



**CITY OF CHULA VISTA  
STANDARD SPECIAL PROVISIONS  
JANUARY 2015**

**For use with the  
Standard Specifications for  
Public Works Construction, “Greenbook”  
2012 Edition**

**and**

**2012 San Diego Regional Supplement  
To the 2012 Edition of the “Greenbook”  
Standard Specifications for Publics Works Construction**

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City Engineer

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Date

**CITY OF CHULA VISTA**  
**STANDARD SPECIAL PROVISIONS**  
**January 2015**

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# **PART 1**

## **GENERAL PROVISIONS**

### **SECTION 1 – TERMS, DEFINITIONS, ABBREVIATIONS, UNITS OF MEASURE, AND SYMBOLS**

Part 1, 2 and 3 shall conform to Part 1, 2 and 3 of the Standard Specifications for Public Works Construction (2012 Edition), including the 2012 San Diego Regional Supplement approved and adopted by the San Diego Regional Standards Committee except for the following changes and/or additions.

#### **1-2 TERMS AND DEFINITIONS.**

Add or substitute for:

**Agency** - the City of Chula Vista, State of California

**Board** - the City Council of the City of Chula Vista

**Engineer** - the City Engineer of the City of Chula Vista, acting directly or through properly authorized agents, acting within the scope of the particular duties delegated to them.

**Laboratory** - The designated laboratory authorized by the Engineer to test materials and work involved in the Contract.

**Notice** - Shall be deemed to have been given if served personally on the Contractor or his/her authorized agent, or mailed to the Contractor postage prepaid.

**Chula Vista Standard Special Provisions** - Standard Special Provisions prepared and approved by the City Engineer for use with "Standard Specifications for Public Works Construction"- January 2015.

**Standard Special Provisions** - "Regional Supplement Amendments" for use with "Standard Specifications for Public Works Construction" approved and adopted by the San Diego County Regional Standards Committee.

**Standard Specifications** - "Standard Specifications for Public Works Construction" 2012 Edition "Greenbook" and all subsequent additions and revisions approved and adopted by the San Diego County Regional Standards Committee.

**Standard Plans** - San Diego Area Regional Standard Drawings – September 2012, Chula Vista Construction Standards, 2002 Edition, details for standard structures, devices or instructions referred to on the plans or in specifications by title or number.

**State Standard Specifications** – Portion of the State Standard Specifications, State of California, Department of Transportation, dated 2010 and all subsequent additions and revisions.

**State Standard Plans** – Portion of the State Standard Plans, State of California, Department of Transportation, dated 2010 and all subsequent additions and revisions.

## **SECTION 2 - SCOPE AND CONTROL OF WORK**

### **2-1 AWARD AND EXECUTION OF THE CONTRACT.**

Delete in its entirety and replace with the following:

The award of the Contract will be to the lowest responsible bidder whose proposal complies with all the requirements described. The award will be made within ~~sixty (60)~~ ninety (90) days after the opening of the bids. All bids will be compared on the basis of the Engineer's estimate of quantities of work to be done.

The Contract shall be signed by the successful bidder, and returned together with the Contract bonds, within ten (10) working days after the bidder has received notice that the Contract has been awarded. No proposal shall be considered binding upon the City until the execution of the Contract.

. Failure to execute a Contract and file acceptable bonds as provided herein within ten (10) working days after the bidder has received notice that the Contract has been awarded, shall be just cause for the annulment of the award and the forfeiture of the proposal guaranty.

Add the following two sub-sections

#### **2-1.2 Return of Bidder's Guaranty:**

Within ten (10) working days after the award of the Contract, the City of Chula Vista will return the cash or checks accompanying the proposals which are not to be considered in making the award. All other proposal guaranty will be held until the Contract has been finally executed, after which the cash or checks will be returned. Bid bonds will be returned upon request.

#### **2-1.3 Non-Collusion Provision:**

The Contractor to whom this Contract is to be awarded shall file a sworn Non-Collusion affidavit executed by, or on behalf of, the person, firm, association, or corporation to whom the Contract is awarded. This affidavit shall be executed and sworn to by the successful bidder before such persons as are authorized by the laws of the State of California to administer oaths, on the form included in these Contract documents. The original of such sworn statement shall be filed with the City Clerk.

### **2-9 SURVEYING.**

#### **2-9.2 Survey Service.**

Delete entire section & replace with the following:

Except for Private Contracts, the City of Chula Vista Surveying Group shall provide one set of construction staking. The project shall be staked by City of Chula Vista Land Survey Section as requested by the Contractor. Staking requests shall be in writing and presented to the Project Inspector at least 4 working days in advance.

It is the Contractor's responsibility to install and maintain the traffic control devices as well as such

additional traffic control devices as may be required to ensure safe movement of construction staking staff through and around the work area, and to preserve construction stakes and marks. Any additional staking or re-staking shall be performed by the City at the Contractor's expense.

### **2-9.3 Private Engineers.**

Add the following paragraph:

For work done under private contracts, (i.e. permits and land development), the contractor shall provide surveying services under the following conditions:

- a) All provisions of Section 8771(b) of the Professional Land Surveyors' Act (Business and Professions Code) shall be adhered to.
- b) Contractor shall retain the services of a Land Surveyor or Civil Engineer licensed to practice land surveying in the State of California to perform all work under this section.
- c) All existing surveying monuments in and around the work area shall be clearly identified prior to the beginning of construction. A list of the monuments identified must be made available to the City for verification. Monuments may exist which are not shown on the plans. The contractor must make every effort to preserve existing surveying monuments. Where this is not possible, or where any monuments are destroyed by the contractors negligence, they must be replaced by the Land Surveyor or Civil Engineer and a Record of Survey in conformance with the Land Surveyor's Act filed in the office of the San Diego County Recorder. A Corner Record may be filed at the discretion of the City Surveying Group. A copy of the record of Survey or Corner Record must be made available to the City Surveying Group for review, correction and approval prior to being sent for recording.

### **2-10 AUTHORITY OF THE BOARD AND THE ENGINEER.**

Add the following paragraph:

Whenever the Contractor varies the period during which work is carried on each day, he/she shall give due notice to the Engineer, so that proper inspection may be provided. The Contractor shall pay a fee established by the City for inspection services, required outside of regular working hours, and on Saturdays, Sundays, and holidays recognized by the City. Any work done in the absence of the Engineer will be subject to rejection.

## **SECTION 3 - CHANGES IN WORK**

### **3-2 WORK INITIATED BY THE AGENCY.**

Delete the Section in its entirety and replace with the following:

The City shall have the option of increasing or decreasing the unit quantity for all bid items in the proposal any amount without a change in contract unit prices. There will be no adjustment in compensation as permitted in Section 3-2 of the Standard Specifications. This does not limit the City's right to increase or decrease any quantities of work in the Contract as allowed by the Standard Specifications or other pertinent law.

### **3-3 EXTRA WORK.**

#### **3-3.2 Payment.**

##### **3-3.2.3 Markup.**

###### **3-3.2.3.1 Work by Contractor.**

Add the following:

Mark-up percentages to be added to the cost of extra work performed by contractor are as follows:

1)	Labor	10%
2)	Material	5%
3)	Equipment	5%
4)	Bonds Premiums	1%

###### **3-3.2.3.2 Work by Subcontractor.**

Add the following paragraph:

A mark-up of 5% on the first \$5,000 and 2 1/2% on work added in excess of \$5,000 of the subcontracted portion of the extra work.

### **3-5 DISPUTED WORK.**

Add the following Sub-Section:

#### **3-5.1 Administrative Claims Requirements and Procedures.**

No suit shall be brought arising out of this Contract, against the City, unless a claim has first been presented in writing and filed with the City of Chula Vista and acted upon by the City of Chula Vista in accordance with the procedures set forth in Chapter 1.34 of the Chula Vista Municipal Code, as same may be from time to time be amended, the provisions of which are incorporated by this reference as if fully set forth herein, and such policies and procedures used by the City in the implementation of same.

Upon request by City, Contractor shall meet and confer in good faith with City for the purpose of resolving any dispute over the terms of this Contract.

## **SECTION 4 – CONTROL OF MATERIALS**

### **4-1 MATERIALS AND WORKMANSHIP.**

#### **4-1.3 Inspection Requirements.**

##### **4-1.3.2 Inspection by the Agency.**

Add the following paragraph

For private Contracts, all costs of inspection at the source, including salaries and mileage costs, shall be paid by the Permittee.

#### **4-1.4 Test of Materials.**

Add the following Section:



#### 4-1.4.1 Testing - Private Contracts and Permittee

When required by the Engineer, tests shall be made to determine compliance with the plans and specifications. The tests shall be performed by a laboratory approved by the Engineer and the number of tests shall be determined by the Engineer. The costs of these tests shall be borne by the Contractor.

## SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

### 7-3 LIABILITY INSURANCE.

Delete Section in its entirety and replace with the following:

Contractor shall procure and maintain for the duration of the contract, *and for 10 years thereafter*, 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, his agents, representatives, employees, or subcontractors.

### MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01, including products and completed operations, with limits of no less than **\$5,000,000** per occurrence for bodily injury, personal injury, and property damage. If a general aggregate limit applies, 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:** Insurance Services Office Form Number CA 0001 covering Code 1 (any auto), with limits no less than **\$5,000,000** per accident for bodily injury and property damage.
3. **Workers' Compensation** insurance as required by the State of California, with Statutory Limits, and Employers' Liability insurance with a limit of no less than \$1,000,000 per accident for bodily injury or disease.
4. **Builder's Risk** (Course of Construction) insurance utilizing an "All Risk" (Special Perils) coverage form, with limits equal to the completed value of the project and no coinsurance penalty provisions.
5. **Surety Bonds** as described below.
6. **Professional Liability** (if Design/Build), with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.
7. **Contractors' Pollution Legal Liability** and/or Asbestos Legal Liability and/or Errors and Omissions (if project involves environmental hazards) with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

If Contractor maintains higher limits than the minimums shown above, the Entity requires and shall be entitled to coverage for the higher limits maintained.

### Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the Entity. At the option of the Entity, either: the contractor shall cause the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Entity, its officers, officials, employees, and volunteers; or the Contractor

shall provide a financial guarantee satisfactory to the Entity guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

### **Other Insurance Provisions**

The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. **The Entity, its officers, officials, employees, and volunteers are to be covered as additional insureds** on the CGL and automobile liability policies with respect to liability arising out of with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations and automobiles owned, leased, hired, or borrowed by or on behalf of the Contractor. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10, 11 85 or both CG 20 10 and CG 23 37 forms if later revisions used). The Endorsement must not exclude Products / Completed Operations.
2. For any claims related to this project, the **Contractor's insurance coverage shall be primary** insurance as respects the Entity, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the Entity, its officers, officials, employees, or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.
3. Each insurance policy required by this clause shall provide that coverage shall not be canceled, except with notice to the Entity.

### **Builder's Risk (Course of Construction) Insurance**

Contractor may submit evidence of Builder's Risk insurance in the form of Course of Construction coverage. Such coverage shall **name the Entity as a loss payee** as their interest may appear.

If the project does not involve new or major reconstruction, at the option of the Entity, an Installation Floater may be acceptable. For such projects, a Property Installation Floater shall be obtained that provides for the improvement, remodel, modification, alteration, conversion or adjustment to existing buildings, structures, processes, machinery and equipment. The Property Installation Floater shall provide property damage coverage for any building, structure, machinery or equipment damaged, impaired, broken, or destroyed during the performance of the Work, including during transit, installation, and testing at the Entity's site.

### **Claims Made Policies**

If any coverage required is written on a claims-made coverage form:

1. The retroactive date must be shown, and this date must be before the execution date of the contract or the beginning of contract work.
2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.
3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective, or start of work date, the Contractor must purchase extended reporting period coverage for a minimum of five (5) years after completion of contract work.
4. A copy of the claims reporting requirements must be submitted to the Entity for review.
5. If the services involve lead-based paint or asbestos identification/remediation, the Contractors Pollution Liability policy shall not contain lead-based paint or asbestos exclusions. If the services

involve mold identification/remediation, the Contractors Pollution Liability policy shall not contain a mold exclusion, and the definition of Pollution shall include microbial matter, including mold.

### **Acceptability of Insurers**

Insurance is to be placed with insurers with a current A.M. Best rating of no less than A: VII, unless otherwise acceptable to the Entity.

### **Waiver of Subrogation**

Contractor hereby agrees to waive rights of subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of the Entity for all work performed by the Contractor, its employees, agents and subcontractors.

### **Verification of Coverage**

Contractor shall furnish the Entity with original certificates and amendatory endorsements, or copies of the applicable insurance language, effecting coverage required by this contract. All certificates and endorsements are to be received and approved by the Entity before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Contractor's obligation to provide them. The Entity reserves the right to require complete, certified copies of all required insurance policies, including endorsements, required by these specifications, at any time.

### **Subcontractors**

Contractor shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein.

### **Surety Bonds**

Contractor shall provide the following Surety Bonds:

1. Bid bond
2. Performance bond
3. Payment bond
4. Maintenance bond

The Payment Bond and the Performance Bond shall be in a sum equal to the contract price. If the Performance Bond provides for a one-year warranty a separate Maintenance Bond is not necessary. If the warranty period specified in the contract is for longer than one year a Maintenance Bond equal to 10% of the contract price is required. Bonds shall be duly executed by a responsible corporate surety, authorized to issue such bonds in the State of California and secured through an authorized agent with an office in California.

### **Special Risks or Circumstances**

Entity reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other circumstances.

### **7-4 WORKER'S COMPENSATION INSURANCE.**

Delete Section in its entirety.

### **7-13 LAWS TO BE OBSERVED.**

Add the following sub-section:

**7-13.1 Taxes.**

All applicable State or Federal taxes shall be considered as included in the amount paid for the various items of work. The Contractor shall be responsible for payment of such taxes to the proper governmental authority.

The Contractor shall keep fully informed and comply with all existing Federal and State laws and all Municipal Ordinances and Regulations of the City which in any manner affect those engaged or employed in the work, or the material used in the work, or which in any way affect the conduct of the work, and all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same. City of Chula Vista Resolution 3077 requires that all underground work be completed prior to the street being surfaced.

Contractors and all subcontractors shall be licensed in accordance with the provisions of Chapter 9 of Division III of the Business and Professions Code, State of California.

Unless otherwise specified, the Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of work. The Contractor and subcontractors shall have a valid City of Chula Vista Business License.

Add the following Section:

**7-15 RECORD RETENTION AND AVAILABILITY.**

1. The Contractor shall allow access by the City, the federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives to any books, documents, papers and records of the Contractor pertinent to that specific Contract.
2. The Contractor shall retain all required records for three years after final Payments are made and all other pending matters are closed.

## **SECTION 9 – MEASUREMENT AND PAYMENT**

### **9-1 MEASUREMENT OF QUANTITIES FOR UNIT PRICE WORK.**

#### **9-1.1 General.**

Add the following:

The estimate of the quantities of work to be done and materials to be furnished are approximate only, being given as a basis for the comparison of bids, and the City of Chula Vista does not expressly or by implication agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any class or portion of the work or to omit portions of the work that may be deemed necessary or expedient by the Engineer.

# **PART 2**

## **CONSTRUCTION MATERIALS**

### **SECTION 207 - PIPE**

#### **207-2 Reinforced Concrete Pipe.**

##### **207-2.1 General.**

Add the following:

Unless otherwise specified, the "D" load rating of all concrete pipe used within the street right of way shall be equal to a "D" loading of at least 1500.

#### **207-11 Corrugated Metal Pipe and Pipe Arches (Steel).**

##### **207-11.1 General.**

Add the following:

All corrugated steel pipe shall be coated and paved per Sections 207-11.5.2, Coatings, and 207-11.5.4, Paving.

The gauge of sheets, unless otherwise specified, shall conform to the following:

Pipe Diameter	Gauge No.
8" to 21" inclusive	16
24" to 30" inclusive	14
36" to 54" inclusive	12
60" to 72" inclusive	10
78" to 96" inclusive	8

#### **207-13 CORRUGATED ALUMINUM PIPE AND PIPE ARCHES.**

##### **207-13.1 General.**

Add the following:

The gauge of sheets, unless otherwise specified, shall conform to the following:

Pipe Diameter	Gauge No.
8" to 21" inclusive	16
24" to 30" inclusive	14
36" to 54" inclusive	12
60" to 72" inclusive	10
78" to 96" inclusive	8

## **SECTION 302 – ROADWAY SURFACING**

### **302-5 ASPHALT CONCRETE PAVEMENT.**

#### **302-5.5 Distribution and Spreading.**

Revise the sixth paragraph to read as follows:

The depositing, distributing, and spreading of the asphalt concrete shall be accomplished in a single, continuous operation by means of a self-propelled mechanical spreading and finishing machine designed especially for that purpose. The machine shall be equipped with a screed capable of being accurately regulated and adjusted to distribute a layer of the material to a definite predetermined thickness. The screed shall be able to extend from 8 to 18 feet per the manufacturers recommendations. The screed shall be equipped with a 2-foot wide cut-off shoe to allow the paver to operate between 8 feet and 18 feet wide. Hydraulic wing extensions are not considered to be a screed. All screed extensions shall be similar to a Blaw-Knox Omni screed that when extended shall consist of all screed components (screed plate, strike off plates, heater and vibrator). The Engineer shall select joint locations and pavement widths based upon the capabilities of the specified screed. When paving is of a size or in a location that use of a self-propelled machine is impractical the Engineer may waive the self-propelled requirements. The type of machine (make and model) shall be submitted to the Engineer one week prior to commencement of paving operations. The Engineer shall be given the opportunity to inspect the paving machine prior to commencement of paving operations. The manufacturer's operation manual for the machine shall be made available for review upon request of the Engineer.

Asphalt paving equipment shall be equipped with automatic screed controls, a sensing device or devices and a ski device. The minimum length of the ski device shall be 30 feet. The ski device shall be a rigid one-piece unit and the entire length shall be used in activating the sensor or sensors.

When placing asphalt to the lines and grades established by the Engineer, the automatic screed controls shall control the longitudinal grade and transverse slope of the screed. Grade and slope references shall be furnished, installed and maintained by the Contractor.

When placing the initial mat of asphalt concrete on existing pavement, the end of the screed nearest the centerline shall be controlled by a sensor activated by a ski device not less than 30 feet long. The end of the screed farthest from the centerline shall be controlled by a sensor activated by a similar apparatus or by an automatic transverse slope device set to reproduce the cross slope designated by the Engineer.

When paving contiguously with previously placed mats, the end of the screed adjacent to the previously placed mat shall be controlled by a sensor that responds to the grade of the previously placed mat and will reproduce the grade in the new mat within 0.01 ft. tolerance. The end of the screed farthest from the previously placed mat shall be controlled in the same manner as when placing the initial mat.

Should the automatic screed controls fail to operate properly during any day's work, the Contractor may use manual control of the spreading equipment for the remainder of that day, however, the equipment shall be corrected or replaced with automatically controlled equipment conforming to the requirements in this section before starting another day's work.

At the discretion of the Engineer, in locations where the use of automatic screed controls with ski device is impractical or inaccessible, automatic screed controls will not be used.

Where the pavement slopes towards a concrete gutter, asphaltic concrete shall be placed such that the pavement surface is a minimum of 3/8" above the lip of gutter elevation. Where the pavement slopes away from a concrete gutter, asphaltic concrete shall be placed such that the pavement surface is flush with the lip of gutter elevation unless otherwise directed by the Engineer.

### **302-5.6 Rolling.**

#### **302-5.6.2 Density and Smoothness.**

Revise 2nd paragraph to read as follows:

The compaction after rolling shall be between 92 and 96 percent of the maximum theoretical specific gravity as determined by ASTM D 2041. Asphalt concrete density is to be measured through the use of a nuclear density gauge, or core tests. Test locations shall be determined by random sampling techniques per California Test 375, Part C.

At least one density measurement shall be taken from each 50 tons or part thereof or for each 150 lineal feet of paving lane for each mix type placed each day. Acceptability of in-place density shall be based upon the average of at least three tests. For new pavement with a total asphaltic concrete thickness of 1-1/2 inches or more, the Engineer may require removal and replacement at Contractor's expense when the average value of the density tests is greater or less than specified in paragraph 203-6.3.3.

For evaluation of "out-of-spec" pavement materials, only cores shall be used to determine in-place density, unless otherwise approved by the Engineer. At least three cores shall be taken from the area suspected to be "out-of-spec", with at least one core taken for each 50 tons or 150 lineal feet of paving lane placed. The average of the core densities shall be used for acceptance or rejection, unless the results identify obviously defective or isolated suspicious areas. The average core density shall meet the requirements of paragraph 203-6.3.3. An individual core density of less than 90 percent shall constitute a suspicious area. The limits of isolated defective areas shall be further delineated with nuclear density gauge readings calibrated to the core data and said defective areas removed and replaced.

### **302-5.8 Manholes (and other structures).**

Delete first and third paragraphs and add the following:

#### **Manhole and Valve Box Covers**

Unless otherwise specified, the paving contractor will be required to adjust all manhole, valve boxes, cleanout, and monument covers.

Prior to paving, all covers shall be tied-off by the contractor in a manner that will permit determination of their exact locations after paving.

All covers shall be set 1/8" to 1/4" higher than the finish grade. The subgrade, base and pavement shall be neatly removed a distance of 12 inches from the edge of the cover. All spoils shall be removed from the site. All backfill shall be with Crushed Aggregate Base (per Section 200-2.2), compacted to 95% relative density (per Section 211). The street section shall be replaced per Section 306-1.1.5 except a minimum of 4" of asphalt concrete will be required.

Asphalt concrete shall be placed and compacted in a minimum of two layers; a base course and a surface course a minimum of 1 1/2 inches thick.

Pre-cast concrete grade rings are required when the cover is to be adjusted 3” or more. Where manholes have been previously adjusted with steel or fiberglass rings and further adjustment is needed, the steel or fiberglass ring(s) will be removed (and delivered to the City) and replaced with pre-cast concrete grade rings.

Concrete placed to secure the cover shall be a 3250-psi mix, placed a minimum 6” thick. Concrete shall be placed to allow a minimum of 3” of asphalt concrete pavement adjacent to the cover frame and to 1” below the existing asphalt pavement at the pavement removal limits.

Concrete shall be graded and mixed to allow the mixture to fill the space between the cover frame and the pre-cast manhole components; “dry packing” will not be allowed.

## **SECTION 303-CONCRETE AND MASONRY CONSTRUCTION**

### **303-1 CONCRETE STRUCTURES.**

#### **303-1.7 Placing Reinforcement.**

##### **303-1.7.1 General.**

Add the following paragraph:

Reinforcing steel lists shall be submitted to the Engineer for approval when requested. Such approval is intended as additional precaution against errors and shall not be construed as relieving the Contractor of full responsibility for the accuracy of the lists.

### **303-5 CONCRETE CURBS, WALKS, GUTTER, CROSS GUTTERS, ALLEY INTERSECTIONS, ACCESS RAMPS, AND DRIVEWAYS.**

#### **303-5.1 Requirements.**

##### **303-5.1.1 General.**

Add the following paragraph:

When the plans provide for the reconstruction of a portion of an existing sidewalk, the existing section shall be cut to a minimum depth of 1-1/2 inches with an abrasive type saw at the first scoring line at or beyond the planned joint and the entire section shall be removed. The new work shall join the old work at this line.

The Engineer shall determine limits for the removal and reconstruction of curb, gutters, sidewalks, driveways, sidewalk ramps, and pavement.

Concrete coloring for sidewalks and driveways shall not be used without written permission from the Engineer.

#### **303-5.5 Finishing.**

##### **303-5.5.3 Walk.**

Add the following paragraph:

When placing the tops to concrete drainage and sewer structures within the surface of the sidewalk, the tops to concrete drainage and sewer structures shall be monolithic for the full width of the curb, gutter and sidewalk. The top of the structure shall be imprinted with a Storm Drain Stencil per CVCS-24. When placing



the tops of concrete drainage and sewer structures within parkways, if the distance between the edge of the structure and the sidewalk is less than 18", then the tops to said structures shall be constructed to the full width of the parkway.

## **SECTION 306- UNDERGROUND CONDUIT CONSTRUCTION**

### **306-1 OPEN TRENCH OPERATIONS.**

#### **306-1.1 Trench Excavation.**

##### **306-1.1.1 General.**

Delete third paragraph and replace with the following:

The Contractor shall furnish, install, and operate such pumps, well points or other devices as may be necessary to remove any sub-surface water, seepage, storm water, or sewage that may be encountered during the construction. The trenches and other excavations shall be kept free from water while concrete or pipe is being installed. Water shall be disposed of in accordance with all Federal, State, or local agency requirements and in such a manner as to cause no injury to public or private property, nor be a menace to public health.

#### **306-1.2 Installation of Pipe.**

##### **306-1.2.1 Bedding.**

##### **306-1.2.1.1 General.**

Delete fifth paragraph and add the following:

Except where otherwise specified, all non-reinforced and reinforced concrete pipe and all asbestos cement pipe shall be installed using the standard installation. Standard installations for reinforced concrete pipe shall consist of trench and pipe bedding as shown on Regional Standard Drawing No. D-60 except that the one-inch graded crushed aggregate rock shall extend up to the upper half (spring line) of the pipe. The remainder of the bedding material shall be sand, gravel, crushed aggregate, native free draining granular material having a sand equivalent of not less than 30 or having a coefficient of permeability greater than 1.4 inches/hour, or other material approved by the Engineer.

Except where otherwise specified, all corrugated metal pipe and all plastic pipe 18 inches inside diameter and greater shall be installed using the standard installation. Standard installation for corrugated metal pipe and plastic pipe 18 inches inside diameter and greater shall consist of trench and pipe bedding as shown on Regional Standard Drawing No. D-60 except that the one-inch graded crushed aggregate rock shall extend up to the upper half (spring line) of the pipe. The remainder of the bedding material shall be sand.

Except where otherwise specified, all clay pipe shall be installed using "Type B rock to spring line" installation that shall consist of trench and pipe bedding as shown on Regional Standard Drawing No. S-4. The remainder of the bedding material shall be as specified above for non-reinforced and reinforced concrete pipe and asbestos cement pipe.

Except where otherwise specified, all plastic pipe with an inside diameter of less than 18 inches shall be installed using a rock envelope installation which shall consist of trench and pipe bedding as shown on Regional Standard Drawing No. S-4, Type C.

### **306-1.2.2 Pipe Laying.**

Add the following paragraph:

In order to insure a true line and grade, grade stakes shall be set every 25 feet. Sewer pipe shall be laid through the manhole unless otherwise directed by the Engineer.

When sewer pipe is to be carried continuously through the manhole, the top portion of the pipe shall be removed after all other work is completed.

### **306-1.2.3 Field Jointing of Clay Pipe**

Delete first sentence and replace with the following:

Unless otherwise indicated on the plans, all joints for sewers constructed of clay pipe shall be type "G" joints as contained in sub-section (b) of this section.

The Contractor may submit for approval any other type of joint that he believes is equal or superior to those specified. Said alternate shall be submitted in writing at least fifteen (15) days in advance of the start of the work. The City Engineer shall be the sole judge as to whether any material submitted for approval is equal or superior to those specified. No unspecified material shall be used until approved by the City Engineer.

Add sub-section (d) as follows:

d) No sewer shall be broken into except in the presence of the Engineer. The connection shall be made with a standard vitrified clay saddle constructed with lugs to prevent protrusion through the pipe. The hole in the sewer shall be made midway between joints. It shall be made with extreme care starting with as small a hole as possible and carefully enlarged so as to provide a hole approximately 1/4" larger than the outside diameter of the saddle. The saddle shall be mortared in place, filling the annular space between saddle and pipe wall with mortar composed of 1 part Portland cement to 2 parts of clean well-graded sand. The inside shall be wiped to provide a smooth joining of the saddle to the pipe wall.

No additional pipe may be joined to the saddle until the contractor receives approval of the saddle connection from the Engineer.

After the saddle has been mortared in place and approved by the Engineer, at least 6 strands of No. 10 galvanized wire shall be loosely wound around the pipe, 3 strands on each side of the saddle, 2 of which shall pass over the saddle. A ring of Class "A" concrete at least 4 inches thick and 18 inches in length shall then be constructed entirely around the pipe at the location of the saddle.

### **306-1.2.12 Maximum Allowable Deflection for Plastic Pipe & Fittings.**

Add the following paragraph:

This section is also applicable to all plastic pipe and inserted liner whereby the annular space between the outer wall of the liner and inner wall of existing pipe being lined is pressure grouted.

### **306-1.4 Testing Pipelines.**

Add the following new sub-section

#### **306-1.4.7 Balling of Sewers,**

After completion of the sanitary sewer system, including televising sewer mains and the surfacing of

the street, an approved type sewer ball equal to the diameter of the pipe shall be sent through the sewer from the uppermost structure to the lowermost structure. The contractor shall, at his own expense, furnish all materials for carrying out the operation and removing any obstructions that prevent the ball from traveling through the pipe.

## **SECTION 307 - STREET LIGHTING AND TRAFFIC SIGNAL SYSTEM**

### **307-1 GENERAL.**

Add the following sub-Section

#### **307-1.2 Regulations and Codes.**

Before commencing work, the contractor shall contact the San Diego Gas & Electric Company for any requirements regarding their distribution and transmission construction methods. Work shall conform to the "SDG&E" Service guide.

### **307-8 FOUNDATIONS, FOUNDATION CAPS AND SLABS.**

#### **307-8.2 Foundations.**

Add the following paragraph

Foundations shall be installed not less than 3 feet from driveway curb opening or fire hydrants.

### **307-10 STANDARDS, PEDESTALS AND MAST ARMS.**

#### **307-10.1 General.**

Add the following sub-section:

##### **307-10.1.1 Prestressed Concrete Standards.**

###### **1) General.**

Prestressed concrete standard shall be fabricated in a manner consistent with generally accepted systems of prestressing. The standards shall be designed on the basis for wind loads of 15 pounds per square foot using a shape factor of 0.80 for all cylindrical members. A maximum tensile stress of 300 PSI will be permitted in the pole for wind loading.

Standard shall consist of a prestressed centrifugally spun, tapered concrete shaft octagonal in cross-section, a galvanized steel or aluminum luminaire bracket or mast arm, anchor rods, and associated appurtenances as shown or specified.

###### **2) Construction Material**

A. CEMENT - Cement shall conform to Standard Specifications for Type III Portland Cement ASTM, Designation C-150, and shall be fresh when used. B. AGGREGATE - Aggregate shall be marble with a high compressive strength. It shall be uniformly graded from 1/4" to #150 mesh sieve and shall be free and clean from foreign material. The proportion will be determined by submitting spun samples for approval by the Engineer. No dyes or artificial coloring will be acceptable.

- C. WATER - Water shall be taken from a supply distributed for domestic purposes.
- D. MIXING - Mixing shall be done in a mixer to achieve uniform distribution and mixing of the materials and each batch shall be mixed not less than three (3) minutes. No larger batch shall be mixed than that which can be used within thirty (30) minutes. The quantity of water used shall be limited to the smallest amount that will give concrete of such a consistency that it can readily be forced into the mold, and shall not exceed six (6) gallons to each sack of cement. Strength of concrete shall be 5000 PSI. Tests may be called for.
- E. STEEL REINFORCING - All prestressing steel used shall consist of high tensile, stress relieved, wire strand conforming to latest revised ASTM Standard A416 or other approved standards. Additional mild steel reinforcing shall consist of deformed steel bars conforming to ASTM Standard A617-76. Base plates and anchor lugs shall conform to ASTM Standard A36.

All poles shall be spirally reinforced as required to maintain spacing and provide for bursting stressed due to prestressing.

Poles shall be reinforced with four (4) or more stranded cables, the number and size of cables being dependent upon the type of standard used. Deformed bars a minimum of 30 inches long shall be welded to the base plate.

The stranded cables shall be pretensioned a maximum of 70% of their ultimate strength before casting, depending upon the type of standard used.

Stud bolts at least 12 inches long extending 2 inches above standard and bonded to cables shall be provided for top mounting arms.

- F. BONDING OF HARDWARE - All reinforcing steel, cables, deformed bars, base plates, anchor lugs, and stud bolts shall be bonded together. Mast arms shall be positively bonded to stud bolts and/or reinforcing steel and cables.

3) MANUFACTURING:

All standards shall be cast in rigid molds true to design. The steel reinforcement shall be securely anchored to the top and bottom of mold plates. Steel tension strands shall be placed to have a 3/4" minimum concrete coverage at all points.

Concrete shall be placed in mold as rapidly as possible after mixing. When filled, mold shall be placed on spinning machine in a horizontal position and rotated at a gradually increased speed until maximum rotation is attained. Time and speed of rotation shall be sufficient to produce a dense concrete. Excess water and laitance forced to the center of the mass shall be drained in a suitable manner. A central opening or duct, minimum diameter of 1", shall be formed throughout the length of the pole or as shown on drawings and shall be free from sharp projections or edges of a character which might injure the wire or cable. The base shall be cored to dimensions shown on the standard drawings and access into base shall be provided by door opening as detailed on drawings.

4) CURING:

The standard shall be moist steam cured until the concrete has attained a set sufficiently hard to prevent its deformation or slipping of cable strands. Steam curing shall be controlled so there will be

no deformation of the pole center core. Upon removal of the standard from the mold, it shall be protected from the direct action of sun and wind for a period of forty-eight (48) hours. If not steam cured, it shall be kept wet by continuous spraying with water or be covered with heavy burlap or other suitable material that is kept saturated with water during the curing period of seventy-two (72) hours. An additional period of fifteen (15) days shall be allowed for curing in air before standards are delivered for installation.

5) FINISHING:

After the standards have been sufficiently cured, the entire outside surface of the standards shall be sandblasted to remove cement laitance and develop the surface texture, care being taken that the true lines of the standards are maintained. The standards when finished shall be without cracks or crazing and shall have a uniform surface and texture throughout the entire length.

The finished standard shall be coated with an anti-graffiti coating. The coating shall be the Repello-Protective Surface System as manufactured by the L.M. Schofield Company or an approved equal. Three coats of the anti-graffiti coating shall be applied to the light standard.

6) LUMINAIRE BRACKET:

Standards shall be furnished with a bracket or pole mounting conforming to design and dimensions shown on plan. A minimum of 5 inches straight portion shall be provided to mount a 2-inch slipfitter type luminaire. The interior shall be free of sharp edges or projections. Steel arms shall be made of pipe conforming to ASTM Designation A120-47. Aluminum arms shall be made of 6-63-T6 aluminum pipe. Steel brackets shall be hot dipped galvanized. Aluminum brackets shall be furnished with no finish.

7) POLE TOP:

The pole top shall be cast from #214 aluminum alloy. The cover shall be secured to the pole top or bracket by a minimum of two screws.

8) ANCHOR RODS:

Four anchor rods 3/4" or 1" nominal diameter by 36"x4" shall be furnished. The lower end of the rod shall be formed to produce an ell (L) bend. The upper end shall be threaded a minimum of 6" and fitted with two hex nuts per rod. Rod and nuts shall be hot dipped galvanized to ASTM Designation A153-49.

9) MISCELLANEOUS:

All miscellaneous hardware shall be cadmium coated, hot dipped galvanized, or of stainless steel.

10) DESIGN DRAWINGS, SAMPLES, AND GUARANTEE:

The supplier, upon request, shall submit for the approval of the Engineer prior to fabrication, drawings of the standards proposed to be furnished. Such drawings shall be accompanied by design criteria and detailed specifications of materials proposed to be incorporated into the standards. The drawings shall also include details concerning the method of prestressing and fastening of steel to provide the proper residual compressive force in the concrete. The supplier shall also submit as a

part of the required drawings the design of the concrete mix proposed to be used. Prior to approval, the Engineer may require the supplier to deliver to the City a standard for test and evaluation.

The supplier shall provide facilities for the Engineer to select samples of any of the materials proposed to be used and shall also provide facilities for the inspection of all molds, materials, manufacturing and assembly of the standards.

The supplier shall guarantee the City for a period of five (5) years from the date of acceptance, the standards against defective workmanship and materials which would cause cracking and/or spalling or any other defects requiring maintenance of the pole finish or replacement of the pole. When notified by the Engineer, the supplier or his sureties shall promptly replace or repair the defective standard or standards in a manner satisfactory to the Engineer. If the supplier or his sureties fail to promptly make the replacement or repair, the City may perform the work and the supplier and his sureties shall be liable for the cost of all such work. Failure of the supplier or his sureties to comply with the terms of this section may disqualify the supplier for any future City work.

### **307-14 SERVICES.**

#### **307-14.2 Services on Utility Owned Poles.**

Amended to read:

Where the service point is a utility-owned pole, the Contractor shall furnish conduit and all other necessary material to complete the installation of the service riser. If the Contractor is required by the plans or special provisions to install the service riser and equipment on a utility-owned pole, the position of the riser and equipment will be determined by the utility.

The contractor shall make arrangements with the San Diego Gas & Electric Company and shall pay all fees necessary to complete the connection of the service point. Metering installation will be furnished by San Diego Gas & Electric Company.

Full compensation for furnishing and installing service poles, service equipment, conduit, and conductors (including equipment, conduit, and conductors placed on utility-owned poles, and the additional conductor where the service utility requires 3-wire, 120/240-volt service into the meter socket for a 120-volt load), and for any service connection fees, shall be considered as included in the contract item of electrical work involved and no additional compensation will be allowed therefor."

Upon request by the Contractor, the Engineer will arrange for furnishing electrical energy. Energy used prior to final acceptance will be charged to the Contractor, except that the cost of energy used for public benefit, when such operation is ordered by the Engineer, will be at the expense of the City.

## **SECTION 400 - ALTERNATIVE ROCK PRODUCTS, ASPHALT CONCRETE, PORTLAND CEMENT CONCRETE AND UNTREATED BASE MATERIAL**

### **400-2 UNTREATED BASE MATERIALS.**

#### **400-2.1 General.**

##### **400-2.1.1 Requirements**

Revise section to read:

When base material without further qualification is specified the contractor shall supply Crushed Aggregate Base.

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