APPENDIX C

RESPONSES TO RFIs
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RESPONSES TO RFIs

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November 14, 2013

City of Los Angeles
Bureau of Engineering
1149 South Broadway Street, Suite 120
Los Angeles, California 90015

Attn: Mr. Gene Edwards

RE: RESPONSE TO RFI-01 FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION PROJECT AT PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

This letter presents our response to a Request for Information (RFI) submittal from Hayward Baker, Inc. (HBI) dated November 13, 2013 to the City of Los Angeles Bureau of Engineering (City). The RFI was prepared in response to questions regarding the ground anchor installation and testing at White Point Landslide. A summary of the RFI and our responses are listed below:

RFI -01(a): HBI is requesting a design review for the downhole surveying. Once drilling has exceeded past the lower drains, HBI is suggesting to drill the continuation of the hole to the intended design depth and take one final downhole survey.

Response: Shannon & Wilson reviewed the HBI downhole (gyro) survey, which was performed to a depth of 78 feet on November 13, 2013. The gyro survey showed the anchor drillhole was approximately 0.7° right of center in azimuth and 0.3° low of center in inclination. These values are within the 2.5° tolerance required by the plans and specification. At the current angle, the anchor drilling would clear the lower drain alignment by approximately 8 to 9 feet.

The plans and specifications require HBI to perform a gyro survey every 15 feet of anchor drilling. Provided the surveys show deviations within half of the required tolerances, we recommend the City require HBI to perform gyro surveys every 15 feet until drilling passes the lower drain alignment on the test anchors and one gyro survey at the bottom of the test anchors.
If the test anchor gyro surveys show deviations less than half of the required tolerances, we recommend the City require HBI to perform three gyro surveys when drilling non-test anchors in lieu of the current specification requirements. The surveys should be performed 10 feet prior to intersecting the upper drain alignment, 10 feet prior to intersecting the lower drain alignment, and at the conclusion of drilling. If a survey shows deviations greater than half of the required tolerances, we recommend resuming the specified surveys every 15 feet until HBI demonstrates to the satisfaction of the City that they can drill within tolerances.

If our revised survey recommendations are adopted, we recommend the City consider if these changes constitute a deductive change order.

RFI 01(b):  

_HBI is requesting a design review for the alignment load (AL), when stressing the anchor. Per the drawing C-2.0, 3.04-C1, it is not detailed what load the AL should be stressed to. Please let HBI know how would you like to address these items._

Response:  

Add the following to drawing C-2.0, 3.04-C: The AL shall be 10% of the design load.

Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.

Christopher A. Robertson, P.E., G.E.
Vice President

JZB.NXN.RTD.CAR/1111
January 8, 2014

City of Los Angeles  
Bureau of Engineering  
1149 South Broadway Street, Suite 120  
Los Angeles, California 90015

Attn: Mr. Gene Edwards

RE: RESPONSES TO REQUEST FOR INFORMATION (RFI) FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION, PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

This letter presents our responses to questions (RFIs) from Hayward Baker, Inc. (HBI) to the City of Los Angeles Bureau of Engineering (City) and Shannon & Wilson, Inc. (SWI) at the construction meeting on December 18, 2013. A summary of the RFI and our responses are listed below:

RFI: Can anchor strands be cut after stressing?
Response: Yes; however, if re-stressing of the anchor is required after the strands are cut; HBI shall provide the City a strand coupling device for re-stressing of the ground anchor.

RFI: Can amount of backfill over anchors be reduced in order to reduce overburden?
Response: The contract documents show backfill to the original grade after construction. However, the reduction in the amount of backfill is also acceptable and will not affect the performance of ground anchors and slope stability.
Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.

R. Travis Deane, P.E., G.E.
Senior Associate

NXN:RTD/nxn
February 7, 2014

City of Los Angeles
Bureau of Engineering
1149 South Broadway Street, Suite 120
Los Angeles, California 90015

Attn: Mr. Gene Edwards

RE: RESPONSES TO RFI-06 FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION PROJECT AT PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

This letter presents our response to Request for Information (RFI) No. 6 from Hayward Baker, Inc. (HBI) dated February 4, 2014 to the City of Los Angeles Bureau of Engineering (City). The RFI was prepared in response to questions regarding the ground anchor installation at White Point Landslide. For ease of reference, the RFI is provided in italics followed by our responses below:

RFI-06: HBI is requesting clarification on backfilling of excavations adjacent to bearing piles. Drawing C-6.0 indicates backfilling and compacting with existing onsite soils, but HBI understands that this may have changed. HBI is prepared to start this process as soon as we receive written instruction on how to proceed.

Response: Detail 1 of Drawing C-6.0 shows the backfill assuming a localized excavation around each anchor location. For the excavated pad constructed at the slope, we have proposed a conceptual sketch of the backfill as shown in Figure SK-1 attached. Modifications of the county storm drain riser would be required and should be coordinated with the county.

Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.

R. Travis Deane, P.E., G.E.
Senior Associate

RTD/rtd

Enc: Figure SK-1
March 26, 2014

City of Los Angeles
Bureau of Engineering
1149 South Broadway Street, Suite 120
Los Angeles, California 90015

Attn: Mr. Gene Edwards

RE: RESPONSES TO REQUEST FOR INFORMATION (RFI-08) FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION, PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

We had reviewed the method and procedure for reinstalling of Ground Anchor D-2 as proposed in RFI-08 by Hayward Baker, Inc on March 25, 2014. We found the proposed method and procedure in general are acceptable.

For procedure No. 4 in the RFI, we suggest the contractor not to remove all casing from the hole. Removal of casing, especially in the upper 50 feet in soil and highly weathered rock may cause the hole to cave in and cause ground subsidence. We do not recommend the use of 1/2” oversize carbide teeth for overcutting larger diameter hole as proposed by the contractor. We believe that the original sizes of drill bit and casing are sufficient to clear the grout.

The contractor shall contain any water used during reinstallation to avoid contaminating the slope or creating erosion gullies.

Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.

Nicky Nitichaivorarakul, P.E., G.E.
Principal Engineer

NXN:MWP/nxn
May 2, 2014

City of Los Angeles
Bureau of Engineering
1149 South Broadway Street, Suite 120
Los Angeles, California 90015

Attn: Mr. Pedro Garcia

RE: RESPONSES TO REQUEST FOR INFORMATION (RFI-09) FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION, PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

This letter summarizes our review of the attached RFI-09 letter from Hayward Baker, Inc. (HBI), dated May 2, 2014. HBI requests applying a 2- to 3-inch-thick layer of shotcrete to protect the bearing pad subgrade from sloughing material exposed in the loose side walls of lower anchors D2 and E2. The shotcrete would be applied to the exposed subgrade and side walls prior to installation of the concrete bearing pads.

The proposed use of shotcrete for subgrade and side wall protection is acceptable. Shotcrete should not be applied to the slope face outside the bearing pad, and if overspray occurs, should be removed from the slope face (where not covered by the concrete bearing pad). Shotcrete could be applied to the other lower anchors where loose side walls are exposed as described in this letter.
Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.

Nicky Nitichaivortrakul, P.E., G.E.
Principal Engineer

May 2nd, 2014

City of Los Angeles
Department of Bureau of Engineering
1149 South Broadway, Suite 120
Los Angeles, California 90015

Attention: Mr. & Mr. Gene Edwards and Pedro Garcia

Subject: Soil Stabilization Shotcrete RFI 09- WO:E10907703

After observing the excavation of the bearing pads D2 and E2, the soil conditions appear to be very loose and unstable. In order to avoid any material from sloughing into the excavation during the placement of the bearing pad and as well eliminate the need of over excavating and forming along the cliff side, HBI is recommending to coat a 2-3 inch layer of shotcrete along the base and sidewalls of the excavation prior to placing the rebar and shotcrete for the specified 7'x7'x2' bearing pad.

Please let HBI know if this is acceptable in order to continue the installation of the bearing pad structure.

Sincerely,
Hayward Baker Inc.

[Signature]

Chase Henri
Project Engineer
May 30, 2014

City of Los Angeles
Bureau of Engineering
1149 South Broadway Street, Suite 120
Los Angeles, California 90015

Attn: Mr. Pedro Garcia

RE: RESPONSES TO REQUEST FOR INFORMATION (RFI-11) FROM HAYWARD BAKER, INC. FOR GROUND ANCHOR CONSTRUCTION FOR WHITE POINT SLOPE STABILIZATION, PASEO DEL MAR, SAN PEDRO DISTRICT, LOS ANGELES, CALIFORNIA

This letter summarizes our review and responses to the attached RFI-11 letter from Hayward Baker, Inc. (HBI), dated May 20, 2014 (received on May 29, 2014) and the e-mail from HBI dated May 29, 2014. HBI’s questions and our responses are summarizes below:

A. During excavation and preparation of subgrade for the anchor bearing pads, HBI discovered in some locations that the suitable subgrade bearing materials (weathered bedrock) were deeper than 2 feet from the slope surface. The original plans and specifications show the thickness of concrete bearing pad of 2 feet. HBI proposed the following options for construction of the bearing pads.

1) Place the shotcrete bearing pads into the slope with the specified thickness of 2 feet, and leave the bearing pads recessed.

2) Place the form level with the slope surface and fill the entire volume with shotcrete. The steel reinforcement for the bearing pads will be laid near the bottom of the bearing pads.

SWI Response (A): Both options propose a minimum of 2-foot-thick concrete bearing pads per our plans and specifications. Both options are acceptable and satisfactory based on our structural requirements for the bearing pads. SWI refers the selection to be made by the City to satisfy the aesthetic requirements of the project.
B. HBI proposes to place a form on the top of the upper wall of bearing pad and place a mark with indicators in order to insure that the upper wall satisfies the required thickness. In addition, HBI will place marking indicators on the additional 3 wall sides of the shotcrete shells in order to determine the required thickness has been achieved.

SWI Response (B): We agree with HBI’s proposal to put the indicator markings to verify that the concrete thickness of 2 feet is reached when shotcreting.

C. Contract drawing C-6.0 shows the trumpet extending through the rebar mat. If we are to raise the bearing plate to be 2 inches below the surface of the existing slope, this will make the base of the trumpet to rest above the rebar mat. Will this be acceptable? If not, another alternative is to elevate the rebar mat so that it is placed as specified drawings in reference to the trumpet, but leave a thicker area other than the specified 3” between the bearing surface and the rebar mat.

SWI Response (C): We consulted with the structural engineer (Cefali & Associates) who designed the bearing pads. He confirms that the base of the trumpet can be above the rebar mat. The bottom of rebar mat should be located 3 inches above the bearing surface or subgrade.

Please call if you should have any questions or if we can be of further assistance.

Sincerely,

SHANNON & WILSON, INC.
Nicky Nitichaivorrakul, P.E., G.E.
Principal Engineer

      “RFI-11” email from HBI
May 20th, 2014

City of Los Angeles via email: gene.edwards@lacity.org
Department of Bureau of Engineering pedro.garcia@lacity.org
1149 South Broadway, Suite 120
Los Angeles, California 90015

Attention: Mr. Gene Edwards and Pedro Garcia

Subject: Row 2 Shotcrete Bearing Pad Placement- RFI 11- WO:E10907703

Upon excavation and review of the bearing pads base material, it was directed that additional bearing pad base material was necessary to be removed in order for the pad to bear on competent base material. Due to nonbearing material having to be removed, the depth of the bearing pad has increased, causing for the bearing pad block to be recessed into the slope side at the specified thickness.

Previous RFI’s, emails and verbal meeting communications direct for HBI to shotcrete the bearing pad flush with the surface of the slope side, with colored concrete and a rough finish matching the contour line of the slope. If HBI is to continue with the specified thickness, the end result of the bearing pad will be recessed approximately 1 to 3 foot into the slope side, depending on how far the pad needed to be excavated to competent material.

Options proposed are:

1) HBI places the shotcrete panels into the slope with the required specified thickness of 2 feet, and leaves the bearing pads recessed.

2) HBI places the form level with the slopes surface and fills the entire block area in with shotcrete. If this is the case, the steel reinforcement would currently lay at a deeper depth within the bearing block.

3) As recommended per the City of Los Angeles or Geotechnical Engineer of Record.

Further field communications between the City of Los Angeles CONAD onsite Inspector and Hayward Baker have confirmed that a method of verifying the required specified thickness of the shotcrete bearing pad needs a means of measurement for quality control and verification. HBI is proposing to place a form on the top of the upper wall of bearing pad and place a mark with indicators in order to insure that the upper wall satisfies the required thickness. Further HBI will place marking indicators on the additional 3 wall sides of the shotcrete shells in order to determine the required thickness has been achieved.
Please let HBI know what option is selected or proposed to be utilized for the shotcrete placements as well know if the suggested indicator markings are acceptable for thickness verification in order to continue with the placement of the bearing pad structures.

Sincerely,

Hayward Baker Inc.

Chase Henri
Project Engineer
Pedro,

After reviewing the response to RFI-11, I did not see where it addressed the supporting rebar mat locations. On Drawing C-6.0 it shows the trumpet extending through the rebar mat. If we are to raise the bearing plate to be 2 inches from the surface of the existing slope, this will make for the base of the trumpet to rest above the rebar mat. Will this be acceptable? If not, another alternative is to elevate the rebar mat so that it is placed as specified drawings in reference to the trumpet, but leave a thicker area other than the specified 3” between the bearing surface and the rebar mat.

Chase