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January 3, 2006

12-Ora,LA-5-68.4/71.4,0.0/0.5  
12-101674  
ACNHI-005-2(932)114N

Addendum No. 2

Dear Contractor:

This addendum is being issued to the contract for construction on State highway in ORANGE AND LOS ANGELES COUNTIES IN BUENA PARK AND LA MIRADA FROM ORANGETHORPE AVENUE OVERCROSSING TO 0.5 KM NORTH OF ARTESIA AVENUE UNDERCROSSING.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on January 26, 2006. The original bid opening date was previously postponed under Addendum No. 1 dated November 18, 2005.

This addendum is being issued to set a new bid opening date as shown herein and to revise the Project Plans, the Notice to Contractors and Special Provisions, the Proposal and Contract, the Federal Minimum Wages with Modification Numbers 24 for Los Angeles County and 20 for Orange County, both dated 12-23-05, and to provide a copy of additional information for the Information Handout.

Project Plan Sheets 4, 5, 8, 9, 10, 19, 22, 23, 24, 175, 178, 205, 211, 226, 227, 228, 229, 271, 280, 306, 324, 325, 326, 327, 328, 330, 331, 358, 360, 361, 362, 363, 364, 403, 406, 412, 438, 446, 451, 469, 488, 489, 507, 521, 524, 539, 556, 582, 604, 607, 608, 622, 635, 637, 638, 639, 643, 644, 645, 646, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 713, 714, 749, 761, 793, 870, 875, 876, 878, 907, 963, 1161, 1179, 1193, 1335, 1370, 1374, 1375, 1376, 1378, 1379, 1380, 1385, 1386, 1387, 1388, 1389, 1390, 1394, 1398, 1399, 1400, 1401, 1402, 1403, 1404, 1409, 1411, 1412, 1413, 1414, 1415, 1416, 1420, 1422, 1423, 1424, 1425, 1429, 1430, 1431, 1432, 1433, 1437, 1440, 1441, 1442, 1443, 1444, 1445, 1451, 1452, 1453, 1454, 1455, 1456, 1460, 1461, 1462, 1463, 1464, 1467, 1471, 1472, 1476, and 1477 are revised. Half-sized copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheets 134A, 429A, 429B, 604A and 646A are added. Half-sized copies of the added sheets are attached for addition to the project plans.

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Project Plans are revised as follows:

All references to "MANCHESTER BOULEVARD" or callouts of "MANCHESTER BOULEVARD" on plan sheets 1 through 1478 are revised to "AUTO CENTER DRIVE".

In the Special Provisions all references to "Manchester Boulevard" are revised to "Auto Center Drive".

In the Special Provisions, Section 2-1.02B, "SUBMISSION OF DBE INFORMATION," the following is added as the last paragraph of the Section:

"In order to establish the bidder's good faith efforts to meet the DBE goal, the bidder should include the following information and supporting documents, as necessary:

- A. Items of work the bidder has made available to DBE firms. Identify those items of work the bidder might otherwise perform with its own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is the bidder's responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.
- B. The names of certified DBEs and the dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. Bidders are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
- C. For each item of work made available, the DBEs that provided quotes, the selected firm and its status as a DBE, the price quote for each firm, and the name, address and telephone number for each firm. If the firm selected for the item is not a DBE, provide the reasons for the selection.
- D. The names and dates of each publication in which a request for DBE participation for the project was placed by the bidder. Attach copies of the published advertisements.
- E. The names of agencies and the dates on which they were contacted to provide assistance in contacting, recruiting and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
- F. Descriptions of the efforts made to provide interested DBEs with adequate information about the plans, specifications and requirements of the contract to assist them in responding to a solicitation. Where the bidder has provided information, identify the name of the DBE assisted, the nature of the information provided, and date of contact. Provide copies of supporting documents, as appropriate.

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- G. Descriptions of any and all efforts made to assist interested DBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials (excluding supplies and equipment which the DBE subcontractor purchases or leases from the prime contractor or its affiliate). Where such assistance was provided by the bidder, identify the name of the DBE assisted, nature of the assistance offered, and date. Provide copies of supporting documents, as appropriate.
- H. Any additional data to support a demonstration of good faith efforts."

In the Special Provisions, Section 5-1.15, "COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS," is replaced with the attached Section 5-1.15, "COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS".

In the Special Provisions, Section 5-1.17, "PAYMENTS," the following subparagraph is added to the end of the second paragraph's subparagraphs:

"QQ. Membrane Waterproofing"

In the Special Provisions, Section 5-1.18, "PROJECT INFORMATION," the following subparagraphs are added to the end of the second paragraph's subparagraphs:

- "K. Groundwater Quality
- L. Orange County Flood Control District Encroachment Permit"

In the Special Provisions, Section 5-1.29, "RELATIONS WITH ORANGE COUNTY FLOOD CONTROL DISTRICT," is added as attached.

In the Special Provisions, Section 8-1.06, "ASPHALTIC EMULSION," is added as attached.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the twelfth paragraph is revised as follows:

"Attention is directed to "Relations with California Regional Water Quality Control Board (401 water quality certification)", "Relations with California Department of Fish and Game", "Relations with U.S. Army Corps of Engineers" and "Relations with Orange County Flood Control District" of these special provisions."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following paragraph is added after the twenty-fourth paragraph":

"Tie-back anchors shall not be installed within the TCE and temporary tie-back easement (TTBE) areas of the railroad property."

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the following paragraph is added after the fifty-third paragraph and before subsection "Stage 1":

"Attention is directed to "Cooperation" and "Obstructions" of these special provisions regarding construction of Retaining Wall Numbers 785, 1115, 1745, and 1823. The construction for these retaining walls shall not begin until completion of the railroad track and railroad utility work, or as directed, in writing, by the Engineer."

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In the Special Provisions, Section 10-1.14, "OBSTRUCTIONS," is replaced with the attached Section 10-1.14, "OBSTRUCTIONS".

In the Special Provisions, Section 10-1.35, "EARTHWORK," the following paragraph is added after the eighth paragraph:

"The portion of imported borrow placed within 1.5 m of the finished grade shall have a Resistance (R-Value) of not less than 40."

In the Special Provisions, Section 10-1.35, "EARTHWORK," the following paragraph is added after the tenth paragraph:

"Imported borrow will be measured and paid for by the cubic meter and the quantity to be paid for will be computed in the following manner:

- A. The total quantity of embankment will be computed in conformance with the provisions for roadway excavation in Section 19-2.08, "Measurement," of the Standard Specifications, on the basis of the planned or authorized cross section for embankments as shown on the plans and the measured ground surface.
- B. The Contractor, at the Contractor's option, may compact the ground surface on which embankment is to be constructed before placing any embankment thereon. If the compaction results in an average subsidence exceeding 75 mm, the ground surface will be measured after completion of the compaction. The Engineer shall be allowed the time necessary to complete the measurement of an area before placement of embankment is started in that area.
- C. The quantities of roadway excavation, structure excavation and ditch excavation, which have been used in the embankment, will be adjusted by multiplying by a grading factor to be determined in the field by the Engineer. No further adjustment will be made in the event that the grading factor determined by the Engineer does not equal the actual grading factor.
- D. The quantity of imported borrow to be paid for will be that quantity remaining after deducting the adjusted quantities of excavation from the total embankment quantity and then adding a quantity for the anticipated effect of subsidence. No adjustment will be made in the event that the anticipated subsidence does not equal the actual subsidence.
- E. The Contractor may propose a plan whereby the Contractor would be paid on the basis of measured settlement in lieu of the allowance specified above. The proposal shall include complete details of the subsidence-measuring devices and a detailed plan of each installation. If the proposed plan is approved by the Engineer, the Contractor, at the Contractor's expense, shall provide, install and maintain the subsidence-measuring devices. The Engineer will take necessary readings to determine the progress of subsidence, if any, and the Contractor shall provide necessary assistance to make the readings.
- F. Installed devices which are determined by the Engineer to have been damaged will not be used for the determination of subsidence for the area the devices represent in the pattern of approved installations. The subsidence of the area represented by that installation shall be considered zero, regardless of the subsidence measured at other installations.

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- G. The volumes required as a result of subsidence will be computed by the average-end-area method from the original measurements and the final measurements, including zero subsidence at all points and for all areas as provided herein. It shall be understood and agreed that the subsidence at the point of intersection of the side slopes (and end slopes at structures) with the ground line as established by the original cross sections shall be considered as zero. Unless otherwise agreed to by the Engineer, the subsidence shall be considered as zero at the points on the cross sections 15 m beyond the beginning and ending of the instrumented area. The computed volumes for such subsidence will be added to the quantities of embankment measured as specified herein.
- H. Detachable elements of the subsidence-measuring devices which can be salvaged without damage to the work shall remain the property of the Contractor and shall be removed from the highway right of way after final measurements are made."

In the Special Provisions, Section 10-1.49, "CEMENT TREATED BASE," the third and fourth paragraphs are revised as follows:

"The portland cement content of the cement treated base shall be 6 percent by mass of the dry aggregate.

Cement treated base shall be spread by the Type 3 method. The use of motor graders for spreading operations shall be permitted."

In the Special Provisions, Section 10-1.49, "CEMENT TREATED BASE," the eighth paragraph is revised as follows:

"Special attention shall be given to joint construction to ensure that adequately mixed material is placed and compacted against the joint. The Contractor's work, including temporary related work, shall not penetrate or damage the cement treated base. No sawcutting, except for longitudinal joints, or drilling into the cement treated base shall be permitted."

In the Special Provisions, Section 10-1.51, "ASPHALT CONCRETE BASE," the following paragraph is added after the first paragraph:

"The grade of asphalt binder to be mixed with aggregate for asphalt concrete base (Type A) shall be PG Grade 64-10 and shall conform to the provisions in Section 92 of Section 11-2, "Asphalts," of these special provisions."

In the Special Provisions, Section 10-1.52, "ASPHALT CONCRETE," the following paragraph is added after the third paragraph:

"The grade of asphalt binder to be mixed with aggregate for asphalt concrete Type A and asphalt concrete Type B shall be PG Grade 64-10 and shall conform to the provisions in Section 92 of Section 11-2, "Asphalts," of these special provisions."

In the Special Provisions, Section 10-1.53, "ASPHALT CONCRETE (MISCELLANEOUS AREA)," the following paragraph is added after the second paragraph:

"The grade of asphalt binder to be mixed with aggregate for asphalt concrete (miscellaneous areas) shall be PG Grade 64-10 and shall conform to the provisions in Section 92 of Section 11-2, "Asphalts," of these special provisions."

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In the Special Provisions, Section 10-1.54, "RECYCLED ASPHALT CONCRETE (CONTRACTOR OPTION)," subparagraphs G, H, and I of the ninth paragraph are replaced by the following subparagraphs:

"G. The results of tests on the asphalt binder recovered from the processed reclaimed asphalt pavement limited to DSR at intermediate temperature and BBR at low temperature in conformance with the provisions in Section 92-1.02(B), "Grades," of Section 11-2, "Asphalts," of these special provisions. Determine the intermediate temperature at which  $G^*/\sin(\delta)$  is 5000 kPa and the low temperature at which the S-value is 300 MPa and M-value is 0.30. The rolling thin film oven (RTFO) procedure and the pressure aging vessel (PAV) procedure shall not be used before testing.

H. The results of tests, in conformance with the provisions in Section 92-1.02(B), "Grades," of Section 11-2, "Asphalts," of these special provisions on the asphalt binder recovered from the proposed recycled asphalt concrete mixture demonstrating that the asphalt binder in the recycled asphalt concrete is the same grade as designated for asphalt concrete in "Asphalt Concrete" of these special provisions. Testing shall be limited to DSR at intermediate temperature and BBR at low temperature for recovered asphalt binder. Determine the intermediate temperature at which  $G^*/\sin(\delta)$  is 5000 kPa and the low temperature at which the S-value is 300 MPa and M-value is 0.30. The RTFO procedure and PAV procedure shall be used before testing.

I. A blending chart showing the grade of final asphalt binder."

In the Special Provisions, Section 10-1.62, "CONCRETE STRUCTURES," the following subsection is added before subsection "MEASUREMENT AND PAYMENT":

"RETAINING WALL FINISHING

The roadway surfaces of Retaining Wall Numbers 722, 780, 785, 1115, 1175, 1210, 1465, 1510, 1530, and 1745 shall conform to the provisions in Section 51-1.17, "Finishing Bridge Decks," of the Standard Specifications."

In the Special Provisions, Section 10-1.62, "CONCRETE STRUCTURES," subsection "MEASUREMENT AND PAYMENT" the following paragraph is added after the sixth paragraph:

"Full compensation for retaining wall finishing shall be considered as included in the contract price paid per cubic meter for structural concrete, retaining wall and no separate payment will be made therefor."

In the Special Provisions, Section 10-1.73, "ARCHITECTURAL SURFACE (TEXTURED CONCRETE)," the second paragraph is revised as follows:

"Attention is directed to "Project Information" and "Preparing and Painting Concrete" of these special provisions regarding the appearance of the retaining walls and slope paving."

In the Special Provisions, Section 10-1.75, "WATERPROOFING," the seventeenth paragraph is revised as follows:

"Repairs shall be made to the preformed membrane with a patch after approval by the Engineer. Repairs shall be patched with the same preformed membrane material. Patches shall be cut with rounded corners and shall extend to a minimum of 150 mm in each direction from the damaged area. The entire surface of the patch shall be bonded to the membrane material in accordance to the manufacturer's recommendations."

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In the Special Provisions, Section 10-1.75, "WATERPROOFING," the following paragraph is added after the seventeenth paragraph:

"The manufacturer shall be present during the installation and repair of the preformed membrane waterproofing and provide approval of the installation and repair."

In the Special Provisions, Section 10-1.75, "WATERPROOFING," the twenty-ninth paragraph is revised as follows:

"Upon completion of the preformed membrane waterproofing installation, all seams shall be visually inspected for compliance with the manufacturer's recommendations and these special provisions. In addition to visual inspection, all field seams shall be checked using an air lance nozzle directed on the upper edge and surface to detect any loose edges or ruffles indicating unbonded areas within the seam (per ASTM D4437)."

In the Special Provisions, Section 10-1.75, "WATERPROOFING," the thirty-second paragraph is revised as follows:

"The contract price paid per square meter for membrane waterproofing shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in membrane waterproofing, complete in place, including the manufacturer's representative, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer."

In the Special Provisions, Section 10-1.83, "PREPARING AND PAINTING CONCRETE," the second paragraph is revised as follows:

"Attention is directed to "Project Information" of these special provisions regarding the appearance of the retaining walls and slope paving."

In the Special Provisions, Section 10-1.84, "PREPARE AND STAIN CONCRETE," the fifth paragraph is deleted.

In the Special Provisions, Section 39-2.01, "ASPHALTS," of Section 11-1, "QUALITY CONTROL / QUALITY ASSURANCE," the first paragraph is revised as follows:

"Asphalt binder to be mixed with aggregate shall conform to the provisions in Section 92 of Section 11-2, "Asphalts," of these special provisions. The grade of asphalt binder shall be designated in "Asphalt Concrete" in Section 10-1, "General," of these special provisions."

In the Special Provisions, Section 11-2, "ASPHALTS," is added as attached.

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In the Proposal and Contract, the Engineer's Estimate Items 28, 29, 30, 33, 36, 37, 162, 163, 234, 276, 277, 290, 291, 295, 296, and 300 are revised, Items 337 and 338 are added and Item 336 is deleted as attached.

To Proposal and Contract book holders:

Replace pages 4, 11, 14, 16, 17, and 19 of the Engineer's Estimate in the Proposal with the attached revised pages 4, 11, 4, 16, 17, and 19 of the Engineer's Estimate. The revised Engineer's Estimate is to be used in the bid.

Attached is a copy of additional information for the Information Handout.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the NOTICE TO CONTRACTORS section of the Notice to Contractors and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Submit bids in the Proposal and Contract book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This office is sending this addendum by UPS overnight mail to Proposal and Contract book holders to ensure that each receives it. A copy of this addendum and the modified wage rates are available for the contractor's use on the Internet Site:

**[http://www.dot.ca.gov/hq/esc/oe/weekly\\_ads/addendum\\_page.html](http://www.dot.ca.gov/hq/esc/oe/weekly_ads/addendum_page.html)**

If you are not a Proposal and Contract book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,

ORIGINAL SIGNED BY

REBECCA D. HARNAGEL, Chief  
Office of Plans, Specifications & Estimates  
Office Engineer

Attachments

### 5-1.15 COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS

The provisions of this section shall apply only to the following contract items:

ITEM CODE	ITEM
390153	ASPHALT CONCRETE (TYPE A)
390154	ASPHALT CONCRETE (TYPE B)
390171	ASPHALT CONCRETE BASE (TYPE A)

The compensation payable for asphalt concrete and asphalt concrete base will be increased or decreased in conformance with the provisions of this section for paving asphalt price fluctuations exceeding 10 percent (Iu/Ib is greater than 1.10 or less than 0.90) which occur during performance of the work.

The adjustment in compensation will be determined in conformance with the following formulae when the item of asphalt concrete or asphalt concrete base is included in a monthly estimate:

- A. Total monthly adjustment = AQ
- B. For an increase in paving asphalt price index exceeding 10 percent:

$$A = 0.90 (1.1023) (Iu/Ib - 1.10) Ib$$

- C. For a decrease in paving asphalt price index exceeding 10 percent:

$$A = 0.90 (1.1023) (Iu/Ib - 0.90) Ib$$

- D. Where:

A = Adjustment in dollars per tonne of paving asphalt used to produce asphalt concrete and asphalt concrete base rounded to the nearest \$0.01.

Iu = The California Statewide Paving Asphalt Price Index which is in effect on the first business day of the month within the pay period in which the quantity subject to adjustment was included in the estimate.

Ib = The California Statewide Paving Asphalt Price Index for the month in which the bid opening for the project occurred.

Q = Quantity in tonnes of paving asphalt that was used in producing the quantity of asphalt concrete shown under "This Estimate" on the monthly estimate using the amount of asphalt determined by the Engineer plus the quantity in tonnes of paving asphalt that would have been used in producing the quantity of asphalt concrete base shown under "This Estimate" on the monthly estimate using the amount of asphalt specified in the specifications on the monthly estimate.

The adjustment in compensation will also be subject to the following:

- A. The compensation adjustments provided herein will be shown separately on payment estimates. The Contractor shall be liable to the State for decreased compensation adjustments and the Department may deduct the amount thereof from any moneys due or that may become due the Contractor.
- B. Compensation adjustments made under this section will be taken into account in making adjustments in conformance with the provisions in Section 4-1.03B, "Increased or Decreased Quantities," of the Standard Specifications.
- C. In the event of an overrun of contract time, adjustment in compensation for paving asphalt included in estimates during the overrun period will be determined using the California Statewide Paving Asphalt Price Index in effect on the first business day of the month within the pay period in which the overrun began.

The California Statewide Paving Asphalt Price Index is determined each month on the first business day of the month by the Department using the median of posted prices in effect as posted by Chevron, Mobil, and Unocal for the Buena Vista, Huntington Beach, Kern River, Long Beach, Midway Sunset, and Wilmington fields.

In the event that the companies discontinue posting their prices for a field, the Department will determine an index from the remaining posted prices. The Department reserves the right to include in the index determination the posted prices of additional fields.

The California Statewide Paving Asphalt Price Index is available at the Division of Engineering Services website:

[http://www.dot.ca.gov/hq/esc/oe/asphalt\\_index/astable.html](http://www.dot.ca.gov/hq/esc/oe/asphalt_index/astable.html)

#### **5-1.29 RELATIONS WITH ORANGE COUNTY FLOOD CONTROL DISTRICT**

The locations of work within the Fullerton Creek Channel are within the jurisdiction of the Orange County Flood Control District.

Attention is directed to Section 7-1.11, "Preservation of Property," and Section 7-1.12, "Indemnification and Insurance," of the Standard Specifications.

A permit has been issued by the Orange County Flood Control District to the Department of Transportation for this project. The Contractor shall be fully informed of rules, regulations and conditions that may govern his operations in said area(s) and shall conduct the work accordingly.

The Contractor shall obtain a rider, pay permit fees, provide a bond, and provide a certificate of liability insurance to the Orange County Flood Control District, before doing any work in the Fullerton Creek Channel.

Rider permit fees will be paid for as extra work as provided in Section 4-1.03D of the Standard Specifications.

### **8-1.06 ASPHALTIC EMULSION**

Asphaltic emulsion shall conform to the provisions in Section 94, "Asphaltic Emulsions," of the Standard Specifications and these special provisions.

When tested in conformance with the "Residue and Oil Distillate by Distillation" test of AASHTO Designation: T 59, the composition of SS1 asphaltic emulsion shall be a minimum 57 percent of residue.

#### 10-1.14 OBSTRUCTIONS

Attention is directed to Section 8-1.10, "Utility and Non-Highway Facilities," Section 15, "Existing Highway Facilities," and Section 51-1.19, "Utility Facilities," of the Standard Specifications and these special provisions.

Attention is directed to the existence of certain underground facilities that may require special precautions be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: conductors of petroleum products, oxygen, chlorine, and toxic or flammable gases; natural gas in pipelines greater than 150 mm in diameter or pipelines operating at pressures greater than 415 kPa (gage); underground electric supply system conductors or cables, with potential to ground of more than 300 V, either directly buried or in a duct or conduit which do not have concentric grounded or other effectively grounded metal shields or sheaths.

If these facilities are not located on the plans in both alignment and elevation, no work shall be performed in the vicinity of the facilities, except as provided herein for conduit to be placed under pavement, until the owner, or the owner's representative, has located the facility by potholing, probing or other means that will locate and identify the facility. Conduit to be installed under pavement in the vicinity of these facilities shall be placed by the trenching method in conformance with the provisions in "Conduit" of these special provisions. If, in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of the utility facilities not being located by the owner or the owner's representative, the State will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications, and not otherwise, except as provided in Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications.

The Contractor shall notify the Engineer and the appropriate regional notification center for operators of subsurface installations at least 2 working days, but not more than 14 calendar days, prior to performing any excavation or other work close to any underground pipeline, conduit, duct, wire or other structure. Regional notification centers include, but are not limited to, the following:

Notification Center	Telephone Number
Underground Service Alert-Northern California (USA)	1-800-642-2444
	1-800-227-2600
Underground Service Alert-Southern California (USA)	1-800-422-4133
	1-800-227-2600

It is anticipated that the following utility facilities will be abandoned, removed, relocated, or installed by the utility company prior to the dates shown:

Utility	Location-Work Description	Date
100 mm Gas	Stanton Avenue and Stanton Avenue Overcrossing Station 11+10 to 13+05 Abandon	1/1/06
32 mm Gas	Stanton Avenue Station 12+43 Abandon	1/1/06
100 mm Gas	Western Avenue Overcrossing Station 2+50 to 3+60 Abandon	1/1/06
50 mm Gas	Alley north of Mission Street (Manchester Boulevard) Station 12+80 to 13+20 and Mission Street (Manchester Boulevard) 14+80 to 17+20 Abandon  Alley north of Mission Street (Manchester Boulevard) Station 13+20 to 14+55 Replace and Abandon	1/1/06
150 mm Gas	Manchester Boulevard Station 19+20 to 21+90 Abandon and Relocate Artesia Boulevard Station 10+90 to 12+00 Abandon and Relocate	1/1/06
100 mm Gas	Artesia Boulevard Station 9+60 to 15+00 Abandon and Relocate	1/1/06
SBC & SCE Pole #738498H, 1362590E, 1362591E, 1362592E, 1040360H, 738499H, and 738500H	Along NB Route 5 right of way. Station 20+90 to 22+70 Remove	1/1/06
SBC Cabinet and Riser	Artesia Boulevard Station 12+90 Remove	1/1/06
SBC Underground Line	Artesia Boulevard Station 12+80 to Firestone Station 12+40 Relocate	1/1/06
SCE Pole #1032157E	Artesia Boulevard Station 12+95 Remove	1/1/06
MCI Underground Line	Artesia Boulevard Station 10+80 to Firestone Station 13+50 Relocate	1/1/06
XO Underground Line	Artesia Boulevard Station 10+80 to Firestone Station 13+50 Relocate	1/1/06

CONTRACT NO. 12-101674  
REPLACED PER ADDENDUM NO. 2 DATED JANUARY 3, 2006

Installation or relocation of the following utility facilities, as shown on the plans, will require coordination with the Contractor's operations. The Contractor shall make the necessary arrangements with the utility company, through the Engineer, and shall submit a schedule of work, verified by a representative of the utility company, to the Engineer. The schedule of work shall provide not less than the following number of working days, as defined in Section 8-1.06, "Time of Completion," of the Standard Specifications for the utility company to complete their work:

Working and calendar days listed are consecutive.

Orange County Transportation Authority (OCTA) Planning, Development & Computer Services 550 South Main Street P.O. Box 14184 Orange, CA 92863 (714) 560-5735			
Utility Facility	Location- Work Description	Notification Days	Working Days
Call Box	Rte 5, 12+87 Lt	14	1
Call Box	Rte 5, 16+37.5 Lt	60 Street Closure	1
Call Box	Rte 5, 16+38 Rt	14	1

The Orange County Transportation Authority shall be notified at least 14 days prior to beginning work in the vicinity of their listed facilities.

City of Buena Park Public Works/Engineering 6650 Beach Boulevard P.O. Box 5009 Buena Park, CA 90622 (714) 562-3685		
Utility	Notification Days	Location
250 mm ductile iron pipe and miscellaneous electrical facilities	14	Stanton Avenue Overcrossing
400 mm ductile iron pipe and miscellaneous electrical and communication facilities	14	Beach Boulevard Overcrossing
Temporary 450 mm ductile iron pipe, 2-450 mm mortar lined and coated steel pipe, and miscellaneous electrical facilities	14	Western Avenue Overcrossing
Miscellaneous water facilities and miscellaneous electrical facilities	14	Artesia Avenue

The City of Buena Park shall be notified 14 days prior to beginning work in the vicinity of their listed facilities.

SBC 1265 Van Buren Street Anaheim, CA 92807 (714) 237-6207			
Utility Facility	Location- Work Description	Notification Days – Associated Work	Working Days
Pedestal	Pinchot Court, Station 1+60 Vertical Adjustment	14 Roadway Grading	2
Aerial and Underground Lines	Stanton Avenue, Station 12+40 to 12+85 Remove pole #688708H and aerial line Stanton Avenue, Station 12+60 to 12+85 Place underground line	60 Street Closure	15
Manholes and Vault	Route 39 (Beach Boulevard), Stations 9+10 and 11+06 Vertical Adjustment	14 Roadway Grading	5
Underground Line and Manhole	Route 39 (Beach Boulevard) Overcrossing Construct catenary supports, remove manhole at 9+68, and remove telephone line from bridge and onto catenary system	90 Street Closure and Bridge Work	30
Underground Line and Manhole	Route 39 (Beach Boulevard) Overcrossing Place telephone line in new bridge, remove catenary system and construct new manhole at Station 9+68	30 Bridge Work	30
SBC Pole #105931H, 1013785H, 770058H and 769921H	Western Avenue, Stations 1+75, 2+20, 3+58 and 3+90 Remove	60 Street Closure	15
Manholes (8)	Artesia Boulevard, Station 10+50, 10+65, 12+80, 13+18, 13+19, 13+28, 13+30 and 13+32 Vertical Adjustment	14 Roadway Grading	10

SBC shall be notified 14 days minimum prior to completion of roadway grading work at the location of any SBC facilities.

SBC shall be notified 60 days minimum prior to the closure of Stanton Avenue and Western Avenue. Contractor shall allow SBC to perform their work at these city streets after the street closures.

SBC shall be notified 90 days minimum prior to closure of the west half of Route 39 (Beach Boulevard). Contractor shall allow SBC to perform the catenary related work after the closure of the west half of Route 39 (Beach Boulevard). The Contractor shall remove portions of the bridge to expose the telephone line, as shown on the plans, to allow SBE to raise the line out of the bridge.

The Contractor shall protect SBC's catenary system and telephone lines during construction.

SBC shall be notified 30 days minimum prior to installation of the SBC line in the new bridge decks on the Route 39 (Beach Boulevard) Overcrossing.

Southern California Gas Company (SCGC) 1919 South State College Boulevard Building A Anaheim, CA 92803 (714) 634-3041			
Utility Facility	Location- Work Description	Notification Days – Associated Work	Working Days
50 mm Gas	Pinchot Court 1+04 to 1+70 Stanton Avenue, Station 10+20 to 11+10 Replace and Abandon	30 Roadway Grading	25
200 mm Gas & 250 mm Gas in 400mm casing	Route 39 (Beach Boulevard) and Route 39 (Beach Boulevard) Overcrossing Station 9+22 to 10+80 Abandon	40 Bridge Removal	15
150 mm Gas	Route 39 (Beach Boulevard) Station 10+80 Install	40 Bridge Removal	5
150 mm Gas in 300 mm casing	Route 39 (Beach Boulevard) and Route 39 (Beach Boulevard) Overcrossing Station 9+22 to 10+80 Replace	50 Bridge Deck Placement	20
200 mm Gas critical valves (2)	Route 39 (Beach Boulevard), Station 9+22 and 10+80 Vertical Adjustment	7 Roadway Pavement	1
100 mm Gas	Western Avenue Station 1+00 to 2+20 Abandon and Replace	30 Roadway Grading	20

SCGC shall be notified 30 days minimum prior to completion of roadway grading work at the locations of the SCGC facilities.

SCGC shall be notified 40 days minimum prior to performing any removal work of the existing west half of Route 39 (Beach Boulevard) Overcrossing.

SCGC shall be notified 50 days minimum prior to placing the new bridge deck on the west half of Route 39 (Beach Boulevard) overcrossing. The Contractor shall allow SCGC to place their line and casing in the bridge and bridge approach.

The Contractor shall allow SCGC to jack their casing under the existing railroad track and extend their line from the bridge approaches to Route 39 (Beach Boulevard) stations 9+22 and 10+80.

The Contractor shall remove interfering temporary shoring and backfill excavation area to allow SCGC to install the new line.

SCGC will perform vertical adjustments of the critical valves after completion of the roadway pavement construction.

Adelpia 4175 E. La Palma Avenue, Suite 200 Anaheim, CA 92807 (714) 854-1962			
Utility Facility	Location- Work Description	Notification Days – Associated Work	Working Days
Pull Boxes	Pinchot Court, Station 1+36 Vertical Adjustment or Relocate	7 Roadway Grading	1
Pull Boxes	Stanton Avenue Stations 10+66 and 11+00 Vertical Adjustment or Relocate	7 Roadway Grading	1
Riser Pipe on SCE Pole #12396393E	Stanton Avenue, Station 10+62 Vertical Adjustment and Extend	7 Roadway Grading	2
Pull Boxes	Route 39 (Beach Boulevard) Station 10+66 Vertical Adjustment or Relocate	7 Roadway Grading	1
Underground Cable TV in 20 mm Conduit	Route 39 (Beach Boulevard) Station 8+90 to 10+70 Remove Cables and Abandon Conduit	120 Prior to Western Ave OC Bridge Work	10
Overhead Cable TV on SCE Poles	Western Avenue Route cable TV from Route 39 (Beach Boulevard) to Western Avenue and relocate OH cable TV on SCE Poles	120 Bridge Work and Roadway widening	10
Underground Cable TV in 50 mm Conduit	Artesia Boulevard Station 9+80 to Station 14+80 Relocate	90 Roadway Widening and Drainage Installation	30

Adelpia shall be notified 7 days minimum prior to completion of roadway grading work at the location of Adelpia facilities.

Adelpia shall be notified 120 days minimum prior to performing removal work of the existing Western Avenue Overcrossing.

Adelphia shall be notified 90 days minimum prior to roadway widening and drainage installation at Artesia Boulevard.

Southern California Edison 14799 Chestnut Street Westminster, CA 92683 (714) 934-0829			
Utility Facility	Location- Work Description	Notification Days – Associated Work	Working Days
Street Lights (5)	Pinchot Court, Station 1+25 and 1+55 Stanton Avenue Station 10+75, 11+10, and 11+30 Remove	60 Street Closure	2
Street Lights (5)	Pinchot Court, Station 1+25 and 1+55 Stanton Avenue Station 10+75, 11+10, and 11+30 Install	30 Roadway Grading	15
Pull Boxes and Cabinets	Pinchot Court, Station 1+30 and 1+40 Stanton Avenue Station 10+90, 11+10, 11+20, and 11+50 Vertical Adjustment or Remove	30 Roadway Grading	10
Pole #668492E	Stanton Avenue Station 12+50 Relocate	60 Street Closure	5
Pole #668492E	Stanton Avenue Station 12+60 Relocate	30 Roadway Grading	5
Pole #1077919E & 1077920E	Stanton Avenue Station 12+25 Remove	30 Electrical Work	5
Underground lines	Route 39 (Beach Boulevard) and Route 39 (Beach Boulevard) Overcrossing Station 9+05 to 11+05 Abandon	30 Bridge Removal	5
Underground line	Route 39 (Beach Boulevard) and Route 39 (Beach Boulevard) Overcrossing Station 9+05 to 11+05 Replace in Bridge and Street	30 Bridge Deck Placement and Roadway Grading	10
Pull Boxes, Transformer and Vault	Route 39 (Beach Boulevard) Station 2+20, 9+60, 10+55, and 10+60 Relocate or Remove	30 Roadway Grading	5
Street Lights (3)	Route 39 (Beach Boulevard) 9+20, 10+57, & 10+60 Remove	60 Street Closure	2
Street Lights (3)	Route 39 (Beach Boulevard) 9+20, 10+57, & 10+60 Install	30 Roadway Grading	10
Pole # 695023E, 1816967E, 4340272E, 2281623E, 1362588E, 1362589E, 659723E, 1542920E	Alley east of Western Avenue and Mission Street (Manchester Boulevard) Station 12+40 to 17+00 Remove and Relocate	90 Sewer Installation and Freeway Grading	15
Pole # 1163542E, 1095854E, 1497771E, 4139324E, 1497770E	Western Avenue Station 1+80 to 4+00 Remove and relocate	90 Bridge Work and Roadway widening	15
Pole #425354E, 425353E, 425352E, 425351E, 14393929E, 1440985E, and 1440984E	Artesia Boulevard Station 10+60 to 14+40 Relocate	90 Roadway widening and new Bridge	15

SCE shall be notified 60 days minimum prior to the closure of Stanton Avenue, Route 39 (Beach Boulevard) east half, and Western Avenue. The Contractor shall allow SCE to perform their work at these City Streets after the street closures.

When electrical service connection, as shown on the plans, is required from SCE, SCE shall be notified 30 day prior to completion of electrical work.

SCE shall be notified 30 day prior to completion of electrical work, as shown on the plans, Sheets E-35 and E-36.

SCE shall be notified 30 days minimum prior to performing any removal work on the existing Route 39 (Beach Boulevard) Overcrossing.

SCE shall be notified 30 days minimum prior to placing the new bridge deck on the east half of Route 39 (Beach Boulevard). The Contractor shall allow SCE to place their line and casing in the bridge deck and bridge approach.

The Contractor shall allow SCE to jack their casing under the existing railroad track and extend their line from the bridge approaches to Route 39 (Beach Boulevard) stations 9+05 and 11+05.

The Contractor shall remove interfering temporary shoring and backfill excavation area to allow SCE to install the new line.

Union Pacific Railroad 1416 Dodge Street Omaha, Nebraska 68179 (909) 879-6264			
Railroad Facility	Location- Work Description	Notification Days – Associated Work	Working Hours
Railroad Crossing	Western Avenue	90 Roadway Grading	
Railroad Crossing	Stanton Avenue	90 Roadway Grading	
Railroad Crossing	Route 39 (Beach Boulevard) Remove existing track and signals	90 Roadway Grading	8
Railroad Crossing	Route 39 (Beach Boulevard) Construct new track and signals		12

Working hours listed are consecutive.

UPRR shall be notified 90 days minimum prior to performing work at the railroad crossings.

Immediately after UPRR removes the existing track and signals, the Contractor shall place roadway embankment to raise the Route 39 (Beach Boulevard) grade. The Contractor shall allow UPRR to place new track and signals on the completed embankment.

The Contractor shall have only 52 hours for the complete closure of Route 39 (Beach Boulevard) to coordinate all railroad crossing work and raise the roadway grade.

Kinder Morgan 1100 Town and Country Road Orange, CA 92868 (714) 560-4770		
Utility	Location	Notification Days – Associated Work
250 mm and 400 mm high pressure Oil	Union Pacific Railroad Right of Way	20 beginning of excavation activities
250 mm and 400 mm high pressure Oil	Union Pacific Railroad Right of Way	3 end of excavation activities
250 mm and 400 mm high pressure Oil	Union Pacific Railroad Right of Way	5 restart of excavation activities

The Contractor shall provide an estimate of the number of working days that activity will take place within the easement area at the time of notification.

In the event that the utility facilities mentioned above are not constructed, removed or relocated by the date specified and, if in the opinion of the Engineer, the Contractor's operations are delayed or interfered with by reason of the utility facilities not being constructed, removed or relocated by the date specified, the State will compensate the Contractor for the delays to the extent provided in Section 8-1.09, "Right of Way Delays," of the Standard Specifications, and not otherwise, except as provided in Section 8-1.10, "Utility and Non-Highway Facilities," of the Standard Specifications.

The utility facilities listed in the following table, and other utility facilities that possibly exist at locations which might interfere with the pile driving or drilling operations or substructure and wall construction, will be protected in place. Should the Contractor desire to have any of the utility facilities rearranged or temporarily deactivated for his convenience, the Contractor shall make the necessary arrangements as provided in Section 8-1.10:

Utility Facility	Location
Wiltel 28857 Avenue De Las Flores Sun City, CA 92587 (918) 625-4270	Stanton Avenue, Route 39 (Beach Boulevard) and Western Avenue Overcrossings
Sewer Line	Western Avenue Overcrossing and Artesia Boulevard
Qwest 9643 Santa Fe Springs Road Santa Fe Springs, CA 90670 (805) 701-4157	Stanton Avenue, Route 39 (Beach Boulevard) and Western Avenue

The Contractor shall verify underground utility locations by potholing.

The listed utility companies shall be notified 2 weeks prior to doing any actual work in the vicinity of their facilities.

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

## **SECTION 11-2. ASPHALTS**

### **SECTION 92: ASPHALTS**

#### **92-1.01 DESCRIPTION**

Asphalt shall consist of refined petroleum or a mixture of refined liquid asphalt and refined solid asphalt, prepared from crude petroleum. Asphalt shall be:

- A. Free from residues caused by the artificial distillation of coal, coal tar, or paraffin.
- B. Free from water.
- C. Homogeneous.

#### **92-1.02 MATERIALS**

##### **92-1.02(A) GENERAL**

The Contractor shall furnish asphalt in conformance with the Department's "Certification Program for Suppliers of Asphalt." The Department maintains the program requirements, procedures, and a list of approved suppliers at:

<http://www.dot.ca.gov/hq/esc/Translab/fpmcoc.htm>.

The Contractor shall ensure the safe transportation, storage, use, and disposal of asphalt.

The Contractor shall prevent the formation of carbonized particles caused by overheating asphalt during manufacturing or construction.

**92-1.02(B) GRADES**

Performance graded (PG) asphalt binder shall conform to the following:  
Performance Graded Asphalt Binder

Property	AASHTO Test Method	Specification				
		Grade				
		PG 58-22 <sup>a</sup>	PG 64-10	PG 64-16	PG 64-28	PG 70-10
<b>Original Binder</b>						
Flash Point, Minimum °C	T48	230	230	230	230	230
Solubility, Minimum % <sup>b</sup>	T44	99	99	99	99	99
Viscosity at 135°C, <sup>c</sup> Maximum, Pa·s	T316	3.0	3.0	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	58 1.00	64 1.00	64 1.00	64 1.00	70 1.00
RTFO Test <sup>e</sup> , Mass Loss, Maximum, %	T240	1.00	1.00	1.00	1.00	1.00
<b>RTFO Test Aged Binder</b>						
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	58 2.20	64 2.20	64 2.20	64 2.20	70 2.20
Ductility at 25°C Minimum, cm	T51	75	75	75	75	75
PAV <sup>f</sup> Aging, Temperature, °C	R28	100	100	100	100	110
<b>RTFO Test and PAV Aged Binder</b>						
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	22 <sup>d</sup> 5000	31 <sup>d</sup> 5000	28 <sup>d</sup> 5000	22 <sup>d</sup> 5000	34 <sup>d</sup> 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T313	-12 300 0.300	0 300 0.300	-6 300 0.300	-18 300 0.300	0 300 0.300

Notes:

- For use as asphalt rubber base stock for high mountain and high desert area.
- The Engineer will waive this specification if the supplier is a Quality Supplier as defined by the Department's "Certification Program for Suppliers of Asphalt."
- The Engineer will waive this specification if the supplier certifies the asphalt binder can be adequately pumped and mixed at temperatures meeting applicable safety standards.
- Test the sample at 3°C higher if it fails at the specified test temperature. G\*/sin(delta) shall remain 5000 kPa maximum.
- "RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T240 or ASTM Designation: D 2827.
- "PAV" means Pressurized Aging Vessel.

Performance based asphalt (PBA) binder shall conform to the following:

Performance Based Asphalt Binder

Property	AASHTO Test Method	Specification			
		Grade			
		PBA 6a	PBA 6a(mod)	PBA 6b	PBA 7
Absolute Viscosity (60°C), Pa·s(x10 <sup>-1</sup> ) <sup>a</sup> Original Binder, Minimum RTFO Test Aged Residue <sup>b</sup> , Minimum	T202	2000 5000	2000 5000	2000 5000	1100 3000
Kinematic Viscosity (135°C), m <sup>2</sup> /s(x10 <sup>-6</sup> ) Original Binder, Maximum RTFO Test Aged Residue, Minimum	T201	2000 275	2000 275	2000 275	2000 275
Absolute Viscosity Ratio (60°C), Maximum RTFO Test Visc./Orig. Visc.	—	4.0	4.0	4.0	4.0
Flash Point, Cleveland Open Cup, °C Original Binder, Minimum	T48	232	232	232	232
Mass Loss After RTFO Test, %	T240	0.60	0.60	0.60	0.60
Solubility in Trichloroethylene, % <sup>c</sup> Original Binder, Minimum	T44	Report	Report	Report	Report
Ductility (25°C, 5 cm/min), cm RTFO Test Aged Residue <sup>b</sup> , Minimum	T51	60	60	60	75
On RTFO Test Aged Residue, °C 1 to 10 rad/sec: SSD <sup>e</sup> ≥ 0 and Phase Angle (at 1 rad/sec) < 72°	f	—	35	—	—
On Residue from: PAV <sup>g</sup> at temp., °C Or Residue from Tilt Oven <sup>f</sup> (@113°C), hours	R28	100 36	100 36	100 36	110 72
<sup>c</sup> SSD ≥ -115(SSV)-50.6, °C	f	—	—	—	25
Stiffness, Test Temperature, °C Maximum S-value, MPa Minimum M-value	T313	-24 300 0.300	-24 300 0.300	-30 300 0.300	-6 300 0.300

Notes:

- Absolute viscosity (60°C) will be determined at one sec<sup>-1</sup> using ASTM Designation: D 4957 with Asphalt Institute vacuum capillary viscometers.
- "RTFO Test Aged Residue" means the asphaltic residue obtained using the Rolling Thin Film Oven Test (RTFO Test), AASHTO Test Method T240 or ASTM Designation: D 2827.
- There is no requirement; however results of the test shall be part of the copy of test results furnished with the Certificate of Compliance.
- "Residue from Tilt Oven" means the asphalt obtained using California Test 374, Method B, "Method for Determining Asphalt Durability Using the California Tilt-Oven Durability Test."
- "SSD" means Shear Susceptibility of Delta; "SSV" means Shear Susceptibility of Viscosity.
- California Test 381.
- "PAV" means Pressurized Aging Vessel.

**92-1.02(C) SAMPLING**

The Contractor shall provide a sampling device in the asphalt feed line connecting the plant storage tanks to the asphalt weighing system or spray bar. The sampling device shall be accessible between 600 and 750 mm above the platform. The Contractor shall provide a receptacle for flushing the sampling device.

The sampling device shall include a valve:

- A. With a diameter between 10 and 20 mm.
- B. Manufactured in a manner that a one-liter sample may be taken slowly at any time during plant operations.
- C. Maintained in good condition.

The Contractor shall replace failed valves.

In the presence of the Engineer, the Contractor shall take 2 one-liter samples per operating day. The Contractor shall provide round friction top containers with one-liter capacity for storing samples.

**92-1.03 APPLYING ASPHALT**

Unless otherwise specified, the Contractor shall heat and apply asphalt in conformance with the provisions in Section 93, "Liquid Asphalts."

The Contractor shall apply paving asphalt at a temperature between 120°and 190°C. The Engineer will determine the exact temperature of paving asphalt.

**92-1.04 MEASUREMENT**

If asphalt is paid as a contract work item on a mass basis, the Department will measure asphalt by the tonne under the provisions for determining the mass for payment of liquid asphalt in Section 93, "Liquid Asphalt."

The Engineer will determine the mass of asphalt from volumetric measurements if the Contractor:

- A. Uses partial loads of asphalt.
- B. Uses asphalt at locations other than a mixing plant and no suitable scales are available within 35 km.
- C. Delivers asphalt meeting either of the following:
  1. In calibrated trucks and each tank is accompanied by its measuring stick and calibration card.
  2. In trucks equipped with a calibrated thermometer that determines the asphalt temperature at the time of delivery and equipped with a vehicle tank meter meeting Section 9-1.01, "Measurement of Quantities," for weighing, measuring, and metering devices.

If the Contractor furnishes asphalt concrete from a mixing plant producing material for only one project, the Department will determine the amount of asphalt from volumetric measurements by measuring the amount in the tank at the start and the end of the project provided the tank is calibrated and equipped with its measuring stick and calibration card. The Engineer will determine pay quantities in conformance with the following:

- A. Before converting the volume to mass, the Engineer will reduce the volume measured to that which the asphalt would occupy at 15°C.
- B. The Engineer will use the Conversion Table in Section 93, "Liquid Asphalts," and the following table:

Average Mass and Volumes of Paving Asphalt

Grade	Liters per Tonne at 15°C	Grams per Liter at 15°C
PG 58-22	981	1020
PG 64-10	981	1020
PG 64-16	981	1020
PG 64-28	981	1020
PG 70-10	981	1020
PBA 6a	981	1020
PBA 6a (mod)	981	1020
PBA 6b	981	1020
PBA 7	981	1020

**ENGINEER'S ESTIMATE**  
**12-101674**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
21	074028	TEMPORARY FIBER ROLL	M	5750		
22	074032	TEMPORARY CONCRETE WASHOUT FACILITY	EA	4		
23	074033	TEMPORARY CONSTRUCTION ENTRANCE	EA	2		
24 (S)	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	LUMP SUM	
25 (S)	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	LUMP SUM	
26 (S)	120116	TYPE II BARRICADE	EA	120		
27 (S)	120120	TYPE III BARRICADE	EA	150		
28 (S)	120149	TEMPORARY PAVEMENT MARKING (PAINT)	M2	820		
29 (S)	120159	TEMPORARY TRAFFIC STRIPE (PAINT)	M	118 000		
30 (S)	120165	CHANNELIZER (SURFACE MOUNTED)	EA	1760		
31 (S)	120182	PORTABLE DELINEATOR	EA	990		
32 (S)	037623	FLASHING ARROW SIGN	EA	16		
33 (S)	120300	TEMPORARY PAVEMENT MARKER	EA	29 900		
34	121161	TEMPORARY TERMINAL SECTION (TYPE K)	EA	9		
35 (S)	128650	PORTABLE CHANGEABLE MESSAGE SIGN	LS	LUMP SUM	LUMP SUM	
36	129000	TEMPORARY RAILING (TYPE K)	M	50 700		
37 (S)	129100	TEMPORARY CRASH CUSHION MODULE	EA	1150		
38	129150	TEMPORARY TRAFFIC SCREEN	M	14 400		
39	150206	ABANDON CULVERT	M	330		
40 (S)	150241	ABANDON SEWER	M	540		

**ENGINEER'S ESTIMATE**  
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Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
161	510526	MINOR CONCRETE (BACKFILL)	M3	78		
162 (F)	511035	ARCHITECTURAL TREATMENT	M2	16 455		
163 (F)	511064	FRACTURED RIB TEXTURE	M2	2582		
164	511106	DRILL AND BOND DOWEL	M	137		
165	511109	DRILL AND BOND DOWEL (EPOXY CARTRIDGE)	EA	406		
166	040048	JACKING SUPERSTRUCTURE	LS	LUMP SUM	LUMP SUM	
167	515041	FURNISH POLYESTER CONCRETE OVERLAY	M3	123		
168 (F)	515042	PLACE POLYESTER CONCRETE OVERLAY	M2	1229		
169 (S-F)	518002	SOUND WALL (MASONRY BLOCK)	M2	2218		
170 (S)	518201	MASONRY BLOCK WALL	M2	110		
171 (S)	519117	JOINT SEAL (MR 30 MM)	M	72		
172 (S)	519120	JOINT SEAL (MR 15 MM)	M	32		
173 (S)	519142	JOINT SEAL (MR 40 MM)	M	184		
174 (S)	519144	JOINT SEAL (MR 50 MM)	M	247		
175 (S-F)	520102	BAR REINFORCING STEEL (BRIDGE)	KG	1 887 150		
176 (S-F)	520103	BAR REINFORCING STEEL (RETAINING WALL)	KG	2 167 740		
177 (S-F)	520107	BAR REINFORCING STEEL (BOX CULVERT)	KG	31 572		
178 (S-F)	520113	BAR REINFORCING STEEL (PUMPING PLANT)	KG	51 850		
179 (S-F)	540103	MEMBRANE WATERPROOFING	M2	178 835		
180 (F)	560213	FURNISH SIGN STRUCTURE (LIGHTWEIGHT)	KG	8990		

**ENGINEER'S ESTIMATE**  
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Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	040052	457 MM WELDED STEEL PIPE CASING (6.35 MM THICK)	M	21		
222	040053	450 MM WELDED STEEL PIPE CASING (6.35 MM THICK)	M	25		
223	040054	610 MM WELDED STEEL PIPE CASING (6.35 MM THICK)	M	191		
224	040055	762 MM WELDED STEEL PIPE CASING (6.35 MM THICK)	M	21		
225 (S)	037642	450 MM MORTAR-LINED AND COATED STEEL PIPE	LS	LUMP SUM	LUMP SUM	
226	705222	450 MM CONCRETE FLARED END SECTION	EA	1		
227	705224	600 MM CONCRETE FLARED END SECTION	EA	1		
228	707051	DRAINAGE MANHOLE	EA	5		
229	707244	900 MM PRECAST CONCRETE PIPE MANHOLE	M	19		
230 (S)	714063	150 MM CLAY SEWER PIPE	M	36		
231 (S)	714065	250 MM CLAY SEWER PIPE	M	610		
232 (S)	714066	300 MM CLAY SEWER PIPE	M	230		
233 (S)	719362	1200 MM PRECAST CONCRETE PIPE SEWER MANHOLE	M	30		
234 (F)	721430	CONCRETE (CHANNEL LINING)	M3	134		
235	721501	CONCRETE (CONCRETED-ROCK SLOPE PROTECTION)	M3	21		
236	721616	CONCRETED-ROCK SLOPE PROTECTION (COBBLE, METHOD B)	M3	80		
237 (F)	721810	SLOPE PAVING (CONCRETE)	M3	258		
238	727901	MINOR CONCRETE (DITCH LINING)	M3	200		
239	729010	ROCK SLOPE PROTECTION FABRIC	M2	170		
240 (F)	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	M3	287		

**ENGINEER'S ESTIMATE**  
**12-101674**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
261	820180	INSTALL MEDIAN MILEAGE PANEL	EA	8		
262 (S)	832003	METAL BEAM GUARD RAILING (WOOD POST)	M	1270		
263 (S)	833032	CHAIN LINK RAILING (TYPE 7)	M	490		
264 (S-F)	040060	DECORATIVE METAL RAILING	M	2225		
265	833077	PEDESTRIAN BARRICADE	EA	4		
266 (S-F)	833085	PIPE HANDRAILING	M	107		
267 (S-F)	833088	TUBULAR HANDRAILING	M	356		
268 (F)	833141	CONCRETE BARRIER (TYPE 26A)	M	340		
269 (F)	833142	CONCRETE BARRIER (TYPE 26 MODIFIED)	M	572		
270 (S-F)	839521	CABLE RAILING	M	679		
271 (S)	839541	TRANSITION RAILING (TYPE WB)	EA	10		
272 (S)	839555	END CAP	EA	18		
273 (S)	839581	END ANCHOR ASSEMBLY (TYPE SFT)	EA	11		
274 (S)	839582	END ANCHOR ASSEMBLY (TYPE CA)	EA	1		
275 (S)	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	13		
276 (S)	839604	CRASH CUSHION (REACT 9CBB)	EA	2		
277 (S)	839605	CRASH CUSHION (REACT 9SCBS)	EA	1		
278	839701	CONCRETE BARRIER (TYPE 60)	M	2490		
279 (F)	839702	CONCRETE BARRIER (TYPE 60A)	M	105		
280	839703	CONCRETE BARRIER (TYPE 60C)	M	460		

**ENGINEER'S ESTIMATE**  
**12-101674**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
281 (F)	839704	CONCRETE BARRIER (TYPE 60D)	M	3115		
282	839705	CONCRETE BARRIER (TYPE 60E)	M	280		
283	037645	CONCRETE BARRIER (TYPE 60C MODIFIED)	M	460		
284	037646	CONCRETE BARRIER (TYPE 60E MODIFIED)	M	140		
285 (F)	839725	CONCRETE BARRIER (TYPE 736)	M	248		
286 (F)	839726	CONCRETE BARRIER (TYPE 736A)	M	2733		
287 (F)	839727	CONCRETE BARRIER (TYPE 736 MODIFIED)	M	117		
288	037647	CONCRETE BARRIER (TYPE 736B MODIFIED)	M	28		
289 (F)	037648	CONCRETE BARRIER (TYPE 736S/SV)	M	29		
290 (S)	840515	THERMOPLASTIC PAVEMENT MARKING	M2	2110		
291 (S)	840561	100 MM THERMOPLASTIC TRAFFIC STRIPE	M	49 700		
292 (S)	840563	200 MM THERMOPLASTIC TRAFFIC STRIPE	M	7650		
293 (S)	840564	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 3.66 M - 0.92 M)	M	3470		
294 (S)	840567	100 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 1.83 M - 0.30 M)	M	200		
295 (S)	840570	100 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 10.98 M - 3.66 M)	M	18 600		
296 (S)	840571	100 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 5.18 M - 2.14 M)	M	7780		
297 (S)	840574	200 MM THERMOPLASTIC TRAFFIC STRIPE (BROKEN 10.98 M - 3.66 M)	M	1380		
298 (S)	037649	PAINT TRAFFIC STRIPE (2-COAT - BLACK)	M	35 000		
299 (S)	850101	PAVEMENT MARKER (NON-REFLECTIVE)	EA	6240		
300 (S)	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	8870		

**ENGINEER'S ESTIMATE  
12-101674**

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
321 (S)	860931	TRAFFIC MONITORING STATION (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
322 (S)	860932	TRAFFIC MONITORING STATION (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
323 (S)	860933	TRAFFIC MONITORING STATION (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
324 (S)	037657	CLOSED CIRCUIT TELEVISION (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
325 (S)	037658	CLOSED CIRCUIT TELEVISION (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
326 (S)	037659	CLOSED CIRCUIT TELEVISION (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
327 (S)	037660	CLOSED CIRCUIT TELEVISION (LOCATION 4)	LS	LUMP SUM	LUMP SUM	
328 (S)	861101	RAMP METERING SYSTEM (LOCATION 1)	LS	LUMP SUM	LUMP SUM	
329 (S)	861102	RAMP METERING SYSTEM (LOCATION 2)	LS	LUMP SUM	LUMP SUM	
330 (S)	861103	RAMP METERING SYSTEM (LOCATION 3)	LS	LUMP SUM	LUMP SUM	
331 (S)	037661	RAMP METERING SYSTEM (LOCATION 4 & 5)	LS	LUMP SUM	LUMP SUM	
332 (S)	037662	RAMP METERING SYSTEM (REMOVE)	LS	LUMP SUM	LUMP SUM	
333 (S)	037663	TEMPORARY RAMP METERING SYSTEM	LS	LUMP SUM	LUMP SUM	
334 (S)	869075	SYSTEM TESTING AND DOCUMENTATION	LS	LUMP SUM	LUMP SUM	
335 (S)	869080	TRAINING	LS	LUMP SUM	LUMP SUM	
336	BLANK					
337	198001	IMPORTED BORROW	M3	30 000		
338	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

**TOTAL BID: \_\_\_\_\_**