SECTION VIII - GENERAL

8.01 COOPERATION BETWEEN CONTRACTORS

The Contractor shall be required to cooperate fully with all utility and public agency representatives engaged in construction, relocation, altering or otherwise rearranging any facilities interfering with the progress of the work.

Full compensation for any delay or inconvenience to the Contractor's operation due to such operations as described above shall be considered included in the unit price paid for other items of work and no additional allowance will be made therefor.

8.02 INSURANCE - HOLD HARMLESS

Contractor shall not commence work under this contract until he has obtained the insurance required hereunder and satisfactory proof of said insurance has been submitted to District and has been approved as to form by Riverside County Counsel.

Compensation Insurance - Contractor shall procure and maintain during the life of the contract Workers' Compensation Insurance as required by the State of California. Contractor shall further require each of its subcontractors to procure Workers' Compensation Insurance as required by the State while working on the project.

Liability Insurance - Contractor shall take out and maintain during the course of the work combined single limit liability insurance covering bodily injury and property damage insurance and blanket contractual coverage as to the work and obligations covered hereunder in an amount not less than $2,000,000, or the equivalent thereof. Said insurance must contain an endorsement that District, County of Riverside, and any municipal corporation in which the work is to be accomplished, are named as an additional insured as respects the work covered hereunder. Said insurance must not contain, as respects the work covered hereunder, any exclusions as to bodily injury or death or property damage arising out of blasting, explosion, or underground damage to wire, pipes, conduits, mains, sewers, tank tunnels or any similar property, i.e., the so-called "x c u" exclusions. The insurance certificate evidencing such insurance must affirmatively state that the insurance carrier(s) will give Owner thirty (30) days written notice prior to cancellation of the insurance or a reduction in coverage; must state that the "x c u" exclusions are waived or do not exist in the policy(s); and that District, County of Riverside, and any municipal corporation in which the work is to be accomplished, are named as an additional insured as respects the work covered hereunder.

In the alternate to naming Owner and County of Riverside, and any municipal corporation in which the work is to be accomplished, as additional insured, Contractor may take out and maintain during the course of the work and until acceptance by Owner, Owner's Protective Liability Insurance amount not less than $2,000,000 covering District, County of Riverside, and any municipal corporation in which the work is to be accomplished.

The cost of this insurance shall be included in the prices bid for the various items of work and no additional compensation will be made therefor.

Hold Harmless - Contractor shall hold District, County of Riverside and any municipal corporation in which the work is to be accomplished, together with the officers, agents and employees of each, free and harmless from any liability whatsoever, including wrongful death, based or asserted upon any act or omission of Contractor, its officers, agents, employees or subcontractors, relating to or in any way connected with or arising from the accomplishment of the work, whether or not in furtherance of the work; and Contractor agrees to protect and defend, including all attorney fees and other expenses, each of the foregoing bodies and persons in any legal action based or asserted upon any such acts or omissions.

Obligations - The obligations assumed by Contractor cover all obligations set forth in this Subsection and elsewhere in the Contract Documents, such as Subsections 5.01, 5.02, 5.05, 5.06, 5.08, 5.09, 5.10, 10.01, and 10.02.

8.03 PUBLIC UTILITIES

The locations of all pipelines, power lines, communication lines and other utility components known to District to exist within the limits of the work, are indicated on the drawings and may be the subject of a specific Special Provision(s). Size, location and characteristics of such utilities is based upon information made available to District - primarily from the owner of the utility in question. The exactness of such information is not guaranteed but may be assumed to have been accomplished with reasonable accuracy.

In addition to the drawings and any such provision regarding utilities, Contractor is under a duty to take into account the location of service laterals or other appurtenances which can be inferred from the presence of facilities such as buildings, meters and junction boxes in or about the limits of the work.

Unless otherwise directed by the Contract Documents, all existing utilities - where shown or described or not - shall be left in place and Contractor must conduct its operations so that such utilities are protected from damage at all times during the course of the work and the work must be accomplished so as to give such utilities proper protection and support upon completion of the work by Contractor.

If during the course of the work, Contractor discovers underground utility components not indicated in the drawings, the Special Provisions or elsewhere in the Contract Documents, Contractor must immediately notify, in writing, the Engineer and the utility company (public or private) involved, stating with exactness the condition found.

When Contractor encounters a utility not shown or described in the Contract Documents, Contractor shall cease all work which would disturb such utility and its support until given specific instructions as to how to proceed regarding such utility by Engineer. All work done by Contractor to protect existing utilities shown or described in the Contract Documents, or which can be reasonably inferred from the presence of other visible facilities, is at Contractor's expense, the cost of which is deemed included in Contractor's Proposal to do the work.

Contractor's cost of locating, repairing damage not due to the failure of Contractor to exercise reasonable care, and removing or relocating utility components and facilities not indicated in the drawings, specifications or elsewhere in the Contract Documents with reasonable accuracy, shall be paid Contractor as Extra Work as provided in Subsection 2.07 and Subsection 7.03 of the General Provisions. Compensation for idle time of equipment shall be paid as provided in Section 8-1.07C, "Payment Adjustments", of the State Standard Specifications. No surcharge rates for equipment will be applied for idled equipment.

District may direct the Contractor to do such repair or relocation work as required. When such repair or relocation work is not elsewhere provided for in these Contract Documents, or reasonably inferred therefrom, a requirement of District that Contractor perform such work shall be compensated for as Extra Work pursuant to Subsections 2.07 and 7.03 of these General Provisions.

Contractor shall not be assessed liquidated damages for delay in completion of the project, if such delay is caused by failure of District, or the owner of the utility in question, to provide for removal or relocation of the utility involved.

8.04 PROTECTION OF EXISTING STREET FACILITIES

The Contractor shall be responsible for the protection of existing signs, fences, concrete curbs, gutters and other facilities which may be encountered. The replacement or repair of any facilities which the District deems necessary as a result of the Contractor's operations shall be done by the Contractor at his own expense and to the satisfaction of the Engineer.

Excavation within the street right of way shall be conducted in a manner to cause the least interruption to traffic. Where traffic must cross open trenches, the Contractor shall provide suitable bridges at street intersections and driveways. Hydrants under pressure, valve pipe covers, valve boxes, curb stop boxes, fire or police call boxes, or other utility controls shall be left unobstructed and accessible during construction.

8.05 DIVERSION AND CONTROL OF WATER

Unless otherwise provided in the Proposal, no separate payment will be made for diversion and control of surface or groundwater. All costs incidental to maintaining dry working areas shall be included in the unit prices paid for other items of work in the schedule.

8.06 DUST ABATEMENT

During the performance of all work included in the contract, the Contractor shall take the necessary precautions to save the District free and harmless from any loss or damage resulting from his operations that raise or produce dust in such amounts that will be objectionable, and/or cause damage to adjacent property or property owners.

The Contractor will be required to have a positive and continuous method of dust control which is satisfactory to the Engineer. The methods to be used for controlling dust in the

construction area and along haul roads shall be approved by the Engineer prior to starting any of the work included in the contract. All costs incidental to dust control shall be included in the unit prices paid for other items of work in the schedule.

8.07 PROJECT SIGNS

The Contractor shall erect project signs at the locations designated by the Engineer.

No separate payment will be made for erecting the project signs and all costs in connection therewith will be considered a subsidiary obligation of the Contractor.

8.08 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT, AND SITE OF WORK

The bidder shall examine carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished, and as to the requirements of the proposal, plans, specifications, and the contract.

Where the District has made investigations of subsurface conditions in areas where work is to be performed under the contract, or in other areas, some of which may constitute possible local material sources, such investigations are made only for the purpose of study and design. Where such investigations have been made, bidders or Contractors may, upon request, inspect the records of the District as to such investigations subject to and upon the conditions hereinafter set forth. Such inspection of records may be made at the office of the District.

The records of such investigations are not a part of the contract and are shown solely for the convenience of the bidder or Contractor. It is expressly understood and agreed that the District assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretations set forth therein or made by the District in its use thereof and there is no warranty or guarantee, either expressed or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlooked-for developments may not occur, or that materials other than, or in proportions different from those indicated, may not be encountered.

When a log of test borings showing a record of the data obtained by the District's investigation or subsurface conditions is included with the contract plans, it is expressly understood and agreed that said log of test borings does not constitute a part of the contract, represents only the opinion of the District as to the character of the materials encountered by it in its test borings, is included in the plans only for the convenience of bidders and its use is subject to all of the conditions and limitations set forth in this Section 8.08.

No information derived from such inspection of records of investigations or compilation thereof made by the District or from the Engineer, or his assistants, will in any way relieve the bidder or Contractor from any risk or from properly fulfilling the terms of the contract.

SECTION IX - WATERING

9.01 DESCRIPTION

This work shall consist of developing a water supply for all water required for the work. The application of the water shall be under the control of the Engineer at all times and shall be applied in the amounts and at the locations approved by the Engineer.

At least one mobile unit of at least 1,000-gallon capacity for applying water shall be available on the project at all times.

Water for compacting embankment material and for laying dust shall be applied by means of pressure-type distributors or pipelines equipped with a spray system or hoses with nozzles that will ensure a uniform application of water.

No separate payment or additional allowances will be made for this work and all costs in connection therewith will be considered as included in other items in the schedule.

SECTION X - PUBLIC CONVENIENCE, TRAFFIC CONTROL AND DETOURS

10.01 GENERAL

The Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience to the public and he shall have under construction no greater length or amount of work than he can prosecute properly with due regard to the rights of the public.

Unless otherwise provided in the Special Provisions, all public traffic shall be permitted to pass through the work with as little inconvenience and delay as possible.

Spillage resulting from hauling operations along or across any public traveled way shall be removed immediately at the Contractor's expense.

Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners.

Convenient access to driveways, houses and buildings along the line of work shall be maintained and temporary approaches to crossings or intersecting highways shall be provided and kept in good condition.

10.02 SIGNS

It shall be the responsibility of the Contractor to provide and maintain all lights, barricades and signs, both on and off the site of work, as required by the Engineer, and all such devices shall be of a type approved by him.

If, in any case, the Engineer finds it necessary to replace, add to or erect said barricades, signs, or lights, when the Contractor fails to do so when informed, the Contractor shall be billed for all costs thereof including a daily rental fee for signs.

No separate payment, unless otherwise provided for under the Special Provisions, will be made for traffic control and detour signing and all costs incidental to these items shall be included in the unit prices paid for other items of work.

10.03 MATERIALS STORAGE

Storing or stockpiling of excavated material, imported backfill material or construction materials on any street or highway will not be permitted except as approved in writing by the Engineer.

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SPECIAL PROVISIONS

AND

DETAILED SPECIFICATIONS

SPECIAL PROVISIONS

SECTION 1 - GENERAL

1.1 Drawings and Specifications - These documents are for the construction of **Banning MDP Line D-2, Stages 1 and 2, Lateral D-2A, Stage 1**, located in the city of Banning, Riverside County, California. This work shall conform with the contract drawings indexed on the cover sheets of the drawings included herewith.

Referenced standard drawings are available on the District web site.

The Contractor shall copy any of the referenced District standard drawings from http://www.rcflood.org.

The Contractor shall be responsible to obtain referenced standard plans/drawings of various agencies from their respective office or web site.

References made in these Special Provisions or Detailed Specifications to the "Greenbook Specifications" refer to the "Greenbook" Standard Specifications for Public Works Construction, current edition, including supplements. Standard Specifications of the American Society for Testing and Materials shall be designated by ASTM and the appropriate number of the standard. Unless otherwise specified, wherever the words "Caltrans Specifications" are used in these Special Provisions or Detailed Specifications they shall mean the Standard Specifications of the State of California, Department of Transportation, current edition. Whenever the words "Caltrans Standards" are used they shall mean the Standard Plans of the State of California, Department of Transportation, 2010 edition.

In the event that discrepancies are encountered, the option that provides the method, item or material with the greatest strength or utility shall be chosen, as directed by the Engineer.

In case of conflict between the drawings and the specifications, the drawings shall govern; in case of conflict between the referenced specifications and these specifications, the latter shall govern.

1.2 Submittals to District - Submittals shall be sent in the form of email or postal carrier to the attention of the Engineer. **The Contractor shall allow the Engineer ten (10) working days from the time of receipt of the submittal (mailing time is not included) to review and respond in writing.**

SECTION 2 - TIME OF COMPLETION, DAMAGES AND LEGAL HOLIDAYS

2.1 General - The Contractor shall begin work within ten (10) calendar days after the date of receipt of Notice to Proceed from the Engineer and shall diligently prosecute the same to completion before the expiration of

ONE HUNDRED NINETY (190) WORKING DAYS

from the date of receipt of Notice to Proceed.

2.2 Damages - The Contractor and the District expressly agree that the cost to the District for inspection and superintendence of the work for this contract is **$800.00** per working day.

2.3 Legal Holidays - The Contractor will not be permitted to work on Legal Holidays (Reference Sections 6.02 and 6.06 of the General Provisions), except in cases of emergency as directed by the Engineer.

SECTION 3 - FORCE ACCOUNT PAYMENT

3.1 Labor Surcharge - Attention is directed to the provisions of Section VII, Article 7.03A (1b) of the General Provisions. The labor surcharge percentage to be applied to the actual wages paid as defined in Paragraph 7.03A (1a) will be twenty-four percent (24%).

3.2 Equipment Rental - Attention is directed to the provisions of Section VII, Article 7.03A (3) of the General Provisions. The equipment rental rates to be applied will be the rates published by the California Department of Transportation and in effect at the time of the award of the contract. A copy of said Equipment Rental Rates is on file at the District Office.

SECTION 4 - PROTECTION OF EXISTING UTILITIES

4.1 General - All existing underground utility lines, power poles and overhead wiring shall be protected in place at all times, except as noted otherwise on the plans. Any damage to utilities caused by the Contractor's operation shall be repaired or replaced at the Contractor's expense.

Prior to the commencement of any construction activities, the Contractor shall contact all utility companies and local municipalities servicing the project area to review as-built utility drawings and determine appropriate means of protecting utilities.

At the discretion of the Engineer, the Contractor may be required to verify, by potholing, the location of potentially affected utilities.

4.2 Cooperation with Utilities Relocated by Others – Some utilities will require relocation by others prior to or during construction as shown on the drawings and as specified in these specifications and Special Provisions.

Supplement to Section 8.01 of the General Provisions. The Contractor shall coordinate and cooperate with the various utilities or their contractors to ensure the work proceeds in an orderly manner.

The Contractor shall stage his work as required to accommodate the following utility construction or relocations:

(a) 2" waterline at Station 10+87

(b) Verizon line at approximate Station 62+96.96 (catch basin)

Should any utility relocation result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to downtime and idled equipment or additional payment over and above the agreed upon contract unit prices.

SECTION 5 - PROJECT SITE MAINTENANCE

Through all phases of construction, the Contractor shall comply with the provisions of Section 7-8 of the Greenbook Specifications. Before final acceptance of the work, the Contractor shall clean the work and the site of the work of all falsework, temporary structures, other construction materials and equipment, excess materials and rubbish, and shall leave the work and the site in a neat and presentable condition. Such final cleanup work shall be performed within the time specified for completion of all of the work.

SECTION 6 - SPECIAL REQUIREMENTS

6.1 National Pollutant Discharge Elimination System (NPDES) – The Contractor shall comply with the requirements of Board Order No. R7-2013-0011 (NPDES No. CAS617002), NPDES Municipal Stormwater Permit, hereafter referred to in this Section as the "Permit", issued by the California Regional Water Quality Control Board (CRWQCB) – Colorado River Basin Region. This Permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. The Contractor shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Section 29 "Stormwater and Non-Stormwater Pollution Control" of the Detailed Specifications.

The Contractor's attention is directed to: 1) Section 29.2 "General Requirements" which allows the Engineer to withhold progress payments if the Contractor fails to fully implement Section 29 "Stormwater and Non-Stormwater Pollution Control" or is deemed to be in non-compliance with the provisions of the Permit; 2) Section 29.3 "PRDs Preparation and Approval" which requires that PRDs be prepared and approved prior to the Pre-Construction meeting; and 3) Section 29.6 "SWPPP Implementation" which allows the Engineer to suspend construction operations if the Contractor fails to implement the approved SWPPP and any amendments thereto.

6.2 Sanitation - Sewage flows shall not be interrupted. Should the Contractor disrupt existing sewer facilities, sewage shall be conveyed in closed conduits and disposed of in a sanitary sewer system. If pumping is required it shall be done at the expense of the Contractor. A backup pumping system with equal capacity shall be provided at all times. Sewage shall not be permitted to flow in trenches or be covered by backfill.

6.3 Confined Space Compliance - The Contractor shall comply with all Cal/OSHA safety regulations including regulations concerning confined space and for maintaining a safe working environment for Contractor and District employees on the site. The Contractor shall develop and maintain a confined space procedure specific to this contract that complies with the requirements contained in California Code of Regulations, Title 8, Section 5158, Other Confined Space

Operations and the District Confined Space Procedure, SOM-18. A copy of SOM-18 can be obtained from the District office, 1995 Market Street, Riverside upon request.

Within five (5) days after the award of the contract, the Contractor shall submit three (3) copies of the procedure to the Engineer for review and approval. The Contractor shall allow five (5) working days for the Engineer to review the procedure. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the procedure within three (3) working days of receipt of the Engineer's comments and shall allow four (4) working days for the Engineer to review the revisions. The Contractor must submit three (3) copies of the approved procedure to the Engineer prior to the pre-construction meeting.

The procedure shall provide for recording of data to develop a history of acceptable atmosphere within the confined space. That history will include:

1. Calibration schedule of a direct reading confined space meter by trained personnel.

2. Daily monitoring and recording of the confined space atmosphere with a calibrated direct reading confined space meter.

3. Records of Items 1 and 2 shall be maintained onsite and copies given to the Engineer.

4. The records shall indicate if readings are of natural or mechanically enhanced ventilation.

In addition, the procedure shall include daily tours of the job site with the Engineer to ensure inlets to the confined space are free of obstruction or substances that might affect the atmosphere of the confined space.

The Contractor will be required to keep a direct reading confined space meter onsite for the duration of the contract. The meter shall be calibrated according to the schedule specified in the Contractor's confined space procedure and shall be made available for the Engineer's use upon request.

6.4 Heavy Equipment Working Hours - Heavy construction equipment shall be allowed to work from 7:00 a.m. to 3:30 p.m. each normal working day, unless otherwise approved by the Engineer.

6.5 Encroachment Permits – The Contractor is required to obtain an encroachment permit from the City of Banning for work within City right of way. The City of Banning will not require the Contractor to pay a fee for the encroachment permit. A copy of the encroachment permit shall be provided to the Engineer prior to commencement of work.

6.6 Toxic Material Disposal - Toxic materials including oil, fuel oil, gasoline, coolant, fluid filters and other contaminants shall not be discharged within the project site. All such materials shall be transported offsite and disposed of at a County approved facility.

6.7 Survey Crew - The Contractor shall notify the Engineer in writing at least 48 hours prior to new construction staking.

Survey Crews will be available Monday through Thursday from 7:00 a.m. to 3:30 p.m., with a half-hour off for lunch. If the Contractor requires the Survey Crew to work beyond the specified time mentioned above, it shall be considered as overtime and shall be paid by the Contractor at 1.5 times the Survey Crew's hourly rates.

6.8 Survey Monuments - The Contractor shall salvage and give to the District all survey monuments and wells removed during construction. The District will reset monuments after construction.

6.9 Job Trailer Site - The Contractor is required to provide a site and install an office trailer for District personnel. This trailer shall be in good condition and located in a place acceptable to the District. The trailer shall be for the sole use of the District and shall not be used by the Contractor for any activity, including storage. The Contractor shall make provisions for the privacy and security of the office, and provide air conditioning, drinking water and electrical service. The Contractor shall also provide two office chairs and a desk suitable for reviewing plans. The Contractor shall pay the monthly billings for these services. The trailer shall be fully operational and available to District personnel on the first day of work. Should the trailer or office not be available and in working condition, it is agreed by both parties at the time of entering this contract that damages in the amount of $3,000 per month shall be assessed. It is agreed that this amount may be prorated and shall be deducted from the first contract payment and any successive payments covering any period that the facilities are unavailable.

6.10 Construction Tolerances – Variation in alignment, grade and dimensions of the structures and structural components from the established alignment, grade and dimensions shown on the drawings shall be within the tolerances specified in the following:

Table A – Tolerances for Grading Unlined Channels, Levees and Access Roads		
Departure from established alignment		2 inches on tangents 4 inches on curves
Departure from established profile grade	Channel bottoms, channel sideslopes in cut and fill, levee and access road sideslopes in cut	Zero above and 3 inches below the specified grade
	Top surfaces of levees and access roads in both cut and fill, levee and access road sideslopes in fill	Zero below and 3 inches above the specified grade

Regardless of the construction tolerances specified, the excavation and grading shall be performed so that the finished surfaces are in uniform planes with no abrupt breaks in the surface.

Table B - Tolerances for Trapezoidal Concrete Lined Channels and Levees		
Departure from established alignment		2 inches on tangents 4 inches on curves
Departure from established profile grade		1 inch
Variation in thickness of lining, sideslopes and invert		5 percent of specified thickness provided average thickness is maintained
Variation from specified width of section at any height		0.0025 times specified width W plus 1 inch. 0.0025W + 1 inch
Variation from specified height of lining		0.005 times specified height H plus 1 inch. 0.005H + 1 inch
Variation in surfaces (gradual)	Invert Sideslopes	¼ inch in 10 feet ½ inch in 10 feet
Variation in surfaces (abrupt)		¼ inch

Gradual Variation tolerance shall be measured by placing a 10-foot straightedge anywhere on the finished concrete structure within 72 hours after concrete placement. The gap at any point between the straightedge and the concrete shall not exceed the specified amount.

Table C - Tolerances for Formed, Cast-in-Place Concrete Structures		
Departure from established alignment		1 inch on tangents 2 inches on curves
Departure from established profile grade		1 inch
Inside dimensions		0.005 times specified dimension
Variation from the plumb or the specified batter in the lines and surfaces of walls, piers and in arises	Exposed, in 10 feet Backfilled, in 10 feet	½ inch 1 inch
Variation in cross-sectional dimensions		Minus ¼ inch Plus ½ inch
Variation in surfaces (gradual)	Invert Soffits, Walls, Sideslopes	¼ inch in 10 feet ½ inch in 10 feet
Variation in surfaces (abrupt)		¼ inch

Table D - Tolerances for Reinforcing Steel Placement		
Variance from indicated position	Spacing between adjacent bars and the distance between layers of bars	one bar diameter nor more than one inch
Concrete cover measured perpendicular to steel in the direction of tolerance		¼ inch

Failure to meet these tolerances will require corrective action as directed by the Engineer and is the sole responsibility of the Contractor.

6.11 Surplus Excavated Material - Any stockpiling, grading or disposal of material outside of the project limits is not covered under the District's permits and is the sole responsibility of the

Contractor. Regulatory permits that may be required include, but are not limited to, Federal Clean Water Act (Sections 401 and 404), California Fish and Game Code (Section 1602) and Federal/State Endangered Species Acts. All costs to obtain these Regulatory Permits shall be borne by the Contractor.

6.12 Sewer Line Inspection - Prior to the commencement of construction, the Contractor is required to video record all sewer mains (8" diameter and larger) within the project limits. Additionally, the Contractor shall video record the sewer mains after the backfilling of the storm drain has been completed. Copies of the videotapes shall be provided to the Engineer. All costs associated with this requirement shall be included in the contract price bid for Clearing and Miscellaneous Work. The Contractor is required to replace and/or repair at his own expense, any sewers damaged or misaligned as a result of his construction activities.

6.13 Pipe Order Notification - The Contractor shall submit to the District the invoice from the pipe company stating, (1) pipe order date, (2) pipe quantity, and (3) estimated date of pipe delivery within five (5) calendar days of the award of the contract.

6.14 Project Signs - Supplementing Section 8.07 of the General Provisions, the Contractor shall be required to provide two new project signs. The Contractor shall install and maintain the project signs at locations specified by the Engineer, with painting and lettering as shown in Appendix "B" of these Special Provisions. The signs shall be installed as directed by the Engineer within five (5) days after District issuance of the Notice to Proceed. Upon completion of construction, the signs shall be removed.

6.15 Liability Insurance – The Contractor's attention is directed to Section 8.02, Insurance Hold Harmless, of the General Provisions. The City of Banning shall also be named as additional insureds with the liability insurance coverage required to be maintained by the Contractor.

6.16 Accidental Discovery – In the event that any human remains, hazardous materials, historical, archaeological, or paleontological resources are accidentally discovered within project limits, the Contractor shall immediately cease all construction or ground disturbance activity in the vicinity of find and notify the Engineer. District will provide the appropriate professional to assess the significance of the discovery and, if necessary, develop appropriate management and treatment measures. **The Contractor shall not resume construction in the affected area without Engineer's approval.**

Per State Health and Safety Code 7050.5, if human remains are encountered during construction, no further disturbance shall occur until the Riverside County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The Riverside County Coroner must be notified within 24 hours by the Engineer. If the County Coroner determines that the remains are not historic but prehistoric, the Native American Heritage Commission (NAHC) must be contacted by the Engineer to determine the most likely descendent for this area. Once the most likely descendent is determined, treatment of the Native American human remains will proceed pursuant to Public Resources 5097.98. The NAHC may become involved with decisions concerning the disposition of the remains.

Should any of the above mentioned discoveries result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to downtime and idle equipment or additional payments over and above the agreed upon contract prices.

6.17 Nesting Bird Pre-Construction Survey - The nesting season is defined as January 1st through September 15th. Within the nesting season, the District or its biologist will conduct nesting bird surveys. If active nests are identified, the District will coordinate with its biologist to establish an appropriate buffer of up to 500 feet around the active nest, or other avoidance measures as deemed necessary by the District biologist. Encroachment will not be allowed within the established buffer until it has been determined by the biologist that the nest is no longer active or it is safe to resume work. **The Contractor shall not resume construction in the affected area without Engineer's approval.**

Should the presence of nesting birds result in delays to the Contractor's work schedule, the Contractor shall be entitled only to an equivalent extension of time for the completion of the contract, and shall not be entitled to damages due to downtime and idle equipment or additional payments over and above the agreed upon prices.

SECTION 7 - SOILS REPORT

In conjunction with the soils investigation report prepared by Inland Foundation Engineering dated May 22, 2014, the Contractor's attention is directed to Article 8.08 of the General Provisions. The logs of the soil borings for this report are included for the convenience of the bidders, in conformance with Section 8.08 of the General Provisions, as Appendix "C" of these specifications. The soils report is on file in the District office, 1995 Market Street, Riverside and is available for review upon request.

SECTION 8 - NOT USED

SECTION 9 - PAYMENT

The contract prices shall include full compensation for all costs incurred under these Special Provisions and Detailed Specifications.

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DETAILED SPECIFICATIONS

SECTION 10 - MOBILIZATION

10.1 Description - The contract item Mobilization shall consist of expenditures for all preparatory work and operations, including but not limited to, those costs necessary for the movement of personnel, equipment, supplies and incidentals to the project site; for the establishment of all offices, buildings, construction yards and other facilities necessary for work on the project; and for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site as well as the related demobilization costs anticipated at the completion of the project.

10.2 Payment - The amount credited for Mobilization on each monthly progress payment shall be equal to the total of the amounts credited for work on all the other contract items for that monthly progress payment, up to a cumulative limit of eighty percent (80%) of the lump sum price bid for Mobilization. The remaining twenty percent (20%) of the lump sum price bid for Mobilization will be paid with the final payment.

Payment of the lump sum contract price for Mobilization shall constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to completion of this item of work.

The deletion of work or the addition of extra work as provided for herein shall not affect the price paid for Mobilization.

SECTION 11 - WATER CONTROL

11.1 Description - This section covers the contract item Water Control. Watersheds and/or urban runoff areas are tributary to the project site at various locations, but do not necessarily follow the alignment of the project under current conditions. Surface water in varying quantities can be expected at any time of the year, and substantial runoff can be expected during periods of rainfall. Groundwater was not indicated at the time of the soils investigation for this project. All bidders shall make their own determination regarding what the surface and/or groundwater conditions will be at the time of construction, and their impact on the bidder's operations and construction phasing.

11.2 Water Control - The contract item Water Control includes the control and/or diversion of surface runoff as well as groundwater within the work area as required to complete the work. All work shall be carried on in areas free of water. Care should be exercised so that runoff or diversion flows do not erode, undermine or otherwise damage either facilities which have been constructed or adjacent private properties. The responsibility for the protection of all existing and proposed improvements lies with the Contractor.

11.3 Measurement and Payment - The methods of controlling both surface and groundwater will be the responsibility of the Contractor. The contract lump sum price paid for Water Control shall include full compensation for all direct and indirect costs incurred under this section, and

for doing all the work involved in controlling surface runoff and groundwater within the construction area, as specified in these Detailed Specifications, and as directed by the Engineer.

Payment will be made on a basis of the percentage of the work completed on the entire project.

SECTION 12 - TRAFFIC CONTROL

12.1 Description - The contract item Traffic Control shall include labor, flagmen, lights, barricades, signs, materials, temporary bridges and equipment necessary to ensure that the vehicular and pedestrian traffic conforms to requirements as set forth in this section and as shown on the drawings.

12.2 Notification of Agencies - The Contractor shall notify the following agencies a minimum of 48 hours in advance of start of any street work and inform them of the proposed construction schedule and provide any additional pertinent information they may request:

Ambulance Services (AMR)	800.549.1004
AT&T Distribution (Steve Han)	714.237.6199
Banning Fire Services	951.922.3210
Banning Pass Transit	951.922.3243
Banning Unified School District	951.922.0210
California Highway Patrol (Beaumont Office)	951.769.2000
Caltrans	909.383.7516
City of Banning - Electric Utility	951.922.3260
City of Banning Public Works	951.922.3130
City of Banning Police Department	951.922.3170
City of Banning - Water/Wastewater	951.922.3281
Frontier (Terrance Laury)	909.793.4764
Riverside County Department of Public Social Services (Banning Office)	951.922.7585
Riverside County Sheriff's Department	951.955.2400
Riverside Transit Agency	951.565.5002
San Gorgonio Memorial Hospital	951.769.2194
The Gas Company - Transmission (Kevin Kuennen)	951.845.0709
The Gas Company - Distribution (Arnold Alvarado)	909.335.3928
Time Warner Cable (Lee Hobson)	760.674.5455
Underground Service Alert	800.227.2600
United States Postal Service	951.849.2447
Waste Management	800.423.9986

The Contractor is not relieved of his responsibility of notifying the various departments and agencies mentioned above, even if their telephone numbers may have changed without notice.

The above agencies shall also be advised by the Contractor of any major change in the construction schedule that could restrict pedestrian or vehicular traffic.

The Contractor shall notify the public a minimum of ten (10) working days prior to start of road closure. The Contractor is also required to notify, in writing, the following as applicable: Fire Department, Sheriff, CHP, local newspaper, Trash pickup, School Districts, RTA, Post Master, UPS, Colleges, Local businesses, Local residents, State and local agencies involved, if affected.

12.3 Public Convenience and Access - The Contractor shall comply with the requirements of Section X of the General Provisions and shall provide continuous access to all private property. Additional provisions shall be made as necessary to protect the public and accommodate traffic with a minimum of inconvenience.

Closures or partial closures of the traveled way implemented by the Contractor shall be related to actual work being performed at the time. Closures shall not be maintained if work is not being performed. If the existing closure is not essential to the type of work being performed at the time, the traveled way shall immediately be restored to a safe condition for public use.

The Contractor shall provide temporary bridge crossings for all driveway entrances to be closed to vehicular access for any period exceeding 4 hours.

Temporary bridges shall have a minimum width of 12 feet for residential driveways and 24 feet for business driveways, and shall be designed for an AASHTO H20 truck loading. Steel plates placed over the trench shall have a minimum thickness of 1.25" and the surface shall be roughened or coated to provide a non-skid surface. For spans greater than 4 feet, a structural design shall be prepared by a Registered Civil Engineer and submitted to the District for review and approval.

The Contractor shall notify each resident in writing 3 days in advance of excavating past the affected driveway entrance. Such notice shall contain the expected day and period of time (not to exceed 4 hours) that the driveway is to be out of service. A copy of each letter shall be submitted to the Engineer.

12.4 Construction Signs and Traffic Control Plans - All construction signs, barricades, delineators, etc., shall conform with the U.S. Department of Transportation, Federal Highway Administration, "Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), Part 6, latest edition", and the MUTCD California Supplement, Part 6 along with the Uniform Sign Chart as shown on the drawing.

12.5 Flaggers - All personnel utilized as flaggers must be trained in the proper fundamentals of flagging and signaling.

12.6 Striping and Pavement Marking – Temporary and permanent striping shall be performed by the Contractor at his expense as directed by the Engineer. The Contractor shall restore the permanent striping immediately after resurfacing of the streets is completed. The Contractor shall notify the City of Banning, Telephone: 951.922.3130 at least 48 hours prior to restriping.

All temporary traffic striping and pavement markings shall conform to Section 84 of the Caltrans Specifications and shall be acceptable to the Riverside County Transportation Department.

All pavement markings such as arrows, "STOP", "ONLY", reflectors, etc., shall be replaced by the Contractor using thermoplastic. Thermoplastic crosswalk, traffic stripes and pavement markings shall conform to the provisions in Section 84-1, "General" and 84-2, "Thermoplastic Traffic Stripes and Pavement Markings" of the Caltrans Specifications and these Detailed Specifications.

12.7 Payment - The contract price paid for Traffic Control shall include full compensation for all material and labor costs incurred under this section. Contractor is advised that traffic plans as shown on the drawings may be modified as field conditions require. No additional payment shall be made for modifications to the traffic plan.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 13 - CLEARING AND MISCELLANEOUS WORK

13.1 Description - This section covers the contract item Clearing and Miscellaneous Work as required for construction of the work. All objectionable materials shall be removed and disposed of outside of the limits of the construction easements and permanent rights of way.

13.2 Clearing and Miscellaneous Work - The contract item Clearing and Miscellaneous Work includes the removal and disposal of all vegetation, trees, roots, stumps, fences, pipes, all abandoned facilities, culverts, rocks, structures, concrete and asphalt excluding those items defined specifically as excavation in the appropriate section.

Included in this item are the following:

1. The Contractor shall leave all improved parkways undisturbed where possible. When this is impractical he shall returf in kind, areas disturbed in the parkways including removing and replacing interfering portions of sprinkler systems. Sod shall be used to restore disturbed grass. All work is to be done to the satisfaction of the Engineer.

2. The temporary relocation of signs and mailboxes, and their reinstallation. Work involving mailboxes shall be coordinated with the Postal Service.

3. The stenciling and signage on top of all catch basins and drop inlets. Stenciling and signage will be provided by the District.

4. Manual excavation and backfill within four (4) feet of the 30" steel high pressure gas line as shown on Sheet 7, including sand backfill/zero-sack slurry material.

5. Removal and proper disposal of the abandoned 8" waterline. Salvage and return the abandoned valves cans and caps to the City of Banning.

Finally, included in this item are those types of work as shown on the drawings not specified for pay under any other individual contract item.

13.3 Payment - The contract price paid for Clearing and Miscellaneous Work shall be full compensation for all costs incurred under this section.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 14 - EARTHWORK

14.1 Description - This section covers the contract items Excavation; Asphalt Concrete Excavation; Backfill; Controlled Low Strength Material (CLSM) Backfill; and Filter Material.

14.2 General Excavation Requirements - Pipe Excavation shall be in conformance with Section 306 of the Greenbook Specifications. Structure Excavation shall be in conformance with Section 300-3 of the Greenbook Specifications. Access to trenches shall be in conformance with Section 306-1.1.4 and the manner of bracing excavations shall be in conformance with Section 306-1.1.6 of the Greenbook Specifications.

Excavation shall be kept to the minimum widths required for efficient placing of the pipe or structure and the construction of the various other concrete structures. The maximum length of open trench shall be in conformance with Section 306-1.1.2 of the Greenbook Specifications.

In excavating for surfaces against which concrete is to be placed, care shall be exercised in removing the final lift. The foundation for all concrete structures will be inspected and tested after excavation. The subgrade shall be ninety percent (90%) relative compaction prior to the placement of concrete. Surfaces against which concrete is to be placed shall be free of debris, mud or ponded water. If subgrade compaction is deficient, subgrade shall be scarified, moisture conditioned to or slightly above optimum moisture content, and the surface proof rolled to a minimum ninety percent (90%) relative compaction. Subgrade preparation will not be measured or paid separately and no additional compensation will be allowed unless overexcavation is directed by Engineer.

Material which will not provide a suitable foundation shall be removed and replaced with compacted select material as directed by the Engineer.

Any overexcavation shall be filled with select material compacted to ninety percent (90%) relative compaction and meeting the material requirements for backfill.

The Contractor shall remove slides and materials eroding into the work, and the slopes and grades refinished to original grades as specified.

The Contractor shall dispose of all surplus excavated material outside of the limits of the construction easements and permanent rights of way.

An extensive amount of cobbles and boulders are expected within the proposed depth of excavation and these materials are not suitable for backfill.

The removal of rock material from within the excavation paylines which requires the use of blasting or equipment beyond that normally necessary to accomplish the excavation (as determined by the Engineer) shall be paid for in accordance with Section VII, Article 7.03 of the General Provisions. The cost of removal and disposal (including trucking) of rock away from the jobsite will be paid for under the contract item Excavation and no additional compensation will be allowed.

Blasting, when necessary, as approved by the Engineer shall be in accordance with Section 19-2.03E of the Caltrans Specifications.

The Contractor's attention is directed to the General Provisions, Section V, Article 5.09 on the use of explosives and Article 5.11 in regard to unforeseen difficulties.

14.3 Excavation - The contract item Excavation covers the removal of all material including asphalt, aggregate base, abandoned pipelines and concrete from within the excavation paylines as specified and as required for the construction and installation of the precast reinforced concrete box, junction structures (except RCB to RCB Junction Structure), manholes, transitions and pipe as shown on the standard drawings, and the disposal of all surplus material. All HMA and P.C.C. shall be sawcut unless otherwise specified.

14.4 Asphalt Concrete Excavation – The contract item Asphalt Concrete Excavation covers the header cut and removal of asphalt concrete pavement to the depths and dimensions as specified and as shown on the drawings and the disposal of all surplus material.

Exclusive of this contract item is the asphalt concrete excavation within the trench excavation limits which will be measured and paid by the contract item Excavation.

Included in this contract item is the recompaction of the existing Aggregate Base to 95% relative compaction should the Aggregate Base be exposed after removal of existing asphalt concrete.

The cold planing machine shall have a cutter head at least 72 inches wide and shall be operated so as not to produce fumes or smoke.

The final cut shall result in a uniform surface conforming to the typical cross sections. The outside lines of the planed area shall be neat and uniform. The road surfacing to remain in place shall not be damaged in any way.

The material planed from the roadway surface, including material deposited in existing gutters or on the adjacent traveled way, shall be immediately removed from the work site and

disposed of outside the right of way. The removal crew shall follow within 50 feet of the planer unless otherwise directed by the Engineer.

14.5 General Backfill Requirements - Whenever fill is specified or required (except for pipe backfill) the work shall be performed as set forth in Sections 300-4.1 to 300-4.8 of the Greenbook Specifications. Backfill for pipe and box shall conform to Section 306-12 of the Greenbook Specifications, except jetting is not allowed.

An extensive amount of cobbles and boulders are expected within the proposed depth of excavation and these materials are not suitable for backfill. Trench backfill material shall conform to Section 217-2 of the Greenbook Specifications. Onsite excavated material to be used as backfill shall be screened to remove all material larger than six (6) inches. The cost of screening (including hauling to/from construction yard) of the excavated material shall be included in the cubic yard price for the contract item Backfill.

No backfill materials shall be placed against the outside walls of cast-in-place concrete structures until the concrete has developed eighty percent (80%) of its design strength. No fill or traffic will be permitted on the top of any cast-in-place concrete structure until the concrete in the structure has attained its design strength. Compressive strength will be determined by test cylinders taken by the Engineer. A maximum of six (6) test cylinders per structure will be made and paid by the District for the following day breaks: 7, 14, 21, 28, 28 days, and one break to be agreed upon by the Engineer and Contractor. Any additional test cylinders requested by Contractor shall be deducted from the monthly progress payment at a rate of $500.00/cylinder.

Regardless of the method of densification, backfill material shall not be placed against any reinforced concrete structure until the structure has been inspected and approved for backfilling by the Engineer.

Backfill will be accomplished by either mechanical methods or by placement of Controlled Low Strength Material (CLSM) as described in (1) and (2) below.

(1) Mechanical Compaction - Backfill shall be mechanically compacted by means of tamping rollers or other mechanical tampers. Impact-type pavement breakers (stompers) will not be permitted unless otherwise approved by the Engineer.

All backfill material for structures shall be placed in uniform layers and shall be brought up uniformly on each side of the structure. The thickness of each layer of backfill shall not exceed 8 inches before compaction unless otherwise approved by the Engineer. For hand directed mechanical compactors, the thickness of each layer shall not exceed 4 inches before compaction.

All relative compaction tests will be made by the Engineer in conformance with ASTM D1557. Whenever relative compaction is specified to be determined by ASTM D1557.

(2) Controlled Low Strength Material (CLSM) – Controlled Low Strength Material (CLSM) placement for backfill shall be used when specified or approved by the Engineer. CLSM backfill shall conform to Section 201-6 of the Greenbook Specifications and as specified in Section 16.

Approval to use specific methods and compaction equipment shall not be construed as guaranteeing or implying that the use of such methods and equipment will not result in damage to adjacent ground, existing improvements or improvements installed under the contract, nor shall it be construed as guaranteeing proper compaction. The Contractor shall make his own determination in this regard.

All backfill around structures and pipe shall be compacted to not less than ninety percent (90%) relative compaction. Where such material is placed under existing or proposed paved roadways, the top 3 feet, measured from the subgrade plane, shall be compacted to ninety-five percent (95%) and shall be compacted by Method (1).

Trench bottoms for structures and pipe shall be graded to provide firm and uniform bearing throughout the entire length of the structures and pipe.

14.6 Testing – District personnel shall perform compaction tests as described below using either the ASTM D1556 (sand cone) or ASTM D6938 (nuclear) test method. These tests represent the minimum required. Additional tests may be taken at the Engineer's discretion.

1. Mainline Trenches – A complete series of compaction tests will be taken for each 4-foot thickness of backfill placed. Each series will consist of tests taken at approximate maximum intervals of 300 feet. Each series will begin above the structure.

2. Connector Pipe Trenches – Compaction tests will be taken on 50% of the laterals, one test for each 4-foot of depth.

3. Any failed test will result in a retest.

14.7 Backfill - The contract item Backfill includes all mechanical backfill material compacted as specified around the various concrete structures, precast reinforced concrete box, and pipe within the paylines as shown on the standard drawings.

14.8 Controlled Low Strength Material (CLSM) Backfill - The contract item Controlled Low Strength Material (CLSM) Backfill shall be the placement of CLSM as specified on drawings and as directed by the Engineer.

CLSM material conformance is specified in Section 16 of these specifications.

14.9 Filter Material - The contract item Filter Material includes all filter material to be placed below the reinforced concrete pipe, box and various other structures.

The Contractor should note that the placing of filter material will be determined from field conditions as directed by the Engineer.

The materials for filter material shall conform to Sections 90-1.02C and 90-1.02C(4)(a) of the Caltrans Specifications. Grading shall meet the requirements for 1" x No. 4 coarse aggregate as per Section 90-1.02C(4)(b) of the Caltrans Specifications. The filter material shall be consolidated and the surface trimmed to final grade as directed by the Engineer.

14.10 Measurement - Excavation; Asphalt Concrete Excavation; Backfill; Controlled Low Strength Material (CLSM) Backfill; and Filter Material beyond the limits established by the drawings, unless ordered in writing by the Engineer, will not be measured for payment.

The excavated material shall be measured from the ground surface existing at the start of excavation, as determined from surveyed cross sections taken by the District, to the lines, grades and dimensions shown on the drawings. Longitudinal limits of the excavations as shown on the profile drawings terminate at a vertical plane at the limits of the structure, measured along the longitudinal axis of the various structures.

Measurement for payment for the contract item Excavation will be the number of cubic yards of material excavated as shown on the drawings. Longitudinal limits of the excavations terminate at a vertical plane at the limits of pipe or structures, measured along the longitudinal axis of the pipe or structure.

Measurement for payment for the contract item Asphalt Concrete Excavation will be the number of cubic yards of material excavated as shown on the drawings or as directed by the Engineer.

Measurement for payment for the contract item Backfill will be the number of cubic yards of material placed in final position as specified and within the limits of the payment lines shown on the drawings. The longitudinal limits shall terminate at a vertical plane at the limits of the pipe or structure, measured along the longitudinal axis of the various pipe or structures. Volumes occupied by structures, aggregate base, asphalt concrete, Controlled Low Strength Material (CLSM) and other features for which a separate payment is made will be deducted from the gross volume.

Measurement for payment for the contract item Controlled Low Strength Material (CLSM) Backfill will be the number of cubic yards of material placed in final position as specified and within the limits of the payment lines as shown on the drawings. The longitudinal limits for CLSM shall terminate at a vertical plane at the limits of the pipe or structure, measured along the longitudinal axis of the various pipe or structures. Volume occupied by structures, aggregate base, asphalt concrete and other features for which a separate payment is made will be deducted from the gross volume.

Measurement for payment for the contract item Filter Material will be the number of cubic yards of material placed in final position as specified to the lines, grades and dimensions as shown on the drawings or as directed by the Engineer.

14.11 Payment - The contract prices paid for Excavation; Asphalt Concrete Excavation; Backfill; Controlled Low Strength Material (CLSM) Backfill; and Filter Material shall include full compensation for all costs incurred under this section.

SECTION 15 - TRENCH SAFETY SYSTEM AND FALSEWORK

15.1 Description - This section covers the contract item Trench Safety System and Falsework. This item is defined as a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Trench safety systems include support systems, shield systems and other systems that will provide necessary protection, sloping and benching systems are not allowed. The item includes the furnishing and implementation of the safety system as required by Section 306-1.1.6 of the Greenbook Specifications or as directed by the Engineer.

15.2 Trench Safety System - Excavation for any trench five (5) feet or more in depth shall not begin until the Contractor has provided to the Engineer, a detailed plan for worker protection from the hazards of caving ground during the excavation of the trench. The plan shall show the details of the design of shoring, bracing, or other provisions to be made for worker protection including any design calculations done in the preparation of the plan. No such plan shall allow the use of shoring, or a protective system less effective than that required by the Construction Safety Orders of the California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal-OSHA). The plan shall be prepared and signed by an engineer who is registered as a civil engineer in the State of California, and the plan and design calculations shall be submitted for review at least two (2) weeks before the Contractor intends to begin trenching operations.

All safety plans shall reflect surcharge loadings imparted to the side of the trench by equipment and stored materials. Surcharge loads shall be monitored to verify that such loads do not exceed the design assumptions for the system.

The Contractor should not assume that only one type of trench safety system such as a shield or "trench box" will be adequate for all trenching situations encountered on a given project. The Contractor should be prepared with alternative safety system designs (such as solid sheeting) should construction circumstances dictate the use of such.

Trench safety system designs for support systems, shield systems or other protective systems whether drawn from manufacturers' data, other tabulated data or designed for this particular project must be signed by a civil engineer registered in the State of California prior to submittal to the District for review. A shoring plan for the specific use of a shield shall be prepared. Catalogs or engineering data for a product should be identified in the plan as supporting data. All specific items or applicable conditions must be outlined on the submittal.

The State of California Department of Transportation "Trenching and Shoring Manual" will be used as a guide for plan review and approval.

Also included in this item is the fencing and barricading of the open trench as required for the safety of pedestrians and vehicular traffic as directed by the Engineer.

15.3 Falsework – Falsework for the construction of bridges and reinforced concrete boxes shall conform with Section 48-2 Falsework of the Caltrans Specifications.

The Falsework plan shall be prepared and signed by an engineer who is registered as a civil engineer in the State of California, and the plan and design calculations shall be submitted for review at least 4 weeks before the Contractor intends to begin Falsework construction.

The State of California Department of Transportation "Falsework Manual" will be used as a guide for plan preparation and review.

15.4 Measurement and Payment - The contract price paid for the item Trench Safety System and Falsework shall include full compensation for all costs incurred under this section.

This payment will be made on a basis of the percentage of the work completed on the items related to trenching operations.

SECTION 16 - CONCRETE CONSTRUCTION

16.1 Description - This section includes the contract items related to the various classes of Concrete.

16.2 General Requirements - Concrete for all purposes shall be composed of Portland Cement, aggregates and water of the quantities and qualities herein specified, and in the required proportions. The ingredients are to be well mixed (a minimum of 70 drum revolutions, and a maximum of 250 drum revolutions are required to provide sufficient agitation to the concrete mix) and brought to the proper consistency and to have a compressive strength at the age of 28 days of not less than the amount shown in the following tabulation for each type of work listed:

CONCRETE CLASS	MINIMUM SACKS CEMENT/C.Y.	TYPE OF WORK	POUNDS PER SQUARE INCH
A	7.5	RCB to RCB Junction Structure, Boxes, Precast RCB, Manholes (with velocity greater than 20 feet per second), and Transition Structure Nos. 1 and 3	5000
A	6	Catch Basins, Junction Structure Nos. 2, 3, and 4, Manholes, Concrete Bulkhead, Concrete Collars, Cross Gutters and Spandrel	3250*
B	5	Local Depressions, Curb and Gutter, Sidewalk, Access Ramps and Miscellaneous Concrete not otherwise specified	3000*

E	1/2	Controlled Low Strength Material (CLSM) Backfill	50-100 (hand excavatable)

*Note: Concrete for use in structures constructed from State of California, Department of Transportation Standard Plans shall have compressive strengths as called for on those plans.

16.3 Material and Methods - All concrete materials, methods, forms and proportioning shall conform to Sections 51 and 90, and additionally, curb construction shall conform to Section 73 of the Caltrans Specifications. Concrete test specimens will be made in accordance with ASTM Designation C-31 and C172. Test for concrete compressive strengths will be performed in accordance with ASTM Designation C-39. Combined aggregate grading for all concrete shall be in conformance with Section 90-1.02C(4)(d) of the Caltrans Specifications and the following tabulation for each type of work listed:

TYPE OF WORK	COMBINED AGGREGATE GRADING
The inverts of: Junction Structures, Transition Structures, and Manholes	1-1/2" Maximum
Catch Basins, Local Depressions, Curb and Gutter, Cross Gutter, Spandrel, Sidewalk, Bulkheads, Collars, Access Ramps, and other Miscellaneous Concrete not otherwise specified. All other concrete structures	1" Maximum
Controlled Low Strength Material (CLSM) Backfill	*See below

*Note: Controlled Low Strength Material (CLSM) gradation shall conform to Section 201-6.2.2 of the Greenbook Specifications except that the Contractor has the option to use reclaimed concrete material for the CLSM. The reclaimed material shall meet the same grading requirements as non-reclaimed material set forth in Greenbook Specifications Section 201-6.2.2.

The Contractor may also elect to use an air entrained agent or an accelerant (2% PolarSet or equivalent) to speed up the set time of the CLSM. The Contractor shall submit mix designs for review and approval.

Fly Ash, Class F may be substituted for cement, up to a maximum of 15 percent by weight for all concrete. Fly Ash shall meet the standards of ASTM Designation: C-618. Water reducing agents meeting ASTM Designation: C-494 will be permitted in amounts recommended by the supplier and approved by the Engineer in writing.

No other admixture shall be used in any class of concrete without written permission from the Engineer.

Supplementing Section 90-1.01 of the Caltrans Specifications, prior to placement of any concrete the Contractor shall submit mix designs, for all types of concrete to be placed, to the Engineer for approval. Supplementing Section 90-1.02G(3) of the Caltrans Specifications, concrete delivered to the job site shall be accompanied by a ticket containing the weight of each of the individual ingredients in the mix.

16.4 General Reinforcing Steel Requirements - Reinforcing steel for all reinforced concrete structures shall be Grade 60 Low-Alloy or Grade 60 Billet-Steel. The reinforcing steel for use in structures constructed from State of California, Department of Transportation Standard Plans shall be of Grade 60 or as called for on those plans. Cleaning, bending, placing and spacing of reinforcement shall conform to the applicable provisions of Section 52 of the Caltrans Specifications and to the drawings. The Contractor shall furnish a "Certificate of Compliance" with the specification of ASTM Designation: A-706/A or A-615/A. All splices shall conform to the requirements of A.C.I. Manual, Standard 318, latest edition. Splices requested by the Contractor for his convenience shall be subject to approval by the Engineer. Longitudinal lap shall be 16 inches minimum for #4 bars and 19 inches minimum for #5 bars.

16.5 Consistency - The consistency of the concrete shall be such as to allow it to be worked into place without segregation. Unless otherwise specified, the slump shall be 3 inches plus or minus 1 inch for all concrete.

Controlled Low Strength Material (CLSM) Backfill flow characteristics shall be determined by the producer to meet job site conditions and shall be approved by the Engineer.

The slump test shall be performed in accordance with the requirements of ASTM Designation: C-143. Slumps greater than those specified may be cause for rejection of the concrete by the Engineer.

16.6 Placing - Supplementing Section 51-1.03D(1) of the Caltrans Specifications, concrete shall not be placed except in the presence of the Engineer. The Contractor shall give reasonable notice to the Engineer each time he intends to place concrete. Such notice shall be far enough in advance to give the Engineer adequate time to inspect the subgrade, forms, steel reinforcement and other preparations for compliance with the specifications before concrete is delivered for placing.

Formed concrete shall be placed in horizontal layers in lifts of not more than 20 inches. Hoppers and chutes, pipes and "elephant trunks" shall be used as necessary to prevent segregation of the concrete.

16.7 Form Removal and Finish - Forms shall be removed only when the Engineer has given his approval. Forms shall be removed in such a way as to prevent damage to the concrete. Supports shall be removed in a manner that will permit the concrete to take stresses due to its own weight uniformly.

Forms shall not be removed sooner than the following minimum time or strength after the concrete is placed. These times represent cumulative number of days and fractions of days, not necessarily consecutive, during which the temperature of the air adjacent to the concrete is above 50 degrees Fahrenheit. If the temperature falls below 50 degrees Fahrenheit at any time after the concrete is placed in the forms, the Engineer will advise the Contractor of additional time required before forms can be removed.

Element	Strength or Time
Reinforced Concrete Boxes	3000 psi or 7 days
Transition Structure Nos. 1 & 3	1600 psi
All other structures	16 hours

The finish on all exposed formed surfaces shall conform to Section 51-1.03F(3) Class 1 Surface Finish of the Caltrans Specifications. A tight wood float finish will be required on the surface of trapezoidal channels and bridge decks and excessive surface working will not be permitted. The exposed concrete surfaces shall be broomed in a transverse direction with a fine textured hair push broom to produce a uniform surface and eliminate float marks. Brooming shall be done when the surface is sufficiently set to prevent deep scarring. If directed by the Engineer, a fine spray of water shall be applied to the surface immediately in advance of brooming.

Exposed corners of all concrete structures shall be finished with a 3/4" chamfer.

Concrete flatwork shall match adjacent surfaces. The concrete shall be struck off and tamped or vibrated until a layer of mortar has been brought to the surface. The top surface and face of curbs, gutters, catch basins and sidewalks shall be finished to match adjacent surfaces.

16.8 Curing - All concrete shall be prevented from drying for a curing period of at least seven (7) days after it is placed. Surfaces exposed to air during the curing process shall be kept continuously moist for the entire period or until curing compound is applied.

Formed surfaces shall be thoroughly wetted immediately after forms are removed and shall be kept wet until patching and repairs are completed. Water or covering shall be applied in such a way that the concrete surface is not eroded or otherwise damaged. Water for curing shall be clean and free from any substances that will cause discoloration of the concrete.

Concrete may be coated with curing compound in lieu of the continued application of moisture. The curing compound shall comply with the requirements of Section 90-1.03B(3) of the Caltrans Specifications and ASTM Designation C-309. The curing compound shall be No. 2 White Pigmented Curing Compound, Type 2, Class B for all concrete surfaces other than for flatwork which shall be coated with No. 6 Nonpigmented Curing Compound, Type 1-D, Cass A containing a red fugitive dye.

The curing compound shall be sprayed on the moist concrete surfaces as soon as free water has disappeared, but shall not be applied to any surface until patching, repairs and finishing of that surface are completed. The curing compound shall be thoroughly mixed immediately before applying, and shall be applied at a uniform rate of not less than one gallon per 150 square feet of surface. No separate payment will be made for the curing compound or its application.

16.9 Controlled Low Strength Material (CLSM) Backfill Curing - Controlled Low Strength Material (CLSM) Backfill must achieve a maximum indentation diameter of three (3) inches as determined under ASTM D6024 before covering.

16.10 Joints - Joints shall be made at the locations shown on the drawings, or as approved by the Engineer.

The Contractor shall construct, in one continuous concrete placing operation, all work comprised between such joints. Joints shall be kept moist until adjacent concrete is placed.

All construction joints having a keyed, stepped, or roughened surface shall be cleaned by sandblasting prior to placement of the adjacent concrete, unless otherwise directed by the Engineer.

The sandblasting operations shall be continued until all unsatisfactory concrete, laitance, coatings, stains, debris, and other foreign materials are removed. The surface of the concrete shall be washed thoroughly to remove all loose material.

Construction joints, when required, shall be located between the transverse joints and, unless otherwise specified on the plans, shall utilize 1/2 inch diameter deformed bars 30 inches long, spaced at 18-inch centers as tie bars. The construction joints shall be straight and finished in a workmanlike manner.

Surfaces of construction joints shall be cleaned as set forth in Section 51-1.03D(4) of the Caltrans Specifications.

16.11 Class "A" Concrete, Minor Structures - The contract item Class "A" Concrete, Minor Structures includes the complete construction of the catch basins, collars, concrete bulkheads, cross gutters, and spandrel. Included in the pay item is all earthwork and reinforcing steel required for these structures, but exclusive of the required miscellaneous iron and steel.

16.12 Class "B" Concrete, Miscellaneous - The contract item Class "B" Concrete, Miscellaneous includes the complete construction of the curb and gutters, sidewalks, driveways, local depressions, access ramps, pipe plugs, and any other concrete not specified. Included in the pay item is all earthwork and reinforcing steel required. The subgrade for access ramps, and driveways shall be recompacted to ninety-five percent (95%) relative compaction prior to the placement of concrete.

16.13 Transition Structures - The contract item Transition Structure Nos. 1 and 3 covers the complete construction of these various structures, including reinforcing steel but exclusive of earthwork.

16.14 RCB to RCB Junction Structure - The contract item RCB to RCB Junction Structure covers the complete construction of this structure, inclusive of earthwork, reinforcing steel (Grade 60), shoring and removal of all asphalt, aggregate base, concrete, and existing reinforcement.

16.15 Junction Structure No. 2 - The contract item Junction Structure No. 2 covers the complete construction of these structures, including reinforcing steel, exclusive of earthwork.

No separate payment will be made for Junction Structure No. 3 or Junction Structure No. 4.

16.16 Manholes - The contract items Manhole Nos. 1, 2, and 4 cover the complete construction of these various structures, including reinforcing steel, exclusive of earthwork and the miscellaneous iron and steel.

The manhole rings are required and shall conform to ASTM Designation: C-478, and the drawings. The rings shall be laid up, using Type II modified cement with a 1:2 mix mortar and with 1/2-inch minimum thickness pointed joints. On completion, vertical wall section shall not be out of plumb by more than 1/2-inch in 10 feet of vertical height. The manhole rings shall also be accurately aligned. The cast iron manhole frame and cover shall be installed, with frame accurately set to finished grade of pavement, in mortar well tamped around the perimeter of frame to ensure full bearing.

16.17 Measurement - Measurement for payment for the contract items Class "A" Concrete, Minor Structures; and Class "B" Concrete, Miscellaneous will be the number of cubic yards placed as specified, measured to the neat lines as shown on the drawings.

Measurement for payment for the contract items Transition Structure No. 1; Transition Structure No. 3; RCB to RCB Junction Structure; Junction Structure No. 2; Manhole No. 1; Manhole No. 2; and Manhole No. 4 will be the number of each type constructed as specified.

No measurement or payment will be made for Junction Structure Nos. 3 and 4.

Measurement for payment for the contract item Reinforcing Steel required for the construction of the reinforced concrete structures described in the appropriate sections will be in conformance with Section 52-1.04 of the Caltrans Specifications. Steel used for longitudinal laps or splices will not be measured for payment. Transverse laps or splices shown on the plans but not used, and laps or splices used for the convenience of the Contractor will not be measured for payment.

No measurement or payment will be made for dowels, tie bars, tie wires, blocks, chairs and other accessories.

16.13 Transition Structures - The contract item Transition Structure Nos. 1 and 3 covers the complete construction of these various structures, including reinforcing steel but exclusive of earthwork.

16.14 RCB to RCB Junction Structure - The contract item RCB to RCB Junction Structure (from Station 10+03.17 to Station 10+23.06) covers the complete construction of this structure, inclusive of earthwork, reinforcing steel (Grade 60), shoring and removal of all asphalt, aggregate base, concrete, and existing reinforcement.

16.15 Junction Structure No. 2 - The contract item Junction Structure No. 2 covers the complete construction of these structures, including reinforcing steel, exclusive of earthwork.

No separate payment will be made for Junction Structure No. 3 or Junction Structure No. 4.

16.16 Manholes - The contract items Manhole Nos. 1, 2, and 4 cover the complete construction of these various structures, including reinforcing steel, exclusive of earthwork and the miscellaneous iron and steel.

The manhole rings are required and shall conform to ASTM Designation: C-478, and the drawings. The rings shall be laid up, using Type II modified cement with a 1:2 mix mortar and with 1/2-inch minimum thickness pointed joints. On completion, vertical wall section shall not be out of plumb by more than 1/2-inch in 10 feet of vertical height. The manhole rings shall also be accurately aligned. The cast iron manhole frame and cover shall be installed, with frame accurately set to finished grade of pavement, in mortar well tamped around the perimeter of frame to ensure full bearing.

16.17 Measurement - Measurement for payment for the contract items Class "A" Concrete, Minor Structures; and Class "B" Concrete, Miscellaneous will be the number of cubic yards placed as specified, measured to the neat lines as shown on the drawings.

Measurement for payment for the contract items Transition Structure No. 1; Transition Structure No. 3; RCB to RCB Junction Structure; Junction Structure No. 2; Manhole No. 1; Manhole No. 2; and Manhole No. 4 will be the number of each type constructed as specified.

No measurement or payment will be made for Junction Structure Nos. 3 and 4.

Measurement for payment for the contract item Reinforcing Steel required for the construction of the reinforced concrete structures described in the appropriate sections will be in conformance with Section 52-1.04 of the Caltrans Specifications. Steel used for longitudinal laps or splices will not be measured for payment. Transverse laps or splices shown on the plans but not used, and laps or splices used for the convenience of the Contractor will not be measured for payment.

No measurement or payment will be made for dowels, tie bars, tie wires, blocks, chairs and other accessories.

16.18 Payment - The contract prices paid for the various Concrete items and reinforcing steel items shall include full compensation for all costs incurred under this section.

SECTION 17 - CONCRETE PIPE

17.1 Description - This section covers the contract item Reinforced Concrete Pipe of the various sizes as required for the work.

17.2 General Pipe Requirement - Pipe materials, manufacture and quality, shall conform to ASTM Designation: C-76 or C-655. The Engineer shall be furnished a "Certificate of Compliance" signed by the manufacturer of the pipe certifying that the pipe conforms to the ASTM requirements. All pipe and pipe material supplied by the Contractor shall be new.

The District will also require the D-load bearing strength test conforming to ASTM C497 for new pipe 48" or greater, in conformance with Sections 207-2.9.1(1) and 207-2.9.2 of the Greenbook Specifications as a basis for acceptance of the pipe. The test shall be performed in the presence of the Engineer.

Pipe shall be laid in a trench free of ponded water in conformance with Section 306-1.2.2, with joints in conformance with Section 306-1.2.4 of the Greenbook Specifications.

Pipe ends shall be cleaned and moistened prior to making up joint.

17.3 Reinforced Concrete Pipe - The contract items for the various Reinforced Concrete Pipe include the furnishing and installing of the various pipe as specified, exclusive of earthwork.

17.4 Pipe on Curves - Unsymmetrical closure of pipe joints shall not exceed 1 inch pull on the outside of the curve when pull is measured at the springline on the inside of the pipe. Mortar joints on curves shall conform in strength, texture of mortar finish and tightness to the joints for straight ended pipe.

When beveled pipe is used the maximum deflection angle shall not exceed 6 degrees unless shown on the plans or approved by the Engineer.

17.5 Video Inspection – All concrete pipe (cast-in-place and reinforced) with inside diameters of 30 inches or less shall be videotaped prior to final inspection. Copies of the videotapes shall be provided to the Engineer. For pipe placed within roadway area, video inspection shall be performed and the results approved by the Engineer prior to paving.

17.6 Measurement - Measurement for payment of the contract items Reinforced Concrete Pipe of the various sizes and classes will be the number of lineal feet of each class installed as specified measured along the centerline of the pipe in place including curves.

17.7 Payment - The contract prices paid for the Reinforced Concrete Pipe shall include full compensation for all costs incurred under this section.

SECTION 18 - NOT USED

SECTION 19 - FLEXIBLE PAVEMENT CONSTRUCTION

19.1 Description - This section covers the contract items Aggregate Base, Class 2; Hot Mix Asphalt (HMA); and Temporary Resurfacing.

19.2 General Asphalt Concrete Construction Requirements – In order to minimize damage to completed work by stormwater runoff, reduce inconvenience to local residents, prevent damage to existing pavement, and diminish or eliminate erosion from the construction zone, the Contractor shall stage construction as follows:

Phase One – Project Start through George Street;
Phase Two – George Street through Gilman Street; and
Phase Three – Gilman Street through end of project (including Theodore Street).

A transition zone of 150 feet between each phase will be allowed for the Contractor to continue the installation of the storm drain. However, Contractor is required to complete paving for the previous phase when the transition zone is exceeded.

Each phase's final paving, inclusive of all precursor work (such as, but not limited to, Asphalt Concrete Excavation, the installation of mainline storm drain, laterals, catch basins, junction structures, reconstruction of cross gutters and spandrels, and necessary appurtenances) shall be completed to the satisfaction of the Engineer prior to beginning any mainline storm drain trenching in any upstream phase.

The cost of phasing shall be included in the lump sum price for the contract item Mobilization and/or the respective unit prices for contract items referenced directly or indirectly in this section.

19.3 Aggregate Base, Class 2 - The contract item Aggregate Base, Class 2 includes furnishing and placing such material as indicated on the drawings. Aggregate Base, Class 2 shall be clean and free from roots, organic material and other deleterious substances, and be of such character that when wet it will compact to form a firm stable base. Material and placing shall be in accordance with Section 26 of the Caltrans Specifications using ¾-inch maximum size.

The aggregate base shall also have a sand equivalent value of not less than 35 when tested in conformance with California Test Method 217.

The aggregate base material shall be spread as specified in Sections 26-1.03A and 26-1.03C of the Caltrans Specifications. The aggregate base material shall be compacted as specified in Section 26-1.03D of the Caltrans Specifications.

19.4 General Hot Mix Asphalt (HMA) Requirements - The Contractor shall not start paving Hot Mix Asphalt (HMA) until all compaction on the aggregate base is tested and approved by the Engineer.

The HMA shall be proportioned, mixed, spread and compacted in accordance with the applicable provisions in Section 39 of the Caltrans Specifications and these Detailed Specifications.

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

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

19.5 Hot Mix Asphalt (HMA) Aggregate - Aggregates shall be clean and free from decomposed materials, organic material, and other deleterious substances. Coarse aggregate is material retained on the No. 4 sieve and fine aggregate is material passing the No. 4 sieve. Supplemental fine aggregate is added fine material passing the No. 30 sieve including, but not limited to, cement and stored fines from dust collectors.

The aggregate grading of the different types of Hot Mix Asphalt (HMA) shall conform to the following, unless otherwise specified on the plans:

HMA Type	Grading
A	¾-inch and/or ½-inch
C	1-inch

The base course of the HMA shall consist of ¾-inch aggregate for Type A and 1-inch aggregate for Type C, and the final course for Type A shall consist of ½-inch aggregate.

The combined aggregate gradation and quality characteristics for HMA Type A and Type C aggregate(s), prior to addition of asphalt binder, shall conform to the requirements found in the following tables:

Aggregate Gradation HMA Type A
(Percentage Passing)
¾-inch HMA Type A

Sieve Sizes	Target Value Limits	Allowable Tolerance
1-inch	100	-
¾-inch	90-100	TV ±5
½-inch	70-90	TV ±6
No. 4	45-55	TV ±7
No. 8	32-40	TV ±5
No. 30	12-21	TV ±4
No. 200	2-7	TV ±2

Aggregate Gradation HMA Type A
(Percentage Passing)
½-inch HMA Type A

Sieve Sizes	Target Value Limits	Allowable Tolerance
¾-inch	100	-
½-inch	95-99	TV ±6
3/8-inch	75-95	TV ±6
No. 4	55-66	TV ±7
No. 8	38-49	TV ±5
No. 30	15-27	TV ±4
No. 200	2-8	TV ±2

HMA Type A Aggregate Quality

Quality Characteristic	Test Method	Requirement
Percent of crushed particles[1]	CT 205	
Coarse aggregate (% min.)		
One fractured face		90
Two fractured faces		75
Fine aggregate (Passing No. 4 Sieve and retained on No. 8 Sieve) (% min.)		
One fractured face		70
Los Angeles Rattler (% max.)[1]	CT 211	
Loss at 100 rev.		12
Loss at 500 rev.		45
Sand equivalent[1, 2] (min.)	CT 217	47
Fine aggregate angularity (% min.)[1]	AASHTO T 304 Method A	45
Flat and elongated particles (% max. by weight at 5:1)[1]	ASTM D 4791	10

Note: [1]Combine aggregate in the job mix formula proportions.
[2]Reported value must be the average of three (3) tests from a single sample.

Aggregate Gradation HMA Type C
(Percentage Passing)
1-inch HMA Type C

Sieve Sizes	Target Value Limits	Allowable Tolerance
1-inch	100	-
¾-inch	88-93	TV ±5
½-inch	72-85	TV ±6
3/8-inch	55-70	TV ±6
No. 4	35-52	TV ±7
No. 8	22-40	TV ±5
No. 30	8-24	TV ±4
No. 50	5-18	TV ±4
No. 200	3-7	TV ±2

HMA Type C Aggregate Quality

Quality Characteristic	Test Method	Requirement
Percent of crushed particles[1]	CT 205	
Coarse aggregate (% min.)		
Two fractured faces		95
Fine aggregate (Passing No. 4 Sieve and retained on No. 8 Sieve) (% min.)		
One fractured face		90
Los Angeles Rattler (% max.)[1]	CT 211	
Loss at 100 rev.		12
Loss at 500 rev.		40
Sand equivalent[1, 2] (min.)	CT 217	47
Fine aggregate angularity (% min.)[1]	AASHTO T 304 Method A	45
Flat and elongated particles (% max. by weight at 5:1)[1]	ASTM D 4791	10

Note: [1]Combine aggregate in the job mix formula proportions.
[2]Reported value must be the average of three (3) tests from a single sample.

19.6 Asphalt Binder - The asphalt binder to be mixed with aggregate shall conform to these Detailed Specifications and shall be as designated below or as determined by the Engineer:

- Grade PG 70-10 (Desert)

The Contractor shall furnish and place the HMA with all asphaltic emulsions required.

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

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

The Contractor shall furnish asphalt binder from a supplier that conforms to the State of California Department of Transportation'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/ormt/fpmcoc.htm.

The amount of asphalt binder to be mixed with the mineral aggregate shall be between three percent (3%) and seven percent (7%) by weight, of the dry mineral aggregate. The exact amount of asphalt binder to be mixed with the mineral aggregate shall be determined by a special mix design.

Performance grade paving asphalt shall conform to the testing requirements in the table below:

Performance Graded Asphalt Binder

Property	AASHTO Test Method	Specification Grade			
		PG 64-10	PG 64-16	PG 70-10	PG 64-28PM[i]
Original Binder					
Flash Point, Minimum °C	T48	230	230	230	230
Solubility, Minimum %[b]	T44	99	99	99	98.5
Viscosity[c] at 135 °C, Maximum, Pa·s	T316	3.0	3.0	3.0	3.0
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	64 1.00	64 1.00	70 1.00	64 1.00
RTFO Test[e], Mass Loss, Maximum, %	T240	1.00	1.00	1.00	1.00
RTFO Test Aged Binder					
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum G*/sin(delta), kPa	T315	64 2.20	64 2.20	70 2.20	64 2.20
Ductility at 25 °C Minimum, cm	T51	75	75	75	-
Dynamic Shear, Test Temp. at 10 rad/s, °C Minimum (delta), %	T315	-	-	-	Note g 80
PAV[f] Aging, Test Temperature, °C	R28	100	100	110	100
Elastic Recovery[h], Test Temp., °C Minimum recovery, %	T 301	-	-	-	25 75
RTFO Test and PAV Aged Binder					
Dynamic Shear, Test Temp. at 10 rad/s, °C Maximum G*/sin(delta), kPa	T315	31[d] 5000	28[d] 5000	34[d] 5000	31 5000
Creep Stiffness, Test Temperature, °C Maximum S-value, Mpa Minimum M-value	T313	0 300 0.300	-6 300 0.300	0 300 0.300	-12 300 0.300

Notes:

a. Not used.

b. The Engineer will waive this specification if the supplier is a Quality Supplier as defined by Department's "Certification Program for Suppliers of Asphalt".

c. 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.

d. Test the sample at 3 °C higher if it fails at the specified test temperature. G*sin(delta) shall remain 5000 kPa maximum.

e. "RTFO Test" means the asphaltic residue obtained using the Rolling Thin Film Oven Test, AASHTO Test Method T240 or ASTM Designation: D2827.

f. "PAV" means Pressurized Aging Vessel.

g. Test temperature is the temperature at which G*/sin(delta) is 2.2 kPa. A graph of log G*/sin(delta) plotted against temperature may be used to determine the test temperature when G*/sin(delta) is 2.2 Kpa. A graph of (delta) versus temperature may be used to determine delta at the temperature when G*/sin(delta) is 2.2 kPa. The Engineer also accepts direct measurement of (delta) at the temperature when G*/sin(delta) is 2.2 kPa.

h. Test without a force ductility clamp may be performed.

i. Do not modify PG Polymer Modifier using acid modification.

Certificates of compliance shall be furnished to the Engineer certifying that the asphaltic emulsions and paving asphalts conform to the referenced Greenbook Specifications.

19.7 Hot Mix Asphalt (HMA) Prime Coat - Prime coat shall consist of refined petroleum and shall conform to the provisions in Section 93 "Liquid Asphalts" of the Caltrans Specifications. Prime coat shall be applied only to those areas designated by the Engineer. The application rate shall be 0.25 gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

19.8 Hot Mix Asphalt (HMA) Paint Binder/Tack Coat - Asphaltic emulsion for paint binder (tack coat) shall conform to the provisions in Section 94 "Asphaltic Emulsion" of the Caltrans Specifications for the rapid-setting or slow-setting type and grade approved by the Engineer. Grade CQS1 shall be used if not otherwise specified by the Engineer. Tack coat shall be applied to all vertical surfaces of existing pavement, curbs, gutters, and construction joints in the surfacing against which additional material is to be placed, to a pavement to be surfaced, and to other surfaces designated in the Detailed Specifications. The application rate shall be from 0.02 to 0.10 gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

19.9 Hot Mix Asphalt (HMA) Placement - Hot Mix Asphalt (HMA) shall be spread and compacted in the number of layers of the thicknesses indicated in the following table:

Total Thickness Shown on Plans[1]	Minimum No. of Layers	Top Layer Thickness (ft.)		Next Lower Layer Thickness (ft.)		All Other Lower Layer Thickness (ft.)	
		Min.	Max.	Min.	Max.	Min.	Max.
0.24-foot or less	1	-	-	-	-	-	-
0.25-foot	2	0.12	0.13	0.12	0.13	-	-
0.26 - 0.46-foot	2	0.12	0.21	0.14	0.25	-	-
0.47-foot or more	3 or more	0.15	0.21	0.15	0.25	0.17	0.25

[1]When pavement reinforcing mat is shown to be placed between layers of HMA, the thickness of HMA above the pavement reinforcing mat shall be considered to be the "total thickness shown on plans".

The straightedge for smoothness determination on the top layer of HMA pavement shall conform to the tolerance specified in Section 39-1.12B, "Straightedge" of the Caltrans Specifications.

Areas of the top surface of the uppermost layer of HMA pavement that do not meet the specified surface tolerances shall be brought within tolerance by abrasive grinding. Areas which have been subjected to abrasive grinding shall receive a seal coat. The corrective method for each area shall be selected by the Contractor and shall be approved by the Engineer prior to beginning the corrective work.

When abrasive grinding is used to bring the top surface of the uppermost layer of HMA surfacing within the specified surface tolerances, additional abrasive grinding shall be performed as necessary to extend the area ground in each lateral direction so that the lateral limits of grinding are at a constant offset from, and parallel with, the nearest lane line or pavement edge, and in each longitudinal direction so that the grinding begins and ends at lines normal to the pavement centerline, within a ground area. Ground areas shall be neat rectangular areas of uniform surface appearance.

19.10 Hot Mix Asphalt (HMA) - The contract item Hot Mix Asphalt (HMA) covers the furnishing and installation of HMA necessary for the repair and resurfacing of streets damaged or removed due to construction operations, or as otherwise specified on the plans, including all aggregate, asphalt binder, prime coat, and tack coat/paint binder as specified herein, exclusive of any excavation or pavement grinding.

19.11 Temporary Resurfacing - The contract item Temporary Resurfacing is required for short reaches of the mainline and connector pipe trenches whenever excavation is made through pavement on which traffic must be allowed immediately after backfilling, only as directed by the Engineer. Otherwise the leveling course of the HMA may be used to open the work area to traffic until the final paving is completed. Measurement and payment of the leveling course will be made as a HMA item, not Temporary Resurfacing.

Temporary Resurfacing shall be 2" (0.17') and in conformance with Section 306-13 of the Greenbook Specifications.

19.12 Measurement - Measurement for payment of the contract item Aggregate Base, Class 2 will be the number of cubic yards placed to the lines, grades and dimensions shown on the drawings. **No allowance will be made for aggregate base placed outside said dimensions unless otherwise ordered by the Engineer.**

Measurement for payment of the contract item Hot Mix Asphalt (HMA) will be the number of tons placed to the lines, grades and dimensions shown on the drawings. The HMA pay quantity shall be determined by using a conversion factor of 144 pounds per cubic foot for all HMA placed within standard paylines. No measurement for payment will be made for asphalt emulsions, including asphalt binder, HMA prime coat, HMA tack coat/paint binder required for this portion of the work, raising valves and manholes (frame and cover), all costs for these items shall be included in the price paid for HMA. **No allowance will be made for HMA placed outside said dimensions unless otherwise ordered by the Engineer.**

Measurement for payment of the contract item Temporary Resurfacing will be the number of tons placed as specified in Section 19.10 and as directed by the Engineer.

19.13 Payment - The contract prices paid for Aggregate Base, Class 2; Hot Mix Asphalt (HMA); and Temporary Resurfacing shall include full compensation for all costs incurred under this section.

SECTION 20 - NOT USED

SECTION 21 - MISCELLANEOUS

21.1 Description - This section covers the contract items Miscellaneous Iron and Steel; Traffic Loop Detector Replacement; Traffic Signal Conduit Relocation; Relocate Waterline House Service Connection; Extra Directed Work; and Remodel 4-Inch Vitrified Clay Pipe (VCP) House Connection.

21.2 Miscellaneous Iron and Steel - The contract item Miscellaneous Iron and Steel covers all ferrous metal used in the various hydraulic structures. Materials, parts and fittings shall conform with the following:

(a) Manhole Frames and Covers - Per ASTM Designation: A-48, Class 35B. Manhole frames and covers shall be minimum weight as shown on the plans, and the weight of each frame and cover shall be indicated thereon in white paint. Style and markings shall be approved by the Engineer. The castings shall be free from cracks, blowholes or other imperfections, straight, true to pattern and have a uniform finish. The castings for manholes in streets shall be thoroughly cleaned and coated with asphaltum paint of approved composition; all other castings for frames and covers shall be cleaned and galvanized. The cover shall fit firmly into the frame without rocking, with the frame accurately placed so that cover is flush with finish paving.

(b) All other Miscellaneous Metal - Per ASTM Designation: A-36.

(c) Galvanizing – Except for manhole frames and covers described above, all exposed ferrous metal shall be galvanized per Section 210-3 of the Greenbook Specifications.

21.3 Traffic Loop Detector Replacement - Traffic Loop Detector Replacement shall be required whenever a detector separation occurs due to the Contractor's work or when new loops are required. Loop installation shall be in accordance with State of California, Department of Transportation Standard Plan ES-5A and shall conform to Section 86 of the Caltrans Specifications.

The installation of traffic loops is required within 24 hours of final paving of the affected area.

21.4 Traffic Signal Conduit Relocation - This contract item is to be used only if the Traffic Signal Conduit is in direct conflict with the storm drain as determined by the Engineer. The

contract item Traffic Signal Conduit Relocation includes all work, earthwork, equipment, material and labor required to relocate the traffic signal conduit around the storm drain. Contractor shall obtain approval by the Engineer prior to any work involving the relocation/replacement of the traffic signal conduit. Relocating or replacement shall conform to Section 86 of the Caltrans Specifications. No splicing of conductors will be allowed unless a pull box is installed at the splice location. The traffic signal conduit and materials shall conform to the City of Banning Traffic Signal Plan - Ramsey Street at Hargrave Street (RS 109) as shown in Appendix "D" of these Detailed Specifications.

21.5 Relocate Waterline House Service Connection – The contract item Relocate Waterline House Service Connection covers all labor, equipment, materials, testing, disinfection, earthwork, pavement and sidewalk replacement and incidentals required for the connection of water services to a 6-inch or 8-inch steel pipe water main as shown on the plans and per City of Banning Standard Drawings and Specifications. The City of Banning Standard Drawings and Specifications can be downloaded from the following website http://www.ci.banning.ca.us/DocumentCenter/View/2362. It is the Contractor's responsibility to obtain the latest standard drawings and specifications by contacting the City of Banning Public Works Department.

The Contractor is required to closely coordinate and cooperate with the City of Banning Public Works Department to ensure that work proceeds in an orderly manner and that the waterline is out of service for a minimum period of time. The Contractor shall notify Mr. Art Vela (951.922.3130) of the City of Banning Public Works Department in writing at least ten (10) working days before the waterline relocation is started. All work related to this item shall be performed in the presence of the City inspector.

21.6 Extra Directed Work - The contract item Extra Directed Work shall consist of necessary work that is not included in other contract bid items and not shown on the drawings, as determined by the Engineer. All Extra Directed Work shall be performed only as directed by the Engineer and in accordance with all applicable standards and specifications.

21.7 Remodel 4-Inch Vitrified Clay Pipe (VCP) House Connection - The contract item Remodel 4-Inch Vitrified Clay Pipe (VCP) House Connection pertains to the removing of interfering portions of house connections and replacing with new pipe and any mainline modification required. The remodeling shall be done in accordance with the drawings, including excavation, backfill and any concrete encasement but excluding asphalt concrete or aggregate base in this item of work. Only the VCP house connections interfering with the RCB or pipe conduit to be constructed will be measured for payment.

21.8 Measurement - Measurement for payment for the contract item Miscellaneous Iron and Steel will be the number of pounds used in the work as specified. Should manhole frames and covers exceed the minimum weights as shown on the drawings by more than two percent (2%) that weight in excess of the allowable two percent (2%) increase will not be measured for payment. Manhole frames and covers to be salvaged and reused will not be measured for payment.

Measurement for payment for the contract item Traffic Loop Detector Replacement will be the lineal feet of sawcut necessary for the traffic loops. Conductors and pullboxes will not be measured for payment and shall be included in the bid items.

Measurement for payment for Traffic Signal Conduit Relocation will be made on a lump sum basis.

Measurement for payment for the contract item Relocate Waterline House Service Connection shall be the number of relocations performed.

Measurement for payment for the contract item Remodel 4-Inch VCP House Connection will be the number of lineal feet of 4-inch vitrified clay pipe installed. There will be no separate payment for special fittings or joint materials and modification to the main line.

21.9 Payment - The contract prices paid for Miscellaneous Iron and Steel; Traffic Loop Detector Replacement; Traffic Signal Conduit Relocation; Relocate Waterline House Service Connection; and Remodel 4-Inch VCP House Connection shall include full compensation for all costs incurred under this section.

Full compensation for the contract item Extra Directed Work shall be as "Extra Work" and shall be paid pursuant to Section 2.07 of the General Provisions. The total accumulated costs for Extra Directed Work shall not exceed the amount specified in the contract bid item unless otherwise increased by change order.

SECTION 22 THROUGH SECTION 26 - NOT USED

SECTION 27 - DUST ABATEMENT

27.1 Description - This section covers the implementation of dust control measures necessary to prevent harm and nuisance from dust. Supplementing Section 8.06 of the General Provisions, the Contractor shall comply with all the provisions of the South Coast Air Quality Management District (SCAQMD) Rule 403 and Rule 403.1 as described in Appendix "A".

27.2 Dust Abatement - The contract item Dust Abatement includes the action necessary to prevent, reduce or control dust within the work area as required to complete the work. The Contractor shall carry out proper and efficient measures to prevent his operations from producing dust in amounts damaging to property or causing a nuisance or harm to persons living nearby or occupying buildings in the vicinity of the work.

The Contractor shall implement appropriate fugitive dust control measures including watering, stabilized construction access to reduce tracking of mud or dirt onto public roads, covering trucks hauling loose dirt offsite and street sweeping of track-out. The Contractor can contact SCAQMD for their Rule 403 and Rule 403.1 implementation handbooks which contain a detailed listing of reasonably available dust control measures.

The Contractor shall prepare and implement a dust control plan in accordance with the requirements set forth in the latest version of the SCAQMD Rule 403 and Rule 403.1. The methods to be used for controlling dust in the construction area and along haul roads shall be approved by the Engineer prior to starting any work included in this contract. If the Contractor's operations meet the Rule 403 definition of "Large Operations", the dust control plan shall be submitted to SCAQMD for review and approval prior to start of operations.

Construction equipment idling shall not exceed 10 minutes to ensure that the SCAQMD daily thresholds are not exceeded.

27.3 Payment - The contract lump sum price paid for Dust Abatement shall include full compensation for all direct and indirect costs incurred under this section.

This payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 28 - NOT USED

SECTION 29 – STORMWATER AND NON-STORMWATER POLLUTION CONTROL

29.1 Description – The contract item Stormwater and Non-Stormwater Pollution Control shall include preparing, obtaining approval of, amending and implementing the Permit Registration Documents (PRDs) as required by the State Water Resources Control Board (SWRCB) and the California Regional Water Quality Control Board (CRWQCB) - Colorado River Basin Region. The contract item Non-Stormwater Discharge or Dewatering shall include compliance with Colorado River Basin Water Quality Board Order No. R7-2015-0006.

29.2 General Requirements – All activities performed by the Contractor for this project shall conform to the requirements of the State-wide National Pollutant Discharge Elimination System (NPDES) General Permit (Board Order No. 2009-0009-DWQ, NPDES No. CAS000002 as amended by Board Order No. 2010-0014-DWQ) for Stormwater Discharges Associated with Construction and Land Disturbance Activities, hereafter referred to as the "General Permit", issued by the SWRCB. This General Permit regulates both stormwater and non-stormwater discharges associated with Contractor's construction activities. This General Permit can be downloaded at http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

The PRDs mentioned above consist of:

1. Notice of Intent
2. Risk Assessment (Section VIII of the General Permit)
3. Site Map
4. Stormwater Pollution Prevention Plan (SWPPP) (Section XIV of the General Permit)
5. Annual Fee
6. Signed Certification Statement

Notice of Intent - The District will complete and submit the Notice of Intent.

Risk Assessment - Using the methodology in Appendix 1 of the General Permit, the District has calculated the preliminary Risk Level to be 1.

Site Map - The Contractor shall revise District provided site map of the project area if Contractor's Qualified SWPPP Developer (QSD) deems necessary. Site Map shall conform to requirements of General Permit Attachment B, Section J.

SWPPP - For the convenience of the Contractor and to expedite the SWPPP preparation and approval, a "90%" SWPPP Template has been prepared by the District. This SWPPP Template has been tailored to the referenced project and can be downloaded from http://rcflood.org/Documents/SWPPP_Template_5000169.pdf or obtained from the District in CD form. Winning bidder will be provided two (2) hard copies and a Word document of the "90%" SWPPP Template to amend. The Contractor shall review and amend this SWPPP Template based on the requirements of the General Permit and per the construction schedule and work plan proposed by the Contractor. The Contractor shall then submit a SWPPP certified by the Contractor's QSD which conforms to Section 29.3 for District review and approval.

The Contractor shall amend and finalize the complete "90%" SWPPP Template referenced above. The Contractor shall, at a minimum, provide and/or prepare the following:

1. Name and contact information for the Contractor's Qualified SWPPP Practitioner (QSP) and QSD
2. Contractor name and contact information
3. Contractor site contact person and emergency contact person information
4. Verification of disturbance area due to construction
5. Construction commencement date
6. Anticipated construction completion date
7. Construction Activity Schedule/Best Management Practices (BMPs) Installation Schedule
8. Name and contact information for personnel responsible for pre-storm, post-storm and storm event BMP inspections – this should be the project's QSP
9. Name of the lab responsible for testing any stormwater samples for non-visible pollutants
10. Verification of project risk level and permit type (Linear Underground/Overhead Project (LUP) or Traditional)
11. List of all subcontractors that will be working on the project
12. Review and finalize water pollution control drawings

The SWPPP shall be certified by the Contractor's QSD and implemented by the Contractor's QSP. The SWPPP shall be developed using the format outlined in the CASQA SWPPP Template located in the California Stormwater Quality Association (CASQA) Construction BMP Handbook Portal. The portal can be found on the CASQA Website: www.casqa.org. The SWPPP shall identify site specific BMPs to be implemented during and after construction to minimize the potential pollution of stormwater runoff and downstream

receiving waters. The identified BMPs shall be practices designed to minimize or eliminate the discharge of pollutants from the construction site and Contractor's construction activities, including, but not limited to:

1. Good housekeeping practices for solid and sanitary/septic waste management, vehicle and equipment cleaning/maintenance, and material handling and storage.

2. Construction procedures such as stabilized construction access points, scheduling/phasing to minimize areas of soil disturbance, soil stabilization and erosion/sediment control.

The SWPPP shall also stipulate an ongoing program for monitoring and maintenance of all BMPs.

The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
2. Where not otherwise required to be under a Regional Water Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Conventional Technology (BAT/BCT) standard;
4. Calculations and design details as well as BMP controls for site run-on are complete and correct; and
5. Stabilization BMPs, installed to reduce or eliminate pollutants after construction, are completed.

To demonstrate compliance with requirements of the General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

The Contractor shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Regional Board inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

Annual Fee - The District will pay any necessary fees.

Signed Certification Statement - The Contractor's QSD shall submit a signed certification certifying the SWPPP is a true, accurate and complete representation of the proposed project and mitigation measures.

In the event the District incurs any Administrative Civil Liability or Mandatory Minimum Penalty (fine) imposed by the CRWQCB – Colorado River Basin Region, as a result of Contractor's failure to fully implement the provisions of this section and permit requirements, "Stormwater and Non-Stormwater Pollution Control", the Engineer may, in the exercise of his sole judgment and discretion, withhold from payments otherwise due Contractor a sufficient amount to cover the Civil Liability. Liability for "Negligent Violations" may be in an amount up to $50,000 per day per deemed occurrence while "Knowing Violations" can result in fines as high as $250,000 and imprisonment.

Stormwater and Non-Stormwater Pollution Control work shall conform to the requirements in the latest version of the California Stormwater Quality Association (CASQA) Handbook, entitled **"California Stormwater BMP Handbook – Construction"**. A copy of the "California Stormwater BMP Handbook – Construction", hereafter referred to as the "CASQA Handbook", may be obtained from CASQA, Post Office Box 2105, Menlo Park, California 94026-2105. Telephone: 650.366.1042. Copies of the handbook can also be downloaded from the CASQA Internet site at https://www.casqa.org/.

The Contractor shall be responsible for all costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section, "Stormwater and Non-Stormwater Pollution Control", including but not limited to, compliance with the applicable provisions of the CASQA Handbook, General Permit, Federal, State and local regulations. For the purpose of this paragraph, costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against the District or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act.

The Contractor shall become fully informed of and comply with the applicable provisions of the CASQA Handbook, General Permit, Federal, State and local regulations that govern the Contractor's activities and operation pertaining to both stormwater and non-stormwater discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall, at all times, keep copies of the General Permit, approved SWPPP and all amendments at the project site. The SWPPP shall be made available upon request of a representative of the SWRCB, CRWQCB, United States Environmental Protection Agency (USEPA) or local stormwater management agency. Requests by the public shall be directed to the Engineer.

The Contractor is solely and exclusively responsible for any arrangements made between the Contractor and other property owners or entities that result in disturbance of areas or construction activities being conducted outside limits of the designated rights-of-way and temporary construction easements as shown on the project drawings.

The Contractor shall, at reasonable times, allow authorized agents of the CRWQCB, SWRCB, USEPA or local stormwater management agency, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the construction site and the Contractor's facilities pertinent to the work;
2. Have access to and copy any records required to be kept as specified in the General Permit;
3. Inspect the construction site, including any offsite staging areas or material storage areas, and related soil stabilization practices and sediment control BMPs; and
4. Sample or monitor for the purpose of ensuring compliance with the General Permit.

The Contractor shall notify the Engineer immediately upon request from regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records.

29.3 PRDs Preparation and Approval - The Contractor shall prepare and obtain approval of the PRDs as part of the Stormwater and Non-Stormwater Pollution Control work for this contract. The SWPPP shall include an appropriate Construction Site Monitoring Program (CSMP) as required by Section I, "Monitoring and Reporting Requirements" of Attachment C of the General Permit. A guidance document titled "Field Monitoring and Analysis Guidance" is available from the CASQA internet site in their Construction BMP Handbook Portal. The Contractor shall prepare and implement the SWPPP in accordance with the CASQA Handbook and CSMP, the General Permit and these Detailed Specifications.

In case of conflict between the CASQA Handbook and these Detailed Specifications, the Detailed Specifications shall govern; in case of conflict between these Detailed Specifications and the General Permit, the latter shall govern.

Within five (5) working days after the award of the contract, the Contractor shall submit one (1) hard copy and one (1) pdf copy of the SWPPP to the Engineer for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the SWPPP. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within three (3) working days of receipt of the Engineer's comments and shall allow ten (10) working days for the Engineer to review the revisions. The Contractor shall submit four (4) hard copies and one (1) pdf copy of the approved SWPPP to the Engineer prior to the pre-construction meeting. **The Contractor must have approved PRDs prior to the pre-construction meeting.**

The objectives of the SWPPP shall be to identify all pollution sources associated with Contractor's construction activities that may adversely affect the quality of stormwater discharges; to identify all non-stormwater discharges; to identify, construct, implement and maintain water pollution control best management practices, hereafter referred to as "BMPs", to reduce to the maximum extent practicable pollutants in both stormwater discharges and

authorized non-stormwater discharges from the construction site during construction and to develop a maintenance schedule for BMPs after construction is completed under this contract.

The SWPPP shall incorporate BMPs in each of the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Non-stormwater management, and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of BMPs are described in the CASQA Handbook. The Contractor shall consider the objectives and minimum requirements presented in the CASQA Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate one or more of the listed minimum BMPs required into the SWPPP and implement them on the project to meet the pollution control objectives for the category. In addition, the Contractor shall consider other BMPs presented in the CASQA Handbook to supplement the minimum BMPs required when necessary to meet the objectives of the SWPPP and maintain compliance with the General Permit. The Contractor shall document the selection process in accordance with the procedure specified in the CASQA Handbook.

The Contractor should not assume that the minimum BMPs required for each category presented in the CASQA Handbook are adequate to meet the pollution control objectives. The Contractor may use other effective BMPs, as approved by the Engineer, in addition to the minimum as required in the CASQA Handbook to achieve the pollution control objectives.

The SWPPP shall include the following items as described in the CASQA Handbook, CSMP and General Permit:

Section 1 - SWPPP Requirements:

1.1 Introduction
1.2 PRDs
1.3 SWPPP Availability and Implementation
1.4 SWPPP Amendments
1.5 Retention of Records
1.6 Required Non-Compliance Reporting
1.7 Annual Report
1.8 Changes to Permit Coverage
1.9 Notice of Termination

Section 2 - Project Information:

2.1 Project and Site Description
2.2 Permits and Governing Documents

2.3 Stormwater Run-on from Offsite Areas
2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination
2.5 Construction Schedule
2.6 Potential Construction Site Pollutant Sources
2.7 Identification of Non-Stormwater Discharges
2.8 Required Site Map Information

Section 3 - Best Management Practices:

3.1 Schedule for BMP Implementation
3.2 Erosion Control and Sediment Control
3.3 Non-Stormwater and Material Management
3.4 Post-Construction Stormwater Management Measures

Section 4 - BMP Inspection, Maintenance, and Rain Event Action Plans:

4.1 BMP Inspection and Maintenance
4.2 Rain Event Action Plans

Section 5 - Training

Section 6 - Responsible Parties and Operators:

6.1 Responsible Parties
6.2 Contractor List

Section 7 - Construction Site Monitoring Program:

7.1 Purpose
7.2 Applicability of Permit Requirements
7.3 Weather and Rain Event Tracking
7.4 Monitoring Locations
7.5 Safety and Monitoring Exemptions
7.6 Visual Monitoring (Inspections)
7.7 Water Quality Sampling and Analysis
7.8 Watershed Monitoring Option
7.9 Quality Assurance and Quality Control
7.10 Reporting Requirements and Records Retention

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, individuals responsible for creating, revising, overseeing, and implementing the SWPPP should participate in applicable training programs and document such training in the SWPPP. A copy of the SWPPP should be located at the construction site.

The following notes (or notes of substantially similar intent) that address pollution prevention to the Maximum Extent Practicable during the construction phase of a project on a

year-round basis need to be placed on the Stormwater and Non-Stormwater Pollution Control Drawings:

- Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in runoff from disturbed soil areas on construction sites.
- Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the construction site.
- Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities or adjoining properties by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites and must not be discharged to receiving waters or the local storm drain system. Washwaters or rinsate from ready mix, concrete, or cement vehicles must be handled appropriately and may not be discharged to receiving waters or any storm drain system.
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.
- Construction sites shall be maintained in such a condition that a storm does not carry wastes or pollutants off the site. Discharges other than stormwater (non-stormwater discharges) are prohibited, except as authorized by an individual NPDES permit or the State-wide General Permit for Storm Water Discharges Associated with Construction Activity. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives and asbestos fibers; paint flakes or stucco fragments; fuels, oils, lubricants and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable wastes; wastes from engine/equipment steam cleaning or chemical degreasing; wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area onsite physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, State and Federal requirements.
- Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the construction site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited.
- The Contractor is required to notify and obtain approval from the District ten (10) days prior to any non-stormwater discharge or dewatering associated with Contractor's construction activities.

- Construction sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.
- BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

29.4 PRD and Rain Event Action Plan (REAP) Amendments - If the scope or schedule of the project changes, the Contractor shall immediately notify the Engineer. The Engineer will determine if the Contractor will be required to recalculate the Risk Assessment. If it is determined by the Engineer that a new Risk Assessment is required, the Engineer will notify the Contractor to resubmit amended PRDs and in the case that the risk level increases, the Contractor shall comply with additional applicable requirements of the General Permit, including preparation and implementation of REAPs, CSMP, Numeric Action Level (NAL) Exceedance Reports, and annual reporting requirements. The Contractor shall also prepare amendments to the PRDs, both graphically and in narrative form, whenever there is a change in Contractor's construction activities or operations which may result in the discharge of pollutants to surface waters, groundwaters, municipal storm drain systems, or as deemed necessary by the Engineer. The Contractor shall also amend the PRDs if they are in violation of any condition of the General Permit, or has not effectively achieved the objective of reducing pollutants in stormwater discharges. Amendments shall show additional BMPs, revised Contractor's construction activities or operations, including those in areas not shown in the initially approved SWPPP, which are required on the project to effectively control water pollution.

Amendments to the PRDs shall be submitted for review and approval by the Engineer in the same manner specified for the initial approval of the PRDs. The Contractor shall date and attach all approved amendments to any of the PRDs. Upon approval of the amendment, the Contractor shall implement the approved changes, revised construction activities or operations.

29.5 Non-Compliance Reporting - If the project is in non-compliance at any time, the Contractor shall make a written report to the Engineer within two (2) calendar days of identification of non-compliance activities.

29.6 SWPPP Implementation - Upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for placing, installing, constructing, inspecting and maintaining the BMPs as well as conducting the CSMP as included in the SWPPP and any amendments thereto, and for removing and disposing of temporary BMPs. All SWPPP implementation shall be performed or supervised by a QSP. Unless otherwise directed by the Engineer or specified in these Detailed Specifications, the Contractor's responsibility for SWPPP implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 6.05, "TEMPORARY SUSPENSION OF THE WORK", of the General Provisions. Requirements for installation, construction, inspection, maintenance, removal and disposal of BMPs are specified in the CASQA Construction BMP Handbook Portal and these Detailed Specifications.

The Engineer may order the suspension of construction operations if the Contractor fails to comply with the requirements of this section, "Stormwater and Non-Stormwater Pollution Control", as determined by the Engineer.

The Contractor will not be compensated for sampling and analysis work because of the Contractor's failure to properly implement, inspect, maintain and repair BMPs in the approved SWPPP and any amendments thereto, or for failing to store construction materials or wastes in watertight containers.

(a) Stormwater Pollution Control - **The Contractor shall implement soil stabilization practices and sediment control BMPs, including minimum requirements as presented in the Caltrans Handbooks, on all disturbed areas of the project site throughout the rainy season, defined as between August 1 - October 1 and November 1 - May 1, which is consistent with Caltrans' definition of the rainy season for the eastern desert region.**

Implementation of soil stabilization practices and sediment control BMPs for soil-disturbed areas, including but not limited to, rough graded access roads, slopes, channel inverts, operational inlets and outlets of the project shall be completed no later than ten (10) calendar days prior to the start of the rainy season or upon start of applicable Contractor's construction activities for projects which begin either during or within ten (10) calendar days of the rainy season.

The Engineer may require the Contractor, on a case-by-case basis, to reduce the active, soil-disturbed area limit of the project. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control BMPs to protect soil-disturbed areas of the project site by maintaining an adequate quantity of soil stabilization and sediment control materials onsite to protect exposed, soil-disturbed areas and a detailed plan for the mobilization of sufficient labor and equipment to fully deploy the required BMPs prior to the onset of precipitation and for the duration of the project.

Throughout the rainy season, soil-disturbed areas of the project site shall be considered to be nonactive whenever soil disturbing activities are expected to be discontinued for a period of fourteen (14) calendar days or more. Areas that will become nonactive either during the rainy season or within ten (10) calendar days thereof shall be fully protected with soil stabilization practices such as covering with mulch, temporary seeding, fiber rolls, blankets, etc., within ten (10) calendar days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur. Areas that will become nonactive either during the rainy season or within ten (10) calendar days thereof shall be fully protected with sediment control BMPs within ten (10) calendar days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the rainy season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control BMPs. The Contractor shall monitor the weather forecast on a daily basis. The National Weather Service forecast shall be used, or an alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning BMPs prior to the onset of the precipitation.

(b) Non-Stormwater Pollution Control - **The Contractor shall implement, year-round and throughout the duration of the project, BMPs included in the SWPPP for sediment tracking, wind erosion, non-stormwater management, and waste management and disposal.**

(c) Inspections and Reporting - The Contractor shall regularly inspect the construction site for BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. The Contractor shall identify corrective actions and time frames to address any damaged BMPs or reinitiate any BMPs that have been discontinued.

At a minimum, the Contractor shall inspect the construction site as follows:

1. Prior to a forecast storm;
2. After any precipitation which causes runoff capable of carrying sediment from the construction site;
3. At 24 hour intervals during extended precipitation events; and
4. At a regular interval of once every 2 weeks.

The construction site inspection checklist provided in the Caltrans Handbooks shall be used to ensure that the necessary BMPs are being properly implemented and are functioning adequately. The Contractor shall submit one copy of each site inspection record to the Engineer.

(d) Maintenance - The Contractor shall maintain construction site BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified BMP, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the District.

(e) Training - The Contractor shall ensure that all persons responsible for implementing requirements of the General Permit shall be appropriately trained in accordance with Section VII "Training Qualifications and Certification

Requirements" of the General Permit. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. All training shall be documented and included in the SWPPP as an appendix.

The Contractor shall ensure that SWPPPs are written, amended and certified by a QSD. The Contractor shall also ensure that all inspection, maintenance, repair and sampling activities shall be performed or supervised by a QSP. A QSP is a person responsible for non-stormwater and stormwater visual observations, sampling and analysis.

29.7 REAP - **The REAP is applicable to Risk Level 2 construction sites only.** The Contractor shall ensure a QSP develop a REAP and submit a copy to the Engineer for review 48 hours prior to any likely precipitation event. The Contractor shall amend and implement the REAP as directed by the Engineer. If no comments are received prior to the precipitation event, the REAP shall be implemented as proposed. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of the precipitation forecast information from the National Weather Service Forecast Office (e.g., enter the zip code of the project's location at http://www.srh.noaa.gov/forecast).

The Contractor's QSP shall ensure that the REAP include, at a minimum, the following site information:

a. Site Address

b. Calculated Risk Level

c. Site Stormwater Manager information including the name, company and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number

e. Stormwater Sampling Agent information including the name, company and 24-hour emergency telephone number

29.8 Water Quality Monitoring, Sampling and Analysis - **The Water Quality Monitoring, Sampling and Analysis is applicable to Risk Level 2 construction sites only.** The Contractor's QSD shall be responsible for preparing a CSMP and implementing the monitoring, sampling and analysis requirements as described in Attachment D of the General Permit. Records of all visual observations and sampling results required by the General Permit shall be kept using the forms contained in CSMP, Attachment 3 of the CASQA Construction BMP Handbook Portal. Copies of the forms shall be maintained in the SWPPP and submitted to the Engineer within 24 hours of the visual observation or sampling event.

29.9 NAL Exceedance Report - **The NAL Exceedance Report is applicable to Risk Level 2 construction sites only.** The Contractor shall be responsible for submitting a NAL Exceedance Report to the Engineer in the event that any effluent sample exceeds an applicable NAL.

a. The Contractor shall submit all storm event sampling results for each discharge point to the Engineer no later than 24 hours after the conclusion of the storm event.

b. The Contractor shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. The Contractor shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three (3) years after the date the annual report is filed.

d. The Contractor shall include in the NAL Exceedance Report:

i. The analytical method(s), method reporting unit(s) and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

ii. The date, place, time of sampling, visual observation (inspections) and/or measurements, including precipitation.

iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

29.10 Non-Stormwater Discharge or Dewatering - **Dewatering activity should only be considered after other methods have been determined to be inadequate for storm drain construction by the Engineer.** If groundwater will be encountered during the project activities, the dewatering activity must be covered by the General Waste Discharge Requirements for Low Threat Discharges to Surface Waters within the Colorado River Basin Region (De Minimus Permit), Colorado River Basin Regional Water Quality Control Board Order No. R7-2015-0006. The Contractor shall comply with this Order, and notify and obtain approval from the Engineer fifteen (15) days prior to any non-stormwater discharging of groundwater dewatering. If an emergency or unforeseen dewatering activity that will discharge to Waters of the United States occurs, the Contractor shall contact the Engineer immediately.

When discharging groundwater from dewatering activities to surface waters, the Contractor shall comply with and implement the Monitoring and Reporting Program required under Order No. R7-2015-0006. This Order can be downloaded from http://www.waterboards.ca.gov/coloradoriver/board_decisions/adopted_orders/orders/2015/0006 low_threat.pdf. Under the Monitoring and Reporting Program, the Contractor shall prepare the monitoring report in accordance with Attachment E of the Order. The Contractor must submit the Monitoring Reports to the Engineer by the 15th day of each month following the monitoring period. The District will submit the Monitoring Reports to the Santa Ana Regional Water

Quality Control Board. The Monitoring Reports shall cover the previous month's monitoring activities.

If there is any other form of non-stormwater discharge from the project to surface waters, the Contractor shall immediately contact the Engineer to determine appropriate actions required for coverage under the De Minimus Permit.

Failure of the Contractor to fully comply with this requirement may result in the suspension of construction operations and liability for any associated monitoring, fines, penalties and remediation activities related to the discharge.

29.11 Reports -

(a) Annual Report - The Contractor shall be responsible for preparing an Annual Report to meet the requirements of Section XVI of the General Permit covering the preceding period of construction from July 1st to June 30th. The Annual Report shall be structured in accordance with the CASQA Construction BMP Handbook Portal Section 1.7. The Contractor shall submit two (2) copies of the Annual Report to the Engineer by July 15th of each year for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the Annual Report. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the Annual Report within three (3) working days of receipt of the Engineer's comments. The Contractor shall submit four (4) copies of the approved Annual Report to the Engineer prior to August 15th of each year. **The Contractor shall be responsible for providing an Annual Report to the Engineer for any construction occurring for part of the year after July 1st prior to receiving final payment on the project.**

(b) Monthly Report – The Contractor shall prepare and submit to the Engineer a Monthly Report within five (5) working days of the end of the month including:

1. All visual observation reports;
2. All sampling and analysis reports;
3. All NAL Exceedance Reports; and
4. Summary of changes to the SWPPP and or REAP based on inspection results for the preceding month.

29.12 Payment - The contract lump sum price paid for Stormwater and Non-Stormwater Pollution Control work shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in developing, preparing, obtaining approval of, revising and amending the PRDs, and installing, constructing, maintaining, removing and disposing of BMPs as shown in the SWPPP, as specified in the CASQA Handbook and Sample Contractor's Water Quality CSMP, General Permit and these Detailed Specifications, and as directed by the Engineer.

The contract lump sum price paid for Non-Stormwater Discharge or Dewatering shall include full compensation for compliance of Section 29.10, "Non-Stormwater Discharge or Dewatering". **Contractor shall not be paid any portion of the contract lump sum if coverage under the De Minimus Permit is not required.**

Monthly payment will be made on a basis of the percentage of work completed on the entire project and subject to the submittal of a complete Monthly Report as specified in Section 29.11(b). Failure to complete or report required visual inspections, monitoring, sampling and analysis requirements, NAL Exceedance Reports, and/or other necessary follow-up actions to ensure that the project stays in compliance with the General Permit can be the basis for reducing monthly progress payments for the project. Monthly progress payments will be reduced by the amount of direct costs, overhead costs and engineering costs incurred by the Engineer to address compliance deficiencies, including costs to conduct inspections, monitoring, reporting and supplemental BMP implementation necessary to comply with the General Permit and costs incurred by the Engineer to address complaints, additional State inspections and violations and/or fines issued by the State or USEPA associated with failure to properly comply with the General Permit. Progress payment reductions can exceed the monthly percentage or total contract lump sum price for Stormwater and Non-Stormwater Pollution Control work.

Payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 30 - UTILITIES

30.1 Description - This section covers the contract item Relocate 6-Inch Waterline Gate Valve.

30.2 Relocate 6-Inch Waterline Gate Valve - The contract item Relocate 6-Inch Waterline Gate Valve covers all labor, equipment, materials, dewatering, cleaning, disinfecting, testing, earthwork, installation of a new 6-inch waterline gate valve, removal of existing waterline valve, installation of ductile-iron pipe in the section of removed existing waterline valve, and incidentals required for the construction of gate valve/ductile-iron pipe, as shown on the drawings and as required by the City of Banning Specifications and these Specifications.

The Contractor may obtain the City of Banning Specifications from the City of Banning Public Works Department, 99 E. Ramsey Street, Banning, CA 92220.

Contractor will install a new 6-inch waterline gate valve 10 feet (maximum) east of junction structure, remove and replace the existing waterline valve in conflict area with a ductile-iron pipe. Contractor shall salvage and return to owner the existing waterline valve, and valve cap. The Contractor shall check and verify all field measurements and shall submit with such promptness as to cause no delay in its own work, five (5) copies of all field verified shop drawings, schedules, materials list, removal and installation plan required for the completion of the Relocation 6-Inch Waterline Gate Valve work.

District and City Engineer shall review such schedules and drawings only for conformance with design concept of project and compliance with information given in contract documents, and return marked "no exceptions noted" or "rejected" with guidance as to required corrections within ten (10) working days. Contractor shall make any correction required by District/City Engineer, file four (4) corrected copies with District Engineer, and furnish such other copies as may be needed for construction. District/City Engineer's approval of such drawings or schedules shall not relieve Contractor from responsibility for deviations from drawings or specifications. Any deviations from the submission requires written approval.

All submittals of shop drawings, catalog cuts, data sheets, and material lists shall be complete and shall conform to City of Banning Standard Drawings and Specifications.

All materials necessary to make connections between proposed water service line and existing water system shall be furnished by the Contractor and shall be the size and class matching the existing facility. Gate valves shall be resilient seat and epoxy lined with O-ring seals. Buried application valves shall be non-rising stem with a 2-inch square operating nut. Exposed valves shall be rising stem type furnished with hand wheels. All valves shall conform to AWWA Standard C504. Provide valve box and cap for all buried valves. Install entire assembly centered and plumbed in accordance with the City standards. Valve boxes in areas to be paved must be accessible at all times during construction. Upon completion of paving operations, adjust the valve boxes and caps to finished grade. All materials for raising protection box and cap, including pavement, shall be supplied by the Contractor.

Make connections at all locations indicated on the project plans per details shown on the plans. Connections shall be made in a workmanlike manner and in accordance with water works standards. Prior to construction, Contractor shall excavate and expose all connection ends, verify locations, elevations and condition of existing facility. Existing valves shall be operated, strictly, by the City Water Department. Request for opening or closing the existing water system valves should be made to the City Water Department at least 48 hours in advance. Neatly cut the existing line and install valves, fittings, adaptors and couplings as necessary for proper watertight, sound and structurally integrated connection.

Salvage, return to, and properly log into the Owner's warehouse any valves, fittings, and appurtenances removed from the existing system. Schedule connections to the existing system through the City Water Department, and notify the Owner forty-eight (48) hours in advance of the time set for making connections.

During the storing, laying and installing operation, the pipelines, all fittings and appurtenances shall be carefully protected against contamination. All dirt and foreign materials shall be thoroughly removed. Before placing in service, the entire system shall be thoroughly flushed out and then disinfected by the Contractor in accordance with AWWA Standard C651 entitled "Disinfecting Water Mains". The flushing of all facilities shall be performed by the Contractor as directed by the City Water Department. All necessary chlorine shall be furnished by the Contractor. The Contractor is required to closely coordinate and cooperate with the City of Banning to ensure that the work proceeds in an orderly manner and that the waterline is out of service for a minimum period of time.

The Contractor shall notify the City of Banning, Public Utilities Department - Water Division (Art Vela, 951.922.3130) in writing at least ten (10) working days before relocation is started.

30.3 Measurement and Payment - The contract lump sum price paid for Relocate 6-Inch Waterline Gate Valve shall include full compensation for all costs incurred under this section except that Class "B" Concrete, Miscellaneous; Aggregate Base, Class 2; and Hot Mixed Asphalt, Type A used for resurfacing the street will be measured and paid for under the contract items Class "B" Concrete, Miscellaneous; Aggregate Base, Class 2; and Hot Mixed Asphalt, Type A.

SECTION 31 – PRECAST REINFORCED CONCRETE BOX

31.1 Description – This section includes the contract item Precast Reinforced Concrete Box (PRCB) of the various sizes as required for the work.

31.2 General Requirements – This specification covers single-cell Precast Reinforced Concrete Box (PRCB) sections, the span, rise, soil weight and design earth cover shall be as shown on the plans. The Contractor shall follow Sections 216 and 306-10 of the Greenbook Specifications except as noted in the following sections.

31.3 Materials – The materials used for PRCB shall comply with Section 216-2 of the Greenbook Specifications except as follows:

Filter Material shall be used in place of Leveling Bed Material. Filter Material shall be installed, measured and paid for as described in Section 14 of these Detailed Specifications.

31.4 Fabrication – The Fabrication for the PRCB shall conform to Section 216-3 of the Greenbook Specifications with the following exceptions:

Reinforcement placement shall conform to the details shown on the plans or standard plans except that the minimum cover of concrete over the reinforcement for the invert is two and one half (2.5) inches.

All splices or laps must be tied.

PRCB sections shall be fabricated with one end beveled where the curves, grade breaks or angle points shown on the drawings would otherwise result in a clear space greater than 1 inch measured at the extreme ends. Beveled sections must be identified on the Shop Drawings and PRCB Layout Diagrams.

The interior surface of the PRCB shall be smooth and well finished. The manufacturer may be required to provide a representative section to be used to determine the acceptable finish by the Engineer.

31.5 PRCB Shop Drawings, Calculations, and Layout Diagrams – PRCB Shop Drawings and Layout Diagrams shall be prepared and submitted in accordance with the Greenbook Specifications, with the following additions.

Shop Drawings shall show the necessary details of all reinforcing steel and lifting devices and locations for all PRCB sections.

The Contractor must provide engineered special designs for all PRCB sections that incorporate openings for manholes and junction structures not already detailed on the plans. Shop Drawings and supporting engineering calculations for these specially designed sections shall be prepared by a California Registered Civil Engineer and submitted to the Engineer for approval prior to the pre-construction meeting and in accordance with Section 2-5.3.1 of the Greenbook Specifications. No manufacturing of any specially designed PRCB sections will be allowed prior to the approval of the Shop Drawings.

The Shop Drawings and PRCB Layout Diagrams must explicitly identify which joints are beveled and the 'drop' dimension for each.

31.6 Basis of Acceptance - The basis of acceptance of PRCB shall be dependent on whether the manufacturer fabricating the PRCB sections is currently certified on the Caltrans Authorized Facility Audit List for Structural Precast Concrete, http://www.dot.ca.gov/hq/esc/Translab/OSM/documents/smdocuments/Internet_auditlisting.pdf as follows:

a) If the PRCB Manufacturing Plant is NOT certified on Caltrans Authorized Facility Audit List:

The basis of acceptance shall be full compliance with these Specifications demonstrated through Contractor-supplied third party inspections and verification in accordance with Section 31.7 of these Detailed Specifications.

b) If PRCB Manufacturing Plant IS certified on Caltrans Authorized Facility Audit List:

The basis of acceptance shall be provision of a Certificate of Compliance conforming to Section 4-1.5 of the Greenbook Standard Specifications from the certified manufacturing plant **BEFORE** any PRCB is ordered or fabricated. The Contractor shall supply documentation to the satisfaction of the Engineer, that the plant is currently certified on the Caltrans Authorized Facility Audit List.

Either acceptance, however, shall be considered a tentative acceptance. Final acceptance will only be made when the work is completed.

31.7 Contractor Supplied Third-Party Inspection of PRCB Plant - If the PRCB is fabricated at a plant that is NOT currently certified on the Caltrans Authorized Facility Audit List, the

Contractor, at its expense, shall engage a Qualified Inspector or Accredited Testing Laboratory to inspect the materials, equipment and manufacture of the PRCB.

The PRCB inspections shall be conducted for every 400 feet or 50 units and shall include cage manufacturing, curing processes, batching equipment and process, aggregate and cement storage, concrete mix designs and product handling.

The Qualified Inspector or Accredited Testing Laboratory shall be approved by the Engineer and:

1. Either be registered as a Civil Engineer in the State of California or have a current Plant Quality Personnel Certification, Level II from the Precast/Prestressed Concrete Institute; and
2. Be a subcontractor providing only quality control inspection services; and
3. The Inspector or Accredited Testing Laboratory must not be affiliated with, employed or compensated by any material provider, the PRCB manufacturer, or any other subcontractor providing other services or materials for this project.

The Inspection Reports to be submitted to the Engineer shall include, at a minimum:

1. Plant location;
2. Names of all inspectors and the specific inspections they performed that day;
3. Verification of compliance with these contract documents for every 400 feet or 50 units;
4. Any problems or deficiencies discovered;
5. Any testing or repair work performed; and
6. Daily production reports.

The Third-Party Inspector shall forward all daily reports to the Engineer on a weekly basis. Any problems or deficiencies discovered shall be immediately reported to the PRCB manufacturer and to the Engineer. Deficiencies shall be corrected to the satisfaction of the Engineer, or the affected products must be replaced at no cost to the District.

31.8 Installation of PRCB - The installation of PRCB shall comply with Section 306-10 of the Greenbook Specifications, except as follows:

Earthwork shall conform to Section 14 of these Detailed Specifications and the paylines shown on the drawings.

Filter Material shall be used in place of Leveling Bed Material. Filter Material shall be installed, measured and paid for as described in Section 14 of these Detailed Specifications, within the paylines shown on the drawings.

The finishing of joints shall be in accordance with Section 306-10.6 of the Greenbook Standard Specifications with the exception that preformed flexible joint sealant shall NOT be used to fill the joint annular space on the inside of the PRCB Section. The interior annular space

of all joints shall be filled with concrete or mortar as otherwise required per the Greenbook Standard Specifications, and troweled smooth so that the PRCB will form a continuous conduit with a smooth uniform interior surface. Tongue and groove ends of the PRCB shall be free from any deleterious substance or condition, which might prevent a satisfactory mortar at the joint.

External Sealing Bands shall be installed on top of the PRCB joints as shown on the Greenbook Standard Plans.

31.9 Precast Reinforced Concrete Box (PRCB) – The contract item Precast Reinforced Concrete Box (PRCB) includes the complete furnishing and installation of the various PRCB sizes as specified, exclusive of Earthwork and Filter Material.

31.10 Measurement – Measurement for payment of the contract item Precast Reinforced Concrete Box (PRCB) of the various sizes will be the number of lineal feet of each size installed as specified measured along the centerline of the box in place including curves.

31.11 Payment – The contract prices paid for the Precast Reinforced Concrete Box (PRCB) shall include full compensation for all costs incurred under this section.

APPENDIX "A"

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 403 AND 403.1

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

(Adopted January 15, 1993)(Amended June 16, 2000)(Amended April 2, 2004)

RULE 403.1. SUPPLEMENTAL FUGITIVE DUST CONTROL REQUIREMENTS FOR COACHELLA VALLEY SOURCES

(a) Purpose

The purpose of this rule is to reduce or prevent the amount of fine particulate matter (PM_{10}) entrained in the ambient air from anthropogenic (man-made) fugitive dust sources.

(b) Applicability

The provisions of this rule are supplemental to Rule 403 requirements and shall apply only to fugitive dust sources in the Coachella Valley.

(c) Definitions

(1) ACTIVE OPERATIONS shall mean any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface areas, or agricultural operations.

(2) AGRICULTURAL OPERATIONS means any operation occurring on a ranch or farm directly related to the growing of crops, or raising of fowls or animals for the primary purpose of making a profit or for a livelihood.

(3) ANEMOMETERS are devices used to measure wind speed in accordance with the performance standards, maintenance and calibration criteria specified in the Rule 403.1 Implementation Handbook.

(4) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter and other organic and inorganic particulate matter.

(5) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(6) COACHELLA VALLEY means that portion of Riverside County, as defined in Rule 103, subdivision (h).

(7) COACHELLA VALLEY BLOWSAND ZONE means the corridor of land extending two miles to either side of the centerline of the I-10 Freeway beginning at the SR-111/I-10 junction and continuing southeast to the I-10/ Jefferson Street interchange in Indio.

(8) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(9) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that vegetative ground cover and soil characteristics are similar to adjacent or near-by natural conditions;

(B) been paved or otherwise covered by a permanent structure;

(C) sustained a vegetative ground cover of at least 70 percent of the average native cover for a particular area for at least 30 days.

(10) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 and Rule 403.1 requirements at an active operation.

(11) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive emissions.

(12) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered and shall include, but not be limited to the following: such operations as grading, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, soil mulching and agricultural tilling.

(13) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(14) FUGITIVE DUST CONTROL PLAN means a plan to control fugitive dust plan as described in subdivision (e).

(15) ON-SITE means within the property lines of a property, or as otherwise approved by the Executive Officer.

(16) OPEN STORAGE PILE is any accumulation of bulk material which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(17) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(18) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable state and federal reference test methods.

(19) PROPERTY LINE means the boundaries of an area in which a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(20) RULE 403.1 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(21) STABILIZED SURFACE means any previously disturbed surface area which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403.1 Implementation Handbook.

(22) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, asphalt or other materials with equivalent performance as determined by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Public unpaved roads

are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(23) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(24) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) General Requirements

(1) Any person who is responsible for any active operation, open storage pile, or disturbed surface area, and who seeks an exemption pursuant to Rule 403, paragraph (g)(2) shall be required to determine when wind speed conditions exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(2) Any person involved in active operations in the Coachella Valley Blowsand Zone shall stabilize new man-made deposits of bulk material within 24 hours of making such bulk material deposits. Stabilization procedures shall include one or more of the following:

(A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or

(B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least 6 months; or

(C) Installation of wind breaks of such design so as to reduce maximum wind gusts to less than 25 miles per hour in the area of the bulk material deposits.

(3) Any person involved in active operations in the Coachella Valley Blowsand Zone shall stabilize new deposits of bulk material originating from off-site undisturbed natural desert areas within 72 hours. Stabilization procedures shall include one or more of the following:

(A) Application of water to at least 70 percent of the surface area of any bulk material deposits at least 3 times for each day that there is evidence of wind driven fugitive dust; or

(B) Application of chemical stabilizers in sufficient concentration so as to maintain a stabilized surface for a period of at least six months.

(4) A person who conducts or authorizes the conducting of an active operation shall implement at least one of the control actions specified in Rule 403, Table 2 for the source category "Inactive Disturbed Surface Areas" to minimize wind driven fugitive dust from disturbed surface areas at such time when active operations have ceased for a period of at least 20 days.

(5) Any person involved in agricultural tilling or soil mulching activities shall cease such activities when wind speeds exceed 25 miles per hour. The wind speed determination shall be based on either District forecasts or through use of an on-site anemometer as described in subdivision (g).

(e) Fugitive Dust Control Plan and Other Requirements for Construction Projects/Earth-Moving Activities

(1) Any person who conducts or authorizes the conducting of an active operation with a disturbed surface area of more than 5,000 square feet shall not initiate any earth-moving activities unless a fugitive dust control plan is prepared and approved by the Executive Officer in accordance with the requirements of subdivision (f) and the Rule 403.1 Implementation Handbook. These provisions shall not apply to active operations exempted by paragraph (i)(4).

(2) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall maintain a complete copy of the approved fugitive dust control plan on site in a conspicuous place at all times and the fugitive dust control plan must be provided upon request.

(3) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) shall install and maintain signage with project contact information that meets the minimum standards of the Rule 403.1 Implementation Handbook prior to initiating any type of earth-moving activities.

(4) Any operator required to submit a fugitive dust control plan under paragraph (e)(1) for a project with a disturbed surface area of 50 or more acres shall have an Dust Control Supervisor that:

(A) is employed by or contracted with the property owner or developer; and

(B) is on-site or is available to be on-site within 30 minutes of initial contact; and

(C) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 and 403.1 requirements; and

(D) has completed the AQMD Coachella Valley Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class.

(5) Failure to comply with any of the provisions of an approved fugitive dust control plan shall be a violation of this rule.

(f) Fugitive Dust Control Plan Preparation, Submittal, and Approval Requirements

(1) A fugitive dust control plan prepared pursuant to paragraph (e)(1) must include the following information in a 8 ½ by 11 inch format:

(A) the name(s), address(es), and phone number(s) of the person(s) responsible for the preparation, submittal, and implementation of the fugitive dust control plan; and

(B) a description of the operation(s), including a map depicting the location of the site; and

(C) a listing of all sources of fugitive dust emissions within the property lines; and

(D) a description of the control measures as identified by the Rule 403.1 Implementation Handbook as applied to each of the sources identified in the fugitive dust control plan. The description of the control measures must be sufficiently detailed to demonstrate that the applicable best available control measures will be utilized and/or installed during all periods of active operations; and

(E) a description of the required contingency control measures (e.g., increased watering) for immediate implementation upon notice of visible dust crossing any property line.

(2) In the event that there are special technical (e.g., non-economic) circumstances, including safety, which prevent the use of at least one of the control measures as identified by the Rule 403.1 Implementation Handbook for any of the sources identified in the fugitive dust control plan, a justification statement must be provided in lieu of the description. The justification statement must explain the reason(s) why the required control measures cannot be implemented.

(3) Within 30 calendar days of the receipt of a fugitive dust control plan submitted pursuant to paragraph (e)(1), the Executive Officer will either

approve or apply any necessary conditions to the fugitive dust control plan in writing. For a fugitive dust control plan to be approved, the requirements of paragraph (f)(1) must be satisfied.

(4) The Executive Officer will apply conditions if the stated fugitive dust control plan measures do not satisfactorily conform to the best available control measures and guidance contained in the Rule 403.1 Implementation Handbook. The conditions necessary to modify the fugitive dust control plan will be provided in writing to the person(s) identified in subparagraph (f)(1)(A). A letter to the Executive Officer stating that such modifications will be incorporated into the fugitive dust control plan shall be deemed sufficient to result in approval of the fugitive dust control plan.

(5) Any fugitive dust control plan approved by the Executive Officer shall be valid for a period of one year from the date of approval. Any approved fugitive dust control plan must be resubmitted annually, at least 30 days prior to the expiration date, or the fugitive dust control plan shall expire as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously approved fugitive dust control plan, the submittal may contain a simple statement of no-change (Form 403NC). Otherwise, a resubmittal must contain all the items specified in subparagraphs (f)(1)(A) through (f)(1)(E).

(g) Wind Monitoring Implementation Requirements

(1) The determination of wind speed conditions in excess of 25 miles per hour, as specified in paragraphs (d)(1) and (d)(5), shall be based on the following criteria:

(A) For facilities with an on-site anemometer:

(i) When the on-site anemometer registers at least two wind gusts in excess of 25 miles per hour within a consecutive 30-minute period. Wind speeds shall be deemed to be below 25 miles per hour if there is no recurring wind gust in excess of 25 miles per hour within a consecutive 30-minute period; or

(B) For facilities without an on-site anemometer:

(i) When wind speeds in excess of 25 miles per hour are forecast to occur in the Coachella Valley for that day. This condition shall apply to the full calendar day for which the forecast is valid. (The Executive Officer shall determine meteorological conditions which will cause wind speeds in excess of 25 miles per hour, and shall issue daily forecasts of expected wind conditions. Such forecasts shall be available to the public); or

(ii) When wind speeds in excess of 25 miles per hour are not forecast to occur by the District, and fugitive dust emissions are visible for a distance of at least 100 feet from the origin of such emissions, and there is visible evidence of wind driven fugitive dust.

(2) Any person who elects to install an on-site anemometer shall:

(A) Notify the Executive Officer no more than 10 days after installing such equipment. The notification shall contain, at a minimum, the person's name, address, telephone number, description of the operation(s), and first day of operation, as specified in the District's Rule 403.1 Implementation Handbook.

(B) Be subject to the provisions of subparagraph (g)(1)(B) for wind speed determinations if equipment outages, malfunctions, or invalid data exceed one hour during active operations on a calendar day.

(h) Recordkeeping

(1) A person subject to the provisions of this rule shall compile written daily records to document the specific actions taken to comply with this Rule. Such records shall be retained for not less than three years and shall be made available to the Executive Officer upon request.

(2) In addition to the provisions of paragraph (h)(1), any person who elects to install an on-site anemometer shall also compile written records. Such records shall contain:

(A) Location, vendor, model, and serial number of the anemometer;

(B) The time of occurrence of any wind gust in excess of 25 miles per hour during hours of active operations;

(C) The actions taken to comply with the provisions of paragraphs (d)(5) and (i)(3), as applicable.

(i) Exemptions

(1) The provisions of this rule shall not apply to ceased or inactive mining operations subject to the requirements of the Surface Mining and Recovery Act (SMARA) of 1975, provided that the provisions of the SMARA Reclamation Plan are implemented by the owner and are at least as stringent as those contained in this rule;

(2) The provisions of paragraphs (d)(2), (d)(3), and (d)(4) shall not apply to:

(A) Any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the Endangered Species Act as determined in writing by the State or federal agency responsible for making such determinations;

(B) Any disturbed surface areas or bulk material deposits with a surface area less than 2,500 square feet;

(C) Non-routine or emergency maintenance of flood control channels and water spreading basins.

(3) The provisions of paragraph (d)(5) shall not apply to agricultural tilling activities or soil mulching activities under the following conditions:

(A) If the prohibitory requirements of this Rule have occurred during six or more hours of active operations on each of two previous consecutive days, then a one-day exemption will be allowed. (These activities would again be subject to the prohibitory requirements of this Rule following this one day exemption.)

(B) If the prohibitory requirements of this Rule have occurred during sixty or more cumulative hours of active operations within a calendar month, then an exemption will be allowed for the remainder of the calendar month. (These activities would again be subject to the prohibitory requirements of this Rule at the start of the following month.)

(C) During periods of precipitation.

(4) The provisions of paragraph (e)(1) shall not apply to any active operation which is required to submit a dust control plan to any city or county government that has adopted a District-approved dust control ordinance.

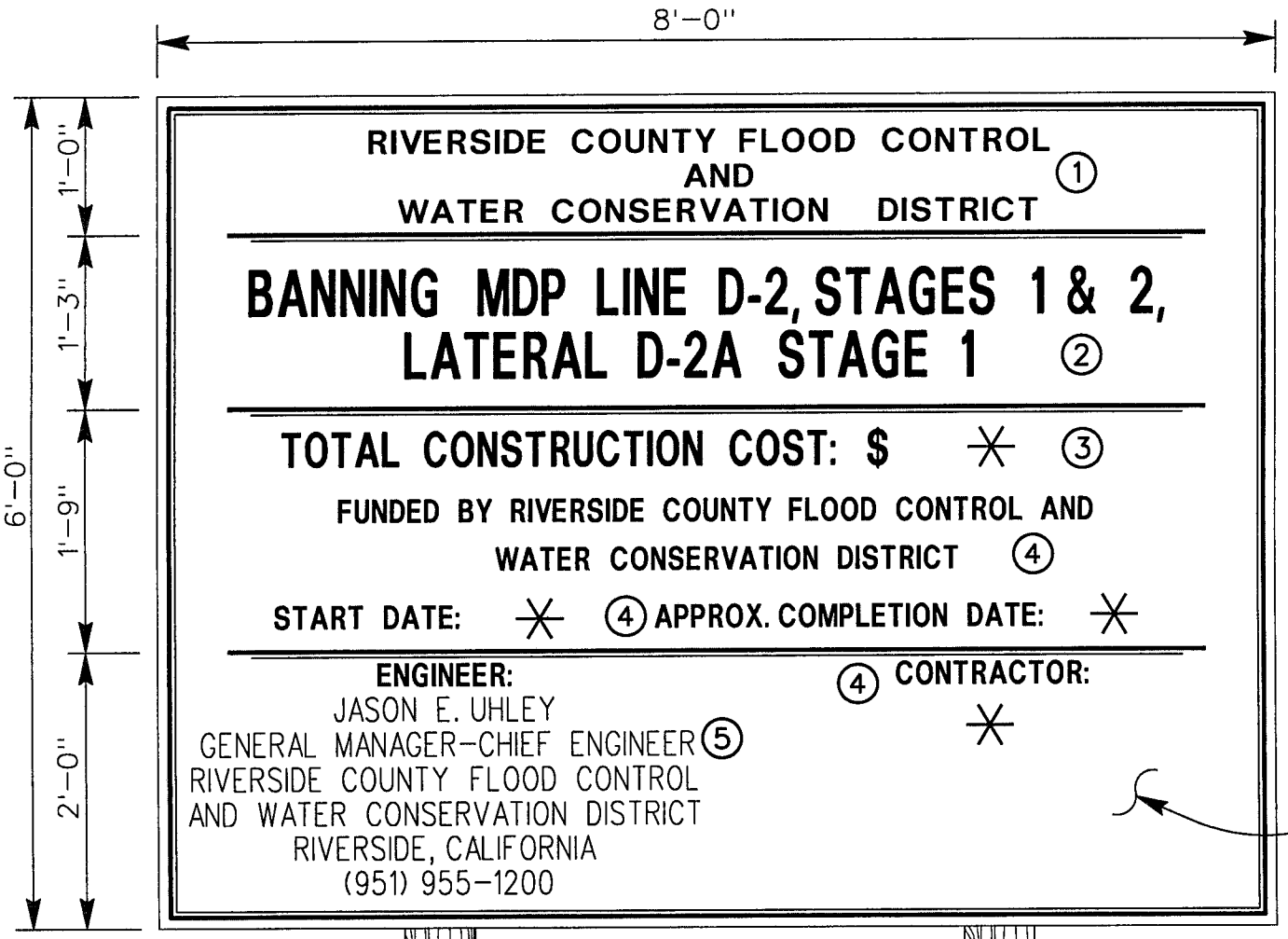
(j) Fees

(1) Any person subject to a fugitive dust control plan submittal pursuant to paragraph (e)(1) shall be assessed applicable filing and evaluation fees pursuant to Rule 306.

(2) The submittal of an annual statement of no-change, pursuant to paragraph (f)(5), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

APPENDIX "B"

PROJECT SIGNS



LETTER SCHEDULE

	SIZE	COLOR
(1)	2"	BLACK
(2)	4"	ROYAL
(3)	3"	ROYAL
(4)	2"	ROYAL
(5)	2"	BLACK

NOTES:

1. MINIMUM SPACING BETWEEN LINES 1".
2. ✳ -INFO. FURNISHED BY ENGINEER
3. ALL LETTERS FILLED AND CENTERED
4. THE STRIPES ARE GOLD AND BLACK ON WHITE BACKGROUND.

APPENDIX "B" PROJECT SIGN

APPENDIX "C"

LOG OF SOIL BORINGS
GEOTECHNICAL REPORT

NOTICE: The geotechnical report is included herein for informational purposes only. This report was not prepared for purposes of bid development. It was produced to assist the design engineer regarding overall project feasibility and to make recommendations regarding some design parameters. Contractors are encouraged to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer.