A. GENERAL:

1. CONSTRUCTION SCHEDULE:

A) Coordinate with and provide the City Representative with a work schedule.

B) Perform all work between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday in the Public Right of Way, unless approved in advance by the City Representative.

C) Do not perform work on weekends or during City recognized holidays without written City approval.

D) Do not make any lane closures on arterial highways shall be between 8:30 a.m. to 3:30 p.m.

2. NOTIFICATIONS:

A) Provide, to the City Representative, at least 10 days prior to the start of construction the following:

1) The name and telephone number of the Contractor's representative to be contacted by the residents and businesses in the project area to coordinate deliveries or answer questions on the project.

2) A project schedule for the various items of work.

B) Note that City will prepare a letter to be delivered by the Contractor to all residents and businesses adjacent to the project.

1) Deliver this letter at least 7 days prior to the start of construction.

2) Provide, to the City Representative, written confirmation of the completion of delivery of these letters.

C) Contact, to City Representative, at least 48 hours prior to the start of construction regarding:

1) To coordinate trash pickup with Anaheim Disposal.

2) To coordinate any street closures; provide written verification that all residents and businesses were contacted.

3. CONSTRUCTION INFORMATION SIGNS:

A) Post, City-provided, project informational signs for the duration of this contract.

B) Install, maintain, and remove all signs as work progresses. City will provide installation locations.

4. PERMITS:

A) Obtain all necessary and applicable City permits.

B) Note that the permits will be valid for one year.

C) Note that City will issue the permits at no charge to the Contractor.

D) Obtain all necessary permits for the discharge or disposal of any ground or surface water in accordance with the California Regional Water Quality Control Board Regulations.

E) Obtain water service/meter application and permit as required by the City of Anaheim-Public Utilities.

5. SURVEY CONTROLS:

A) Note that any required removal of survey controls; i.e., brass tag or washer, etc. must be re-established by the City's Survey.

B) Contact the City Representative who will coordinate with the City's Chief of Surveys for re-establishment and replacement of survey controls.

B. MATERIALS:

1. 200-1.3 Gravel:

Pea gravel for irrigation valve box drainage shall have 100 percent passing the 3/8-inch sieve and less than 5 percent passing the No. 8 sieve.

2. 200-1.4 Coarse Aggregate for Portland Cement Concrete:

The Cleanness Value requirement of Section 200-1.4
(Replace with the following):

Tests	Test Method No.	Requirements
Cleanness Value	California 227	
Individual Test		70 Min
Moving Average		75 Min

3. 200-1.5.3 Sand for Portland Cement Concrete:

The sand equivalent requirement of Section 200-1.5.3
(Replace with the following):

Tests	Test Method No.	Requirements
Cleanness Value	California 217	
Individual Test		70 Min
Moving Average		75 Min

4. 201-1.1.2 Concrete Specified by Class and Alternate Class:
(Insert the following after the last sentence in the first paragraph):

For 2500 class concrete, a prequalified mix design may be used in accordance with the provisions of ACI 318-71, /section 4.2.2.1 in which f'c = 17 mpa (2500 psi)

5. 201-1.2.1 Portland Cement:
(Revise the first paragraph of this section as follows):

The cement type requirement, Section 201-1.2.1, shall conform to ASTM C 150 and the low alkali requirements of Table 1A therein.

6. 201-5.1 General:

Mortar shall be class E, combined with ¼ part lime; all parts by volume of cement content. Minimum compressive strength at 28 days shall be 2,000 psi.

7. 202-1.5.2 Grout:

A) Grout shall be composed of 1 part cement, 3 parts concrete sand and not more than 1/10 part lime by volume of cement content.

B) Grout spaces 3' or more in both horizontal dimensions for concrete block masonry may have 2 parts 3/8" maximum size pea gravel added to grout mix. In this case, grout mix shall be composed of 1 part cement, 2 parts concrete sand and 2 parts pea gravel; all parts by volume of cement content.

C) Sufficient water shall be added to the grout mix to produce consistency for pouring without segregation of the constituents. Minimum compressive strength at 28 days shall be 2,000 psi.

8. 203-6 Asphalt Concrete:

   Asphalt concrete shall be Type III-C3-PG 64-10 for surface course and Type III-B2-PG 64-10 for base course, conforming to SSPWC (Standard Specifications for Public Works Construction, 2006 Edition and any supplement therein).

9. Interlocking Concrete Pavers:

   A) Manufacturer: Acker-Stone Ind., Inc., or equal.

   B) Interlocking Concrete Pavers:

      1) Paver Type: Serpentine

         (a) Material Standard: Comply with material standards set forth in ASTM C 936.

         (b) Color TC Brown

         (c) Color Pigment Material Standard: Comply with ASTM C 979.

         (d) Size: 9 inches x 4 1/2 inches x 80mm

      2) Substitutions: Only as approved by the City of Anaheim City Representative.

   C) Bedding Joint and Sand:

      1) Provide bedding and joint sand as follows:

         (a) Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.

         (b) Do not use limestone screenings, stone dust, or sand for the bedding sand material that does not conform to conform to the grading requirements of ASTM C 33.

         (c) Do not use mason sand or sand conforming to ASTM C 144 for the bedding sand.

10. Root Guards:

   A) Contractor to install a 18" x 20' linear barrier, manufactured by Villa Root Barrier Inc. or equal, along the length of the replaced curb or curb and gutter and shall be paid at the unit price and shall include any necessary grading required, disposal, all labor, material, equipment, and incidentals necessary to complete the work as directed by the City Representative.

   B) The barriers shall be black; made of high-density recycled polystyrene rubber.

   C) Installation per recommended manufacturer specifications.

(CONTINUED ON NEXT PAGE)

C. CONSTRUCTION METHODS:

1. GENERAL:

A) The year in which the improvement is constructed shall be stamped in the completed work.

B) Adjustment of traffic pull boxes, water valves, vaults, conduits, and any other utility structures are to be per SSPWC or APWA standards.

C) Note that any required work may cause collateral damage to the adjacent surfaces and such damage must be restored based on the unit prices herein.

D) Make saw-cuts along all removal lines unless they need to remain in place or at City Representative's direction.

2. SPECIFIC:

A) Note that all work is to be performed according to the most recent edition of the "Greenbook", Standard Specifications for Public Works Construction and according to any attached City Standard Details (Standards); in the event of any conflict between the Greenbook, stated specifications, and the Standards, the Standards will govern, the City stated specs.

B) Note that the Standards listed below may include a City Specific Requirement that modifies the Greenbook specifications:

C) EXAMINATION:

1) Note that compaction of the soil sub-grade must be at least 98% standard Proctor density per ASTM D 1557 for pedestrian areas and residential driveways. Compaction to at least 98% modified Proctor density per ASTM D 1557 is recommended for areas subject to heavy vehicular traffic. Stabilization of the sub-grade and/or base material may be necessary with weak or saturated sub-grade soils.

2) Note that prior to screeding the bedding sand, the recommended base surface tolerance should be ±3/8 in. (±10 mm) over a 10 ft. (3 m) straight edge. See ICPI Tech Spec 2, Construction of Interlocking Concrete Pavements for further guidance on construction practices.

3) Acceptance of Site Verification of Conditions:

(a) Inspect, accept and certify in writing to the paver installation subcontractor that site conditions meet specifications for the following items prior to installation of interlocking concrete pavers.

(b) Verify that sub-grade preparation, compacted density and elevations conform to specified requirements.

(c) Do not proceed with installation of bedding sand and interlocking concrete pavers until [sub-grade soil and] base conditions are corrected by the General Contractor or designated subcontractor.

D) PREPARATION:

1) Verify base is dry, certified by Contractor as meeting material, installation and grade specifications.

2) Verify that base is ready to support sand and pavers and imposed loads.

E) INSTALLATION:

1) Spread bedding sand evenly over the base course and screed to a nominal 1 in. (25 mm) thickness, not exceeding 11/2 in. (40 mm) thickness. Spread bedding sand evenly over the

base course and screed rails, using the rails and/or edge restraints to produce a nominal 1 in. (25 mm) thickness, allowing for specified variation in the base surface.

(a) Do not disturb screeded sand.

(b) Screeded area shall not substantially exceed that which is covered by pavers in one day.

(c) Do not use bedding sand to fill depressions in the base surface.

2) Lay pavers in pattern(s) to be designated by the City Representative.

3) Place units hand tight without using hammers.

4) Make required horizontal adjustments to placement of laid pavers with rubber hammers and pry bars.

5) Provide joints between pavers between [1/16 in. and 3/16 in. (2 and 5 mm)] wide. No more than 5% of the joints shall exceed [1/4 in. (6 mm)] wide to achieve straight bond lines.

6) Ensure that joint (bond) lines do not deviate more than ±1/2 in. (±15 mm) over 50 ft. (15 m) from string lines.

7) Fill gaps at the edges of the paved area with cut pavers or edge units.

8) Cut pavers to be placed along the edge with a masonry saw.

9) Remove excess sand from surface when installation is complete.

10) Sweep surface, broom clean, after removal of excess joint sand.

D. ALTERATIONS TO THE GREENBOOK SPECIFICATIONS:

1. 212-1.4.2 Trees
(Add the following):

A) Tree roots will be pruned on either side of the concrete surface in order to get the concrete back in proper place. This means that no more than five (5) inches of root pruning on either side of the concrete surface is allowed to install a form board back in place. Root pruning for sidewalk depth will be the maximum of seven (7) inches below sub-grade, curb and gutter depth will also be the maximum of seven (7) inches below sub-grade, or as directed by the City Representative or a Public Works Operations Field Arborist.

B) Root pruning equipment will be specifically designed for this purpose with cutting teeth sharpened to sever roots in a clean manner.

2. 300-1.1 General
(Add the following):

A) Areas to be cleared shall be limited to the immediate construction area only, and shall not include the entire right-of-way.

B) Demolition and removal of irrigation equipment and such other items not mentioned that are required are part of this work in this section.

C) Contractor shall notify the City Representative of any damaged or non-salvageable materials prior to commencing any removal or grading operations. Materials found to be damaged after the work commences shall be assumed to be the responsibility of the Contractor. Contractor will not be paid for the replacement or repair of facilities or equipment believed by the City Representative to be damaged after the work commences.

3. 300-2.6 Surplus Material
(Insert the following after the second paragraph):

   A) All surplus material shall be disposed of in a legal manner at the expense of the Contractor. Contractor shall make all arrangements for disposal of the material at off-site locations in accordance with all applicable ordinances.

4. 300-4.7 Compacting:
(Add the following):

   A) Consolidation by jetting will not be permitted.

5. 303-1.1 Concrete and Masonry Construction: General:
(Insert the following after the first sentence):

   A) Scope:

      1) This work includes everything necessary for and incidental to executing and completing the masonry work as directed by the City Representative.

   B) Materials:

      1) All masonry 6 x 6 x 16", or 8 x 8 x 16" CMU blocks and color(s) will be determined by the City Representative. Three samples of the concrete block(s) to be used shall be submitted to the City Representative for approval prior to the start of construction.

      2) Cement: The cement shall conform to ASTM C150, Type I, Type II, and Type V.

      3) Sand for mortar shall conform to ASTM C 144

      4) Sand and gravel for masonry grout shall conform to ASTM C 404

      5) Water: Potable and clean from domestic supply.

      6) Hydrated lime shall conform to ASTM C 207, Type S.

      7) Reinforcing Steel: ASTM A 615, grades as shown.

6. 303-5.3 Placing Concrete:
(Add the following):

   A) Concrete curb, curb and gutter shall not be constructed monolithically with access ramps.

   B) Concrete curb, curb and gutter shall be constructed monolithically with PCC Commercial Driveway Approach.

   C) Pour PCC sidewalks in place separately.

7. 303-5.5.3 PCC Sidewalk:

   A) Construct in accordance with Standard Plan 110.

   B) Remove and make saw cuts in accordance with Standard Plan 112-1, unless they need to remain in place as approved by the City Representative.

8. 303-5.5.4 Curb and Gutter, Cross Gutter:

   A) Construct in accordance with Standard Plans 120 and 121.

   B) Note that Curb and Gutter shall conform to the requirements of Section 303-5.3.

   C) Remove and make saw cuts in accordance with Section 300-1.3.2 (c).

D) Test and correct all concrete water flow lines for any irregularities causing water to pond; refinish as necessary.

9. 303-5.5.5 Alley Intersections, Access Ramps, and Driveways: City Standard Details:
   A) Standard 110-B: Sidewalk:
      1) Pages included: 1, 2, and 3 of 3 pages listed.
      2) Specific: 4" thick PCC sidewalk (match existing) or at City Representative's direction.
   B) Standard 111-3: Curb Ramp:
      1) Pages included: 7, 8, 9, and 10 only of 10 pages listed.
      2) Specific: Access Ramps shall include furnishing and installing the truncated domes (3'X4').
   C) Standard 112-1: Curb and Sidewalk Joints:
      1) Pages included: 1 of 1 page listed.
      2) Specific: no variation from Greenbook.
   D) Standard 114-A: Local Street Driveway Approach:
      1) Pages included: 1 and 2 only of 3 pages listed.
      2) Specific: no variation from Greenbook.
   E) Standard 115-B: Arterial Highway and Commercial Driveway Approach:
      1) Pages included: 1 and 2 only of 3 pages listed.
      2) Specific: no variation from Greenbook.
   F) Standard 116: Anaheim Resort Area Typical Concrete Scoring Pattern:
      1) Pages included: 1 and 2 of 2 pages listed.
      2) Specific: no variation from Greenbook.
   G) Standard 117: Anaheim Resort Area Tree Well/Planter:
      1) Pages included: 1 of 1 page listed.
      2) Specific: no variation from Greenbook.
   H) Standard 120: Curbs and Gutters:
      1) Pages included: 1 and 2 of 2 pages listed.
      2) Specific: no variation from Greenbook.
   I) Standard 121-A: Cross Gutter:
      1) Pages included: 1 and 2 of 2 pages listed.
      2) Specific: no variation from Greenbook.
   J) Standard 130-1: Alley Intersection:
      1) Pages included: 1 of 1.
      2) Specific: no variation from Greenbook.
   K) Standard 132-C: Trench Replacement:
      1) Pages included: 1, 2, 3, 4 of 4 pages listed.

2) Specific: Remove and construct 4" thick or 6" thick on arterial highways or at City Representative's direction.

10. 303-6 Stamped Concrete:

A) Imprint with a basket weave pattern or other design as designated by the City Representative.

11. 303-7 Colored Concrete:

A) Note that the concrete color is to be the City Standard, La Crescenda Brown, Schoffield Color Mix.

B) Note that other colors will be according to the following:

1) Color will be selected by the City Representative.

2) Colored hardener shall be a ready-to-use, dry-shake type colored hardener and shall be shake-free intergrinds of pigments, surface conditioning and dispersing agents, and Portland cement, blended with hard, graded aggregate.

3) Color wax complying with ASTM C309 shall be used as a curing membrane and shall conform to applicable air pollution regulations. Installations shall be as follows:

(a) The concrete mix shall be placed and screeded to the proper grade and wood floated to a uniform surface in the normal manner.

(b) Color hardener shall be applied evenly to the plastic surface by the dry-shake method using a minimum of 60 pounds per 100 square feet. It shall be applied in two shakes, wood floated after each, and troweled only after the final floating.

(c) While concrete is still in the plastic stage of set, the imprinting tools shall be applied to make the desired patterned surface.

(d) Colorwax in the matching color, thinned in the proportion of 4 parts wax to 3 parts mineral spirits (paint thinner) shall then be applied if directed by the City Representative. The coverage shall be approximately 600 to 650 square feet per gallon of unthinned colorwax.

12. INTERLOCKING CONCRETE PAVERS:

A) Summary:

1) Interlocking Concrete Paver Units (manually installed).

2) Bedding and Joint Sand.

B) Concrete Pavers and Certification Submittals:

1) Provide the City Representative full-size samples of each paver type, thickness, color, finish that indicate the range of color variation and texture expected in the finished installation. Color(s) selected will be from the manufacturer's available colors.

2) Note that the accepted samples become the standard of acceptance for the work.

3) Provide manufacturer's catalog product data, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.

4) Provide a copy of current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.

C) Delivery, Storage and Handling:

1) Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

2) Deliver materials in manufacturer's original, unopened, undamaged containers packaging with identification labels intact.

   (a) Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.

   (b) Deliver concrete pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift.

   (c) Unload pavers at job site in such a manner that no damage occurs to the product.

3) Store materials protected such that they are kept free from mud, dirt, and other foreign materials. [Store concrete paver cleaners and sealers per manufacturer's instructions.]

   (a) Cover bedding sand and joint sand with waterproof covering if needed to prevent exposure to rainfall or removal by wind. Secure the covering in place.