END OF SERVICE ROAD

RELOCATE

VRFM-7

VRFM-8

EXTEND PASSIVE VENTING & RELOCATE VRFM-9 AS SHOWN

VRFM-9 (TYP.) SEE DETAIL 3 THIS SHEET

HARDSCAPE PASSIVE VENTING (TYP.) SEE DETAIL 2 THIS SHEET

4" SOLID PVC SCH.-80 PIPE (TYP.)

VRFM-5

SHT. GP-118 EX. BLOC..
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005552
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5640
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # E1686.2 Date Created: 1/21/2008 Date Required: 1/30/2008

Answered By: Los Angeles Unified School District

Author By: Dominic Arredondo,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent: Subcontractor RFI Number:

Subject: Relocation of Vertical Vent Risers VRM-8 & VRM-9

Location: SSD09107
Discipline: Gas Mitigation

Drawing/Spec: Revision: 12/28/08

Question:
Reference RFC E1686. The referenced RFC relocates vertical vent risers VRM-8 and VRM-9 to avoid a conflict with the retaining wall footings located on each side of the fire lane. Please advise if it is acceptable to relocate vertical vent risers VRM-8 and VRM-9 as shown on attached sketches SK-001 and SK-002.

Consultant Comments:

Response Issued By: [Signature] [Printed Name] 1/28/18
Response Reviewed By: [Signature] [Printed Name] Date

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

SCS Engineers’ Response: It is acceptable to relocate vent risers VRM-8 & VRM-9 as shown on attached sketches SK-001 and SK-002
Central L.A. High School #11  
Request For Clarification  

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Los Angeles Unified School District

Sean Burwell,  
Hensel Phelps Construction Co.  
1200 Colton  
Los Angeles, CA 90026

Control Air 223

Methane Exhaust Duct at Parking Garage

55098107

**Reference:** Referencing sheet MA-1.06, the exhaust ductwork for the methane exhaust penetrates into an enclosure at grid line S & T.E. Please advise as to the elevation which this duct is to penetrate and confirm pipe construction material as well as any type of damper needed for this installation.

**Consultant Comments:**

1. 4" DIAMETER GALV. SHEET METAL DUCT WITH BALANCING DAMPER LOCKED IN PLACE.
2. CONSULT WITH THE METHANE CONTROL SYSTEM CONSULTANT FOR ELEVATION OF THE PENETRATION.

**DFDA/Consultant ENG.**  
Name (Printed)  
Date

Response Reviewed By:  
Name (Printed)  
Date

**This Form Cannot Modify Contract Amount or Milestones and/or Contract Time**

**UNCC RESPONSE:** PROVIDE PERSONAL RESPONSE ABOVE.

**SCS RESPONSE:** PIPE CAN BE PENETRATED ANYWHERE BELOW THE SLAB. PIPE MATERIAl AND TYPE OF DAMPER TO BE ADDRESSED BY MECHANICAL ENGINEER.

Performance:  
1/11/2008

**Signature:**  
1/24/08
RFC: E1754.1

Central L.A. High School #11
Request For Clarification
Dated: 1/4/2008

Hensel Phelps Construction Co.

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<td>Sean Burwell, Hensel Phelps Construction Co. 1200 Colton Los Angeles, CA 90026</td>
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<td>Job Site Contact:</td>
<td>Control # 215</td>
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<td>Los Angeles Unified School District</td>
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**Subject:** 6" Methane Exhaust Routing

**Location:** 55098107 Mechanical

**Question:**
Referencing the 6" methane exhaust as shown on contract drawing MA-1.03, penetration into the elevator room P202 within a vertical shaft as shown on drawing MA-1.06 cannot be achieved due to congestion of rebar in the level 2 deck. In lieu of penetrating the deck, the routing would be to penetrate the north wall of room P111 into the undesignated area P120, and run the duct exposed against the south wall of undesignated area P120. A CSDF could be added at the wall penetration. Please confirm that this routing is acceptable.

**Answer:**

1. IT APPEARS THAT REROUTING OF THE EXHAUST DUCT TO MEET THE EXISTING BUILDING STRUCTURAL CONDITION IS ACCEPTABLE.
2. REVISED DUCT ROUTING SHALL BE REFLECTED IN THE CONTRACTOR'S 'AS- BUILT' DRAWINGS.

**DFDA/Consultant ENG.**

**LAUSD OAR Signature**

**Date**

01/17/08

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

**SCS Response:**
No objections to rerouting of the exhaust duct, however, it must be approved by the structural engineer.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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<tr>
<td>Author By</td>
<td></td>
<td>Brian Turner, Hensel Phelps Construction Co. 1200 Colton Los Angeles, CA 90026</td>
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<tr>
<td>Co-Respondent</td>
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**Subject:**
Interior Footing Placement Placement Procedure

<table>
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<th>CSI Division</th>
<th>Drawing Clarification</th>
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<tr>
<td>The following procedures are being used to construct the interior footings of the new building construction:</td>
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1. Hensel Phelps is overexcavating the foundation footings a minimum of 1" on each side as per the requirements of contract drawing and building code for neat pour concrete placement. The bottom of footing elevation is being excavated 7" deeper than contract drawings to accommodate for protection slab placement. Upon completion of footing excavation, bottom of footing inspection requests are inspected approved by onsite Soils Technician. |

2. After footing inspections, the interior footing edges and bottoms are re-evaluated by Hensel Phelps, along with Barber-Webb, and after concurrence, the following options are available and followed: |

   A. If the interior footing faces contain rough edges, they are reversed formed and a lift of 3-ton (Structural) slurry mix is placed to allow for geotextile fabric and gas membrane placement. |

   B. If the interior footing faces are agreed to be acceptable, necessary preparation is completed and the installation of the geotextile fabric and membrane operation commences. |

3. Prior to installation of gas membrane for interior footings, a 1" lift of select material containing no sharp edges, is placed at the bottom of footing. Upon completion of step #2 above, the gas membrane is tested (BW) and concurrently inspected by SCS for installation conformance. After inspections are completed, a second lift of 2" sand is placed at the bottom of the footing over the geotextile/membrane/geotextile installation. Once this is complete, a 4" lift of structural concrete (foundation footing mix) is placed as a "protection slab". The top elevation of the "protection slab" will be the bottom of footing elevation per plan. |

See attached sketch SK-001 for further clarification. |

**Answer**
SEE ATTACHED SHEET. |

**Consultant Comments**

Response Issued By: |

Architects Signature | Name (Printed) | Date |

**Printed on:** 6/1/2006 | P_HPCC_B3038_PM72_4005052

Page 1 of 2
RESPONSE TO RFC # N0163:

BRANDON & JOHNSTON ASSOCIATES TAKES NO EXCEPTION PROVIDED THAT THE GEOTECHNICAL ENGINEER CONFIRMS THAT THE ALLOWABLE BEARING PRESSURE GIVEN IN THE SOIL REPORT DOES NOT CHANGE.

Kim Carmell | 9-1-2006

RESPONSE TO RFC # N0163:

THE SUGGESTED PROCEDURE FOR CONSTRUCTION OF “PROTECTION SLAB” DESCRIBED IN THE RFC # N0163 AND DETAILED IN THE ATTACHED SKETCH WILL NOT IMPACT THE METHANE MITIGATION SYSTEM. HOWEVER, DURING THE CONSTRUCTION OF 4" THICK “PROTECTION SLAB”, HOPPERS AND ELEPHANT TRUNKS SHALL BE USED TO PREVENT THE FREE FALL OF CONCRETE FOR MORE THAN 4 FEET.

Shashiko Roothary
SCS ENGINEERS
INTERIOR FOOTING DETAIL

4" Concrete Bottom (For Protection)

2" Sand Bed

HDPE Membrane Liner w/ Geotextile Per Plan.

Bottom of Footing Per Plan.

+17" Total

Fill Voids with Slurry

Net Dug Footings

1" Select Bedding in Bottom of Excavation.
RESPONSE TO RFC # N0163:

BRANDOW & JOHNSTON ASSOCIATES TAKES NO EXCEPTION PROVIDED THAT THE GEOTECHNICAL ENGINEER CONFIRMS THAT THE ALLOWABLE BEARING PRESSURE GIVEN IN THE SOIL REPORT DOES NOT CHANGE.

Kim Carmelleti 6/1/2006

RESPONSE TO RFC # N0163:

THE SUGGESTED PROCEDURE FOR CONSTRUCTION OF "PROTECTION SLAB" DESCRIBED IN THE RFC # N0163 AND DETAILED IN THE ATTACHED SKETCH WILL NOT IMPACT THE METHANE MITIGATION SYSTEM. HOWEVER, DURING THE CONSTRUCTION OF 4" THICK "PROTECTION SLAB", HOPPERS AND ELEPHANT TRUNKS SHALL BE USED TO PREVENT THE FREE FALL OF CONCRETE FOR MORE THAN 4 FEET.

Shashi Komary
SCS Engineers
INTERIOR FOOTING DETAIL

HDPE MEMBRANE LINER W/ GEOTEXTILE
PER PLAN.

4" CONCRETE BOTTOM (FOR PROTECTION)

2" SAND BED

BOTTOM OF FOOTING PER PLAN.

FILL HOLES WITH SLURRY

NEAT DUG FOOTING

17" TOTAL

SELECT BEDDING IN BOTTOM OF EXCAVATION.

SGS ENGINEERS

SHOP DRAWING REVIEW

DATE RECEIVED _______________ JOB NO. _______________

☐ APPROVED ☐ APPROVED AS NOTED
☐ REVISE & RESUBMIT ☐ DISAPPROVED

CHECK BOX IS ONLY FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR THE DIMENSIONS TO BE CONFIRMED AND CORRELATED AT THE JOB SITE FOR INFORMATION THAT PERTAINS FOLLOWING TO THIS APPLICATION, PROCESS OR TECHNIQUE OF CONSTRUCTION AND FOR COORDINATION OF THE WORK OF ALL TRADES.
Central L.A. High School #11
Request For Clarification

Project #: 000347
1200 W. Colton St.
Los Angeles, CA 90028

Jobsite Info.
Tel: 213-341-5640
Fax: 213-341-0016

RFC #: 00347
Date Created: 10/02/2006
Date Required: 10/12/2006

Los Angeles Unified School District
Brian Turner,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90028

Utility vault lining at sand dispersion layer

55.93107
Gas Mitigation
Drawing Clarification

Reference gas mitigation drawings sheet GP-116, detail 2. This detail states that all utility vaults that penetrate the sand dispersion layer is to receive a lining under the vault. Please confirm this requirement is only required at vaults that are within the dispersion layer. If all vaults are to receive a lining, whether interior (within the structure already installed) or exterior (below the structure-not installed), please provide details for these instances (manholes, grade interceptors, etc.).

Response issued By: M. Leonard, Sr.
Architects Signature

Response Reviewed By: M. Leonard, Sr.
LAUSD CAR Signature

This Form Cannot Modify Contract Amount or Milestones and is/are Contract Time

SEE ATTACHED MEMO FOR REVISED RESPONSE.
SCS TECHNICAL MEMORANDUM

Date:        January 3, 2007

To:          Tom Dolan, LAUSD OEHS

CC:          Jeff Dobrowolski and Dave Oliver, Geosyntec Consultants

From:        Mike Leonard and Shashi Kothary, SCS

Subject: Subject: Revised Response to RFC #N0347 and Response to RFC #N0422 and E#0914 Regarding Venting of Utility Vaults, High School 11

This Construction Bulletin serves to clarify the intended system for subsurface gas mitigation at utility vaults or other buried enclosed structures.

**Landscape Areas with Sand Dispersion Layer**

- If structure extends below the bottom of the sand dispersion layer and is larger than 18-inches by 18-inches, it must be either wrapped with a 60 mil HDPE membrane (see detail provided in GP-1.19, Detail 2) or vented with a vent pipe connected to a vent riser.
- If the structure does not extend below the bottom of the sand dispersion layer no additional mitigation is required.

**Hardscape (paved outdoor areas) Areas**

- If the structure is smaller than 18” x 18” no further mitigation is needed.
- If the structure is larger than 18” x 18” it must either be wrapped with a 60 mil HDPE membrane or provided with a dedicated vent pipe connected to a vent riser.

**Electrical Pull Boxes With Dry Sump**

- Regardless of the location these structures must be provided with a vent pipe connected to a vent riser as per the plans and details provided to the contractor.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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Subject

Campus Light Pole Size

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<th>Revision</th>
<th>Date</th>
<th>Detail/Section</th>
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Question

Reference drawing E2.8L, there is no pole type specified with the new LSI fixtures. The adjacent gas mitigation poles (as applicable) are 6". Please confirm this is the design intent to have two differing size poles at common gas mitigation/light standard locations.

Consultant Comments

It was WWCOT's suggestion to keep the power pole separate from the gas mitigation pole. Therefore, where applicable, there will be two different sizes poles (6" diameter for gas mitigation) at common gas mitigation/light standard locations.

Answer

Response Issued By:  
Response Reviewed By:  

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<th>Contact Name</th>
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<th>Notes</th>
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#3 TIES AT 6" O.C. U.N.O.

3'-0"

6" Ø STD. PIPE SLEEVE

(3) #5 EA. SIDE

4" CLR TO PIPE SLEEVE

Sketch No. SKN-A-114

Light Pole w/ Mitigation Vent Section

Central L.A.H.S. No. 11 - New Bldgs

WWCOT Project No: 03035.00
District: LAUSD
District No.: 55-96107
DSA A. No.: 03-106518

Issue: PC0
Scale: 1"=1'-0"
Reference:
Date: 03-20-07
NOTE:
REFERENCE 5/A1.5.4 FOR ADDITIONAL INFORMATION

3
A1.5.4

6" Ø STD. PIPE EXTENDS INTO FOOTING

CMU BASE
COLOR 4

VARYING
MIN. 2-6" MAX

1'-0"

3'-0"

1'-6"

A114
SKN

Light Pole w/ Mitigation Vent Section
Central L.A.H.S. No. 11 - New Bldgs
1200 W. Colton Street
Los Angeles, California 90012

WWCOT Project No.: 03035.00
District: LAUSD
District No.: 55-96107
DSA A. No.: 03-106518

Sketch No.: SKN-A-115
Issue: PC0
Scale: 1"=1'-0"
Reference: 5/A1.5.4
Date: 03–20–07
Central L.A. High School #11
Request For Clarification

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Heinsel Phelps Construction Co.

RFC # N0869
Date Created: 6/15/2007
Date Required: 8/24/2007

Answered By
Los Angeles Unified School District

Authored By
Sean Burwell,
Heinsel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent
Subcontractor RFI Number

Powerco 416

Subject
Site Lighting Underground Conduits

Location
55.98107
Discipline
Electrical

Drawing/Spec.
Revision
Date
Detail/Section

Question
Specification section 161.30/3.01/B/2 states that underground conduits shall have depth of 24" to top of concrete envelope. This would place the conduits in the center of the sand dispersion layer of the mitigation system.

1. Powerco request to run PVC conduits at 18" per NEC 300-5 to avoid penetrating the sand dispersion layer. Please confirm that this is acceptable.
2. Please confirm it is acceptable to run rigid metallic conduit per NEC 300-5 at 6" encased in concrete.
3. Is the 18" soil buffer zone considered a classified zone? If so, please specify which type.

Consultant Comments
Item 3. Soil buffer zone is considered an "Unclassified" zone. Items 1 & 2 to be responded by the Project Architect.

Answer

Response Issued By: 

Signature

Name (Printed)

Date

Response Reviewed By: 

Signature

LAUSD OAR Signature

Name (Printed)

Date

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Performance!
Printed on:
8/15/2007

P_HFCC_B3038_PM72_4005052
Page 1 of 1
Project #: 4005052  
1200 W. Colton St.  
Los Angeles, CA 90026

Jobsite Info.  
Tel: 213-241-5940  
Fax: 213-241-0915

Central L.A. High School #11  
Request For Clarification  
Detailed, Each RFC

RFC #: N6898  
Date Created: 9/5/2007

Answered by

Authorised By  
Sean Burwell,  
Hensel Phelps Construction Co.  
1200 Colton  
Los Angeles, CA  90026

Date Required: 9/14/2007

Co-Respondent  
Subcontractor RFI Number  
Powerco 419

Subject
Site Lighting/Mitigation Pole Discrepancies

Location  
Discipline  
CSI Division  
SS.98107

Drawing/Spec  
Revision  
Date  
Detail/Section

Question:  

Reference drawings GP 1.17 and E2.0:

1. Between VR-1 and VRQ-2 there is no vent riser for fixture type Y-2 as depicted on E2.0L. Please advise.
2. VR-19 does not depict any fixtures as shown on E2.0L. Please advise.
3. VR-11 depicts single head on pole, E2.0L depicts double head. Please advise.
4. Location of VR-20 approximately 40' away from the location depicted for the Y2 pole on E2.0L. Please confirm location.

Consultant Comments

Answer

Response Issued By:
Architects Signature  
Name (Printed)  
Date

Response Reviewed By:
LAUSD OAR Signature  
Name (Printed)  
Date

Date Answered:

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Company Name  
Contact Name  
Copies  
Notes

Performance  
Printed on: 9/5/2007  
P_HPCC_B3038_PM72_4005052

Anna de la O's handwriting:  
Final
DATE: November 13, 2006

TO: Shashi Kothary, P.E.
SCS Engineers
3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806
Tel: (562) 426-9544
Fax: (562) 427-0805

FROM: Sopon Amorn, P.E.
Amorn Electrical Engineers, Inc.
3752 Atlantic Ave, Suite 4
Long Beach, CA 90807
Tel: (562) 424-2838
Fax: (562) 490-4996

SUBJECT: Response to RFC Number N0902
Gas Mitigation System
LAUSD Central L.A. New High School No.11

NUMBER OF PAGES: 3 (including this page)

Remarks:

Attached please find the followings

1. Response to RFC Number N0902
2. SK-001 with mark ups per comments
**DATE:** September 14, 2007

**TO:** Shashi Kothary, P.E.  
SCS Engineers  
3900 Kilroy Airport Way, Suite 100  
Long Beach, CA 90806  
Tel: (562) 426-9544  
Fax: (562) 427-0805

**FROM:** Sopon Amorn, P.E.  
Amorn Electrical Engineers, Inc.  
3752 Atlantic Ave, Suite 4  
Long Beach, CA 90807  
Tel: (562) 424-2838  
Fax: (562) 490-4996

**PROJECT NAME:** LAUSD Central L.A. New High School No.11  
Gas Mitigation System

**RFC DATE:** September 6, 2007

**RFC NUMBER:** N0902

**RFC SUBJECT:** Building P – Mounting Elevations of Back Boxes/ Panels

**COMMENTS:**

Gas Mitigation Equipment shall be mounted as follows:

1. Provide minimum 6 inches between Gas Mitigation Equipment and other system panels.
2. Provide minimum 3 inches between Gas Mitigation Equipment
3. Provide minimum 12 inches from edge of wall for Gas Mitigation Equipment.
4. Gas Mitigation Display Panel shall be mounted 36" above finished floor.
5. Gas Mitigation Strobe Light Control Panel shall be mounted 54" above finished floor.
6. Strobe Lighting shall be mounted 96" above finished floor.

See attached SK-001 with mark ins per the above comments.
*9/5/07*

*Need elevation for all Annunciator Back Boxes, strobe light, & panels*
**Hansel Phelps Construction Co.**

Central L.A. High School #11

Request For Clarification

Detailed, Each RFC

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<td>Authorised By</td>
<td>Dominic Arredondo, Hensel Phelps Construction Co. 1200 Colton Los Angeles, CA 90026</td>
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**Subject:**
Building P - Mounting Elevations of Back Boxes/panels

**Location:** 55.88.107

**Revision:** 9/13/07

**Date:** 9/13/07

Reference attached sketch SK-001. The attached sketch is an elevation of the west wall of room P271. Please provide mounting elevations for the back boxes/panels to be installed at the subject wall.

Please advise if the elevations will be typical for other locations where similar equipment will be installed.

**Consultant Comments:**

**Answer:**

**WKCOT RESPONSE:** See revised locations for back boxes on SK-001. Follow per engineer's direction. Verify locations w/ gas mitigation consultant.

**LAUSD DAR Signature**

**Date:** 9/13/07

**SCS RESPONDER:** See the additional clearance dimensions, shown clouded on WWCOT sketch SK-001.
* 9/5/07 *

Need elevation for all Annunciator Back Boxes, strobe light, & panels

* 9/17/07 *

Additional dimensional requirements as indicated by clouded dimensions.

Shashi Kothary, SCS Engineers

West Wall P271 Elevation

SK-001

RFC NO9102

9/12/07
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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<td>1200 Colton</td>
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<tr>
<td>Question</td>
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<td>Reference attached sketch SK-001. The attached sketch shows a typical elevation of a sample sensor panel to be installed at one location at Building &quot;Q&quot;, one location at Building &quot;P&quot;, and one location at the Central Plant. The sample sensor panels require piping for the sampled gas to be discharged to outdoors. The contract documents do not indicate piping to be installed for the subject panels. Per job site walk with LAUSD, SCS, and HPCC on September 12, 2007, please confirm the routing of the exhaust piping on attached sketches SK-002 through SK-004. Please provide a response noting material and size of piping.</td>
<td></td>
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<tr>
<td>Consultant Comments</td>
<td></td>
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</tbody>
</table>

Answer

Response Issued By: Shashi Kathay 9/18/07

Response Reviewed By: LAUSD OAR Signature

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

CONCUR. THE EXHAUST PIPE FROM THE GAS SAMPLING PANEL SHALL BE 1" DIAMETER AS SHOWN ON THE DRAWING. FROM THE SAMPLE PANEL TO CEILING, EXHAUST PIPE SHALL BE STAINLESS STEEL. HOWEVER, ALONG THE CEILING TO DISCHARGE POINT OUTSIDE THE BUILDING, THE PIPE CAN BE FLUSH THREADED PVC SCHEDULE 80 PROVIDED IT IS ADEQUATELY PROTECTED FROM VANDALISM AND/OR DAMAGE.
EXHAUST PIPING TO BE ROUTED DIRECTLY ABOVE PANEL THROUGH ROOF

PARTIAL ROOF OF BUILDING 'P'

BUILDING 'P' SECOND FLOOR PAM
SCALE: 1/8" = 1'-0"

RFC N0913
SK-002

REF: GP-2.04

NOTE:
1. UNDERSTANDING DUCTS FOR DUCT PIPING TO BE DETERMINED BY CONTRACTOR
2. FOR CABINET INSTALLATION HEIGHT OF 12" MAXIMUM NO EXCEED EQUIPMENT REQUIREMENTS FOR ANGLE PULL
3. FOR AIR BLOWER INSTALLATION HEIGHT
4. (A), (B), (C), (D) SILENT CIRCUIT WIRE INDICATE CIRCUIT NUMBERS ON THE NO
5. PROVIDE MARKER AT COVER OF "TO DUCT" BLOWER PANEL, W/DATE
6. IN LINE OF EXACT LOCATION OF PARADEE COMMUNICATION, DUCTS
SELF-CONTAINED EXHAUST PIPING FOR EXHAUST GAS MONITORING SENSOR PANELS E2.1 & E2.2
(SEE TYPICAL DETAIL ON SHEET GP-1.12)
(SEE ELECTRICAL DRAWINGS FOR POWER SUPPLY DETAIL)

EXHAUST PIPING TO BE ROUTED DIRECTLY ABOVE PANEL THROUGH ROOF

1. Monitor monitoring probe pipes are laid across grade beams or foundations. The pipes shall be installed through sleeve pipes as shown in details sheet GP-1.19.

2. Venting, air injection piping and extent of horizontal hope under are not shown for clarity. For passive venting, air injection piping and extent of horizontal hope under see sheet GP-1.03.

3. For location of ventil risers (VR) see sheet GP-1.17.

NOTES.

ARCHITECTURAL AND STRUCTURAL PLANS INFORMATION AND DimENSIONS IN THE DRAWINGS ARE ONLY FOR GENERAL REFERENCE. ALL SUCH INFORMATION MUST BE VERIFIED OR CONFIRMED WITH THE PRIMARY JOB SITE PLANS BOARD IN THE CD, AND MAY NOT BE USED DIRECTLY FOR BIDDING, CONSTRUCTION OR LAYOUT PURPOSES.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # E1469 Date Created: Date Required: 7/19/2007

Answered By:

Los Angeles Unified School District

Authored By:
Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Recipient:
Subcontractor RFT Number
Powers 396

Subject:
EF-A16 controls

Location Disciplne CSI Division
55009107 Electrical

Drawing/Spec Revision Date Detail/Section

Question
Reference sheets EA-1.07, GP-2.07, and N-0.03, on sheet N-0.03 schedule note 4 calls for the high speed control of EF-A16. The conduit schedules on GP-2.07 and EA-1.07 do not depict conduit needed from the sensor panel in room P128 to EPK2MCC1 to achieve this control. Please advise.

Consultant Comments

Answer

Response Issued By: Shashi Kolay 7/20/07

Response Reviewed By: LAUSD OAR Signature

Name (Printed) Date

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

CC: Company Name Contact Name Copies Notes

GAS MITIGATION PANEL AT ROOM P128 PROVIDES CONTACT FOR HVAC CONTROL SYSTEM. THE CONTACT WILL SEND SIGNAL BY CHANGING CONTACT STATUS FROM OPEN POSITION TO CLOSED POSITION AT/HIGHER WARN LEVEL SET POINT. CONDUITS AND WIRING FOR HVAC CONTROL FROM THE GAS MITIGATION PANEL TO WHERE HVAC CONTROL PANEL LOCATED ARE PROVIDED BY HVAC DISCIPLINE.
**Central L.A. High School #11**

**Request For Clarification**

**Project # 4005052**
1200 W. Colton St.
Los Angeles, CA 90026

**Jobsite Info.**
Tel: 213-241-5940
Fax: 213-241-0915

**Hensel Phelps Construction Co.**

---

**RFC # E0292**

**Date Created:** 6/8/2006

**Date Required:** 6/16/2006

**Answered By**

Los Angeles Unified School District

**Authored By**

Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

**Co-Respondent**

Subcontractor RFI Number

HPCC

---

**Subject**

Bedding space for Air injector pipes

**Location**
55098107

**Discipline**
Gas Mitigation

**CSI Division**

**Drawing/Spec**

**Revision**

**Date**

**Detail/Section**

---

**Question**

Please see attach sketch and provide the dimensions for air injector pipes in relation to the bottom of trench.

---

**Consultant Comments**

---

**Answer**

---

**Response Issued By:**

Architects Signature

Name (Printed)

Date

**Response Reviewed By:**

LAUSD OAR Signature

Name (Printed)

Date

---

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---

THE AIR INJECTION PIPING SHALL BE PLACED 2 INCHES ABOVE GRADED SUB-GRÁDE, (2" SAND BEDDING). SEE THE ATTACHED SKETCH FOR THE DIMENSIONS.
LEGEND

- PASSIVE VENT/GAS COLLECTION PIPE
- GAS COLLECTION HEADER
- AIR INJECTION PIPE
- AIR INJECTION MANIFOLD

VENT RISER BASEBALL FIELD (VRB)

GRASS OR VEGETATION

18" THICK CLEAN SAND DISPERSION LAYER,

9"

2 1/2" (PERFORATED UPPER HALF) PVC SCH. 80 PIPE FOR AIR INJECTION

18" THICK SOIL BUFFER ZONE

4" FACTORY SLOTTED CORRUGATED HOPE PIPE FOR GAS COLLECTION, (TYP.)

GRATED SUB-GRADE

SECTION-DISPERSION LAYER AND PASSIVE VENTING
N.T.S. 17/17

SK-001

METAL STRAPPING
**Central L.A. High School #11**

**Submittal Transmittal**

**Detailed by Each Transmittal**

---

**Project #** 4005052  
1200 W. Colton St.  
Los Angeles, CA 90026

**Jobsite Info.**  
Tel: 213-241-5940  
Fax: 213-241-0915

**Transmittal To:** Jose Avelar  
Los Angeles Unified School District  
Los Angeles, CA 90026  
Tel: 213-241-5940  
Fax: 213-241-0937

**Transmitted By:** Sean Bunwell  
Hensel Phelps Construction Co.  
1200 Colton  
Los Angeles, CA 90026  
Tel: 213-241-5940  
Fax: 213-241-0915

---

**Reference Number:** 0765  

**Date:** 08/25/2006

---

**Qty** | **Submittal Package No** | **Description** | **Due Date** | **Package Action**
---|---|---|---|---
1 | 0346 - 13400 - N.O.A | Subsurface Gas Mitigation Systems - Cabling | 09/10/2006 |  

**Transmitted For**  
Approval

**Delivered Via**  
Hand

**Items** | **Qty** | **Description** | **Notes** | **Item Action**
---|---|---|---|---
001 | 6 | Gas Mitigation - Cabling |  

---

**Cc:** Company Name  
Contact Name  
Copies  
Notes

**Remarks**

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**Received**  
AUG 25 2006  

**By**

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**Signature**  

---

**Signed Date**  
8/25/06

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**Performance!**  
Printed on: 8/25/2006  
P_HPCC_B3038_PM72_4005052  

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Page 1
Central L.A. High School #11
Request For Clarification

MAY 26 2006

Project #: 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Job Site Info.
Tel: 213-241-5940
Fax: 213-241-0115

Hensel Phelps Construction Co.

Subject:
Gas Mitigation Floor Cleanout Detail

Location:
55098107

Gas Mitigation

Drawing Clarification

Answer:

Follow Peter Ensminger's comment below.

Signature:

Chris T. Hagan

Date:
5/23/06

Response Issued By:

DPA

Response Reviewed By:

EIC.

Name (Printed):

Real Gerhardt

Date:
5/23/06

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ADDED NOTE TO SHEETS PA-1.01, PA-1.02, PA-1.03, PB-4.01, PB-4.02 AND PC-1.02 TO READ AS FOLLOWS: EXTEND ALL FLOOR CLEANOUTS, DRAINS, FLOOR MOUNTED FIXTURES, ETC., INSTALLED IN EXISTING CONCRETE SLABS AS REQUIRED FOR NEW RAISED FLOORS AT GRADE LEVEL. SEE GAS MITIGATION DRAWINGS FOR ADDITIONAL REQUIREMENTS.

RECEIVED
MAY 25 2006

BY:  ______
Central L.A. High School #11
Request For Clarification

Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # E8402 Date Created: 6/26/2006 Date Required: 7/5/2006

Answered By
Los Angeles Unified School District

Co-Respondent

Subcontractor RFC Number
Powerco #52

Authorised By
Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Subject
Explosion proof at DWP Vault

Location
55088107

Discipline
Electrical

CSI Division

Drawing/Spec

Revision

Date

Detail/Section

Question
Reference drawing EA-104 calls for explosion proof fittings, boxes, fixtures, etc. in room P209 (DWP Vault). The existing installations of conduit and boxes are indicated to be used do not comply with this requirement, the DWP equipment is not explosion proof and has exposed medium voltage switching. Please confirm that installations in this room are not required to be explosion proof.

Consultant Comments
Explosion proof components & installations in DWP Vault were requested by Mitigation Consultant. Therefore, this question shall be addressed to Mitigation Consultant.

Date Answered:
DAVID GUSHYAN / DEOA 06-27-06

Response Issued By:
Architects Signature

Name (Printed)

Date

Response Reviewed By:
LAUSD OAR Signature

Name (Printed)

Date

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Co: Company Name Contact Name Copies Notes

Please send to: Mitigation Consultant

Performance
Printed on
6/26/2006

P-HPCX_83038_JAM02_4005052

RECEIVED
JUN 29 2006

BY:
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

RFC # E0412
Date Created: 6/28/2006
Date Required: 7/7/2006

Answered By

Los Angeles Unified School District

Author By

Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent

Subcontractor RFI Number
Pan-Pac 4

Subject
Monitoring Probe Pipe Detail verification

Location SSD98107
Discipline Gas Mitigation

CSI Division

Drawing/Spec
Revision
Date
Detail/Section

Question
Reference drawing GP-1.19 detail 5, please advise if the L/4 dimension is divided in four equal spaces on a standard 20’ piece of pipe. If so where would a cut be made on a pipe between 0’ and 20’ to match the detail.

Consultant Comments

Answer

Date Answered:

Response Issued By:

Architects Signature

Name (Printed)

Date

Response Reviewed By:

LAUSD OAR Signature

Name (Printed)

Date

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Notes

“L” DIMENSION IS THE TOTAL PIPE RUN FROM THE POINT OF AIR INJECTION TO END CAP AND NOT 20 FOOT STANDARD OF PVC PIPE LENGTH. CONTRACTOR WILL HAVE TO COMPUTE LENGTHS FOR EACH TYPE OF PERFORATIONS.
**Central L.A. High School #11**

**Request For Clarification**

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<th>Date Required: 7/14/2006</th>
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**Respondent:**

Los Angeles Unified School District

**Author:**

Brian Turner,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

**Question:**

Existing Elevator Casings

Academy House Elevators AB-2, AB-3, and AA-4, all have existing shaft casings that extend above the floor level in the parking garage. These shafts will not be used by the elevator contractor, due to the hung platen enclosure, attached to the underneath side of the podium deck/building slab. The platen of the elevator(s) do not extend below the floor line and must be cut off below the floor line, filled with concrete, and slab patched back. Please provide details for this required construction.

**Answer:**

Response Issued By:
Architects Signature
Name (Printed)
Date

Response Reviewed By:
LAUSD OAR Signature
Name (Printed)
Date

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SEE ATTACHED SHEET A493 FOR PATCHING SLAB AT ELEVATOR CASINGS.
CORD W/ GAS MITIGATION CONSULTANTS FOR ANY ADDITIONAL ABANDONMENT PROCEDURES AS REQUIRED. LAUSD TO CORD W/ MITIGATION CONSULTANT.

WILLIAM J. CARLTON

Printed on: 7/9/2006
REMOVE (E) ELEVATOR CASING ABOVE SLAB

(E) SLAB

APPROX. 2'-0" (N) CORE INFILL

(N) GAS MITIGATION SLAB

(N) GAS MITIGATION MEMBRANE

(E) SLAB

DRILL (E) SLAB SET #4 REBAR DOWEL IN EPOXY, (4) DOWELS ONE AT EA. QUADRANT

CUT (E) CASING BELOW SLAB

DET.LAB.

Patch Abandoned Existing Elevator Casings Parking Level 1 Slab
Central L.A.H.S. No. 11 - Ext. Bldg
1200 W. Colton Street
Los Angeles, California 90012

WWCOT Project No: 03032.00
District: LAUSD
District No.: 65-98107
DBA A. No.: 03-108518

Sketch No. SKE-A043
Issue: -
Scale: 1/1/2" = 1'-0"
Reference: RFC ED432
Date: 03-15-06
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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Subject
Clarification on Non-Restricting Rain Guard

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<td>Gas Mitigation</td>
<td>Drawing Clarification</td>
</tr>
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Question
1) Reference detail 6/GP-1.20 calls out for a 'non-restricting rain guard' at the top of the vertical vent riser on building exterior. However there is no detail for the rain guard. Please provide a detail for the rain guard.

Consultant Comments

Answer

Response Issued By:
Architects Signature
Name (Printed)
Date

Response Reviewed By:
LAUSD OAR Signature
Name (Printed)
Date

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Contact Name
Copies
Notes

After a lengthy discussion with DTSC, a detail of non-restricting rain guard acceptable by DTSC was provided to Tom Dolan, OEHS, who was to submit this detail to WWCOT for their approval. See awaiting response from the WWCOT.
Vent and Shanty Caps

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Galvanized Steel

http://www.blowerwheel.com/vent-caps.htm

8/1/2006
Project # 4005052  
1200 W. Colton St.  
Los Angeles, CA 90026  

Jobsite Info.  
Tel: 213-241-5940  
Fax: 213-241-0915  

Central L.A. High School #11  
Request For Clarification  
Detailed, Each RFC  

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<th>Date Required:</th>
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Answered By  
Los Angeles Unified School District

Authored By  
Sean Burwell,  
Hensel Phelps Construction Co.  
1200 Colton  
Los Angeles, CA 90026

Co-Respondent  
Subcontractor RFI Number  
Powersco 174

Subject  
Utility Vault Ventilation

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Question  
Referencing the reply to RFC N0347, one of the options provided is to vent through the utility vault covers. The vaults provided for power and communications have (4) 1 ¼" holes in the covers. The vaults provided for the fire alarm have (2) 1 ¼" holes in the cover. Please confirm.

Consultant Comments  
SEE ATTACHED SCS TECHNICAL MEMORANDUM DATED 1/3/07.  

Answer  

Response Issued By:  
Michael J. Loomis  
Architect Signature  
SRS

Response Reviewed By:  
LAUSD OAR Signature

Name (Printed)  
Date  

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Performance!  
Printed on:  11/20/2006  
P_HPCC_B303B_PM72_4005052  
Page 1 of 1
SCS TECHNICAL MEMORANDUM

Date: January 3, 2007
To: Tom Dolan, LAUSD OEHS
CC: Jeff Dobrowolski and Dave Oliver, Geosyntec Consultants
From: Mike Leonard and Shashi Kothary, SCS

Subject: Revised Response to RFC #N0347 and Response to RFC #N0422 and E#0914 Regarding Venting of Utility Vaults, High School 11

This Construction Bulletin serves to clarify the intended system for subsurface gas mitigation at utility vaults or other buried enclosed structures.

Landscape Areas with Sand Dispersion Layer

- If structure extends below the bottom of the sand dispersion layer and is larger than 18-inches by 18-inches, it must be either wrapped with a 60 mil HDPE membrane (see detail provided in GP-1.19, Detail 2) or vented with a vent pipe connected to a vent riser.
- If the structure does not extend below the bottom of the sand dispersion layer no additional mitigation is required.

Hardscape (paved outdoor areas) Areas

- If the structure is smaller than 18” x 18” no further mitigation is needed.
- If the structure is larger than 18” x 18” it must either be wrapped with a 60 mil HDPE membrane or provided with a dedicated vent pipe connected to a vent riser.

Electrical Pull Boxes With Dry Sump

- Regardless of the location these structures must be provided with a vent pipe connected to a vent riser as per the plans and details provided to the contractor.
# Request For Clarification

Central L.A. High School #11

<table>
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<tr>
<td>Author By</td>
<td>Nick Duran, Hensel Phelps Construction Co.</td>
<td>1200 Colton Los Angeles, CA 90026</td>
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Los Angeles Unified School District  

Subcontractor RFI Number  

McIntyre 76

---

**Subject**  

Proposed Revision to McIntyre Gas Conduit Details

<table>
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<tr>
<th>Location</th>
<th>Discipline</th>
<th>CSI Division</th>
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<tbody>
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</table>

**Question**

1) See attached sketch, 8K-001, for revisions to McIntyre Company's revised gas conduit details. The McIntyre Company feels that the new details will not only assist in the installation of the metal deck but will also assist in the application of the caulking and will provide a more sound gas conduit. Please review attached sketch and clarify if revisions are acceptable.  

**Consultant Comments**

---

**Answer**

<table>
<thead>
<tr>
<th>Response Issued By</th>
<th>Architects Signature</th>
<th>Name (Printed)</th>
<th>Date</th>
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<th>LAUSD GAR Signature</th>
<th>Name (Printed)</th>
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These details are not accepted, thus have been rejected. New details are forthcoming upon review and approval from DTSC.

---

Performance

Printed on: 12/28/2006  
P_HPCC_83039_PM72_4005052  
SCS Engineers  
Page 1 of 1
DECK END PERPENDICULAR TO GAS CONDUIT
REF. B-8/69-P-103  SCALE: 1/4

REvised
**Central L.A. High School #11**

Request For Clarification

**Project #: 4005652**
1200 W. Colton St
Los Angeles, CA 90026

**Jobsite Info.**
Tel: 213-241-6940
Fax: 213-241-6915

---

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**Answered By:**
Los Angeles Unified School District

**Co-Respondent:**

**Subcontractor RFI Number:**

**Subject:**
Gas Mitigation Masonry Shroud Details

**Location**
55D06107

**Discipline**
Gas Mitigation

**CSI Division**
Drawing Clarification

---

**Question:**
Delta E revised gas mitigation drawings, dated 1/19/06, call out for new Masonry Shroud/Façade detail 7/GP-1.20. This detail calls out well compacted backfill at the column locations to receive 120 mil spray on membrane. These locations of columns and facades are existing. Without exterior demolition, it is not possible to achieve "well compacted backfill" within the wall cavity. Please provide clarification on this matter.

**Consultant Comments:**

---

**Answer:**

**Response Issued By:**

**Response Reviewed By:**

**Architects Signature**

**LAUSD CAR Signature**

**Name (Printed)**

**Name (Printed)**

**Date**

**Date**

---

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---

"WELL COMPACTED BACKFILL" AS STATED ON THE DRAWING IS MEANT THAT THE SURFACE, WHICH WILL RECEIVE SPRAY-ON MEMBRANES, SHOULD NOT HAVE ANY LOOSE MATERIAL AND FINISHED BE SMOOTH TO RECEIVE THE MEMBRANE. IN SOME INSTANCES, SMALL PORTION OF THE SHROUD/FAÇADE MAY NEED TO BE DEMOLISED TO SPRAY THE MEMBRANE."
**Central L.A. High School #11**

Request For Clarification

Details, Each RFC

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<td>1200 Colton</td>
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**Subject**

Gas Mitigation Sealant Specifications

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<td>Gas Mitigation</td>
<td>Drawing Clarification</td>
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**Drawing/Spec**

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**Question**

Delta E revised gas mitigation drawings, dated 1/19/06, call our for "Air Tight Epoxy Seal (Entire Length of Sidelap)", detail Raised filler side lap metal decking, sheet GP-1.05. Revised specification section 13400, section 2.16 Sealant, calls out for Elastuff 120 Matlic to be used at this location as alternative. Please confirm.

**Answer**

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<td></td>
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<td>LAUSD OAR Signature</td>
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This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

USE AIR TIGHT EPOXY SEAL. ELASTUFF OR EQUAL, AS PER SPECIFICATIONS, IS FOR USE ON HDPE MEMBRANE.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # E0187 Date Created: 5/2/2006 Date Required: 5/11/2006

Answered By

Authors By

Los Angeles Unified School District

Brian Turner,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent

Subcontractor RFI Number

Subject

Gas Mitigation Triple Gym Electrical Room 110

Location Discipline CSI Division
55D98107 Gas Mitigation Drawing Clarification

Drawing/Spec Revision Date

Detail/Section

Question

Delta E revised gas mitigation drawings, dated 1/19/06, revise the subslab gas ventilation system to include Electrical Room 110 at the triple gym. Drawings currently do not indicate if subslab membrane is required at this location. Please provide revised details for gas membrane, piping, and sensor locations for Electrical Room 110.

Consultant Comments

Answer

Date Answered:

Response Issued By:

Architects Signature Name (Printed) Date

Response Reviewed By:

LAUSD OAR Signature Name (Printed) Date

This Form Cannot Modify Contract Amount or Milestones and for Contract Time

Co: Company Name Contact Name Copies Notes

MITIGATION FOR ELECTRICAL ROOM 110 SHALL BE PER DETAILS INDICATED ON DRAWING GP-1.11.
Central L.A. High School #11
Request For Clarification

Project #: 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC #: E0210
Date Created: 5/10/2006
Date Required: 5/19/2006

Answered By

Author By

Los Angeles Unified School District

Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent

Subcontractor RFI Number

Pan-Pac #002

Subject

Gas Mitigation Field piping dimensions

Location

Discipline

CSI Division

55D86107

Gas Mitigation


Question

Reference drawings GP-1.17, starting at the block wall on the south side of the field. Dimensions are given as 28' north to the first vent pipe and 40' typical between the vent pipes. The air injection pipe is shown as 20' from the vent pipe (midway between the vent piping). Using these dimensions, the vent piping at the north side of the field will be approximately 11' short of what is shown on the GP-1.17 drawings. Please confirm.

Consultant Comments

Answer

Date Answered:

Response Issued By:

Architects Signature

Name (Printed)

Date

Response Reviewed By:

LAUSD CAR Signature

Name (Printed)

Date

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

Cc: Company Name
Contact Name
Copies
Notes

FOLLOW THE DIMENSIONS SHOWN ON THE DRAWING.
Central L.A. High School #11
Request For Clarification

Project # 4005552
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-5915
Hensel Phelps Construction Co.

RFC # E1554 Date Created: 9/5/2007 Date Required: 9/15/2007

Answered By: Los Angeles Unified School District

Author By: Dominic Arredondo,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent: Subcontractor RFI Number

Subject
Gas Mitigation Sensor Panel Enclosure Mounting Detail

Location Discipline CSI Division
56D08107 Gas Mitigation

Drawing/Spec Revision Date Detail/Section

Question
Reference sheet GP-2.14. The referenced sheet notes the sensor panel enclosures for the gas mitigation system to be mounted to finish floor. Please confirm the sensor panel enclosures do not require a house keeping pad.

Consultant Comments
Sensor panel enclosures shall be installed per the Contract Drawing GP-2.14, except in Room 129 where the enclosure will be installed on a 6" high housekeeping concrete pad.

Answer:

Response Issued By: SCS

Signature

Name (Printed)

Date

Response Reviewed By: LAUSD OAR Signature

Name (Printed)

Date

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

Cc: Company Name Contact Name Copies Notes

Performance!
Printed on: 9/5/2007 P_HPCC_B2038_PM72_4005552 Page 1 of 1
Central L.A. High School #11
Request For Clarification:
Detailed, Each RFC

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<td>Dominic Arredondo, Hensel Phelps Construction Co.</td>
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<tr>
<td>Question</td>
<td>Exhaust Piping for Gas Mitigation Sensor Panels</td>
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Reference RFC E1594. The response to the referenced RFC notes the exhaust for the gas sampling panel to be stainless steel from the panel to ceiling. Please specify size, and schedule or gauge of stainless steel piping to be installed.

Consultant Comments:

**Answer:**

```
TUBING FROM PANEL TO CEILING SHALL BE 1-INCH DIAMETER 304 STAINLESS STEEL SEAMLESS STANDARD INSTRUMENTATION TUBING WITH NOMINAL WALL THICKNESS OF 0.083 INCH.
```

Response Issued By:

**Architect's Signature**

**Name (Printed)**

**Date**

Response Reviewed By:

**LAUSD OAR Signature**

**Name (Printed)**

**Date**

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

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Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

RFC # N0052.1
Date Created: 3/30/2006
Date Required: 4/8/2006

Answered By
Los Angeles Unified School District

Authored By
Brad Jeanneret,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent
Subcontractor RFI Number
Barber Webb

Subject
T-Lock Installation at Perimeter Grade Beams

Location
Discipline
CSI Division
55.96107
Architectural
Drawing Clarification

Drawing/Spec
Revision
Date

Question
1) Per conversations with Brad Jeanneret and the Design Team please confirm that the use of the T-Lock system is acceptable at all perimeter footings, per the attached sketch GM-SK-1, in lieu of detail A/ GP1.19. It was agreed that the installation of the T-Lock would be done prior to concrete placement to assure uniformity (as opposed to a wet set method).

Consultant Comments

Answer

SCS Engineers has no objections to the Contractor’s proposed membrane attachment to perimeter footing using T Lock system, per the attached sketch GM SK-1. Since the final approval will be coming from DTSC, SCS recommends that LAUSD-OEHS forward this RFC # N0052.1 to DTSC for review and approval.

Response Issued By:
Architects Signature

Response Reviewed By:
Architects Signature

Name (Printed)
Date

SHASHI KOTHARI
4/03/06
2" SAND LAYER (BY OTHERS)
60 MIL. HDPE GEOMEMBRANE EXTRUSION WELDED TO "T-LOCK" EMBED STRIP.
4" SAND LAYER (BY OTHERS)
THICKENED SLAB EDGE TO ENCAPSULATE LINER @ T-LOCK TERMINATION
6" ADDITIONAL CONCRETE THICKNESS TO ACCOMMODATE T-LOCK EMBED STRIP

EXTERIOR WALL FOOTING

GM-SK-1
REQUEST FOR CLARIFICATION (RFC)

School Name: Central LA High School #11  
Project Name: Central LA High School #11  
Project Description: Rehabilitation of Existing Buildings and Construction of New High School Buildings

RFC Number: N0052  
Date: 1/17/2006

Project No.: 55.98107  
Contract No.: 0610004

Issued To: WWCOT

(Architect)

A/Gp1.19  
Drawing Number Detail: 13400

Specification Section: GP1.19

Page

Request:
1. Per conversation during presubmittal meeting for the Gas Mitigation Membrane System on 1/6/06, Barber-Webb, the installer of the gas mitigation membrane, proposed an alternative detail for Section A on sheet GP1.19. This proposed alternative detail allows for the installation of a T-Lock HDPE anchoring system into the concrete (cast in place) to allow for attachment point (welded) for the HDPE liner. This detail pertains to exterior footing only, all other details will be followed per the approved drawings. Attached is the product data for the T-lock, along with the proposed revised detail. Please confirm this is acceptable.

Request Issued by:  
Contractor's Signature:  
Name (Printed): Brian Turner  
Date: 1/17/2006

Response:

Response Issued by:  
Architect's Signature:  
Name (Printed):  
Date:

Response Reviewed by:  
Owner Authorized Representative:  
Name (Printed):  
Date:

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time.
EnviroCon T-Lock is a High Density Polyethylene (HDPE) extended anchor system designed to provide an embedded attachment for HDPE liner. EnviroCon T-Lock is designed to embed in any face of new cast-in-place or precast concrete construction and can be fabricated to maneuver around shapes and corners.

Any thickness of HDPE liner can be welded to EnviroCon T-lock. If unexpectedly high tensile loads are experienced by the liner, the liner is designed to yield before the T-Lock will yield or pull out of the concrete. The T-Lock Profile is detailed in Figure 1.

![Figure 1 - EnviroCon T-Lock](image)

Attachment of the HDPE Liner to T-Lock is performed by gripping the T-Lock and the HDPE Liner and then extrusion welding the HDPE Liner to the T-Lock.

Proper installation techniques must be observed to insure a secure embedment of the T-Lock and a sound weld to the HDPE Liner.

Page 1
T-LOCK INSTALLATION

T-LOCK must be cut and bent-molded together to fit corners and shapes. This cutting and bending, if performed correctly, will provide continuous support for the HUPE Liner and secure a seal. Corners and "T" connections can be supplied prefabricated.

ATTACHMENT OF T-LOCK TO FORMS

EnviroCon T-LOCK is attached to the inside of a concrete form with finishing nails prior to concrete placement (Figure 2). The finishing nails should be 1" or smaller. The nails must be driven flush with the back of the T-LOCK to allow for their easy removal when the forms are wrecked. The T-LOCK should be attached at sufficient points to ensure a flush fitting with the form.

![Figure 2](image)

EMBEDMENT OF THE T-LOCK

The concrete surrounding the T-LOCK should be vibrated to ensure that there are no void spaces in the concrete adjacent to the T-LOCK.

After the concrete has set and the forms are wrecked, the finishing nails can be removed. If concrete gaps between the T-LOCK and the form it should be chipped away to reveal the face of the T-LOCK. Any sharp edges that are exposed by the shipping block of the concrete must be beveled to prevent possible rusting or pitting of the liner.
HEAT FUSION WELDING OF T-LOCK

The recommended method of butt-welding T-lock is a heat fusion welding method which yields a continuous strip of material. The following is a list of tools and procedures required to perform the heat fusion welding method:

Welding Tools

110 V Leister Therma with Welding Mirror attachment.

—or-

Any Double sided Butt-Welding hot plate.

Welding Procedures

1. Cut the ends of the T-Lock to be welded, these cuts should be square and smooth with no nicks or gouges in the surface.

2. Clean ends with a clean cotton cloth to remove dirt, water, grease and other foreign materials.

3. Insert clean and pre-heated welding mirror plate between ends and bring the ends firmly in contact with the mirror plate while achieving an even melt pattern over the cut face of the T-Lock. Allow ends to heat and soften until a melt bead of approximately 1/8” appears.

4. Remove the mirror plate from between the two pieces of T-Lock and bring the melted ends together, apply enough pressure to produce a 1/8” roll-back bead.

5. Allow the joint to cool.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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<td>Authorised By</td>
<td>Brian Turner, Hensel Phelps Construction Co.</td>
<td>1200 Colton Los Angeles, CA 90026</td>
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<tr>
<td>Co-Respondent</td>
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<td>Subcontractor RFI Number</td>
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**Subject:**
Interior Footing Placement Procedure

**Location:**
55.9107

**Drawing/Spec:**

**Question:**
The following procedures are being used to construct the interior footings of the new building construction:

1. Hensel Phelps is overexcavating the foundation footings a minimum of 1" on each side as per the requirements of contract drawing and building code for neat pour concrete placement. The bottom of footing elevation is being excavated 7" deeper than contract drawings to accommodate for protection slab placement. Upon completion of footing excavation, bottom of footing inspection requests are inspected approved by onsite Soils Technician.
2. After footing inspections, the interior footing edges and bottoms are re-evaluated by Hensel Phelps, along with Barber-Webb, and after concurrence, the following options are available and followed:
   A. If the interior footing faces contain rough edges, they are reversed formed and a lift of 2-sack (Structural) slurry mix is placed to allow for geotextile fabric and gas membrane placement.
   B. If the interior footing faces are agreed to be acceptable, necessary preparation is completed and the installation of the geotextile fabric and membrane operation commences.
3. Prior to installation of gas membrane for interior footings, a 1" lift of select material containing no sharp edges, is placed at the bottom of footing. Upon completion of step #2 above, the gas membrane is tested (BW) and concurrently inspected by SCS for installation conformance. After inspections are completed, a second lift of 2" sand is placed at the bottom of the footing over the geotextile/membrane/geotextile installation. Once this is complete, a 4" lift of structural concrete (foundation footing mix) is placed as a "protection slab". The top elevation of the "protection slab" will be the bottom of footing elevation per plan.

See attached sketch SK-001 for further clarification.

**Answer:**
SEE ATTACHED SHEET.

Response Issued By:

Architect's Signature

Name (Printed)

Date

Printed on: 5/1/2005 P_HCC_B3039_F4W72_4000052
RESPONSE TO RFC # N0163:

BRANDOW & JOHNSTON ASSOCIATES TAKES NO EXCEPTION PROVIDED THAT THE GEOTECHNICAL ENGINEER CONFIRMS THAT THE ALLOWABLE BEARING PRESSURE GIVEN IN THE SOIL REPORT DOES NOT CHANGE.

Kim Caswell 6/1/2006

RESPONSE TO RFC # N0163:

THE SUGGESTED PROCEDURE FOR CONSTRUCTION OF “PROTECTION SLAB” DESCRIBED IN THE RFC # N0163 AND DETAILED IN THE ATTACHED SKETCH WILL NOT IMPACT THE METHANE MITIGATION SYSTEM. HOWEVER, DURING THE CONSTRUCTION OF 4” THICK “PROTECTION SLAB”, HOPPERS AND ELEPHANT TRUNKS SHALL BE USED TO PREVENT THE FREE FALL OF CONCRETE FOR MORE THAN 4 FEET.

Sashi Kotnary
SCS ENGINEERS
INTERIOR FOOTING DETAIL

**Typ.**

- **HDPE Membrane Liner**
  - Per Plan.
- **2" Sand Bed**
- **4" Concrete Bottom** (For Protection)
- **Bottom of Footing Per Plan.**
  - Fill Voids with Slurry
  - Neat Dug Footing
  - 1" Select Bedding in Bottom of Excavation

**17" Total**
RESPONSE TO RFC # N0163:

PRANDOW & JOHNSTON ASSOCIATES TAKES NO EXCEPTION PROVIDED THAT THE GEOTECHNICAL ENGINEER CONFIRMS THAT THE ALLOWABLE BEARING PRESSURE GIVEN IN THE SOIL REPORT DOES NOT CHANGE.

Kim Carrillo 4/30/06

RESPONSE TO RFC # N0163:

THE SUGGESTED PROCEDURE FOR CONSTRUCTION OF "PROTECTION SLAB" DESCRIBED IN THE RFC # N0163 AND DETAILED IN THE ATTACHED SKETCH WILL NOT IMPACT THE METHANE MITIGATION SYSTEM. HOWEVER, DURING THE CONSTRUCTION OF 4" THICK "PROTECTION SLAB", HOPPERS AND ELEPHANT TRUNKS SHALL BE USED TO PREVENT THE FREE FALL OF CONCRETE FOR MORE THAN 4 FEET.

Shashi Komaty
SCS Engineers
INTERIOR FOOTING DETAIL

HDPE MEMBRANE LINER W/GEOTEXTILE
Per Plan.

4" Concrete
Bottom (For Protection)

2" Sand Bed

Fill Voids with Slurry

Neat Dug Footing

17" Total

1" Select bedding in bottom of excavation.

S & S Engineers
Shop Drawing Review

Date Received  __________ Job No. __________

☐ Approved  ☐ Approved as Noted
☐ Revise & Resubmit  ☐ Disapproved

CHECKS IS ONLY FOR CONFORMANCE WITH THE
DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE
WITH THE INFORMATION GIVEN IN THE CONTRACT
DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR THE
DIMENSIONS TO BE CONFIRMED AND CORRELATED AT
THE JOB SITE FOR INFORMATION THAT PERTAIN
FOLLOWING TO THIS APPLICATION, PROCESS OR TECHNIQUE
OF CONSTRUCTION AND FOR COORDINATION OF THE
WORK OF ALL TRADES.

Reviewed by  __________ Date  __________
### Project Details
- **Project #**: 4005052
- **Construction Co.**: Hensel Phelps Construction Co.
- **Location**: 1200 W. Colton St., Los Angeles, CA 90026
- **Contact Info**:
  - Tel: 213-241-5940
  - Fax: 213-241-0915

### Request for Clarification
- **RFC #**: N0129
- **Date Created**: 5/5/2006
- **Date Required**: 5/14/2006
- **Answered By**: Los Angeles Unified School District

### Authoring
- **Author**: Brian Turner,
  Hensel Phelps Construction Co.
  1200 Colton
  Los Angeles, CA 90026

### Subcontractor/RFI Number

### Subject
Gas Mitigation Trench Dam Clarification

### Location
- **Location**: 55.98107
- **Discipline**: Gas Mitigation
- **CSI Division**: Plan/Spec Discrepancies

### Question
Delta E revised gas mitigation drawings, dated 1/19/06, describes trench dam materials. Per revised gas mitigation drawing discussion on 4/25/06, it was agreed upon that a 2-sack slurry mix (no bentonite) was acceptable for the trench dams to be located throughout the site, typical. Please confirm.

### Consultant Comments

### Answer
- **Response Issued By**:
  - **Architects Signature**:
  - **Name (Printed)**: Name
  - **Date**

- **Response Reviewed By**: LAUSD CAR Signature
  - **Name (Printed)**: Name
  - **Date**

---

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

---

2-sack slurry mix (no bentonite) will be acceptable for the trench dams located throughout the site.

![Signature]

SCS Engineers
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # N0179
Date Created: 6/15/2006
Date Required: 6/24/2006

Answered By

Los Angeles Unified School District

Authored By

Brian Turner,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent

Subcontractor RFI Number

Gas Mitigation System Additional Remote Cabling Requirements

Location
55.98107

Discipline
Gas Mitigation

CSI/Division
Drawing Discrepancies

Drawing/Spec
Revision

Date

Detail/Section

Question
After review of the revised Delta B Gas Mitigation Drawings and discussions with SCS, WWCOT and LAUSD, which took place at drawing review discussion on April 25, 2006, it was determined that additional remote wiring was required. The additional requirements are:

1. Fiber optic line run from the PLC cabinet (Building Q) to the Admin Office Touch Screen Panel (Building P).
2. Additional remote I/O cable running from the PLC cabinet (Building Q) to the parking garage panel.

The intent for these additional cables was to house in new site electrical ductbank conduits. See attached sketch of the control wiring riser diagram for clarification of additional remote wiring depicted in the clouded areas. The gas mitigation control drawings so this additional requirement, however, the revised gas mitigation drawings do not reflect this change.

Please confirm the additional remote cable(s) are required and provide revised electrical & gas mitigation drawings to reflect this change.

Please confirm the wiring required will be installed in the electrical ductbank conduits and will not require additional conduits.

Consultant Comments

Answer

Response Issued By:

Architects Signature

Name (Printed) Date

Response Reviewed By:

LAUSD OAR Signature

Name (Printed) Date

This Form Cannot Modify Contract Amount or Milestones and/or Contract Time

Co: Company Name Contact Name Copies Notes

Performance! Printed on: 6/15/2006 P_HPCC_B3038_PM72_4005052
Clarification of Termination of Gas Mitigation Membrane AT GL Q2 of Building P

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<tr>
<td>55.98107</td>
<td>Gas Mitigation</td>
<td>Drawing Clarification</td>
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**Question**

1) Reference drawing S2.Q2, SK-1, shows the extent of the exterior footings. Along GL Q2 between GL’s QE and QF the exterior footing turns north roughly halfway between the two GL’s. Reference drawing GP-1.05, SK-2, shows the extent of the gas mitigation membrane. According to the drawing the gas mitigation membrane runs along GL Q2 between GL’s QE and QF without ever turning north as the exterior footing does. There is an issue with the termination of the membrane where there is only an edge of slab condition, see SK-1, and not an exterior footing. Please clarify how the membrane is going to be terminated on gridline Q2, between QF and QE where there is no exterior footing.

**Answer**

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Response Issued By:

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Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90025

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # N0367 Date Created: 10/18/2006 Date Required: 10/27/2006

Answered By

Los Angeles Unified School District

Co-Responder

Authored By

Charlie Robben,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Subcontractor RFI Number

Subject

Building Q Gates Q138B & Q138C

Location

55.09107

Discipline

Structural

CSI Division

Drawing/Spec

Revision

Date

Detail/Section

Question

Ron Schadet 10/19/06

Door types Q138B and Q138C are steel gates and are not listed in the gate schedule. Referencing the door schedule on A6.1.1, gates are listed with no clear direction for attachment to structure. The slab below is roughly 4" with sub-slab gas mitigation system with no footings or imbeds to be installed for attachment of gates. Please provide direction for attachment details.

Consultant Comments

If the attachment details requires attachment to slab, there cannot be penetration through members.

Answer 10/19/06

Response Issued By: [Signature] Name (Printed) Date 10/19/06

Response Reviewed By: LAUSD OAR Signature Name (Printed) Date

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Central L.A. High School #11  
Request For Clarification

Hensel Phelps Construction Co.

---

Project #: 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-341-5940  
Fax: 213-341-0915

---

RFC #: N0422  
Date Created: 11/10/2006  
Date Required: 11/19/2006

Answered By:  
Los Angeles Unified School District

Authorised By:  
Sean Burwell  
Hensel Phelps Construction Co.
1200 Colton  
Los Angeles, CA 90026

Co-Respondent:  
Subcontractor RFI Number
Powerco 174

---

Subject:  
Utility Vault Ventilation

Location:  
5SD9107  
Drawing/Spec:  
Revision

---

Question:  
Referencing the reply to RFC N0347, one of the options provided is to vent through the utility vault covers. The vaults provided for power and communications have (4) 1 1/4" holes in the covers. The vaults provided for fire alarm have (2) 1 1/4" holes in the cover. Please confirm.

---

Consultant Comments:  
SEE ATTACHED SCS TECHNICAL MEMORANDUM DATED 3/3/07  
1/4/07

Answer:  
Response Issued By:  
Michael L. Leonard  
SCS ENG.

Response Reviewed By:  
LAUSD OAR Signature  
Name (Printed)  
Date

---

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Cc: Company Name  
Contact Name  
Copies  
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SCS TECHNICAL MEMORANDUM

Date: January 3, 2007

To: Tom Dolan, LAUSD OEHS

CC: Jeff Dobrowolski and Dave Oliver, Geosyntec Consultants

From: Mike Leonard and Shashi Kothary, SCS

Subject: Revised Response to RFC #N0347 and Response to RFC #N0422 and E#0914 Regarding Venting of Utility Vaults, High School 11

This Construction Bulletin serves to clarify the intended system for subsurface gas mitigation at utility vaults or other buried enclosed structures.

**Landscape Areas with Sand Dispersion Layer**

- If structure extends below the bottom of the sand dispersion layer and is larger than 18-inches by 18-inches, it must be either wrapped with a 60 mil HDPE membrane (see detail provided in GP-1.19, Detail 2) or vented with a vent pipe connected to a vent riser.
- If the structure does not extend below the bottom of the sand dispersion layer no additional mitigation is required.

**Hardscape (paved outdoor areas) Areas**

- If the structure is smaller than 18” x 18” no further mitigation is needed.
- If the structure is larger than 18” x 18” it must either be wrapped with a 60 mil HDPE membrane or provided with a dedicated vent pipe connected to a vent riser.

**Electrical Pull Boxes With Dry Sump**

- Regardless of the location these structures must be provided with a vent pipe connected to a vent riser as per the plans and details provided to the contractor.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Los Angeles Unified School District

Brian Turner,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Utility vault lining at sand dispersion layer

Reference gas mitigation drawings sheet GP-1.18, detail 2.
SCS TECHNICAL MEMORANDUM

Date: January 3, 2007

To: Tom Dolan, LAUSD OEHS

CC: Jeff Dobrowolski and Dave Oliver, Geosyntec Consultants

From: Mike Leonard and Shashi Kothary, SCS

Subject: Revised Response to RFC #N0347 and Response to RFC #N0422 and E#0914 Regarding Venting of Utility Vaults, High School 11

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**Electrical Pull Boxes With Dry Sump**

- Regardless of the location these structures must be provided with a vent pipe connected to a vent riser as per the plans and details provided to the contractor.
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Site Info.
Tel: 213-241-5840
Fax: 213-241-0915

Hensel Phelps Construction Co.

RFC # N0885 Date Created: 9/5/2007 Date Required: 9/14/2007

Answered By
Los Angeles Unified School District

Authored By
Dominic Arredondo,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent

Subcontractor RFI Number
HPCC JB

Subject
Gas Mitigation Vent System at Hardscape Area

Location Discipline CSI Division
55.98107

Drawing/Spec Revision Date Detail/Section

Question
Reference details 3, 4/1 GP1.20. The referenced details note a gas mitigation vent system to be installed under hardscape areas. These details also note a layer of "sand" to be placed directly under the paving. These areas are not noted on site plan GP1.02 as requiring a dispersion layer. Nor is the term "dispersion" used, as it is in other details requiring the layer. It is assumed this "sand" layer is actually the crushed base for the civil road sections. Otherwise, if it is sand, it will not be possible to construct the asphalt/ base section to 95% compaction. Please advise if our assumption is correct. If it is not, please provide revised compaction requirements for the asphalt road sections that take into account the sand layer.

Consultant Comments
Concur. OK to use crushed aggregate base in lieu of sand for hardscape areas.

Answer

Response Issued By: SCS Engineering
Response Reviewed By: LAUSD DAR

Signature

Name (Printed)

Date

9/7/07

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Central L.A. High School #11
Request For Clarification

Project # 4005052
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-0915

RfC # N0898
Date Created: 9/5/2007

Answered By

Author By
Sean Burwell,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Co-Respondent
Subcontractor RFI Number

Subject
Site Lighting/Mitigation Pole Discrepancies

Location Discipline CSI Division
55,98107

Drawing/Spec Revision Date

Question
Reference drawings GP 1.17 and E2.0:

1. Between VR-1 and VRQ-2 there is no vent riser for fixture type Y-2 as depicted on E2.0L. Please advise: PROVIDE POLE W/ FTG. PER E2.0L.
2. VR-19 does not depict any fixtures as shown on E2.0L. Please advise: PROVIDE LIGHTS TO MITIGATION POLE.
3. VR-11 depicts single head on pole, E2.0L depicts double head. Please advise: FOLLOW PER E2.0L.

Location of VR-29 approximately 40' away from the location depicted for the Y2 pole on E2.0L. Please confirm location. LOCATE PER E2.0L. ROUTE GAS MITIGATION PIPING AS SHOWN ON ATTACHED Sketch.

Consultant Comments

Answer
Date Answered:

Response Issued By: Vern Org
Architects Signature Name (Printed) Date 10/8/07

Response Reviewed By: Vern Org
LAUSD OAR Signature Name (Printed) Date

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SCS CONCURS WITH ITEM 4 ABOVE.

(SCS ENGINEERS)

Page 1 of 1
ROUTE GAS MUT. PIPING TO LIGHT POV PER E2.0L
Central L.A. High School #11
Request For Clarification

Hensel Phelps Construction Co.

Project #: 400562
1200 W. Colton St.
Los Angeles, CA 90026

Jobsite Info.
Tel: 213-241-5940
Fax: 213-241-5915

Hensel Phelps Construction Co.

RFC # N9901
Date Created: 9/5/2007
Date Required: 9/15/2007

Answered By: Los Angeles Unified School District

Answered By:

Subcontractor RFI Number:

Co-Respondent:

Author By:
Dominic Arredondo,
Hensel Phelps Construction Co.
1200 Colton
Los Angeles, CA 90026

Subject:
Gas Mitigation Sensor Panel Enclosure Mounting Detail

Location
55.98107

Discipline
Gas Mitigation

Drawing/Spec

Revision

Date

Detail/Section

Question:
Reference sheet GP-2.11. The referenced sheet notes the sensor panel enclosures for the gas mitigation system to be mounted to finish floor. Please confirm the sensor panel enclosures do not require a house keeping pad.

Consultant Comment:
Sensor panel enclosures shall be installed per the Contract Drawing GP-2.11

Answer:

Response Issued By:

Response Reviewed By:

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Printed on: 9/6/2007
Page 1 of 1
Central L.A. High School #11
Request For Clarification
Detailed, Each RFC

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<td>Los Angeles Unified School District</td>
<td>Author By</td>
<td>Dominic Arradondo, Hensel Phelps Construction Co. 1200 Colton, Los Angeles, CA 90026</td>
</tr>
<tr>
<td>Co-Respondent</td>
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<td>Subcontractor RFI Number</td>
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**Subject**
Exhaust Piping for Gas Mitigation Sensor Panels

<table>
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<th>Discipline</th>
<th>CSI Division</th>
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<tr>
<td>55.98107</td>
<td>Gas Mitigation</td>
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**Question**
Reference RFC N0913. The response to the referenced RFC notes the exhaust for the gas sampling panel to be stainless steel from the panel to ceiling. Please specify size, and schedule or gauge of stainless steel piping to be installed.

**Answer**
TUBING FROM PANEL TO CEILING SHALL BE 1-INCH DIAMETER 304 STAINLESS STEEL SEAMLESS STANDARD INSTRUMENTATION TUBING WITH NOMINAL WALL THICKNESS OF 0.083INCH.

**Response**

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<th>Response Issued By</th>
<th>SCS ENGINEERING</th>
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Co: Company Name Contact Name Copies Notes

Printed on: 10/9/2007 P_HPCC_B3039_PM72_4005052 Page 1 of 1
APPENDIX C

Variances
Good Evening, Tom--

DTSC has reviewed the sand dispersion layer submittal information and concurs with the SCS approval of this.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax

>>> "Dolan, Tom" <tom.dolan@lausd.net> 3/23/2006 6:42 PM >>>
Stephanie/Mike, the contractor for CLAHS#11 (i.e., Vista Hermosa) has submitted the attached Submittal for the sand that will be used to construct the sand dispersion layer at the site. SCS Engineers (the methane engineer) has reviewed and approved the Submittal; SCS has stamped and annotated the two proposed sand sources. Please note that the sand will still be subject to the geotechnical and environmental testing required by LAUSD construction specifications.

LAUSD requests DTSC concurrence with the SCS approval at the earliest opportunity. Please contact me directly if you have any questions or comments regarding the Submittal. Your concurrence can take the form of a an email reply to this email.

Thanks for your help.

Regards,
Tom Dolan
LAUSD-OEHS
Project Manager/Consultant
323-447-7719
Based on the review of the signed cover sheet and air permeability calculations, I concur with this approval.

In reviewing the calculations to estimate air permeability, I note that SCS used a method which relies on an estimate of the porosity. To verify their result, I used methods described in Groundwater by Freeze and Cherry and Groundwater and Wells by Driscoll. These method rely on analysis of the gradation curve to determine a d50 of the sand and a measure of the grain size uniformity. My estimate of the K (.05 cm/sec) for the Vulcan sand compared well with SCS estimates. However, for the Spec Sand, the my estimate of the K value was an order of magnitude higher (range from 0.1 to 0.4 cm/sec). Since the K values estimated for the Vulcan sand are in reasonable agreement and the air sweep calculations showed use of the Vulcan sand will provide adequate system performance, I am approving this submittal.
I do note that the material delivered to the site is more fine grained than indicated in the original submittal. I estimate the K of the delivered material to be on the order of 0.01 cm/sec, similar to the "spec sand" used in the attached baseball field air sweep system blower size calculations. Based on the calculations, the reduced K will require a small increase in the system pressure to achieve one air exchange per hour. Overall the system should function adequately. 

Mike Sorensen, P.E.
Dept of Toxic Substances Control
8800 Cal Center Drive, Sacramento, CA 95826
Phone: 916-255-6660
Fax: 916-255-6659
email: msorensen@dtsc.ca.gov

>>> "Dolan, Tom" <tom.dolan@lausd.net> 5/31/2006 12:18 PM >>>
Stephanie/Mike, please review the email below and the attached laboratory results. OEHS is requesting your concurrence with deviations from the approved sand submittal specification for the current and future deliveries of sand that will be used to construct the sand dispersion layer.

Your expedited review will be greatly appreciated. Please call me if you have any questions.

Thanks,
Tom Dolan
LAUSD-OEHS
Project Manager/Consultant
323-447-7719

From: Leonard, Mike [mailto:MikeLeonard@scsengineers.com]
Sent: Wed 5/31/2006 12:05 PM
To: Dolan, Tom
Cc: James_Richey@URSCorp.com; Glen_Davis@URSCorp.com
Subject: Sand for Dispersion Layer--LAUSD HS 11

Tom,

We have reviewed the sieve analyses results dated May 30, 2006 provided by Mactec for the sand being delivered to the site from the Vulcan plant. The results indicate an average fines content (i.e., percent passing the no. 200 sieve) of 4.5% which is below the specified limit of 5%. We have observed the material and it appears to be non-plastic.
However, the gradation is exceeding the specification in several of the larger sieve sizes as shown on the Mactec results. It is our opinion that these exceedances have no significant impact on the functionality of the sand dispersion layer. The basis for this opinion is as follows:

1. The porosity of the sand based on the gradations in the Mactec report will not be significantly different from the porosity used in the dispersion layer calculations already completed for the Vulcan sand source. The method used to estimate the porosity that is used in the sand dispersion model is based on a uniform sand compacted to 85% relative density and was conservatively selected at the low end of the published values in the referenced text ("Soil Mechanics" by Lambe and Whitman, Table 3.2, p. 31).

2. The historical data for the Vulcan sand has shown relative consistency in gradation and the gradation is quite similar to that used for the dispersion layer analysis.

Michael L. Leonard, Sr., P.E.
Project Director
SCS Engineers
3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806-6816
Phone: (562) 426-9544
Fax: (562) 427-0805
Cell: (562) 304-6894
mikeleonard@scseng.com
www.scsengineers.com
Attached is the word document for final review. Also attached is a pdf of the tables, figure and lab data.

(See attached file: CLAHS#11-Vulcan Sampling 2 Report_061606.doc) (See attached file: CLAHS#11-Vulcan Sampling 2 Report_061506a.pdf)

Glen T. Davis, P.E.
Project Manager
URS Corporation
2020 E. First Street, Suite 400
Santa Ana, CA 92624
Office: (714) 438-7783
Cell: (714) 448-3063
Fax: (714) 667-3147
glen_davis@urscorp.com

This e-mail and any attachments are confidential. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.
Good Afternoon--

Based on a site visit to the Vista Hermosa school site on 9/5/06. This email is DTSC's concurrence to the changes made to the detection probe piping of the gas mitigation system currently being installed. Upon observing the bubble test, DTSC concerns of uneven distribution of airflow along the detection probe piping have been addressed. The installation of new piping and the proper spacing and sizing of the holes within these pipes appears to create fairly uniform flows along the piping. LAUSD and their consultants may proceed with the next step of the installation process.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax
I reviewed the revised drawings (GP-1.03R, 1.04R, 1.08R, 1.09R) for the air sweep system and detection probe piping for Building P dated 9/5/06. I approve the revised drawings GP-1.03R, GP-1.08R.

On Drawing GP-1.04R, I note that one air injection header feeds the perforated pipe which contains a 90 degree bend. Based on testing of the air sweep system for Building Q (specifically piping run "7 Right") which had a similar configuration, there was very low air flow downstream of the bend. I suggest a "T" be placed in the air injection header and separate feeder lines be routed to the midpoints of each leg of the perforated piping. The other option is to build it as designed and test it in the field.

On drawing GP-1.09R, I note that the northern portion of the detection probe piping crosses the perforated air sweep piping; therefore, a blank section will need to be indicated on the drawing. We apparently missed this issue in the original approved drawings.

I know time is of the essence here, so if you agree with the changes to sheets GP-1.04R and GP-1.09R, I will approve proceeding with construction contingent that the changes be shown on the final as-builts. Please advise if you need me to return the originals to you with the DTSC approval stamp.

Mike Sorensen, P.E.
Dept of Toxic Substances Control
6800 Cal Center Drive, Sacramento, CA 95826
Phone: 916-255-6600
Fax: 916-255-6659
email: msorensen@dtsc.ca.gov
I reviewed the proposal and concur with the change. Concurrence is conditional provided the following items/changes are included:

1) Testing information is provided showing that this type of spray-on membrane has long term resistance to H2S.

2) A manufacturers warrantee for a minimum of 30 years is provided.

3) A membrane test section is sprayed at the same time as the membrane in the switchgear room and subject to the following testing - elongation, tensile, puncture resistance and methane permeability, and meet or exceed the LADBS passing criteria. The test membranes shall include a bonded seam and shall be a minimum of 5 feet long and 2 feet wide (perpendicular to the seam) with the seam centered on the sample, over the specified non-woven geotextile carrier fabric. The following tests shall be conducted:
   a) Bonded seam strength test (tensile), grab test method of ASTM D751-89. Specimens shall be 4 inches in width and not less than 9 inches plus width of the seam. At the start of the test the sample shall be positioned such that the clamps are 3 inches clear from the closest edge of the seam. Loading shall be at the rate of 12 inches per minute. Pass = field membrane fails before seam membrane, Fail = seam membrane fails before field membrane.
   b) Elongation, ASTM D751. Pass = * 100% of geotextile substrate elongation, Fail = membrane fails before geotextile fails.
   c) Puncture, ASTM D4833. Pass = * 100% of geotextile substrate puncture resistance, Fail = < 200 lbs (travel of probe = 0.756")

3) Specifications for the Typar substrate fabric should be included.

4) Quality assurance provisions should be included that require continuous inspection of the installation of membrane substrate fabric, membrane and membrane protective cover. The principal inspector should be able to demonstrate that they have been accepted (i.e. successfully interviewed by a principal inspector) by the Los Angeles Department of Building & Safety (LADBS) as inspectors of methane gas mitigation systems within the City of Los Angeles and that they have successfully completed 'inspector' training by the membrane manufacturer. The inspector should prepare field inspection reports for each day of work and the results of all testing should be included in the construction documentation report.

5) On the sheet "SKE-GP-004B" it is not clear why tables 1, 2 and 3 are included. If they are not pertinent to this project, they should be removed.

6) On the sheet "SKE-GP-004A":
   a) 3 inch layer of gravel and 16oz geotextile are shown. It is my understanding that a sand/cement slurry will be used for the sub-base. Please clarify.
   b) Details 2 and 3 indicate the 16 oz geotextile underlays the spray on membrane in laps and test patch repairs. This should be changed to Typar substrate fabric.
   c) Detail 4 shows a dimension of 4" min, but it is not clear what this dimension is referring to.

---

Stephanie/Mike, attached is an SCS Construction Bulletin that proposes a limited use of a spray-on membrane (in lieu of HDPE membrane) for the existing DWP Switchgear Room (not the DWP Vault). It is not feasible to boot the existing conduits due to their number and tight spacing.

Please review for concurrence.

Regards,
Tom Dolan
LAUSD-OEHS

3/20/2008
From: Kothary, Shashi [mailto:SKothary@SCSEngineers.com]
Sent: Wed 9/13/2006 8:43 AM
To: Dolan, Tom
Cc: Glen_Davis@URSCorp.com; mike.leonard@scsengineers.com; Stoddard, Allie
Subject: Construction Bulletin for Spray-on Membrane in lieu for HDPE Membrane - Switchgear Room, Existing Buildings - CLAHS#11

Tom: Attached is the construction bulletin and figures, signed and sealed, as requested.

Shashi Kothary, P.E., R.E.A., C.P.P.
Senior Project Advisor
SCS ENGINERS
3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806-0816
Telephone No. (562) 426-9544
Fax No. (562) 427-0805
E-mail Address: skothary@scsengineers.com
Website: www.scsengineers.com

3/20/2008
Building P Air Injection Measu...

Based on my field observations on 10/11 of the layout and testing of the air sweep and sensor piping for Building P, I concur with the adequacy of the piping layout. Please note there is a small error on the attached spreadsheet, regarding the Total flow after each Tee (ft³/minute). The total should be = 181.7 CFM or 79% of the total flow from the blower. Please provide a marked up copy of the plans for the air sweep system showing the testing line designations. (e.g. location of Line IA Left)

During my field visit, I directed LAUSD to do the following:

1) Shorten the sensor piping on the north side of building P so as not to extend into the footing along column line P5.

2) Obtain DTSC inspection of the finished building P subgrade before any gravel for the 4 inch layer is placed. The concern is that the fine grained materials may become mixed into the shallow gravel trenches for the vent piping during grading operations.

3) Clean the sensor piping after it is put into position on the gravel. The end caps should be removed and any dirt or other debris blown out with compressed air. The perforations should also be cleaned with a nail or other tool to remove any remnants of drilling.

Mike Sorensen, P.E.
Dept of Toxic Substances Control
8800 Cal Center Drive, Sacramento, CA  95826
Phone: 916-255-6660
Fax: 916-255-6659
email: msorensen@dtsc.ca.gov

>>> "Dolan, Tom" <tom.dolan@lausd.net> 10/11/2006 6:58 AM >>>
Mike/Stephanie, attached are yesterday's flow measurements collected along the Bldg. P air injection piping. The format is similar to that previously provided for Bldg. Q.

Please review these results and advise whether DTSC concurs with the present pipe layout.

Regards, Tom
Tom Dolan
LAUSD-OEHS
Project Manager/Consultant
323-447-7719
Good Afternoon, Tom

Per our conversation yesterday, I mentioned I would send this concurrence e-mail regarding LAUSD's use of a sprayed-on liquid boot membrane in the switchgear room at Vista Hermosa. In addition, DTSC has reviewed the information submitted by Mr. John Hart and agree that this would be applicable for use at the site. If you have any additional questions, please do not hesitate to contact me.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax
Good Afternoon, Tom--

DTSC has reviewed the technical memorandum submitted by LAUSD for the replacement of the damaged vent piping at the baseball field. DTSC concurs with the approach for the replacement piping and hereby approves the technical memorandum. Please confirm with DTSC the start date of implementation for this portion of the project. Do not hesitate to contact me if you have any questions.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax
Good Morning, Tom--

DTSC's project team has reviewed the Construction Bulletin regarding alternatives for the electrical conduit seals. Due to limited clearances, the installation of the EYS electrical conduit seals is not feasible. The contractor for the project has proposed the use of O-Z/Gedney's electrical conduit sealing bushings as an alternative. DTSC has reviewed the manufacturer's specifications and concur with its use for the methane mitigation system at Central Los Angeles High School #11. Contact me if you have additional questions.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax
Tom Dolan

From: Stephanie Lewis [SLevis1@dtsc.ca.gov]
Sent: Tuesday, July 24, 2007 5:24 PM
To: Dolan, Tom
Subject: CLA HS #11 - Raised Floor Plumbing Penetrations

Follow Up Flag: Follow up
Flag Status: Completed

Good Afternoon, Tom--

DTSC has reviewed the plans for the plumbing penetrations of teacher's training facility in the former retail space. The plans have been reviewed by our project engineer, Jesus Sotelo. DTSC concurs with the raised floor penetration plans and request that the as-built drawings be documented in the RACR. Let me know if the hardcopies need to be stamped. Thanks and I apologize for the extreme delay.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax

3/20/2008
Good Afternoon, tom--

I am in receipt of your message of yesterday. I am hoping that SCS did forward the plans to J. Sotelo because I was out of the office yesterday.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
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>>> "Dolan, Tom" <tom.dolan@lausd.net> 7/27/2007 5:37 PM >>>
Stephanie, to comply with LAUSD inspection protocol, the electrical inspector at CLAHS#11 is requiring a DTSC-stamped revision of the plans to document the alternative electrical conduit seal (i.e., the O-Z/Gedney Electrical Conduit Seal Bushing) recently approved by DTSC for use. Consequently, SCS has revised the plans to incorporate this conduit seal; PDFs of these plans are attached.

Please review this as soon as possible. On Monday, SCS will be sending out hard copies for DTSC stamp. Because the schedule is so tight (power on is scheduled for Wednesday, August 1), an interim approval via email would be most helpful.

Please call with any questions.

Thanks again.

Tom Dolan
Tom Dolan
LAUSD-OEHS
Project Manager/Consultant
Office 213-972-3989
Cell 323-447-7719
Tom Dolan

From: Stephanie Lewis [S.Lewis1@dtsc.ca.gov]
Sent: Thursday, September 27, 2007 11:00 AM
To: Dolan, Tom
Cc: Jesus Sotelo
Subject: Re: URGENT - CLAHS#11 Construction Bulletin No. 4 - Substitute Membrane in Dance Practice Room

Follow Up Flag: Follow up
Flag Status: Completed

Good Morning, Tom--

DTSC has reviewed the CLAHS #11 Construction Bulletin No. 4 regarding substitution of 60 mil HDPE membrane for the 100 mil dry spray-on membrane in the Dance Practice Room 115. It is DTSC's understanding that use of the 60 mil HDPE liner does not allow the proper tolerance for the installation of the wood flooring. DTSC concurs with the use of the 100 mil spray-on membrane for these construction purposes and require that this construction variances be noted in subsequent reporting documents. Do not hesitate to contact me if you have any questions.

Stephanie Lewis
DTSC Project Manager
Schools Unit - Glendale Office
(818) 551-2847
(818) 551-2874 fax

>>> "Dolan, Tom" <tom.dolan@lausd.net> 9/25/2007 11:40 AM >>>
Stephanie/Jesus, the installation of the HDPE membrane in the Dance Practice Room to seal the joint between wall and floor is NOT feasible due to the required dance floor tolerances. OEHS requests DTSC concurrence with the attached SCS Construction Bulletin that proposes to substitute Liquid Boot for the HDPE membrane to allow the dance floor to be installed.

Your prompt attention to this request is appreciated. Please respond as soon as possible, the work is imminent.

Thanks, Tom
Tom Dolan
LAUSD-OEHS
Project Manager/Consultant
Office: 213-972-3989
Cell: 323-447-7719

3/20/2008
Date: September 24, 2007

To: Tom Dolan, LAUSD OEHS

From: Shashi Kothary, SCS

Subject: Construction Bulletin No. 4 – Substitution of HDPE liner with 100 mil Spray-on Liner in Dance Practice Room 115, LAUSD High School 11

In the Dance Practice Room 115, resilient wood flooring manufacturer recommends the flooring to be installed over a smooth trowel surface and level to a tolerance of 1/8” in 10’-0” radius. Due to such a tight tolerance, it is NOT possible to install the designed HDPE liner system as shown on Gas Mitigation drawing GP-1.11 (see attached figure). SCS recommends using 100 mil dry spray-on membrane (Liquid Boot) in lieu of the HDPE liner system to be within the allowable tolerances. We have substituted HDPE liner system with spray-on membrane in DWP Vault (due to closely spaced existing electrical conduit) with DTSC approval. The spray-on membrane will be smoke tested prior to installation of the wooden flooring.

Also, as shown on the attached figure the space between the walls is vented to atmosphere. The application of a membrane to seal the joint between wall and floor is a redundant, conservative measure.
September 13, 2006
File No. 01203104.05

Mr. Thomas Dolan
Senior Engineer
Los Angeles Unified School District
Office of Environmental Health and Safety
9th Floor
1055 W. 7th St.
Los Angeles, CA 90017

Subject: Bulletin for Use of Spray-on Membrane in Lieu of HDPE Membrane in Switchgear Room in the Existing Building – Methane Mitigation System for Central Los Angeles High School #11 – Los Angeles, California

Dear Mr. Dolan:

This construction bulletin addresses the spray-on membrane system as an alternative to the DTSC-approved HDPE membrane system. Due to a large numbers of the tightly spaced existing electrical conduits, installation of individual membrane boots on them to seal the membrane is not feasible. Consequently, in lieu of HDPE membrane, SCS Engineers proposes the limited use of spray-no membrane, installed in accordance with the attached plans and specification.

The attached figures show details and specifications for a spray-on membrane system for mitigation in the existing DWP Switchgear Room. The spray-on membrane shall be a minimum of 100-mil dry thickness and all penetrations through the membrane shall be booted per the attached detail. The boots shall be sprayed on after the membrane is cured for 24 hrs.

If you have any questions or need additional information, please call the undersigned.

Very truly yours,

[Signature]
Shashi Kothary, P.E., R.E.A., C.P.P.
Senior Project Advisor
SCS Engineers

SRK/srk

Enclosures
SCS TECHNICAL MEMORANDUM

Date: January 16, 2007

To: Tom Dolan, LAUSD OEHS

CC: Jeff Dobrowolski, Geosyntec Consultants

From: Mike Leonard and Shashi Kothary, SCS

Subject: Subject: Construction Bulletin No. 2 for Procedures to be Followed for Replacement of Damaged 4” ADS Vent Piping, Baseball Field, LAUSD High School 11

As requested by LAUSD OEHS, the procedures to be followed for replacement of the baseball field 4” Advanced Drainage Systems (ADS) vent piping found to be damaged are presented on the attached figure and in the notes.

Both the Geotechnical Engineer’s Field Representative and SCS Engineers shall be present to inspect the replacement process to ensure it is completed as prescribed herein. SCS Engineers also recommends that the pipe manufacturer (ADS) be invited to the site to observe the pipe installation and certify that the installation meets its warranty requirements.
CONSTRUCTION BULLETIN NO.2

NOTES:

1. EXCAVATE TRENCHES TO EXPOSE ALL EXISTING DAMAGED PIPE AND REMOVE PIPE.


3. EXCAVATE TRENCH TO TOTAL DEPTH OF 36 INCHES AND WIDTH OF 24 INCHES.

4. SMOOTH TRENCH BOTTOM TO CONSTANT GRADE AND INSPECT FOR WET SPOTS AND SOFT SPOTS. REPAIR OR MITIGATE WET/ SOFT SPOTS AS NEEDED.

5. MOISTEN AND COMPACT BOTTOM OF TRENCH USING HAND-OPERATED VIBRATORY EQUIPMENT (E.G., "TURTLE") TO 85% RELATIVE COMPACTION.

6. PLACE 4" OF SAND BEDDING (SAME SPECIFICATION AS THE SAND DISPERSION LAYER SAND) INTO TRENCH BOTTOM AND COMPACT. SAND TO BE MOISTENED TO OPTIMUM AND COMPACTED TO 85% RELATIVE COMPACTION USING HAND-OPERATED VIBRATORY EQUIPMENT.

7. PLACE PIPE IN TRENCH WITH PROPER SIDE CLEARANCE. EFFORT SHOULD BE MADE TO CENTER THE PIPE IN THE TRENCH BEFORE PLACING PADDING (I.E. BACKFILL) MATERIAL.

8. PLACE SAND PADDING IN LIFTS NO THICKER THAN 2 INCHES AND ON BOTH SIDES OF THE PIPE. MOISTEN AND COMPACT USING HAND-OPERATED VIBRATORY EQUIPMENT. DO NOT RUN HAND OPERATED COMPACTION EQUIPMENT OVER THE TOP OF THE PIPE UNTIL A MINIMUM DEPTH OF 4 INCHES OF SAND IS PLACED ABOVE THE TOP OF PIPE.

9. CONTINUE PLACING AND COMPACTING SAND BY SAME METHOD AS IN #8 ABOVE TO AT LEAST 12" ABOVE TOP OF PIPE.

10. PLACE FINAL SOIL (SAME SOIL AS USED FOR SOIL BUFFER ZONE) TO COMPLETE TRENCH BACKFILL, COMPACT TO 85% RELATIVE COMPACTION USING HAND-OPERATED "JUMPING JACK" OR VIBRATORY "TURTLE".
July 20, 2007  
File No. 01207053.02

CONSTRUCTION BULLETIN

TO: Tom Dolan, LAUSD OEHS
FROM Mike Leonard and Shashi Kothary
SUBJECT: CLAHS#11 Switchgear Room – Use of Approved Alternative for Electrical Conduit Seals

The existing switchgear room contains bundles of vertical conduits from the original installation that will be used for the refurbished existing school buildings. DTSC approved the use of Liquid Boot in this room due to the multitude of conduit penetrations, because there was no feasible alternative.

Due to the extremely limited clearances between the vertical conducts in the switchgear room, the installation of EYS electrical conduit seals is NOT possible (i.e., there is not enough space around the existing conduits to allow the installation of the EYS seals). SCS was requested by the OAR to review a proposal from the contractor for an alternative. The contractor proposed the use of O-Z/Gedney’s Electrical Conduit Sealing Bushings (see attached cutsheets). The manufacture warrants the seals for up to 50 psi pressure and has certified their use in a methane environment (see attached letter). In addition, the materials of construction include PVC coated steel and neoprene, both of which are resistant to methane and hydrogen sulfide. The seals essentially encapsulate the electrical wires within an impermeable elastomeric matrix and prevent the migration of gas through the conduits under pressure.

SCS has reviewed the specifications and the intended application within the switchgear room. SCS has approved the use of O-Z Gedney seals. The seals meet the functional requirements of the methane mitigation system.

SCS recommends that OEHS forward this approval to the OAR for implementation.
Conduit Sealing Bushings

For Use with Insulated Wire, Cable and Rigid Metal Conduit

**Type CSB Series**

**Type CSB:**
Seals against pressure from the outside of the fitting and provides some support for the cable when fitting is used in vertical position as shown in illustrations.

Seals against fluids or gases that are inside a conduit and prevents them from entering an enclosure.

**Type CSBE:**
Provides all the features of Types CSBI and CSBE and in addition prevents the sealing bushing from moving out of the end of the conduit should the internal pressure be high or if the fitting is used on conduit in an inverted position. The Type CSBE fittings are capable of sealing against gas or fluid pressure of 100 psi, (9.4 atm.). Segmented Type CSBI and CSBE (non-segmented CSBI and CSBE - see page 104) Segmented bushes above pressure in hull. Can also be supplied with Lay-LUG bushing, see page 104.

**User:**
- These conduit Sealing Bushings are used for sealing the ends of conduit in applications involving higher static gas or fluid pressures than can be handled by standard bushings.
- For use with IMC or EMT, a short nipple of Rigid Metal Conduit should be used to accommodate the Conduit Sealing Bushing. For Schedule 40 PVC Conduit, contact your local representative.

**Features:**
- The complete assembly is provided with 1 or more holes to accommodate the size and number of cables which emerge from the conduit. When the fitting is in place and the screws are tightened, the neoprene sealing ring is compressed between the metal plates and forced against the inside wall of the conduit and also against the cable insulation to effect a complete seal at the conduit end.
- Blank fittings are available. These are intended as abandonment devices only. Do not field drill.
- Consult your local representative for all other applications.
- These fittings are simple to install. They eliminate the special preparation of the end of the conduit or the compounding of the conduit thread which is required on other types of sealing fittings used to seal against high pressures.

**Materials:**
- Slotted PVC coated steel disc, neoprene sealing ring and stainless steel socket head cap screws and washers. Locking collars on Type CSBSG are hot dipped galvanized mild steel or copper.
Conduit Sealing Bushings

Type CSB Series

1 Segmental Design (Figure 1):
Segmental pressure discs and slit neoprene sealing rings produce a come-apart design which allows the sealing bushing to be installed without having to thread it along the cable or allows installation around cables already terminated. Maximum diameter of wire or cable may need to be reduced. (Include Catalog Number “SEG”). Also available with slit neoprene sealing ring and one piece pressure discs.

2 Sealed Sealing Ring:
A second neoprene sealing ring may be added for cable support applications. Add suffix “G2” to catalog number. Contact your local representative for price and availability.

3 Close/Short Nipples:
Short nipples which can be screwed into conduit hubs or couplings. Seal fittings are then installed in the open ends of these nipples. To specify a fitting complete with nipple add “N” after Catalog Number. (Example: CSBG 200P-N).

4 Type GL Cabinet Adapter (Figure 2):
For use with sealing bushings when exposed wires enter cabinets. Hot dip galvanized malleable or ductile iron is standard; aluminum if specified. Adapter assembly includes special smooth bore nipple, gasket and locknut. Type GL Cabinet Adapters must be ordered separately. See table for catalog numbers.

Thread length on special smooth bore nipples will accommodate 3/8” thick cabinet or structure on Type CSBG (specify if thicker than 3/8”), and up to 3/4” thickness on Types CSBE & CSBI.

These fittings are designed for use in schedule 40 Rigid Metal Conduit. For use with IMC or EMT, a short nipple of Rigid Metal Conduit should be used to accommodate the Conduit Sealing Bushing. Contact your local representative for application involving Schedule 40 or Schedule 80 PVC Conduit.

Blank fittings are intended as abandonment and future use devices only.
DO NOT FIELD DRILL.

Dimensional Data:
See Page RA19

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SUBJECT: CSB Conduit Sealing Bushings

DATE: January 22, 2007

To whom it may concern,

EGS Electrical Group offers the CSB series conduit sealing bushings to provide a seal at the ends of conduit in applications involving high static fluid and gas pressure. They provide a watertight seal against pressure from outside of the conduit up to 50 psig. They are suitable for outdoor use. They have good resistance to ozone and weathering. They can be used in a Methane environment due to the fact that the components including the Neoprene grommets, stainless steel hardware and PVC coated steel plates have good resistance to Methane gas.

Respectfully,

Robert Andlovec
Chief Engineer
EGS Electrical Group