September 19, 2018

ADDENDUM No. 3 TO SPECIFICATION No. 1313S
Pala Sewer Force Main Project

This addendum to the specifications is for the purpose of adding, clarifying, or deleting certain information to the construction drawings and project specifications as follows:

**BIDDING SHEETS**

ADD Additive Bid Item A2 as follows:

<table>
<thead>
<tr>
<th>Bid Item</th>
<th>Qty</th>
<th>Unit</th>
<th>Description (Unit Price Written in Words)</th>
<th>Unit Price (Figures)</th>
<th>Total Amount (Figuras)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>1</td>
<td>LS</td>
<td>This line item is an allowance to prepare dewatering plans and perform construction dewatering work and groundwater disposal per approved dewatering plans all in accordance with the contract documents. Refer to Special Condition SC-45.</td>
<td>Preset</td>
<td>$150,000</td>
</tr>
</tbody>
</table>

The bidding sheets have been updated and are included in the revised proposal package made a part of this addendum. Failure to submit the revised proposal package “may” deem your bid non-responsive.

**SECTION H**

Encroachment Permit

DELETE Page 3 and 4, encroachment permit application form submitted for conditional Encroachment Permit.
SPECIAL CONDITIONS

REPLACE SC-30 with the following:

Trenches within the street right-of-way must be secured daily per the City’s encroachment permit requirement. All excavation shall be permanently paved at the end of each work day with a hot mix asphalt concrete base course flush with adjacent pavement. Temporary asphalt concrete pavement shall not be used. As an alternative, excavation may be temporary secured at the end of work day by the use of recessed traffic plates. The cost of securing trenches shall be included in the bid and no additional compensation will be allowed.

SC-41. Working Hours.
REPLACE SC-41 with the following:

General contractor and sub-contractor’s shall be restricted to the following work schedule table, which was developed in accordance with the City of Temecula (Encroachment Permit Number: LD17-1307). No acceptations will be made, unless approved by City Engineer and/or assignees. No work within the Right of Way shall be allowed during City recognized Holidays.

<table>
<thead>
<tr>
<th>Permitted Work Days &amp; Hours</th>
<th>Paved Areas</th>
<th>Non-Paved</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Temecula Encroachment Permit</td>
<td>S,M,T,W &amp; TH 9:00PM - 5:00AM (night work)</td>
<td>M-F 7:30AM - 4:30PM</td>
</tr>
<tr>
<td>EMWD Easement(s)</td>
<td>M-F 7:00AM - 5:00PM</td>
<td>M-F 7:00AM - 5:00PM</td>
</tr>
</tbody>
</table>

SC-45. Ground Water and Dewatering.
REPLACE SC-45 Paragraph 4 with the following:

If ground water is encountered, Contractor shall dewater trench and jack/bore pits as required for proper installation of the force mains and protection of the workers including all permits. An allowance in the amount of $150,000 has been included for this item. All work associated with groundwater disposal will be tracked in accordance with time and material procedures note in Section F-30 of the General Conditions.
ADD Paragraph 5, 6, 7 and 8 to SC-45 as follows:

Contractor shall comply with the specification Section 02222 for dewatering of groundwater and disposal of groundwater generated during construction. Contractor shall submit plans for dewatering and groundwater disposal. Contractor shall submit copies of applicable permits that disposal approaches are in accordance with applicable Federal, State, and local agencies requirements.

Contractor shall dewater excavation area as required to properly and safely construct structures, piping, and protection of the workers. Contractor shall dewater outside of the excavations prior to commencement of the excavation process. Monitoring wells shall be installed to monitor and measure the success of the dewatering prior to the commencement of excavation. The dewatering operation shall maintain the depth of the groundwater to a minimum of five feet below the planned excavation depth prior to the commencement of the excavation process. At the conclusion of the dewatering program, Contractor shall gradually shut off the dewatering; it shall not be an instantaneous shutoff.

When the dewatering is stopped or when the pumps are shut off following the construction of structures and backfill, the shoring should be ejected slowly, allowing sufficient time for the groundwater to rise back to its original elevation. If the shoring is removed too fast, the sudden rise in groundwater inside the trench could create buoyant upheaval force on the trench backfill, creating unstable conditions. Shoring shall also not be vibrated as this may also cause settling of piping and appurtenances.

The Contractor may discharge removed groundwater to District’s recycled water system after proper treatment and meet District’s discharge requirement. The Contractor shall assume that the costs for construction dewatering and construction related groundwater disposal will be covered by the $150,000 additive bid item A2. This allowance for construction related groundwater dewatering is to be used on a time and materials basis as outlined in Section F-30 of the General Conditions.

ADD SC-48 Pipe Bedding, Trench Backfill, and Trench Compaction as follows:

SC-48. **Pipe Bedding, Trench Backfill, and Trench Compaction.** Bedding and pipe zone backfill for the PVC force mains shall consist of clean imported sand to a minimum compacted thickness of one (1) foot over the top of the PVC pipe. Clean imported sand shall consist of cohesion-less soil having a sand equivalent of greater than 30 and fewer than 10% particles finer than the No. 200 sieve.
Trench backfill and pipe zone backfill shall be compacted to 90% relative compaction minimum after all sheeting, shoring, or shields have been removed. The upper 3' of trench backfill below pavement subgrade (upper 36") shall be compacted to 95% relative compaction minimum in accordance with the City of Temecula Standard Drawing No. 407 requirements.

Contractor shall notify District when any segment of backfill is complete and ready for compaction testing. After such notification, District will have all necessary tests made by a soils engineer of its choosing. District will pay for all passing tests. Contractor shall pay for all failing tests.

Compaction tests will be taken in the pipe zone, in the backfill, above the pipe zone, and in the subgrade at approximately 250-foot intervals. In addition, compaction tests may be taken along all force main appurtenances. Contractor shall assist, at no additional cost to District, soils engineer in taking all compaction tests. Contractor shall furnish all equipment (including shoring), labor, and materials needed for such assistance. Compaction testing shall be completed and accepted by District prior to testing of the force mains. The Contractor shall abide by the more stringent requirements between these Special Conditions and the approved City Encroachment Permit.

All costs associated with furnishing, placing, and compacting bedding and backfill materials (including drying, blending, and importing of suitable dry soil and clean sand, crushed rock, CLSM, and reinforced concrete) shall be included in the bid for the force main installation and no additional compensation will be allowed.

ADD SC-49 Valves as follows:

SC-49. Valves.

A. General. All interior non-working ferrous surfaces other than stainless steel shall be given an epoxy coating.

All valve interiors shall be fusion bonded epoxy coated (8 to 12 mils) in accordance with AWWA C550 (latest). District shall approve epoxy coating materials and methods before application. Completed coating shall be free from all defects and shall be inspected by use of low voltage holiday detecting and non-destructive thickness gauges.

Where the manufacturer demonstrates in writing that it would be impossible to use the powder epoxy method without causing damage to the valve components, the use of a liquid epoxy will be permitted upon approval by the District.
B. **Plug Valves.** Plug valves shall be of the non-lubricated eccentric type with cylindrical/rectangular port design. The port area shall be 100% of the standard pipe area. The valve body and plug shall be constructed of cast iron meeting the requirements of ASTM A-126, Class B. Valve bearing shall be constructed of corrosion resistant stainless steel. The entire plug shall be completely encapsulated with Buna N rubber. The valves shall be flanged with dimensions, facing, and drilling in full conformance with ANSI B 16.1, Class 125. With the plug in the full open position, valve shall have no cavities where debris can collect, have minimal head loss and be capable of passing a clean out pig with the same nominal diameter as the adjacent pipe. Valves shall be equipped with worm gear operators conforming to AWWA C504, Section 3.8. All eccentric plug valves shall have a pressure rating of not less than 150 psi, for bubble tight shut off. Valves shall be the product of a single manufacturer and shall be DeZurik Corporation PEF, or equal.

Valves shall be installed in strict accordance with the manufacturer's written instructions and as specified in the Section 15105, Part 3.

C. **Combination Sewage Air and Vacuum Valves**

1. **General**

   Combination sewage air and vacuum valves shall have an elongated body and be of the type that automatically exhausts large quantities of air during filling of the system, allows air to re-enter during draining of the system, and allows accumulating air to escape while in operation and under pressure.

2. **Stainless Steel Combination Sewage Air and Vacuum Valves**

   Each valve unit shall be supplied with isolation valve (solid wedge gate). Backflush shutoff valve and supply hose are not required. The unit shall be designed for an operating pressure of not less than 125 psi. The body and cover shall be Type 316L stainless steel. Anti-surge orifice float, upper float, and lower float assembly shall be high density polyethylene. O-ring seats shall be EPDM rubber and seat hardness shall be selected by the manufacturer for actual operating pressure of the system. Stainless steel combination sewage air and vacuum valves shall be Vent-O-Mat Series RGX, no substitutes.

*ADD SC-50 Ductile Iron and Stainless Steel Piping and Fittings as follows:*  

SC-50. **Ductile Iron and Stainless Steel Piping and Fittings.** Above grade piping and fittings shown on the Contract Drawings to make the connections to the Diaz Lift Station and below grade fittings for force mains shall be as follows:
A. Ductile iron pipe shall conform with AWWA C 150 and C 151. Unless specified otherwise on the Construction Drawings, ductile iron pipe shall be minimum Class 53 thickness.

B. Flanged ductile iron pipe shall conform to AWWA C 115 and grooved ductile iron pipe shall conform to AWWA C 606. Flanges shall be ductile iron Class 125, ANSI B16.1.

C. Ductile iron fittings shall be Class 250 and shall conform to AWWA C 110. Ductile iron mechanical joint fittings shall be Class 350 and shall conform to AWWA C104.

D. All ductile iron pipe and fittings shall have an interior cement mortar lining of standard thickness in accordance with AWWA C 104.

E. Below grade ductile iron pipe and fitting shall be provided with an exterior asphaltic coating in accordance with AWWA C 151 and polyethylene encasement in accordance with AWWA C 105.

F. Stainless steel pipe shall conform to ANSI B36.19 and ASTM A312. Unless specified otherwise on the Construction Drawings, stainless steel pipe shall be Grade 316, Schedule 40.

G. Stainless steel fittings 2 inches and smaller shall be ASTM A351, Grade 316, ANSI B16.3, Class 150, threaded.

H. Stainless steel fittings 2 1/2 inches and larger shall be ASTM A403 and A774, Grade 316, ANSI B16.9, B36.19. Schedule 40, standard weight, smooth-flow (mitered fittings are not acceptable).

I. Stainless steel flanges shall be ANSI A182, Grade 316, slip-on or weld neck ANSI B16.5, Class 150.

ADD SC-51 Thrust Block Requirements as follows:

SC-51. **Thrust Block Requirements.** Contractor shall provide neatly constructed thrust blocks where shown on the Drawings and conform to District Standard Drawing B-407 per the dimensions shown on the Approved Drawings. All locations must be adequately formed, with proper wrapping, and inspected prior to pouring.

**SECTION P – CONTRACT DRAWINGS**

ADD the following Standard drawings:

Standard Drawing No. 407 Trench/Pothole Repair
Cal Tran Standard RSP B3-1B, B0-3, and B3-5

Page 6 of 14 Specification No. 13135 Addendum No. 3
REPLACE the following drawings (revisions are shown as clouded areas):

D-55353 (Sheet 3)
D-55354 (Sheet 4)
D-55356 (Sheet 6)
D-55357 (Sheet 7)
D-55359 (Sheet 9)
D-55360 (Sheet 10)

SECTION 02222- DEWATERING
ADD Section 02222 Dewatering.

QUESTIONS & ANSWERS

Trautwein Construction, Inc.

Q1. The special conditions SC-41 set the work hours from 7:00am to 4:30pm Monday through Friday, but the Temecula permit requires night work from 9:00pm to 5:00am Sunday through Thursday. Can you clarify this? Also, is work in the easements day or night?

A1. SC-41 working Hours is revised and included in this addendum.

Q2. Special Conditions SC-30 allows 2" temporary pavement over the trenches, however, the Temecula permit requires all ditches to be base paved or recessed plates at the completion of each work day. Can you clarify this? Also, if night work is required, and daily base paving or plate recessing is required, this will impact the cost and pace of construction. Another issue is the ability to get asphalt at night. Plants don't operate if the temperatures are too low, and plant opening fees will more than likely be required daily. Will Temecula consider using temporary asphalt, 2" to 3" over the trenches?

A2. SC-30 is revised per the City's encroachment permit requirement. All pavement repair and trench securing shall meet the City's encroachment permit requirement.

Q3. Can the existing pipeline dewatering @ station 8+92 be pumped into the existing sewer?

A3. The dewatered sewer at station 8+92 shall not be pumped into the existing gravity sewer manhole nearby (station 9+33.75). Flows from this existing gravity sewer (and manhole) are directed into the Diaz Lift Station. Pumping into this manhole will create an endless cycle. The Contractor shall provide sewer dump truck to collect removed sewer from the existing sewer pipe and discharge properly in accordance with State and Local agency requirements.
Q4. Can you provide City of Temecula Standard 407?

A4. The City’s Standard 407 is provided in attachment to this addendum.

Q5. Due to the tight working areas, will road closures with detours be allowed on Diaz Road or Vincent Moraga Dr.?

A5. Traffic Control plan shall be submitted to the City for review and approval.

Q6. At stations 25+00 & 25+36, you are requiring restraining the existing 18" per B-663. This detail does not give the run restraint distance, but only the branch. Can you verify how far in each direction needs to be restrained? Is 20' in each direction acceptable as shown?

A6. Plans have been revised to include thrust block at these locations.

Q7. Can you provide a detail of the work required to relocate the (2) existing air vacs at station 63+77? Do each require their own tank?

A7. Details are provided in the attachment to this addendum.

Q8. On (2) of the air vacuum valves you require a unistrut support and no cover, and on (2) of the air vacuum valves you require a fiberglass enclosure and no unistrut support. Is this correct?

A8. Detail 3 on sheet 10 is simply providing a look at what each air-vacuum valve install will require. All air-vacuum valve will have the unistrut support and fiberglass enclosure. Only air-vacuum valves at stations 52+89.04, 63+63.36, and 63+77.65 will drain to a holding tank. The remaining air-vacuum will drain into an adjacent gravity sewer main. Details have been revised on sheet 10 of the Drawings.

Q9. The dimensions on the plan for the Jacking Pit (10' X 20') is too small to perform the work. Is this dimension set in stone or are we allowed to build the pits to the size needed?

A9. Changes to the pit sizes will require District and City of Temecula review and approval.
Spencer McClymont

Q1. Regarding the Noise Control Requirements in the Special Conditions of the Project Specifications (SC-24), it states that the contractor is to build noise control barrier walls and keep noise below 65 db or less. Is this requirement to be included in the bid for the entire project? If not, this specification should be modified or removed.

A1. Please note that SC-24 also states that the barrier walls be installed such that the noise level of 65 db or less is achieved at the property lines. Noise levels in excess of 65 db shall be allowed only during critical operations for brief periods of time. The contractor shall make every effort to minimize levels during nighttime operations. This requirement is to be included for the entire project.

Q2. On the Bidding Sheets (BS-5), there are entries to be filled in for an Additive Bid Item (A1) and also the TOTAL BID. Is Bid Item A1 to be included in the Total Bid Amount?

A2. Additive Bid Item(s) shall be included in Total Bid Price as a Basis of Award.

Q3. For the dewatering discharge, the project Special Conditions (SC-33, part 3) state that dewatering is to be discharged in accordance with the State Water Resources Control Board and California Regional Water Quality Control Board, Santa Ana Region. Does EMWD have this permit and then the Contractor will pull the Secondary Permit? Or, does the Contractor have to pull both permits?

A3. An additive bid item has been added providing an allowance for dewatering and disposal of groundwater. Disposal of groundwater will likely be either to sewer or the District recycled water system.

JPI

Q1. We are interested in bidding the project mentioned above and we noticed there was a mandatory job walk on Monday 8/20. Is there going to be an additional job walk?


R&D Mechanical Supply, Inc.

Q1. Sheet 3, Connection Detail 1: Call out for a 18” Ball Valve, should this be a Plug Valve?

A1. The noted valve should be a plug valve. Revised plan is included in the attachment to this addendum.
Q2. DI Fittings Spec Section 15333 asking for Linings and coatings to be with bituminous inside and outside coatings. vs Appendix A = Fittings shall be Tar (seal) coated and Cement Mortar lined?

A2. The tar (seal) coated and cement mortar lined fitting shall be provided.

Q3. Sheet 10, Detail 3: Call out for Vent-O-Mat Valve. Specs 15108 Valves shall be APCO model 450, or approved equal. Approved material list calls for APCO, Crispin, Valmatic and others? General Conditions 00064 shows Plans over specs. What do you want me to do with the various choices here?

A3. The plans take precedence over the specifications; therefore provide the Vent-O-Mat valve. Special condition section SC-49 is added to clarify the requirement of the sewage air and vacuum valves.

Q4. What Valve cap type for Plug Valves should be use? Approved material list calls for standard B-668 or Spec Section 02768 – 7 asking for 8” Brooks No. 1-SP, or equal, valve boxes?

A4. Valve caps and risers shall be in accordance with Standard Drawing B-668. The reference made to Section 02768-2.05 is for the locator wire valve box.

Underground Solutions and AEGION Company

Q1. Section 02768 – Furnish and Install PVC Force Main, specifies restrained joints for Bid Item #3 for the 18” and 24” sewer force main pipe. Fusible PVC® pipe is a fused PVC pipe with intrinsically restrained joints that utilizes all the standard mechanical fittings used for PVC pipe. Can Fusible PVC® pipe be allowed as an equal for the restrained joint PVC pipe?

A1. The fusible PVC pipe will be allowed as an alternative option for the portions of the alignment that require restrained joints and within the casing.

Q2. For the two separate Jack & Bore sections in Bid Item #3, the plans call out 24” restrained joint PVC inside a 42” Steel casing. Fusible PVC® pipe has a low-profile joint (no bells/couplings) since the outside diameter (OD) of the fusion joint is the same as the pipe OD. Can casing spacers be eliminated for Fusible PVC® pipe? Also, can the casing be downsized as well? Please see the attached Pipe Technical Data Sheet for more information.
A2. The casing size may be reduced for FPVC pipe, but casing spacers shall not be eliminated. The contractor shall submit jack/bore casing to engineer for review and approval. The contractor shall be aware that the jacking pit size may be increased to allow a long fused section of pipe from the lay area, into the pit, and through the casing. The contractor shall submit traffic control plans to the City of Temecula for review and approval and perform work in accordance the approved traffic control plans and encroachment permit. The contractor shall include all associate’s cost of using FPVC into his bid if FPVC is so chosen. No additional compensation will be allowed for using FPVC during construction.

Pipe Jacking Trenchless

Q1. Will a Geotechnical Report be provided?

A1. Geotechnical Report was provided in appendices. All appendices were included in CD, not hard copies.

Dangelo Co.

Q1. The 24” and 18” ductile fittings do not have to be epoxy, or epoxy 401 lined. And are standard Cement mortar lined and asphalt (tar) coated. Being a sewer line I wanted to double check.

A1. Ductile iron fittings shall be tar (seal) coated and cement mortar lined.

Q2. Import ductile fittings and restraints are permitted.

A2. Yes.

The Artukovich Companies:

Q1. Please confirm whether launching and receiving shafts shall be an augured CMP, steel casing, or liner plate shaft type as stated in Special Condition SC-18, or if the contractor can beam and plate or use trench boxes and shields?

A1. SC-18 is about Soils or Geotechnical Reports. SC-40 is Jacking and Boring. The contractor is allowed to use the methods and equipment as long as it is OSHA approved. The contractor will be required to make submittals to the District for review and approval, which includes (among other items) the design of the jacking/receiving pits and required bearing loads to resist jacking forces.
Q2. Please confirm lane closures will be limited to 300 feet maximum as stated in the City of Temecula permit No. LD17-1307? This is not sufficient room for the contractor to perform his work efficiently.

A2. The Contractor shall submit traffic control plans for the City of Temecula to review and approval. The contractor shall follow traffic control plans and encroachment permit to perform all works within the City’s right of way.

Q3. Please confirm work within the City of Temecula ROW will be restricted to night work from 9pm to 5am.

A3. Working hours are provided in the encroachment permit from the City of Temecula. SC-41 was revised to be consistent with the encroachment permit requirement.

Q4. Please advise which standard drawings the contractor shall abide by, sewer or water. As this is not a gravity sewer but rather a pressurized sewer force main, the contractor can interpret it to be either.

A4. This project is sewer force main project. Needed Detail drawings numbers are provided in Section P.

Q5. Please confirm that the contractor’s equipment must meet the Tier 3 requirements set forth in the MMRP.

A5. The contractor shall follow requirements set forth in the MMRP.

Q6. Please confirm all trucks on the project shall be year 2010 or newer as stated in the MMRP.

A6. The contractor shall follow requirements set forth in the MMRP.

Q7. Please advise where the contractor will be allowed to discharge water after the completion of hydrostatic testing.

A7. The water after hydrostatic testing can be discharged to District sewer manholes or sewer lift station.
Q8. Please advise where the contractor will be allowed to discharge the sewer per shutdown coordination table on project plan sheet 2 of 10.

A8. The contractor shall provide dump truck to collect removed sewer from the existing sewer pipe and discharge properly in accordance with State and Local agency requirements.

Q9. Please confirm the contractor shall keep spoil material minimum 12-feet away from the existing 18-inch and 20-inch force mains' center line, per SC-16. This will require the contractor to haul away all of the excavated material as there is limited easement.

A9. SC-16 is about Notification for community outreach. SC-36 is Spoil Material. The paragraph specifically states that excess soils from excavation and asphalt concrete grindings shall be spoiled entirely at Contractor's expense off the project site to an approved disposal area through the County or City. Spoil material shall be kept 12-feet away from existing 18 and 20-inch force mains' centerline. The intent of the easement area was for future access and not spoil material.

Koppl Pipeline Services

Q1. What is the DR rating of the C-905 PVC pipe. It needs to be greater than DR-17 for proper operations of the 18-inch line stop.

A1. The existing 18-inch C-905 PVC pipeline has a rating of DR-18.
Eastern Municipal Water District

Paul D. Jones II, P.E.
General Manager

PE: [Signature]
PM: [Signature]
DFE: [Signature]
DE: [Signature]

PDJ:SL:ae:bp:jrm

Attachments: Revised Proposal Package
City of Temecula STD 407
Cal Tran Standard RSP B3-1B, B0-3, and B3-5
Revised Construction Drawings
Section 02222 Dewatering
As-Build drawings of existing gravity sewer to Diaz LS
TYPE C2-PG-70-10 A.C. FINISH SURFACE TO BE PLACED NO SOONER THAN 14 DAYS AND NO LATER THAN 35 DAYS AFTER BASE PAVING.

TYPE B-PG-70-10 A.C. BASE COURSE TO BE PLACED WITHIN 72 HOURS AFTER CONSOLIDATION ON BACKFILL.

95% R.C. MIN.

90% R.C. MIN.

MATCH EXISTING 6" MIN.

C.A.B./C.M.B. REFER TO C.O.T. STD. NO. 115

PIPE ZONE COMPACTION PER UTILITY SPECS.

BEDDING AND SHADING PER UTILITY INVOLVED. IF NONE REQUIRED, USE CRUSHED AGGREGATE BASE. IF ROCK IS USED IN THE PIPE ZONE, A FILTER FABRIC BLANKET SHALL BE PLACED OVER THE BEDDING / SHADING MATERIAL, PRIOR TO PLACING THE REMAINING TRENCH BACKFILL.
NOTES:

1. ALL TRENCHES BE BACKFILLED AND CONSOLIDATED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

2. SPREADER BOXES MAY BE EMPLOYED FOR TRENCH PAVING JOBS LESS THAN 300’ L.F.

3. ALL JOINTS SHALL BE VERTICAL BUTT JOINTS; LAP OR FEATHERED JOINTS ARE NOT ACCEPTABLE. HEADER CUT AS NEEDED OR SPECIFIED BY THE DIRECTOR OF PUBLIC WORKS. (SEE SHT. 1 OF 2 FOR REFERENCE)

4. UNLESS OTHERWISE INSTRUCTED BY DIRECTOR OF PUBLIC WORKS, TRENCH PATCH SHALL STRAIGHT GRADE ACROSS WIDTH AND SHALL NOT BE CROWNED AT CENTER.

5. PRIOR TO PLACEMENT OF A.C., PAVEMENT EDGE SHALL SAW BE CUT TO A CLEAN VERTICAL AND STRAIGHT EDGE.

6. THE ENTIRE TRAVELED LANE, 12’ MIN., SHALL BE COLD MILLED AND REPaved WITH 0.15’ MIN. CZ-PG-70-10 A.C. USING A SELF-PROPELLED PAVING MACHINE, BARBER GREEN, BLOW KNOX OR EQUAL FOR ALL TRENCHES 300’ IN LENGTH OR LONGER. ANY PAVEMENT JOINT LINE IN THE WHEEL TRACK SHALL EXTEND TO THE NEXT LANE LINE.

7. ALL TRENCHES SHALL BE PERMANENTLY PATCHED TO SURFACE PAVEMENT ELEVATION AT THE END OF EACH DAY WITH A HOT MIX A.C. BASE COURSE. TEMPORARY A.C. COLD MIX SHALL NOT BE ALLOWED. AS AN ALTERNATIVE, THE TRENCH MAY BE TEMPORARILY SECURED EACH DAY WITH TRAFFIC PLATING RECESSED LEVEL WITH EXISTING PAVEMENT SURFACE. RECESSED GRIND SHALL NOT EXCEED THICKNESS OF THE PLATE.

8. TRENCH BACKFILL USING SLURRY SHALL NOT BE PERMITTED UNLESS AUTHORIZED BY THE DIRECTOR OF PUBLIC WORKS.

9. PRINCIPAL AND URBAN ARTERIAL ROADS PER THE CITY OF TEMECULA GENERAL PLAN REQUIRE CRUSHED AGGREGATE BASE (C.A.B.)

10. ALL TRENCH EXCAVATION WITHIN THE CITY OF TEMECULA RIGHT-OF-WAY SHALL REQUIRE AN ENCROACHMENT PERMIT FROM THE DEPARTMENT OF PUBLIC WORKS.

11. UNDERGROUND SERVICE ALERT SHALL BE NOTIFIED AT 1 (800) 422-4133 TWO (2) WORKING DAYS PRIOR TO START OF WORK

12. ALL STREET TRENCHES SHALL CONFORM TO CITY AND ENGINEERING STANDARDS AND THE CITY'S PAVING NOTES

APPROVED BY:

[Signature]

OCTOBER 12, 2011

GREG BUTLER, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

R.C.E. NO. 4706

TRENCH / POTHOLE REPAIR

STANDARD NO. 407 (SHEET 2 OF 2)
BRIDGE DETAIL 3-5
8" PSP AND PERMEABLE MATERIAL

BRIDGE DETAIL 3-6
WALL EXPANSION JOINT

BRIDGE DETAIL 3-7
WALL EXPANSION JOINTS AND WEAKENED PLANES

NOTES:
A. 4" # Drains @ 25'-0" maximum center to center, 9'-0" center to center for Type 3 and 9'-3" center to center for Type 4 retaining walls, for walls adjacent to sidewalks or curbs, provide 6" plastic pipe under the sidewalks to discharge thru curb face. Exposed wall drainage shall be located 3'-3" above finished grade.
B. 6" square aluminum or galvanized steel wire 1/2" mesh hardware cloth, minimum wire diameter 0.025", anchor firmly to backface.
C. One cubic feet pervious backfill material in a nonwoven filter fabric, securely tied.
D. Pervious backfill, note #6; continuous behind retaining wall or abutment.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
BRIDGE DETAILS
NO SCALE
DIAZ ROAD

MATCH LINE SEE SHEET 4

STA. 8+93.39 TO 19+00.00

CONNECTION DETAIL 1

PLAN AND PROFILE

DIAZ ROAD

MATCH LINE SEE SHEET 4

STA. 19+00.00
PART 1 - GENERAL

1.01 Summary

A. Section includes Specifications for temporary dewatering systems.

B. Contractor shall bear the sole responsibility for the design, installation, and operation of the dewatering system to comply with the requirements of this Specification.

C. Contractor is responsible for investigating the soil and groundwater conditions at the Site and performing necessary field tests to supplement existing subsurface data as necessary at no additional cost to the District. A description of subsurface soils materials is provided in a geotechnical exploration report for Pala Force Main Sewer Project, City of Temecula, California, by Leighton Consulting, Inc., dated January 11, 2017, provided in Appendix B.

D. Any failure to fully investigate the Project Site or the foregoing conditions shall not relieve the Contractor from the responsibility for estimating the difficulty or cost of successfully performing any work. Neither the District nor any of its representatives or agents assumes any responsibility for any understanding or representation not in the Contract Documents with respect to the Project Site, surface and subsurface conditions made by the District or any of its representatives or agents prior to the execution of the Contract pursuant to the Contract Documents.

E. Discharge of dewatering water to any sanitary sewer system will not be permitted.

F. Demonstrate to the District that the proposed dewatering system is working and is in compliance with the Dewatering Plan prior to beginning excavation.

1.02 System Description

A. Remove water which accumulates in excavations during the progress of work so that all work can be done in the dry, unless otherwise approved by the District. Keep excavated areas free from water while underground utilities are constructed, and backfill have been placed to a sufficient height to anchor the work against possible leakage or buoyant uplift forces. A height to anchor the work against buoyant uplift forces shall be considered sufficient when the dead load weight of the backfill exceeds the uplift forces by a minimum factor-of-safety of 1.5.

B. In addition to the other requirements specified herein, design the dewatering system to perform as follows:
1. Prevent damage to adjacent properties, buildings, structures, utilities and other work as a result of settlement or other groundwater related effects.

2. At all times, maintain groundwater levels over the entire excavation a minimum of 5 feet below the excavation grade.

C. At all times, have on the work sites sufficient pumping equipment for immediate use, including standby pumps for use in case other pumps become inoperable. Dispose of water in accordance with the detailed requirements specified herein and so as to cause no injury to personnel or the public, damage to public or private property, and not be a menace to the public health.

D. Design dewatering system to prevent pumping fines from below grade or disturbing materials exposed at the excavation bottom. Wells shall be cased and filter(s) shall be provided to prevent such pumping of fines.

E. Provide a sufficient number of monitoring wells to confirm the following:

1. The dewatering system is performing as intended and is achieving the specified reduction in groundwater levels.

2. Construction site groundwater levels inside and outside dewatered excavations to determine the acceptability of removing the dewatering system from operation.

3. The dewatering program shall maintain the depth of the ground water to a minimum of five feet below the planned excavation depth prior to the commencement of the excavation process. At the conclusion of the dewatering program, Contractor shall gradually shut off the dewatering; it shall not be an instantaneous shutoff.

1.04 Definitions

A. Dry: Refers to a subgrade excavation that is stable with no ponded water, mud or muck, and is able to support construction equipment without rutting or disturbance and is suitable for the placement and compaction of fill material and placement of piping and structures.

1.05 Permitting

A. Contractor shall comply with and obtain the required state and county permits where the Work is performed.

B. Obtain and pay for new well permits for dewatering wells, as required by Riverside County Department of Environmental Health.

1.06 Submittals
A. Well permits.

B. Dewatering Plan

The Dewatering Plan shall be prepared and stamped by an engineer licensed in California with at least 5 years’ experience in the design and construction of dewatering systems and shall have completed not less than five (5) successful dewatering projects of similar type, size and complexity to that required for this Project.

The dewatering plan shall include shop drawings, design data and following elements:

1. The proposed type of dewatering system.
2. Arrangement, location and depths of system components.
3. Complete description of equipment and instrumentation to be used, with installation, operation and maintenance procedures.
4. Types and sizes of filters.
5. Design calculations demonstrating adequacy of the proposed system and equipment.
7. Type of filtration and chemical treatment of contaminated water, as applicable.
8. Well point system design, submit design complete with calculations and shop drawings.
9. Method for establishing and monitoring construction site groundwater levels.
10. Criteria for dewatering the acceptability of removing the dewatering system from operation.

C. Prior to removing the dewatering system from operation, submit documentation and calculations verifying that the approved criteria for determining the acceptability of removing the system from operation have been met.

PART 2 - PRODUCTS - (Not used)

PART 3 – EXECUTION

3.01 Installation

A Install a dewatering system to lower and control ground surface water at least 5 feet below the lowest level of excavation in order to permit excavation,
installation of pipeline, construction of structure, and placement of backfill materials to be performed under dry conditions. Make the dewatering system adequate to predrain the water-bearing strata above and below the bottom of structure foundations, utilities and other excavations.

B. Install a dewatering system to reduce hydrostatic pressure head in water-bearing strata below structure foundations, utility lines, and other excavations, to the extent that water levels in the construction area are a minimum of 5 feet below the excavation surface at all times.

C. Install wells, well points and sumps, and all other groundwater control system components to prevent loss of fines from surrounding soils. Sand filters shall be used with all dewatering installations unless screens are properly sized by the Contractor’s dewatering engineer to prevent passage of fines from surrounding soils.

D. Install well systems in accordance with the accepted submittal.

E. No pumping or monitoring wells will be allowed through the pipeline alignment.

F. Certify in writing by the Contractor’s dewatering engineer that the dewatering system has been installed according to the accepted plan and that it is functioning properly prior to excavation.

3.02 Monitoring Wells

A. Install monitoring wells to monitor and measure the success of the dewatering prior to commencement of all excavations. The number and location of the monitoring wells should be adequate to demonstrate that the water table has been lowered to the required level, and must include at least two wells within the lower level of each excavated area required for the pipelines. Measure water levels at each monitoring well daily.

B. Install monitoring wells to a depth of at least 10 feet below the lowest level of excavation, unless otherwise approved by District, and to whatever depth is necessary to indicate the groundwater control system designed by the Contractor's dewatering engineer is performing as intended. Additional monitoring wells may be required by the District if deemed necessary to monitor the performance of the Contractor's groundwater control system.

C. Begin daily monitoring of groundwater levels in work areas prior to initial operation of the dewatering system. Daily monitoring in areas where groundwater control is in operation shall continue until the time that groundwater control systems are turned off.

D. Process and report observation well data to District on a daily basis. Data shall be provided on a form that includes the following information: monitoring well number, depth to groundwater, total depth of well, top of casing elevation, groundwater level elevation and date and time of reading.
E. Protect access to the monitoring wells by providing a lockable cap or lockable protective casing and padlock. Construct the surface completion at the ground surface to prevent damage by vandalism or construction operations and to prevent surface water from infiltrating. Provide two copies of keys for each padlock to District for access to each well.

F. Monitoring wells shall be developed so as to provide a reliable indication of groundwater levels. Wells shall be redeveloped if well clogging is observed, in the event of apparent erroneous readings, or as directed by District.

G. Submit monitoring well installation logs, top of casing elevation, and well locations to District within 24 hours of completion of well installation.

H. Maintain monitoring wells and repair or replace them at no additional cost, whether or not the wells are damaged by the Contractor's operations or by third parties.

3.03 Operation

A. Place the dewatering system into operation to lower the groundwater table as required and provide District proof that the dewatering system is operating as required prior to any excavation. The dewatering system shall operate continuously 24 hours a day, 7 days a week until pipeline and structures have been satisfactorily constructed, which includes the placement of backfill materials and dewatering is no longer required.

B. Dewater to the required levels starting a minimum of 48 hours prior to excavation.

C. Operate the dewatering system to prevent loss of ground as water is removed, avoid inducing settlement or damage to existing facilities, completed Work or adjacent property, and to relieve artesian pressures and resultant uplift of excavation bottom.

D. Provide sufficient redundancy in each system to keep excavation free of water in event of component failure or changes to areas of groundwater sources.

E. Provide complete standby equipment, installed and available for immediate operation, as may be required to adequately maintain dewatering on a continuous basis and in the event that all or any part of the system may become inadequate or fail. Test the standby or backup power equipment at least once per month for proper functioning systems.

3.04 Water Disposal

A. Dispose of water removed from the excavations in such a manner that will:

1. Not endanger portions of Work under construction or completed.

2. Not cause any inconvenience to others working or residing near Site.
3. Not cause or contribute to a violation of water quality standards.

4. Comply with the stipulations of required permits for disposal of water. Control runoff in all work areas including, but not limited to, excavations, access roads, parking areas, laydown, and staging areas. The Contractor shall provide, operate, and maintain all ditches, basins, sumps, culverts, site grading, and pumping facilities to divert, collect, and remove all water from the work areas. All water shall be removed from the immediate work areas and shall be disposed of in accordance with applicable permits.

B. Excavation Dewatering:

1. Provide all facilities required to divert, collect, control, and remove water from all construction work areas and excavations.

2. Provide drainage features that have sufficient capacity to avoid flooding of work areas.

3. Arrange and alter drainage features as required to avoid degradation of the final excavated surface(s).

4. Utilize all necessary erosion and sediment control measures to avoid construction related degradation of storm water quality.

C. Provide dewatering equipment to remove and dispose of all surface and groundwater entering excavations, trenches, or other parts of the Work during construction. Maintain each excavation dry during subgrade preparation and continually thereafter until the structure to be built, or the pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation, or other cause will result.

D. Comply with best management practices in accordance with the District approved Stormwater Pollution Prevention Plan for the Project.

3.05 Corrective Action

A. If dewatering requirements are not satisfied due to inadequacy or failure of the dewatering system (loosening of the excavation, or instability of trench slopes, or damage to pipeline or structures), perform the necessary work for remediation, repair or strengthening of foundation soil and damaged pipeline and structure resulting from such inadequacy or failure by Contractor, at no additional cost to the District.

B. As information about the soil and groundwater conditions in the field is obtained, update and revise the Dewatering Plan and dewatering system to continue to meet the requirements listed in Part 1.

3.06 Removal
A. Insure compliance with all conditions of regulating permits and provide such information to District.

B. Obtain written approval from District before discontinuing operation of the dewatering system.

C. Do not turn off the dewatering system in a manner that the upsurge in water weakens the subgrade for completed excavation and pipeline installation. At the conclusion of the dewatering program, Contractor shall gradually shut off the dewatering; it shall not be an instantaneous shutoff.

D. Destruct all wells, including the existing piezometers, in accordance with well permits and Riverside County well destruction requirements.

E. When directed by District, leave in place observation wells for continued monitoring. When so directed, cut casings flush with final ground level and provide protective lockable boxes with locking devices. The protective boxes shall be suitable for traffic and for any other conditions to which the observation wells will be exposed.

END OF SECTION