C.C. MYERS, INC.

An Equal Opportunity / Affirmative Action Employer

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LETTER OF TRANSMITTAL

Document No:	215-STT.00142
Dated Dec 08 2004	**Job No.:** 215
Attention: Mr. Lourdes David	
Re: 04-0120R4	
Temporary Bypass Structure	

To: State of California
333 Burma Road
Oakland CA 94607

We are sending you: ☑ Attached ☐ Via Fax

☐ Drawing	☐ Plans	☐ Prog. Pmt
☐ Samples	☐ Certificates of compliance	☐ Calculations
☐ Payroll	☐ Specs	☐ Copy of Letter
☐ Change Order	☐ Schedule	☐ Invoice

Copies	Item	Date	Description
1	01	Nov 22 2004	Pacific Mechanicals "Piping Routing and Design"

These are transmitted as checked below:

☐ For Approval	☐ For Review/comment	☐ Return For Correction
☑ For Your Use	☐ As Requested	☐ For Information

Remarks:

Copy To: Andy Chan, Robert Coupe, Main Office

File: 215-101, 215-214

RECEIVED
DEC 8 04
00685 000

Signed: Christine M Williams
Christine M Williams
Project Engineer

3286 Fitzgerald Road, Rancho Cordova, CA 95742, Tel No. 916-635-9370 Fax No. 916-635-1527

PACIFIC MECHANICAL CORPORATION
GENERAL ENGINEERING CONTRACTORS
Calif. State Lic. No. 138920 * Nevada State Lic. No. 0006244

November 22, 2004

CC Myers, Inc.
3286 Fitzgerald Road
Rancho Cordova, CA 95742

JOB 215 TEMP. BYPASS STRUCTURE
IC - 1163
215-214
RC
AC
Cal trans (Trans)

Log No: 292-00001

Attention: Bob Coupe

Fax: 916-635-1527

Reference: Temporary Bypass Structure
Caltrans Contract #04-0120R4

Subject: Piping Routing and Design

Dear Mr. Coupe,

We received copy of the Caltrans letter of Nov. 12 the subject project and we offer these comments.

Firstly, we are surprised by the sudden change of position on this subject. As you know we have had some back and forth on this submittal already. Although there was some questions on the routing of the piping on the K-rail portion, there was not any outstanding comments on the portion running on top of the Type 732 barrier rail. We understood that the portion of the work supported by the Type 732 barrier rail had been accepted months ago. We understood that the only portion not accepted was the few meters running on top of the K-rail over the existing bridge.

Secondly, on the comment *"Barrier rails are not designed to sustain any additional imposed loads on them without modifications to the design"* we do not concur with this statement. The maximum load that will applied to the barrier from the piping is 1043 Kg distributed over a surface area of 464 sq cm. The resulting stress is many orders of magnitude less than the capacity of concrete and the rebar of the barrier. In fact these loads are insignificant compared to the capacity of the barrier. The present design of the K-rail can certainly adequately support the added load of 1043 Kg every 7 meters.

Thirdly, on the comment *"also, the center of gravity of the altered pipe-rail system would be higher than normal, thereby creating a potentially unstable condition for the barrier rails."* You will note that the Type 732 Barrier is anchored into the structural deck with two #16M @ 400 mm. Lateral or overturning resistance of the barrier is provided mostly by this set of rebars. Not by the dead weight of the concrete. The resistance provided by the dead weight of the concrete is insignificant in comparison. The effect of a higher center of gravity of the barrier created by the additional pipe weight is most certainly negligible. Therefore, we submit that the

design we provided for running and supporting the pipe meets the requirements of good engineering practice and the specifications.

Fourthly, on the subject supporting the pipe of the K-rail, we concur that some eccentric loads applied to the K-rail could contribute to making less stable if it is not anchored to the deck. We believe that pipe supports could be designed to support the piping partly off the deck, behind the K-rail, instead of being attached solely to the K-rail. This would eliminate any eccentric loading to the K-rail. Please refer to the attached sketch showing this proposed method. Please advise if sufficient room exists there and we will redesign these supports accordingly.
In conclusion, we firmly believe that our design meets all requirements of good engineering practice, the drawings and the specifications. This is the design we based our proposal on.

We believe that the requirements made in the November 12 Caltrans letter were not part the original specifications and bid package. We believe that these additional constraints and requirements will cause both PMC and CC Myers additional cost. Additional cost to redesign the piping, the pipe supports, and to run and support piping at an alternate location will require additional compensation. At this point, if the submitted support method cannot be approved, we will required a change order to cover for the additional expenses associated with the additional requirements.

Alternately, we are prepared to redesign the supports for the K-rail portion of the routing as shown on the attached sketch at no additional costs. We propose you arrange a meeting with decision makers at Caltrans to discuss the benefits of our design and/or address any of their concerns.

Very truly yours,

Pierre Bigras
Project Manager

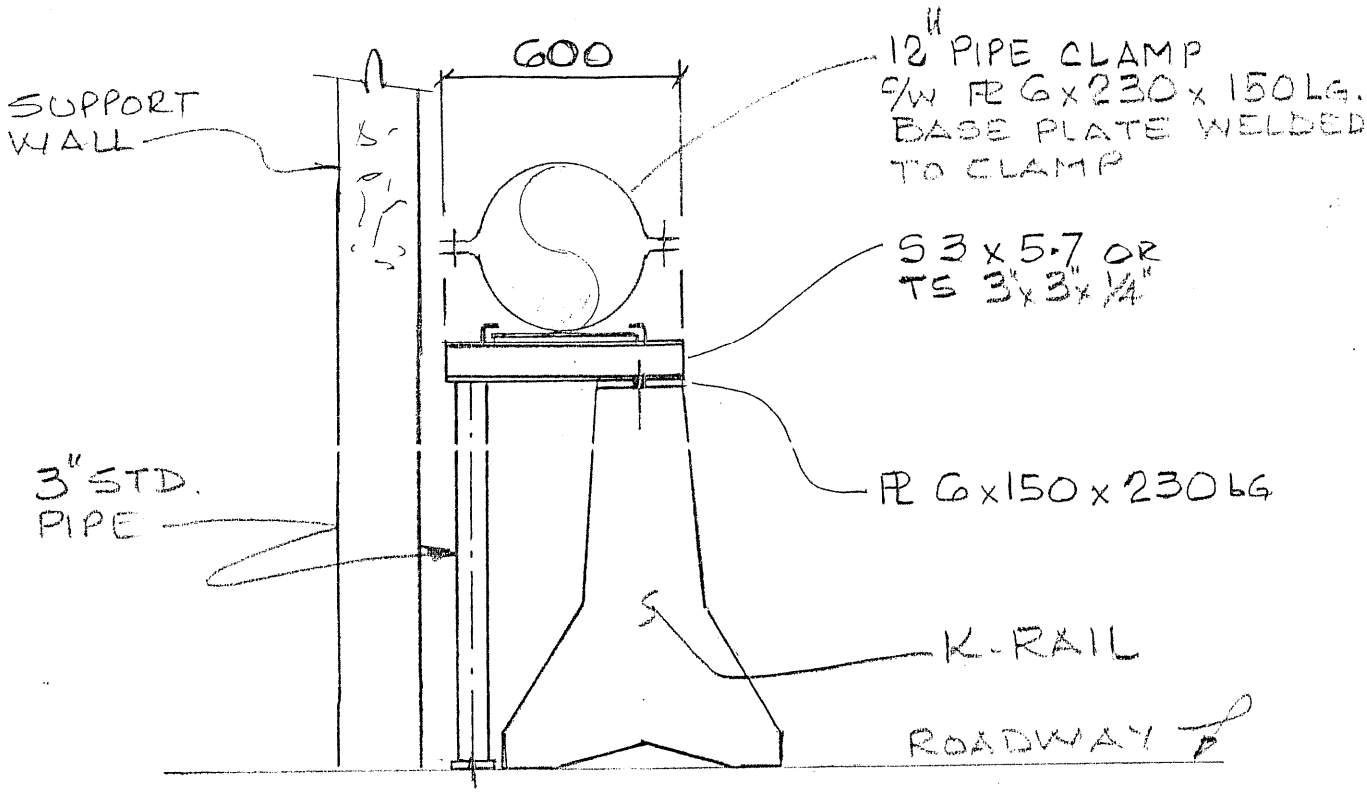
cc:

Enclosures:

PACIFIC MECHANICAL CORPORATION
P.O. BOX 4041 • CONCORD, CA 94524
(925) 827-4940 • FAX (925) 827-0519

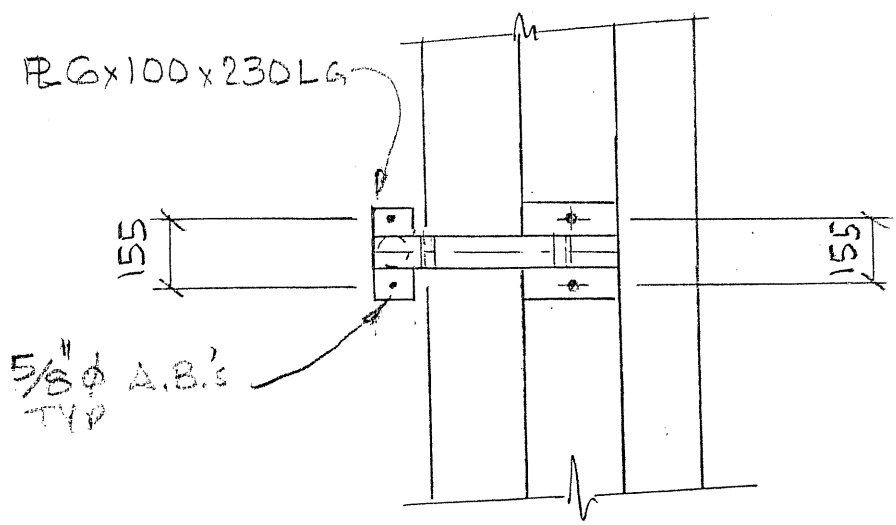
Subject: REVISED PIPE SUPPORT @ K-RAIL
12" & 4" WATER LINES

By: [illegible] Date: 11/22/04 Sheet 1 / 1



SECTION

12" PIPE SHOWN
4" PIPE SIMILAR



PLAN