09 SAFETY AND PROTECTION

- A. General:
 - 1. Follow construction procedures necessary to provide a safe working condition through all phases of the Project. Procedures shall conform to the Safety Orders, Division of Industrial Safety, Title 8, California Code of Regulations.
 - 2. The Owner, Owner's Representative, and field inspectors are not hired to review or approve safety procedures followed by the Contractor.
- B. Contractor is solely responsible for outlining safety procedures to be followed by its workers, subcontractors, and related trades working on its Project. Provide for safety of the public both day and night where they are exposed to construction operations.
- C. Contractor shall also take whatever care is necessary to avoid damage to existing facilities or utilities to remain, whether on the Project or adjacent to it, and shall be liable for any damage thereto or interruption of service as a result of its operations.
- D. Provide fences, barricades, railings, warning lights, lights and other protection required by law, Contract Documents, and common sense to ensure public safety.
- E. Give adequate warning to the public at all times whenever a dangerous condition exists as the result of construction work. Furnish Owner's Representative with name, address, pager number and local telephone number of the superintendent responsible and at least one other person for the maintenance of barriers, signs, lights, and other accident prevention devices for evenings and weekends.
- F. Protection of Work and Facilities:
 - 1. Protect adjacent property, roads, streets, curbs, planting areas, erosion control materials and other improvements during construction operations. All damaged materials shall be replaced and/or repaired at the expense of the contractor and to the satisfaction of the Owner's Representative.
 - 2. Protect installed work and provide special protection where applicable.
 - 3. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
 - 4. Contractor shall install temporary construction fencing per contract documents and place signage on the fence stating, "Construction Area – Keep Out" and "No Trespassing". Signs shall be located along fence every 75 feet and maintained at all times.
- G. Vehicular Safety: Motorized and/or self-propelled construction equipment shall be equipped with a hub-cap type reverse signal alarm.

2.10 WATER CONTROL

- A. Furnish and maintain pumps or other devices that may be required by Contractor's work under this Contract.
- B. The Work shall be kept free of standing water during construction.

2.11 MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING

- A. Throughout progress of work, do not interfere with use of or access to adjacent buildings or property.
- B. Construct, designate and maintain specific vehicular access as required for the orderly progress of the work.
 - 1. Engineer construction access roads and parking areas as necessary to provide suitable support during all weather conditions for anticipated loads, including municipal fire apparatus.
 - 2. Provide adequate surface drainage without interrupting natural flow of existing drainage.
- C. Parking:
 - 1. Provide temporary on-site parking to accommodate construction personnel and Owner's Representative to the greatest extent possible. Coordinate location with the Owner's Construction Coordinator.
 - 2. Contractor shall make arrangements for offsite parking, if required, with adjacent public parking facilities to accommodate vehicles of construction personnel. Cost of parking is the responsibility of the Contractor and/or its subcontractor.
- D. Restore temporary vehicular access and parking areas to original or specified conditions prior to Project Final Acceptance.
- E. Move and relocate traffic signs and signals, controls, power and light poles, and similar utility and public service items obstructed by Project barricades and operations.
- F. Maintain accessibility from street at all times to fire hydrants within construction area.
- G. Construction traffic shall be routed, whenever possible, to avoid noise impacts on the surrounding neighborhood.
- H. Construction period for trucks hauling fill and piling materials shall be restricted to nonpeak hours to minimize impact to rush hour traffic and to avoid noise impacts on the surrounding existing residential areas.
- I. Vehicles (wheels in particular) shall be cleaned before leaving site so as to minimize impact on City streets.
- J. Clean and sweep all streets muddied or littered from construction activity to the satisfaction of the City.

2.12 HAUL ROUTES

- A. Comply with any and all local governing ordinances and guidelines.

2.13 FIRE PROTECTION

- A. Take precautions to prevent and eliminate fire hazards. The Contractor shall be responsible for providing, maintaining, and enforcing any necessary or required fire prevention safeguards until project final acceptance.
- B. Provide fire extinguishers on the premises during the course of construction of the type and sizes recommended by the NFPA 10 and NFPA 241 to control fires resulting from the particular work being performed. Instruct employees in their use. Place extinguishers in the immediate vicinity of the work being performed, ready for use.
- C. Fire Inspection: The Contractor's Superintendent shall inspect the entire project as necessary to make certain the required precautions are being maintained.

- D. Combustible and/or flammable Building Materials: Only an appropriate working supply of flammable fuel or building materials shall be located inside storage facilities.
- E. During the use of hazardous equipment, such as acetylene torches, welding equipment, bitumen kettles, and similar devices, no work shall start or equipment used unless fire extinguishers of specified type and capacity are placed in the working area and available for use by workmen using such hazardous equipment. Extinguishers shall meet standards established by Underwriter's Laboratory and shall be inspected at regular intervals and recharged by the contractor, as necessary.
- F. Combustible and/or flammable Waste Materials. Oil-soaked rags, papers, and other highly combustible materials must be stored in closed metal containers with tightly-hinged lids at all times, and shall be removed from the site at the close of each day's work and more often when necessary.

2.14 TOOL AND ELECTRICAL EQUIPMENT

- A. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order.

2.15 TEMPORARY SIGNS AND NOTICES

- A. Contractor shall post and maintain all signs and notices required by law or ordinance. No advertisements will be permitted on the premises without approval of the Owner.
- B. Project Sign:
 - 1. Contractor shall provide a project sign as directed by the Owner.
 - 2. Sign graphics shall include, as a minimum, the following:
 - a. Project name.
 - b. Owner's name.
 - c. Landscape Architect's name and address.
 - d. Contractor's name and address.
 - 3. Full-scale artwork for logos, if required, will be provided.
 - 4. Location of sign shall be as directed by the Owner.

2.16 TRASH REMOVAL

- A. Store trash or rubbish resulting from construction within the Contract work area.
- B. Provide the necessary on-site containers for the collection of recycling materials, waste materials, and debris.
- C. Remove waste materials and debris from the site periodically and dispose of at recycling centers or legal disposal sites in accordance with governing construction and demolition debris regulations.
- D. Keep the work area clean at all times. Increase frequency of trash removal, when requested by the Owner, to conform to this requirement.
- E. Waste material and debris shall not be buried at the site.
- F. Burning of trash and debris on the site will not be permitted.

2.17 SECURITY

- A. All site security shall be the responsibility of the Contractor at its expense and no additional cost to Owner.

- B. Employment of security personnel for non-construction hours shall be left to the discretion of the Contractor, who shall be fully responsible for any theft or damage to any material, equipment or to portion of the work until Project Final Acceptance.
- C. Security provisions shall be provided 24 hours a day, 7 days a week, including holidays, until acceptance of the Project by Owner.
- D. If security personnel are used, provide Owner's Representative with the name and pager number or 24-hour telephone number of a contact person who shall have primary responsibility for security.

2.18 DUST CONTROL

- A. Blowing dust shall be reduced by timing construction activities so that paving begins as soon as possible after completion of grading and by landscaping disturbed soils as soon as possible.
- B. All portions of the site shall be watered as many times a day as required to ensure proper dust control seven (7) days a week for the duration of the Project.
 - 1. Sprinkle unpaved construction areas with water at least twice per day or as necessary to eliminate dust.
 - 2. Cover stockpiles of soil, sand, and other similar materials.
 - 3. Cover trucks hauling debris, soil, sand, and other similar materials.
- C. The Contractor shall obtain reclaimed water from the City, if available, for compliance with the above requirements.
- D. The Contractor shall maintain and operate construction equipment so as to minimize exhaust emissions of PM10 and other pollutants by means of the following:
 - 1. Prohibition on idling of motors of equipment that is not in use and by waiting trucks.
 - 2. Implementation of specific maintenance programs to reduce emissions for equipment in frequent use during construction.

PART 3 - EXECUTION

3.01 SYSTEMS

- A. Maintain and operate systems to assure continuous service.
- B. Modify and extend systems as work progress requires.

3.02 STORM WATER POLLUTION PREVENTION

- A. Contractor shall be required to adhere to the project's Storm Water Pollution Prevention Plan (SWPPP) prepared and approved for this Project. Refer to specification section 01 57 23 Storm Water Pollution Prevention Plan and Erosion and Sediment Control Plan for additional information.

3.03 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.
- B. Completely remove temporary materials and equipment when their use is no longer required.
- C. Clean and repair damage caused by temporary installations or use of temporary facilities.

- D. After removal of temporary facilities, restore existing facilities used for temporary services back to an "as was" or better condition subject to the discretion of the Owner's Representative.
- E. Full compensation for cleanup shall be included in other items of work. No separate compensation will be allowed for work pertaining to cleanup or disposal of material.

END OF SECTION

SECTION 01 57 23

STORMWATER POLLUTION PREVENTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Construction shall adhere with the requirements of the California State Water Resource Control Board, General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit). Project construction is covered under the General Permit WDID#: _____.
- B. The project Stormwater Pollution Prevention Plan (SWPPP) applies to operations within the limits of work and adjacent points of discharge that may be outside the limits of work. The SWPPP describes the proposed facilities, identifies potential sources of pollution and recommends appropriate Best Management Practices (BMPs) to reduce the discharge of pollutants. The contractor shall be strictly held to the requirements of the General Permit and shall provide the services of Qualified Stormwater Practitioner (QSP) as the agent to the District, who is the Legally Responsible Person (LRP).
- C. Scope of work:
 - Provide such work to satisfy the requirements of the General Permit including but not limited to:
 - 1. Qualified Stormwater Practitioner (QSP) services.
 - 2. Install, adjust and maintain all necessary; BMPs, non-stormwater pollutants, safe storage, hazardous material controls and construction activities to protect discharge with best available technology.
 - 3. Monitoring, testing and action plans as required by the project SWPPP Document.
 - 4. Amend the SWPPP whenever there is a change in construction or operations that will affect the discharge of pollutants, or change in schedule delaying completion of grading activities beyond completion date identified in the project SWPPP.
 - 5. All necessary data entry submit documentation to the Storm Water Multiple Application and Report Tracking System (SMARTS) during construction and closeout.
- D. Related sections can include, but may not be limited to the following:
 - 1. Section 01 50 00 - Construction Facilities and Temporary Controls
 - 2. Section 02 41 00 - Site Clearing and Demolition
 - 3. Section 31 20 00 - Earthwork
 - 4. Section 33 40 00 - Storm Drainage

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. California State Board of Water Resources Construction General Permit Order 2009-0009-DWQ
- A. SWPPP Document WDID#_____

- B. California Stormwater Quality Association (CASQA) Industrial and Commercial BMP Handbook.

1.03 MONITORING AND TESTING:

- A. Monitoring, testing, and action plans documentation required by the project SWPPP Document, and/or as required by the General Permit.

PART 2 - PRODUCTS – NOT APPLICABLE

PART 3 - EXECUTION

3.01 PREPARATION, MONITORING AND DOCUMENTATION

- A. Prior to installing any portion of the work, the contractor shall examine the site and verify that site conditions are acceptable to begin work.
- B. Prior to grading and demolition operations, the contractor shall install and manage all necessary BMPs with best available technology, making all necessary adjustments for the duration of construction.
- C. Contractor shall be responsible for all necessary, modifications and additions to the BMPs and site conditions to meet the requirements of the General Permit at no additional cost to the District.
- D. Regardless of construction schedule or weather conditions, it shall be the contractor's responsibility to; provide all necessary measures, adjust BMPs, protect discharge from pollutants and take necessary actions should numeric action levels be triggered, at no additional cost to the District.
- E. Contractor shall provide QSP to conduct all monitoring and testing and prepare action plans as required by the project SWPPP.
- F. The contractor shall amend the SWPPP and prepare the COI whenever there is a change in construction or operations that will affect the discharge of pollutants or change in schedule that will delay completion of grading activities beyond completion date identified in the project SWPPP.
- G. Contractor shall prepare, track and submit all necessary documentation to SMARTS during construction and closeout. This shall include filing all required Ad Hoc reports, Annual Reports, and the Notice of Termination on the SMARTS site.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Field engineering services for proper completion of the Work including, but not necessarily limited to:
 - 1. Establishing and maintaining lines and levels.
 - 2. Structural design of shoring, forms, and similar items provided by the Contractor as part of its means and methods of construction.
 - 3. Excavations and elevations, footings and piers required for installation of work items.
 - 4. Establishing horizontal and vertical control for site construction items.
- B. Related Requirements:
 - 1. Section 01 78 29 - Conformance Survey

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Informational submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.03 INFORMATIONAL SUBMITTALS

- A. Name and address of surveyor or professional engineer to the Owner's Representative.
- B. Upon request of the Owner's Representative, submit:
 - 1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
 - 2. Documentation verifying accuracy of field engineering work.
 - 3. Certification, signed by the Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

1.04 QUALITY ASSURANCE

- A. Contractor shall employ a California Registered Civil Engineer or Licensed Land Surveyor, hereafter referred to as Surveyor, to lay out the entire work and set grades, lines, levels, and positions throughout the site.

1.05 SURVEY REFERENCE POINTS

- A. Existing horizontal and vertical control points for the Project are those designated on the Drawings. Locate and protect these control points prior to starting site work and preserve permanent reference points during construction.
- B. Do not change or relocate reference points or items of the work without specific review and acceptance by the Owner's Representative.
- C. Promptly advise the Owner's Representative when a reference point is lost, destroyed, or requires relocation because of other changes in the work. Upon direction of the Owner's Representative, replace reference stakes or markers according to the original or appropriate survey control.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 LAYING OUT THE WORK

- A. Prior to beginning work, locate or set all general reference points, benchmarks, establish monuments and take action as necessary to prevent their destruction, then layout all lines, elevations, and measurements for entire work.
- B. Verify figures and dimensions shown on the Drawings and son surveys furnished by the Owner before starting work. Notify the Owner's Representative immediately of any discrepancies and re-direct work to avoid delay.
 - 1. Contractor shall accept responsibility for errors resulting from failure to notify Owner's Representative of known discrepancies.
 - 2. Offsets will be as agreed upon, in writing, by the Contractor and the Owner's Representative.
- C. Establish monuments on curbs, manholes or pavements with concrete embedded steel pipe with lead plug and/or brass nail with washer, as acceptable to the Owner's Representative.
- D. Verify layout from time to time as work progresses.

3.02 RECORDS

- A. Maintain a complete and accurate log of all control and survey Work as it progresses in accordance with the requirements of Section 01 78 39 - Project Record Documents. Show exact locations of the monuments if any are disrupted or destroyed.

END OF SECTION

SECTION 01 77 00
CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.01 SUMMARY

- A. Scope of work: This section specifies administrative and procedural requirements for project close-out, that may include but are not necessarily limited to:
 - 1. Inspection and/or observation procedures
 - 2. Project record document submittal
 - 3. Operating and maintenance manual submittal
 - 4. Warranty submittal
 - 5. Final cleaning
- B. Related sections can include, but may not be limited to the following:
 - 1. All pertinent Sections of the Specifications

1.02 SUBSTANTIAL COMPLETION

- A. Refer to the General Provisions as applicable, and section 01 42 00 for procedures required to establish Substantial Completion.
 - 1. Final, regular Certificate for Payment (progress payment) shall be issued when all pertinent requirements of the achieving Substantial Completion are met. Final retention payment shall be made after project Final Acceptance and conclusion of any specified Landscape Maintenance Periods subject to the discretion of the Owner's representative.
- B. inspection Procedures: Upon receipt of a request for inspection or observation, the Owner's representative shall either proceed or advise the Contractor of unfilled requirements. The Owner's representative shall prepare the Certificate of Substantial Completion following review or advise the contractor of what must be completed or corrected by "punch-list" before the Certificate is issued. Upon receipt of "punch-list", contractor shall complete all work described in a timely manner subject to the discretion of the Owner's Representative.
 - 1. The Owner's representative shall repeat inspection and/or observation when requested provided the contractor has made the request within the specified lead time and given written assurance that the "punch-list" work has been completed.
 - 2. Results of the completed inspection and/or observation shall help form the basis of requirements for Final Acceptance and if acceptable, may signal the beginning of the specified Landscape Maintenance Period.

1.03 UNCORRECTABLE WORK

- A. Should the Owner's representative determine it is not practical or possible for the contractor to correct work that is damaged or improperly executed, an equitable deduction from the Contract sum may be made at the sole discretion of the Owner's representative.

1.04 CLOSE-OUT SUBMITTALS

- A. Submit two (2) copies of the following, where applicable, in accordance with applicable Contract Documents:
 - 1. Project record documents (as-constructed)

2. Operation and maintenance manuals
 3. Warranties, guaranties, and bonds
 4. Keys and keying schedule
 5. Spare parts and extra materials
 6. Other items required by the Specifications
 7. Binder of all manufactured items final submittal information that were installed or provided for the project.
- B. Specified number of copies of above close-out submittals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.
- C. In addition to those items previously mentioned in this section, the contractor shall submit to the Owner's representative the following items before a Notice of Completion will be filed:
1. Up-to-date sub-contractor list with names, addresses and telephone numbers.
- D. Final Adjustment of Account:
1. Submit a final statement of accounting to the Owner's representative showing all adjustments to the Contract sum.

1.05 MAINTENANCE MANUALS

- A. Submit two (2) copies of proposed manual(s) to the Owner's representative for review and acceptance. All maintenance manuals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.
- B. Organize operating and maintenance data into properly indexed heavy duty 2-inch, 3-ring vinyl covered binders. Mark appropriate identification on front and spine of each binder. Manuals can include but are not limited to the following types of information:
1. Emergency instructions
 2. Spare parts list
 3. Copies of warranties or actual warranty cards
 4. Wiring diagrams
 5. Recommended "turn around" cycles
 6. Inspection procedures
 7. Shop drawings and product data
 8. Fixture lamping schedule
- C. Product submittal items (1.04-A-7) can be provided with warranty information binders.

1.06 DEMONSTRATION

- A. Prior to Final Acceptance, the contractor shall fully instruct Owner's representative's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed.
1. Provide services of factory trained instructors from the manufacturers of each major item of equipment or system, if necessary or requested by the Owner's representative.
- B. Operation and maintenance manual(s) shall be fully described at this instruction meeting.
1. Review contents of manual(s) with personnel in full detail to explain all aspects of operations and maintenance such as:
 - a. Maintenance manuals
 - b. Record documents
 - c. Spare parts and materials

- d. Tools
 - e. Fuels
 - f. Identification systems
 - g. Control sequences
 - h. Hazards
 - i. Cleaning
 - j. Warranties and bonds
 - k. Maintenance agreements and similar continuing commitments.
2. As part of instruction for operating equipment, demonstrate the following procedures:
- a. Start-up
 - b. Shutdown
 - c. Emergency operations
 - d. Noise and vibration adjustment
 - e. Safety procedures
 - f. Economy and efficiency adjustments
 - g. Effective energy utilization

1.07 WARRANTY/GUARANTY FORMAT

- A. Provide written warranties, guaranties (except manufacturers' standard printed warranties and/or guaranties), addressed to the Owner's representative, in the format shown within the General Provisions. Manufacturers' standard printed warranties and/or guaranties shall be submitted as-is.
- B. Warranties and guaranties shall be submitted in duplicate, in the format shown within the General Provisions, signed by all pertinent parties and by the contractor in every case, with modifications as accepted by the Owner's representative to suit the conditions pertaining to the warranty or guaranty. Collect and assemble written warranties and guaranties into bound booklet form and deliver bound books to the Owner's representative for review.

1.08 REMOVAL OF TEMPORARY FACILITIES

- A. Prior to final inspection, the contractor shall remove tools, materials, sheds, temporary power poles, temporary tree protection, and other articles from the project site. Should the contractor fail to take prompt action, the Owner's representative may, given 30 days written notice, treat them as abandoned property.

1.09 FINAL SITE CLEANING

- A. Broom clean and power wash exterior paved surfaces and adjacent public streets. Utilize appropriate cleaning methods to remove spills, stains, tire tracks, etc. from all paved surfaces. Rake clean other surfaces of the site.
- B. Hose down and scrub walls and paving surfaces dirtied or stained as a result of the construction work, as directed by the Owner's representative.
- C. Remove from the site construction waste, unused materials, excess earth, and debris resulting from the work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01 78 29

CONFORMANCE SURVEY

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Conformance surveying required for proper completion of the work including, but not necessarily limited to, the following:
 - 1. Synthetic turf base preparation.
 - 2. Other applicable Project components.
- B. Related Requirements:
 - 1. Section 01 33 00 – Submittal Procedures
 - 2. Section 01 71 23 – Field Engineering
 - 3. Section 01 78 39 – Project Record Drawings
 - 4. Section 31 20 00 – Earth Moving
 - 5. Section 32 11 00 – Base Courses
 - 6. Section 32 12 16 – Asphalt Paving
 - 7. Section 32 18 13 – Synthetic Turf Playing Field

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.03 INFORMATIONAL SUBMITTALS

- A. Name and address of Contractor's licensed surveyor to the Owner's Representative.

1.04 QUALITY CONTROL AND REWORK

- A. Portions of the field that does not conform to the grading tolerance requirements identified in this Section will be corrected by the Contractor at its expense. Areas out of tolerance shall be addressed and re-stringline at the Contractor's expense.
- B. Delays and costs incurred due to grades out of tolerance are the sole responsibility of the Contractor. At any time during construction and following acceptance of field base by the Owner, the Owner reserves the right to recheck the surface grades at its expense to verify it is still within tolerance.
- C. It is the Contractor's responsibility to protect the grading and compaction tolerances of completed surfaces after stringline operations are complete and accepted, and prior to installation of subsequent materials.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 SYNTHETIC TURF BASE

- A. General: The stone grades shall not vary from any two adjacent points within the field shall cumulatively deviate more than 1/2-inch (0.04 feet) from point to point.
- B. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using the string line method.
 - 1. A mason's line held taught between two workers separated by a distance of approximately 40 feet shall be placed directly on the finished surface parallel to the direction of greatest slope.
 - 2. A third worker shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances.
 - 3. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.
 - 4. Areas of separation shall be outlined with marking paint and the depth of separation indicated.

END OF SECTION

SECTION 01 78 39

PROJECT RECORD DOCUMENTS

1.01 SUMMARY

- A. Section Includes: Requirements for preparing, maintaining, and submitting the Project Record documents.
- B. Related Requirements:
 - 1. Section 33 40 00 - Storm Drainage Utilities

1.02 DOCUMENT MAINTENANCE

- A. Maintain one record copy of each of the following at the site for the Owner:
 - 1. Contract Drawings, Specifications, Addenda, Change Orders, RFIs and other modifications marked currently to record changes made during construction.
 - 2. Reviewed submittals.
 - 3. RFI log.
 - 4. Addenda log.
 - 5. Submittal log.
 - 6. Inspection reports and log.
- B. Documents shall be kept at the site and maintained in a clean, dry, legible condition.
- C. The Contractor shall advise the Owner's Representative of changes and deviations made during construction.
- D. Make documents available at all times for review by Owner's Representative.
- E. Comply with related requirements of the individual Specification Sections.
- F. Maintenance of Record Drawings shall be delegated to one person on Contractor's staff who will be present at all meetings.

1.03 RECORDING

- A. Label each document "PROJECT RECORD."
- B. Do not permanently conceal any work until required information has been recorded.
- C. Drawings:
 - 1. Make day-to-day changes and notations on a specially designated complete "Job Set" of prints or digital files as the work proceeds.
 - 2. Markings and notations shall be neatly and accurately made, using nonfading, clear, permanent markings. Use contrasting colors for different disciplines of work and where required for clarity.
 - 3. Clearly identify deviations by drawing a "cloud" around affected area and make sufficient notations to describe the change.
 - 4. Convert schematic layouts to portray precise physical layout (including depths) of exposed and concealed work.
 - 5. Drawings shall be marked to indicate:
 - a. Measured depths of various elements of foundation in relation to survey or other approved datum.
 - b. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.

- c. Measured locations of utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
 - d. Variations in layout of site improvements.
 - e. Field changes of dimensions and detail.
 - f. Changes made by Change Order or Construction Change Directive.
 - g. Significant details not shown on the original Contract Drawings.
- 6. Contractor shall solely bear any cost of uncovering, recording and re-covering work not recorded on Job Set.
- 7. Upon completion of the Work and unless otherwise mutually agreed between Owner and Contractor, all changes and notations shall be neatly and accurately transferred by the Contractor to a complete set of Drawings, as originally issued for construction, obtained from the Owner.
 - a. Where the Contract Drawings are not of sufficient size and detail, the Contractor shall furnish its own drawings for incorporation of details and dimensions.
 - b. Each sheet of record drawing shall be signed and certified by the Contractor as to their correctness and turned over to the Owner's Representative.
- 8. Record Drawings are specifically required for the following work:
 - a. Storm, and site drainage.
 - b. Domestic water
 - c. Sanitary Sewer system.
- D. Specifications:
 - 1. On a complete and designated copy or digital file of the Project Manual, legibly mark each Specification Section to record:
 - a. Manufacturer, trade name, catalog number, color designation (if applicable), and supplier of each product and item of equipment actually installed.
 - b. Changes made by Addendum, Change Order, or Construction Change Directive.
 - c. Other matters not originally specified.
 - d. Where selection of manufacturers is offered, indicate which manufacturer's product was installed.
- E. Product Data: Maintain one copy or digital file of each product data submittal. Note related Change Orders and markup of Contract Drawings and Specifications.
 - 1. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
 - 2. Give particular attention to concealed products and portions of the Work that cannot be readily reviewed by direct observation.
- F. Samples: Immediately prior to Substantial Completion, meet with Owner's Representative and Owner's personnel at the Project site to determine which samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's storage area.
- G. Miscellaneous Record Submittals: As specified in other Specification Sections.
 - 1. Immediately prior to Substantial Completion, complete these miscellaneous records and place in good order.
 - 2. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Digital files are acceptable.
 - 3. Submit for the Owner's records as directed.

1.04 INTERIM REVIEW

- A. Project Record Documents are subject to review at time of review of payment request.
- B. If Record Documents are not properly maintained, Owner may withhold all or a portion of payment to Contractor.

1.05 SUBMITTALS

- A. At completion of work under the Contract, deliver Record Documents as directed.
- B. Partial submittals are not acceptable, unless specifically acceptable to Owner.
- C. Submit documents specified and required prior to claim for final Application and Certificate for Payment.
- D. Accompany submittal with transmittal letter, in duplicate, containing:
 - 1. Date.
 - 2. Title of Work.
 - 3. Contractor's name and address.
 - 4. Title of each Record Document.
 - 5. Certification that each document, as submitted, is complete and accurate.
 - 6. Signature for Contractor or its authorized representative.

END OF SECTION

SECTION 02 41 13

SITE CLEARING AND DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Site clearing and demolition work and related activities as shown on the Drawings and specified herein. The general extent of the site clearing and demolition work includes, but is not necessarily limited to, the following:
 - 1. Demolition, removal and disposal of designated items.
 - 2. Careful removal, and protection of designated items.
 - 3. Careful removal and salvage of designated items.
 - 4. Disconnection and capping of existing utility lines.
 - 5. Spraying until dead, clearing, grubbing vegetated areas in existing turf areas.
 - 6. Incidental demolition of abandoned utility and irrigation lines.
- B. Related Requirements:
 - 1. Section 31 20 00 - Earth Moving

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
- B. City of Petaluma's Construction Waste Management Plan.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

- A. Product Data: Manufacturer's product information on herbicides to be used for approval prior to use.

1.05 INFORMATIONAL SUBMITTALS

- A. Schedule: Indicate the proposed timeline for site clearing and demolition work including shut off times and capping of utility services on the project schedule.

1.06 QUALITY ASSURANCE

- A. The Owner will obtain and pay for all permits required in connection with this work. Fees for the dumping of debris shall be paid for by the Contractor.

1.07 FIELD CONDITIONS

- A. Dust Control:
 - 1. The Contractor shall prevent the formation of airborne dust on and around the project site with the use of sprinkled water or other means acceptable to the Owner's Representative. Non-compliance with proper dust control measures may be grounds for issuance of a "stop work" order by the

Owner until satisfactory measures are implemented. Any stoppage due to not complying with dust control will be at no cost to the owner.

- B. Utility Services:
 - 1. Issue written notices of planned demolition operations to utility companies and coordinate site clearing and demolition improvements as requested by the utility companies.
 - 2. Coordinate work in order to maintain utilities to temporary on-site facilities.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Conform to applicable requirements of Section 01 45 00 - Quality Control.
- B. Carefully identify limits of demolition and site clearing.
- C. Mark project areas in coordination with the Owner's Representative and as necessary to clearly identify the interface of items to be removed and items remain.

3.02 PREPARATION

- A. Protection:
 - 1. Make provisions and take necessary precautions to protect all existing items not designated for removal. An existing item or area damaged during construction operations shall be replaced or repaired to an "as-was" or better condition at no additional cost to the Owner and subject to the acceptance of the Owner's Representative.
 - 2. Erect barriers, fences, guard rails, enclosures, chutes, and shoring as necessary to protect personnel, structures, and utilities to remain.
 - 3. Provide warning signs and lighting as necessary for vehicular and personnel protection. Maintain warning signs during construction as required by applicable safety ordinances and as reasonably prudent.
 - 4. Coordinate arrangements for items to be salvaged and turned over to the Owner.
 - 5. Notify Underground Service Alert (USA), (800) 640-5137, and local utility companies to verify locations of existing utilities a minimum of 48 hours prior to beginning work.
 - 6. Provide tree protection fencing prior to commencing demolition and site clearing work.
- B. Traffic Access:
 - 1. Ensure minimum interference with roads, streets, driveways, sidewalk and adjacent facilities.
 - 2. Do not close or obstruct streets, sidewalk, alleys or passageways without acceptance from the Owner's Representative or governing authorities as applicable.
 - 3. Provide approved alternate routes around closed or obstructed traffic ways as required by the Owner's Representative.
 - 4. Maintain access to adjacent existing buildings to ensure uninterrupted operations during demolition work.

3.03 DEMOLITION

- A. General: Refer to the Drawings for extent of demolition and site clearing work.
- B. Paving: Demolish paving in accordance with local noise ordinance regulations and as acceptable to the Owner's Representative.

- C. Filling:
 - 1. Completely fill below-grade areas and voids resulting from demolition work.
- D. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both the nature and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of response from Owner's Representative, rearrange selective demolition and site clearing schedule as necessary to continue overall job progress without delay.

3.04 CLEARING AND GRUBBING

- A. Mow all existing turf areas to a height of 1 inch and remove cuttings.
- B. Irrigation heads, valves, and controllers shall be salvaged and provided to Owner.
- C. Clear/strip vegetative material from soil surface and remove unless noted otherwise. Existing turf areas to be removed need to be stripped to remove organic soil.
- D. Utilities and Related Equipment:
 - 1. The locations of existing utilities, as may be shown on the Drawings, are approximate. Should existing utilities not shown on the Drawings be encountered during construction operations, notify the Owner's Representative immediately, and re-direct work to avoid delay. The Owner's Representative will then determine what action, if any, is required.
 - 2. Remove abandoned utilities as indicated and as uncovered by the work and terminate in a manner conforming to code.
 - 3. Remove and salvage designated items and related equipment and deliver to a location acceptable to the Owner's Representative.
- E. Underground Piping:
 - 1. Existing storm drain and irrigation systems, as may be shown on the Drawings, shall be modified to allow for construction of new items and systems as a part of this project. Caution shall be exercised so as not to damage underground piping not scheduled for removal. Damaged caused by construction on pipe not schedule for removal shall be responsibility of the contractor. Inspection of drainage system by televising to be provided by Contractor and reviewed by Owner prior to connection to new storm connections.
 - 2. Remove underground piping as indicated or necessary and backfill to specified compaction density.
 - 3. Existing piping abandoned but not removed shall be backfilled with slurry fill (grout), and ends shall be capped with concrete.
 - 4. Manholes and lines scheduled for removal which connect to active systems shall have their active remaining portions capped, plugged, or blind-flanged as appropriate.
 - 5. Materials used for pipe terminations and temporary connections shall be the same as the existing lines. Fittings and flanges shall be of weight and class suitable for the service in which used.

3.05 SALVAGE

- A. Demolition:
 - 1. Materials or equipment to be demolished shall become the property of the Contractor except for items specified or noted on the Drawings to be salvaged for the Owner.
 - 2. Carefully remove items to be salvaged to avoid damage.
 - 3. Irrigation heads, valves and existing controller shall be salvaged and provided to Owner. Contractor shall clean and box items. Items shall be returned to Owner in accordance with instructions provided by the Owner.

- B. Replacement: In the event items not scheduled to be demolished are damaged, promptly replace or repair such items to an as-was or better condition per the discretion of the Owner's Representative at no additional cost to Owner.
- C. Materials scheduled for removal shall not be placed on view to prospective purchasers or sold on site.

3.06 CLEANING

- A. Debris and Rubbish:
 - 1. Remove and transport debris and rubbish as it accumulates and dispose in a legal manner via recognized haul routes in accordance with Section 01 50 00 - Temporary Facilities and Controls in a manner that will prevent spillage on streets or adjacent areas.
 - 2. Remove tools, equipment and appliances used for demolition from the site upon completion of the work.
 - 3. Clean entire project area, adjacent streets, and pavements to a broom-clean, "stain-free" condition per the discretion of the Owner's Representative.

3.07 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum (ls) for "VIDEO/TV OF EXISTING STORM DRAIN SYSTEM" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including video recording of the existing storm drainage system as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer and no additional compensation will be allowed therefore.
- B. "SYNTHETIC TURF REMOVAL" shall be measured by the square foot of respective synthetic turf, including infill, being removed. The contract unit prices paid per square foot for "SYNTHETIC TURF REMOVAL" shall include full compensation for labor, tools, equipment and incidentals, collecting infill material, rolling up and loading existing turf material, and off hauling of material, and for performing all of the work involved, including but not limited to gathering and packaging for off-haul of existing infill material, cutting and rolling up existing synthetic turf material, hauling, and disposing all existing materials as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.
- C. "HARDSCAPE DEMOLITION" shall be measured by the square foot of respective hardscape demolition being removed. The contract unit prices paid per square foot for "HARDSCAPE DEMOLITION" shall include full compensation for labor, tools, equipment and incidentals, off hauling of material, and for performing all of the work involved, including but not limited to demolition, exposing and cutting existing tree roots, hauling, and disposing all existing materials as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.
- D. "SAWCUTTING" shall be measured by the linear foot of respective hardscape sawcut. The contract unit prices paid per linear foot for "SAWCUTTING" shall include full compensation for labor, tools, equipment and incidentals, cutting of existing hardscape, and for performing all of the work involved, including but not limited to sawcutting of existing hardscape and disposing all existing materials as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.
- E. "FIELD DRAIN ROCK AND PIPE REMOVAL" shall be measured by the cubic yards of respective rock and pipe material being removed. The contract unit prices paid per cubic yards for "FIELD DRAIN ROCK AND PIPE REMOVAL" shall include full compensation for labor, tools, equipment and incidentals, off hauling of material, and for performing all of the work involved, including but not limited removal existing field and trench rock, removal of existing drainage pipe, and off hauling of removed material

as shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.

- A. The full contract cost per lump sum (ls) for "DRINKING FOUNTAIN DEMOLITION" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including disconnection of existing utilities to drinking fountain, careful remove and turn over to Owner, and grinding down of existing hardware that could be consider safety issues as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 09 91 15

EXTERIOR SITE PAINTING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Painting and painter's finish on site and landscape improvements, except prefinished items and unless otherwise noted, as required to complete finishing of the Work. The Work includes the following specific items:
 - a. Paint touchup at chain link fencing.
- B. Items Not Included in This Section:
 - 1. Factory-prefinished items as specified in various Sections.
 - 2. Painting specified elsewhere and included in respective Sections, including but not necessarily limited to shop priming.
- C. Related Requirements:
 - 1. Section 32 36 00 - Landscape Decorative Metal; site finishing of landscape metal fabrications.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Coordination: Perform painting work in proper sequence with work of other trades so as to avoid damage to finished work.

1.03 ACTION SUBMITTALS

- A. Product Data: A complete list of materials proposed for use, together with manufacturer's technical information, including paint label analysis and application instructions.
- B. Color Samples:
 - 1. Appropriately label and identify each sample, including location and application. Include manufacturer's name, color number, and gloss units.
 - 2. Each sample shall have stepped finish, clearly showing each coat and build-up of specified finish. Submit separate samples for each required gloss level.
 - 3. Resubmit samples as requested until required sheen, color, and texture are achieved.
 - 4. See also requirements for field samples below.

1.04 INFORMATIONAL SUBMITTALS

- A. Statement of applicator qualifications.

1.05 CLOSEOUT SUBMITTALS

- A. Extra stock as specified.
- B. Specified warranty.

1.06 QUALITY ASSURANCE

- A. Unsuitability of Specified Products: Claims concerning unsuitability of any material specified (or inability satisfactorily to produce the Work) will not be entertained, unless such claim is made, in writing, to Owner's Representative before beginning of application.
- B. Single-Source Responsibility:
 - 1. To the maximum extent practicable, select a single manufacturer to provide all materials required by this Section, using additional manufacturers to provide systems not offered by the selected principal manufacturer.
 - 2. For each individual system:
 - a. Provide primer and other undercoat paint produced by same manufacturer as finish coat.
 - b. Use thinner within manufacturer's recommended limits.
- C. Applicator Qualifications:
 - 1. Not less than 5 years of documented experience in painting work similar in scope to work of this Project.
 - 2. Maintain a crew of painters who are fully qualified to satisfy requirements of this Section.
- D. Field Samples:
 - 1. Request review, by the Owner's Representative, of first finished item of each finish type or color scheme required for color, texture, and workmanship.
 - 2. Modify selected colors, if requested by Owner's Representative, to achieve desired effect.
 - 3. Use first acceptable surface or item as the Project standard for each color scheme.
- E. Primers:
 - 1. Provide finish coats that are compatible with prime paints used.
 - 2. Review other Sections of these Specifications in which prime paints are to be provided in order to ensure compatibility of total coatings system for various substrates.
 - 3. Upon request, furnish information to other Sections regarding characteristics of finish materials proposed for use.
 - 4. Provide barrier coats over incompatible primers, or remove and re-prime as required.
 - 5. Notify Owner's Representative, in writing, of any anticipated problems arising from using specified coating systems with substrates primed by other Sections.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in original, new, unopened packages and containers bearing the manufacturer's name and label describing contents including the following information:
 - 1. Name or title of material.
 - 2. Manufacturer's stock number and date of manufacture.
 - 3. Contents by volume for major pigment and vehicle constituents.
 - 4. Thinning instructions.
 - 5. Application instructions.
 - 6. Color name and number.
- B. Store materials in tightly covered containers. Maintain containers in a clean condition, free of foreign materials and residue.
- C. Store materials at ambient temperature of between 45 degrees F minimum and 90 degrees F maximum, in a well-ventilated area.
- D. Ensure that storage area is neat and orderly.
- E. Take precautionary measures to prevent fire and health hazards.

1.08 FIELD CONDITIONS

- A. Ambient Conditions:
 - 1. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be stored and applied.
 - 2. Do not apply finish in areas where dust is being generated.
- B. Cover or otherwise protect in progress and finished work of other trades, and surfaces not being painted concurrently or not to be painted.

1.09 WARRANTY

- A. Color and Life of Film:
 - 1. At the end of 1 year, colors of surfaces shall have remained free from serious fading. Variations (if any) shall be uniform.
 - 2. Materials shall have their original adherence at end of 1 year. There shall be no evidence of blisters, running, peeling, scaling, chalking, streaks, or stains at end of this period.

1.10 EXTRA MATERIALS

- A. At completion of the Work, deliver to Owner extra stock of paint of each color used in each coating material used.
- B. Containers shall be full, tightly sealed, and clearly marked.
- C. Provide the following quantities:
 - 1. Field Colors: One 5-gallon container.
 - 2. Accent Colors: One 1-gallon container.

PART 2 - PRODUCTS

2.01 MANUFACTURERS AND PRODUCTS

- A. Products are specified under "Paint Systems" in Part 3 below and are manufactured by Kelly-Moore Paints, unless otherwise indicated. Equivalent products manufactured by PPG, Benjamin Moore, Sherwin-Williams, or Dunn-Edwards are acceptable.
- B. Materials selected for coating systems for each type surface shall be the product of a single manufacturer or shall be acceptable to manufacturer of finish coating for system.
- C. If more than one quality level of product type is marketed, use material of highest quality.

2.02 COLORS

- A. Colors shall be as scheduled on the Drawings. Scheduled colors may have manufacturer identifications other than the acceptable manufacturers listed above. The Drawing listing is solely for the purpose of conveying color information and does not imply manufacturer's approval or waiver of the requirement that all coatings be from the same manufacturer, unless a specific system is not available from the primary manufacturer.
- B. Submit samples of selected colors as specified in Part 1 above.
- C. Colors of paints, including shades of stain, shall match color chips on schedule.

2.03 MIXING AND TINTING

- A. Deliver paints and stains ready mixed to jobsite.
- B. Accomplish job mixing and job tinting only if required for adjustment to finish applied to field test areas to achieve color acceptable to Owner's Representative.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine surfaces scheduled to receive paint and finishes for conditions that will adversely affect execution, permanence, or quality of work and that cannot be put into acceptable condition through preparatory work as included in Article 3.02, "Preparation."
- B. Do not proceed with surface preparation or coating application until conditions are suitable.

3.02 PREPARATION

- A. General:
 - 1. Verify that surfaces to be painted are dry, clean, smooth, and free from deleterious materials.
 - 2. Protect hardware, exposed metals, and other surfaces that are not to be painted by masking, removal, or other means to ensure a neat job.
- B. Metals:
 - 1. Remove mill scale, rust, and corrosion.
 - 2. Clean oils, grease, and dust from surfaces.
 - 3. Touch up chipped or abraded areas in shop coatings, using appropriate primer.
 - 4. Soluble Salts: Removal of soluble salts from bare metal and galvanized metal surfaces, both interior and exterior, is required prior to application of primer coats to preclude pre-mature coating failure and accelerated corrosion.
 - a. Removal shall be in accordance with SSPC-Guide 15, "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates."
 - b. Abrasive blasting, where specified as a required surface preparation procedure, shall be performed after removal of soluble salts. Abrasive blasting is not an acceptable procedure for removal of soluble salts.
 - 5. Previously Painted Metal: Prepare in accordance with recommendations of coating manufacturer based on condition of surfaces and the following:
 - a. Remove loose paint, dirt, and chalk with scraper and strong detergent solution.
 - b. Abrade shiny surfaces, such as baked enamel.
 - c. Clean surfaces of dust from sanding and other foreign matter that could adversely affect adhesion or performance of coating system. Remove sanding dust with a clean, wet rag.
 - d. Surfaces shall be clean, dry, smooth, and even.

3.03 FACTORY FINISHING AND PRIMING

- A. Pertinent Work and Requirements Specified Elsewhere: Review all Sections for products that are to be factory finished or factory (shop) primed.
- B. Touch-up: Touch up abrasions in prime coat immediately after products arrive on jobsite and as required prior to application of finish coats.

3.04 APPLICATION

- A. Do not apply initial coating until moisture content of surface is within limitations recommended by paint manufacturer.
- B. Application:
 - 1. Apply paint with suitable brushes, rollers, or spraying equipment.
 - 2. Guardrails and other exposed metal requiring field finish painting shall be sprayed to the fullest extent conditions will permit. If brush or roller application is used, surface finish shall be subject to review by the Owner's Representative for complying with the appearance requirements specified herein.
 - 3. Apply coatings in accordance with manufacturer's recommendations.
 - 4. Rate of application shall be within limits recommended by paint manufacturer for surface involved.
- C. Spray-Gun Application - Standard Coatings:
 - 1. Spray-apply standard paints only with airless sprayer.
 - 2. Apply in fine, even spray, without addition of thinner, using nozzle pattern suitable to surface being painted.
 - 3. When necessary, follow by brushing to ensure uniform coverage and to eliminate wrinkling, blistering, and air holes.
 - 4. If spraying becomes detrimental to equipment or objectionable to personnel, brush painting will be required.
- D. Comply with recommendation of product manufacturer for drying time between succeeding coats.
- E. Finish coats shall be smooth and free from brush marks, streaks, laps or pileup of paints, and skipped or missed areas.
- F. Leave all parts of moldings and trim clean and true to details with no undue amount of paint in corners and depressions.
- G. Make edges of paint adjoining other materials or colors clean and sharp, with no overlapping.
- H. Refinish whole area where portion of finish is not acceptable.

3.05 CLEANING

- A. Touch up and restore finish where damaged.
- B. Remove spilled, splashed, or spattered paint from all surfaces. Do not mar surface finish of item being cleaned.
- C. Leave storage space clean and in condition required for equivalent spaces in Project.

3.06 PAINT SYSTEMS

- A. General:
 - 1. This Specification shall serve as guide and is meant to establish procedure and quality. Confer with the Owner's Representative to determine exact finish desired.
 - 2. Number of coats scheduled is minimum. Additional coats shall be applied at no additional cost as required to hide base material completely, produce uniform color, and provide required and satisfactory finish.
- B. Acceptance of Final Colors: Final coat of paint shall not be applied until colors have been accepted by the Owner's Representative.

- C. Gloss and Sheen Ratings: It is recognized that manufacturer's use various identifiers for the sheen of their paints. The sheen rating of applied paint, therefore, shall be identified as a Gloss Level and generally fall within the following limits established by the Master Painters Institute, Inc. (MPI) Standards and ASTM D523. Not all of the Gloss Levels are necessarily scheduled or used on this Project.

1. Gloss Level 1: Matte or Flat; not more than 5 units at 60 degrees and 10 units at 85 degrees.
2. Gloss Level 2: Velvet or Low Sheen; not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees.
3. Gloss Level 3: Eggshell; 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
4. Gloss Level 4: Satin; 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees.
5. Gloss Level 5: Semi-gloss; 35 to 70 units at 60 degrees.
6. Gloss Level 6: Gloss; 70 to 85 units at 60 degrees.

- D. Clarification of System Terminology:

1. Exterior paint Systems are specified and identified herein by initial letters "EXT."
2. Initial numbers for each System identify the substrate to be coated.
3. Letter following substrate numbers identify the general finish coat chemistry summarized as follows:

CODE	DESCRIPTION
A	Standard acrylic
B	Standard alkyd
C	Semi-transparent stain
D	Semi-solid stain
H	High performance polyurethane
M	Premium performance acrylic polymer
T	Fluoropolymer

4. Hyphenated suffix identifies the topcoat gloss levels.

- E. Exterior Painting Systems:

EXT 5.3-5

Acrylic over Waterborne Primer on Galvanized Metal – Gloss Level 5

Pretreatment (SSPC SP-1)	Devprep 88	Heavy-duty cleaner
1 coat	4020-1000	Primer
2 coats	2406-XXXX	100% Acrylic Semi-gloss

EXT 5.1H-5

High Performance Polyurethane over Galvanized Metal, Gloss Level 5

Pretreatment		As specified in Section 32 3600 – Landscape Decorative Metal
1 coat	Tnemec 27WB	Two-component, water-based epoxy tinted to match color of topcoat (if primer not shop applied)
1 coat	Tnemec UVX Series 750	Polyurethane

Note: Provide additional topcoat if required to achieve manufacturer's recommended total DFT (primer plus finish coats), or to achieve complete hiding for selected color. Comply with manufacturer's maximum recoat time.

EXT 5.3T-5

High Performance Fluoropolymer Finish on Galvanized Steel - Gloss Level 5: Tnemec coatings as specified, or equal.

Pretreatments

	Cleaner	SSPC SP-1	Heavy-duty cleaner
	Additional Surface Preparation	ASTM D6386	Brush Blast
1	coat	Tnemec "Chembuild" Series 135"	Modified polyamidoamine epoxy applied at 102 microns to 127 microns (4.0 to 5.0 mils) in one or more coats
1	coat	Tnemec "Endura Shield" Series 740	Low VOC hybrid aliphatic polyurethane applied at 102 microns to 127 microns (4.0 to 5.0 mils) in one or more coats
1	coat	Tnemec "Fluoronar" Series 1071	High-solids thermoset fluoropolymer applied at 51 microns to 76 microns (2.0 to 3.0 mils) in one or more coats

Note: Provide additional topcoat if required to achieve manufacturer's recommended total DFT (primer plus finish coats), or to achieve complete hiding for selected color.

3.07 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum (ls) for "CHAIN LINK FENCING PAINTING" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services to complete all chain link fencing paint work within the project limits and all related activities as shown on the Drawings and/or specified herein and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Site excavation and backfilling as shown on the Drawings including, but is not necessarily limited to, the following:
 - 1. Rough grading.
 - 2. Filling and backfilling to attain required grades.
 - 3. Excavating for paving, footings, and foundations.
- B. Related Requirements:
 - 1. Section 01 33 00 - Submittal Procedures
 - 2. Section 01 71 23 - Field Engineering
 - 3. Section 01 78 39 - Project Record Drawings
 - 4. Section 02 41 13 - Site Clearing and Demolition
 - 5. Section 31 23 00 - Excavation and Fill
 - 6. Section 32 11 00 - Base Courses

1.02 REFERENCES

- A. California Building Code (CBC).
- B. American Society for Testing and Materials (ASTM):
 - 1. D 1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- C. California Occupational Safety and Health Standards (OSHA):
 - 1. Article 6 - Excavations and Shoring.
- D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 CLOSEOUT SUBMITTALS

- A. Project Record Drawings:
 - 1. Conform to requirements specified in Section 01 78 39 - Project Record Documents.
 - 2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients.

1.05 QUALITY ASSURANCE

- A. Adhere to requirements, recommendations, and Best Management Practices (BMPs) for storm water management as may be outlined in the Project Storm Water Pollution Prevention Plan (SWPPP) prepared for this project, or as required by governing agencies.

- B. The Owner may retain the services of the Geotechnical Engineer to make recommendations based on the soil conditions encountered the results of field and laboratory tests, and observations of the activities performed under this Section.
 - 1. If, in opinion of the Geotechnical Engineer, work performed does not meet technical or design requirements stipulated, the Contractor shall make necessary readjustments to the approval of the Geotechnical Engineer.
 - 2. No deviations from the Contract Documents shall be made without specific and written acceptance of the Owner's Representative.
 - 3. In event of conflict between the Specifications and recommendations contained in Geotechnical Report, the Owner's Representative and Geotechnical Engineer shall be notified.
 - a. Contractor shall follow clarification and interpretation issued through the Owner's Representative at no extra cost to the Owner.
 - b. If clarification or interpretation should change scope of work, there will be mutually agreed-to adjustment in the Contract price by written Change Order.
 - 4. The Geotechnical Engineer will not inspect the Contractor's safety measures.
- C. Certification:
 - 1. The Contractor shall certify source and type of backfill proposed to be incorporated into the work, at the request of the Owner's Representative.
 - 2. The Contractor shall certify elevations of excavations, footings, subgrades, and finish grades with the use of a Licensed Surveyor, at Contractor's expense, at the request of the Owner's Representative.
- D. Control of Work: Conform to Section 5 of the Standard Specifications.
- E. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.06 PROTECTION

- A. Protect all existing structures, fences, roads, sidewalks, paving, curbs, and other items as necessary from earthwork activity.
- B. Protect above or below grade utilities which are to remain.
- C. Repair damage to any existing site features which are to remain. Repair and restoration shall be equal to quality and appearance of prior condition and to the satisfaction of the Owner's Representative.

1.07 FIELD CONDITIONS

- A. Underground Utilities: Unknown buried utility lines may exist. If encountered, notify Owner's Representative immediately for direction and re-direct work to avoid delay.
 - 1. Cooperate and coordinate with Owner's Representative and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 - 2. Do not interrupt existing utilities serving occupied facilities without proper notification to, and written direction from, Owner's Representative.
- B. Wet Conditions: No grading operations shall be conducted when excessively wet conditions exist as determined by the Owner's Representative.
- C. Contractor shall provide de-watering equipment as required to continue scheduled operations and provide optimum working conditions at no additional cost to Owner.
- D. Dry Conditions: Contractor shall apply sufficient water to materials during construction to properly compact materials and control dust. Contractor shall provide dust control in conformance with Section 10

of Standard Specifications and shall provide water to subgrades as necessary to achieve compaction goals.

1.08 GRADE STAKES AND LINES

- A. Grading and subgrading shall be controlled by Contractor-installed intermediate grade stakes and lines necessary to obtain the finished grade elevations shown or implied in the Drawings. Subgrade and finish grade surfaces shall conform to the control planes established by these grade stakes and lines.
- B. Protect and maintain all existing benchmarks, monuments, and other reference points. If disturbed or destroyed, they shall be replaced at the Contractor's expense.
- C. Contractor shall set temporary benchmarks as necessary to properly complete construction operations.

1.09 SURVEYING

- A. Contractor shall be responsible for hiring a licensed professional surveyor to perform all surveying, layout and staking in accordance with requirements specified in Section 01 71 23 - Field Engineering. Contractor shall be responsible for informing Owner's Representative a minimum 2 working days' notice when staking and layout is scheduled so that a review of completed chalk lines and staking can take place.

1.10 TOLERANCES

- A. Refer to related specification sections for grading tolerances of specified improvements.

PART 2 - PRODUCTS

2.01 PERFORMANCE CRITERIA

- A. Excavations shall not exceed plus or minus 1/10-foot variation from dimensions and elevations shown or noted, unless otherwise accepted by Owner's Representative.
- B. Grading Tolerance: Refer to related specification sections for grading tolerances of specified improvements.

2.02 MATERIALS

- A. Fill Material: Soil excavated from the site or imported conforming to requirements for fill material contained in applicable portions of Division III Grading, Section 19 - Earthwork of the Standard Specifications, unless modified by recommendations for fill material contained in the Geotechnical Report. Imported fill shall be approved by the Geotechnical Engineer before importation to the site.
- B. Subsoil: Excavated material below top 6 inches of existing grade, graded free of clay clods larger than 6 inches, rocks larger than 3 inches, and debris.
- C. Permeable Fills: As specified in Section 32 11 00 - Base Courses and conforming to recommendations for granular fill in the Geotechnical Report
- D. Water: Clean and free from deleterious amounts of acids, alkalis, salts, and organic matter.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify all required lines, levels, contours, datum, control points and property lines required to properly establish limits of work.
- B. Verify elevations of critical existing grades as noted on Drawings and as directed by Owner's Representative. Notify Owner's Representative of discrepancies prior to start of work and re-direct work to avoid delay.
- C. Identify all known below grade utilities. Stake and flag locations.
- D. Identify and flag surface grades and utilities.
- E. Contact Underground Service Alert (USA), 800-642-2444, and local utility companies to verify locations of existing utilities a minimum of 5 working days prior to excavation.

3.02 PROTECTION

- A. Maintain and protect existing utilities remaining which pass through work area.
- B. Perform excavation work near utilities by hand. Provide necessary protection as the work progresses.
- C. Provide and maintain protection for walks, curbs, drains, trees, corners of structures, and other improvement, as necessary to prevent damage.
- D. Barricade and/or cover open excavations occurring as part of this work and post with warning lights to the satisfaction of the Owner's Representative. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
- E. Keep adjacent properties, streets and drives clean of any dirt, dust, or stains caused by earthwork operations.
- F. Upon discovery of unknown utility or concealed conditions, notify the Owner's Representative immediately and re-direct work to avoid delay.
- G. Control dust on and near the work, and on and near off-site borrow areas.
 - 1. Thoroughly moisten surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of any other activities that may occur on the site.
 - 2. Non-compliance with proper dust control measures will be cause for issuance of a "stop work" order by the Owner until such time as satisfactory measures can be implemented.

3.03 ROUGH GRADING

- A. Grade site subsoil to establish proper subgrade elevations and site contouring as described or implied in the Drawings:
- B. Contouring:
 - 1. Construct landforms depicted in the Drawings to the satisfaction of the Owner's Representative.
 - 2. "Round-off" tops of slopes.
 - 3. "Feather" toes of slopes.
- C. Compaction:
 - 1. Compact subgrade in accordance with the procedures.

2. Compact by power tamping, rolling, or combinations thereof as accepted by Owners representative.
 - a. Where impractical to use rollers in close proximity to adjacent construction, compact by mechanical tamping.
 - b. Scarify, moisture condition, and recompact any layer not attaining compaction until required density is obtained.
 3. Repeat compaction procedure until proper grade is attained.
- D. Compaction: Compact subgrade for the specific areas as follows unless otherwise noted:
1. Areas to be Paved:
 - a. Maximum 8-inch loose lifts to at least 95 percent relative density.
 - b. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable. The top 12 inches shall be compacted to at least 95 percent relative compaction.
 - c. Fill soils shall be compacted to no less than 90 percent relative compaction at moisture content of 2 to 4 percent for pavement area.
 - d. Compacted subgrade should be non-yielding under construction traffic, including a loaded ten-wheel truck such as a water or dump truck, in all pavement areas. Removal and subsequent replacement of some material (i.e. areas of excessively wet materials, unstable subgrade, or pumping soils) may be required to obtain the minimum 95 percent compaction to the recommended depth of 12 inches.
 - e. Subgrade preparation for pavement areas shall extend laterally for at least two feet beyond the edge of pavement.
 2. Areas to Receive synthetic Turf: Shall be as follows:
 - a. Maximum 8-inch loose lifts to at least 90 percent relative density. The top 12 inches shall be compacted to at least 95 percent relative compaction.
 - b. Additional lifts should not be placed if the previous lift did not meet the required density, relative compaction, moisture content or if the soil conditions are not stable.
 - c. Fill soils shall be compacted to no less than 90 percent relative compaction at moisture content of 2 to 4 percent for pavement area.
- E. Remove all excess subsoil material from site and dispose of in a legal manner. Refer to "Material Storage" below.
- F. Entire project or individual field area shall be rough graded at one time. No earthwork operation shall occur for partial field areas without receiving direction from the Owner or prior written approval from the Owner.

3.04 EXCAVATION

- A. Remove and dispose of all miscellaneous materials encountered when establishing required grade elevations:
 1. Miscellaneous materials can include but are not limited to: pavements and other obstructions, underground structures, utilities, abandoned irrigation materials, and other materials encountered per the discretion of the Owner's Representative.
- B. Stability of Excavations:
 1. Comply with any applicable requirements of agencies having jurisdiction, including the City of Petaluma and Cal-OSHA.
 2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- C. De-watering: Provide and maintain, at all times during construction, ample means and devices with which to promptly remove and properly dispose of water from any source entering structural excavation, pipe trenches, or other excavations. All costs incurred from de-watering activities shall be paid for by the Contractor.

- D. Excavation for Pavements: Cut surface under pavements to comply with cross-sections, elevations, and grades as shown in the Drawings.
- E. Material Storage:
 - 1. Stockpile satisfactory excavated materials where appropriate, until required for use.
 - 2. Stockpile topsoil and subgrade soil in separate piles.
 - 3. Place, grade, and shape stockpiles for proper drainage.
 - 4. Locate and retain stockpiles away from edge of excavations.
 - 5. Dispose of excess soil material in a legal fashion after it has become evident that the material is no longer needed on the project and is of no value to the Owner.

3.05 FIELD QUALITY CONTROL

- A. Tolerances: Conform to Section 19 of the Standard Specifications, unless more stringent requirements in these Contract Documents are provided, in which place the more stringent tolerances shall govern. Refer to Section 01 71 23 - Field Engineering for additional project requirements.
- B. The Owner Representative shall review and accept work at the following stages:
 - 1. Grading plan for project. Plan shall provide strategy for grading sequence for entire site at one time or by field. Limits and sequence shall be reviewed and coordinated.
 - 2. Cross ripping of subgrade shall be reviewed and observed.
 - 3. Compaction of subgrade soils.

3.06 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum for "TAPERING OF FIELD ROCK" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including excavation and removal of existing field rock, recompaction, and base touch up as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer herein and no additional compensation will be allowed therefore.
- B. "ROUGH GRADING AND EXCAVATION" shall be measured by the square foot of area over which rough grading and excavation is performed regardless of the volume of material moved or disturbed. The contract unit price paid per square foot for "ROUGH GRADING AND EXCAVATION" shall include full compensation for furnishing all materials, labor, tools, equipment and incidentals, and for performing all of the work involved, including excavation necessary materials, off haul and disposal, and any necessary dewatering, as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer.
- C. The full contract cost per lump sum for "FINE GRADING AND STRINGLINEING" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including performing a stringline review of the field base, fine grading of the existing base to ensure it meets contract requirements, and other requirements as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer herein and no additional compensation will be allowed therefore.
- D. The full contract cost per lump sum for "CLEAR AND GRUB" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including performing a clear and grubbing of existing vegetation and soil as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer herein and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 31 23 00

EXCAVATION AND FILL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Trenching, backfilling, and compaction required for, but not necessarily limited to, the following:
 - 1. Sanitary sewer line installation.
 - 2. Storm drainage system installation.
 - 3. Potable water line installation.
- B. Related Requirements:
 - 1. Section 01 33 00 - Submittal Procedures
 - 2. Section 01 71 23 - Field Engineering
 - 3. Section 01 78 39 - Project Record Drawings
 - 4. Section 02 41 13 - Site Clearing and Demolition
 - 5. Section 31 20 00 - Earth Moving
 - 6. Section 32 11 00 - Base Courses
 - 7. Section 33 11 00 - Domestic Water Utilities
 - 8. Section 33 40 00 - Storm Drainage Utilities

1.02 REFERENCES

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 SEQUENCING AND SCHEDULING

- A. Refer to all other Contract Documents, determine the extent and character of related work, and properly coordinate work specified herein with that described elsewhere to produce a complete, operational installation.

1.04 CLOSEOUT SUBMITTALS

- A. Project Record Drawings:
 - 1. Conform to requirements specified in Section 01 78 39 - Project Record Documents.
 - 2. Accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts and slope gradients as practical.

1.05 QUALITY ASSURANCE

- A. Control of Work: Comply with Section 5 of the Standard Specifications.
- B. Control of Materials: Comply with Section 6 of the Standard Specifications.
- C. Trench Safety: Comply with applicable portions of Sections 5 and 7 of the Standard Specifications and requirements of OSHA and other agencies having jurisdiction).

1.06 FIELD CONDITIONS

- A. Wet Conditions: No trenching shall occur when excessively wet conditions exist in the opinion of the Owner's Representative.
- B. Dry Conditions: Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to work as necessary to achieve compaction goals.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. General: Materials shall be free of debris, roots, wood, scrap material, vegetative matter, refuse, soft unsound particles, or other deleterious and objectionable materials.
- B. Bedding for Utility Piping: Sand conforming to Section 19-3.02F(2) of the Standard Specifications.
- C. Native Backfill: Native backfill shall be acceptable soil material excavated from the project site. This material will be considered unclassified and no testing other than for compaction will be required. Additional material required for backfill shall be acceptable to the Owner's Representative.
- D. Aggregate Base: As specified in Section 32 11 00 - Base Courses.

PART 3 - EXECUTION

3.01 PREPARATION

- A. General:
 - 1. Prior to trenching, the Contractor shall pothole existing utilities at locations indicated or implied on the Drawings, where new piping or utilities will cross existing utilities of uncertain depth to determine the elevation of the utility in question and ensure that the new line will clear the potential obstruction.
 - 2. The Contractor shall mark out construction areas in white with non-permanent paint and contact Underground Service Alert (U.S.A.), 800-642-2444, to locate all known utilities a minimum 48 working hours prior to any excavation.
 - 3. Should an existing crossing utility present an obstruction, the proposed line shall be adjusted as acceptable to the Owner's Representative to clear the existing utility.

3.02 TRENCH EXCAVATION

- A. General:
 - 1. Excavation shall include removal of water and materials that interfere with construction. Remove water which may be encountered in the trench by pumping or other methods prior to pipe laying, bedding and backfill operations. Trenches shall be sufficiently dry to permit proper jointing and compaction.
 - 2. Contractor is responsible for directing vehicular and pedestrian traffic safely through or around the work area at all times.
 - 3. The Contractor shall relocate, replace, reconstruct or repair, to an "as-was" or better condition, surface or subsurface improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the construction activities. Except as specified in other Sections or shown in the Drawings, this provision applies to all surface improvements of whatever nature such as walls, fences, above-grade utilities, landscaping, paving, structures, or other physical features whether shown in the Drawings or not and to all subsurface improvements

such as utilities which may be indicated in the Drawings or marked in the field. The Contractor shall connect modified utilities to existing systems and leave work in an operating condition. The cost of this work shall be considered as included in other items of work and no additional compensation will be allowed.

4. The maximum allowable trench width at the top of pipe shall be 18 inches greater than the pipe diameter.
5. New utility trenches extending deeper than 2 feet below finish grade should be located a minimum of 5 feet away from footings and foundations.

B. Existing Paving Areas:

1. Existing asphalt paving over new trenches shall be sawcut, removed, and legally disposed. Existing asphalt paving shall be neatly sawcut 1 foot greater on each side than the trench width. If a longitudinal pavement joint or edge of pavement is located within 3 feet of the limit of excavation, intervening pavement shall be removed and replaced after completion of backfilling. If curb, gutter, or similar concrete improvement are to be replaced, the adjacent existing asphalt paving shall be sawcut 2 feet from the edge of concrete.
2. Existing Portland cement concrete paving over new trenches shall be sawcut to a minimum depth of 1-1/2 inches in straight lines either parallel to the curb or at 90-degree angles to the alignment of the sidewalk prior to being broken out. No section to be replaced shall be smaller than 30 inches in either length or width. If the sawcut would fall within 30 inches of a construction joint, expansion joint, or edge, or within 12 inches of a score mark, the concrete shall be removed to the joint, edge, or mark.

C. Walkway Areas:

1. Backfill for trenches or other excavations within walkway areas should be compacted in 6-inch maximum layers, unless otherwise noted, with hand-held tampers to assure adequate subgrade support.

D. Compacted Fill Areas:

1. Where trenches are to be excavated in compacted fill, these trenches shall be backfilled with the fill materials excavated and re-compacted in the layers and to the density specified for the particular area.

E. Open Trench:

1. No trench shall be left in an open un-protected condition at the end of the day. At the end of the day, open trenches shall be protected in a manner acceptable to the Owner's Representative.
2. Provisions for trench crossings and access shall be made at all street crossings, driveways, water gate valves, and fire hydrants unless otherwise acceptable to the Owner's Representative.

F. Excavated Material:

1. Excavated material not required for backfill or of value to the Owner shall be removed and legally disposed of by the Contractor at no additional cost.
2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
3. Provisions shall be made whereby all storm and waste water can flow uninterrupted in gutters or drainage channels to drainage structures.
4. Excavated material shall not be stored on existing landscaping or paving without provisions being made to protect the surface below from being stained or otherwise adversely affected.

G. Shoring

1. Should excavations extend more than 4 feet below existing ground surface, shoring will be required.
2. For trenching greater than 4 feet deep side slopes are not to exceed 1-1/2: 1 with a depth of 20' max.
3. When trenching greater than 4 feet deep, provide a trench box or shield approved by a PE or designed with accompanying tabulated data approved by a PE.

4. Provide shoring, bracing, or underpinning when trenching next to adjoining walls, sidewalks, or pavements. There shall be no trenching below the base or footing of a foundation that can reasonably be expected to pose a hazard to workers unless one of the mentioned support systems is used.
5. Follow OSHA standards for maintaining, installing, and removing support systems.
6. Utility trenches shall be excavated according to accepted engineering practices following OSHA.

3.03 PIPE BEDDING

A. Stabilization of Trench Bottom:

1. When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be dewatered as necessary. The Owner's Representative will determine the suitability of the trench bottom and the amount of sand, gravel, or crushed rock needed to stabilize the soft foundation. Contractor shall provide a dewatering plan for review and approval by Owner's Representative.

3.04 TRENCH BACKFILL AND COMPACTION

A. General:

1. Construct backfill in two operations, initial and final.
2. Do not backfill where the foundation material in trench is already saturated, except as acceptable to the Owner's Representative. Provide a minimum cover as shown or specified.
3. Where settling greater than the tolerance allowed for grading occurs in trenches and pits due to unstable subgrade material, excavate to the depth necessary to rectify the problem, then backfill and compact the excavation as specified herein and restore the surface to the required elevation.
4. Place final backfill in 6-inch maximum loose lifts for utilities under roads, streets, concrete slabs or other areas to be paved and synthetic turf subgrade areas.
5. Compact backfill surrounding ducts, conduits, pipes and other structures, including the top 12-inches of subgrade to 95 percent maximum density in accordance with ASTM D1557.

B. Initial Backfill:

1. Prior to trench backfill, the condition of the trench and laying of pipe shall be acceptable to the Owner's Representative.
2. Select backfill material shall be used as initial backfill for all utilities except irrigation piping, except as otherwise noted and specified.
 - a. After the pipe has been properly laid and accepted by the Owner's Representative, selected backfill material shall be placed on both sides of the pipe and compacted to the depth shown in the Drawings.
 - b. Compaction: The initial backfill material shall be hand tamped in layers not exceeding 4 inches in uncompacted depth and shall be brought up uniformly on both sides of the pipe to avoid bending or distortion stress. After hand-tamping, the relative compaction of the initial backfill material shall be at least 95 percent relative compaction.

C. Final Backfill:

1. Native backfill material shall be used for final backfill, unless otherwise noted.
2. Compaction: Final backfill compaction shall be by mechanical means with backfill material placed in layers not exceeding 6 inches in loose depth. Each layer shall be thoroughly compacted before succeeding layers are placed. The use of machine tampers, except manually held types, shall not be permitted. Final backfill shall be compacted to a relative compaction of 95 percent for paving areas and synthetic turf subgrade areas. In planting areas, provide acceptable topsoil to required depth compacted to 85 percent to 89 percent maximum relative compaction.

D. Jetting: No jetting will be allowed.

3.05 TRENCH SURFACING

A. General:

1. In unimproved areas, the trench surface shall be restored to its original condition. No mounds of earth shall be left along the trench.
2. Backfill shall be flush with adjoining grade in a firm, unyielding position with no visible settling for a period of one year after Final Acceptance.

3.06 MEASUREMENT AND PAYMENT

- A. Payment for all trenching excavation, pipe embedment, trench backfill, etc. which are not covered separately in a specific bid item will be included in various items of work and shall be full compensation for conforming to the provisions in this section, furnishing all labor, materials, tools, and equipment, and doing all work involved, including all other items necessary for performing this work not specifically enumerated in the plans and specifications, and no additional allowances will be made therefore.

END OF SECTION

SECTION 32 11 00

BASE COURSES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Grading and compaction of subgrade soil for areas to receive pavement, structures, and base material.
 - 2. Furnishing and placing of aggregate base material.
- B. Related Requirements:
 - 1. Section 01 71 23 - Field Engineering
 - 2. Section 31 20 00 - Earth Moving
 - 3. Section 32 12 16 - Asphalt Paving
 - 4. Section 32 13 13 - Concrete Paving

1.02 REFERENCES

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Sequencing and Scheduling
 - 1. Work of this Section shall not proceed until all underground utilities and irrigation sleeving have been installed and accepted.
 - 2. Contractor shall schedule work so that installation of paving and surfacing occurs no later than 5 working days after placement and proper compaction of base materials. Base materials left un-paved longer than this time period shall be subject to testing and re-compaction at the contractor's expense.

1.04 ACTION SUBMITTALS

- A. Certificates of compliance, including sieve analyses, for products and materials proposed to be used in work covered by this Section.

1.05 QUALITY ASSURANCE

- A. Control of Work: Conform to Section 5 of the Standard Specifications.
- B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.06 FIELD CONDITIONS

- A. Wet Conditions: Do not prepare subgrade or place base material when excessively wet conditions exist as determined by the Owner's Representative.
- B. Dry Conditions: Contractor shall provide dust control in conformance with Section 10 of Standard Specifications and shall provide water to subgrades and base courses as necessary to achieve compaction goals.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be stockpiled on site in locations that, in the opinion of the contractor, cause least interference with construction operations and as acceptable to the Owner's Representative.
- B. Materials shall not be stockpiled in proposed planting areas.
- C. Protect materials from segregation, contamination and wind and water erosion.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Aggregate Base: Class 2, 3/4-inch maximum material conforming to Section 26-1.02A of the Standard Specifications. No recycled materials will be accepted for synthetic turf. All other paving and surfacing using aggregate base can use recycled materials

PART 3 - EXECUTION

3.01 SUBGRADE PREPARATION

- A. Preparation of subgrade shall conform to Section 6 of the Standard Specifications and as specified in Section 31 20 00 - Earth Moving.
- B. Remove unsuitable subgrade material as necessary and replace with suitable material or aggregate base per the discretion of the Owner's Representative.

3.02 BASE MATERIAL PLACEMENT

- A. Conform to Section 26 of the Standard Specifications.
- B. Obtain acceptance of subgrade preparation work prior to placing base material thereon.
- C. Place and compact base material in 6-inch maximum lifts unless otherwise noted. Compaction shall be at least 95 percent relative compaction.
- D. Base material shall be moisture conditioned to between optimum and 3 percent above optimum prior to placement and compaction.

3.03 TOLERANCES

- A. Conform to Section 26 of the Standard Specifications, unless more stringent requirements in these Contract Documents are provided, in which place the more stringent tolerances shall govern.

3.04 CLEAN-UP OF WORK AREA

- A. The Contractor shall remove and legally dispose of excess materials, spoils, and debris from the job site on a daily basis.

3.05 PROTECTION OF FINISHED PRODUCT

- A. The Contractor shall provide lighted barricades, signs, and other devices as necessary to prevent damage to finished base courses.

3.06 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for aggregate base. Full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involving aggregate base as specified in these Special Provisions, shall be considered as included in the contract prices paid for the various items of work that require aggregate base, and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Asphalt paving is shown on the Drawings including, but is not necessarily limited to, the following:
 - 1. Plant-mixed asphalt and other asphalt items.
 - 2. Header boards.
- B. Related Requirements:
 - 1. Section 01 33 00 - Submittal Procedures
 - 2. Section 31 20 00 - Earth Moving
 - 3. Section 32 11 00 - Base Courses
 - 4. Section 32 13 13 - Concrete Paving
 - 5. Section 33 40 00 - Storm Drainage Utilities

1.02 REFERENCES

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Sequencing and Scheduling:
 - 1. Time delay between placement and compaction of base material and installation of asphaltic shall not be more than 5 calendar days. Base material left unpaved longer than this time period shall be subject to testing and re-compaction at the expense of the contractor.

1.04 ACTION SUBMITTALS

- A. Product Data: Descriptive literature for primer and other materials proposed for use if requested by the Owner's Representative.
- B. Certificates, signed by asphaltic producer and Contractor, stating that materials comply with specification requirements. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.
- C. The Contractor shall furnish vendor's certified test reports for each carload, or equivalent of bituminous material shipped to the project, signed by asphaltic producer and Contractor stating that materials comply with specification requirements.
 - 1. Minimum information submitted shall include a manufacturer's certification for asphalt products and an asphalt mix design by an independent, qualified laboratory.
 - 2. The report shall be submitted and approved before material is used on the Project. The furnishing of the vendor's certified test report for the bituminous material shall not be interpreted as basis for final acceptance.
 - 3. Test reports shall be subject to verification by testing samples of materials received for use on the project.

1.05 CLOSEOUT SUBMITTALS

- A. Warranty as specified.

1.06 QUALITY ASSURANCE

- A. Work shall conform to the appropriate portion of the referenced "Standard Specifications" except references to "measurement" and "payment" are not applicable.
- B. Control of Work: Conform to Section 5 of Standard Specifications.
- C. Control of Materials: Conform to Section 6 of Standard Specifications.
- D. Asphalt paving surfaces shall have positive drainage as indicated on the Drawings.

1.07 PROTECTION OF WORK

- A. Curbs and other work shall be covered with suitable material and protected from staining or injury by equipment and contact with oil, emulsion, and asphalt.
- B. Manholes, catch basins, and other gratings shall be covered with suitable material so that no asphalt or emulsion will come in contact with the inside walls or floors of the structures.
- C. Damage to adjacent improvements shall be repaired or replaced at the Contractor's expense and to satisfaction of the Owner's Representative.

1.08 FIELD CONDITIONS

- A. Grade Control:
 - 1. Establish and maintain required lines and grades, including crown and cross slope.
 - 2. The final grades and elevations of the ground paving shall be a consistent depth below adjacent concrete work.
- B. Ambient Conditions:
 - 1. Apply bituminous prime and tack coats only when ambient temperature in shade is at least 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application.
 - 2. Do not apply when substrate surface is wet or contains an excess of moisture.
 - 3. Construct asphaltic surface course only when atmospheric temperature is above 40 degrees F and underlying base is thoroughly dry.

1.09 WARRANTY

- A. Contractor: Provide an extended 2-year warranty for asphalt paving.
 - 1. Warranty shall be limited to ordinary wear and tear by weather or defects due to faulty materials and workmanship.
 - 2. Make repairs at no expense to Owner.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE REQUIREMENTS

- A. At no point shall paved surface fail to drain. Provide drainage as indicated on the Drawings.

- B. Asphalt paving shall be free from excessive segregation defined as gaps between aggregate visible at 3/16 inch or larger, cracking, potholes, raveling, slippage, depressions, corrugations, or other defects at the date of completion and acceptance of the project.
- C. Unless otherwise noted, aggregates in asphalt mix may be a blend of virgin material and reclaimed asphalt paving (RAP), with the RAP constituting no more than 15% of the aggregate blend per Section 39 of the Standard Specifications.

2.02 ASPHALT PAVING

- A. Paving Asphalt Binder: Shall be PG 64-10, conforming to Section 92 of the Standard Specifications.
- B. Prime Coat: Liquid asphalt to conform to the requirements for SS-1 liquid asphalt as per Section 94 of the Standard Specifications and approved by the Owner's Representative.
- C. Tack Coat: Asphaltic emulsion to be penetration type conforming to the RS-1 requirements of Section 94 of the Standard Specifications.
- D. Aggregates:
 - 1. Traffic Areas (Vehicular Asphalt Paving): 1/2-inch medium in accordance with the gradation requirements of Section 39 of the Standard Specifications, unless otherwise specified or noted. Traffic area aggregate shall be used in parking and street areas.

2.03 AGGREGATE BASE

- A. Aggregate base shall conform to Section 32 11 00 - Base Courses.

2.04 EQUIPMENT

- A. Spreading and rolling equipment shall be in accordance with Section 39-5 of the Standard Specifications and additional requirements specified.
- B. Spreading and compaction shall be in accordance with Section 39-6 of the Standard Specifications and additional requirements specified.
- C. Pavers that leave ridges, indentations or other marks in the surface that cannot be eliminated by rolling or prevented by adjustment in operation shall not be used.

PART 3 - EXECUTION

3.01 PAVING INSTALLATION - GENERAL

- A. Conform to requirements of Sections 37 and 39 of the Standard Specifications.
- B. Place plastic materials under asphaltic paving equipment while not in use, to catch and/or contain drips and leaks.
- C. Areas shall be paved in sequence and direction to avoid driving loaded trucks on the new asphalt surface.

3.02 PREPARATION – PRIME COAT

- A. Apply primer in accordance with Standard Specifications Section 39 on aggregate base.

- B. Immediately before applying the prime coat, loose dirt and other objectionable material shall be removed from the full width of the surface to be primed.
- C. The bituminous material including solvent shall be uniformly applied with a bituminous distributor at the rate of 0.25 to 0.50 gallon per square yard depending on the base course surface texture. The type of bituminous material and application rate shall be approved by the Owner's Representative prior to application.
- D. Following the application, the primed surface shall be allowed to dry not less than 24 hours without being disturbed or for such additional time as may be necessary to permit the drying out of the prime coat until it will not be picked up by traffic or equipment. This period shall be determined by the Owner's Representative. The surface shall then be maintained by the Contractor until the surfacing has been placed.
- E. Suitable precautions shall be taken by the Contractor to protect the primed surface against damage during this interval, including supplying and spreading sand necessary to absorb excess bituminous material.

3.03 PREPARATION – TACK COAT

- A. General: Apply tack coat to contact surfaces of adjacent pavement and concrete curbs.
- B. Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or air blast to remove all loose dirt and other objectionable material.
 - 1. Vegetation shall be removed and an approved herbicide applied to those areas before cleaning.
 - 2. Emulsified asphalt shall be diluted by the addition of water when directed by the Owner's Representative and shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before the overlying mixture is placed on the tacked surface.
 - 3. The bituminous material including vehicle or solvent shall be uniformly applied with a bituminous distributor at the rate of 0.05 to 0.07 gallons per square yard. The type of bituminous material and application rate shall be approved by the Owner's Representative prior to application.
- C. Following the application, the surface shall be allowed to cure without being disturbed. The curing period shall be not less than 24 hours, unless otherwise approved by the Owner's Representative, and shall be sufficient to permit drying out and setting of the tack coat.
- D. After tack coat has cured, suitable precautions shall be taken by the Contractor to protect the surface against damage prior to placement of next course.

3.04 PLACING ASPHALT PAVEMENT

- A. General:
 - 1. Place asphalt within 48 hours of applying primer or tack coat and after required curing time for emulsions.
 - 2. Each course of asphalt concrete shall be installed or constructed in accordance with the Standard Specifications Section 39.
 - 3. All layers, except as otherwise provided in these Specifications, shall be spread with mechanical spreading and finishing equipment as provided for in the Standard Specifications Section 39-5.01.
- B. Tack and Levelling Course:
 - 1. After completion of the base course a tack coat shall be applied and a leveling course of minimum 1-inch thickness shall be placed and compacted over entire area.
 - 2. After compacting, the surface of the leveling course shall be check for compliance with the specified tolerances.

3. Where required, depressions shall be filled with asphalt concrete fines prior to proceeding with subsequent pavement construction.
- C. Paver Equipment Requirements:
1. Asphalt pavers shall be self-propelled mechanical spreading and finishing equipment provided with a screed or strike-off assembly capable of distributing the material to not less than the full width of a traffic lane.
 - a. Screed action shall include cutting, crowding, and other practical action which is effective on the mixture without tearing, shoving, or gouging, and which produces a surface texture of uniform appearance.
 - b. The screed shall be adjustable to the required section and thickness. The paver shall be provided with a full width roller or tamper or other suitable compacting devices.
 2. Asphalt pavers shall be operated to insure continuous and uniform movement of the paver.
 3. The asphalt paver shall operate independently of the vehicle being unloaded or shall be capable of propelling the vehicle being unloaded in a satisfactory manner and, if necessary, the load of the haul vehicle shall be limited to that which will insure satisfactory spreading.
 4. While being unloaded, the haul vehicle shall be in contact with the machine at all times, and the brakes on the haul vehicle shall not be depended upon to maintain contact between the vehicle and the machine.
- D. Placing Hot-Mix Asphalt:
1. The completed mixture shall be deposited at a uniform quantity per linear foot to provide the required compacted thickness without resorting to spotting, picking-up or otherwise shifting the mixture.
 - a. Segregation shall be avoided, and the surfacing shall be free from pockets of coarse or fine material.
 - b. Asphalt containing hardened lumps shall not be used.
 2. Unless lower temperatures are directed by the Owner's Representative, mixtures shall be spread, and the first coverage of initial or breakdown compaction shall be performed, when the temperature of the mixture is not less than 275 degrees F. Breakdown compaction shall be completed before the temperature of the mixture drops below 250 degrees F.
 - a. A layer shall not be placed over another layer that exceeds 2 inches in compacted thickness until the temperature of the layer that exceeds 2 inches in compacted thickness is less than 150 degrees F at mid depth.
 - b. Layer thickness shall not be less than 1.25 inches or exceed 2 inches unless approved in advance and in writing by Owner's Representative.
- E. Construction Joints: Before placing the top layer adjacent to cold transverse construction joints, the cold transverse construction joints shall be trimmed to a vertical face and to neat line.
1. Transverse joints shall be tested with a 16-foot straightedge and shall be cut back to conform to meet the specified tolerances.
 2. Connections to existing surfacing shall be feathered to conform to the requirements for smoothness.
 3. Longitudinal joints shall be trimmed to a vertical face and to a neat line if the edges of the previously laid surfacing are, in the opinion of the Owner's Representative, in such condition that the quality of the completed joint will be affected.
- F. Rollers and Roller Equipment: The Contractor shall furnish a sufficient number of rollers to achieve the compaction and surface finish required by these Specifications.
1. Each roller shall have a separate operator.
 2. Rolling equipment shall be self-propelled and reversible.
 3. Rollers shall be equipped with pads and water systems that prevent sticking of asphalt mixtures to the pneumatic- or steel-tired wheels.
 4. A parting agent that will not damage the asphalt mixture, as determined by the Owner's Representative, may be used to aid in preventing the sticking of the mixture to the wheels.
- G. Compaction:

1. Compact pavement by rolling to specified relative compaction but not less than 96 percent of bulk unit weight tested in accordance with the nuclear gauge or CTM 308 core method.
 - a. Do not displace or extrude pavement from position.
 - b. Hand compact in areas inaccessible to rolling equipment.
 - c. A "pass" shall be one movement of a roller in either direction.
 - d. A "coverage" shall be as many passes as are necessary to cover the entire width being paved.
 - e. Overlap between passes during a coverage, made to ensure compaction without displacement of material in accordance with good rolling practice, shall be considered to be part of the coverage being made and not part of a subsequent coverage.
 - f. Each coverage shall be completed before subsequent coverages are started.
 - g. Rolling shall commence at the lower edge and shall progress toward the highest portion.
 - h. Perform rolling with consecutive passes to achieve even and smooth finish without roller marks.
 2. Asphalt concrete shall be compacted to a relative compaction of not less than 96 percent and shall be finished to the lines, grades, and section shown on the Drawings.
 - a. In-place density of asphalt concrete will be determined prior to opening the pavement to public use.
 - b. Relative compaction will be determined by California Test 375.
 - c. Laboratory specimens will be compacted in conformance with California Test 304.
- H. The completed surfacing shall be thoroughly compacted, smooth, and free from routes, humps, depressions, or irregularities. Ridges, indentations, or other objectionable marks left in the surface of the asphalt paving by blading or other equipment shall be eliminated by rolling or other means. The use of any equipment that leaves ridges, indentations, or other objectionable marks in the asphalt paving shall be discontinued, and other acceptable equipment shall be furnished by the Contractor.

3.05 TOLERANCES

- A. Surface Tolerance:
1. The Contractor shall have on site a 12-foot straightedge for testing the asphalt paving surface when said straightedge is laid on the finished surface and parallel with the center line, the surface shall not vary more than 0.01-foot from the lower edge of the straightedge.
 2. The transverse slope of the finished surface shall be uniform to a degree that no depressions greater than 0.02-foot are present when tested with a straightedge 12 feet long.
 3. Skin patching will not be allowed to correct depressions.
- B. Thickness Tolerance:
1. The pavement thickness shall be determined by measuring the average thickness of core samples taken from the pavement for density determination.
 2. Thickness will be determined from the cores and shall be based upon the average of the cores.
 3. The asphalt thickness indicated on the cross sections shall be maintained.
 4. Thickness deficiencies in excess of 3/8-inch shall be corrected by removal and replacement of overlay at the discretion of the Owner's Representative.
 5. Skin patches and overlays less than 1-1/2 inches will not be allowed.
- C. Adjustments to Contract Sum:
1. The Contract will be reduced for thickness deficiencies equal to or less than 3/8-inch in proportion to 2 times the percent of thickness deficiencies to the specified pavement thickness (i.e., a 1/4-inch thickness deficiency in a pavement with a 2-inch specified thickness would result in a reduction of the unit price of $(2 \times 0.25)/2.0 = 25$ percent) for the lot containing a thickness deficiency.
 2. No Contract Sum adjustment will be made for thickness in excess of those specified or shown.

3.06 FIELD QUALITY CONTROL

- A. Take samples and perform tests in accordance with Caltrans Test Methods.

- B. Upon completion of the work, Contractor shall provide a water drainage test for paved areas.
 - 1. Areas that fail to drain properly, as determined by the Owner's Representative, shall be corrected and repaired at no additional cost.
 - 2. If repaired, the entire surface shall have a seal coat applied at Contractor's cost.
 - a. Type of seal coat will be determined by the Owner's Representative.
 - b. Repairs shall be made within 15 calendar days of notification at the expense of the Contractor.

3.07 PROTECTION

- A. After final rolling, do not permit vehicular traffic on pavement until it has cooled to not less than temperature noted in the "Standard Specifications" and hardened and in no case sooner than 6 hours.
- B. Contractor shall be responsible for erecting barricades to protect paving from traffic until mixture has cooled and attained its maximum degree of hardness.
- C. Ample time shall be allowed for drying before traffic, vehicular and pedestrian, is allowed on the pavement.

3.08 MEASUREMENT AND PAYMENT

- A. "ASPHALT PAVING" shall be measured by the square foot of respective asphalt concrete pavement structural section installed. The contract unit prices paid per square foot for "ASPHALT PAVING" shall include full compensation for furnishing all materials (including asphalt concrete, and aggregate base), labor, tools, equipment and incidentals, and for performing all of the work involved, including but not limited to, excavation for placement of aggregate base, subgrade preparation, furnishing and placement of 6" of aggregate base, and placement of full asphalt concrete pavement structural section, complete-in-place as, shown on the Drawings, specified in the State Standard Specifications and these Technical Specifications and as directed by the Engineer.

END OF SECTION

SECTION 32 13 13

CONCRETE PAVING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Concrete flatwork as shown on the Drawings including, but is not necessarily limited to, the following
 1. Curbs.
 2. Accessible ramps.
 3. Walkways.
 4. Expansion and control joints.
 5. Reinforcement.
 6. Finishing.
- B. Related Requirements:
 1. Section 01 33 00 - Submittal Procedures
 2. Section 01 71 23 - Field Engineering
 3. Section 32 12 16 - Asphalt Paving
 4. Section 31 20 00 - Earth Moving
 5. Section 32 11 00 - Base Courses
 6. Section 32 33 00 - Site Furnishings

1.02 REFERENCES

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Pre-Installation Meeting: Conduct meeting at Project site to review scope of concrete paving work and expectations.
 1. Meeting shall be scheduled after approval of mockups and sufficiently in advance of commencement of concrete paving.
 2. Attendees shall include:
 - a. Contractor.
 - b. Concrete subcontractor.
 - c. Owner's Representatives.

1.04 ACTION SUBMITTALS

- A. Product Data: Manufacturers' current catalog cuts and specifications for the following:
 1. Expansion joint filler materials.
 2. Color admixtures.
 3. Curing compounds.
 4. Other items as requested by Owner's Representative.
- B. Samples:
 1. Concrete materials as required for testing and inspection.

2. Expansion Joint Sealant: Manufacturer's standard bead samples showing full range of colors available.
3. Concrete Panels: Not less than 12 inches by 12 inches for each selected color and finish texture using concrete mix proposed for this Project.
 - a. Indicate materials and methods used to produce each color and texture.
 - b. Mockup work shall not commence until a concrete sample panels have been approved.
- C. Concrete Mix Design: Submit mix designs and certified compressive strength test reports for each concrete strength, type, additives, and maximum aggregate size required, prepared, and certified by the ready-mix concrete supplier.

1.05 INFORMATIONAL SUBMITTALS

- A. Statement of installer/finisher qualifications if requested by Owner's Representative.
- B. Mill Certificates and Certifications for reinforcing bars.
- C. Delivery tickets for each load of concrete delivered to the site.
- D. Results of slip-resistance testing.

1.06 QUALITY ASSURANCE

- A. Construction of concrete flatwork, including curbs and gutters, shall conform to Section 73 of the Standard Specifications.
- B. Codes and Standards: Comply with the applicable provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:
 1. California Building Code, Title 24, Part 2, Chapter 19A - Concrete
 2. ACI 301 Specifications for Structural Concrete for Buildings
 3. ACI 318 Building Code Requirements for Reinforced Concrete
 4. ACI 614 Recommended Practice for Measuring, Mixing, and Placing Concrete
 5. Concrete Reinforcing Steel Institute, Manual of Standard Practice
- C. Contractor shall be responsible for quality of concrete in place and shall bear burden of proof that concrete as placed meets minimum requirements.
- D. Slip Resistance: Paving shall provide a value equal to or greater than 0.42 when tested in accordance under dry conditions with DCOF AcuTest procedure contained in ANSI A137.1:2012, Section 9.6, and under wet conditions with DCOF AcuTest procedure of ANSI B101.3.
- E. Concrete Testing:
 1. The Owner may retain, at its expense, a testing laboratory to perform material evaluation tests in accordance with Section 01 45 00 - Quality Control.
 2. Testing may include slump tests and securing samples of concrete, cement, aggregates, or other materials for testing. Applicable materials shall be provided by the Contractor at no additional cost to the Owner.
- F. When review or observation is required of the Owner's Representative of the concrete work, Contractor shall notify the Owner's Representative not less than 2 working days prior to date when the review or observation is required.
- G. Pre-Pouring Review:

1. Formwork, joint patterns, base material, reinforcement, "dobies," ties, and other installation accessories shall be reviewed and accepted by the Owner's Representative prior to pouring concrete.
 2. Forms, reinforcing, and accessories shall be in place and Contractor shall give a minimum of 5 working day lead-time notice to Owner's Representative when scheduling the review request.
 3. Contractor shall allow a minimum of 2 working days after pre-pour review in Construction Schedule for possible modifications to concrete preparation work, at no cost or delay to the project.
- H. The Owner's Representative shall have access to any off-site batch plant or quarry supplying materials at all times for subject project and trucks in route to the project site.
- I. Mockups (Contractor shall provide an allowance for this section of work):
1. General – Contractor to provide an allowance for concrete mockups. Mockups will be discussed in a first construction meeting if needed:
 - a. Mix design shall match that used on accepted sample panels and proposed for use in final construction including cement and color additive.
 - b. Prepare at least one month before start of final concrete work to allow concrete to cure before observation.
 - c. Concrete color and finish for mockup appearance shall match color and finish of accepted sample.
 - d. Build mockups at the location indicated or, if not indicated, as selected by the Owner's Representative
 - e. Notify Owner's Representative 5 working days in advance of dates and times when mockups will be constructed and layouts will be ready for review.
 - f. Color and texture shall be approved before starting construction.
 - g. Perform specified slip-resistance testing on mockups.
 - h. Maintain final accepted mockups in an undisturbed condition as a standard for judging the completed Work.
 - i. Retain samples of sands, aggregates, and color additive used in the mockups for comparison with materials used in final work.
 - j. Demolish and remove mockups when directed if not incorporated into the final work.
 2. Flat Paving Mockups:
 - a. 4-feet x 4-feet sample panels of colored concrete flatwork and concrete darkening agent for each required color and texture shall be poured by the Contractor at the site for review and acceptance by the Owner's Representative.
 - b. Quantity:
 - 1) Contractor shall allow for preparation of up to 2 flat paving mockups for evaluation and final approval of each concrete.
 - c. Samples shall include each type and profile of joint, surface texture, and tooled conditions for approval. Contractor shall schedule review well in advance of concrete operations to allow for modifications and preparing an additional mockup panel if necessary.

1.07 DELIVERY AND STORAGE

- A. Deliver concrete reinforcement to job site properly tagged and ready to set. Store above ground surface on platforms, skids, or other supports. Coordinate delivery and storage of all other materials as appropriate.
- B. Coordinate delivery so that mixes may be immediately poured upon arrival at site.

1.08 FIELD CONDITIONS

- A. Maintain control of concrete dust and water. Do not permit adjacent areas to be contaminated.

PART 2 - PRODUCTS

2.01 BASE MATERIALS

- A. Aggregate: As specified in Section 32 11 00 - Base Courses.

2.02 FORMS

- A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet or less.
 - 2. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.03 REINFORCING

- A. General:
 - 1. Reinforcing steel shall be cut and bent cold to exact lengths and shapes to comply with Drawings, reviewed shop drawings, and referenced codes and standards.
 - 2. Comply with the additional requirement shown on the Drawings.
- B. Reinforcing Steel: Deformed billet steel bars complying with Section 52-1.02B of Standard Specifications, Section 1907 of CBC and ASTM A615.
 - 1. Provide Grade 60 for No. 4 and larger.
 - 2. Bars shall be in a new, "first-class" condition.
- C. Smooth Dowel Steel Bars for Expansion Joints: ASTM A29, Grade 60, No. 4 smooth.
 - 1. Dowels shall be shop painted with iron-oxide zinc-chromate primer.
 - 2. Where shown, provide metal dowel sleeve or other approved break-bond method at one end of dowel to permit lateral movement at dowel within concrete section.
 - 3. Provide for movement which equals joint width plus 1/2 inch.
 - 4. Bars shall be in a new, "first-class" condition.
- D. Dowel Insert System: Single component dowel sleeve with self-locking design; Greenstreak "Speed Dowel" by Sika, or equal selected for dowel profile and diameter indicated on the Drawings.
- E. Tie Wire: ASTM A82, black annealed, minimum 16 gage.
- F. Supports for Reinforcement: Provide bolsters, chairs, spacers, and other devices for spacing, support and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable.

2.04 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type II, and shall be provided by one manufacturer.
- B. Pozzolan: Class F Fly Ash per ASTM C618 comprising 15-20% of total cementitious materials. Fly Ash may be added to a maximum ratio of 35% of total cementitious materials where testing reports are provided for the mix design review.
- C. Coarse Aggregates: Coarse aggregates shall conform to ASTM C33, sizes 57, 67 or 7. Pea gravel aggregate shall not be used.

D. Fine aggregates: Fine Aggregates shall conform to ASTM C33.

E. Water: Clean and not detrimental to concrete.

2.05 CONCRETE ADDITIVES

- A. Pigment for Concrete: Synthetic mineral-oxide pigments or colored water-reducing admixtures, color stable, nonfading, and resistant to lime and other alkalis, and complying with ASTM C979; Davis Colors Inc., 800-800-6856, as specified and noted on the Drawings, or equal.
1. If added to mix at Project site, additive shall be furnished in manufacturer's "Mix-Ready" disintegrating bags.
 2. Dosage Rate: As required to achieve color of approved sample but not exceeding 10 percent of weight of cementitious materials in mix.
 3. Colors:
 - a. Darkening Agent: Davis Colors Inc. colorant #8084 Black, or acceptable equal.
 - 1) Dosage: 1/2 lb / CY (1/4 per 94 lb sack), typ. (Match existing).
 - b. Other Colors: As noted on the Drawings.
- B. No admixtures shall be allowed without written acceptance by the Engineer of Record. Admixtures that have a negative impact on concrete finish shall not be used. When more than one admixture is used, admixtures shall be compatible.

2.06 ACCESSORIES

- A. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 2,400 psi in 48 hours and 7,000 psi in 28 days. SIKAGROUT 212 or equal.
- B. Curing Materials:
1. Liquid Curing Compounds: ASTM C309, Type 1.
 2. Sheet Material: Waterproofed Kraft paper, ASTM C17, regular type.
- C. Joint primer: One component, solvent based; Sonneborn horizontal paving joint primer No. 733, or No. 766, or equal.
- D. Fiber Expansion Joint Material: Preformed cellular fiber complying with ASTM D1751; 1/2 inch thick unless otherwise indicated.
1. Expansion joint material shall be variety with "zip-strip" H-channel joint sealant receptacles. If proposed joint material is not installed with sealant receptacles then, the expansion joint material shall be completely covered with a Sonneborn "Sonofoam" closed cell backer rod or acceptable equal prior to application of joint sealant.
 2. Provide 3/8-inch tooled edges each side of joint material. Refer to Drawings for additional information.
- E. Paving Expansion Joint Sealant: One-part, self-leveling polyurethane conforming to ASTM C920, Class 25, Type S, Grade P; Sonneborn "Sonolastic SL 2," or equal.
1. Color: As selected by Owner's Representative.

2.07 CONCRETE MIXING

- A. General:
1. Mix and deliver concrete in accordance with ASTM C94.
 2. Addition of water to the mix after leaving the plant is not permitted.
 3. No admixtures will be allowed without prior acceptance by the Owner's Representative. If accepted, use admixtures according to manufacturer's written instructions.

4. Ensure equipment and plant will afford accurate weighing, minimize segregation, and will efficiently handle materials.
 5. Deposit concrete into final position within 90 minutes of introduction of cement.
- B. Pigments:
1. Darkening Agent: Add 1/2 lb / CY (1/4 per 94 lb. sack), typ. (Match existing) of specified black colorant per 94 lb. sack of cement to all concrete which will be exposed to view when cured except for drain rims and concrete receiving other colorants.
 2. Other Colors: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.
- C. Minimum ultimate compression strength of concrete at 28 days is as follows:

Item	Strength	Maximum slump	Size of aggregate	Cement (# of 94 lb. sacks per yard)	W/C Ratio
Slab-On-Grade	3,000	4"	3/4"-1"	5	0.50
Curbs / Edgebands	3,000	4"	3/4"-1"	5	0.60

- D. Drying Shrinkage Limit at 21 Days: 0.40 percent.
- E. Adjustment to Concrete Mixes:
1. Mix design adjustments may be requested by Contractor when job conditions, weather, test results warrant, or to meet appearance of accepted samples or mockup.
 2. Test data for revised mix design shall be submitted to and accepted by Owner's Representative before using in work.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify requirements for concrete cover over reinforcement.
- B. Verify that anchors, seats, plates, reinforcement, and other items to be cast into concrete are accurately placed, positioned securely, and will not cause hardship in placing concrete.

3.02 PREPARATION

- A. Prepare joints in previously placed concrete by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.
- B. Coordinate the placement of joint devices with erection of concrete formwork and placement of form accessories.

3.03 EXCAVATION

- A. In addition to the general grading excavation required, the Contractor shall excavate to the required depths in the locations shown for flatwork and curbs. Excess excavation shall be replaced with concrete poured monolithically with the wall or pavement, at no additional cost to the Owner.

3.04 INSTALLATION OF FORMWORK

- A. Formwork shall conform to Section 51 of the Standard Specifications and as follows:
 - 1. The Contractor shall build forms with a high degree of care and shall select from materials of adequate strength and smoothness to produce smooth, even surfaces of uniform texture and appearance, free of bulges, depressions, or other imperfections per the discretion of the Owner's Representative. Remove any residue remaining on concrete after forms are removed.
 - 2. Transition of curves to straight lines and of curves to curves shall be formed as smooth, continuous, and uninterrupted with typical 90-degree radius alignment at the points of tangency.

3.05 PLACING REINFORCEMENT

- A. General:
 - 1. When there has been a delay in placing concrete, reinforcement shall be inspected and, if necessary, cleaned, relocated, and tied at no additional cost to Owner.
 - 2. Wherever conduits, piping, inserts, sleeves, and similar item interfere with placing of reinforcing steel, obtain approval of Owner's Representative of method of procedure before concrete is placed.
- B. Reinforcement installation shall conform to the provisions of the Standard Specifications as follows:
 - 1. Cleaning Section 52-1.03B
 - 2. Bending Section 52-1.03C
 - 3. Placing Section 52-1.03D
 - 4. Splicing Section 52-6
 - 5. Lapped Splices Section 52-6.03B

3.06 PLACING CONCRETE

- A. Place concrete in accordance with ACI 301.
- B. Notify Engineer of Record and Special Inspector minimum 48 hours prior to commencement of operations. Do not place concrete until forms and reinforcements, as well as other required inspections, have occurred and the Special Inspector is present to perform observations and testing during placement.
- C. Ensure reinforcement, inserts, embedded parts, formed expansion and contraction joints are not disturbed during concrete placement.
- D. Separate slabs on grade from vertical surfaces with 1/2-inch-thick joint filler. Place joint filler to required elevations. Secure to resist movement by wet concrete.
- E. Extend joint filler from bottom of slab to within 1/8 inch of finished slab surface.
- F. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.
- G. Place concrete continuously between predetermined contraction joints.
- H. Do not interrupt successive placement; do not permit cold joints to occur.
- I. Screed slabs on grades shown, maintaining surface to tolerance of 1/4 inch maximum in 10 feet.

3.07 CONCRETE JOINTS

- A. General:
 - 1. Joints shall be constructed as detailed in the Drawings.

2. Refer to layouts on the Drawings for location of each joint type.
- B. Expansion Joints: Install to full depth of slab.
 1. Fiber Expansion Joints: After allowing concrete to fully cure, remove zip strips and install expansion joint sealant as shown and in accordance with manufacturer's instructions.
 2. Install specified dowel sleeves in accordance with manufacturer's instructions and as shown.
- C. Score Joints: Tool to a 3/8-inch radius and to a 1-inch depth.
- D. Form contraction joints as detailed on plans. Joints shall be formed immediately after final finishing with an approved concrete-sawing machine; "SOFF-Cut" as manufactured by SOFF-Cut International: Corona, California (909) 272-2330, or equal.
 1. Avoid dislodging aggregates.
 2. Unless otherwise indicated or directed, the joints shall be 1/8-inch-wide and 1-inch deep. Do not use zip-strips.
 3. Saw contraction joints to true alignment with "SOFF-Cut" concrete-sawing machines adequate in number and power and with sufficient replacement blades to complete the sawing at the required rate.
 4. Joints shall be cut as the concrete has hardened sufficiently to permit walking on the slab, and as recommended by the saw manufacturer.
 5. Unless otherwise approved, saw joints in the sequence of concrete placement. Remove cutting debris.
 6. Saw cuts shall be made in accordance with manufacturer's instructions.
- E. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
 1. Cut depth shall be 25 percent of slab depth unless otherwise shown or required to comply with accepted mockup.
 2. Layout: As shown on the Drawings.
- F. Curb and Edge Band Joint: Locate as follows, unless otherwise noted on the Drawings.
 1. Every 5 feet for score joints.
 2. Install fiber expansion joints maximum 15 feet on center.
 3. Install fiber expansion joints at corners, and beginnings and endings of radii.
 4. Align score and fiber expansion joints with existing fence posts.

3.08 EDGING

- A. Edges of slabs, curbs, and other paving shall be tooled with a 1/2-inch radius edging tool, unless otherwise indicated or specified in the Drawings.
- B. Trowel marks resulting from tooling of edges shall be carefully troweled out.

3.09 PLACING OF CONCRETE

- A. Notify Owner's Representative minimum 5 working days prior to pour.
- B. Preparation:
 1. Protect finished surfaces adjacent to areas to receive concrete.
 2. Valve boxes, electric boxes, drainage inlet structures, manholes, lids, and other similar items shall be covered and protected prior to and during concrete pour. Concrete staining to these items will not be accepted.
 3. Verify that the Owner's Representative, if required, has inspected reinforcement.
 4. Notify the Owner's testing laboratory at least 2 working days before placing concrete.

- C. Placing:
 - 1. Concrete placement shall conform to Section 40-103H of the Standard Specifications.
 - 2. Moisten earth, and spray forms and reinforcement with water before placing concrete.
 - 3. Place concrete in continuous operation to permit proper and thorough integration and to complete scheduled placement.
- D. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six feet. Spouts, elephant trunks, or other acceptable means shall be used to prevent segregation.

3.10 CONCRETE FINISHING - GENERAL

- A. Provide formed concrete surfaces to be left exposed with a medium broom finish. Coordinate with Landscape Architect prior to placing concrete.
- B. Finish concrete floor surfaces in accordance with ACI 301. Provide non-slip surface where concrete floor surfaces are left exposed, unless noted otherwise.
- C. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains as indicated on drawings.

3.11 FLATWORK FINISHING

- A. General:
 - 1. Provide each concrete finish where shown in the Drawings.
 - 2. Provide samples and mockups as specified of all concrete finishes for review and acceptance prior to pouring concrete.
- B. Broom Finish:
 - 1. Broom with medium bristled broom to a uniformly roughened surface. Finished surface shall be clean with uniform and straight lines.
 - 2. Paving with a slope greater than 6 percent shall be heavy broom finish and paving less than 6 percent shall be a medium broom finish.

3.12 FIELD QUALITY CONTROL

- A. Provide free access to Work and cooperate with Owner's Representatives.
- B. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.
- C. One additional test cylinder will be taken during cold weather concreting, cured on job site under same conditions as concrete it represents.
- D. At a minimum one slump test will be taken for each set of test cylinders taken.
- E. Tolerances:
 - 1. Vertical deviation from specified grades shall not exceed 0.04 foot.
 - 2. Surface smoothness deviations shall not exceed 1/8 inch in 8 feet, in any direction.
 - 3. Thickness shall not be more than 0.01 foot less than planned thickness at any point.

3.13 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Cure floor surfaces in accordance with ACI 308.
- D. Spraying: Spray water over floor slab areas and maintain wet for 7 days.
- E. Provide necessary security to protect the concrete from vandalism. Concrete which is defaced or damaged during the course of this Contract shall be replaced by the Contractor at no additional cost to the Owner.

3.14 PATCHING

- A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.
- C. Patch imperfections in accordance with ACI 301.

3.15 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances, or specified requirements; concrete with excessive honeycombs or other surface or finish defects.
- B. Repair or replacement of defective concrete will be determined by the Engineer of Record.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.
- D. No additional compensation will be allowed for repair of defective concrete.

3.16 CLEANING

- A. Remove excess base material, concrete spills, cement stains and all other excess materials from all project areas prior to Final Acceptance.

3.17 MEASUREMENT AND PAYMENT

- A. The full contract cost per square foot for "CONCRETE PAVING" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, as shown on the plans, as required by the Specifications, and as directed by the Engineer for replacement and/or construction of new walkways, parking areas, and thicken edges including concrete and surplus material, excavating areas to subgrade, removal of all unsuitable material to subgrade and placement of new aggregate base (6" under vehicular pavement, 4" under pedestrian pavement), root pruning, supplying, placing and compacting aggregate base, forms board and other materials for concrete pour, reinforcement bars, dowels and epoxy for doweling into existing concrete walkways and walls, complete in place and no additional compensation will be allowed therefor.
- B. The full contract cost per linear foot for "CONCRETE CURBS" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, as shown on the plans, as required by the Specifications, and as directed by the Engineer for replacement and/or construction of curbs including concrete and surplus material, excavating areas to subgrade, removal of all unsuitable material to subgrade and placement of new aggregate base, root pruning, supplying, placing and compacting aggregate base, forms board and other materials for concrete pour,

reinforcement bars, dowels and epoxy for doweling into existing concrete, complete in place and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 32 17 23
PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. Furnish all labor, materials, equipment, facilities, transportation and services to complete all striping and related work shown on the Drawings and/or specified herein.
- B. Scope of Work: The general extent of the striping work is shown on the Drawings and can include, but is not necessarily limited to the following:
 - 1. Accessible parking striping, lettering, and symbols
 - 2. Parking lot striping
- C. Related sections can include, but may not be limited to the following:
 - 1. Section 32 12 16 - Asphalt Paving
 - 2. Section 32 13 13 – Concrete Paving

1.02 REFERENCES AND REGULATORY REQUIREMENTS

- A. State of California Department of Transportation Standard Specifications, current edition.

1.03 SUBMITTALS

- A. Conform to requirements of Section 01 33 00 Submittals and/or applicable Division One and Division Two specifications, General Conditions and Special Provisions.

1.04 PROJECT/SITE CONDITIONS

- A. Work shall not be performed during wet, or other adverse conditions as determined by the Owner's Representative and/or paint manufacturer's instructions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Unless otherwise specified, all striping shall be two coats of solvent borne, rapid dry paint (of the colors indicated in the Drawings) in conformance with Section 84 of the Standard Specifications.
- B. Colors shall be as follows:
 - 1. Parking stalls - white
 - 2. Accessible parking – blue.
 - 3. No parking and emergency access – red.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Contractor shall make provisions and take all necessary precautions to protect existing improvements and surrounding property from overspray or damage due to pavement marking work.
- B. Contractor shall layout all striping (with chalk-lines or other acceptable method) prior to start of work for review and acceptance by the Owner's Representative. Adjust layout as directed by the Owner's Representative.

3.02 APPLICATION

- A. No striping shall be installed until the pavement surface has fully cured and/or has been properly stripped, cleaned and prepped per the paint manufacturers' instructions.
- B. Paint shall be applied at rates approximately as follows:
 - 1. First Coat: 360 square feet per gallon of paint
 - 2. Second Coat: 150 square feet per gallon of paint

3.03 PROTECTION

- A. The contractor shall provide appropriate barriers, warning signs, and/or other acceptable arrangements to protect all painted surfaces until project Final Acceptance.

3.04 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum for "ADA PARKING STRIPING", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in pavement striping, as specified in these Technical Specifications and as directed by the Engineer and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 32 18 13

SYNTHETIC TURF PLAYING FIELD

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Included: Synthetic grass playing field system consisting of, but not necessarily be limited to, the following:
 - 1. Synthetic grass system consisting of 2-inch-tall hybrid of monofilament and slit-film polyethylene fiber, Owner Furnished, Contractor Installed (OFCl).
 - 2. A resilient infill system consisting of virgin sand and olive pits materials as specified in this section. The infill shall be filled so that there is a void of no greater than $\frac{3}{4}$ " to the top of the fiber, Owner Furnished, Contractor Installed (OFCl).
- B. Related Requirements:
 - 1. Section 32 18 14 - Synthetic Turf Base

1.02 REFERENCES

- A. ASTM Standard Test Methods:
 - 1. D1335: "Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings."
 - 2. D5848: "Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering."
 - 3. F355: "Standard Test Method for Shock-Absorbing Properties of Playing Surfaces."
 - 4. F1936: "Standard Test Method for Shock-Absorbing Properties of North American Football Field Playing Systems as Measured in the Field."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.04 ACTION SUBMITTALS

- A. Submit Drawings: Prepare and submit the following.
 - 1. Seaming plan.
 - 2. Installation details; edge detail, utility box detail, and other conditions of the installation.
 - 3. Field layout and striping plan including field colors, including field line layouts and colors.
 - 4. Final electronic versions of artwork.

1.05 INFORMATIONAL SUBMITTALS

- A. Manufacturer's installation instructions.
- B. Certifications:
 - 1. Project specific letter from turf manufacturer on the company letterhead certifying that the products to be provided meet or exceed all specified requirements, and state that the installer meets the specified qualifications above and is certified by the manufacturer to install the synthetic turf specified and to be provided.
- C. Qualifications: A list providing project name, date the field installation was approved, contact names and telephone numbers for each project that meets the experience and qualification requirements specified.

1.06 CLOSEOUT SUBMITTALS

- A. The Contractor shall provide the following prior to Final Acceptance and the Owner filing the Project Notice of Completion:
 - 1. Written warranty as specified with forms completed in Owner's name and registered with manufacturer and insurance carrier.
 - 2. Information confirming that the third-party insurance policy, non-cancelable and pre-paid, is in effect covering this installation, and underwritten by a Best "A" Rated Insurance Carrier. Insurance carrier shall confirm that the policy is in force and premiums paid.
 - 3. Three copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventive maintenance of the turf system, including painting and markings.
 - 4. Project Record Documents, in accordance with Section 01 78 39 – Project Record Documents with plans showing actual locations of seams and other pertinent information.

1.07 QUALITY ASSURANCE

- A. The manufacturer shall have a representative on site to certify the installation and warranty compliance.
- B. Designs, markings, layouts, and materials shall conform to all current standards as specified that may apply to this type of synthetic turf installation.

1.08 TURF COMPANY QUALIFICATIONS

- A. The Turf company shall be experienced in both the manufacturing and installation of the specified type of synthetic infilled turf system.
 - 1. Use of outside, independent contractors for the installation is to be reviewed by the Owner's Representative prior to the Bid of Contract.
 - 2. The Turf Company shall identify and provide the name of a single point of contact for their company for this project beginning with the bid process through construction administration and project close-out.
 - 3. The Turf Company shall coordinate all bid documents, submittals, shop drawings, schedules, warranty and close-out efforts internally and shall not rely on Owner's Representative to coordinate with multiple parties. Failure to do so could result in a time and materials charge from the Owner or Owner's Representative for additional coordination.
 - 4. For the purpose of meeting these qualifications, the type of fiber and infill olive and sand are not determining factors in meeting these installation qualifications.
- B. Installer:
 - 1. Capable of providing competent workers skilled in this specific type of in-filled synthetic grass installation.
 - 2. Designated supervisory personnel on the project shall be certified as competent in the installation of this material including sewing seams and proper installation of the infill mixture.
 - 3. The foreman for the installation shall have installed at least 20 fields in the last 3 years of the specified material.
 - 4. Possess an active California D-12 Synthetic Products license in good standing and have never had a license revoked.
 - 5. Shall not have had a Surety or Bonding Company finish work on any contract within the last 5 years.
 - 6. Shall not have been disqualified or barred from performing work for any public owner or other contracting entity in the U.S.
 - 7. For the purpose of meeting these qualifications, the type of olive and sand are not determining factors in meeting these installation qualifications.

1.09 FIELD CONDITIONS

- A. Contractor shall be responsible for reviewing the base and ensuring it conforms to the project requirements prior to placement of the synthetic turf.
- B. Ambient Conditions: Care should be taken during installation to account for rapid fluctuations in temperature to avoid expansion and contraction which can affect the final installation. Temperature extremes shall be carefully monitored. The carpet should never be rolled or unrolled when frozen, which can cause cracking and irreparable damage to the secondary backing.
- C. Thread for sewing seams of turf shall be as recommended by the synthetic turf manufacturer.
- D. Synthetic Turf Glue
 - 1. Glue for inlaying lines and markings shall Nordot 34G, Mapei 2K, Turf Claw, hot melt technology or equivalent, as recommended by the synthetic turf manufacturer.
 - 2. Any adhesive products required for the installation of the proposed turf system shall be purpose-suited to the system. The material and application methods shall be as recommended by the adhesive manufacturer.
 - 3. Disposal of adhesive containers and unused adhesives as well as any fees resulting from such disposal shall be the responsibility of the Contractor.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. General:
 - 1. Synthetic turf construction and components shall be non-toxic and not cause commonly known allergic reactions. Each synthetic turf system should be constructed to provide dimensional stability and resist damage from wear and tear during athletic and recreational usage.
 - 2. System shall be permeable by design with adequate perforations through all of the backing coatings.
 - 3. The bonding or fastening of system material components shall provide a permanent, tight, secure, and hazard-free athletic playing surface.
 - 4. Seams shall be sewn with high strength sewing thread. Gluing of rolls is permitted if warranted by the turf company and shall be glued with the specified glue.

2.02 INFILL SYNTHETIC TURF

- A. Manufacturer and System: FieldTurf 2" Vertex Core with Olive Pits and sand infill as specified and the basis of design has been pre-approved by the Owner (OFCl).

2.03 MATERIALS

- A. Synthetic Turf Infill system shall consist of two components, a Primary and Secondary Infill (OFCl):
 - 1. Primary Infill: Olive Pits complying with the product specification.
 - 2. Secondary Infill (OFCl): Sand shall be rounded silica sand and dust free. Coarse jagged sand will not be accepted. Sand shall consist of 50-60 percent of the total infill material as defined by weight. The sand shall have the following gradation:

Sieves (US Mesh Size)	% Retained
16	0
25	10-30

Sieves (US Mesh Size)	% Retained
30	30-50
35	15-35
40	5-15
50	<5
70	<1

3. At the end of installation, and prior to acceptance, the top of the infill shall be not less than a uniform $\frac{3}{4}$ inch depth below the top of fibers. If additional infill is required to meet with requirement, it shall be furnished and installed by the Turf Company at no additional charge.
- B. Thread for sewing seams of turf shall be as recommended by the synthetic turf manufacturer.
- C. Synthetic Turf Glue
 1. Glue for inlaying lines and markings shall Nordot 34G, Mapei 2K, Turf Claw, hot melt technology or equivalent, as recommended by the synthetic turf manufacturer.
 2. Any adhesive products required for the installation of the proposed turf system shall be purpose-suited to the system. The material and application methods shall be as recommended by the adhesive manufacturer.
 3. Disposal of adhesive containers and unused adhesives as well as any fees resulting from such disposal shall be the responsibility of the Contractor.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify the base, as specified in Section 32 18 14 - Synthetic Turf Base, has been installed and approved by Owner's Representative and turf manufacturer.
- B. Use a 2-5-ton static roller or other acceptable compactor to repair and properly compact any disturbed areas of the prepared base.
- C. Do not proceed with installation of turf until unacceptable base conditions have been corrected.

3.02 INSTALLING THE SYNTHETIC TURF

- A. The installation shall be performed in full compliance with the reviewed and accepted product submittal.
- B. Only trained technicians, skilled in the installation of athletic caliber synthetic turf systems working under the direct supervision of the approved installer's supervisor, shall undertake cutting, sewing, gluing, shearing, topdressing or brushing operations.
- C. Strictly adhere to the installation procedures specified. Variance from these requirements shall be submitted to and accepted in writing, by the manufacturer's onsite representative, and submitted to the Owner, verifying that the changes do not, in any way, affect the warranty.
- D. The turf manufacturer and installation subcontractor shall inspect and accept the field base, and provide documentation to that effect, prior to the installation of the synthetic grass system. The surface must be perfectly clean as installation commences and shall be maintained in that condition throughout the process.

- E. The turf rolls are to be installed directly over the properly installed manufactured base material.
 - 1. No equipment with loads greater than 35 pounds per square inch shall be allowed on the field. Contractor is responsible for altering operations in order to adhere to this requirement.
 - 2. Contractor and synthetic turf installer shall strictly adhere to the written instructions provided by the manufactured base manufacturer for installing turf on top of their product.
 - 3. Contractor is responsible to assure vehicles being used on the manufactured base are equipped with pneumatic (air-filled) tires, preferably turf tires, designed to spread loads and minimize damage to surface. Foam filled or solid tires and tires with aggressive lug patterns shall not be used on the manufactured base without synthetic turf installed.
 - 4. Use of an A-frame for unrolling of the synthetic turf as recommended by the base manufacturer.
- F. Cutouts in the synthetic turf shall be in accordance with the Drawings and approved submittals. Coordinate cutouts in turf with Owner's Representative before cutting turf for utility boxes and other structures.
- G. The turf rolls shall be installed directly over the properly prepared base. Extreme care shall be taken to avoid disturbing the base, both in regard to compaction and planarity.
- H. The full width rolls shall be laid out across the width of the field.
- I. Utilizing standard state of the art sewing procedures each roll shall be attached to the next. After all of the rolls of the playing surface have been installed, the sideline areas shall be installed at right angles to the playing field turf.
- J. The synthetic turf field shall utilize sewn seams. Minimum gluing will only be permitted to repair problem areas, corner completions, and to cut in any logos or inlaid lines as required by the Specifications.
 - 1. Seams between turf panels shall be sewn. Seams shall be sewn using double bagger stitches and polyester thread. Seams shall be flat, tight, and permanent with no separation or fraying.
 - 2. Inlaid markings that cannot be tufted into the fabric shall be installed by means of shearing out the existing green fiber and laying in a new piece of colored fabric into a bed of suitable "hot melt" adhesive placed directly on the original turf backing material.
 - a. Inlaid markings shall not be installed by means of cutting through the fabric and adhering the colored turf to a separate reinforcing tape or cloth.
- K. Connections of the perimeter synthetic turf edges shall be completed by one of the following two methods and as shown on the Drawings:
 - 1. Connection to perimeter concrete edges with the specified adhesive.
 - 2. Connection to the recycled plastic header boards shall be done with industrial staples. Minimum embedment depth of fasteners shall be 1 inch with spacing a maximum 2 inches on center.
- L. The infill materials shall be installed to fill the voids between the fibers and allow the fibers to remain vertical and non-directional.
 - 1. Apply in thin lifts to depth specified. The turf shall be brushed as the mixture is applied.
 - 2. The mix shall be uniform and even in thickness to assure proper playing characteristics.
 - 3. The infill shall be placed with a void of $\frac{3}{4}$ inch to the top of the fibers.

3.03 FIELD QUALITY CONTROL

- A. After completion of the synthetic turf installation, and prior to Substantial Completion of the project, the Contractor shall have installation tested for shock absorbency.
 - 1. Site testing shall be at ambient shaded air temperature of 40–100 degrees F.
 - 2. Field test measurements shall be made at a minimum of 6 locations and shall avoid areas where 2 seams cross.
 - 3. Testing shall be made, at the Contractor's expense, by an independent testing laboratory accredited for such tests and pre-approved by the Owner.

4. Testing and analysis by the testing laboratory shall provide the necessary data to the Owner that verifies the finished field does not exceed shock attenuation of 120 as determined by the ASTM F355A and F1936 test procedures.
- B. Test results that do not meet the specified shock attenuation, or if any one test value is 10 percent greater in variance than the specified values, then the Contractor's field installer shall address the failed test area, be required to retest the entire field as stated above, and conform to these requirements prior to acceptance by the Owner.
- C. The Contractor shall provide the following prior to Final Acceptance and the Owner filing the Project Notice of Completion:
 1. Written warranty as specified with forms completed in Owner's name and registered with manufacturer and insurance carrier.
 2. Information confirming that the third-party insurance policy, non-cancelable and pre-paid, is in effect covering this installation, and underwritten by a Best "A" Rated Insurance Carrier. Insurance carrier shall confirm that the policy is in force and premiums paid.
 3. Three copies of Maintenance Manuals, which will include all necessary instructions for the proper care and preventive maintenance of the turf system, including painting and markings.
 4. Project Record Documents, in accordance with Section 01 78 39 with plans showing actual locations of seams and other pertinent information.

3.04 DEMONSTRATION AND TRAINING:

- A. Upon completion of the field installation, Contractor shall have a supervisory person provide a minimum 3-hour field training seminar with the Owner's personnel on how to care for the field.
- B. At a minimum, seminar shall include a demonstration of how use of the sweeper and groomer, how to care for the field with the groomer and sweeper, review the entire provided maintenance manual including the proper procedure for removal of gum and other debris, and answer any questions.

3.05 MAINTENANCE

- A. Manufacturer shall be responsible for the testing of the G-max levels of the installed synthetic turf at the completion of years 2, 4, 6, 8 and 6 months prior to the completion of year ten of the warranty period.
- B. Testing shall be completed by an independent testing laboratory accredited for such tests and shall be pre-approved by the Owner. Testing and analysis of findings shall be completed by testing laboratory's qualified persons utilizing the required techniques outlined in the ASTM F355 test standard.
- C. If tests results indicated turf playing field does not fall within the G-max range specified, the manufacturer will be required under terms of its warranty to modify the field composition to the sole satisfaction of the Owner so that it falls within the target G-max range. A failed test shall be retested to verify that the field meets the specifications.
- D. Costs associated with testing and corrective work shall be at no cost to the Owner.

3.06 MEASUREMENT AND PAYMENT

- A. The full contract cost per lump sum for "SYNTHETIC TURF/INFILL, MANUFACTURED DRAINAGE MATERIAL, FILTER FABRIC INSTALLATION" shall include full compensation for furnishing all labor, equipment, facilities, transportation and services for performing all of the work involved, including installation of the filter fabric material, manufactured drainage pad, synthetic material and infill, cutting and gluing material around new/existing boxes/utilities, connection to existing or new heard boards, and testing of material as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer herein and no additional compensation will be allowed therefore.

- B. The contract unit prices paid per linear foot for "SYNTHETIC TURF CONNECTION" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, complete in place, as shown on the Drawings, as required by these Specifications, and as directed by the Engineer and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 32 18 14

SYNTHETIC TURF BASE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Base for the synthetic turf consisting of, but is necessarily limited to, the following:
 - 1. Stone aggregate base for stability and leveling purposes, and substrate for porous drainage composite.
 - 2. Manufactured porous drainage composite, Owner Furnished, Contractor Installed (OFCI)..
- B. Related Requirements:
 - 1. Section 01 78 29 – Conformance Survey
 - 2. Section 31 20 00 – Earth Moving
 - 3. Section 31 23 00 – Excavation and Fill
 - 4. Section 32 18 13 – Synthetic Turf Playing Field

1.02 REFERENCES

- A. California Building Code (CBC):
 - 1. Chapter 33 – Site Work, Demolition, and Construction.
- B. American Society for Testing and Materials (ASTM):
 - 1. D 1557: "Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort."
 - 2. ASTM F2898-11: "Standard Test Method for Permeability of Synthetic Turf Sports Field Base Stone and Surface System by Non-confined Area Flood Test Method"
 - 3. ASTM D2434: "Standard Test Method for Permeability of Granular Soils (Constant Head)."
 - 4. ASTM C88: "Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate."
- C. California Occupational Safety and Health Standards (OSHA):
 - 1. Article 6 - Excavations and Shoring.
- D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures:
 - 1. Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
 - 2. Closeout Submittals shall be submitted in accordance with Section 01 78 39 - Project Record Documents.

1.04 ACTION SUBMITTALS

- A. Product Data: Manufacturer's descriptive literature for pipe accessories, filter fabric, and porous drainage composite as applicable.

- B. Samples: Two 1-quart samples of each rock material and additional samples of each rock material to the Owner's testing agent as specified under Article "Material Testing," and Two 1-quart samples of Subdrain Trench Leveling Rock, as required.

1.05 INFORMATIONAL SUBMITTALS

- A. Manufacturer's installation instructions.
- B. Certification: Certification signed by Contractor and drainage system Installer that installed materials conform to specified requirements and system was successfully checked and tested prior to covering with engineered permeable rock base, trench drain rock, and/or subdrain trench leveling rock.

1.06 CLOSEOUT SUBMITTALS

- A. Project Record Drawings.

1.07 QUALITY ASSURANCE

- A. Control of Work: Conform to Section 5 of the Standard Specifications.
- B. Control of Materials: Conform to Section 6 of the Standard Specifications.
- C. Single-Source Responsibility: Crushed stone shall come from only one supplier.
- D. Material delivered to the site not meeting the Specifications will be rejected by the Owner. Material rejected by the Owner shall be removed from the site at the Contractor's expense.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Prior to trucking of material to project sites, crushed rock shall be washed so it is clean of impurities and fines created during rock crushing operations.
- B. Store products to be installed as part of the field base neatly and orderly, stacked and blocked to prevent damage and contamination.

1.09 FIELD CONDITIONS

- A. Protection of Project Site: Make provisions, and take the necessary precautions, for protect existing and completed work from damage during turf installation.
- B. Contractor shall prevent surface water and subsurface or groundwater from flowing into excavations and flooding area to receive turf base. Contractor shall not allow water to accumulate in excavations. Contractor shall remove water to prevent softening of sub grades.

1.10 PROJECT RECORD DOCUMENTS

- A. Accurately record location of pipe runs, connections, cleanouts and invert elevations. Include locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities as applicable by horizontal dimensions, elevations, inverts, and slope gradients.

1.11 POROUS CLOSED-CELL COMPOSITE GUARANTY

- A. The manufacturer of the porous closed cell composite base shall provide a guaranty, in writing, that for a period of twenty five (25) years, the porous closed cell composite base shall be a part of a turf system

that will not exceed a field average G-max of 120 g's as tested according to the ASTM 1936 Standard Specification.

PART 2 - MATERIALS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. The finished crushed stone or aggregate base supplied shall be stable, unyielding, and permeable.

2.02 SUBDRAIN TRENCH DRAIN ROCK

- A. Shall be 3/4-inch x 1/2-inch crushed virgin, un-recycled, washed rock, meeting the following general gradation requirements:

Sieve Size	Percent Passing
1"	100
3/4"	90-100
1/2"	10-40
3/8"	0-15
#4	0-5

- B. The rock profile will extend from the bottom of the trench to the top of both sides of the subdrain trench, and to the top of rock elevation. The Engineered Permeable Base Rock shall not be installed over the subdrain trench drain rock.
- A. The Contractor is responsible for ensuring the type of rock and blend they submit and install will meet all the specified requirements, including those outlined in item 1.10 of this specification section.
- B. Soft rock materials, including sandstone, limestone, and shale, are not suitable. Rock supplier shall certify that all supplied rock will be void of this type of rock.

2.03 SUBDRAIN TRENCH LEVELING ROCK

- A. For planarity purposes, a clean uniform 3/8-inch crushed stone material, of the same source as the subdrain trench drain rock or Engineered Permeable Rock Base may be installed over the subdrain trench profile upon approval of Owner's representative. Maximum thickness for this stone layer is 1 inch.

2.04 MANUFACTURED BASE MATERIAL (OWNER FURNISHED, CONTRACTOR INSTALLED)

- A. Manufactured Porous Closed Cell Composite Base: Resilient, interlocking, polypropylene panels specifically engineered for sports fields; "PowerBase YSR" by Brock International, 303-544-5800, or equal.
1. Panel Size: Approximately 73.5 x 49.0 inches.
 2. Thickness: 1.0 inches, (25 mm).
 3. Weight: 5.56 lbs per panel

2.05 GEOTEXTILE FILTER FABRIC (OWNER FURNISHED, CONTRACTOR INSTALLED)

- A. Geotextile Filter Fabric: Mirafi 140 N, or accepted equal, conforming to the following minimum specifications, unless otherwise recommended by the Geotechnical Engineer:

Property	Test Method	Typical Values
Grab Strength	ASTM D 4632	80 lb.
Puncture Strength	ASTM D 4833	25 lb.
Burst Strength	ASTM D 3786	130 lb.
Trapezoid Tear	ASTM D 4533	25 lb.
Permeability	ASTM D 4491	0.1 cm/sec
Apparent Opening Size	ASTM D 4751	#50 Sieve size
Permittivity	ASTM D 4491	

2.06 DRAINAGE ELEMENTS

- A. Refer to Storm Drainage Specification Section for in-field drainage elements.

2.07 ROOT BARRIER

- A. Root Barriers: Model #UB 36-2 "Universal Barrier" by Deep Root Partners L.P, 800-458-7668, or equal.

PART 3 - EXECUTION

3.01 INSTALLATION OF THE SUBDRAIN TRENCH AND IN-FIELD DRAINAGE

- A. Contractor to install drain rock and piping in strict compliance with the manufacturer's written instructions and as indicated in the Drawings. Contractor to exercise caution and the appropriate sequencing of work, so as not to damage any drainage piping during the base rock installation.
- B. Contractor to protect drain trenches to ensure that pipe is not damaged in any way by construction operations and that the rock is not contaminated with native soils, unintended construction material, or deleterious materials during subsequent construction operations.

3.02 SYNTHETIC TURF ROCK BASE

- A. Finish surface planarity shall be verified, and if necessary adjusted, by the Contractor using string line method.
 1. Entire finished surface shall be "walked" with mason's line in increments of approximately 3 feet.
 2. A mason's line shall be held taught between two workers separated by a distance of approximately 40 feet then placed directly on the finished surface parallel to the direction of greatest slope.
 3. A third worker shall check for separations between the mason's line and the finished surface that are equal to or greater than the specified tolerances.
 4. Areas of separation shall be outlined with marking paint and the depth of separation indicated.
 5. Areas outlined with marking paint shall be filled with top rock to the depth indicated and raked by hand. Filled areas shall be compacted to provide a non-yielding, smooth, flat surface.
 6. Final finished surface planarity shall be approved by the Owner and the synthetic turf installer.

3.03 INSTALLATION OF MANUFACTURED DRAINAGE MATERIAL

- A. Upon successful completion of installing the base, the porous drainage composite shall be installed in accordance with the Drawings and in strict compliance with the manufacturer installation instructions. Contractor to exercise extreme care in order to avoid disturbing the crushed stone base.

- B. Contractor to take measures to ensure that the product is not exposed to the outdoor elements longer than the manufacturer's recommendations. Product that exceeds this exposure time duration shall be removed from the project site immediately and not used on the project.
- C. Sections of the material shall be interlocked and/or connected to adjacent pieces of the drainage material in strict conformance with the manufacturer's written installation instructions.
- D. Provide geotextile filter fabric in the areas designated on the Drawings. Fabric shall be laid in shingle fashion overlapping 12 inches minimum following direction of slope with upslope fabric laying atop the down slope fabric.

3.04 MEASUREMENT AND PAYMENT

- A. The full contract cost per ton for "DRAINAGE ROCK" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services for performing all of the work involved, including installation of the drainage rock material as shown on the Drawings, as specified in these Technical Specifications, and as directed by the Engineer herein and no additional compensation will be allowed therefore.
- B. The full contract cost per linear foot for "ROOT BARRIER" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, as shown on the plans, as required by the Specifications, and as directed by the Engineer for removal, replacement and/or construction of new synthetic turf base including removing and disposing of permeable rock base, subdrain rock and pipe, rough and fine grading, installation of new drain rock , complete in place and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 32 31 13

CHAIN LINK FENCING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: chain link fencing improvements as shown on the Drawings including, but not necessarily limited to, the following:
 - 1. Thermally fused and bonded PVC coated ("vinyl coated") galvanized chain link fabric with painted posts, gates, hardware, and related appurtenances.
 - 2. Concrete footings
- B. Related Requirements:
 - 1. Section 01 33 00 - Submittal Procedures
 - 2. Section 32 33 00 - Site Furnishings

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 2. A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
 - 4. F567 - Standard Practice for Installation of Chain-Link Fence."
 - 5. F1043 - Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework.
 - 6. F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
- B. American Welding Society (AWS):
 - 1. A2.4: "Symbols for Welding, Brazing and Nondestructive Examination."
- C. Chain Link Fence Manufacturers Institute (CLFMI): Product Manual CLF-PM0610.
- D. Industrial Steel Guide for Fence, Rails, Posts, Gates and Accessories.
- E. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Sequence and Scheduling: Contractor shall coordinate construction timing of chain link fencing and related work with installation of concrete work.

1.04 ACTION SUBMITTALS

- A. Shop Drawings: To scale drawings showing all different types and sizes of fencing systems.

1. Shop Drawings shall include, but may not be limited to:
 - a. All information regarding clearances, connections, components and any miscellaneous related appurtenances (such as wood baseboards at backstops, locking mechanisms etc.).
 - b. Concrete footing and reinforcement information.
 2. Indicate materials, dimensions, sizes, weights and finishes of components. Include plans, elevations, sections and other required installation and operational clearances, connections, components and miscellaneous related appurtenances.
 3. Show required field measurements and interface with work of other Sections. Provide details showing interface and anchorage of fencing with adjacent construction, both new and existing.
 4. Details showing post anchorage, attachment and bracing. Provide setting drawings, templates, instructions, and directions for installation of anchorage devices.
- B. Product Data: Manufacturer's descriptive literature for materials and components of the chain link fencing system including coatings, fittings, and hardware.
1. Include the manufacturer's name and catalog number for each item where applicable.
 2. Clearly identify which portions of the information on the printed literature are applicable if more than one product is shown.
- C. Samples:
1. Chain-link fabric, approximately 12 inches square, if requested by Owner's Representative.
 2. Hardware and fittings Owner's Representative.
 3. Color selections for finishes of vinyl coated and powder coated fencing system.

1.05 INFORMATIONAL SUBMITTALS

- A. Installation Instructions and/or Drawings: Submit as applicable.

1.06 QUALITY ASSURANCE

- A. Welding:
1. Qualifications: Certified and qualified in accordance with AWS D1.1.
 2. Procedures and operations shall comply with AWS "Standard for Welding Procedure and Performance Qualifications," B2.1.
 3. Comply with AWS publication "Welding Zinc Coated Steel" for galvanized products.
 4. Welding inspector's qualifications shall be in accordance with AWS D1.1.

PART 2 - PRODUCTS

2.01 DESIGN AND PERFORMANCE CRITERIA

- A. It is intended that all fencing, by area, receive the same finish coating wherever possible. Nuts, bolts, applicable moving portions of hinges etc. shall be painted to match with PVC touch-up paint in vinyl or powder coated systems.
- B. Except as otherwise specified, comply with Chain Link Fence Manufacturers Institute (CLFMI) Product Manual.
- C. Industry Standards: Materials and installation shall conform to the requirements of the Chain Link Fence Manufacturers Institute (CLFMI) "Product Manual."

2.02 MATERIALS

- A. Fabric: Galvanized steel wire complying with ASTM A392, Class 1, with not less than 1.2 ounce zinc coating per square foot.

1. Selvage: Knuckled finish top and bottom.
 2. Steel Fabric: Comply with Chain Link Fence Manufacturers Institute (CLFMI) Product Manual. Furnish one-piece fabric widths for fencing up to 16 feet high. Wire sizes includes zinc coating.
 3. Mesh Opening: 2 inches.
 4. Wire Diameter: 9-gauge (0.148-inch diameter), unless noted otherwise.
 5. Polymer Coating: Thermally fused and bonded polyvinyl chloride (PVC) complying with ASTM F668 Class 2b, 7mil (0.18 mm) thickness thermally fused over zinc-coated wire.
 - a. Color: Black and in compliance with F934.
- B. Framework: Posts and rails shall be Schedule 40 pipe complying with conforming to ASTM F1083, Regular Grade, 30,000 psi Yield Strength, or ASTM F1043, Group 1-C, High Strength Grade 50,000 psi Yield Strength, galvanized with no less than 1.8 ounces of zinc coating per square foot of surface area complying with ASTM A123.
1. Strength requirements for posts and rails shall conform to ASTM F1043 or F1083 as noted below.
 2. Pipe shall be straight, true to section, material, and sizes specified, and shall conform to the following weights per foot:

NPS in inches	Outside Diameter (OD) in inches	Type I Steel ASTM F1083 (30 KSI)	Type II Steel ASTM F1043 (50 KSI)
1	1.315	1.68	1.35
1.25	1.660	2.27	1.84
1.5	1.900	2.72	2.28
2	2.375	3.65	3.12
2.5	2.875	5.79	4.64
3	3.500	7.58	5.71
3.5	4.000	9.11	6.56
4	4.500	10.79	---
6	6.625	18.97	---
8	8.625	28.55	---

- C. Fittings and Accessories:
1. Unless specified otherwise, steel fence fittings and accessories shall comply with ASTM F626 and be galvanized in accordance with ASTM A53, with zinc weights per Table 1 of ASTM A153.
 2. Tension Wire: 7-gauge (0.177 inch diameter) coil spring steel with finish to match fabric.
 3. Tie Wires: 9 gauge (0.148 inch diameter) steel with finish to match fabric.
 4. Caps: Provide weather tight closure cap for each post and exposed ends of framing. Provide line post caps with loop to receive wire or top rail with finish to match fabric.
 5. Tension Bars: Hot-dip galvanized steel with minimum length 2 inches less than full height of fabric, minimum cross-section of 3/16 inch by 3/4 inch and minimum of 1.2 ounce zinc coating per sq. ft. of surface area.
 6. Tension Clips: Minimum 3/4 inch wide 12-gauge (.105 inch) thick with finish to match fabric.
 7. Truss Rods: Hot dipped galvanized steel rods with a minimum diameter of 5/16 inch (7.9 mm).

2.03 ADDITIONAL MATERIALS AND COMPONENTS

- A. Concrete: Minimum Class B, 28-day compressive strength of 2,500 psi as specified in Section 32 32 15 - Landscape Concrete.

2.04 FABRICATION

- A. Welding: Welds shall be shop fabricated prior to galvanizing unless otherwise acceptable to Owner's Representative and were field welding is unavoidable.
- B. Repair zinc coating damaged after fabrication with specified repair paint in accordance with ASTM A780, AHDGA publication, "Recommended Practice for Touch-up of Damaged Galvanized Coatings," and manufacturer's recommendations for application of repair paint.
- C. Steel Framework: System shall comply with the following minimum requirements.
 - 1. Posts, Rails, Braces, and Gate Frames: Type I galvanized steel pipe as specified.
 - 2. End, Corner, and Pull Posts for the Following Fabric Heights: As noted on the Drawings.
 - 3. Line or Intermediate Posts for the Following Fabric Heights: As noted on the Drawings.
 - 4. Top, Bottom and Horizontal Intermediate Rails: 1.66 inch outside diameter (1-5/8 inch outside diameter).
- D. Finishing: At fencing with vinyl coated fabric, posts and railings shall be painted with exterior grade paint, System as specified in Section 09 91 15 – Exterior Site Painting.
 - 1. Color: To match vinyl.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Prior to excavation, layout all fencing locations for review and acceptance by Owner's Representative.
- B. Do not begin installation and erection before final grading is completed, unless otherwise permitted.

3.02 ERECTION

- A. General: Erect chain link fence and related items in accordance with ASTM F567, in strict conformance with reviewed and accepted shop drawings, and manufacturer's recommendations.
- B. Set all posts straight, plumb, and true to line.
 - 1. Set line posts at equal spacing not to exceed 10 feet on centers, in concrete footings not less than 10 inches around and 36 inches deep.
 - 2. Set terminal posts at corners, ends, and gates, in concrete footings not less than 12 inches around and 36 inches deep.
 - 3. Slope tops of concrete footings so as to provide drainage away from posts.
- C. Excavation: Drill or hand-excavate holes for posts to diameter and spacing indicated in firm, undisturbed or compacted soil.
 - 1. Unless noted otherwise, excavate holes for each post to minimum diameter recommended by fence manufacturer, but not less than 4 times largest cross section of post.
 - 2. Unless noted otherwise, excavate hole depths approximately 3 inches lower than post bottom, with bottom of posts set not less than 36 inches below finish grade surface.
- D. Setting Posts: Center and align posts in holes 3 inches above bottom of excavation. Space chain link posts maximum 8 feet on center unless noted otherwise. Surface mount posts with mounting plates where indicated. Fasten with lag bolts and shields.
- E. Top Rails: Run rail continuously through line posts caps, bending to radius for curved runs and at other posts termination into rail end attached to posts or post caps fabricated to receive rail. Provide expansion couplings as recommended by fencing manufacturer.

- F. Bottom Rails: Install bottom rails between posts with fittings and accessories as shown in Drawings, as applicable.
- G. Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension.
- H. Tension Wire: As applicable, install at bottom of fabric (and at top if top rail is not specified) as shown in Drawings. Install tension wire before stretching fabric and attach to each post with ties. Secure wire to fabric with 12.5 gauge hog rings at 24 inches on center maximum.
- I. Fabric: Leave approximately 2 inches between finish grade and bottom selvages (1 inch at backstops) unless otherwise indicated. Pull fabric taut and tie to posts, rails, and tension wires. Install fabric on infield or primary use side of fence, unless noted otherwise, and anchor to framework so that fabric remains in tension after pulling force is released.
- J. Tension Bars: Provide one bar for each gate and end post, and two for each corner and pull post, except where fabric integrally woven into post. Thread through fabric, and secure to end, corner, pull, and gate posts with tension clips spaced not over 15 inches on center.
- K. Tie Wires: Use U-shaped wire of proper length to secure fabric firmly to posts and rails with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing. Tie fabric to line posts 12 inches maximum on center and to rails and braces 24 inches maximum on center.
- L. Fasteners: Install nuts for tension clips and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score threads to prevent removal of nuts. Cut all bolts within three threads of nut or less.
- M. Field Welding:
 - 1. Field welds shall be completed by a Certified Structural Welder.
 - 2. Comply with applicable AWS specification for procedures of manual shielded metal arc welding, for appearance and quality of welds, and for methods used in correcting welding work.
 - 3. Repair zinc coating damaged by field welding as specified for shop welding.
- N. Bolts shall be cut back to within three threads of the nut.

3.03 ADJUSTMENT AND TOUCH-UP

- A. Inspect installed work. Verify that gates, controls, and hardware operate properly. Correct deficiencies.
- B. Restore products and finishes damaged during installation and construction period so that no evidence of correction work remains.

3.04 MEASUREMENT AND PAYMENT

The full contract cost per lineal foot for "3' TALL CHAIN LINK FENCE" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, complete in place, as shown on the Drawings, as required by these Specifications, and as directed by the Engineer and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 32 33 00

SITE FURNISHINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Site furnishings and installation accessories as shown on the Drawings including, but not necessarily limited to, the following:
 - a. Drinking fountain.
 - b. Truncated Domes
 - 2. Site Furnishings Product Matrix
- B. Related Requirements:
 - 1. Section 32 12 16 - Asphalt Paving
 - 2. Section 32 13 13 – Concrete Paving
 - 3. Section 32 18 13 – Synthetic Turf Playing Field

1.02 REFERENCES

- A. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Scheduling and Sequencing:
 - 1. Do not install site furnishings prior to acceptance by Owner's Representative of area to receive items.
 - 2. Coordinate construction timing of installation of site furnishings in conformance with other work interfacing with installation of the site furnishing items.

1.04 ACTION SUBMITTALS

- A. Shop Drawings: Submit complete shop drawings for all materials or furnishings requiring field or shop fabrication.
- B. Product Data: Manufacturer's catalog cut sheets of materials and equipment to be provided.
 - 1. Include the manufacturer and distributor name, and subcontractor as applicable.
 - 2. Cut sheets clearly describe the specific product by catalog number and that additional non-specified products that may appear on the same cut sheet are crossed out where applicable.
- C. Samples: Colors and finishes for products and furnishings requiring selection by the Owner's Representative.

1.05 INFORMATIONAL SUBMITTALS

- A. Statement of qualifications for manufacturers and installer if requested by the Owner's Representative.

1.06 CLOSEOUT SUBMITTALS

- A. Provide operation and maintenance data for items with operable, movable, or replaceable parts, for items with mechanical connections, and for other items as applicable.
- B. Extended warranties as specified.

1.07 QUALITY ASSURANCE

- A. Furnishings shall be reviewed for conformance with the intent of the Contract Documents and accepted by the Contractor prior to installation.
- B. Site furnishings shall be in a new, "first-class" condition as determined by the Owner's Representative at the time of Final Acceptance.
- C. Field Samples and Mockups: As requested by the Owner's Representative.

1.08 DELIVERY, STORAGE AND HANDLING

- A. General:
 - 1. The Contractor is responsible for coordination of the delivery, acceptance, handling, and storage of site furnishings.
 - 2. Store and handle site furnishings as acceptable to the Owner's Representative and so that work or access of others is not impeded.
 - 3. Protect site furnishings from theft or damage until such items have been accepted by the Owner.
- B. Packaging and Labeling: Furnish materials in manufacturer's unopened, original packaging, bearing original labels showing quantity, description, and name of manufacturer. Verify that materials and components are adequately padded and securely bound in such a manner that no damage occurs to the product during delivery and unloading at the site.
- C. Storage: Damaged materials will be rejected. Remove damaged materials from job site immediately and pay cost of replacement. Determination of damage shall be the sole authority of the Owner's Representative.
- D. Painted Finishes: Provide non-scratching, non-staining, firmly bound covering for shop-painted finishes until installed and accepted.
- E. Protect wood materials from stains.

1.09 WARRANTY

- A. Manufacturers: Provide Owner with manufacturer's written extended product warranties as available for the specified products.

PART 2 - PRODUCTS

2.01 SITE FURNISHINGS - GENERAL

- A. In addition to those described in the following Articles, refer to the Site Furnishing Matrix included at the end of this Section for complete list of items to be provided.

2.02 DRINKING FOUNTAIN

- A. Product and Manufacturer: Hi/low pedestal drinking fountain with bottle filler by Elkay.
1. Model: LK4430BF1L
 2. Colors: Green
 3. Quantity: 1

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to commencement of work described in this Section, carefully inspect installed work, and verify all such work is correct and complete. Immediately notify the Owner's Representative of any discrepancy before proceeding with work.

3.02 INSTALLATION - GENERAL

- A. Conform to layout shown on Drawings. Final placement shall be field verified with the Owner's Representative.
- B. Installation of products shall be as shown in the Drawings, or according to manufacturer's instructions. If discrepancies are found, or if information is lacking, consult with the Owner's Representative prior to beginning the work.
- C. Furnish anchorage and fastening required for installation to ensure proper fit and accurate placements. Bolts, where exposed, shall be cut back to within three threads of the nut.

3.03 CLEANING AND ADJUSTMENT

- A. Protect furnishings from damage until acceptance of work. Do not remove protective wrappings from furnishings until so instructed by the Owner's Representative.
- B. Clean soiled site furnishings prior to acceptance by Owner.
- C. Repair minor damages to finish in accordance with manufacturer's instructions and as approved by the Owner's Representative.
- D. Replace damaged items to the satisfaction of the Owner's Representative. Replace missing accessories at no cost to Owner.

3.04 SITE FURNISHINGS MATRIX

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	QTY.	FINISH/ COLOR	DISTRIBUTOR/CONTACT
A.	Drinking Fountain w/ Bottle Filler	ELKAY	LK4430BF1L (ADA spout to be relocated in factory for front approach)	1	Green	Elkay Headquarters 2222 Camden Court Oak Brook, IL 60523 Phone: 630-574-8484
B.	Truncated Domes	East Jordan	700540	Per Plans	Yellow	East Jordan Foundary 301 Spring Street, East Jordan, MI 49727 (800)874-4100

ITEM	DESCRIPTION	MANUFACTURER	MODEL NO.	QTY.	FINISH/ COLOR	DISTRIBUTOR/CONTACT
C.	Wheel Stops	Jensen Precast	4' wide wheel stop S-48	3	NA	Jensen Precast 3309 Sebastopol Rd Santa Rosa, CA 95407 (415)542-2762
D.	ADA Parking Signs	TBD	Per Plans	1 Standard, 1 Van	NA	TBD
E.	Tow Away Sign	TBD	Per Plans	1	NA	TBD

3.05 MEASUREMENT AND PAYMENT

- A. The full contract cost per each (ea) for "DRINKING FOUNTAIN", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in furnishing and installing drinking fountain complete in place, including the connection of domestic waterline, connection of sanitary sewer line, and installation of drinking fountain components and fountain itself as shown in the Drawings, as specified in these Technical Specifications, and as directed by the Engineer.
- B. The full contract cost per each (ea) for "TRUNCATED DOMES", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in furnishing and installation of truncated domes as shown in the Drawings, as specified in these Technical Specifications, and as directed by the Engineer.
- C. The full contract cost per each (ea) for "WHEEL STOP", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in furnishing and installation of wheel stops as shown in the Drawings, as specified in these Technical Specifications, and as directed by the Engineer
- D. The full contract cost per each (ea) for "ADA PARKING SIGNS", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in furnishing and installing ADA parking signs, including pole, concrete footings, and sign connections as shown in the Drawings, as specified in these Technical Specifications, and as directed by the Engineer.
- E. The full contract cost per each (ea) for "TOW AWAY SIGN", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and doing all of the work involved in furnishing and installing Tow away sign, including pole, concrete footings, and sign connections as shown in the Drawings, as specified in these Technical Specifications, and as directed by the Engineer.

END OF SECTION

33 11 00

DOMESTIC WATER UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Domestic water and fire system work is shown on the Drawings including, but is not necessarily limited to, the following:
 - 1. Intermediate staking and layout for domestic water system.
 - 2. Pipes, fittings, valves, valve boxes, connections, meter, and backflow preventer.
 - 3. Field testing and disinfection.
- B. Related Requirements:
 - 1. Section 32 11 00 - Base Courses
 - 2. Section 32 23 00 - Excavation and Fill

1.02 REFERENCES

- A. American Water Works Association: Current edition of Standards as specified.
- B. California Plumbing Code: Current Edition.
- C. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
- D. City of Petaluma Water Standards

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Sequence and Scheduling:
 - 1. Refer to other Contract Documents, determine the extent and character of related work, and properly coordinate work specified herein with that described elsewhere to produce a complete, operational installation.
 - 2. Contractor shall be solely responsible for coordinating, sequencing, and scheduling work with other trades and subcontractors to insure proper and timely performance of the work under this Section.

1.04 ACTION SUBMITTALS

- A. Product Data: Manufacturer's "cut-sheets" for products proposed for use.

1.05 INFORMATIONAL SUBMITTALS

- A. Certification that ductile iron pipe supplied for this Project has been manufactured in compliance with all requirements of AWWA C151.
- B. Certification that PVC pipe supplied for this project has been manufactured in compliance with all requirements of AWWA C900.

1.06 CLOSEOUT SUBMITTALS

- A. Project Record Drawings that provide accurately record locations of utilities remaining, re-routed utilities, new utilities, and newly discovered utilities by horizontal dimensions, elevations, inverts, and slope gradients. Comply with additional requirements specified in Section 01 78 39 – Project Record Documents.
- B. Warranty as specified.
- C. Results of field testing of completed system.
- D. Certificate of Compliance for disinfection.

1.07 QUALITY ASSURANCE

- A. Unless otherwise specified, install materials in accordance with manufacturer's recommendations.
- B. Contractor shall make necessary repairs to the domestic water system and other work affected by defects in the system through project Final Acceptance and specified warranty period. Repairs shall be made at the Contractor expense and at no additional cost to Owner.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Store pipe in a neat and orderly manner fully supported and protected from sunlight.
- B. Do not dump pipe off truck. Pipes are to be delivered, unloaded and handled so as to prevent damaging the material.

1.09 FIELD CONDITIONS

- A. PVC pipe shall not be cemented during wet conditions as determined by the Owner's Representative.
- B. Trench excavation and backfilling shall not be executed during excessively wet conditions as determined by the Owner's Representative.

1.10 WARRANTY

- A. Contractor: Provide Owner with a special written 1-year warranty covering entire water system against defects in installation, workmanship, and equipment from date of final acceptance.
 - 1. Contractor shall make necessary repairs to the system as well as to other work affected by defects in the system during warranty period.
 - 2. Repairs shall be made at the Contractor's sole expense.

1.11 MAINTENANCE

- A. Service: Contractor shall service and maintain domestic water system as necessary until project final acceptance.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS

- A. General:
 - 1. Pipe materials for domestic lines shall be in conformance with the California Plumbing Code and local governing agencies.
 - 2. Plans and details, if shown, are schematic in nature and do not necessarily identify all fittings and appurtenances required to provide a complete installation. The Contractor is responsible for providing complete and functional systems.
 - 3. Materials and procedures not specifically addressed herein shall comply with the appropriate AWWA standard and City of Petaluma Water Standards.
 - 4. Materials proposed for use shall be in a new, "first class" condition unless otherwise noted.
- B. Water Lines 2 Inches and Smaller Diameter:
 - 1. Polyethylene Plastic Tubing: Class 200, PE 3408, CTS, and shall conform to AWWA STD C901.
- C. Couplings and Sleeves:
 - 1. General:
 - a. Couplings, sleeves, and accessories shall be of domestic manufacture; "Trim Tyton" by U.S. Pipe, Union Foundry, Tyler Pipe and Couplings, or acceptable equal.
 - 2. Compression Fitting shall be used with plastic inserts.
- D. Ball Valves:
 - 1. Use ball valves designed for a working pressure of not less than 150 psi.
 - 2. Provide connections as required for the piping in which they are installed.
 - 3. Provide an arrow on the operating nut or wheel, cast in metal, indicating direction of opening.
- E. Thrust Blocks: Class "A" concrete construction with dimensions conforming to the California Plumbing Code.
- F. Valve Boxes:
 - 1. Size: 10 inches round boxes for gate valves.
 - 2. Box lid shall be labeled with "water" and shall be bolted down.
 - 3. Boxes located in landscape areas shall be round plastic; Carson Model 910-10 with 910-4 lid, or equal.
 - 4. Boxes located in paving shall be concrete with concrete lid.
- G. Pipe Detection Tape: 3 inch wide, detectable type; "Terra Tape" "Sentry Line Detectable" from Reef Industries, Inc., 713.507.4251; or equal.
 - 1. Text: "Caution Water Line Buried Below."
- H. Tracer Wire: Polyethylene insulated, copperclad steel; "SoloShot XTreme Tracer Wire" by Copperhead Industries, LLC. 877-726-5644, or equal.

2.02 BACKFLOW PREVENTER

- A. Device: As specified on Drawings.
 - 1. If the system is using recycled water, label all potable water backflow preventers with tags or labels reading: "potable water" in black letters on blue background, per details.
- B. Enclosure: Low profile, vandal-resistant; "Strongbox" Model series SBBC-CR powder coated cold-rolled steel by V.I.T. Products, Inc., or equal.
 - 1. Enclosure size to be verified with size of installed backflow device by Contractor.

- C. Insulation Blanket: "WeatherGuard Blanket" by Best Choice USA, or equal.

2.03 MISCELLANEOUS MATERIALS

- A. Water Meter: Manufacture and product information as indicated on Drawings and per City of Petaluma Standards.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Prior to starting work, test and verify that water pressure levels meet the domestic water system requirements. Notify the Owner's Representative immediately of any discrepancies and re-direct work to avoid delay.
- B. The utility plan and the piping details on the Drawings are diagrammatic. Pipe lines shown parallel in the Drawings may be placed in a common trench, provided that a minimum horizontal distance of 6 inches is maintained between buried lines, except for sanitary sewer lines, which require 10 feet horizontal clearance.

3.02 HANDLING

- A. Handle pipe accessories so as to ensure delivery to the trench in sound, undamaged condition.
- B. Use pinch bars or tongs for aligning or turning the pipe only on the bare end of the pipe.
- C. Thoroughly clean interior of pipe and accessories before lowering pipe into trench. Keep clean during laying operations by plugging or other acceptable method.
- D. Before installation, inspect each piece of pipe and each fitting for defects.
- E. Replace material found to be defective, both before or after laying, with sound material meeting the specified requirements and without additional cost to the Owner.
- F. Rubber gaskets: Store in a cool dark place until just prior to time of installation.

3.03 BACKFLOW INSTALLATION

- A. Reduced Pressure Backflow Prevention Device: Install in accordance with local codes and as shown on the Drawings.

3.04 PIPE CUTTING

- A. Cut pipe neatly and without damage to the pipe.
- B. Unless otherwise recommended by the pipe manufacturer, cut pipe with mechanical cutter only.
- C. Use wheel cutters when practicable.
- D. Cut pipe square, and remove all burrs prior to use.

3.05 TRENCHING

- A. Conform to requirements specified in Section 31 23 00 – Excavation and Fill and the following.
- B. Excavate trenches with vertical sides uniform bottom, free of deleterious materials, and wide enough for pipes to lay side by side, fully supported on bottom.
 - 1. No lines shall be installed parallel to and directly over another line.
 - 2. When lines must cross, the angle shall be 45 to 90 degrees, and a minimum of 6 inch vertical clearance shall be maintained.
- C. Provide minimum coverage for pressurized service as follows:
 - 1. Landscape Areas: 24 inches.
 - 2. Paved Areas: 30 inches.

3.06 PLACING AND LAYING

- A. General:
 - 1. Lower pipe and accessories into trench by means recommended by the manufacturer.
 - 2. Except where necessary in making connections to other lines, lay pipe with the wide bell end opening facing source.
 - 3. Rest the full length of each section of pipe solidly on the pipe bed, with recesses excavated to accommodate wells, couplings, and joints.
 - 4. Replace pipe that has been disturbed after laying.
 - 5. Do not lay pipe in water, or when trench conditions are unsuitable for the work. De-water trench until jointing is completed.
 - 6. Securely close open ends of pipe and valves when work is not in progress.
 - 7. Where any part of coating or lining is damaged, repair at no additional cost to the Owner.
 - 8. Follow manufacturer's detailed instructions in installing and assembling pipe.
- B. Plastic Pipe:
 - 1. Position pipe and fittings in trench in a manner that identifying markings will be readily visible for inspection.
 - 2. Cutting and joining:
 - a. Protect against abrasion from serrated holding devices.
 - b. Remove burrs and glosses from surfaces to be jointed; use abrasive paper, file, or steel wool.
 - c. Remove dirt, dust, and moisture by wiping clean with dry cloth.
 - 3. Align pipe system components without strain.
 - 4. Support plastic pipe in trenches with a 2 inch minimum layer of bedding. Provide a minimum 3 inch bedding sand cover. Allow no rocks, debris, or potentially damaging substances within 6 inches of plastic pipe in trenches.
- C. Connections: Use appropriate fittings to suit the actual condition where connections are made between new work and service points.

3.07 JOINTING

- A. Mechanical Joints and Push-On Type Joints: Install in accordance with AWWA C600, modified as necessary by the recommendation of the manufacturer, to provide for special requirements of specified pipe.
- B. Make connections between different types of pipe and accessories with transition fittings.
- C. Rubber Gaskets:
 - 1. Handle and install in strict accordance with the recommendations of the manufacturer.
 - 2. Lubricants for gaskets shall be manufactured by or approved by the pipe manufacturer for use under the conditions found in the field.

3.08 SETTING METERS, VALVES AND VALVE BOXES

- A. Center valve boxes on the meter and valves, setting plumb.
- B. Tamp earth fill around each valve box to a distance of four feet on all sides, or to be undisturbed trench face if less than four feet.
- C. Tighten mechanical joints, and fully open and close each valve to assure that all parts are in working condition.

3.09 THRUST BLOCKS

- A. Provide and install thrust blocks in accordance with California Plumbing Code requirements and installation guidelines.

3.10 TESTING, INSPECTING, AND DISINFECTION

- A. General:
 - 1. Do not allow or cause the work of this Section to be covered up or enclosed until after it has been completely inspected, tested, and has been accepted by the Owner's Representative and governing authorities when applicable.
 - 2. Perform tests and disinfection in a manner acceptable to governmental agencies having jurisdiction.
- B. Testing:
 - 1. Except for joint material setting, or where concrete reaction backing necessitates a five day delay, pipelines joints, or couplings may be subjected to hydrostatic pressure, inspected, and tested for leakage at any time after partial completion of backfill.
 - 2. Testing of water service shall be in accordance with the requirements of AWWA C600 for hydrostatic testing.
 - 3. Contractor shall keep records of each piping test, including date and time of test, name of witnessing Owner Representative, test pressure, description of piping tested, and clarifying comments including those related to leaks and repairs made.
 - 4. Tests shall last 4 hours and be tested at 200 psi.
- C. Disinfection:
 - 1. Before acceptance of the domestic water system, disinfect each unit of completed service line in accordance with AWWA C601 and criteria of the local governing jurisdiction.
 - 2. Proposed method for disinfection shall be submitted to the Owner's Representative for review and acceptance.
 - 3. Furnish two copies of a Certificate of Compliance to the Owner.

3.11 BACKFILLING

- A. Backfill only after specified tests have been performed and accepted.
- B. Clean trenches of debris and deleterious material before backfilling.
- C. Backfill, as specified or shown in Drawings, shall be free from deleterious material.
- D. Compact trenching to 95 percent relative compaction under pavement and 85 percent relative compaction within planting areas.
- E. Trench surfaces shall be flush with finish grade. Trench settlements shall be corrected by the Contractor at no additional cost to the Owner.

- F. Install pipe detection tape and reinforced tracer wire above pressurized lines.

3.12 DEMONSTRATION

- A. Contractor shall instruct Owner's personnel in complete and proper operation of domestic water system per prior to Contract closeout.

3.13 FINAL REVIEW

- A. Provide Owner's Representative with specified closeout submittals prior to Final Review.

3.14 MEASUREMENT AND PAYMENT

- A. The full contract cost per linear foot for "DOMESTIC WATER LINE" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services to complete all work within the project limits and all related activities as shown on the Drawings and/or specified herein to connect on site domestic water to new drinking fountain and no additional compensation will be allowed therefore.
- B. The contract unit prices paid per each for "BACKFLOW PREVENTER", "METER", and "BALL VALVE" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, complete in place, as shown on the Drawings, as required by these Specifications, and as directed by the Engineer and no additional compensation will be allowed therefor.

END OF SECTION

SECTION 33 30 00

SANITARY SEWERAGE UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Site sanitary sewerage and related work as shown on the Drawings and specified including, but is necessarily limited to, the following:
 - 1. Sanitary sewerage system installation for drinking fountains.
- B. Related Requirements:
 - 1. Section 31 20 00 - Earth Moving
 - 2. Section 31 23 00 - Excavation and Fill
 - 3. Section 32 11 00 - Base Courses
 - 4. Section 32 33 00 - Site Furnishings
 - 5. Section 33 11 00 - Domestic Water Utilities

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C700 Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated.
 - 2. D3034: Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
- B. American Water Works Association (AWWA):
 - 1. C110: Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (76 mm Through 1,219 mm) for Water.
 - 2. C111: Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - 3. C151: Ductile-Iron Pipe, Centrifugally Cast, for Water.
- C. California Plumbing Code, current edition, Sections as specified.
- D. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
- E. "The Greenbook: Standard Specifications for Public Works Construction," current edition.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Sequencing and Scheduling:
 - 1. Refer to all other Contract Documents, determine the extent and character of related work, and properly coordinate work specified herein with work included under other Sections to produce a complete, operational installation.
 - 2. Contractor shall be solely responsible for coordinating, sequencing, and scheduling work with applicable trades and subcontractors to insure proper and timely performance.

1.04 ACTION SUBMITTALS

- A. Product Data: Manufacturers' data sheets for the following:
 - 1. Piping materials and fittings.
 - 2. Special pipe couplings.
 - 3. Precast concrete cleanout boxes and box covers.

1.05 INFORMATIONAL SUBMITTALS

- A. Design Mix Reports and Calculations: Submit for each class of cast in place concrete.
- B. Field Test Reports: Indicate and interpret test results for compliance with specified performance.

1.06 QUALITY ASSURANCE

- A. Control of Work: Conform to Section 5 of the Standard Specifications.
- B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store pipe neat and orderly stacked and blocked to prevent damage. Cracked, checked, spalled or otherwise damaged pipe shall be removed from site.
- B. Use of chain slings shall not be permitted.
- C. Pipe, fittings, precast sections, cast iron fittings, covers and all other materials shall be carefully handled at all times.
- D. All pipelines and fittings shall be kept clean and closed during construction.

1.08 FIELD CONDITIONS

- A. Make provisions to take the necessary precautions to protect existing work from damage during execution of this work.
- B. Work of this Section shall not be executed when site conditions are detrimental to quality of work as determined by the Owner's Representative.
- C. PVC pipe shall not be solvent welded during wet conditions.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS

- A. General: Pipe and fittings shall be clearly and permanently marked to identify manufacturer, type, class, or schedule and NSF approval as applicable.
- B. Polyvinyl Chloride Pipe (PVC) and Fittings: SDR 26 bell and spigot, Type I PVC 1120, and complying with ASTM D3034.

- C. Ductile Iron Pipe (DIP) Joints and Fittings: Class 50, rubber gasket push-on type, in compliance with AWWA C151, C111, and C110.
- D. Vitrified Clay Pipe (VCP) and Fittings: Extra strength, unglazed for socket and spigot joint, complying with ASTM C700.

2.02 MISCELLANEOUS MATERIALS

- A. Crushed Rock: 3/4-inch bedding rock as specified in Section 32 11 00 – Base Courses
- B. Mortar: Conform to applicable sections of the Standard Specifications. Mixture shall be a 1:2 Portland cement to sand mixture with a minimum of water.
- C. PVC Solvent Cement: Conform to pipe manufacturer's recommendations.
- D. PVC Primer: Conform to pipe and solvent cement manufacturer's recommendations.

PART 3 - EXECUTION

3.01 PIPE LAYING

- A. General:
 - 1. The Owner's Representative will review and accept pipe prior to installation.
 - 2. Pipe shall be installed in conformance with Section 31 23 00 – Excavation and Fill.
 - 3. Sanitary sewer installations shall be reviewed and accepted by the Owner's Representative prior to backfilling.
- B. Pipe:
 - 1. Pipe shall be laid in trench to specified lines and grades fully and evenly supported layer of bedding material as specified and identified on the Drawings. Excavate bedding so bell fittings are clear from soil 6 inches on each side of joint and to a depth sufficient to avoid contamination of joint. Refer to Drawings for additional information.
 - 2. Pipe shall be laid beginning at the outlet and proceeding with each bell end opening facing upgrade.
 - 3. Cut pipe square and ream to remove burrs prior to use.
 - 4. Connections:
 - a. Thoroughly clean and dry all components to be joined.
 - b. Apply primer and sufficient cement to coat joint surfaces of both components and fill gaps but not in excess.
 - c. Join pipe, wipe off excess cement, and fully support pipe until joint has cured.
- C. Provide sleeving where shown, and where pipes penetrate walls, using schedule 40 PVC pipe minimum 1/4-inch diameter larger than pipe or other method acceptable to the Owner's Representative.

3.02 FIELD QUALITY CONTROL

- A. The Owner's Representative shall review and accept work at the following stages:
 - 1. Excavated trench with bedding in place prior to any pipe being laid.
 - 2. Pipe laid prior to backfilling. Any pipe covered prior to acceptance shall be uncovered for review and re-backfilled at contractor's expense.
- B. The Contractor shall furnish the necessary labor, equipment and materials necessary to perform air tests of the completed sewerage project before the system is placed in operation or connected to other lines.

- C. In no case shall the Contractor place the newly constructed sewer in operation without acceptance by the Owner's Representative.

3.03 MEASUREMENT AND PAYMENT

- A. The full contract cost per linear foot for "SANITARY SEWER LINE" shall include full compensation for furnishing all labor, materials, equipment, facilities, transportation and services to complete all work within the project limits and all related activities as shown on the Drawings and/or specified herein and no additional compensation will be allowed therefore.

END OF SECTION

SECTION 33 40 00

STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Storm drainage system improvements and related work as shown on the Drawings and specified including, but is necessarily limited to, the following:
 - 1. Pipe and fittings.
 - 2. Nonpressure transition couplings.
 - 3. Cleanouts.
 - 4. Drains.
 - 5. Catch basins.
 - 6. Dry wells.
- B. Related Requirements:
 - 1. Section 31 23 00 - Excavation and Fill
 - 2. Section 31 20 00 – Earth Moving
 - 3. Section 32 11 00 – Base Courses
 - 4. Section 32 33 00 - Site Furnishings
 - 5. Section 33 10 10 - Domestic Water Utilities

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C478: Standard Specification for Circular Precast Reinforced Concrete Manhole Sections.
 - 2. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
 - 3. D2321: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications.
 - 4. D2412: Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
 - 5. D2729: Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 6. D3034: Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
 - 7. D3350: Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
 - 8. D4101: Standard Specification for Polypropylene Injection and Extrusion Materials.
- B. California Building Code, Current Edition.
- C. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Action and Informational Submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.
- B. Coordinate work of this section with all other work contained in the Contract Documents.

1.04 ACTION SUBMITTALS

- A. Shop Drawings:

1. Junction boxes and dry wells. Include plans, elevations, sections, details, frames, covers, and grates.

B. Product Data: Manufacturer's cut-sheets of products to be used.

1.05 INFORMATIONAL SUBMITTALS

A. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1-inch equals 50 feet (1:500) and vertical scale of not less than 1-inch equals 5 feet (1:50). Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.

B. Field Test Reports indicating and interpreting test results for compliance with performance.

1.06 CLOSEOUT SUBMITTALS

A. Record Drawings:

1. Accurately record location of new piping, drain structures, and connections to existing systems using horizontal dimensions, elevations, inverts, and slope gradients as applicable.
2. Comply with the additional requirements of Section 01 78 39 – Project Record Documents.

1.07 QUALITY ASSURANCE

A. Control of Work: Conform to Section 5 of the Standard Specifications.

B. Control of Materials: Conform to Section 6 of the Standard Specifications.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Store pipe neatly and orderly, stacked and blocked to prevent damage. Cracked, checked, spalled, or otherwise damaged pipe and precast concrete units shall be removed from site.

B. Use of chain slings shall not be permitted.

C. Piping, fittings, and related materials shall be carefully handled. Comply with manufacturer's rigging instructions for precast items. Use of chain slings is not be permitted.

D. All pipelines, fittings and drainage structures shall be kept clean and closed during construction.

1.09 FIELD CONDITIONS

A. Make provisions for, and take the necessary precautions to, protect existing and new work from damage during entire life of project.

B. Work of this Section shall not be executed when site conditions are detrimental to quality of work as determined by the Owner's Representative.

C. Do not interrupt service to facilities occupied or used by Owner without the Owner's written permission.

PART 2 - PRODUCTS

2.01 PIPE AND FITTINGS

A. General:

1. Pipe and fittings shall be clearly and permanently marked to identify manufacturer, type, class, or schedule and NSF approval as applicable.
 2. Unless otherwise noted, Contractor has option of using either CHDPE or PVC pipe as specified.
- B. Corrugated High Density Polyethylene (CHDPE) Pipe: Dual wall, perforated and solid with an integrally formed smooth waterway; "N-12" drainage pipe by Advanced Drainage Systems, Inc., 510-913-2211, or equal.
1. Nominal sizes shall have a full circular cross-section, with an outer corrugated pipe wall and an essentially smooth inner wall (waterway).
 2. Corrugations may be either annular or spiral.
 3. Sizes shall conform to the AASHTO classification "Type S."
 4. Pipe manufacturer for this specification shall comply with the requirements for test methods, dimensions, and markings found in AASHTO Designations M252 and M294.
 5. The minimum parallel plate stiffness values when tested in accordance with ASTM D2412 shall be as follows:

Diameter	Pipe Stiffness
4 inch (100 mm)	50 psi (340 kPa)
6 inch (150 mm)	50 psi (340 kPa)
8 inch (200 mm)	50 psi (340 kPa)
10 inch (250 mm)	50 psi (340 kPa)
12 inch (300 mm)	50 psi (340 kPa)
15 inch (375 mm)	42 psi (290 kPa)

6. Fittings: Virgin PE compounds conforming with the requirements of ASTM D3350, cell class 324420C, and supplied or recommended by the pipe manufacturer.
 - a. The fittings shall not reduce or impair the overall integrity or function of the pipeline.
 - b. Common Corrugated Fittings:
 - 1) Couplers, reducers, and other in-line joint fittings.
 - 2) "Tees", "wyes", end caps, and other branch or complimentary assembly fittings.
 - c. Acceptable Installation Methods: Snap-on, screw-on, bell and spigot, and wrap around.
 - d. Couplings shall provide sufficient longitudinal strength to preserve pipe alignment and prevent separation at the joints.
 - e. Where designated on the Drawings and as required by the manufacturer, a neoprene or rubber gasket shall be supplied.

2.02 DRAINAGE STRUCTURES

- A. Precast Catch Basins:
1. General:
 - a. Grates in paved areas shall conform to ADA Standards for Accessible Design.
 - b. All catch basins to have locking mechanism or screw down grate to frame.
 - c. Provide two grade rings at each catch basin.
 2. 24-inch Basins: "RBT 2412" as supplied by Oldcastle Precast, 888-965-3220, or equal.
 - a. Grating: Round, ADA compliant, and lockable.
- B. Extensions: Provide box extensions, junction boxes and grade rings compatible with structures as necessary to finish at the proper elevation and to facilitate future elevation adjustments as noted below.
- C. Clean Outs: As shown or noted in the Drawings.
- D. Drywell: Manufacturer and product as indicated on the Drawings.

2.03 ADDITIONAL MATERIALS

- A. Permeable Rock Beneath Synthetic Turf Area: As specified in Section 32 18 14 – Synthetic Turf Base.
- B. Drain Rock:
 - 1. Drain Rock shall conform to requirements of Subdrain Trench Drain Rock beneath Synthetic Turf Area: As specified in Section 32 18 14 – Synthetic Turf Base
- C. Sand Bedding for Storm Drain Piping: Sand conforming to Section 19-3.02F(2) of the Standard Specifications.
- D. Mortar: A 1:2 Portland cement to sand mixture with a minimum of water conform to the applicable sections of the Standard Specifications.
- E. Structural Adhesives for Manholes, Catch Basins, and Junction Boxes: “Ram-Nek” by Henry Company, 800-523-0268, or equal as available.
- F. Reinforcing Bars: As specified in Section 32 32 15 – Landscape Concrete.
- G. Minor Concrete: Comply with requirements of Section 32 32 15 – Landscape Concrete.

PART 3 - EXECUTION

3.01 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 31 20 00 - Earth Moving.

3.02 PIPING INSTALLATION

- A. General:
 - 1. Pipe shall be installed per manufacturers' instructions and in conformance with the Contracts Documents.
- B. CHDPE Pipe:
 - 1. Pipe shall be installed with a minimum cover under the H-20 live load equal to 12 inches to the top of subgrade elevation.
 - 2. Minimum compaction for pipe subject to H-20 live load is 90 percent in accordance with Section 19, Standard Specifications.
 - 3. CHDPE pipe shall be laid and jointed in accordance with generally accepted practice and the following provisions to provide the required work.

3.03 INSTALLATION OF DRAINAGE STRUCTURES

- A. General: Set rim or cover elevations to specified grades utilizing a minimum of two grade rings (or extensions) at top of drainage structure to facilitate potential elevation adjustments in the future.
- B. Junction Boxes: Install as shown in the Drawings and as follows:
 - 1. Excavate as required.
 - 2. Set on firm, unyielding base. Set on compacted select backfill material if directed by Owner's Representative.
 - 3. Prefabricated units not having a bottom shall be set on a poured-in-place concrete slab with smooth trowel finish. Mortar and properly seal unit to slab, making a watertight connection.

4. Install pipe inlets and outlets to specified elevations. Grout and/or seal all joints to a watertight condition with material per manufacturer's recommendation.
- C. Drywells, Drinking Fountain Drains, Atrium Drains and Drop Inlets: Install as shown in the Drawings and in accordance with the manufacturer's written recommendations.

3.04 IDENTIFICATION

- A. Materials and their installation are specified in Section 31 20 00 - Earth Moving. Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
- B. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.05 FIELD QUALITY CONTROL

- A. The Owner's Representative shall review and accept work at the following stages:
 1. Excavated trench with bedding in place prior to any pipe being laid.
 2. Pipe laid prior to backfilling. Pipe covered prior to review and acceptance shall be uncovered and re-backfilled at Contractor's expense.
 3. Drainage device location and pipe connection.
 4. New drainage system shall be flood tested and clean of debris.

3.06 MEASUREMENT AND PAYMENT

- A. The contract unit prices paid per each for "CLEANOUT", "JUNCTION BOX", "DRYWELL", and "DRINKING FOUNTAIN DRAIN" shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, complete in place, as shown on the Drawings, as required by these Specifications, and as directed by the Engineer and no additional compensation will be allowed therefor.
- B. The contract unit prices paid per linear foot for "PERFORATED DRAIN LINE", and "STORM DRAIN LINE", shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work, complete in place, as shown on the Drawings, as required by these Specifications, and as directed by the Engineer and no additional compensation will be allowed therefor.

END OF SECTION

SECTION V

CONSTRUCTION AGREEMENT

CONSTRUCTION AGREEMENT

FY _____ Fund _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

For multi-year contracts or contracts with multiple accounts:

FY _____ Fund _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

THIS AGREEMENT is dated as of the _____ day of _____ in the year 20____, by
(city use only)

and between CITY OF PETALUMA (hereinafter called "CITY") and _____ (hereinafter called "CONTRACTOR").

CITY and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1. WORK

CONTRACTOR shall complete the WORK as specified or indicated in the CITY'S Contract Documents entitled _____.

ARTICLE 2. COMPLETION OF WORK

The WORK shall be completed to the satisfaction of CITY within _____ (_____) working days from the commencement date stated in the Notice to Proceed. In no event, however, shall the WORK to be performed under this contract be considered to be complete until all construction items called for on the drawings, and specifications have been completed and the contract price paid in full.

ARTICLE 3. LIQUIDATED DAMAGES

- A. CITY and the CONTRACTOR recognize that time is of the essence of this Agreement and that the CITY will suffer financial loss if the WORK is not completed within the time specified in Article 2 herein, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage which the CITY will sustain in the event of and by reason of the CONTRACTOR's failure to fully perform the WORK or to fully perform all of its contract obligations that have accrued by the time for completion as specified in Article 2 herein and/or as specified for completion of any scheduled operations or works described in the Special Provisions. It is, therefore, agreed in accordance with California Government Code Section 53069.85 that the CONTRACTOR will forfeit and pay to the CITY liquidated damages in the sum of _____ Dollars (\$_____) per day for each and every calendar day that expires after the time for completion specified in Article 2 herein and/or as specified for completion of any scheduled operations or works described in the Special Provisions except as otherwise

provided by extension of time pursuant to Article 12 of the General Conditions. It is further understood and agreed in accordance with California Government Code Section 53069.85 that the liquidated damages sum specified in this provision is not manifestly unreasonable under the circumstances existing at the time this contract was made, and that the CITY may deduct liquidated damages sums in accordance with this provision from any payments due or that may become due the CONTRACTOR.

- B. Liquidated damages will continue to accrue at the stated rate until final completion of the WORK. Accrued liquidated damages may be deducted by the CITY from amounts due or that become due to the CONTRACTOR for performance of the WORK. Liquidated damages may not be waived or reduced by CITY unless expressly waived or reduced in writing by the ENGINEER.

ARTICLE 4. PREVAILING WAGES

- A. Pursuant to California Labor Code Section 1771, CONTRACTOR and any subcontractor shall pay all workers employed in execution of the WORK in accordance with the general rate of per diem wages specified for each craft, classification, or type of worker needed to execute the WORK. Copies of the prevailing rates of per diem wages are on file at the City Clerk's office and shall be made available to any interested party on request.
- B. CONTRACTOR is required to pay all applicable penalties and back wages in the event of violation of prevailing wage law, and CONTRACTOR and any subcontractor shall fully comply with California Labor Code Section 1775, which is incorporated by this reference as though fully set forth herein.
- C. CONTRACTOR and any subcontractor shall maintain and make available for inspection payroll records as required by California Labor Code Section 1776, which is incorporated by this reference as though fully set forth herein. CONTRACTOR is responsible for ensuring compliance with this section. CONTRACTOR and any subcontractor shall maintain and make available for inspection payroll records as required by California Labor Code Section 1776, which is incorporated by this reference as though fully set forth herein. CONTRACTOR is responsible for ensuring compliance with this section. In addition, CONTRACTOR and any subcontractor shall submit certified payroll records to the Labor Commissioner online: <http://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html>.
- D. CONTRACTOR and any subcontractor shall fully comply with California Labor Code Section 1777.5, concerning apprentices, which is incorporated by this reference as though fully set forth herein. CONTRACTOR is responsible for ensuring compliance with this section.
- E. In accordance with California Labor Code Section 1810, eight (8) hours of labor in performance of the WORK shall constitute a legal day's work under this Agreement. CONTRACTOR and any subcontractor shall pay workers overtime pay as required by California Labor Code Section 1815. CONTRACTOR and any subcontractor shall, as a penalty to the CITY, forfeit Twenty-Five Dollars (\$25) for each worker employed in the

execution of the contract by the respective contractor or subcontractor for each calendar day during which the 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 so the provisions of Article 3 of Chapter 1 of Part 7, Division 2 of the California Labor Code, which is incorporated by this reference as though fully set forth herein.

ARTICLE 5. CONTRACT PRICE

- A. CITY shall pay CONTRACTOR for completion of the WORK the sum of _____ Dollars (\$_____), based on the bid price of same and in accordance with the Contract Documents.
- B. Notwithstanding any provisions herein, CONTRACTOR shall not be paid any compensation until such time as CONTRACTOR has on file with the City Finance Department a current W-9 form available from the IRS website (www.irs.gov) and has obtained a currently valid Petaluma business license pursuant to the Petaluma Municipal Code.
- C. In no case shall the total contract compensation exceed _____ Dollars (\$_____) without the prior written authorization by the City Manager. Further, no compensation for a section or work program component attached with a specific budget shall be exceeded without the prior written authorization of the City Manager.

ARTICLE 6. BONDS

- A. Before entering upon the performance of the WORK, the CONTRACTOR shall furnish Performance and Labor and Materials Bonds, each in the amount of one hundred percent (100%) of the contract price, as security for the faithful performance and payment of all the CONTRACTOR's obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of Completion, except as otherwise provided by Law or Regulation or by the Contract Documents. The CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary General Conditions.
- B. The CONTRACTOR shall guarantee the WORK to be free of defects in material and workmanship for a period of one (1) year following the CITY's acceptance of the WORK. The CONTRACTOR shall agree to make, at the CONTRACTOR's own expense, any repairs or replacements made necessary by defects in material or workmanship which become evident within the one-year guarantee period. The CONTRACTOR's guarantee against defects required by this provision shall be secured by a Maintenance Bond, in the amount of ten percent (10%) of the contract price, which shall be delivered by the CONTRACTOR to the CITY prior to acceptance of the WORK. The Maintenance Bond shall remain in force for one (1) year from the date of acceptance of the contracted WORK. The CONTRACTOR shall make all repairs and replacements within the time required during the guarantee period upon receipt of written order from the ENGINEER. If the CONTRACTOR fails to make the repairs and replacements within the required time, the CITY may do the work and the CONTRACTOR and the CONTRACTOR's surety for the Maintenance Bond shall be liable to the CITY for the cost. The expiration of the Maintenance Bond during the one-year guarantee period does not operate to waive or void

the one-year guarantee, as set forth herein.

- C. The form of the Performance, Labor and Materials, and Maintenance Bonds are provided by the CITY as part of the Contract Documents. Only such bond forms provided by the CITY are acceptable 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.
- D. 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 7 days thereafter substitute another Bond and surety, which must be acceptable to the CITY.
- E. 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 of California 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.

ARTICLE 7. PAYMENT PROCEDURES

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

ARTICLE 8. RETENTION

- A. Pursuant to Section 22300 of the California Public Contract Code, the CONTRACTOR may substitute securities for any money withheld by the CITY to ensure performance under the Contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the CITY or with a state or federally chartered bank in California as to the escrow agent, who shall return such securities to the CONTRACTOR upon satisfactory completion of the Contract.
- B. Alternatively, the CONTRACTOR may request and the CITY shall make payment of retentions earned directly to the escrow agent at the expense of the CONTRACTOR. At the expense of the CONTRACTOR, the CONTRACTOR may direct the investment of the 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. The CONTRACTOR shall be responsible for paying all fees for the expenses incurred by the escrow account and all expenses of the CITY. These expenses and payment terms shall be determined by the CITY's Finance Director or his/her designee and the escrow agent. 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 CITY, pursuant to the terms of this section. The CONTRACTOR

shall pay to each subcontractor, not later than 20 days of receipt of the payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to ensure the performance of the CONTRACTOR.

- C. Securities eligible for investment under Section 22300 shall be limited to those listed in Section 16430 of the Government Code and to bank or savings and loan certificates of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other security mutually agreed to by the CONTRACTOR and the CITY.

ARTICLE 9. CONTRACT DOCUMENTS

The Contract Documents which comprise the entire agreement between the CITY and the CONTRACTOR concerning the WORK consist of this Agreement and the following attachments to this Agreement:

- Notice Inviting Bids
- Instructions to Bidders
- Bid Forms including the Bid, Bid Schedule(s), Information Required of Bidder, Bid Bond, and all required certificates and affidavits
- Labor and Materials Bond
- Performance Bond
- Maintenance Bond
- General Conditions
- Supplementary General Conditions (if any)
- Specifications
- Special Provisions
- Drawings
- Federal Wage Rates dated _____ (if applicable)
- Form FHWA-1273 (if applicable)
- Addenda (if any)
- Change Orders which may be delivered or issued after Effective Date of the Agreement and are not attached hereto.

There are no Contract Documents other than those listed in this Article 9. The Contract Documents may only be amended by Change Order as provided in Paragraph 3.5 of the General Conditions.

ARTICLE 10. INSURANCE

The applicable insurance requirements, as approved by the City's Risk Manager, are set forth in **Exhibit B**, attached hereto and incorporated by reference herein. *[City use: check one.]*

ARTICLE 11. INDEMNIFICATION

- A. CONTRACTOR shall indemnify, defend with counsel acceptable to CITY, and hold harmless to the full extent permitted by law, CITY and its officers, officials, employees, agents and volunteers from and against any and all alleged liability, loss, damage, claims, expenses and costs (including, without limitation, attorney fees and costs and fees of litigation) (collectively, "Liability") of every nature arising out of or in connection with CONTRACTOR's performance of the WORK or its failure to comply with any of its obligations contained in this Agreement, except such Liability caused by the active negligence, sole negligence or willful misconduct of the CITY. Such indemnification by the CONTRACTOR shall include, but not be limited to, the following:
1. Liability or claims resulting directly or indirectly from the negligence or carelessness of the CONTRACTOR, its subcontractors, 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;
 2. Liability or claims arising directly or indirectly from bodily injury, occupational sickness or disease, or death of the CONTRACTOR'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;
 3. Liability or claims arising directly or indirectly from or based on the violation of any Laws or Regulations, whether by the CONTRACTOR, its subcontractors, employees, or agents;
 4. Liability or claims arising directly or indirectly from the use or manufacture by the CONTRACTOR, its subcontractors, 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 specified stipulated in this Agreement;
 5. Liability or claims arising directly or indirectly from the breach of any warranties, whether express or implied, made to the CITY or any other parties by the CONTRACTOR, its subcontractors, employees, or agents;
 6. Liability or claims arising directly or indirectly from the willful misconduct of the CONTRACTOR, its subcontractors, employees, or agents;
 7. Liability or claims arising directly or indirectly from any breach of the obligations assumed in this Agreement by the CONTRACTOR;
 8. 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;
 9. 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 area contiguous thereto or its performance of the WORK thereon.

- B. The CONTRACTOR shall reimburse the CITY for all costs and expenses, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court costs of appeal) incurred by said CITY in enforcing the provisions of this Paragraph.
- C. The indemnification obligation under this Article 11 shall be in addition to, and 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. The CONTRACTOR's responsibility for such defense and indemnity obligations shall survive the termination or completion of this Agreement for the full period of time allowed by law.
- D. Pursuant to California Public Contract Code Section 9201, City shall timely notify Contractor of receipt of any third-party claim relating to this Agreement.

ARTICLE 12. DISCLAIMER AND INDEMNITY CONCERNING LABOR CODE SECTION 6400

By executing this agreement the CONTRACTOR understands and agrees that with respect to the WORK, and notwithstanding any provision in this contract to the contrary, the CONTRACTOR, and/or its privities, including, without limitation, subcontractors, suppliers and other engaged by the CONTRACTOR in the performance of the WORK shall be "employers" for purposes of California Labor Code Section 6400 and related provisions of law, and that neither CITY nor its officials, officers, employees, agents, volunteers or consultants shall be "employers" pursuant to California Labor Code Section 6400 with respect to the performance of the WORK by the CONTRACTOR and/or its privities.

The CONTRACTOR shall take all responsibility for the WORK, shall bear all losses and damages directly or indirectly resulting to the CONTRACTOR, any subcontractors, the CITY, its officials, officers, employees, agents, volunteers and consultants, on account of the performance or character of the WORK, unforeseen difficulties, accidents, or occurrences of other causes predicated on active or passive negligence of the CONTRACTOR or of any subcontractor, including, without limitation, all losses, damages or penalties directly or indirectly resulting from exposure to hazards in performance of the WORK in violation of the California Labor Code. The CONTRACTOR shall indemnify, defend and hold harmless the CITY, its officials, officers, employees, agents, volunteers and consultants from and against any or all losses, liability, expense, claim costs (including costs of defense), suits, damages and penalties (including, without limitation, penalties pursuant to the California Labor Code) directly or indirectly resulting from exposure to hazards in performance of the WORK in violation of the California Labor Code, except such liability or costs caused by the active negligence, sole negligence or willful misconduct of the CITY.

ARTICLE 13. INDEPENDENT CONTRACTOR

It is understood and agreed that in the performance of this Agreement, CONTRACTOR (including its employees and agents) is acting in the capacity of an independent contractor, and not as an agent or employee of the CITY. CONTRACTOR has full control over the means and methods of performing said services and is solely responsible for its acts and omissions, including the acts and omissions of its employees and agents.

ARTICLE 14. SUBCONTRACTORS

CONTRACTOR must obtain the CITY's prior written consent for subcontracting any WORK pursuant to this Agreement. Any such subcontractor shall comply, to the extent applicable, with the terms and conditions of this Agreement. Any agreement between CONTRACTOR and a subcontractor pursuant to this Agreement shall provide that the subcontractor procure and maintain insurance coverage as required herein and which shall name CITY as an additional insured.

ARTICLE 15. COMPLIANCE WITH LAWS/NON-DISCRIMINATION

CONTRACTOR shall comply with all applicable local, state and federal laws, regulations and ordinances in the performance of this Agreement. CONTRACTOR shall not discriminate in the provision of service or in the employment of persons engaged in the performance of this Agreement on account of race, color, national origin, ancestry, religion, gender, marital status, sexual orientation, age, physical or mental disability in violation of any applicable local, state or federal laws or regulations.

ARTICLE 16. NOTICES

All notices required or permitted by this Agreement, including notice of change of address, shall be in writing and given by personal delivery or sent postage prepaid and addressed to the parties intended to be notified, as set forth herein. Notice shall be deemed given as of the date of delivery in person or as of the date deposited in any post office or post office box regularly maintained by the United States Postal Service, unless otherwise stated herein. Notice shall be given as follows:

CITY:

City Clerk
City of Petaluma
Post Office Box 61
Petaluma, California 94953
Telephone: (707) 778-4360

CONTRACTOR:

(Contact Name)

(Business Name)

(Address)

(City, State, Zip)

(Telephone)

(E-mail)

ARTICLE 17. GOVERNING LAW/VENUE

This Agreement shall be construed and its performance enforced under California law. Venue shall be in the Superior Court of the State of California in the County of Sonoma.

ARTICLE 18. NON-WAIVER

The CITY's failure to enforce any provision of this Agreement or the waiver of any provision in a particular instance shall not be construed as a general waiver of any part of such provision. The provision shall remain in full force and effect.

ARTICLE 19. THIRD PARTY BENEFICIARIES

The Parties do not intend, by any provision of this Agreement, to create in any third party any benefit or right owed by one party, under the terms and conditions of this Agreement, to the other party.

ARTICLE 20. ASSIGNMENT

No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

CITY and CONTRACTOR each binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

ARTICLE 21. SEVERABILITY

If any term or portion of this Agreement is held to be invalid, illegal, or otherwise enforceable by a court of competent jurisdiction, the remaining provisions of this Agreement shall continue in full force and effect.

IN WITNESS WHEREOF, CITY and CONTRACTOR have caused this Agreement to be executed the day and year first above written.

CITY

CONTRACTOR _____

City Manager

By _____
(CORPORATE SEAL)

ATTEST:

City Clerk

APPROVED AS TO FORM:

City Attorney

Attest:_____

Address for giving notices:

Agent for service of process:

License Number

Taxpayer I.D. Number

Petaluma Business Tax Certificate Number

file name:

END OF AGREEMENT

AGREEMENT CERTIFICATE
(if Corporation)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Board of Directors of the _____
_____ a
corporation existing under the laws of the State of _____, held on
_____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as _____
President of the Corporation, be and is hereby authorized to execute the Agreement
dated _____, 20____, by and between this
Corporation and _____ and that his/her execution thereof,
attested by the Secretary of the Corporation, and with the Corporate Seal affixed,
shall be the official act and deed of this Corporation.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the
corporation this _____, day of _____, 20____.

Secretary

(SEAL)

AGREEMENT CERTIFICATE
(if Partnership)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Partners of the _____

a partnership existing under the laws of the State of _____, held
on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____, as the
General Partner of the Partnership, be and is hereby authorized to execute the
Agreement dated _____, 20____, by and between this Partnership and
_____ and that his/her execution thereof,
attested by the _____ shall be the official act and deed of this
Partnership.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____ day of _____,
20____.

Partner

(SEAL)

AGREEMENT CERTIFICATE
(if Joint Venture)

STATE OF CALIFORNIA)
) ss:
COUNTY OF)

I HEREBY CERTIFY that a meeting of the Principals of the _____

_____ a
joint venture existing under the laws of the State of _____, held
on _____, 20____, the following resolution was duly passed and adopted:

“RESOLVED, that _____,
as _____, of the joint venture, be and is hereby authorized to execute
the Agreement dated _____, 20____, by and between this Joint Venture
and _____ and that his/her execution
thereof, attested by the _____ shall be the official act and deed of
this Joint Venture.”

I further certify that said resolution is now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand this _____, day of
_____, 20_____.

Managing Partner

(SEAL)

FAITHFUL PERFORMANCE BOND

WHEREAS, the City Council of the City of Petaluma, State of California, and _____ (hereinafter designated as "Principal") have entered into an agreement whereby Principal agrees to install and complete certain designated public improvements, which said agreement, dated _____, 20____, and identified as project _____, is hereby referred to and made a part hereof; and,

WHEREAS, said Principal is required under the terms of said agreement to furnish a bond for the faithful performance of said agreement.

NOW, THEREFORE, WE, the Principal and _____, duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the City of Petaluma, hereinafter called "City," in the penal sum of _____ Dollars (\$____) lawful money of the United States, for payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors, and administrators, jointly and severally, firmly by these present. The conditions of this obligation are such that if the above-bound Principal, the Principal's heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the said agreement and any alteration thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of Petaluma, its officers, agents, employees, and volunteers, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

As a part of this obligation secured hereby and in addition to the face amount specified therefore, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by the City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of this agreement or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications.

And the said Surety, for value received, hereby stipulates and agrees that upon termination of the Contract for cause, the Obligee reserves the right to refuse tender of the Principal by the Surety to complete the Contract work.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on _____, 20_____.

PRINCIPAL

SURETY

By_____

By_____

Name and Title

Name and Title

Address

City

State

Zip

Phone Number

###

NOTE: No substitution or revision to this bond form will be accepted. Be sure that all bonds submitted have a certified copy of the bonding agent's power of attorney attached. Also verify that Surety is an "Admitted Surety" (i.e., qualified to do business in California), and attach proof of verification (website printout from the California Department of Insurance website (<http://www.insurance.ca.gov/docs/index.html>) or certificate from County Clerk).

APPROVED AS TO AMOUNT:

APPROVED AS TO FORM:

City Manager

City Attorney

END OF FAITHFUL PERFORMANCE BOND

LABOR AND MATERIALS BOND

WHEREAS, the City of Petaluma, State of California, and _____ (hereinafter designated as "Principal") have entered into an agreement whereby the Principal agrees to install and complete certain designated public improvements, which said agreements, dated _____, 20____, and identified as project _____, is hereby referred to and made a part hereof; and,

WHEREAS, under the terms of said agreement Principal is required before entering upon the performance of the work, to file a good and sufficient payment bond with the City of Petaluma, to secure the claims to which reference is made in Title 15 (commencing with Section 3082) of Part 4 of Division 3 of the Civil Code of the State of California.

NOW, THEREFORE, said Principal and the undersigned, duly authorized to transact business under the laws of the State of California, as corporate surety, are held firmly bound unto the City of Petaluma, and all contractors, subcontractors, laborers, materialmen and other persons employed in the performance of the aforesaid agreement and referred to in the aforesaid Civil Code of the State of California, in the sum of _____ Dollars (\$_____) for materials furnished or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that said surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay, in addition to the face amount thereof, costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under Title 15 (commencing with section 3082) of Part 4 of Division 3 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

THE SURETY hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of said agreement or the specifications accompanying the same shall in any

manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and surety above named, on _____, 20_____.

PRINCIPAL

SURETY

By_____

By_____

Name and Title

Name and Title

Address

City

State

Zip

Phone

#

NOTE: No substitution or revision to this bond form will be accepted. Be sure that all bonds submitted have a certified copy of the bonding agent's power of attorney attached. Also verify that Surety is an "Admitted Surety" (i.e., qualified to do business in California), and attach proof of verification (website printout from the California Department of Insurance website (<http://www.insurance.ca.gov/docs/index.html>) or certificate from County Clerk)..

APPROVED AS TO AMOUNT:

APPROVED AS TO FORM:

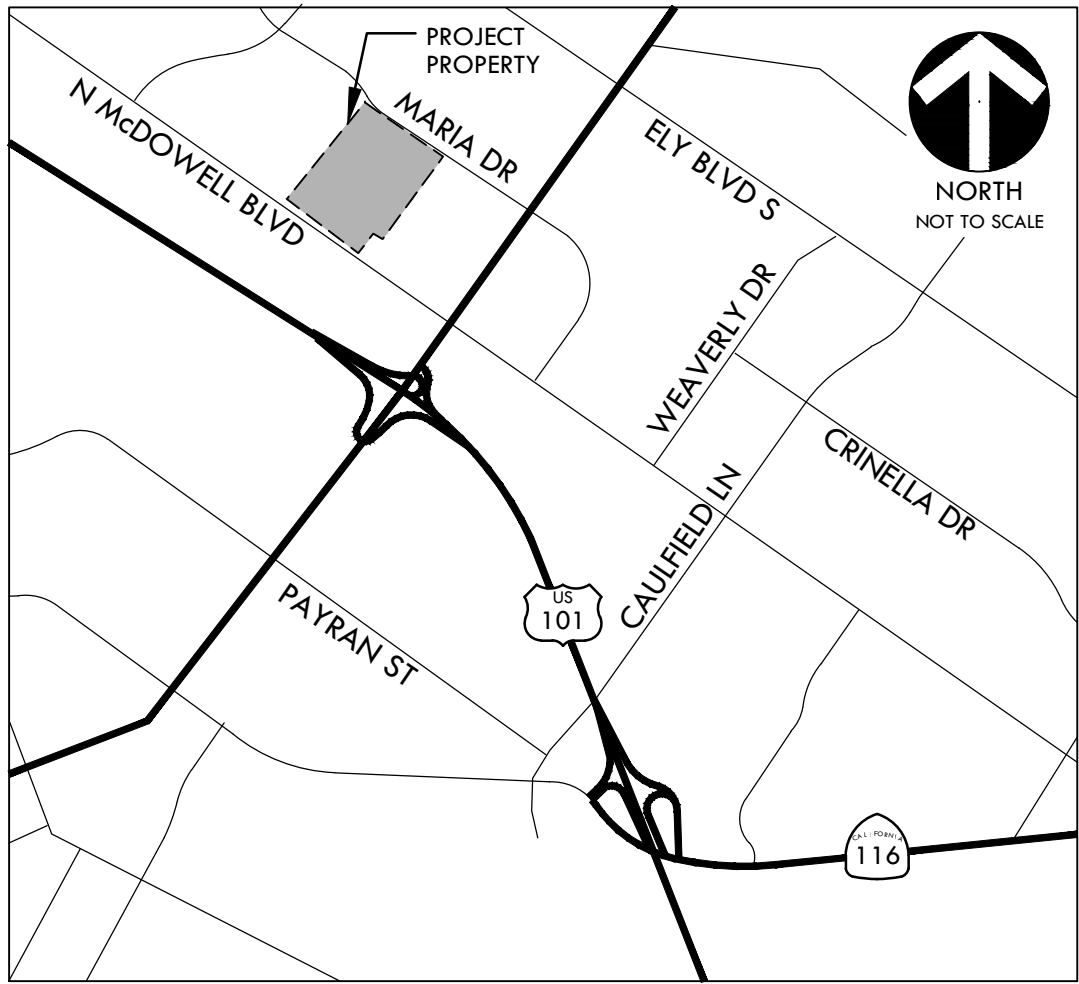
City Manager

City Attorney

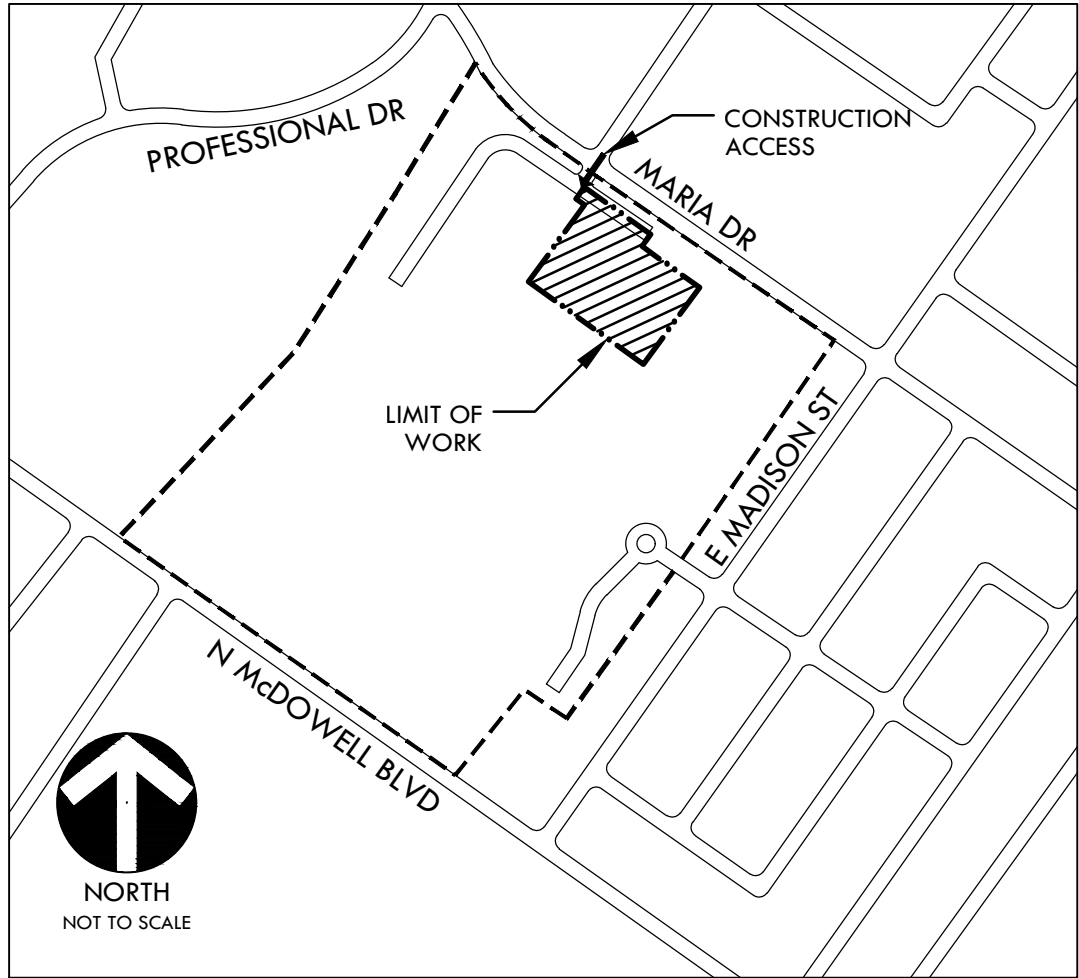
END OF LABOR AND MATERIALS BOND

SECTION VI
PROJECT PLANS

PROJECT MAPS



VICINITY MAP

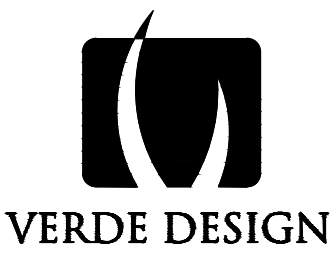


SITE MAP

CONSTRUCTION DRAWINGS FOR LUCCHESI PARK TURF REPLACEMENT PROJECT

320 N McDOWELL BLVD
PETALUMA, CA 94954
CITY OF PETALUMA PROJECT NO. C14502008
VERDE DESIGN, INC. PROJECT NO. 2108300

PREPARED BY



LANDSCAPE ARCHITECTURE
CIVIL ENGINEERING
SPORT PLANNING & DESIGN
3558 Round Barn Blvd, Suite 200
Santa Rosa, CA 95403
tel: 707.800.4204
fax: 408.985.7260
www.VerdeDesigninc.com



SCOPE OF WORK

SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, THE REMOVAL OF THE EXISTING SYNTHETIC TURF MATERIAL, INCLUDING INFILL, AT THE PARK'S SYNTHETIC TURF SOCCER FIELD AND THE INSTALLATION OF A NEW SYNTHETIC TURF MATERIAL, INFILL, AND DRAIN/SHOCK PAD. SCOPE OF WORK TO ALSO INCLUDE, MODIFICATIONS TO EXISTING ROCK BASE, REMOVAL AND REPLACEMENT OF EXISTING FIELD DRAINAGE SYSTEM, ACCESSIBLE PARKING IMPROVEMENTS, INSTALLATION OF NEW DRINKING FOUNTAIN, AND PATH OF TRAVEL PAVING REPLACEMENT.

BID ALTERNATES

BID ALTERNATE #1 (ADD ALTERNATE) - REPLACEMENT OF THE EXISTING PERIMETER STORM DRAIN LINES WITHIN EXISTING FIELD
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, REMOVAL OF THE EXISTING 6" STORM DRAIN LINES ALONG THE WEST AND EAST PERIMETER EDGES OF THE FIELD AND REPLACEMENT WITH NEW 10" STORM DRAIN LINES.

BID ALTERNATE #2 (ADD ALTERNATE) - REPLACEMENT OF THE EXISTING PERIMETER FENCING FABRIC
SCOPE OF WORK TO INCLUDE, BUT NOT LIMITED TO, REMOVAL OF THE EXISTING BLACK FENCING FABRIC AT EXISTING WESTERN AND EASTERN PERIMETER FIELD FENCING AND THE INSTALLATION OF NEW BLACK FENCING FABRIC.

GENERAL NOTES

- PRIOR TO BIDDING, THE GENERAL CONTRACTOR SHALL VISIT & INSPECT THE SITE & FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AFFECTING THE NEW WORK. THE GENERAL CONTRACTOR SHALL NOT DISPUTE, COMPLAIN OR ASSERT THAT THERE IS ANY MISUNDERSTANDING IN REGARDS TO LOCATION, EXTENT, NATURE OR AMOUNT OF WORK TO BE PERFORMED UNDER THIS CONTRACT DUE TO THE CONTRACTOR'S FAILURE TO INSPECT THE SITE. CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS, REQUIRING WORK, WHICH ARE NOT COVERED IN THE CONTRACT DOCUMENTS.
- NO CONSTRUCTION SHALL COMMENCE WITHOUT THE OFFICIAL NOTICE TO PROCEED FROM THE OWNER.
- THE GENERAL CONTRACTOR & SUBCONTRACTORS ARE RESPONSIBLE FOR LOCATING & VERIFYING ALL EXISTING UNDERGROUND UTILITIES IN ALL AREAS OF NEW WORK PRIOR TO COMMENCEMENT OF EXCAVATION. EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE ROUTING LOCATIONS AS BEST DETERMINED FROM EXISTING DRAWINGS AND THE OWNER, BUT SHOULD NOT BE CONSTRUED TO REPRESENT ALL OF THE EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES THAT MAY BE AFFECTED BY NEW FACILITIES IN THIS CONTRACT. VERIFY ACTUAL LOCATION AND DEPTH OF UTILITIES, AND REPORT POTENTIAL CONFLICTS TO THE OWNER PRIOR TO EXCAVATING FOR NEW FACILITIES.
- CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO PROTECT ALL EXISTING UTILITIES, WHETHER SHOWN OR NOT, IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING UTILITIES CAUSED BY ITS OPERATIONS.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS WITHIN SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR ALL DAMAGED AREAS TO THEIR ORIGINAL CONDITION OR BETTER AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- DIMENSIONS AND LOCATIONS OF EXISTING FACILITIES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER.
- ALL WORK SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE, CALIFORNIA PLUMBING CODE, CALIFORNIA FIRE CODE AND ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES, AS WELL AS ADAPTED STANDARDS.
- ALL NOTES ARE FOR GENERAL REFERENCE IN CONJUNCTION WITH, AND AS A SUPPLEMENT TO, THE WRITTEN SPECIFICATIONS AND DETAILS ASSOCIATED WITH THE CONTRACT DOCUMENTS.
- THIS DRAWING SET SHALL BE USED IN CONJUNCTION WITH THE CSI FORMAT SPECIFICATIONS PUBLISHED IN BOOK FORM. COMBINED, THEY ARE HEREIN REFERRED TO AS THE "CONTRACT DOCUMENTS".
- DIMENSIONS ON WORKING DRAWINGS TAKE PRECEDENCE OVER MEASURED ELEMENTS. CONTRACTOR SHALL NOT SCALE DRAWINGS.
- ALL TYPICAL DETAILS SHALL APPLY UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL PROVIDE ADEQUATE DUST CONTROL AND KEEP MUD AND DEBRIS OFF THE PUBLIC RIGHT-OF-WAY AT ALL TIMES.
- ALL TRENCHES AND EXCAVATIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH THE APPLICABLE SECTIONS OF CALIFORNIA AND FEDERAL O.S.H.A. REQUIREMENTS AND OTHER APPLICABLE SAFETY ORDINANCES. CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR TRENCH SHORING DESIGN AND INSTALLATION.
- ANY ALTERATIONS OF EXISTING FACILITIES TO ACCOMMODATE THE INSTALLATION OF NEW WORK SHALL BE REVIEWED BY THE OWNER PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL COORDINATE ALL WORK TO AVOID DISTURBING STUDENTS OR TEACHERS DURING SCHOOL HOURS. ANY DISRUPTION OF THE UTILITIES MUST BE COORDINATED AND APPROVED BY THE OWNER AND INSPECTOR OF RECORD PRIOR TO COMMENCING WORK.
- ALL TEMPORARY WORK SHALL BE CONSIDERED A PART OF THIS CONTRACT AND NO EXTRA CHARGES WILL BE ALLOWED. THIS SHALL INCLUDE MINOR ITEMS OF MATERIAL OR EQUIPMENT NECESSARY TO MEET THE REQUIREMENTS AND INTENT OF THE PROJECT.
- THE PLANS AND SPECIFICATIONS DO NOT UNDERTAKE TO SHOW OR LIST EVERY ITEM TO BE PROVIDED, BUT RATHER TO DEFINE THE REQUIREMENTS FOR A FULL AND WORKING SYSTEM FROM THE STANDPOINT OF THE END USER. FOR THIS REASON, WHEN AN ITEM NOT SHOWN OR LISTED IS CLEARLY NECESSARY FOR PROPER CONTROL/OPERATION OF EQUIPMENT WHICH IS SHOWN OR LISTED, THE CONTRACTOR SHALL PROVIDE AN ITEM WHICH WILL ALLOW THE SYSTEM TO FUNCTION PROPERLY AT NO INCREASE IN PRICE.
- ALL CONTRACTORS SHALL REMOVE TRASH AND DEBRIS STEMMING FROM THEIR WORK ON A DAILY BASIS. PROJECT SITE SHALL BE MAINTAINED IN A CLEAN AND ORDERLY CONDITION.
- THE DETAILS REFLECT THE DESIGN INTENT FOR TYPICAL CONDITIONS. THE CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND SHALL INCLUDE, IN HIS SCOPE, THE COST FOR COMPLETE FINISHED INSTALLATIONS, INCLUDING ANOMALIES, OF ALL TRADES.
- NO WORK SHALL COMMENCE WITH UNAPPROVED MATERIALS. ANY WORK DONE WITH UNAPPROVED MATERIALS AND EQUIPMENT IS AT THE CONTRACTOR'S RISK AND IS SUBJECT TO REJECTION AND REPLACEMENT. SEE SPECIFICATIONS FOR SUBMITTAL AND SUBSTITUTION REQUIREMENTS.
- CONSTRUCTION MATERIALS STORED ON THE SITE SHALL BE PROPERLY STACKED AND PROTECTED SO AS TO PREVENT DAMAGE OR DETERIORATION UNTIL USED. FAILURE IN THIS REGARD MAY BE CAUSE FOR REJECTION OF MATERIAL AND/OR WORK.
- ALL EQUIPMENT SHALL BE FABRICATED FROM FIELD VERIFIED DIMENSIONS AND APPROVED SHOP DRAWINGS. COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL PERFORM THEIR CONSTRUCTION AND OPERATIONS IN A MANNER WHICH WILL NOT ALLOW HARMFUL POLLUTANTS TO ENTER THE STORM DRAIN SYSTEM. TO ENSURE COMPLIANCE, THE CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE BEST MANAGEMENT PRACTICE (BMP) AS OUTLINED IN THE BROCHURES ENTITLED "BEST MANAGEMENT PRACTICE FOR THE CONSTRUCTION INDUSTRY" ISSUED BY THE CALIFORNIA STORM WATER QUALITY ASSOCIATION, NONPOINT SOURCE POLLUTION CONTROL PROGRAM, TO SUIT THE CONSTRUCTION SITE AND JOB CONDITION. THE CONTRACTOR SHALL PRESENT HIS PROPOSED BMP AT THE PRECONSTRUCTION MEETING FOR DISCUSSION AND APPROVAL.
- CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FENCING PER CONTRACT DOCUMENTS TO SERVE LIMIT OF WORK AREAS. FENCING MAY BE ADJUSTED DURING CONSTRUCTION BASED ON CONSTRUCTION SEQUENCE OR THE OWNER'S DIRECTION.
- OVERNIGHT PARKING OF CONSTRUCTION EQUIPMENT IN THE STREET RIGHT-OF-WAY SHALL NOT BE PERMITTED.

CONTACT INFORMATION

ORGANIZATION	NAME	PHONE
OWNER CITY OF PETALUMA	<i>Josh J Minshall</i> JOSH MINSHALL	(707) 776-3785
CIVIL ENGINEER/ LANDSCAPE ARCHITECT VERDE DESIGN INC.	DEVIN CONWAY WES DOWNING	(408) 850-3420 (707) 800-4204

APPLICABLE CODES

1. 2022 CBC CHAPTER 35; PROVIDE ALL THE APPLICABLE/ADOPTED STANDARDS. WHERE A PARTICULAR STANDARD IS REFERENCED IN THE CODE BUT DOES NOT APPEAR AS AN ADOPTED STANDARD IT MAY STILL BE USED. APPLY ONLY THE PORTION OF THE STANDARD THAT IS APPLICABLE TO THE CODE SECTION WHERE THE STANDARD IS REFERENCED, NOT THE ENTIRE STANDARD.

2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
(2018 INTERNATIONAL BUILDING CODE VOLUMES 1-2)
2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.
(2017 NATIONAL ELECTRICAL CODE)
2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.
(2018 UNIFORM MECHANICAL CODE)
2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
(2018 UNIFORM PLUMBING CODE)
2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
(2018 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
2022 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 C.C.R.
(2018 INTERNATIONAL EXISTING BUILDING CODE)
2022 CALIFORNIA "GREEN" BUILDING REQUIREMENTS OR CAL GREEN, PART 11, TITLE 24 C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

LIST OF FEDERAL CODES AND STANDARDS (IF APPLICABLE)
AMERICANS WITH DISABILITIES ACT (ADA), TITLE II OR TITLE III
FOR TITLE II: UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS) 28 CFR 35.151(C)
OR ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 35)
FOR TITLE III: ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)
2010 AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN 28 CFR 36.406

NOTE: TITLE II APPLIES TO PROJECTS FUNDED AND/OR USED BY STATE AND LOCAL GOVERNMENT SERVICES. TITLE III COVERS PUBLIC ACCOMMODATIONS AND COMMERCIAL FACILITIES. DEPENDING ON THE USE AND FUNDING, BOTH TITLE MAY APPLY TO THE PROJECT.

NFPA 13 AUTOMATIC SPRINKLER SYSTEMS 2022 EDITION
NFPA 14 STANDPIPE SYSTEMS 2019 EDITION
NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEMS 2021 EDITION
NFPA 17A WET CHEMICAL EXTINGUISHING SYSTEMS 2021 EDITION
NFPA 20 STATIONARY FIRE PUMPS 2022 EDITION
NFPA 24 PRIVATE FIRE SERVICE MAINS 2022 EDITION
NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE (CALIFORNIA AMENDED)
(NOTE SEE UL STANDARD 1971 FOR "VISUAL DEVICES") 2022 EDITION
NFPA 253 CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS 2023 EDITION
NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS 2022 EDITION
ASME 17.1 ELEVATOR STANDARD 2019 EDITION

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2022 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35

ADA STANDARD FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)

2. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS, A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.

3. ALL EXISTING FIRE EXTINGUISHING SYSTEMS ARE IN COMPLIANCE WITH UL 300, CBC 904.1.1, CFC 904.1.1.

SHEET INDEX (10 Sheets)

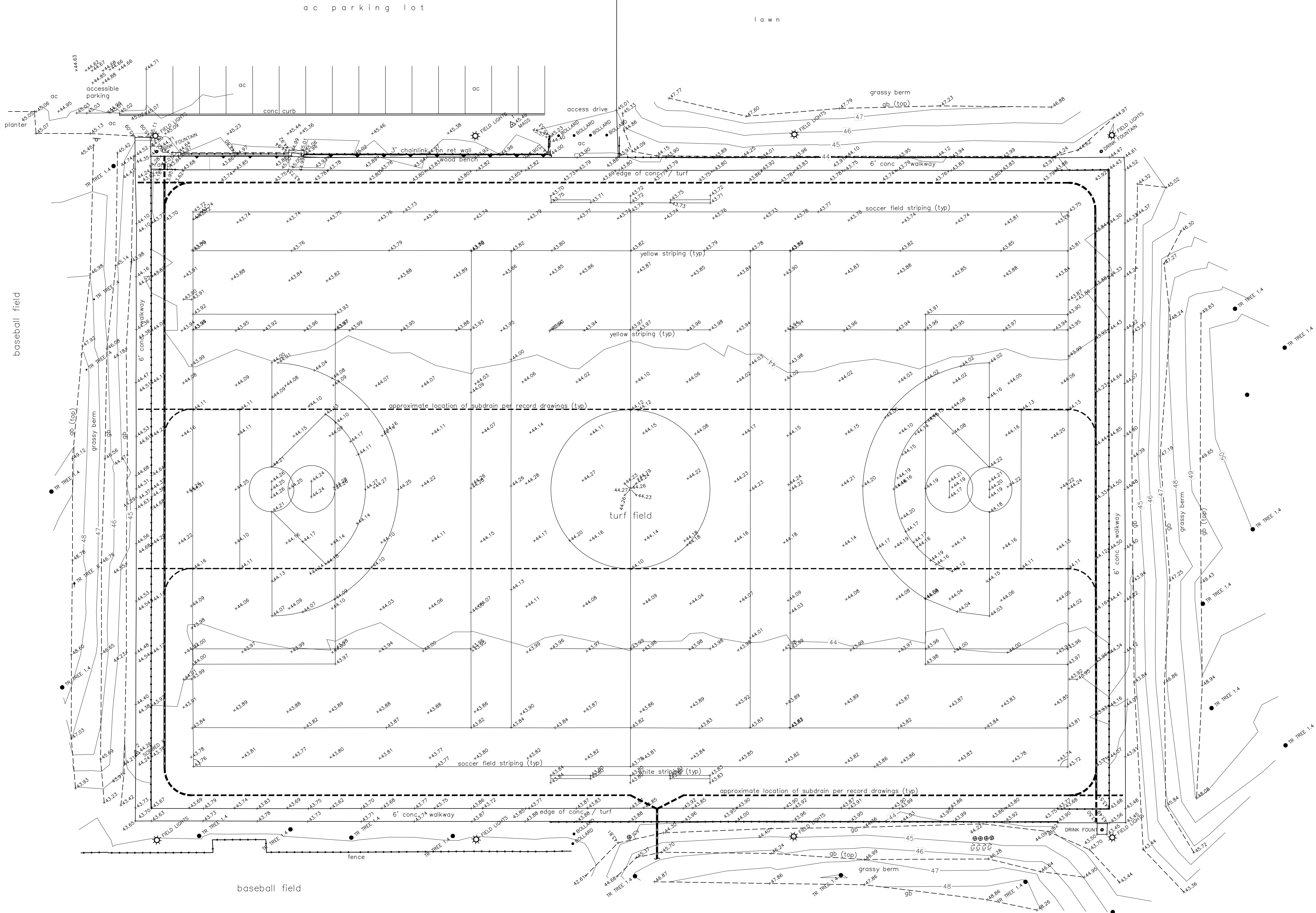
SHEET NO.	SHEET DESCRIPTION
C0.0	COVER SHEET
L1.0	EXISTING CONDITIONS SURVEY PLAN
L2.0	EROSION AND SEDIMENT CONTROL PLAN
L3.0	DEMOLITION PLAN
L4.0	GRADING PLAN
L5.0	DRAINAGE AND UTILITIES PLAN
L6.0	MATERIAL AND DETAIL REFERENCE PLAN
LD1.0	CONSTRUCTION DETAILS
LD2.0	CONSTRUCTION DETAILS
LD2.1	CONSTRUCTION DETAILS

C0.0

COVER SHEET

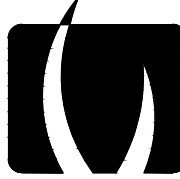
ALL IDEAS, DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE PROPERTY OF VERDE DESIGN, INC. AND WERE CREATED, EVOLVED, AND DEVELOPED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED, REPRODUCED, OR PUBLISHED BY ANY METHOD, IN WHOLE OR IN PART, OR DISCLOSED TO ANY PERSON, FIRM, OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN PERMISSION OF VERDE DESIGN, INC.

Maria Dr.



SHEET INFO AND REFERENCE

- THIS TOPOGRAPHIC SURVEY WAS PROVIDED BY CHAUDHARY & ASSOCIATES, INC. (TELEPHONE): (707) 255-2729 (ADDRESS): 211 GATEWAY ROAD WEST, SUITE 204, NAPA, CALIFORNIA 94558.
- NOTE THAT THIS IS NOT A COMPLETE UNDERGROUND SURVEY. THIS DRAWING CONTAINS ONLY PARTIAL INFORMATION FOR THE EXISTING IRRIGATION, SANITARY SEWER, STORM DRAIN SYSTEMS, ETC. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS.



VERDE DESIGN
LANDSCAPE ARCHITECTURE
CIVIL ENGINEERING
SPORT PLANNING & DESIGN

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SURVEY NOTES

FIELD SURVEY SHOWN HEREON WAS PERFORMED BY CHAUDHARY & ASSOCIATES, INC. ON DECEMBER 15, 2021. CONTOUR LINES SHOWN ARE 1' INTERVAL

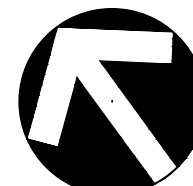
HORIZONTAL DATUM:
NORTH AMERICAN DATUM OF 1983 (NAD83)

VERTICAL DATUM:
NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

UNITS: US SURVEY FEET

SURVEY LEGEND

AC	ASPHALTIC CONCRETE
CONC	CONCRETE
EP	EDGE OF PAVEMENT
FL	FLOWLINE
GB	GRADE BREAK
ICV	IRRIGATION CONTROL VALVE
MAGNS	MAG NAIL AND SHINER
SD	STORM DRAIN
TC	TOP OF CURB
(TYP)	TYPICAL
W	WATER
WV	WATER VALVE
	CHAUDHARY & ASSOC. SURVEY CONTROL POINT
	STREET SIGN
+ 54.73	SPOT ELEVATION
• tree 1.4	1.4" DIAMETER TREE
	WATER VALVE
	CHAINLINK FENCE
	RETAINING WALL
	SUBDRAIN
	STORM DRAIN PIPE
	CONTOUR LINE



NORTH

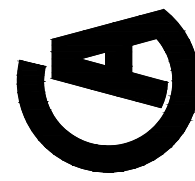
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STAMP

CONSULTANT

CHAUDHARY & ASSOCIATES, INC.
ENGINEERS SURVEYORS INSPECTORS

211 Gateway Road West, Suite 204
Napa, California 94558
Tel: (707) 255-2729 Fax: (707) 255-5051 WWW.CHAUDHARY.COM



SHEET TITLE

**EXISTING CONDITIONS
SURVEY PLAN**

PROJECT NAME

**LUCCHESI PARK
TURF REPLACEMENT
PROJECT**

PROJECT ADDRESS

**320 N McDOWELL BLVD
PETALUMA, CA 94954**

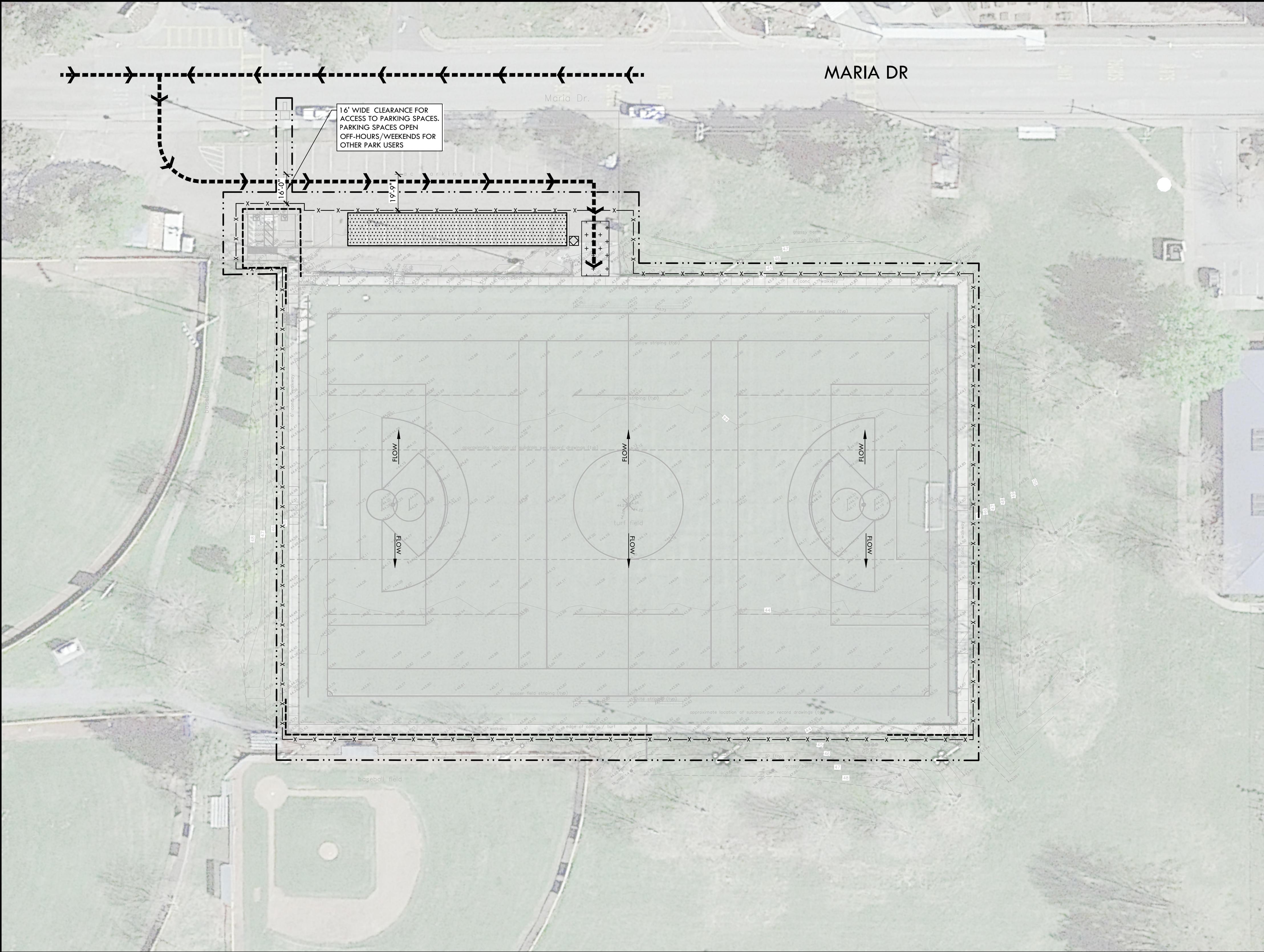
SUBMITTAL	DATE
DESIGN DEVELOPMENT SUBMITTAL	01/06/23
90% SUBMITTAL	02/03/23
BID SUBMITTAL	02/17/23

NO.	REVISIONS	DATE

DRAWN BY KL	CHECKED BY WD/DC
DATE ISSUED 02/17/23	SCALE 1"=20'-0"
PROJ. NO. 2108300	
SHEET NO. L1.0	

EXISTING CONDITIONS SURVEY PLAN

ALL IDEAS, DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE PROPERTY OF VERDE DESIGN, INC. AND WERE CREATED, EVOLVED, AND DEVELOPED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL BE USED, REPRODUCED, OR PUBLISHED IN WHOLE OR IN PART, OR DISCLOSED TO ANY PERSON, FIRM, OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN PERMISSION OF VERDE DESIGN, INC.



EROSION AND SEDIMENT CONTROL NOTES

- EROSION AND SEDIMENT CONTROL SHALL BE CONSTRUCTED DURING FIRST WEEK OF CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL SHALL REMAIN THROUGHOUT CONSTRUCTION AND BE REMOVED AND DISPOSED OF DURING MAINTENANCE PERIOD.
- EROSION AND SEDIMENT CONTROL MAY BE ADJUSTED THROUGH CONSTRUCTION WITH APPROVAL OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
- CONTRACTOR SHALL SWEEP STREETS AND PARKING AREAS AFFECTED BY CONSTRUCTION WITH STREET SWEEPER AS REQUIRED TO KEEP PAVING CLEAN OF CONSTRUCTION DEBRIS.
- CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AS SHOWN IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), REFER TO SPECIFICATIONS.
- THIS EROSION CONTROL PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGE PRACTICES (BMPs) LISTED IN THE SWPPP AND SHALL COMPLY WITH THE STATE REGULATIONS TO CONTROL THE DISCHARGE OF STORMWATER POLLUTANTS.

EROSION AND SEDIMENT CONTROL LEGEND

SYM	DESCRIPTION	DTL REF
---	LIMIT OF WORK	
---	SEDIMENT RETENTION FIBER ROLL	(A)
---	TEMPORARY CONSTRUCTION FENCING	
---	TEMPORARY CONCRETE WASHOUT FACILITY - PROVIDE A WASHOUT BIN FOR CONSTRUCTION WASHOUT AND REMOVE AT END OF CONSTRUCTION.	(S)
---	RUMBLE PLATE CONSTRUCTION ENTRY	(C)
---	CONSTRUCTION STAGING AREA	
---	DIRECTION OF SURFACE FLOW	
---	PROJECT ACCESS	



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STAMP



CONSULTANT

SHEET TITLE

EROSION AND SEDIMENT CONTROL PLAN

PROJECT NAME

LUCCHESI PARK TURF REPLACEMENT PROJECT

PROJECT ADDRESS

320 N McDOWELL BLVD
PETALUMA, CA 94954

SUBMITTAL	DATE
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DESIGN DEVELOPMENT SUBMITTAL	01/06/23
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90% SUBMITTAL	02/03/23
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BID SUBMITTAL	02/17/23
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NO.	REVISIONS	DATE
1		
2		
3		
4		
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8		
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10		

DRAWN BY KL	CHECKED BY WD/DC
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DATE ISSUED 02/17/23	SCALE 1" = 30'-0"
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PROJ. NO. 2108300	
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SHEET NO.	
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L2.0

C RUMBLE PLATE CONSTRUCTION ENTRY

NTS

B TEMPORARY CONCRETE WASHOUT FACILITY

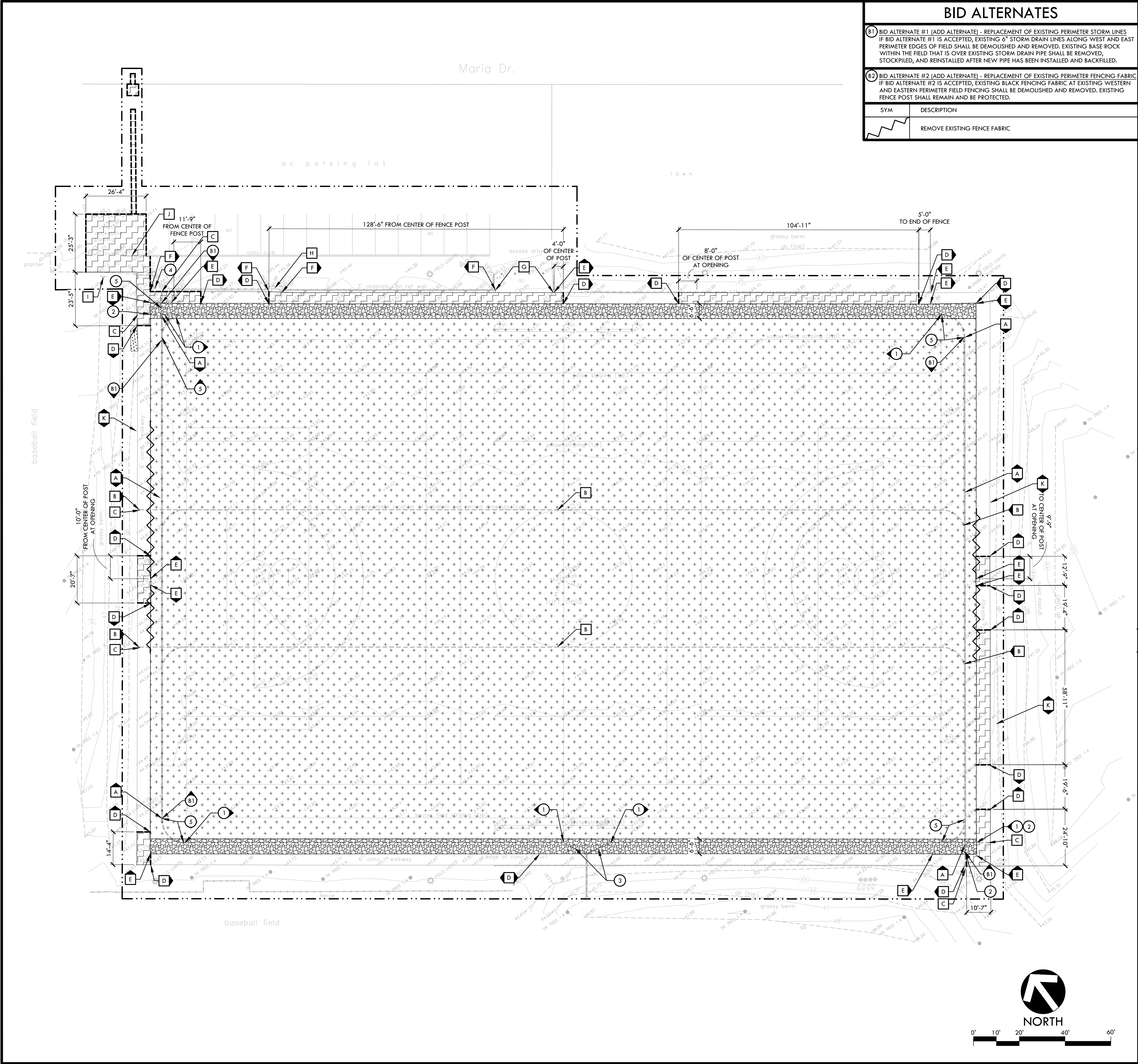
NTS

A SEDIMENT RETENTION FIBER ROLL

NTS

NTS

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BID ALTERNATES	
B1 BID ALTERNATE #1 (ADD ALTERNATE) - REPLACEMENT OF EXISTING PERIMETER STORM LINES IF BID ALTERNATE #1 IS ACCEPTED, EXISTING 6" STORM DRAIN LINES ALONG WEST AND EAST PERIMETER EDGES OF FIELD SHALL BE DEMOLISHED AND REMOVED. EXISTING BASE ROCK WITHIN THE FIELD THAT IS OVER EXISTING STORM DRAIN PIPE SHALL BE REMOVED, STOCKPILED, AND REINSTALLED AFTER NEW PIPE HAS BEEN INSTALLED AND BACKFILLED.	
B2 BID ALTERNATE #2 (ADD ALTERNATE) - REPLACEMENT OF EXISTING PERIMETER FENCING FABRIC IF BID ALTERNATE #2 IS ACCEPTED, EXISTING BLACK FENCING FABRIC AT EXISTING WESTERN AND EASTERN PERIMETER FIELD FENCING SHALL BE DEMOLISHED AND REMOVED. EXISTING FENCE POST SHALL REMAIN AND BE PROTECTED.	
SYM	DESCRIPTION
	REMOVE EXISTING FENCE FABRIC

- ### DEMOLITION NOTES
- THE CONTRACTOR SHALL PERFORM ALL CLEARING, DEMOLITION, REMOVAL OF OBSTRUCTIONS AND SITE PREPARATIONS NECESSARY FOR THE PROPER EXECUTION OF ALL WORK CONTAINED IN THE CONTRACT DOCUMENTS.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND PROVIDE THE REQUIRED COORDINATION FOR THEIR TEMPORARY DISCONNECTION, PROTECTION, REMOVAL AND/OR STORAGE AS MAY BE REQUIRED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE OWNER TO DETERMINE WHETHER TEMPORARY SERVICES ARE NECESSARY.
 - THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID SUBMITTAL TO DETERMINE THE EXACT EXTENT AND DEPTH OF SITE DEMOLITION REQUIRED AND VERIFY COMPLIANCE WITH DRAWINGS. THE OWNER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
 - THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800) 222-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
 - ALL EXISTING ITEMS ARE TO REMAIN UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT CONTRACTOR'S EXPENSE, ANY EXISTING ITEM DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY AND ALL DAMAGES TO ADJACENT PROPERTIES. THE DAMAGED ITEMS SHALL BE RESTORED TO AN "AS-WAS" OR BETTER CONDITION OR REPLACED PER THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
 - PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL INSTALL SELF-SUPPORTING INTERLOCKING CHAIN-LINK TEMPORARY CONSTRUCTION FENCING TO ENCLOSE AND SECURE THE PROJECT AREA LIMIT OF WORK. THE FENCING SHALL CONTAIN PEDESTRIAN AND/OR VEHICULAR ACCESS GATES AS NECESSARY AND SHALL BE MINIMUM 6 FEET HIGH WITH A TOP AND BOTTOM RAIL WITH KNUCKLED TOP AND BOTTOM SELVAGE (NO BARBED WIRE PERMITTED). ALL FENCE SHALL INCLUDE FULL HEIGHT SCREEN SHADE CLOTH COVERING. THE CONSTRUCTION FENCING WORK SHALL BE SUBJECT TO THE DISCRETION OF THE OWNER'S REPRESENTATIVE.
 - CONTRACTOR SHALL VIDEO EXISTING/REMAINING STORM DRAINAGE LINES WITHIN THE FIELD AND RELAY INFORMATION ON CONDITIONS OF THE EXISTING LINES TO THE OWNER'S REPRESENTATIVE.
 - CONTRACTOR SHALL FOLLOW THE CITY OF PETALUMA'S CONSTRUCTION WASTE MANAGEMENT PLAN. ADDITIONAL INFORMATION AND FORM CAN BE FOUND AT [HTTPS://CITYOFPETALUMA.ORG/DOCUMENTS/CONSTRUCTION-DEMOLITION-DEBRIS-RECYCLING-FORM/](https://cityofpetaluma.org/documents/construction-demolition-debris-recycling-form/).

DEMOLITION LEGEND	
SYM	DESCRIPTION
	LIMIT OF WORK / CONSTRUCTION FENCING
	EXISTING SYNTHETIC TURF, AND ASSOCIATED INFILL MATERIAL, SHALL BE REMOVED AND DISPOSED OF IN LEGAL MANNER. CONTRACTOR SHALL PERFORMED STRING LINING OF THE EXISTING FIELD BASE TO ENSURE BASE IS WITHIN CONFORMANCE STANDARDS SET WITHIN SPECIFICATIONS. ANY LOCATIONS FOUND TO BE OUT OF CONFORMANCE SHALL BE CORRECTED. CONTRACTOR SHALL LOOK AT ALTERNATE MEANS OF DISPOSAL OF SYNTHETIC TURF MATERIAL.
	CONTRACTOR SHALL REMOVE EXISTING PERMEABLE ROCK BASE, SUBDRAIN ROCK AND EXISTING PIPE, AND REPLACE WITH NEW SUBDRAIN TRENCH ROCK AND PIPE, REFER TO DETAIL A, SHEET LD1.0 AND SHEET L5.0 FOR ADDITIONAL INFORMATION.
	EXISTING HARDSCAPE PAVING, INCLUDING BASE MATERIALS AND HEADER BOARDS, TO BE DEMOLISHED AND REMOVED.
	CLEAR AND GRUB EXISTING VEGETATED AREA. EXISTING NATIVE MATERIAL TO BE CLEAR AND STRIPPED. STRIPPED MATERIAL TO BE OFF HAULED.
	SAWCUT EXISTING HARDSCAPE. WHEN SAWCUTTING OCCURS AT CONCRETE PAVING, SAWCUT SHALL BE MADE AT THE NEAREST CONCRETE JOINT.

DEMOLITION ITEMS	
ITEMS TO BE DEMOLISHED AND/OR REMOVED	
1	PERFORATED SUBDRAIN LINE TO BE DEMOLISHED AND REMOVED
2	EXISTING STORM DRAIN CONNECTED TO CLEANOUT THAT GOES UNDER EXISTING PAVEMENT, SHALL BE CUT AND CAPPED AT EXISTING PAVEMENT EDGE AT LOCATIONS WHERE NEW JUNCTION BOXES WILL BE INSTALLED.
3	CONTRACTOR SHALL CUT AND DEMOLISH EXISTING STORM LINE AS NEEDED TO INSTALL NEW DRAINAGE STRUCTURE, REFER TO SHEET L5.0 FOR ADDITIONAL INFORMATION.
4	EXISTING DRINKING FOUNTAIN TO BE REMOVED. CONTRACTOR SHALL CUT AND CAP WATERLINE AND OTHER UTILITIES CONNECTED TO FOUNTAIN. CONTRACTOR SHALL ALSO GRIND DOWN ANY EXPOSED BASE HARDWARE (BOLTS, ANCHORS, ETC) AND IF THERE IS AN EXPOSED HOLE IN EXISTING CONCRETE BASE, FILL/PATCH/FABRICATE MATERIAL TO COVER HOLE. FOUNTAIN SHALL BE TURNED OVER TO CITY.
5	EXISTING STORM DRAIN LINE TO BE DEMOLISHED AND REMOVED
ITEMS TO BE PROTECTED OR RELOCATED	
A	EXISTING STORM DRAIN LINE TO REMAIN AND BE PROTECTED. CONTRACTOR SHALL CAMERA EXISTING STORM DRAIN LINES TO REMAIN TO ENSURE THAT ALL LINES ARE CLEAN AND STRUCTURALLY SOUND
B	EXISTING PERFORATED SUBDRAIN LINE TO REMAIN AND BE PROTECTED.
C	EXISTING CLEANOUT BOX TO REMAIN AND BE PROTECTED.
D	EXISTING CONCRETE EDGE, AND HEADER BOARD, TO REMAIN AND BE PROTECTED.
E	EXISTING CHAIN LINK FENCING TO REMAIN AND BE PROTECTED. FENCE ADJACENT TO PROPOSED PERIMETER PATH IMPROVEMENTS MAY BE REMOVED AND REPLACED AS DEEMED NECESSARY BY THE CONTRACTOR.
F	EXISTING CONCRETE WALL AND FENCING TO REMAIN AND BE PROTECTED
G	EXISTING ASPHALT DRIVEWAY TO REMAIN AND BE PROTECTED. CONTRACTOR SHALL REMOVE ASPHALT AT DRIVEWAY AS NEEDED TO INSTALL NEW CONCRETE AND PROVIDE SMOOTH TRANSITION BETWEEN BOTH MATERIALS (12" MAX.)
H	EXISTING CONCRETE STAIRS TO REMAIN AND BE PROTECTED.
I	POST TO REMAIN IN PLACE, SIGN TO BE REMOVED AND REPLACED WITH ADA SIGN
J	WOODEN CURB TO REMAIN AND BE PROTECTED
K	EXISTING DRAIN LINE ALONG BOTTOM OF SLOPE SHALL REMAIN AND BE PROTECTED. IF EXISTING DRAIN LINE AT DRINKING FOUNTAIN LOCATION IS IN CONFLICT WITH PROPOSED WORK, DRAIN SHALL BE CAPPED AT BOTH ENDS OF NEW FOUNTAIN PAD AND REMAIN IN PLACE.

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SHEET TITLE

DEMOLITION PLAN

PROJECT NAME

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TURF REPLACEMENT
PROJECT**

PROJECT ADDRESS

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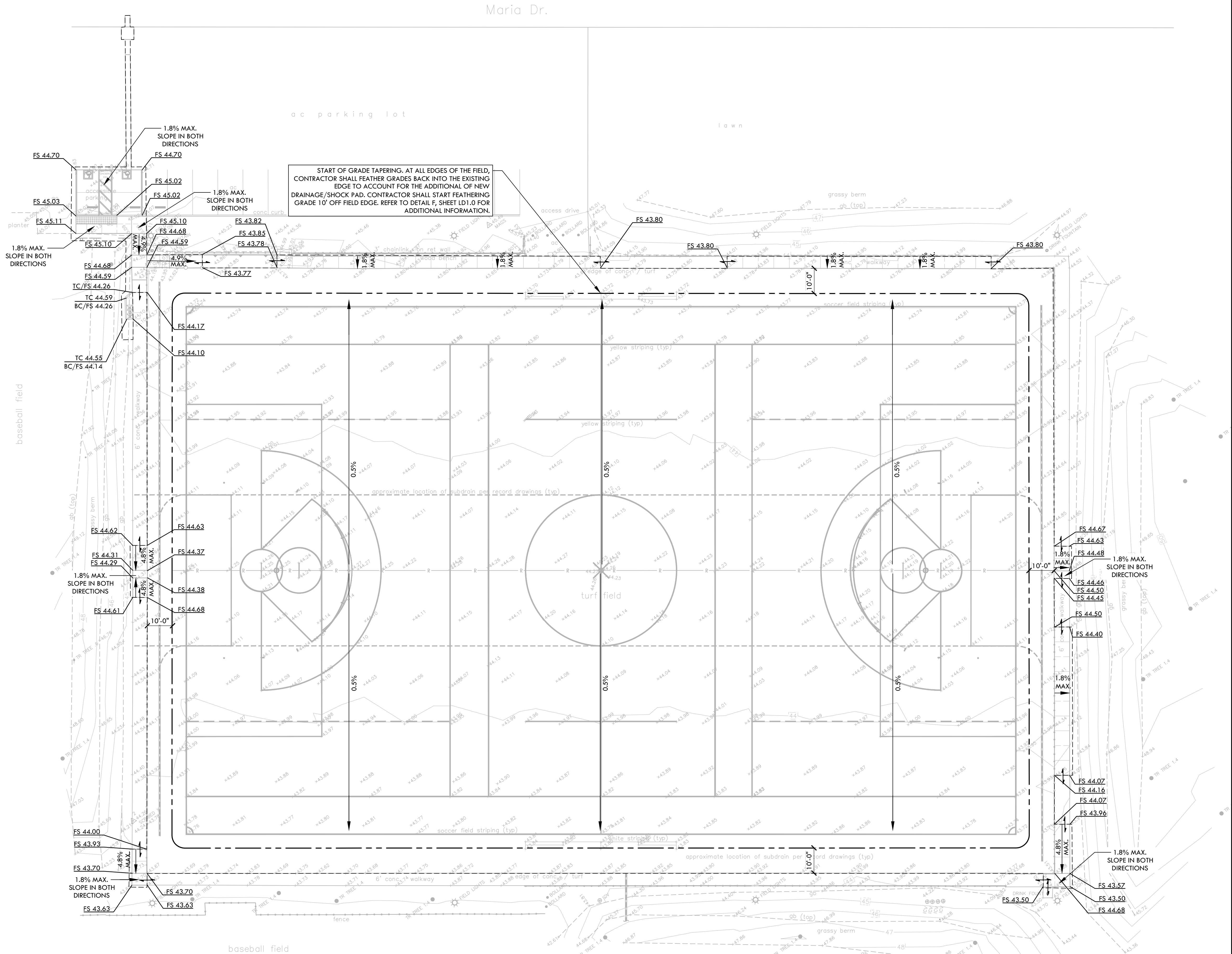
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DEMOLITION PLAN

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GRADING NOTES

- EXISTING GRADES ARE BASED ON INFORMATION PROVIDED BY: CHAUDHARY & ASSOCIATES, INC. . CONTRACTOR SHALL VERIFY EXISTING GRADES FOR ACCURACY PRIOR TO THE START OF GRADING, NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD CONFLICTS ARISE AND REDIRECT WORK TO AVOID DELAY.
- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDER GROUND SERVICE ALERT (USA) AT (800) 227-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT.
- PROPOSED GRADES SHALL MEET EXISTING GRADES WITH A SMOOTH AND CONTINUOUS TRANSITION SO AS TO AVOID TRAPPING WATER. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IF PUDDLING IS SUSPECTED AND REDIRECT WORK SO AS TO AVOID DELAY WHILE AWAITING RESPONSE.
- ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT.

GRADING LEGEND

SYM	DESCRIPTION	DETAIL NUMBER	SHEET NUMBER
	LIMIT OF TAPER	F	LD1.0
	LIMIT OF GRADING		
	EXISTING RIDGE LINE		
	PROPOSED FINISH SURFACE ELEVATION OF HARDSCAPE		
	PROPOSED TOP OF CURB ELEVATION		
	PROPOSED BOTTOM OF CURB ELEVATION		
	SLOPE VALUE AND DIRECTION		
	CONFORM TO EXISTING GRADE		
	EXISTING CONTOUR		
	EXISTING ELEVATION		



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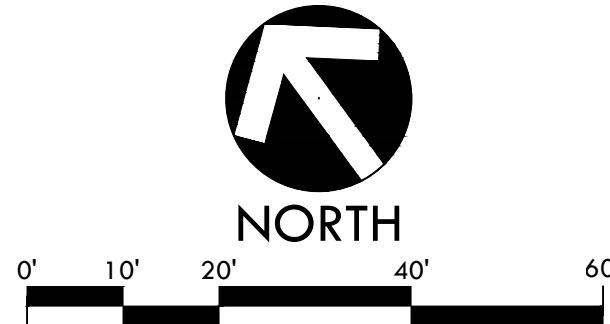
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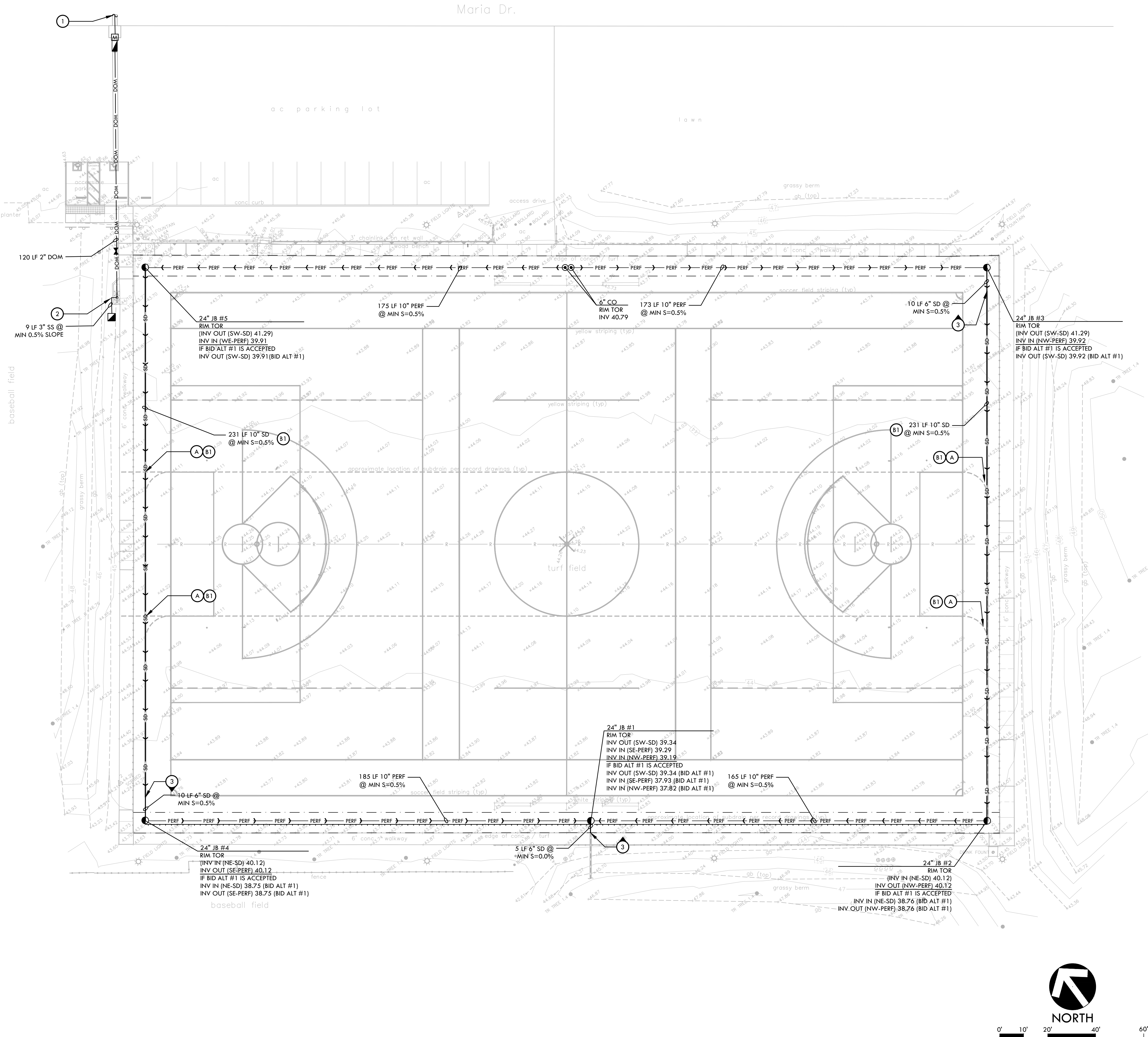
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DRAINAGE NOTES

- THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES, AND SERVICES SHOWN IN THE CONTRACT DOCUMENTS SHALL BE DEEMED TO BE APPROXIMATIONS ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT UNDER-GROUND SERVICE ALERT (USA) AT (800) 227-2600 PRIOR TO ANY DEMOLITION OR EXCAVATION. UPON COMPLETION OF USA MARKING OPERATIONS, CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS. THIS SET SHALL BE KEPT ON-SITE FOR REFERENCE FOR DURATION OF CONTRACT.
- ALL EXISTING DRAINAGE STRUCTURES, BOXES, UTILITY VAULTS ETC. TO REMAIN, SHALL BE BROUGHT TO FINAL FINISH GRADE PRIOR TO FINAL SURFACE TREATMENT.
- THE CONTRACTOR IS TO PROTECT DRAINAGE SYSTEM FROM DEBRIS, INCLUDING SOIL, ROCK MATERIAL, AND TRASH FROM ENTERING THE PIPE DURING CONSTRUCTION. CONTRACTOR SHALL AVOID PLACING CONSTRUCTION VEHICLES OVER INSTALLED DRAINAGE TRENCHES TO PREVENT CRUSHING OF PIPE.
- COORDINATE ALL SLEEVING AND UTILITY LOCATIONS AS SHOWN ON THE PLANS AND DETAILS CONTAINED WITHIN THESE CONTRACT DOCUMENTS.
- THE CONTRACTOR IS TO ENSURE THAT ALL REMAINING ACTIVE AND NEW DRAINAGE AND UTILITY LINES ARE PROTECTED AND UNDAMAGED FROM TRENCHING AND FOOTING EXCAVATIONS FOR NEW FOOTINGS, PARTICULARLY FOR NEW FENCING AND WALLS.
- ALL ABANDONED STORM LINES SHALL REMAIN IN PLACE UNLESS IN CONFLICT WITH PROPOSED DRAINAGE, UTILITY, OR SUBGRADING OPERATIONS, IN WHICH CASE ABANDONED PIPE IN CONFLICT SHALL BE REMOVED. REMAINING ABANDONED STORM PIPE SHALL BE SEALED WITH APPROPRIATELY SIZED CONCRETE CAP (3 SACK MIX) 6" ENVELOPE OUTSIDE AND INSIDE DIAMETER OF PIPE.
- PRIOR TO ALL DRAINAGE AND UTILITY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL POTENTIAL DRAINAGE CONNECTIONS AND EXISTING UTILITY BY POT-HOLING. IN ADDITION, ALL DOWNSTREAM CONNECTIONS TO EXISTING STRUCTURES SHALL BE THE START OF THESE OPERATIONS, AND GRADES SHALL BE VERIFIED.

DRAINAGE LEGEND

SYM	DESCRIPTION	DETAIL NUMBER	SHEET NUMBER
●	JUNCTION BOX (JB), SIZE PER PLAN	B	UD1.0
⊙	CLEANOUT IN SYNTHETIC TURF (CO)	C	UD1.0
PERF →	PERFORATED CHDPE SUBDRAIN LINE (PERF)	A	UD1.0
→	PERFORATED DRAINAGE TRENCH	A	UD1.0
SD →	SOLID WALL STORM DRAIN (SD)	H	UD1.0
■	DRY WELL	I	UD1.0
⋈	BALL VALVE	J	UD1.0
SS →	SANITARY SEWER LINE (SS)	H	UD1.0
DOM →	DOMESTIC WATER LINE (DOM)	L	UD1.0
◼	BACKFLOW PREVENTER. BACKFLOW SHALL BE 2" WILKINS 975XL BACKFLOW WITH STRONG BOX 58BC-45CR ENCLOSURE	N	UD1.0
M	NEW WATER METER	M	UD1.0
1	CONTRACTOR SHALL TIE IN NEW DOMESTIC WATER LINE INTO EXISTING MAINLINE IN MARIA DRIVE. CONTRACTOR SHALL POT-HOLE TO VERIFY ON SITE LOCATION OF EXISTING WATER LINE. CONTRACTOR SHALL REFER TO THE CITY OF PETALUMA WATER STANDARDS FOR MAINLINE CONNECTION PROCEDURES.		
2	CONTRACTOR SHALL TIE IN DOMESTIC WATER AND SANITARY SEWER LINE INTO DRINKING FOUNTAIN		
3	CONTRACTOR TO CONNECT NEW SD LINE TO EXISTING 6" SD LINE AT LOCATION SHOWN.		
INV (INV)	INVERT EXISTING INVERT		
RIM	RIM ELEVATION		
TOR	TOP OF ROCK ELEVATION		
LF	LINEAR FEET		
S=0.5%	SLOPE		
MIN.	MINIMUM		
N, S, W, EA,	NORTH, SOUTH, WEST, EAST		
ROOT BARRIER (360 LF)		A	UD1.0

BID ALTERNATES

BID ALTERNATE #1 (ADD ALTERNATE) - REPLACEMENT OF EXISTING PERIMETER STORM DRAIN LINES WITHIN EXISTING FIELD IF BID ALTERNATE #1 IS ACCEPTED, CONTRACTOR SHALL INSTALL NEW 10" STORM DRAIN LINE AND ADJUST INVERTS AS SHOWN ON THIS PLAN.			
SYM	DESCRIPTION	DETAIL NUMBER	SHEET NUMBER
SD →	SOLID WALL STORM DRAIN (SD)	H	UD1.0
A	IF BID ALT #1 IS ACCEPTED, CONTRACTOR SHALL TIE EXISTING 4" STORM DRAIN LINE INTO NEW 10" STORM DRAIN LINE.		

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DRAINAGE AND UTILITIES PLAN

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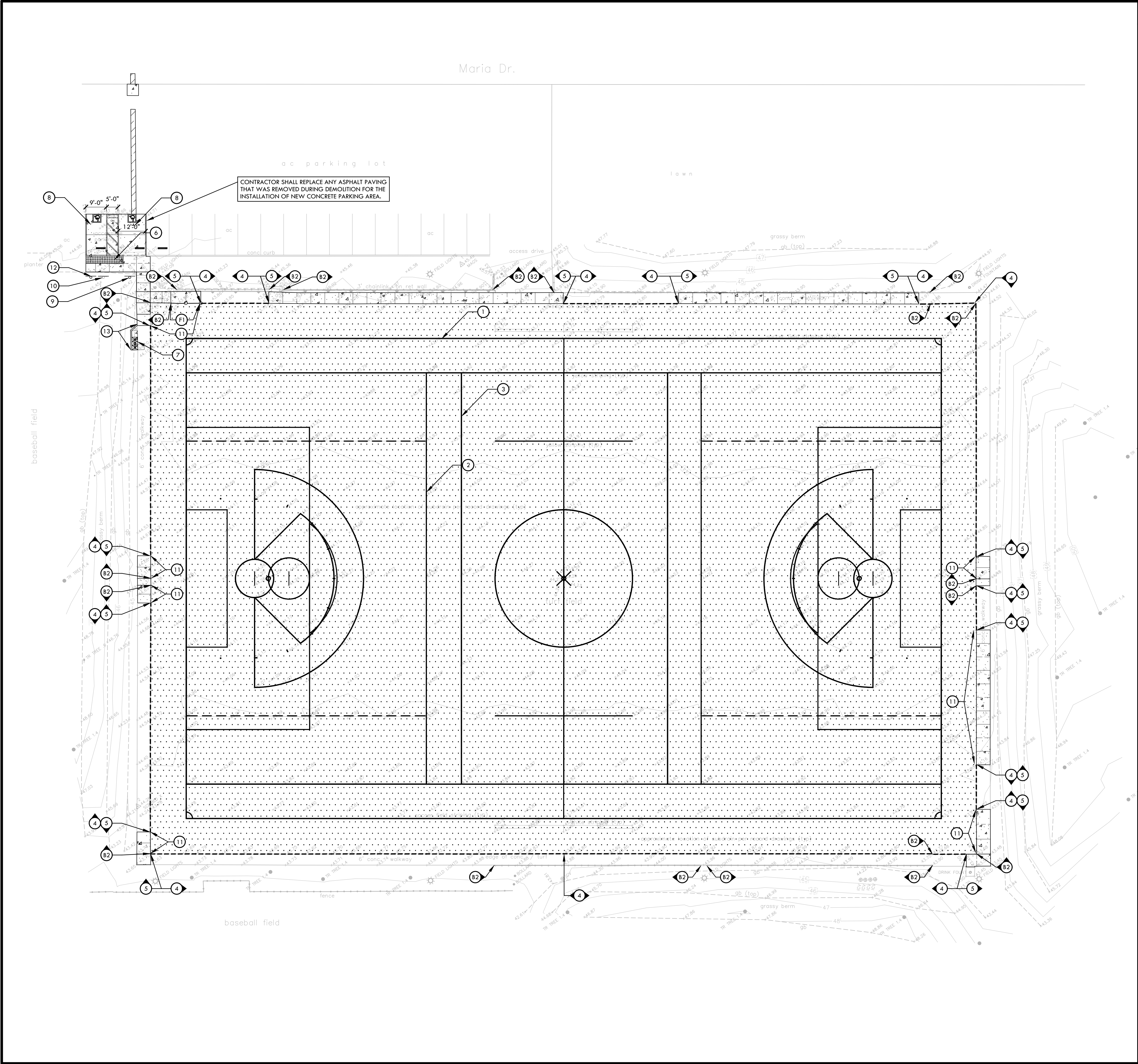
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DRAINAGE AND UTILITIES PLAN

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MATERIAL NOTES

1. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ELEMENTS INCLUDING UTILITY LOCATIONS AND REQUIRED SLEEVING PRIOR TO INSTALLATION. VERIFY CRITICAL DIMENSIONS, REFERENCE POINT LOCATIONS AND CONSTRUCTION CONDITIONS PRIOR TO INITIATING CONSTRUCTION. TEMPORARY BENCHMARKS OR REFERENCE POINTS SHALL BE SET BY THE CONTRACTOR AS NECESSARY. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY SHOULD DISCREPANCY ARISE AND REDIRECT WORK TO AVOID DELAYS.
2. THE INTERFACE OF ALL PROPOSED IMPROVEMENTS TO EXISTING SITE SHALL CONFORM AND BE SMOOTH AND UNIFORM.
3. ALL REINFORCING AND FORMS SHALL BE SECURED IN PLACE AND ACCEPTED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING ANY CONCRETE.
4. CONCRETE FINISHES SHALL BE AS NOTED. CONTRACTOR SHALL PROVIDE 4"x4" SAMPLES OF ALL SPECIFIED FINISHES OF CONCRETE USING THE SAME MATERIALS THAT WILL BE USED IN THE ACTUAL CONSTRUCTION FOR EACH TYPE SPECIFIED. SAMPLES SHALL BE PREPARED WELL ENOUGH IN ADVANCE OF SCHEDULED CONCRETE POUR TO ALLOW FOR REVIEW AND POSSIBLE RE-POURING OF UNACCEPTABLE SAMPLES. UNACCEPTABLE SAMPLES SHALL BE RE-PREPARED UNTIL ACCEPTED BY THE OWNER'S REPRESENTATIVE. ACCEPTED SAMPLES SHALL BE PROTECTED AND REMAIN ON SITE FOR REFERENCE UNTIL FINAL ACCEPTANCE.
5. CONTRACTOR SHALL PROVIDE AN ALLOWANCE FOR CONCRETE MOCKUPS PER SPECIFICATIONS SECTION 32 32 13.

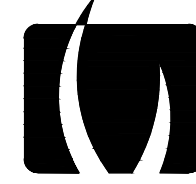
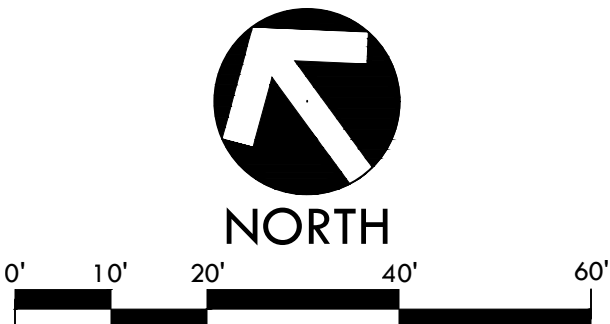
MATERIAL LEGEND

SYM	DESCRIPTION	DTL
(E)	SYNTHETIC TURF (OWNER FURNISHED, CONTRACTOR INSTALLED)	(E) UD1.0
(A)	CONCRETE PAVING. CONTRACTOR SHALL DOWEL ALL NEW CONCRETE INTO EXISTING CONCRETE AT 24" O.C. DOWELING INTO ADJACENT WALL SHALL BE 48" O.C.	(A) UD2.0
(H)	ASPHALT PAVING - VEHICULAR	(H) UD2.0
(B)	EXPANSION JOINT	(B) UD2.0
(G)	SCORE JOINT	(G) UD2.1
(F1)	3' TALL CHAIN LINK FENCE	(F1) UD2.1
(1)	70 X 110 YD SOCCER FIELD STRIPING (WHITE)	(A) UD2.1
(2)	BOYS LACROSSE FIELD STRIPING (YELLOW)	(B) UD2.1
(3)	GIRLS LACROSSE FIELD STRIPING (BLUE)	(C) UD2.1
(4)	SYNTHETIC TURF CONNECTION AT EXISTING EDGE/PAVING/CURB	(G) UD1.0
(5)	SYNTHETIC TURF CONNECTION AT NEW CONCRETE. NEW HEADER BOARD TO ALIGN AND BE FLUSH WITH EXISTING HEADER BOARD ON EACH SIDE.	(K) UD1.0
(6)	TRUNCATED DOMES	(E) UD2.0
(7)	DRINKING FOUNTAIN	(H) UD2.1
(8)	ACCESSIBLE PARKING STALLS	(D) UD2.0
(9)	ACCESSIBLE PARKING SIGN - VAN	(I) UD2.0
(10)	ACCESSIBLE PARKING SIGN ON EXISTING POST	(J) UD2.0
(11)	CONCRETE THICKENED EDGE	(K) UD2.0
(12)	PARKING TOW AWAY SIGN	(L) UD2.0
(13)	6" CURB	(G) UD2.0

BID ALTERNATES

- (B2) BID ALTERNATE #2 (ADD ALTERNATE) - REPLACEMENT OF EXISTING PERIMETER FENCING FABRIC. IF BID ALTERNATE #2 IS ACCEPTED, CONTRACTOR SHALL INSTALL NEW BLACK FENCE FABRIC. REFER TO SPECIFICATION SECTION 32 31 13 FOR ADDITIONAL INFORMATION.

SYM	DESCRIPTION
(B2)	NEW BLACK FENCE FABRIC



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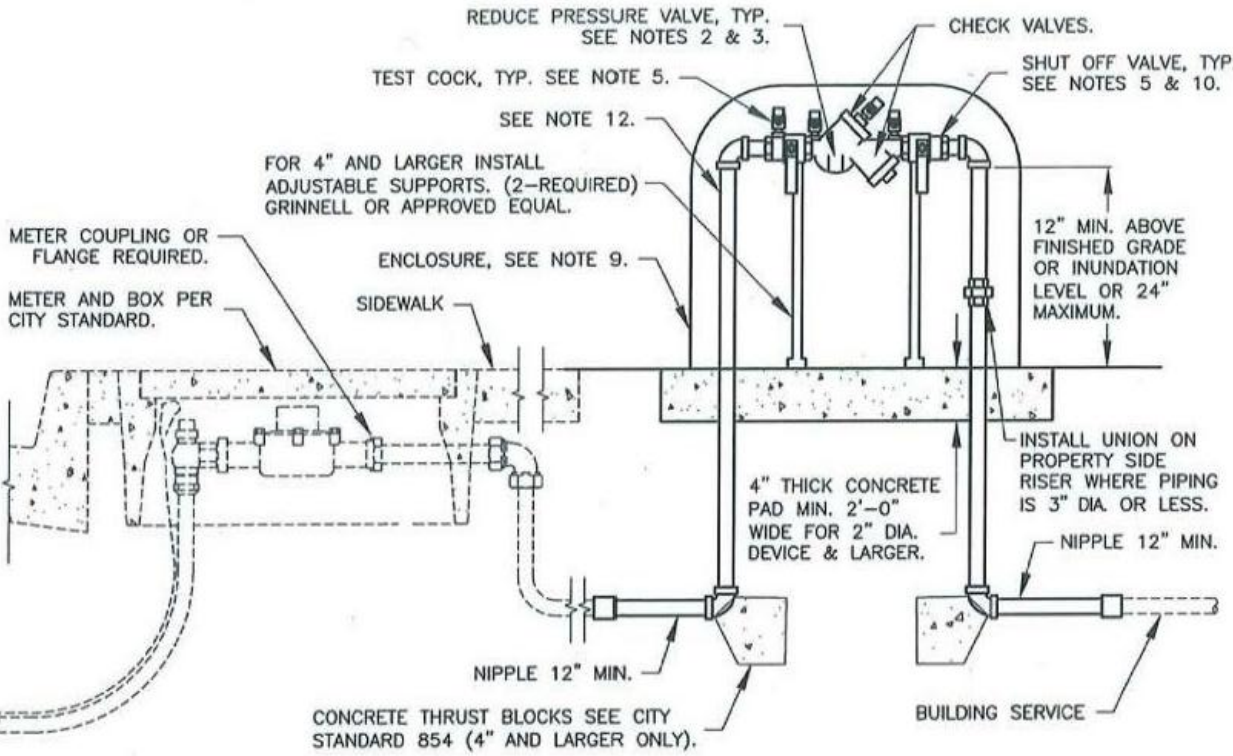
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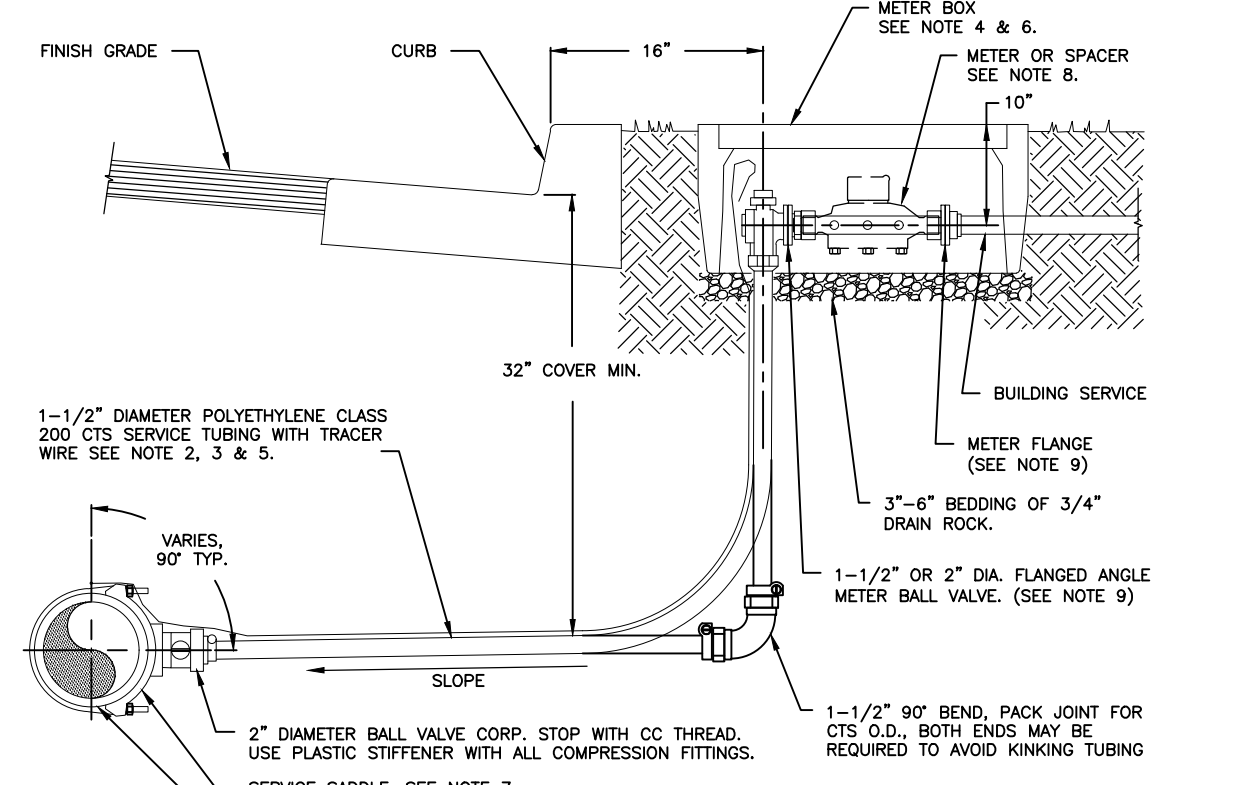
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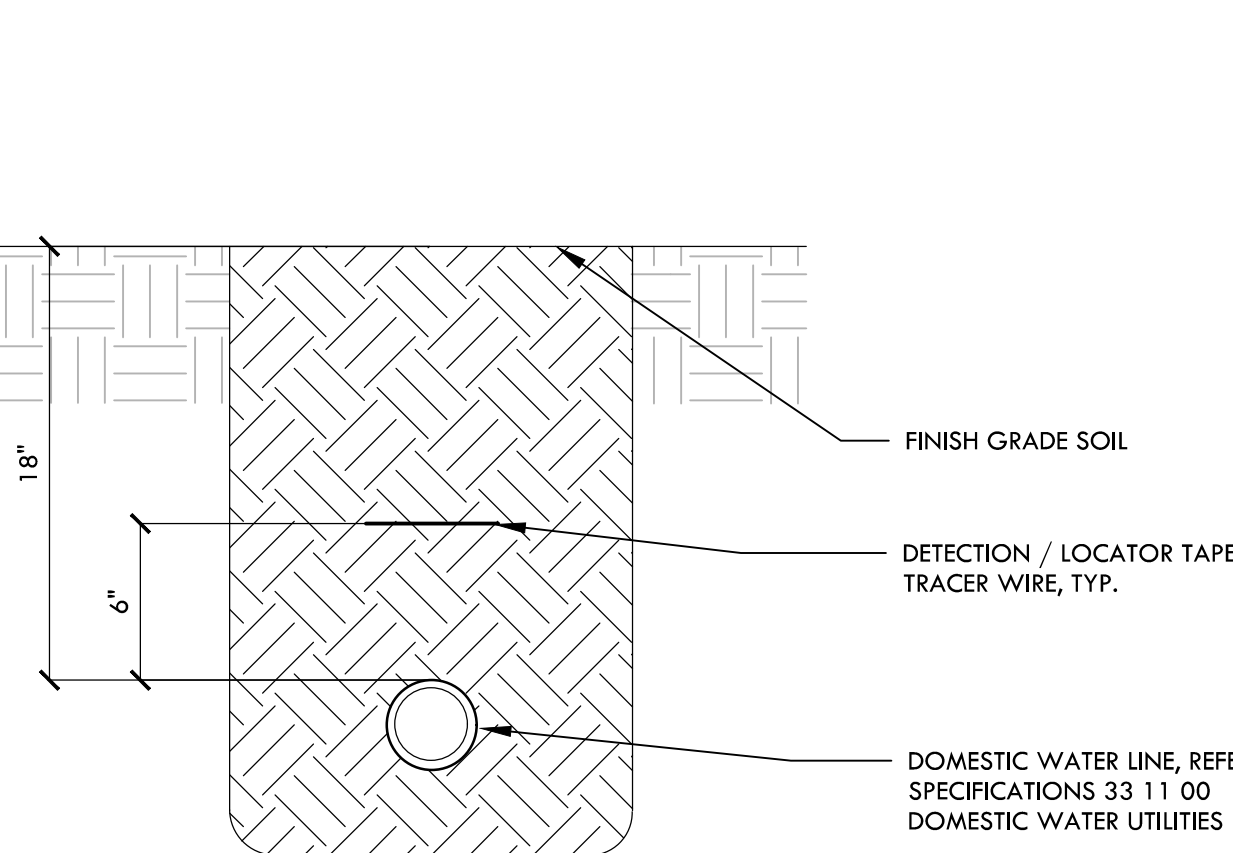
- NOTES:**
- SEE WATER SYSTEM DESIGN GUIDELINES.
 - REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE REQUIRED FOR ANY USE WHERE TOXIC MATERIALS ARE USED OR WHERE POSITIVE PROTECTION OF THE PUBLIC WATER SUPPLY IS REQUIRED. TYPICAL APPLICATIONS INCLUDE: ALL INDUSTRIAL AND IRRIGATION SERVICES, PARKS, HOSPITALS, MEDICAL AND DENTAL LABORATORIES, MORTUARIES, INDUSTRIAL PLANTS AND DRY CLEANERS OR AS DETERMINED BY PUBLIC WORKS & UTILITIES.
 - REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE INSTALLED ADJACENT TO AND ON THE PROPERTY SIDE OF SIDEWALK WHERE APPLICABLE. WHERE NO SIDEWALK EXISTS, THE REDUCED PRESSURE BACKFLOW ASSEMBLY SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE WATER METER LOCATION. THERE SHALL BE NO TEE OR BRANCH LINES BETWEEN THE WATER METER AND ASSEMBLY LOCATION. ANY CONFLICTS SHALL BE RESOLVED BY PUBLIC WORKS & UTILITIES.
 - APPROVED REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE AS SHOWN ON "LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES" (LATEST REVISION) BY THE STATE OF CALIFORNIA WATER RESOURCE CONTROL BOARD, DIVISION OF DRINKING WATER, INFORMATION FOR PUBLIC DRINKING WATER SYSTEMS.
 - ALL REDUCED PRESSURE BACKFLOW ASSEMBLIES SHALL BE PROVIDED WITH A MINIMUM OF FOUR (4) TEST COCKS, AND TWO (2) SHUT OFF VALVES.
 - THE PIPING FROM THE METER TO THE REDUCED PRESSURE BACKFLOW ASSEMBLY AND THE REDUCED PRESSURE BACKFLOW ASSEMBLY ITSELF, MUST BE THE SAME SIZE AS THE METER UNLESS OTHERWISE APPROVED BY PUBLIC WORKS & UTILITIES.
 - FOR 2" PIPE DIAMETER OR LESS, A 12" LONG MINIMUM BRASS NIPPLE OR TYPE "L" HARD TEMPER COPPER PIPE IS REQUIRED AT BOTH UNDERGROUND ELBOWS.
 - A THERMAL EXPANSION TANK WHEN USED ON A DOMESTIC SERVICE SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S RECOMMENDATION ON THE COLD WATER SUPPLY LINE TO THE WATER HEATER.
 - AN ENCLOSURE IS RECOMMENDED FOR PROTECTION FROM FREEZING AND VANDALISM.
 - SHUT OFF VALVES:
 - 2" AND LESS SHALL BE BALL VALVE
 - 2 1/2" AND GREATER SHALL BE RESILIENT SEAT GATE VALVE.
 - ALL PIPING, VALVES, NIPPLES, ETC. SHALL BE THREADED BRASS.
 - 2" AND LESS SHALL BE TYPE "L" HARD-TEMPER COPPER.
 - 4" AND GREATER SHALL BE FLANGED DUCTILE IRON.
 12. PVC PIPE OR FITTINGS SHALL NOT BE USED.
 13. IF PROPOSING TO INSTALL THIS DEVICE IN A FLOOD ZONE, CONTACT PUBLIC WORKS & UTILITIES FOR APPROVED WATER INFORMATION.
 14. PVC PIPE OR FITTINGS SHALL NOT BE USED.

ABOVE GROUND REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY



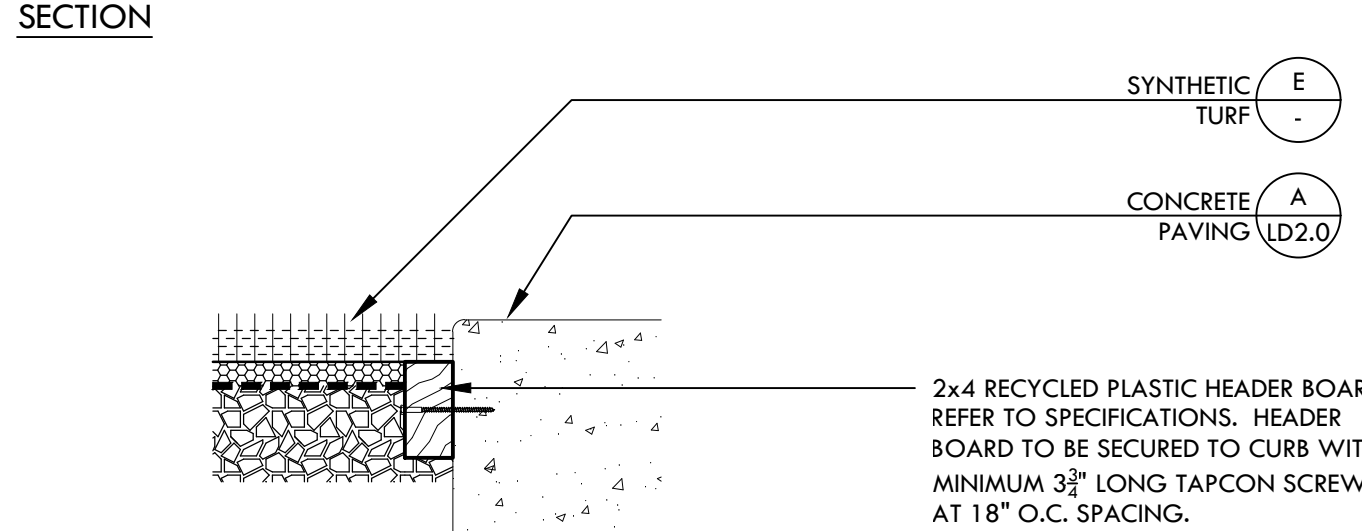
- METER SETTING ASSEMBLY PARTS LIST**
- | METER SIZE | VALVES | SPACER BAR SIZE (SEE NOTE 9.) |
|------------|-----------------------------|---|
| 1-1/2" | SEE APPROVED MATERIALS LIST | 1-1/2" DIA X 13-1/4" L SCH. 80 PVC PIPE |
| 2" | SEE APPROVED MATERIALS LIST | 2" DIA X 17-1/4" LONG SCH. 80 PVC PIPE |
- NOTES:**
- SEE WATER SYSTEM DESIGN GUIDELINES.
 - THE SERVICE SHALL NOT BE SIZED SMALLER THAN THE METER. IF FIRE SPRINKLERS ARE REQUIRED SEE CITY STANDARD DETAIL 863.01 & 863.02.
 - USE INSULATED NO. 12 THIN WIRE.
 - ALL WIRE CONNECTIONS SHALL BE MADE WITH MECHANICAL WIRE CONNECTORS WRAPPED WITH ELECTRICAL TAPE.
 - END OF TRACER WIRE TO BE EXPOSED AT MINIMUM INSIDE OF METER BOX.
 - METER BOXES SHALL BE LOCATED OUT OF TRAFFIC LOADING AREAS WHERE POSSIBLE. TRAFFIC LOADING BOX & LID TO BE INSTALLED IN ALL LOCATIONS WHERE VEHICULAR TRAFFIC MAY OCCUR. THE STEEL LID SHALL BE SET FLUSH WITH FINISHED SURFACE. BOX PIPE KNOCKOUTS TO BE GROUTED TO PREVENT DIRT INTRUSION WHERE REQUIRED.
 - TRENCH BACKFILL REQUIREMENTS - SEE CITY STANDARD DETAIL 852.01.
 - METER BOX AND COVER SHALL BE B-36 - SEE APPROVED MATERIALS LIST.
 - TAPPING SERVICE SADDLES - SEE APPROVED MATERIALS LIST.
 - FOR NEW SERVICES CONTRACTOR SHALL INSTALL SCHEDULE 80 PVC SPACER PIPE WITH 1/2" DIAMETER HOLES DRILLED THRU PIPE AT 2" ON CENTER, THRU BOTH ENDS. CITY PUBLIC WORKS AND UTILITIES PERSONNEL TO REMOVE SPACER PIPE AND INSTALL METER. SEE METER SETTING ASSEMBLY PARTS LIST.
 - INSTALL BRASS METER FLANGE (WITH OBLONG BOLT HOLES AND BUSHING TO FIT 1-1/2" METERS). SET 2" MIN. FROM SIDE OF BOX. USE 316 SS HARDWARE.
 - ALL FLANGE BOLTS FOR METERS TO HAVE THREADS FACING AWAY FROM METER. INCLUDES 1-1/2" AND 2" METERS.

2" WATER SERVICE FOR 1-1/2" OR 2" METER



DOMESTIC WATER TRENCHING

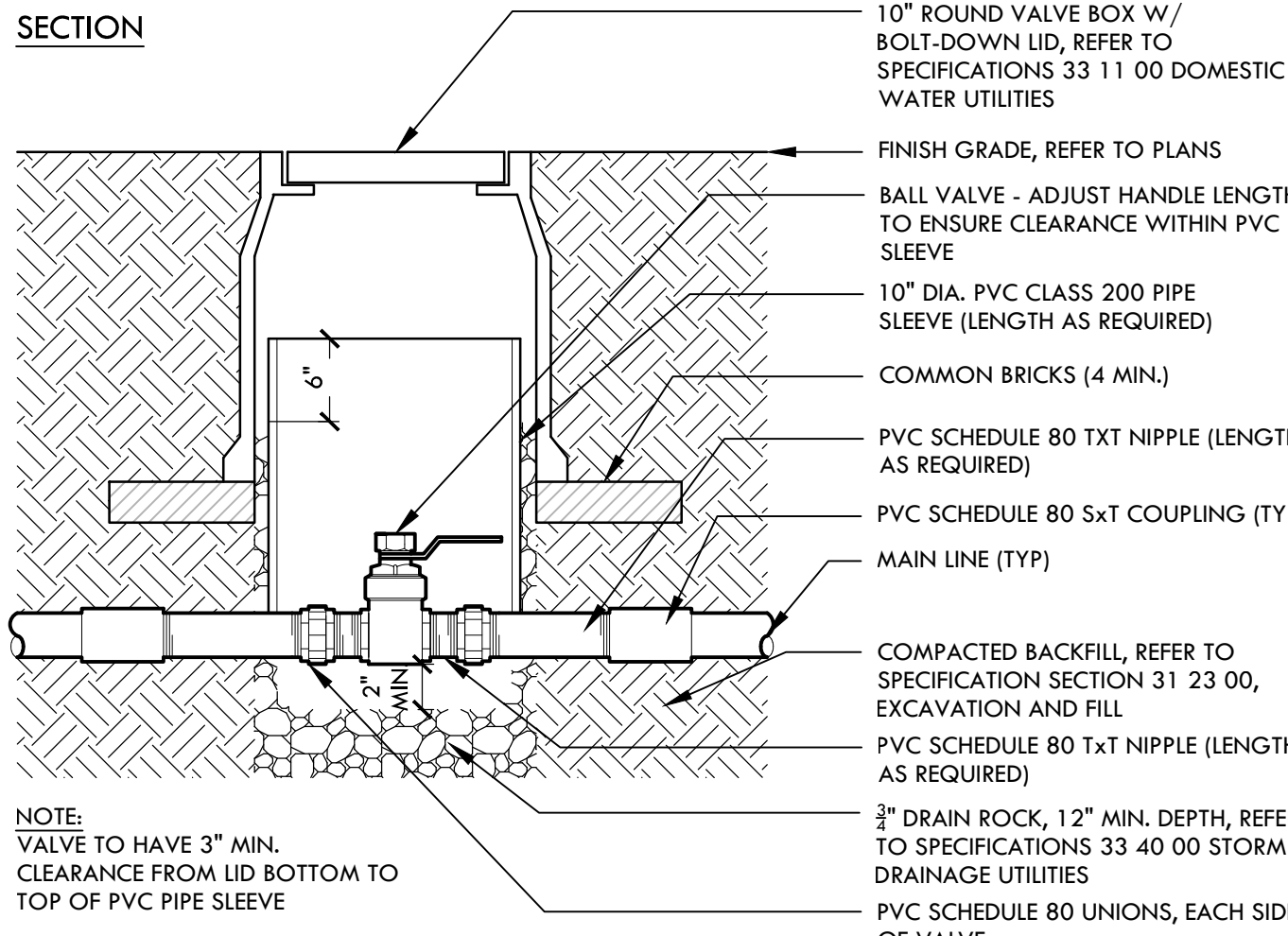
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PLOT DATE: 02-21-23 PLOTTED BY: station5



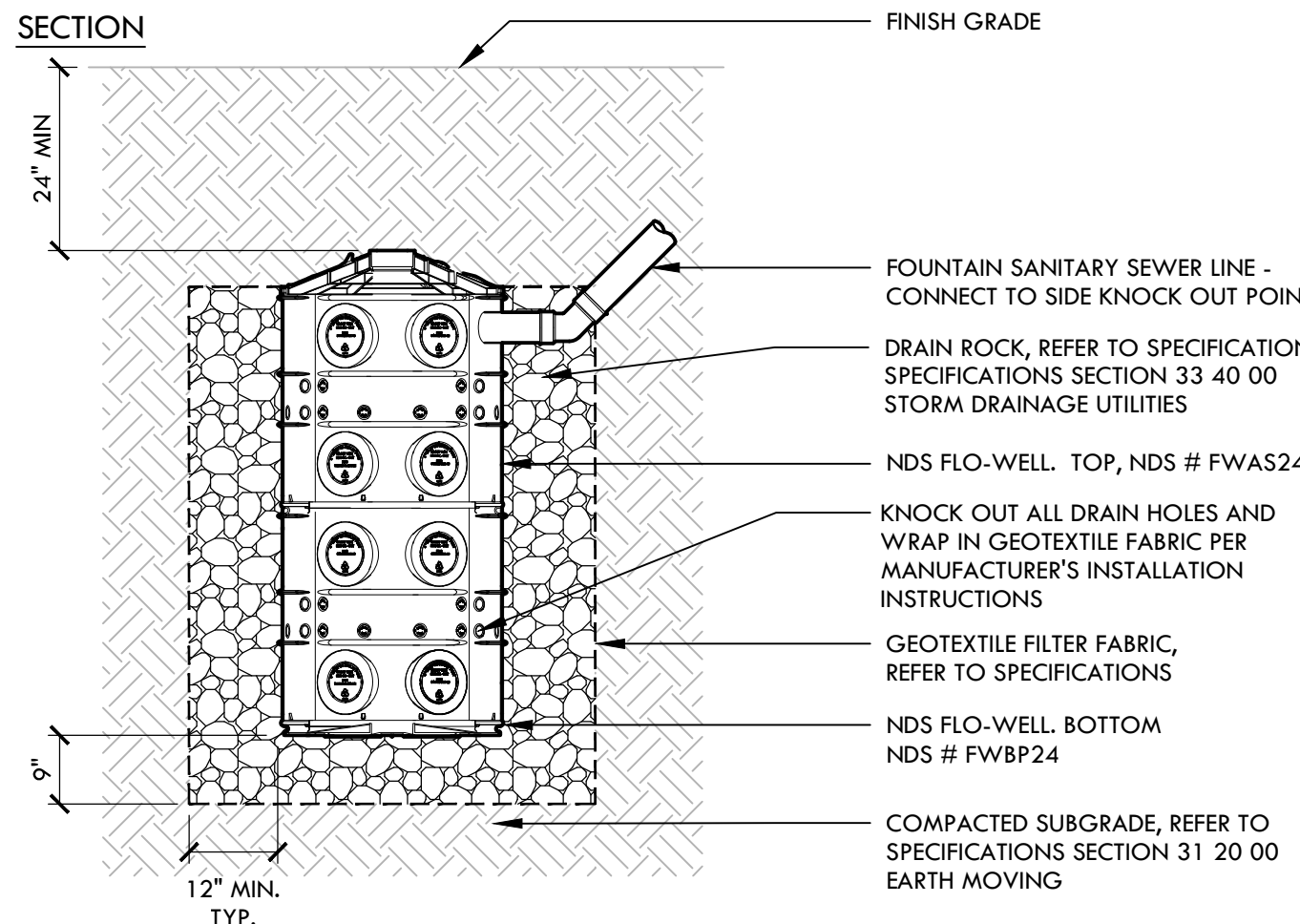
SYNTHETIC TURF CONNECTION AT NEW CONCRETE

- NOTES:**
- 2x4 RECYCLED PLASTIC HEADER BOARD, REFER TO SPECIFICATIONS. HEADER BOARD TO BE SECURED TO CURB WITH MINIMUM 3" LONG TAPCON SCREW AT 18" O.C. SPACING.

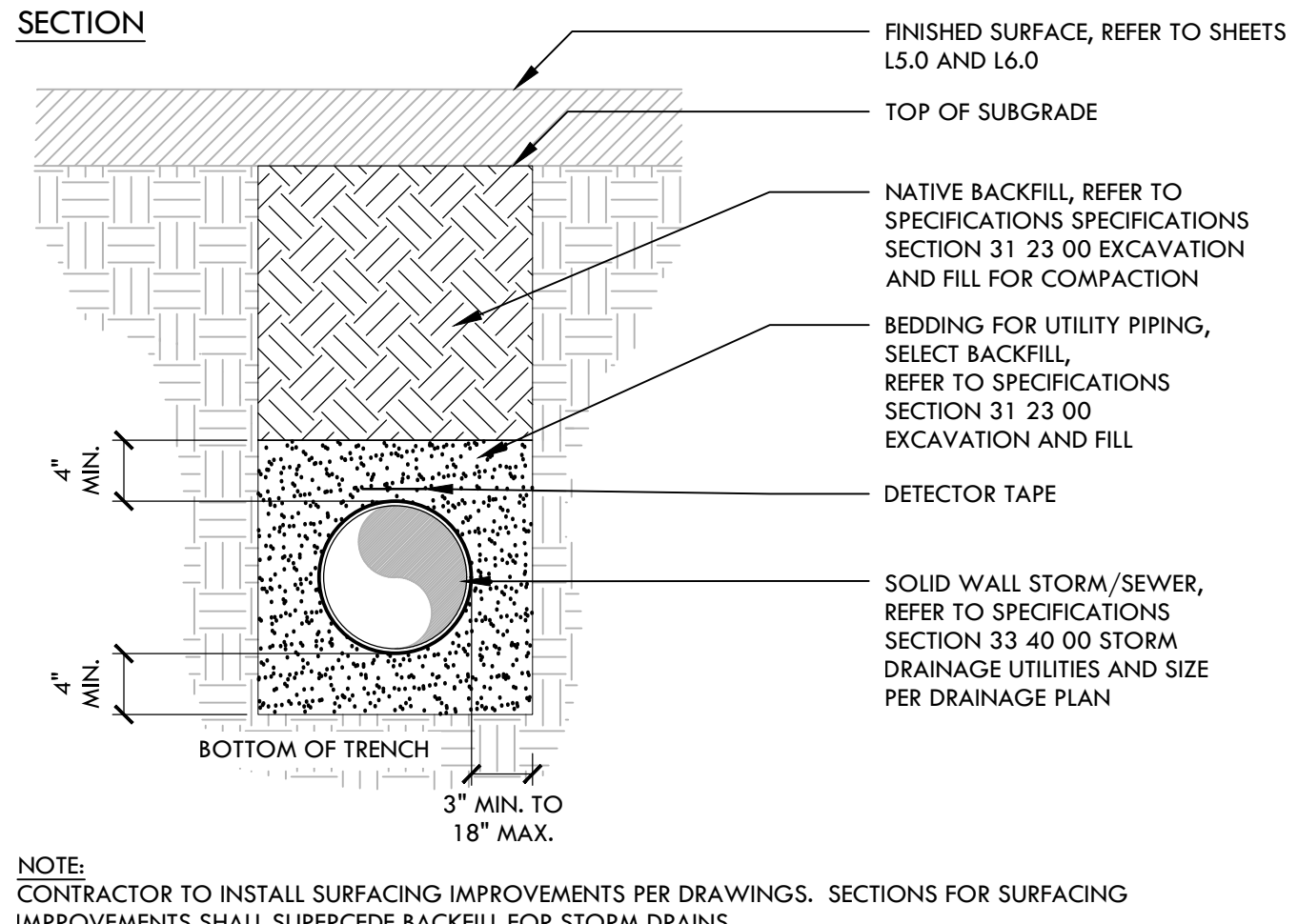
SYNTHETIC TURF EDGE AT EXISTING EDGEBAND/PAVING



BALL VALVE

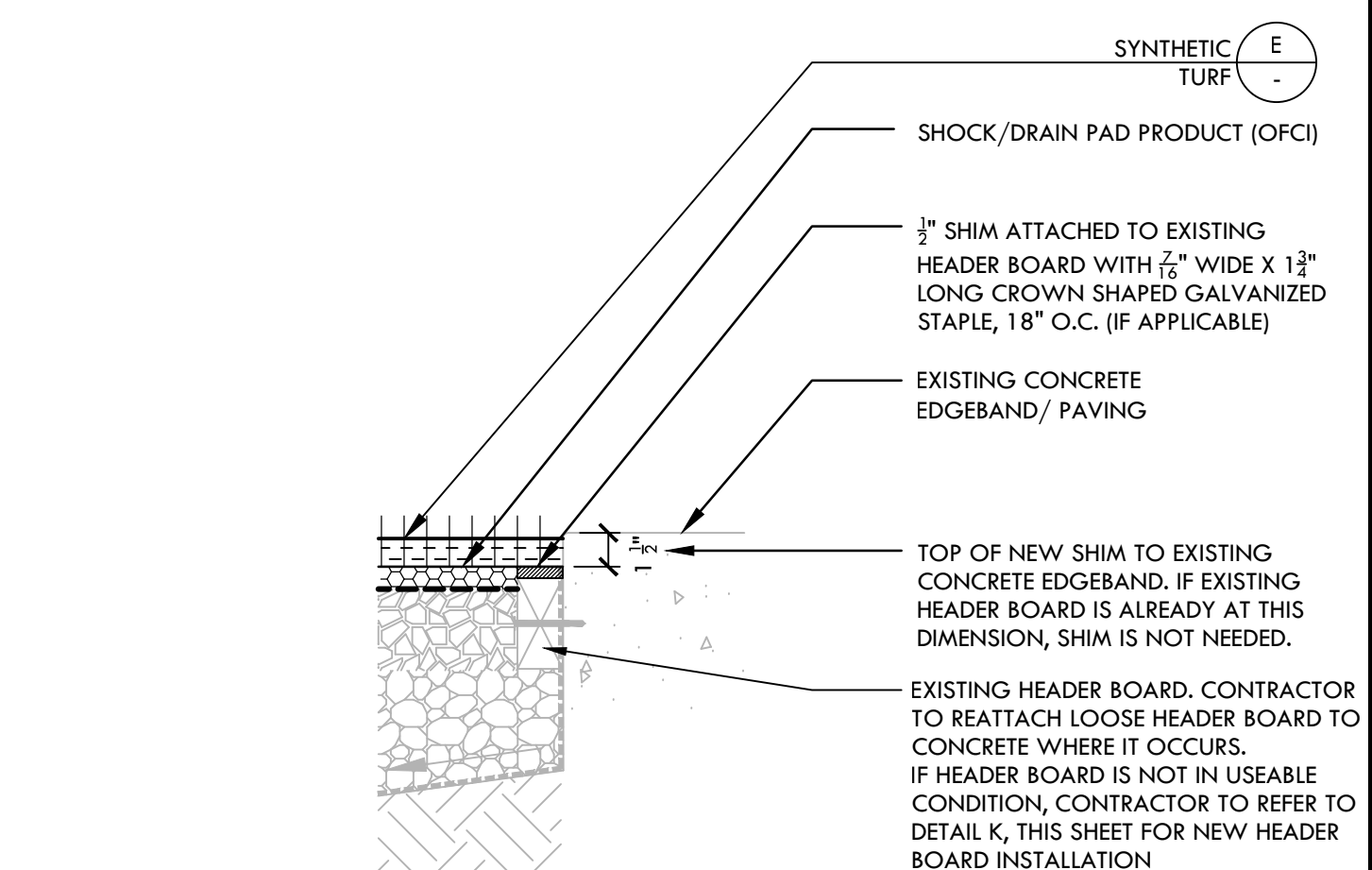


DRYWELL

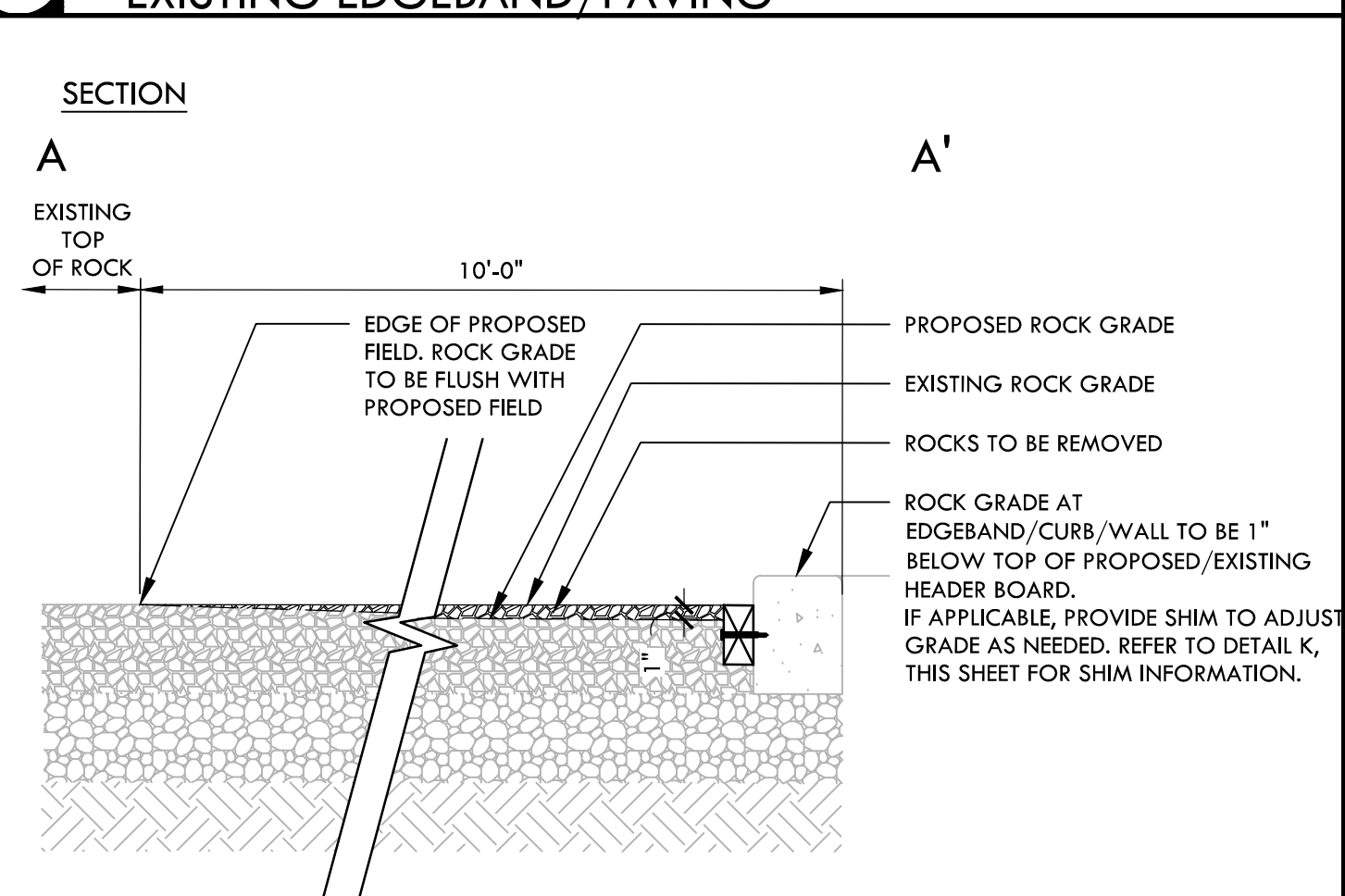


TRENCH BACKFILL - SOLID WALL STORM/ SEWER

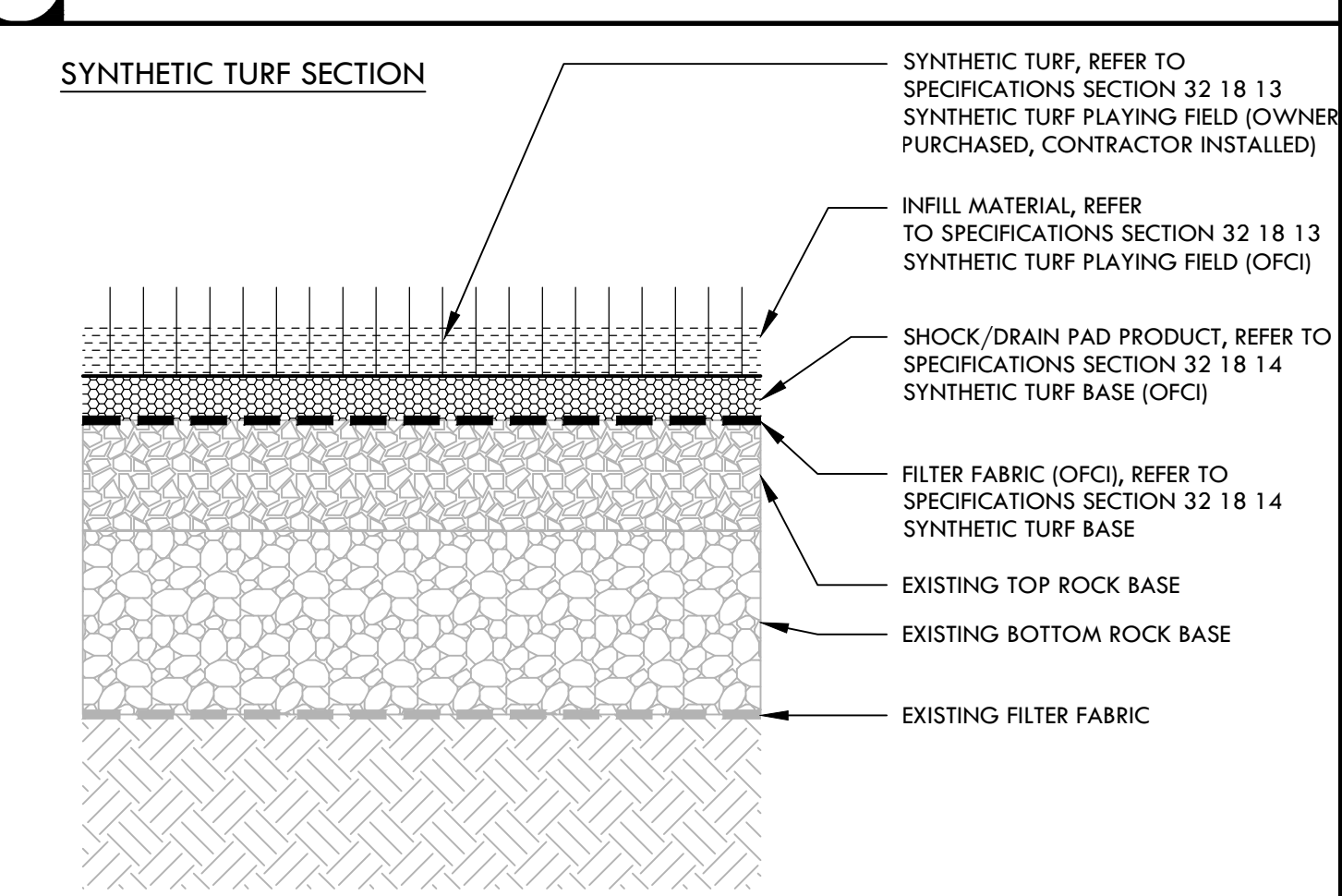
CONTRACTOR TO INSTALL SURFACING IMPROVEMENTS PER DRAWINGS. SECTIONS FOR SURFACING IMPROVEMENTS SHALL SUPERCEDE BACKFILL FOR STORM DRAINS.



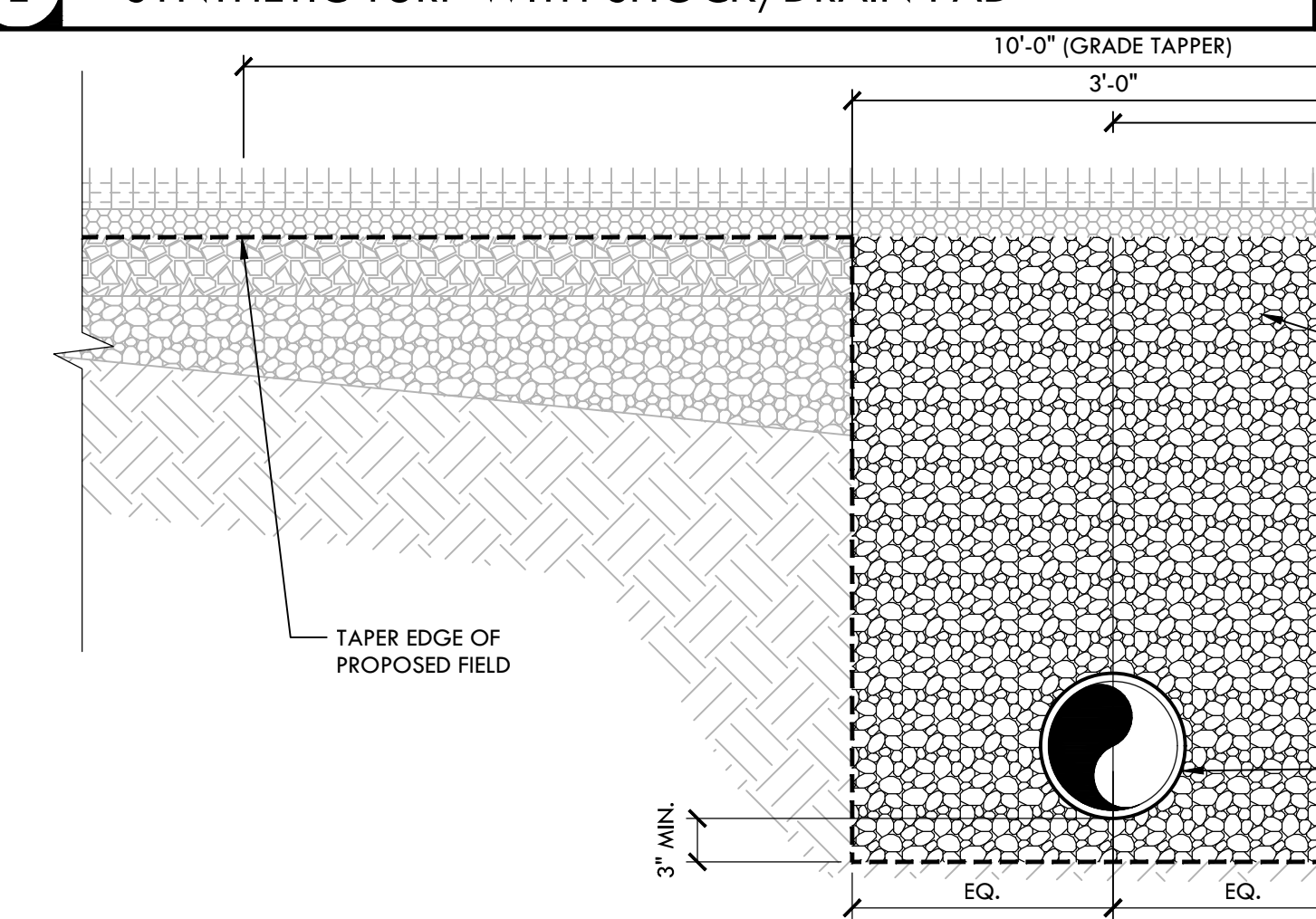
SYNTHETIC TURF EDGE AT EXISTING EDGEBAND/PAVING



ROCK LAYER DEMOLITION - SECTION A-A'

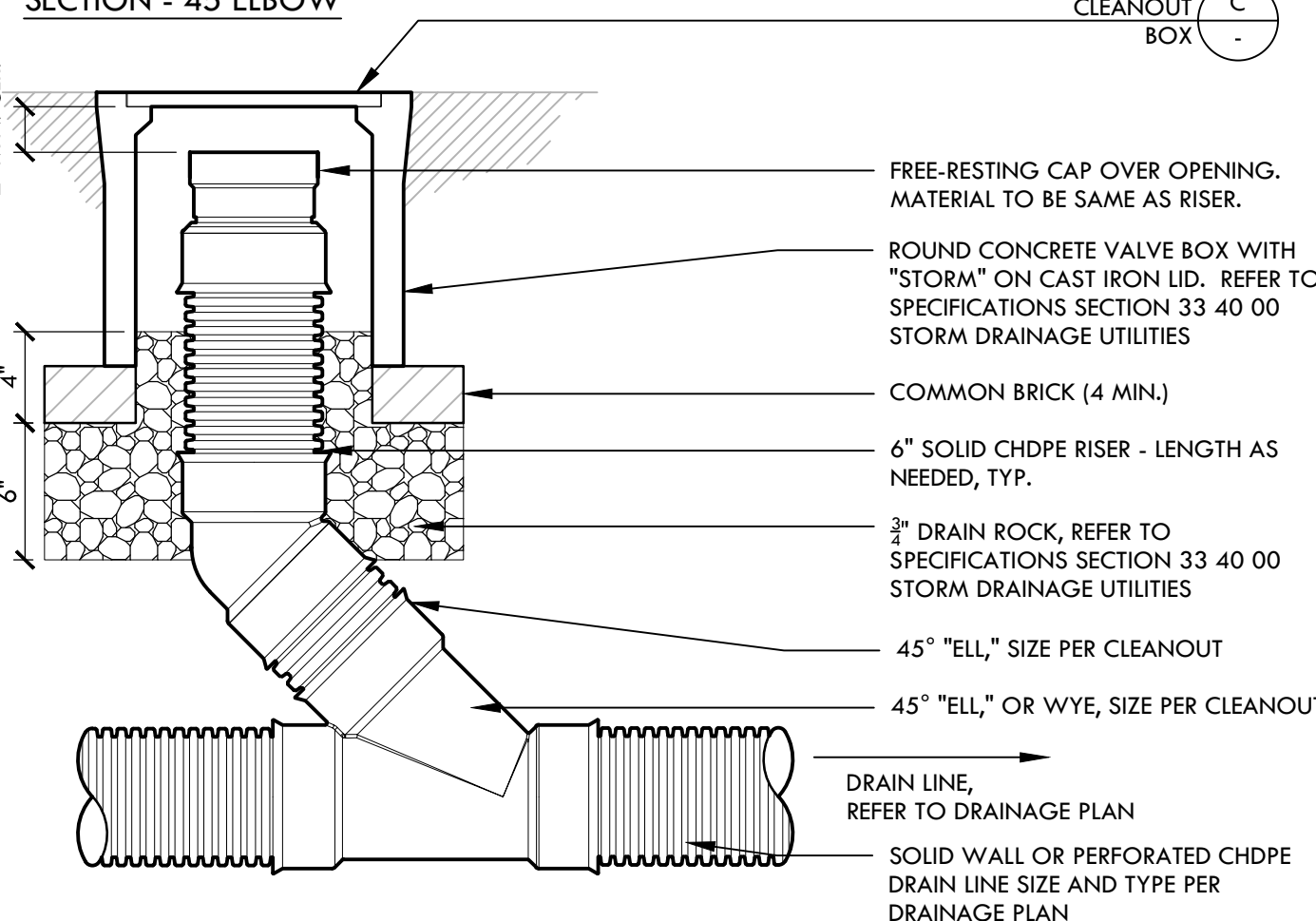


SYNTHETIC TURF WITH SHOCK/ DRAIN PAD

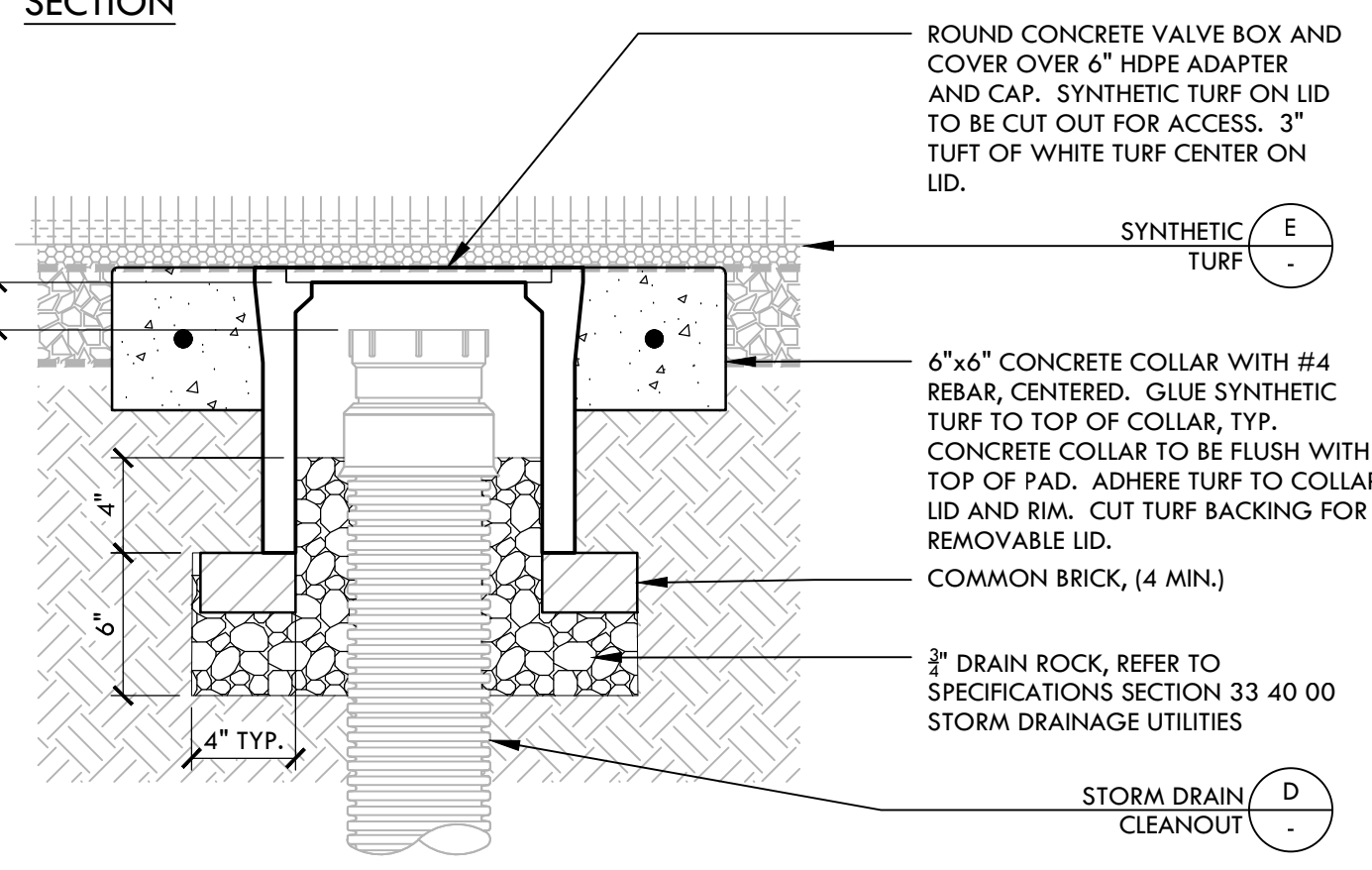


SUBDRAIN TRENCH AT FIELD EDGE

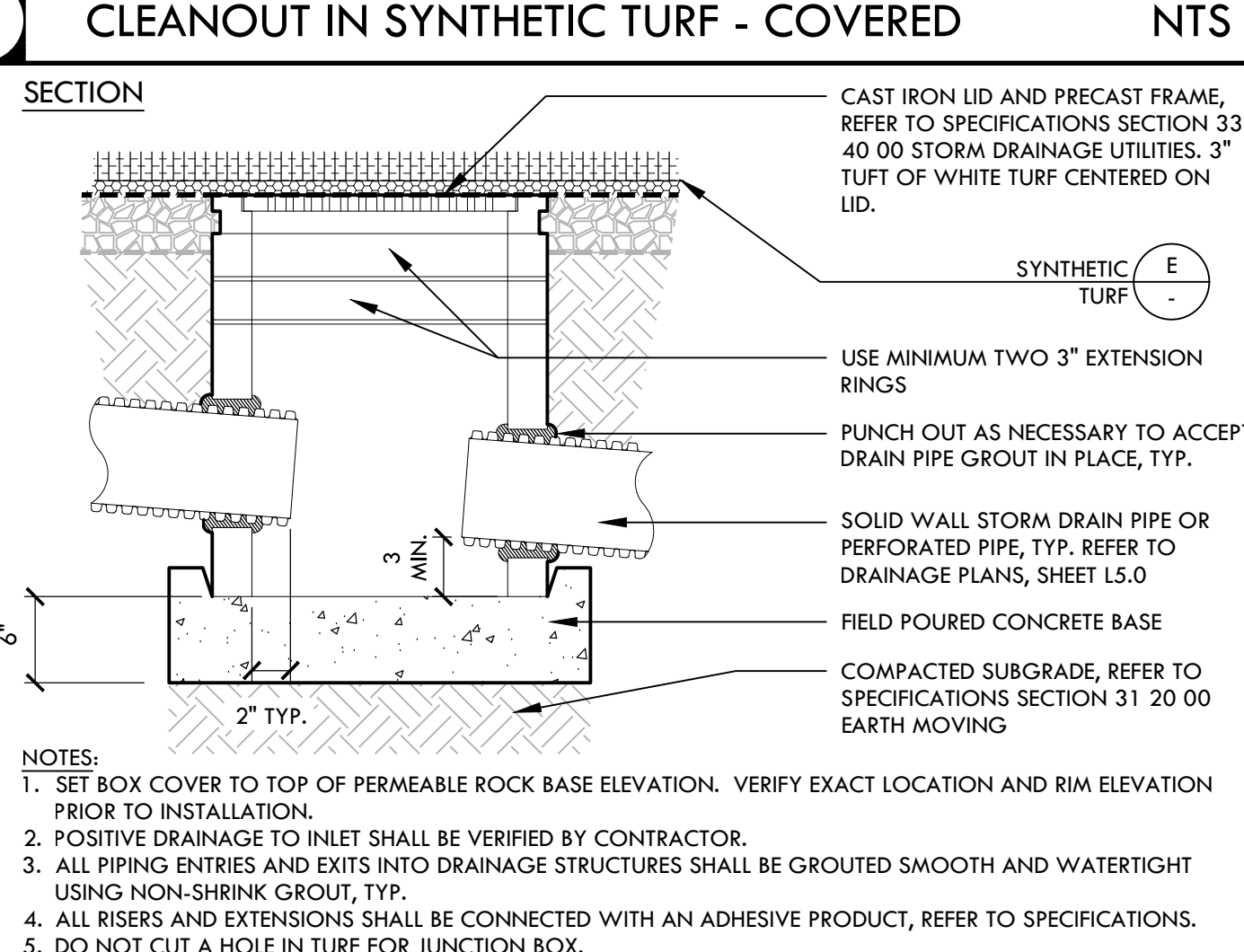
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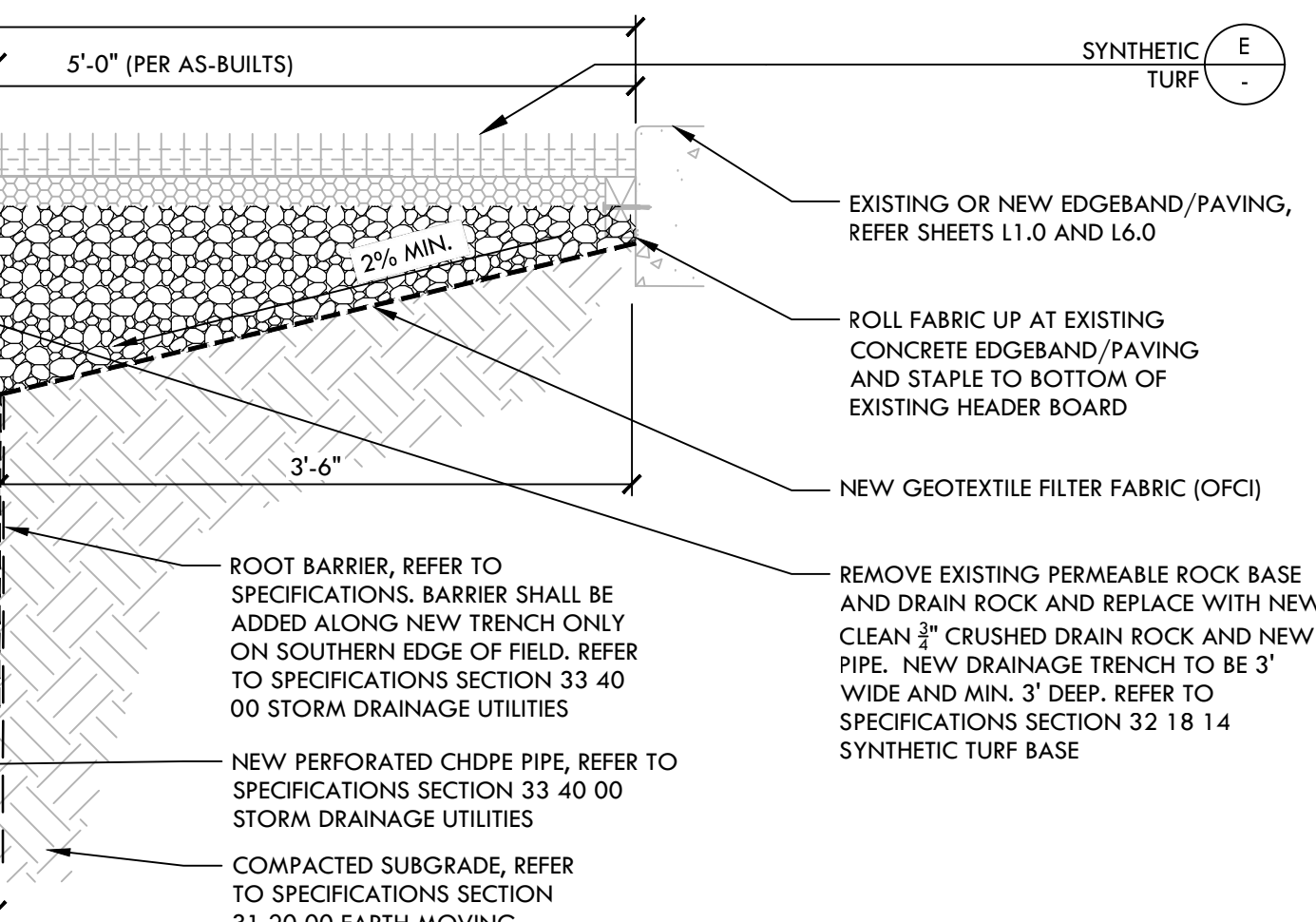
STORM DRAIN CLEANOUT



CLEANOUT IN SYNTHETIC TURF - COVERED



JUNCTION BOX - SYNTHETIC TURF



DOMESTIC WATER TRENCHING

CONTRACTOR TO INSTALL SURFACING IMPROVEMENTS PER DRAWINGS. SECTIONS FOR SURFACING IMPROVEMENTS SHALL SUPERCEDE BACKFILL FOR STORM DRAINS.

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DANIEL J. VERDE
C-56494
EXPIRATION DATE: June 30, 2023
STATE OF CALIFORNIA

CONSULTANT

PROJECT NAME

PROJECT ADDRESS

SHEET TITLE

CONSTRUCTION DETAILS

PROJECT NAME

PROJECT ADDRESS

SHEET TITLE

CONSTRUCTION DETAILS

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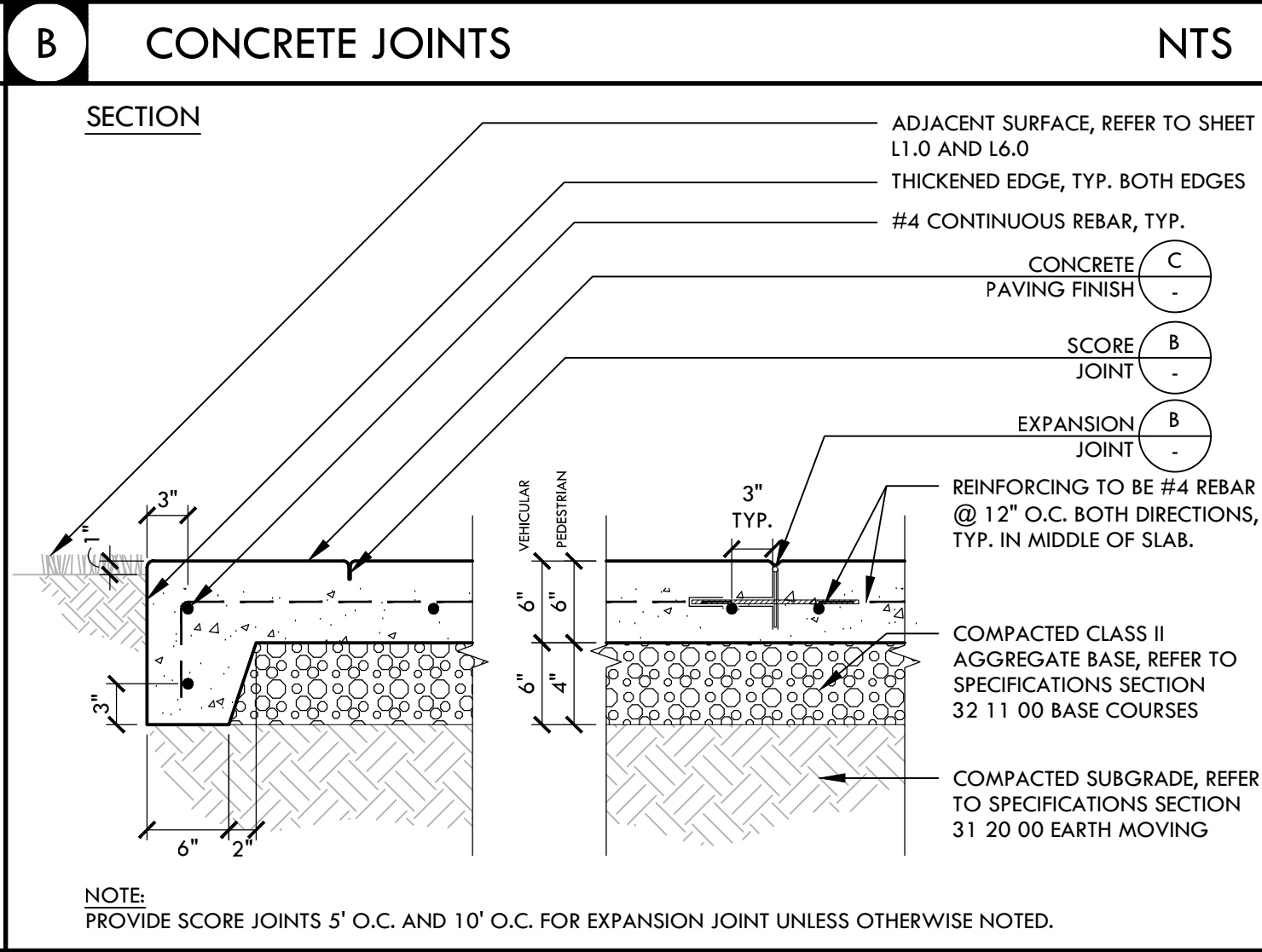
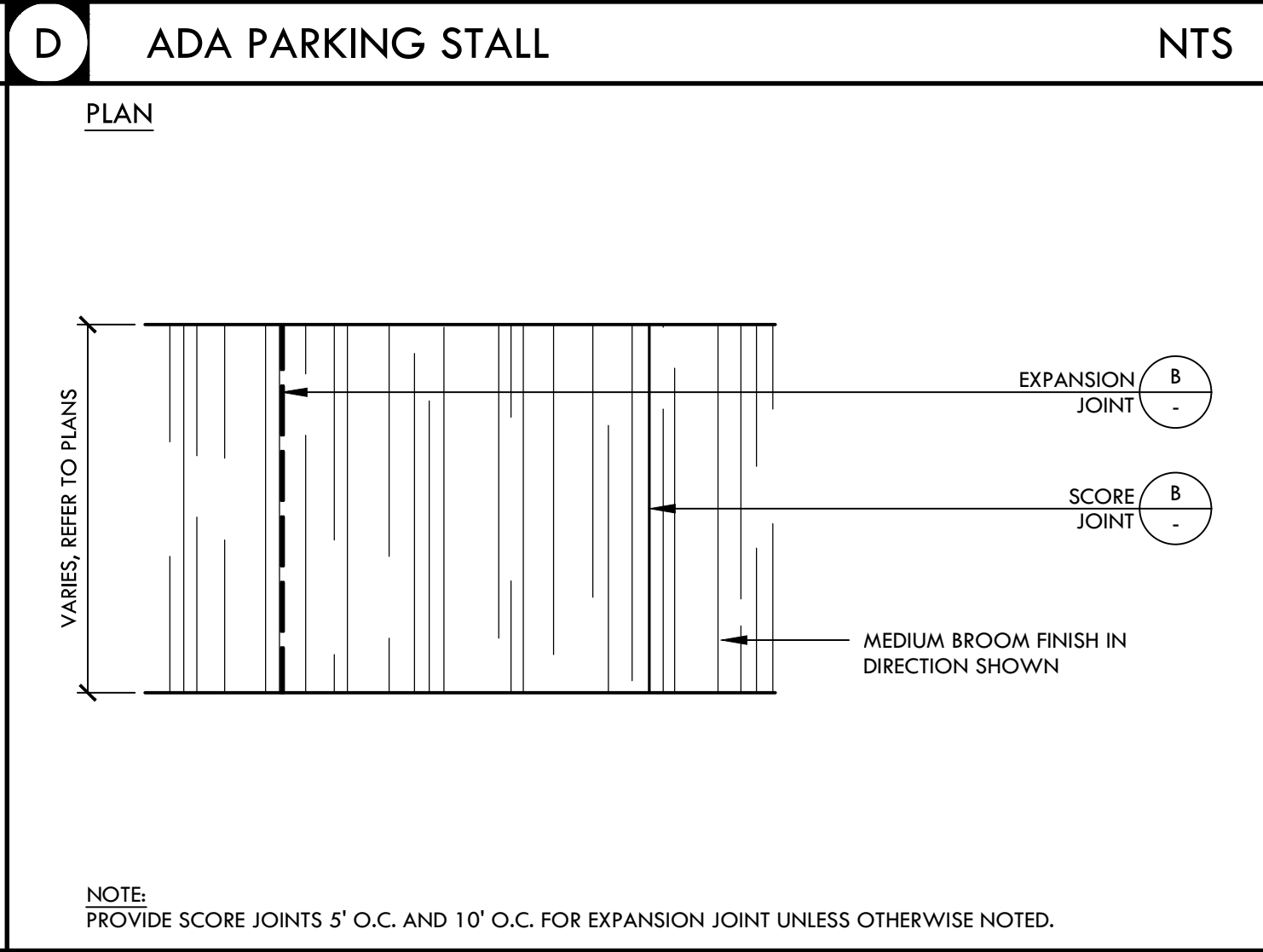
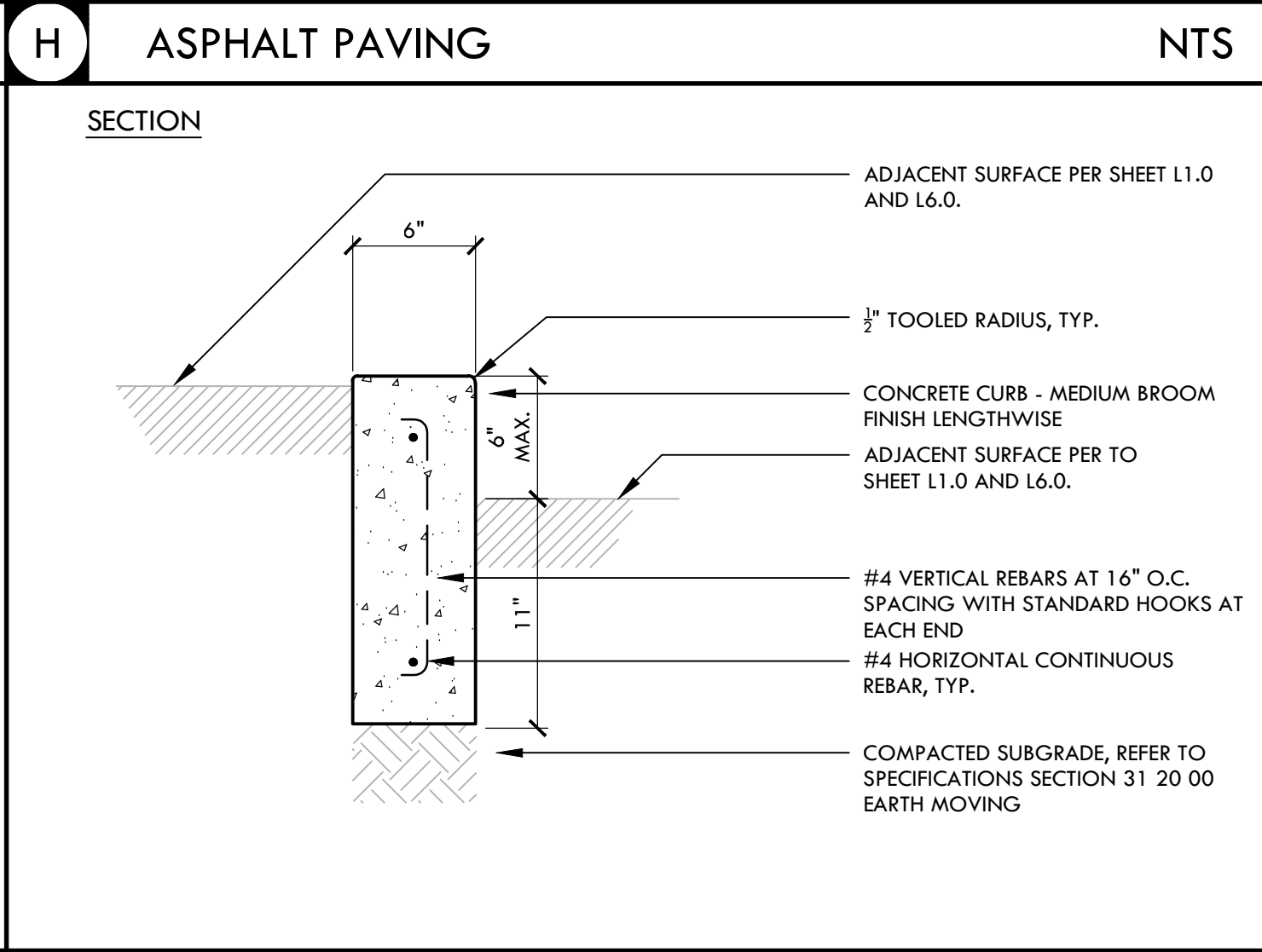
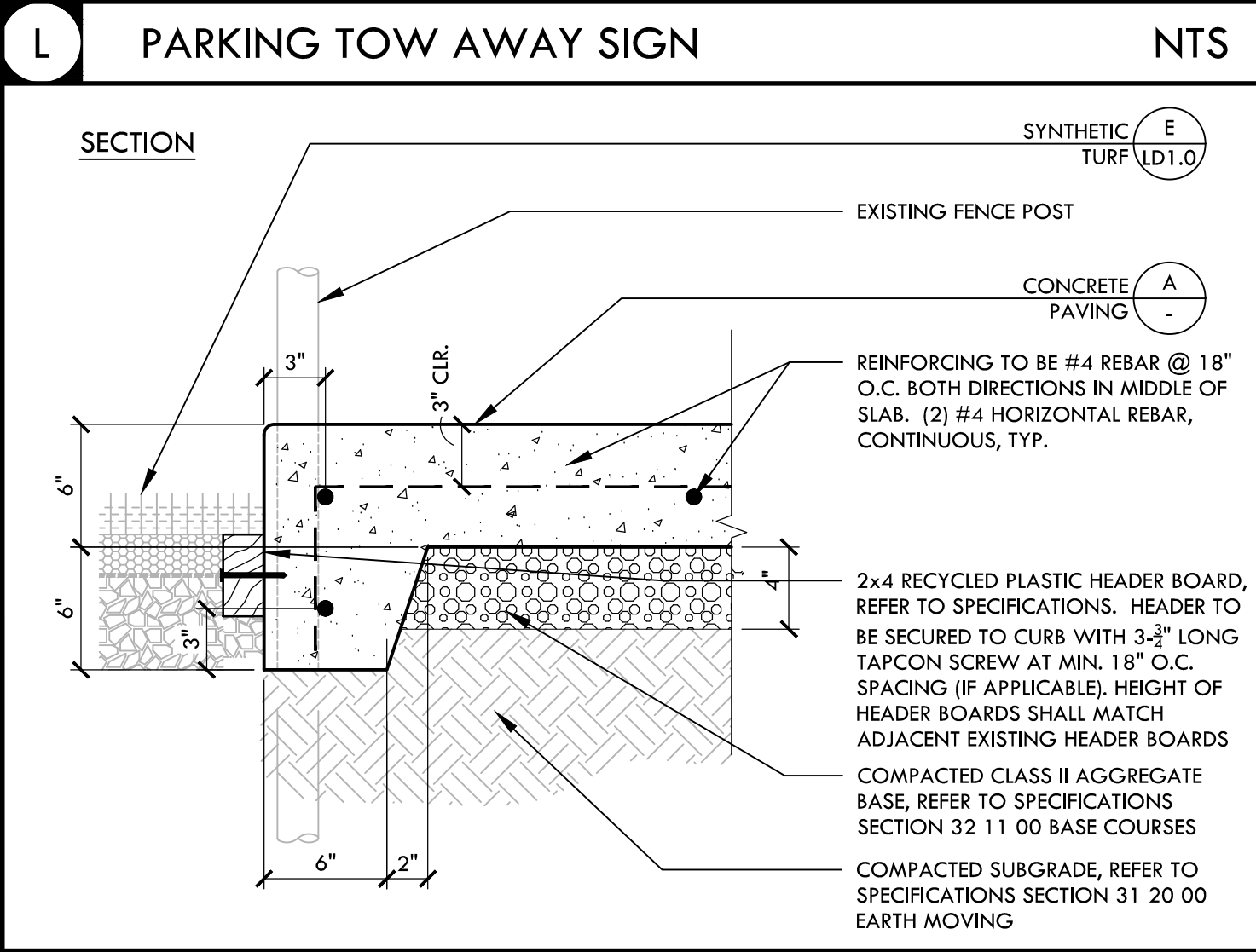
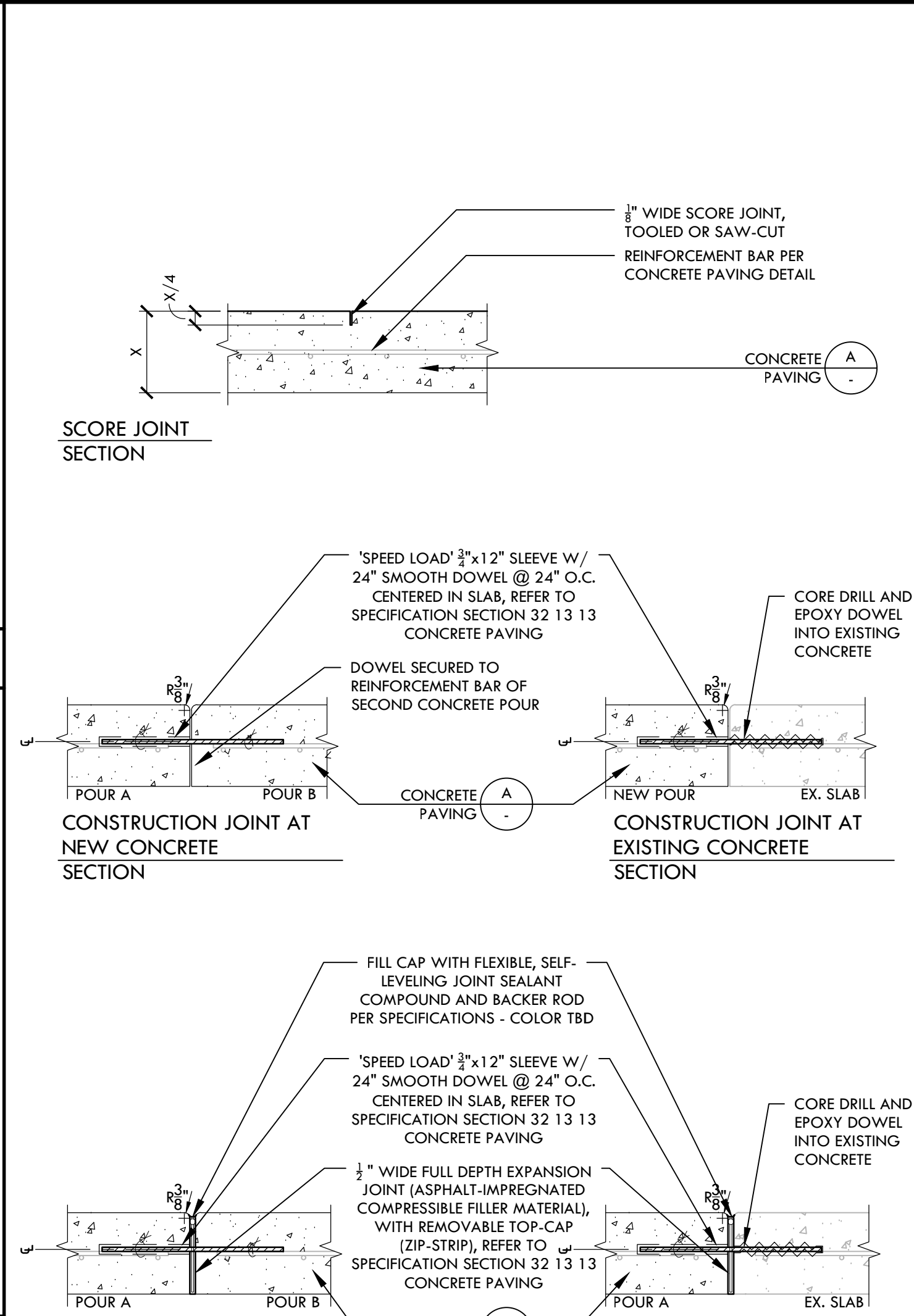
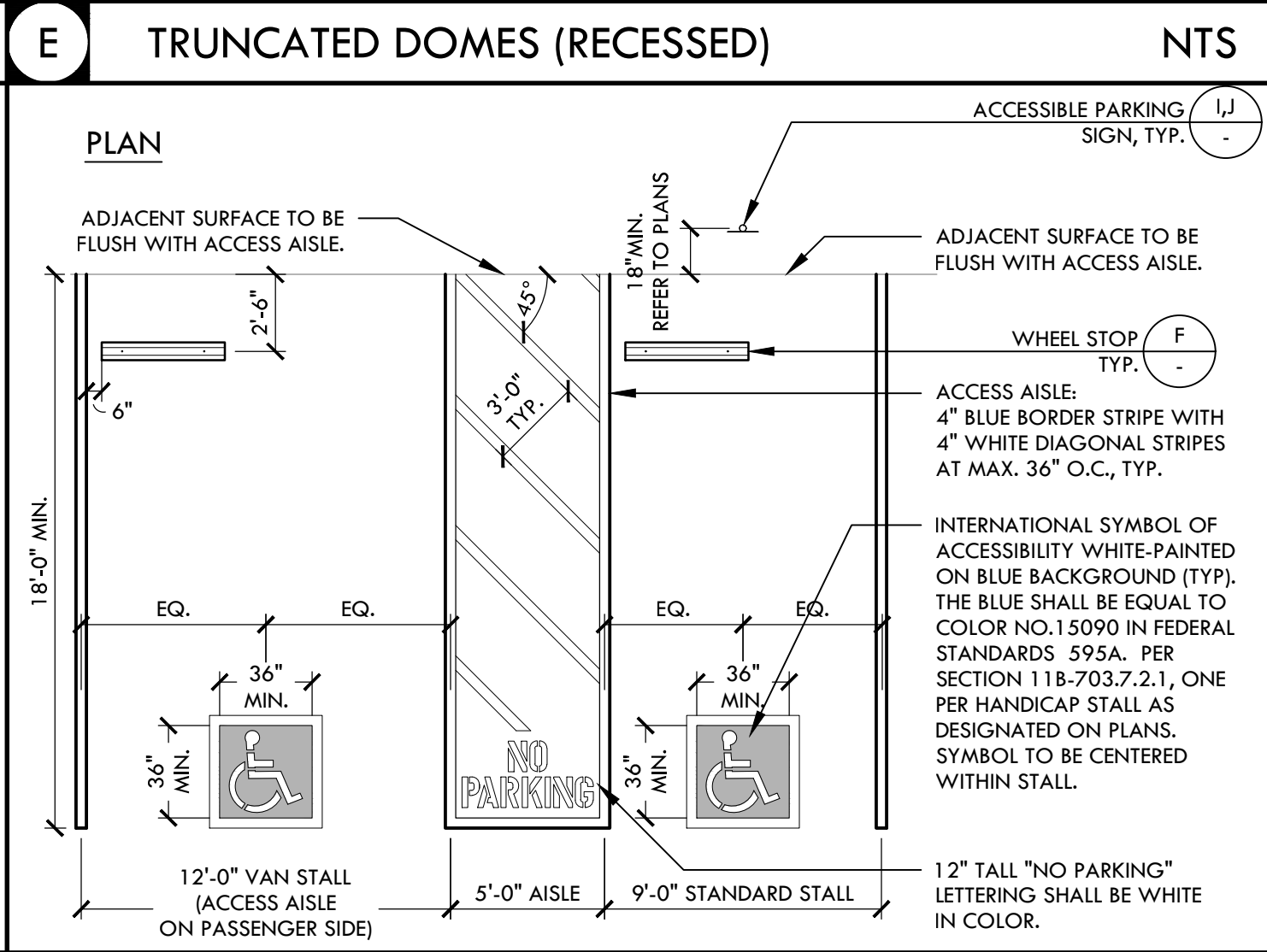
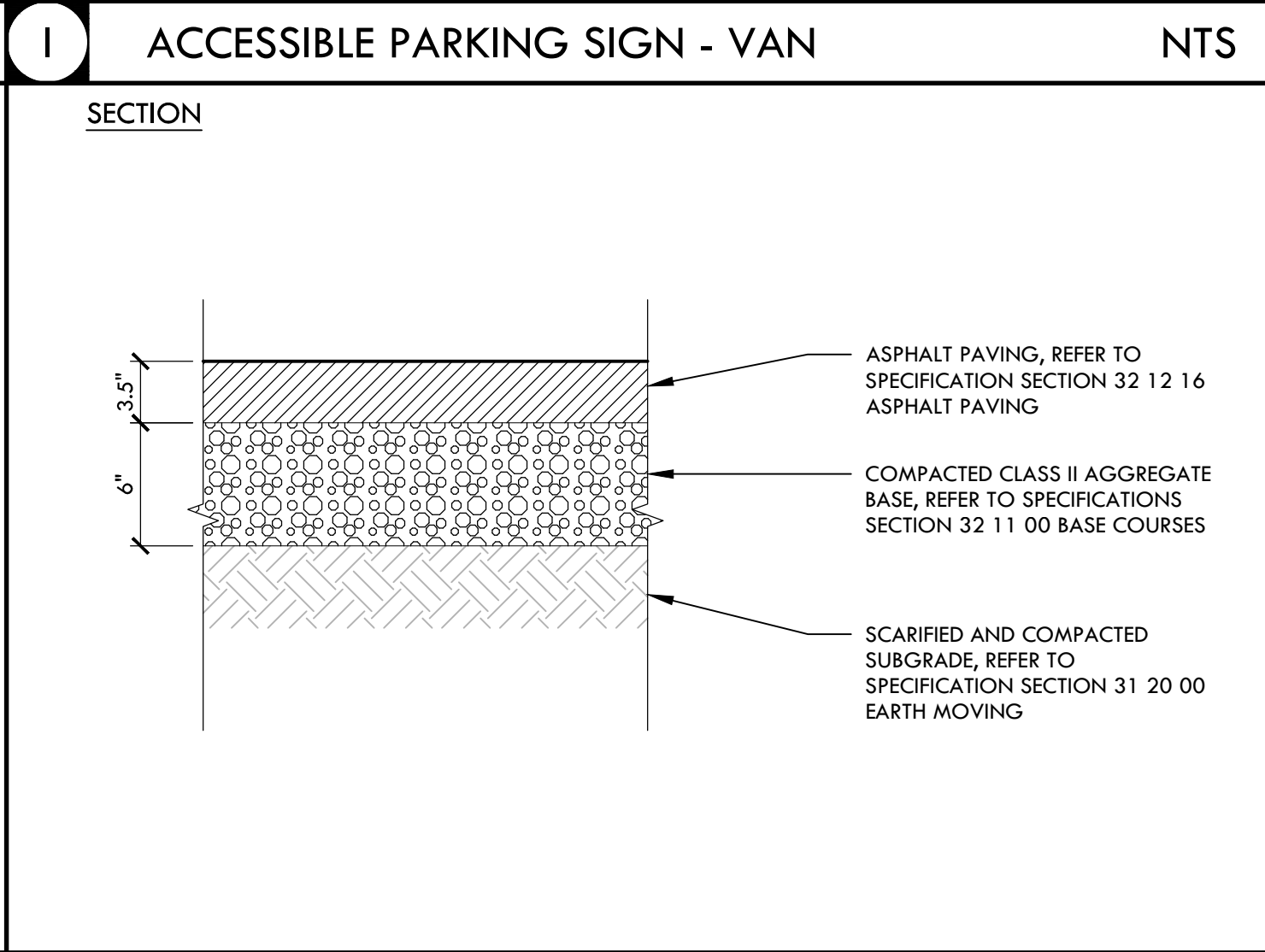
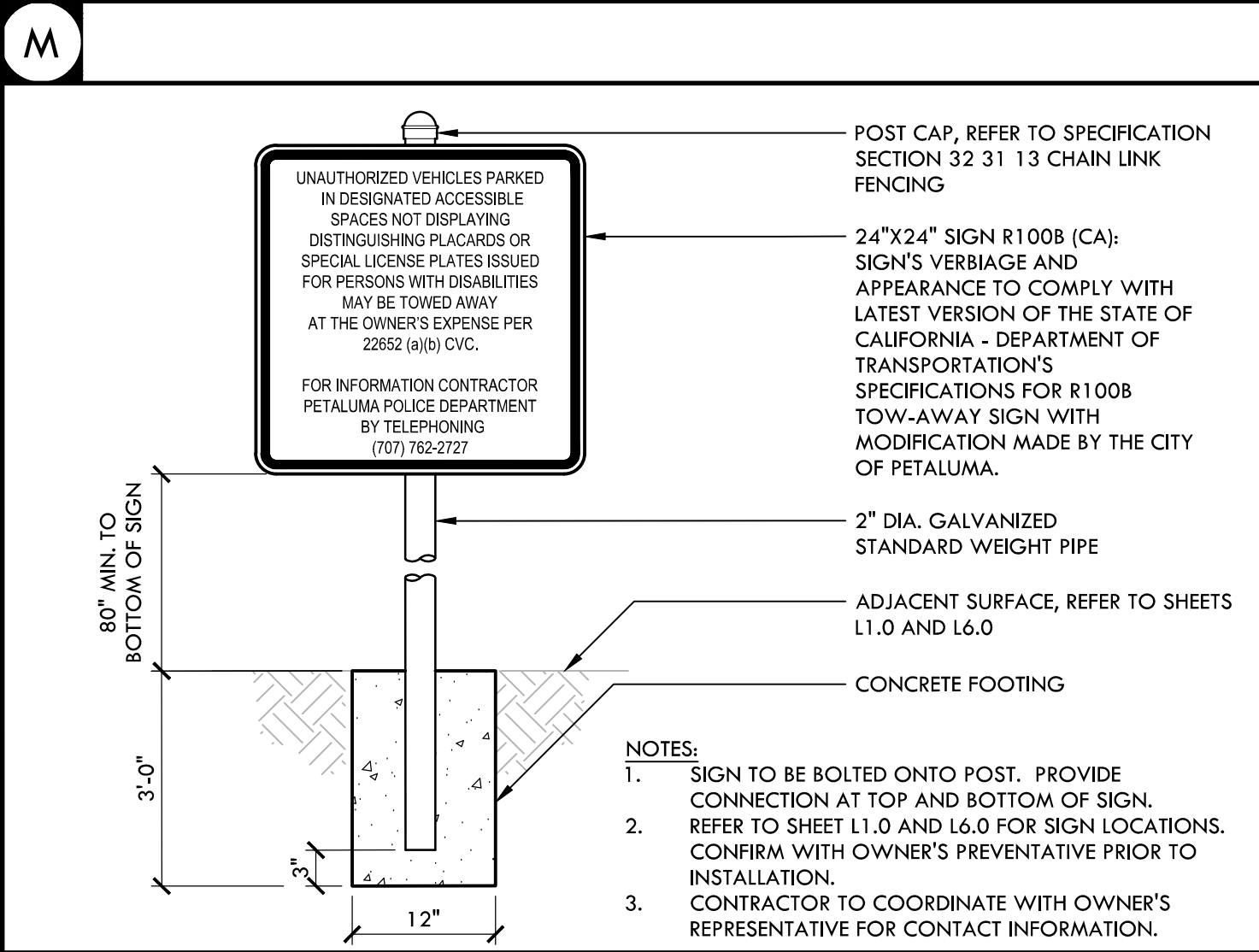
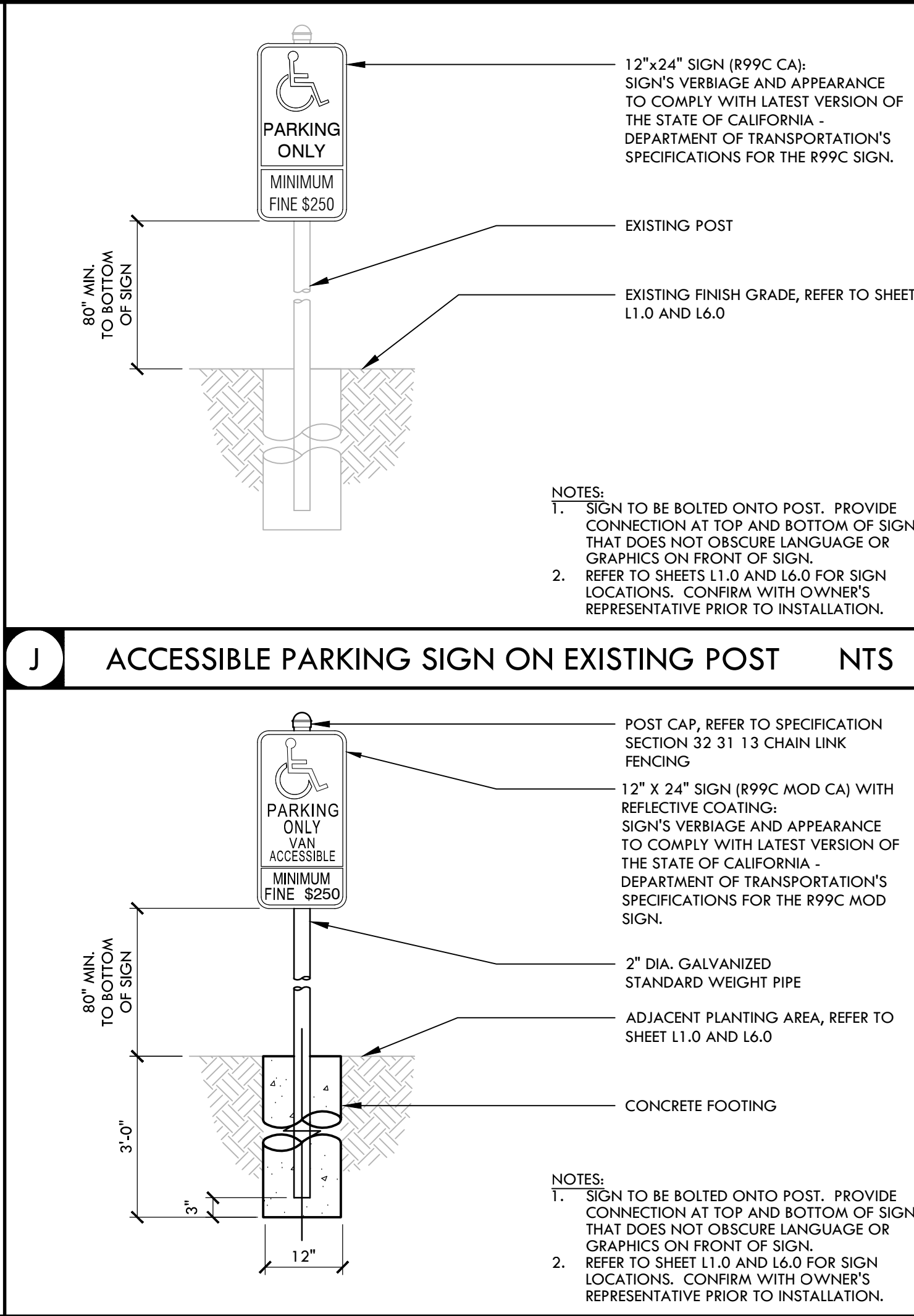
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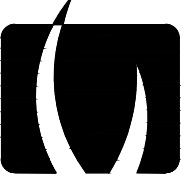
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PROJECT ADDRESS

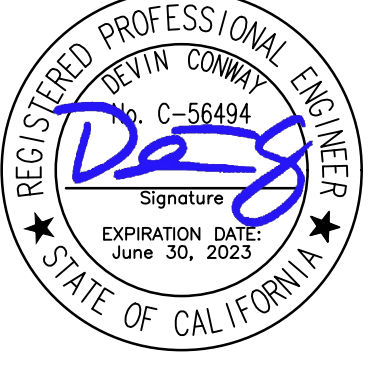
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CONSULTANT

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CONSTRUCTION DETAILS

PROJECT NAME

**LUCCHESI PARK
TURF REPLACEMENT
PROJECT**

PROJECT ADDRESS

**320 N McDOWELL BLVD
PETALUMA, CA 94954**

SUBMITTAL	DATE
DESIGN DEVELOPMENT SUBMITTAL	01/06/23
90% SUBMITTAL	02/03/23
BID SUBMITTAL	02/17/23

NO.	REVISIONS	DATE
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

DRAWN BY	CHECKED BY
KL	WD/DC

DATE ISSUED	SCALE
02/17/23	NTS

PROJ. NO. 2108300

SHEET NO. LD2.0

CONSTRUCTION DETAILS

