

## SECTION 02 00 01

### BASIC SITE MATERIALS AND METHODS

#### PART 1 GENERAL

##### 1.1 WORK INCLUDED

- A. BASIC SITE MATERIALS AND METHODS consists of furnishing transportation, labor, materials, and equipment to locate, protect, repair, remove, replace, and dispose of existing surface and subsurface conditions and improvements at the Project site, including existing utilities, structures, and substructures. This Section also covers basic materials and methods common to new site construction.

##### 1.2 RELATED WORK

- A. TEMPORARY FACILITIES AND CONTROLS      Section 01 51 00
- B. CLEANING      Section 01 74 00
- C. HOT MIX ASPHALT BASE REPAIR      Section 32 01 23

##### 1.3 MEASUREMENT AND PAYMENT

A. Water Pollution Control

The contract lump sum price paid for bid item "Water Pollution Control Program" shall include full compensation for furnishing transportation, labor, materials, tools, equipment, and incidentals, and for doing all work involved in Water Pollution Control Program. Work includes, but not limited to, submitting water pollution control plan for City's review and approval prior to project construction, participation in stormwater construction inspections, use of best management practices during construction to prevent construction related pollutants from entering the storm drain system, maintenance of storm water pollution prevention measures, and removal and disposal of measures after completion of work. All work shall be complete in place as accordance specifications, permits, and as directed by the Engineer.

B. Traffic and Pedestrian Control

The contract lump sum price paid for bid item "Traffic and Pedestrian Control" shall include full compensation for furnishing transportation, labor, materials, temporary traffic control signs, tools, equipment, and incidentals, and for doing all the work involved in Traffic and Pedestrian Control and as described in Section 01 51 00 (Temporary Facilities and Controls). Work includes, but not limited to, coordinating with various agencies and businesses; preparing traffic and pedestrian control plans for City's review and approval prior to project construction; placing, removing, storing, and maintaining No-Parking signs, temporary signs, Construction Area signs at project limits and all cross streets, and other traffic control devices, including flagging; loading, hauling, removing,

covering, and uncovering construction signs; removing any temporary striping as may be required; and maintaining street and sidewalk to provide safe passage for pedestrians and vehicles. All work shall be complete in place as accordance with temporary traffic control plans, specifications, permits, and as directed by the Engineer.

C. Public Notification

The contract lump sum price paid for bid item "Public Notification" shall include full compensation for furnishing transportation, labor, materials, (including SMS signs on collectors and arterials), tools, equipment and incidentals, and for doing all the work involved in notifying the public and impacted residents/businesses of the project 7 calendar days in advance and during the construction, as accordance with project plans, specifications, permits, and as directed by the Engineer.

D. Remove Existing Pavement Markings, Striping, and Raised Markers

The contract lump sum price paid for bid item "Remove Existing Pavement Markings, Striping, and Raised Markers" shall consist of furnishing transportation, labor, materials, tools, equipment, and incidental work involved to remove existing striping, conflicting striping, pavement words, numbers, arrows, etc, and raised pavement markers. All work be complete and in place as accordance with project plans, specifications, permits, and as directed by the Engineer.

#### 1.4 REFERENCES

A. State of California Department of Transportation Standard Specifications (SS):

Section 12	Temporary Traffic Control
Section 13	Water Pollution Control
Section 15	Existing Facilities
Subsection 15-2-2.02C(1)	Remove Traffic Stripes and Pavement Markings
Subsection 15- 2-2.0D	Remove Pavement Markers
Section 15-3	Concrete Removal
Subsection 15-3.03	Construction
Section 19	Earthwork
Subsection 19-1.03B	Unsuitable Material
Section 26	Aggregate Bases
Subsection 26-1.02B	Class 2 Aggregate Base
Subsection 26-1.03C	Spreading
Subsection 26-1.03D	Compacting
Section 94	Asphalt Emulsions

B. Standard Specifications for Public Works Construction (RS):

Subsection 306-5                      Abandonment of conduits and structures

1.5 EXISTING SUBSURFACE CONDITIONS

- A. Keep existing services and facilities in operation except when shutdown is approved by the Engineer in writing, and only after temporary services have been provided.

**PART 2 PRODUCTS**

NOT APPLICABLE

**PART 3 EXECUTION**

3.1 VERIFICATION OF SITE CONDITIONS

- A. Notify Underground Service Alert (USA) 72 hours prior to commencing demolition, excavation, trenching, drilling, or similar underground work.
- B. Contact owners of existing lines and substructures that may interfere with the work.
- C. Determine and mark locations of substructures not marked by owners. Maps and reference drawings showing record locations of substructures are available for review in the office of the Engineer.

3.2 PROTECTION OF EXISTING FACILITIES

- A. Protect existing facilities adjacent to the Work to avoid damage. Repair or replace existing structures and improvements located above or below ground which are damaged or removed as a result of the Contractor's operations wherever such existing improvements are not specifically designated to be permanently removed. Structures to protect and repair include, but are not limited to, pipelines, wires, cables, electrical pullboxes, conduits, vaults, property fences, and maintenance holes. Repairs and replacements shall be made at Contractor's expense and shall be equal to existing improvements and shall match existing in finish and dimension.
  - 1. Replacement pavement shall be 1 inch greater in thickness than the existing pavement that was removed.
  - 2. Damaged pipelines:
    - a. Notify owner(s) of the damaged utility pipelines
    - b. Obtain approval from the owner(s) of the damaged utility pipelines prior to replacement of damaged pipeline section(s) up to and including the

joints at the end of the damaged section(s). Replacement shall include damaged joint materials.

- B. Place barricades and install warning lights around excavations
- C. Exercise extreme caution when working in the vicinity of existing power poles and light poles designated to remain. Support utilities' poles and guy wires adjacent to excavations in conformance with the requirements of the utility owners.
- D. When excavation is proposed within 10 feet of a high priority subsurface installation, the operator of the high priority subsurface installation shall notify the excavator of the existence of the high priority subsurface installation prior to the legal excavation start date and time, as such date and time are authorized pursuant to paragraph (1) of subdivision (a) of Government Code Section 4216.2. The excavator and operator or its representative shall conduct an onsite meeting at a mutually-agreed-on time to determine actions or activities required to verify the location of the high priority subsurface installations prior to start time. High priority subsurface installations are high pressure natural gas pipelines with normal operating pressures greater than 415 kPA gauge (60 p.s.i.g.), petroleum pipelines, pressurized sewage pipelines, conductors or cables that have a potential to ground of 60,000 volts or more, or hazardous materials pipelines that are potentially hazardous to employees, or the public, if damaged.

### 3.3 UNSUITABLE MATERIAL

- A. Unsuitable Material shall conform to SS Section 19, "Earthwork". Unsuitable Material, for the purposes of this project, shall be any material directly beneath excavations including base repairs.
- B. The Engineer may direct the Contractor to perform additional roadway excavation for base repair areas in which unsuitable soft and yielding material is encountered. The depth and limits of the additional excavation shall be determined by the Engineer and any excavation beyond the limits determined by the Engineer shall be at the Contractor's expense. The unsuitable material resulting from the additional roadway excavation shall become the property of the Contractor and shall be removed from the Right of Way. Excavated areas shall be backfilled with Class 2 aggregate base and shall be included in the unit price paid for Unsuitable Material and no additional compensation will be made therefor.
- C. Class 2 aggregate base shall conform to the provisions in SS Section 26, "Aggregate Bases".
- D. Aggregate base shall be spread and compacted in conformance to SS Section 26-1.03C and 26-1.03D. Spreading and compacting shall be performed by methods that will produce a uniform base, firmly compacted and free from pockets of coarse or fine material. No spreading operation shall begin until the

physical characteristics of aggregate base material and the condition of the subgrade have been approved by the Engineer.

- E. Aggregate base exceeding a workable moisture content will be rejected by the Engineer and shall be immediately removed from the project site by the Contractor.
- F. The grading of the material shall conform to the  $\frac{3}{4}$  inch, maximum, specified in SS Section 26-1.02B, "Class 2 Aggregate Base"

#### 3.4 BASIC PAVEMENT REMOVAL METHODS

- A. Perform asphalt concrete pavement removal in conformance with SS Subsection 15-3.03 except that, where the removal line will be a join line, the line shall be saw cut to a 3 inch minimum depth to provide a butt joint.
- B. Upon demolishing the existing pavement or excavating to the specified elevations, the areas exposed by excavation on which the subgrade preparations are to be performed shall be:
  - 1. Scarified to minimum depth of 8 inches
  - 2. Moisture-conditioned to at least 2 percent above-optimum moisture content.
  - 3. Compacted to minimum of 95 percent relative compaction. Soils with significant high moisture content may be dried or blended with dry soils to achieve the required relative compaction.
- C. Removal work performed beyond the lines and grades shown on Contract Drawings or Standard Details, or beyond limits described in excavation and demolition submittal approved by the Engineer, will be considered to be unauthorized and at the expense of the Contractor. Engineer may request Contractor to restore such removals in conformance with the "Protection of Existing Facilities" Article of this Section.

#### 3.5 BASIC BACKFILL AND COMPACTION METHODS

- A. Earth soils compaction shall be 95 percent relative compaction for top 12-inches and 90 percent relative compaction below that unless indicated otherwise on Drawings or Specifications.
- B. Jetting and flooding is not permitted for compaction of trench backfill. Mechanical compaction of soils is required.
- C. Removal areas 5 feet by 5 feet or less and surrounded by pavement to remain in place on 3 or 4 sides shall be backfilled with cement sand slurry up to the bottom of proposed pavement.

### 3.6 BASIC TRAFFIC STRIPES AND PAVEMENT MARKINGS AND MARKERS REMOVLAL METHODS

- A. Perform traffic stripes and pavement markings removal in conformance with SS Section 15-2.02C.
- B. Perform pavement markers removal in conformance with SS Section 15-2.02D.
- C. All removed pavement markings and markers and excess material shall become the property of the Contractor and shall be removed and disposed of in a legal and proper manner in accordance with SS Section 15, Existing Facilities.
- D. Where sand blasting is used for removal, the sand residue including dust shall be removed immediately after contact between the sand and the surface being treated. Such removal shall be by a vacuum attachment operating concurrently with the blast cleaning operation. When removal is done by grinding or sandblasting methods, the affected pavement shall be completely covered by applying asphaltic emulsion conforming to SS Section 94, Asphaltic Emulsions. All temporary striping or markings shall be removed by Contractor after placement of permanent striping or markings.

### 3.7 INTERFERING SUBSTRUCTURES

- A. Consult the Engineer immediately for directions whenever substructures interfere with or affect Work. Contractor shall propose means and methods to the Engineer resolve the interferences. The Engineer will make the final decision on method of correction or protection to be used.
  - 1. If interfering substructures must be removed, the following procedures must be adopted before removing or cutting the substructures:
    - a. Coordinate with the utility owner to determine if the line contains any kind of liquid or gaseous material.
    - b. If storm drain or sewer lines are empty or filled with concrete or mud slurry, lines may be cut, removed, and capped or plugged, in conformance with RS Subsection 306-5.
    - c. Test conductors in conduits appearing to be abandoned and verify that conductors are de-energized. Remove de-energized conductors. Report energized conductors to the Engineer and cease removal work until Engineer authorizes work to resume.
    - d. Consult the Engineer for methods of handling other substructures.
    - e. Notify the Engineer to identify contents of unknown line if it is found to contain liquid or gaseous material. Coordinate with the utility owner to remove contents and dispose in conformance with applicable regulations. Such work will be considered a Change in the Work and payment will be determined in conformance with the GENERAL

CONDITIONS Section.

2. Evacuated lines or remaining portions of abandoned lines shall be capped or removed as described in this Article for empty lines.

3.8 OWNERSHIP AND DISPOSAL

- A. Asphalt concrete and other bituminous pavement, concrete rubble, unreinforced concrete, rocks, concrete masonry, and reinforced concrete demolished at the site shall become property of Contractor
- B. Refer to the CLEANING Section, Subsection 1.2 E, Disposal of Materials.

3.9 MAINTENANCE AND REPAIR

- A. Maintain continuity and integrity of permanent fences and temporary construction fences. Immediately replace fence sections damaged or missing during construction prior to close of the regular working day upon which damage occurred.

-END OF SECTION-