



## **STANDARD SPECIFICATIONS**

**THE LATEST EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS SHALL APPLY UNLESS MODIFIED OR SUPPLEMENTED IN THESE SPECIFICATIONS.**

**November, 2010**

**Approved and adopted by the City of Clayton City Council on December 7, 2010  
Resolution No. 48 - 2010**

**CITY OF CLAYTON  
6000 HERITAGE TRAIL  
CLAYTON, CA 94517  
(925) 673-7300**



# TABLE OF CONTENTS

## *GENERAL PROVISIONS*

SECTION 1: DEFINITIONS AND TERMS .....	1
SECTION 2: BIDDING.....	2
SECTION 3: CONTRACT AWARD AND EXECUTION.....	3
SECTION 4: SCOPE OF WORK .....	4
SECTION 5: CONTROL OF WORK.....	4
SECTION 6: CONTROL OF MATERIALS.....	6
SECTION 7: LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC .....	6
SECTION 8: PROSECUTION AND PROGRESS.....	7
SECTION 9: MEASUREMENT AND PAYMENT.....	7

## *MISCELLANEOUS*

SECTIONS 10 AND 11: (BLANK).....	8
SECTION 12: CONSTRUCTION AREA TRAFFIC CONTROL DEVICES.....	8
SECTION 13: (BLANK).....	9
SECTION 14: ENVIRONMENTAL STEWARDSHIP.....	9
SECTION 15: EXISTING HIGHWAY FACILITIES.....	9

## *GRADING*

SECTION 16: CLEARING AND GRUBBING.....	10
SECTION 17: WATERING .....	10
SECTION 18: DUST PALLIATIVE.....	10
SECTION 19: EARTHWORK.....	11
SECTION 20: EROSION CONTROL AND HIGHWAY PLANTING .....	11
SECTION 21: (BLANK).....	11
SECTION 22: FINISHING ROADWAY.....	12
SECTION 23: (BLANK).....	12

## *SUBBASES AND BASES*

SECTION 24: LIME STABILIZED SOIL .....	12
SECTION 25: AGGREGATE SUBBASES.....	12
SECTION 26: AGGREGATE BASES.....	12
SECTION 27: CEMENT TREATED BASES .....	13
SECTION 28: LEAN CONCRETE BASE.....	13
SECTION 29: TREATED PERMEABLE BASES.....	13
SECTIONS 30 THROUGH 36: (BLANK).....	13

## *SURFACINGS AND PAVEMENTS*

SECTION 37: BITUMINOUS SEALS .....	13
SECTION 38: BLANK .....	13
SECTION 39: HOT MIX ASPHALT .....	14
SECTION 40: CONCRETE PAVEMENT .....	14
SECTION 41: PAVEMENT SUBSEALING AND JACKING .....	14

## TABLE OF CONTENTS (cont'd.)

SECTION 42: GROOVE AND GRIND PAVEMENT .....	14
SECTIONS 43 THROUGH 48: (BLANK).....	14

### *STRUCTURES*

SECTION 49: PILING.....	14
SECTION 50: PRESTRESSING CONCRETE .....	15
SECTION 51: CONCRETE STRUCTURES.....	15
SECTION 52: REINFORCEMENT .....	15
SECTION 53: SHOTCRETE.....	15
SECTION 54: WATERPROOFING.....	15
SECTION 55: STEEL STRUCTURES .....	15
SECTION 56 : SIGNS.....	16
SECTION 57: TIMBER STRUCTURES .....	16
SECTION 58: PRESERVATIVE TREATMENT OF LUMBER, TIMBER AND PILING .....	16
SECTION 59: PAINTING .....	16
SECTION 60: (BLANK).....	16

### *DRAINAGE FACILITIES*

SECTION 61: CULVERT AND DRAINAGE PIPE JOINTS.....	16
SECTION 62: ALTERNATIVE CULVERTS.....	16
SECTION 63: CAST-IN-PLACE CONCRETE PIPE.....	17
SECTION 64: PLASTIC PIPE.....	17
SECTION 65: REINFORCED CONCRETE PIPE .....	17
SECTION 66: CORRUGATED METAL PIPE.....	17
SECTION 67: STRUCTURAL METAL PLATE PIPE .....	17
SECTION 68: SUBSURFACE DRAINS .....	17
SECTION 69: OVERSIDE DRAINS .....	17
SECTION 70: MISCELLANEOUS FACILITIES.....	18
SECTION 71: (BLANK).....	18
SECTION 72: SLOPE PROTECTION.....	18
SECTION 73: CONCRETE CURBS AND SIDEWALKS.....	18
SECTION 74: PUMPING PLANT EQUIPMENT.....	18
SECTION 75: MISCELLANEOUS METAL.....	19
SECTIONS 76 THROUGH 79: (BLANK).....	19

### *RIGHT OF WAY AND TRAFFIC CONTROL FACILITIES*

SECTION 80: FENCES.....	19
SECTION 81: MONUMENTS.....	19
SECTION 82: MARKERS AND DELINEATORS.....	19
SECTION 83: RAILINGS AND BARRIERS.....	20
SECTION 84: TRAFFIC STRIPES AND PAVEMENT MARKINGS .....	20
SECTION 85: PAVEMENT MARKERS .....	20
SECTION 86: ELECTRICAL SYSTEMS.....	20
SECTION 87: (BLANK).....	20

## TABLE OF CONTENTS (cont'd.)

### *MATERIALS*

SECTION 88: GEOSYNTHETICS .....	20
SECTION 89: (BLANK).....	20
SECTION 90: PORTLAND CEMENT CONCRETE.....	20
SECTION 91: PAINT .....	21
SECTION 92: ASPHALTS.....	21
SECTION 93: LIQUID ASPHALTS.....	21
SECTION 94: ASPHALTIC EMULSIONS.....	21
SECTION 95: EPOXY .....	21



**CITY OF CLAYTON**  
**STANDARD SPECIFICATIONS**

November, 2010

**THE LATEST EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS SHALL APPLY UNLESS MODIFIED OR SUPPLEMENTED IN THESE SPECIFICATIONS.**

All references to Measurement and Payment do not apply to land development or encroachment permit projects. These specifications are supplemented by City Standard Plans, State Standard Plans, CCCSD Standard Plans and Specifications (sanitary sewer work only), and the construction documents for the specific project being constructed.

***GENERAL PROVISIONS***

**SECTION 1**

**DEFINITIONS AND TERMS**

**1-4 DEFINITIONS**

**1-4.01 General**

Whenever in the City Specifications or other contract documents the following terms, or pronouns in place of them, are used, the intent and meaning shall be interpreted as follows:

CITY – The City of Clayton, Contra Costa County, California.

CITY CLERK – The legally authorized City Clerk of the City of Clayton.

CITY COUNCIL – The legally authorized governing body of the City of Clayton.

CITY SPECIFICATIONS – City of Clayton, California, Standard Specifications.

CITY STANDARD PLANS – City of Clayton, California, Standard Plans.

DEVELOPER – Owner or permittee of a City-approved land development or encroachment permit project

**1-4.02 Glossary**

The following are modifications to the definitions specified in the Caltrans Standard Specifications.

Contractor – shall also mean the developer or permittee responsible for the work. A contractor must have a valid State of California Contractors License to work in the public right of way.

Department – The City of Clayton.

Director – The duly appointed City Manager of the City of Clayton.

Engineer or Office Engineer – The City Engineer or his designated representative.

holiday – delete March 31<sup>st</sup>, Cesar Chavez Day, and 2<sup>nd</sup> Monday in October, Columbus Day.

State – The City of Clayton.

## **SECTION 2**

### **BIDDING**

**(Section 2 of the Caltrans Standard Specifications does not apply)**

#### **2-1.01 Proposal Form**

All bids must be made upon the bid form attached in the Specifications. The bid form is bound in a book together with the Notice to Contractors and Special Provisions. The bidder shall completely fill out the form in a clear and legible manner. Should there be any conflict between the unit price and the total shown by the bidder on the bid form for any individual item, the unit price shall govern.

#### **2-1.02 Approximate Quantities**

The quantities shown on the bid form are approximate and are given only as a basis for the comparison of bids, unless the Special Provisions specifically fix the quantity. The City does not expressly, nor by implication, represent that the actual amount of work will correspond to the estimate.

#### **2-1.03 Examination Of Plans, Specifications, Special Provisions, And Site Of Work**

The bidder is required to examine carefully the site of the work contemplated, the Bid, Plans, Specifications and Contract forms, and it will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the Bid, the Specifications, Plans, Special Provisions, and the Contract. It is mutually agreed that submission of a Bid by the bidder shall be considered prima facie evidence that the bidder has made such an examination.

#### **2-1.04 Addenda**

The Engineer may, when he deems necessary, and at a time prior to the bid opening, issue addenda to the Plans and Specifications to amend, clarify or correct matter contained therein. Such addenda shall constitute a part of said Plans and Specifications and shall be equally binding with them. Addenda will be forwarded to all prospective bidders, insofar as they are known to the Engineer, in any manner determined by the Engineer.

#### **2-1.05 Bidder's Guaranty**

All bids shall be presented under sealed cover and shall be accompanied by cash, cashier's or certified check or a bidder's guaranty shall be in an amount equal to at least ten percent (10%) of the amount of the bid and made payable to the City of Clayton.

#### **2-1.06 Withdrawal Of Bids**

Any bids may be withdrawn, at any time prior to the time fixed in the Public Notice for the opening of bids, by filing a written request with the City Clerk for the withdrawal of the bid. The request shall be executed by the bidder or his representative. The withdrawal of a bid prior to the bid opening does not prejudice the right of the bidder to file a new bid. No bids may be withdrawn after the time fixed in the Public Notice for opening of bids.

#### **2-1.07 Rejection Of Proposal Containing Alterations, Erasures Or Irregularities**

Any bid may be rejected by the City Council if such bid shows any alterations of form, additions not called for, conditional or alternative bids, incomplete bids, or substantial irregularities of any kind.

### **SECTION 3**

#### **CONTRACT AWARD AND EXECUTION**

**(Does Not Apply)**

#### **3-1.02 Contract Award**

The award of the contract, if awarded, will be made within thirty (30) calendar days after the opening of the proposals. The award of the contract will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed. Such time for award of the contract may be extended by the City Council.

The right is reserved by the City Council to reject any and all proposals at its discretion.

**3-1.03 Contract Bonds (Public Contract Code §§ 10221 and 10222)**

The Contractor shall, at his sole expense, furnish two (2) good and sufficient bonds. One bond shall be a faithful performance bond and the other a labor and materials bond. Each of the said bonds shall be executed in a sum of not less than 100% of the total contract price and shall be issued by a corporate surety or sureties admitted by the State of California Department of Insurance.

Whenever any surety on any such bonds becomes insufficient, or the City Engineer has reasonable cause to believe that such surety or sureties have become insufficient, a demand in writing may be made of the Contractor to furnish good and sufficient bonds as required by the terms of the contract. Thereafter, no payment shall be made upon such contract to the Contractor or any assignee of the Contractor until such further bond or bonds or additional surety has been furnished. All alterations, extensions of time, extra work, and other changes authorized by the contract documents may be made without securing the consent of the surety or sureties on the contract bonds.

**3-1.09 Contract Execution**

The contract shall be signed by the successful bidder and returned, together with the contract bonds, within ten (10) calendar days after the Contractor has received the contract. Failure to execute a contract and file acceptable bonds and certificates of insurance as provided herein shall result in forfeiture of the proposal guaranty.

**3-1.10 Bidders' Securities**

Within ten (10) calendar days after the award of the contract by the City Council and upon request by the bidder, the City Clerk will return to the unsuccessful bidders, the bidder's guaranty accompanying their respective bids.

**SECTION 4**

**SCOPE OF WORK**

**(Subsection 4-1.035 Does Not Apply)**

**SECTION 5**

**CONTROL OF THE WORK**

**5-1.005 General**

The City of Clayton does not utilize a website for contract administration and forms. Any available forms may be provided by and submitted electronically to the Engineer.

#### **5-1.04 Contract Components**

If there is a conflict between contract documents, the document highest in precedence shall control. The precedence shall be:

1. Permits from other agencies as may be required by law
2. Special Provisions
3. Project Plans
4. City Standard Plans
5. City Standard Specifications
6. Caltrans Standard Specifications
7. Caltrans Standard Plans
8. CCCSD Standard Plans and Specifications (for sanitary sewer work only)

Change Orders, Supplemental Agreements and approved revisions to Plans and Specifications will take precedence over items 2 through 6 above. Detailed plans shall have precedence over general plans.

Should it appear that the work to be done, or any matter relative thereto, is not sufficiently detailed or explained in these Specifications, Plans, and the Special Provisions, the Contractor shall apply to the Engineer for such further explanations as may be necessary, and shall conform to such explanation or interpretation as part of the contract, so far as may be consistent with the intent of the original specifications. In the event of doubt or question relative to the true meaning of the specifications, reference shall be made to the Engineer, whose decision shall be final.

In the event of any discrepancy between any drawing and the figures written thereon, the figures shall be taken as correct.

#### **5-1.07 Lines And Grades**

Additional provision: The Developer's Engineer will set stakes and furnish cut sheets to the City a minimum of twenty four (24) prior to the start of work.

#### **5-1.08 Inspection**

Additional Provision: The City shall be notified at least twenty four (24) hours before any work is commenced or resumed and before each phase of work is to be inspected.

#### **5-1.13 Final Inspection**

Additional Provision: Upon completion of the work, the Contractor shall submit a letter stating that all the improvements have been completed in accordance with the approved plans and request that the City accept these improvements. No final inspection will be made until all fees are paid.

#### 5-1.18 Property And facility Preservation

Additional Provision: The contractor and/or developer shall locate and preserve all property corners, monuments, bench marks and other survey points within the area of work. Any damaged points shall be reset by a licensed land surveyor at the contractor's and/or developer's expense.

#### 5-1.19 Hours Of Work

Work within the public right-of-way is restricted to 7:00 a.m. to 6:00 p.m. on weekdays. Work that encroaches into the driving lanes on Clayton Road or Marsh Creek Road shall not occur prior to 9:00 a.m. in the north/westbound direction or after 3:00 p.m. in the south/eastbound direction unless written authorization is obtained from the Engineer.

No work will be allowed within the public right-of-way on Saturday, Sunday or legal holidays without written permission from the Engineer.

### SECTION 6

#### CONTROL OF MATERIALS

#### 6-3.01 Testing By Contractor

Unless otherwise specified in the special provisions, the Contractor shall provide all required materials and construction testing. For development projects, the developer shall provide all required materials and construction testing.

All test results shall be provided to the City within twenty four (24) hours of test completion. Subsequent work may not proceed until City has reviewed and accepted preceding test results.

The cost of such testing shall be borne by the Contractor and/or developer.

### SECTION 7

#### LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC (Subsections 7-1.01A(1), 7-1.01A(2), 7-1.01A(2)(a) and 7.101A(3) do not apply to land development projects)

#### 7-1.01E Trench Safety

Additional Provision: Contractor shall provide his annual trench and/or excavation permit issued by the State Division of Occupational Safety and Health.

### **7-1.17 Acceptance Of Contract**

Additional Provision: The work will not be accepted until a 15% maintenance bond has been provided by the contractor or developer, all fees have been paid, and cleanup has been completed.

## **SECTION 8**

### **PROSECUTION AND PROGRESS**

**(Subsections 8-1.04, 8-1.06, 8-1.07, 8-1.08, 8-1.09 and 8-1.11 do not apply to land development projects)**

### **8-1.03 Beginning Of Work**

Additional Provision: For land development projects, no work will be permitted to proceed until:

- 1) Plans are submitted and approved by the City;
- 2) All fees are paid and permits/licenses are issued;
- 3) Bonds and insurance certificates are submitted and approved;
- 4) Easements and permits to enter upon private property are obtained;
- 5) A preconstruction meeting has been held.

### **8-1.05 Temporary Suspension Of Work**

Additional Provision: For land development projects, the City may suspend work if any of the following occur:

- 1) The developer, contractor, job engineer, or other Owner's representative fails to comply with these specifications, the City of Clayton Municipal Code, or specific instructions of the Engineer;
- 2) Traffic is improperly controlled; A hazardous condition exists;
- 3) Defective materials or work are not corrected;
- 4) Dust problems are not corrected;
- 5) Stormwater treatment facilities are not provided or properly maintained.

## **SECTION 9**

### **MEASUREMENT AND PAYMENT**

**(Does not apply to land development projects)**

### **9-1.11 Payments Withheld**

The City may withhold or, on account of later discovered evidence, nullify all or part of any certification made to the Contractor by the City as to the amount determined to be due the

Contractor, to such extent and period of time only as may be necessary protect the City from loss on account of:

- 1) Defective work not remedied;
- 2) Claims filed or reasonable evidence indicating probable filing;
- 3) Failure to properly pay Subcontractors for material or labor;
- 4) Reasonable doubt that the work can be completed for the balance then unpaid;
- 5) Damage to another Contractor, or third party.

#### **9-1.12 Contractor's Financial Obligation**

The Contractor shall promptly make payment to all persons supplying labor and materials, and before final acceptance of the work and final payment to the Contractor, including all sums retained by the City, the Contractor shall furnish to the City, satisfactory evidence that all claims for labor and material furnished and used in the construction of said work have been settled and that no legal claim can be filed against the City for such labor and material.

### ***MISCELLANEOUS***

#### **SECTION 10 (Blank)**

#### **SECTION 11 (Blank)**

#### **SECTION 12**

### **CONSTRUCTION AREA TRAFFIC CONTROL DEVICES**

#### **12-1.01 Description**

Additional Provision: It shall be the contractor's responsibility to notify all affected public service agencies including, but not limited to, police, fire district, emergency medical providers, school districts, public transit agencies, etc. as to construction schedules and the contractor shall maintain a current list or diagram of limited access areas.

#### **12-2.02 Flagging Costs**

Flagging costs will be borne solely by the contractor.

#### **12-3.03A Flashing Arrow Signs Required**

Flashing arrow signs are required on all arterial street lane closures.

### **12-3.13 Roadway Widening**

Where widening occurs adjacent to a traffic lane is in use, the area adjacent to the traffic lane shall be sloped at 4:1 to provide for public safety. The material used for this slope shall be completely removed as the new structural section is being constructed to allow proper compaction and to tie the existing base rock and the new base rock together. The 4:1 slope will be required until the new base rock is 0.5 feet below the existing pavement section.

If temporary K railings are used, the 4:1 slope may be omitted.

## **SECTION 13 (Blank)**

## **SECTION 14**

### **ENVIRONMENTAL STEWARDSHIP**

**(Shall Apply Without Modification)**

## **SECTION 15**

### **EXISTING HIGHWAY FACILITIES**

### **15-1.03 Recycling**

All existing facilities to be removed shall be removed from the worksite and, where appropriate, disposed of at recycling facilities. Prior to commencement of work, Contractor shall provide the City a list of recycling facilities he intends to use for the work. Prior to completion of the work and acceptance by the City, the contractor shall provide proof of delivery of such materials from the recycling facilities, including the actual quantities delivered and recycled.

### **15-2.04 Salvage**

Additional Provision: All undamaged materials specified to be salvaged, shall be delivered to the City's corporation yard at 6000 Heritage Trail. The Engineer shall be given twenty four (24) hours notice prior to delivery of salvaged materials.

### **15-2.05A Frames, Covers, Grates, and Manholes**

Additional Provisions: On manholes being adjusted to grade, only one additional manhole adapter ring will be allowed. It shall be attached by set screws or welding so that it does not move under heavy truck traffic. The top of the structure must be reconstructed as new construction if it does not fit the finished pavement grade within 0.05 feet.

Prior to beginning work, a false bottom shall be constructed in all manholes to prevent debris from falling into the pipes.

## ***GRADING***

### **SECTION 16**

#### **CLEARING AND GRUBBING**

##### **16-1.03 Construction**

Additional Provisions: All trees are to be protected unless marked by the Engineer for removal. If the contractor or developer damages or removes an unmarked tree, he shall replace the tree with an equivalent tree of a species and size to be determined by the Engineer. Further, the cost to maintain the new tree until it is the size of the damaged or removed tree, in an amount to be determined solely by the Engineer, shall be paid to the City by the contractor or developer.

Tree stumps and roots over four (4) inches in diameter shall be completely removed and the ground recompacted to 90% relative compaction.

The contractor shall have a water truck on the site during the clearing and grubbing phase.

##### **16-1.04 Removal And Disposal Of Materials**

All materials removed shall be disposed of in accordance with Subsection 7-1.13, "Disposal of Materials Outside the Highway Right of Way." The contract work area shall be left with a neat and finished appearance.

### **SECTION 17**

#### **WATERING**

**(Shall Apply Without Modification)**

### **SECTION 18**

#### **DUST PALLIATIVE**

**(Shall Apply Without Modification)**

## SECTION 19

### EARTHWORK

#### **19-2.03 Blasting**

Blasting will not be allowed within the City Limits.

#### **19-3.02 Excavation For Culverts**

When the plans require embankment construction prior to culvert excavation, the embankment shall first be constructed to two (2) feet above the top of pipe or to subgrade. Trench excavation and backfill shall conform to City Standard Plan S-16.

#### **19-3.025A Shaped Bedding**

Shaped bedding in lieu of bedding material as shown on City Standard Plan S-16 shall not be allowed.

#### **19-3.025B Sand Bedding**

Sand bedding will only be allowed if required by the utility company that is responsible for the conduit.

#### **19-3.06 Structure Backfill**

Additional Provision: Trench backfill shall conform to City Standard Plan S-16.

#### **19-5.03 Relative Compaction (95 Percent)**

Additional Provision: The limits of the 95% relative compaction requirement shall be from back of curb to back of curb in the public right-of-way.

## SECTION 20

### EROSION CONTROL AND HIGHWAY PLANTING

(Shall Apply Without Modification)

## SECTION 21

(Blank)

**SECTION 22**

**FINISHING ROADWAY**  
**(Shall Apply Without Modification)**

**SECTION 23**

**(Blank)**

***SUBBASES AND BASES***

**SECTION 24**

**LIME STABILIZED SOIL**  
**(Shall Apply Without Modification)**

**SECTION 25**

**AGGREGATE SUBBASES**

**25-1.02a Aggregate Subbases**

Aggregate subbase shall conform to the grading and quality requirements shown in the Table for Class 2 Aggregate Subbase.

**25-1.05 Compacting**

The surface of the aggregate subbase shall not be higher than the grades established by the Engineer or shown on the plans. Low areas shall be filled with aggregate base during the spreading operation for aggregate base.

**SECTION 26**

**AGGREGATE BASES**

**26-1.02B Class 2 Aggregate Base**

Aggregate base shall conform to the grading and quality requirements shown in the Table for Class 2, 3/4 " maximum aggregate base.

**26-1.04 Spreading**

The aggregate base under the gutter shall be spread and compacted at the same time as the roadway aggregate base.

**26-1.05 Compacting**

The surface of the aggregate base shall not be higher than the grades established by the Engineer or shown on the plans. Low areas shall be filled with asphalt concrete during the spreading operation for the base course of hot mix asphalt or finish course for single lift hot mix asphalt sections.

The work specified in this Section includes furnishing, spreading and compacting mineral aggregate on the subgrade in accordance with these Specifications.

**SECTION 27**

**CEMENT TREATED BASES**  
**(Shall Apply Without Modification)**

**SECTION 28**

**LEAN CONCRETE BASE**  
**(Shall Apply Without Modification)**

**SECTION 29**

**TREATED PERMEABLE BASES**  
**(Shall Apply Without Modification)**

**SECTION 30 through 36**  
**(Blank)**

***SURFACINGS AND PAVEMENTS***

**SECTION 37**

**BITUMINOUS SEALS**  
**(Shall Apply Without Modification)**

**SECTION 38**  
**(Blank)**

**SECTION 39**

**HOT MIX ASPHALT**

**39-1.02E Aggregate**

The aggregate for the surface course shall conform to the grading and quality requirements of 1/2" maximum, medium grading, Type B HMA.

The aggregate for the base course shall conform to the grading and quality requirements of 3/4" maximum, medium grading, Type B HMA.

**SECTION 40**

**CONCRETE PAVEMENT**  
**(Shall Apply Without Modification)**

**SECTION 41**

**PAVEMENT SUBSEALING AND JACKING**  
**(Shall Apply Without Modification)**

**SECTION 42**

**GROOVE AND GRIND PAVEMENT**  
**(Shall Apply Without Modification)**

**SECTIONS 43 through 48**  
**(Blank)**

***STRUCTURES***

**SECTION 49**

**PILING**  
**(Shall Apply Without Modification)**

**SECTION 50**

**PRESTRESSING CONCRETE**  
**(Shall Apply Without Modification)**

**SECTION 51**

**CONCRETE STRUCTURES**

**51-1.02 Minor Structures**

Minor concrete structures shall be cast in place unless otherwise authorized by the Engineer.

**SECTION 52**

**REINFORCEMENT**  
**(Shall Apply Without Modification)**

**SECTION 53**

**SHOTCRETE**  
**(Shall Apply Without Modification)**

**SECTION 54**

**WATERPROOFING**  
**(Shall Apply Without Modification)**

**SECTION 55**

**STEEL STRUCTURES**  
**(Shall Apply Without Modification)**

**SECTION 56**

**SIGNS**

**56-2.06 Measurement**

Roadside signs shall be measured by the unit from actual count.

**SECTION 57**

**TIMBER STRUCTURES**  
**(Shall Apply Without Modification)**

**SECTION 58**

**PRESERVATIVE TREATMENT OF LUMBER, TIMBER AND PILING**  
**(Shall Apply Without Modification)**

**SECTION 59**

**PAINTING**  
**(Shall Apply Without Modification)**

**SECTION 60**

**(Blank)**

***DRAINAGE FACILITIES***

**SECTION 61**

**CULVERT AND DRAINAGE PIPE JOINTS**  
**(Shall Apply Without Modification)**

**SECTION 62**

**ALTERNATIVE CULVERTS**  
**(Shall Apply Without Modification)**

**SECTION 63**

**CAST-IN-PLACE CONCRETE PIPE**  
(Shall Apply Without Modification)

**SECTION 64**

**PLASTIC PIPE**  
(Shall Apply Without Modification)

**SECTION 65**

**REINFORCED CONCRETE PIPE**

**65-1.02A(1) Circular Reinforced Concrete Pipe (Designated or Selected by Class)**

Concrete pipe shall meet the minimum strength requirements of Class III pipe in accordance with the requirements of AASHTO Designation M170, unless a stronger class of pipe is shown on the plans. Non-reinforced precast concrete pipe shall not be used in the public right-of-way.

**SECTION 66**

**CORRUGATED METAL PIPE**  
(Shall Apply Without Modification)

**SECTION 67**

**STRUCTURAL METAL PLATE PIPE**  
(Shall Apply Without Modification)

**SECTION 68**

**SUBSURFACE DRAINS**  
(Shall Apply Without Modification)

**SECTION 69**

**OVERSIDE DRAINS**  
(Shall Apply Without Modification)

**SECTION 70**

**MISCELLANEOUS FACILITIES**  
**(Shall Apply Without Modification)**

**SECTION 71**  
**(Blank)**

**SECTION 72**

**SLOPE PROTECTION**  
**(Shall Apply Without Modification)**

**SECTION 73**

**CONCRETE CURBS AND SIDEWALKS**  
**(Shall Apply Without Modification)**

**73-1.05 Curb Construction**

Weakened plane joints shall conform to City Standard Plans. Premolded expansion joint fillers are not allowed.

**73-1.05B Extruded or Slip-Formed Curb Construction**

Weakened plane joints shall conform to City Standard Plans. Premolded expansion joint fillers are not allowed.

**73-1.06 Sidewalk, Gutter Depression, Island Paving, Curb Ramp (Wheelchair Ramp) and Driveway Construction**

Weakened plane joints shall conform to City Standard Plans. Premolded expansion joint fillers are not allowed.

**SECTION 74**

**PUMPING PLANT EQUIPMENT**  
**(Shall Apply Without Modification)**

**SECTION 75**

**MISCELLANEOUS METAL**

**75-1.02 Miscellaneous Iron and Steel**

Drainage inlet frames and grates shall be galvanized in accordance with the provisions of Section 75-1.05, "Galvanizing".

**SECTIONS 76 through 79  
(Blank)**

***RIGHT OF WAY AND TRAFFIC CONTROL FACILITIES***

**SECTION 80**

**FENCES  
(Shall Apply Without Modification)**

**SECTION 81**

**MONUMENTS**

**81-1.02 Materials**

Survey marker disks, frames and covers for survey monuments shall conform to the dimensions and details shown on the City's Standard Plans. All materials shall be supplied by the contractor.

**81-1.03 Construction**

Survey monuments shall be cast-in-place and shall conform to the dimensions and details shown on the City's Standard Plans. Surplus excavated materials remaining after the monuments have been constructed shall be disposed of outside of the highway right-of-way.

**SECTION 82**

**MARKERS AND DELINEATORS  
(Shall Apply Without Modification)**

SECTION 83

**RAILINGS AND BARRIERS**  
(Shall Apply Without Modification)

SECTION 84

**TRAFFIC STRIPES AND PAVEMENT MARKINGS**  
(Shall Apply Without Modification)

SECTION 85

**PAVEMENT MARKERS**  
(Shall Apply Without Modification)

SECTION 86

**ELECTRICAL SYSTEMS**  
(Shall Apply Without Modification)

SECTION 87

(Blank)

***MATERIALS***

SECTION 88

**GEOSYNTHETICS**  
(Shall Apply Without Modification)

SECTION 89

(Blank)

SECTION 90

**PORTLAND CEMENT CONCRETE**  
(Shall Apply Without Modification)

**SECTION 91**

**PAINT**

**(Shall Apply Without Modification)**

**SECTION 92**

**ASPHALTS**

**(Shall Apply Without Modification)**

**SECTION 93**

**LIQUID ASPHALTS**

**(Shall Apply Without Modification)**

**SECTION 94**

**ASPHALTIC EMULSIONS**

**(Shall Apply Without Modification)**

**SECTION 95**

**EPOXY**

**(Shall Apply Without Modification)**