May 5, 2016

TO: Marco Foster, MS47354
THRU: T. Madden / K. Klingman, NB82-230
FROM: P. Fuller / S. Beadle, NB 82-66
SUBJECT: C8549
SR99, AWV Replacement North Access Connection
F.A. Project No: STPF-0099(122)
CHANGE ORDER 133
Ductbank Changes EN1, EN3, EN4 & EP5

Attached for your review, approval and further processing is HQ executed Change Order #133 "Ductbank Changes EN1, EN3, EN4 & EP5", for the subject project. Change Order Checklist is attached (Attachment A).

Description of the Change

The change order compensates the Contractor for added work and extended overhead associated with new work. This change order revises ductbanks EN1 & EN4, EN3 and adds new ductbank EP5.

1. EN1 and EN4 Ductbanks:
   Revises the horizontal and vertical alignment of ductbank EN1 as shown on UPA1, UPA1 and UPR7. This work will:
   - Raise EN1 vertical alignment to be above new ductbank EP5 and above EN2 and EN4 as shown on UPD33 and UPD33A.
   - Revise the horizontal alignment of EN1 to run along the Substation Yard retaining wall foundation.
   - Compensate the Contractor for the added effort and complexity for working along the SCL Substation retaining wall as shown on UPD33 and UPD33A.
   - Demolish and replace 10 ft. of existing EN1 duct bank to tie into the new alignment. This change order compensates the Contractor for demolishing and constructing 10 ft. of ductbank.
   - Compensate the Contractor for re-trenching, re-shoring and backfilling a second time for EN1. It also covers additional costs for vectoring and supporting live communication power and other utilities.
2. **EN3 Ductbank:**
Revises the horizontal and vertical alignments of ductbank EN3 as shown on UPAL1, UP1, UP8, UPR8, UPR9, UPD11 and UPD33.

This change order compensates the Contractor for re-trenching, re-shoring and backfilling a second time at EN3. The change order also covers additional costs for vectoring and supporting in place existing utilities.

This change order makes ductbank adjustments to avoid future King County ductbank as shown on UPR9.

3. **EP5 Ductbank:**
Adds new ductbank EP5 feeders from Station EP5 350+00.00 to 350+10.86 to the SCL Substation yard as shown on UPAL1, UP1, UPR7-UPR9, UPR10, UPD20, UPD33. New ductbank EP5 shall be positioned in between ductbanks EN1 and EN3 and ductbanks EN4 and EN2.

**Development of the Change**
The Development of Change will follow the numbering system as above.

1. **Constructability issues** with the planned alignment of the EN1 ductbank which was in conflict with the substation wall footing were brought to the attention of the PE in RFI#380. The original plan shows that the bottom of the footing is below EN1. The work was stopped and SCL began to redesign the alignment for EN1. The redesign captured the protection and support of the substation retaining wall. The updated plan clearly shows that the bottom of the duct bank is near the bottom of the footing for the wall. The new design also included approximately ten feet of new ductbank to replace previously installed EN1 duct bank that needed to be removed so that it can be installed above the added duct bank EP5. Since the work had stopped and Contractor could not continue work until SCL provided new plans, approximately half of 80 feet of EN1 was backfilled. The Contractor had to re-excavate the trench and re-shore it. The design also captured profile changes per RFI#413 where EN1 alignment was in conflict with a King County vault at the SW corner of 6th Ave and Harrison St. The new alignment will reroute EN1 to avoid the vault. Other profile changes include vertical changes in profile from 300 foot sweeping radii to four vertical profile changes with two 50 foot radii and two 30 foot radii. There were also minor changes that SCL wanted to address at EN4 ductbank where is crosses ED1. The plans did not show a reinforcement cage which is standard practice when ductbanks cross over each other. This reinforcement cage was added in the revised plans.
2. While excavating for EN2 ductbank, the Contractor noticed that the planned EN3 ductbank could not be installed due to a conflict with an existing SCL vault at the SW corner of 6th Ave and Harrison St. as referenced in RFI#398. The planned configuration for EN1, EN4, EN2 and EN3 is shown as being constructed side by side in order listed. During the redesign, the new King County ductbank which runs parallel to Harrison St. was discovered to be in conflict with the new alignment of EN3. The result, EN3 was designed to have a splayed ductbank to avoid the top of new King County Ductbank. EN3 also includes costs to re-trench and re-shore a portion of the alignment from M30 vault to M9 vault. This ductbank trench was backfilled when the conflict with the SCL vault was encountered.

3. In RFI#371, the Contractor discovered an unknown ductbank crossing the EN4 alignment which runs north-south across Harrison at approximately at Station H-Line 96+15. After investigating, the unknown ductbank was found to be empty and was removed. In further discussions, SCL wanted to make this reconnection as EP5 into Vault M9 which the original plans did not include. Without this connection, SCL could not power up the new EP1 ductbank. The new design of EP5 was placed on top of EN2, EN4 ductbanks and in the bottom of new designed elevations of EN1, EN3 ductbanks.

We received plans from SCL on December 23, 2015. These plans were forwarded to the Contractor the same day. Upgrades required by SCL to meet current standards and future demands contributed to the cost increase. Work stopped for EN1 and EN3 until agreement was reached on the negotiated pricing. The plans also included the new work for EP5. This added work is being paid for by SCL.

Schedule Analysis
This change order is adding 28 working days to the contract due to the added work described above. There are overhead costs associated with these added working days. We performed an independent schedule analysis and agree to the number of added working days. See Attachment E. We compared the baseline work activities with the revised January 2016 schedule provided by the Contractor. The schedule shows a 35 day difference for a composite of changes involving EP5, EP1, EP2, EP3, EP4, EN3, and EN4. The analysis included all of EP1, EP2, EP3 and EP4 because the Contractor had combined all these ductbanks together in the baseline. We performed a combined schedule analysis with both CO133 and CO147 due to the difficulty in separating the activities. We agreed with the increase of 28 working days for CO133. The Contractor also incurred 7 additional working days on CO147 which totals 35 working days and this agrees with our independent analysis. The work included in this change order is on the critical path of the approved schedule.

Approvals
- PE Approval—Patrick Fuller gave approval on 4/29/2016 (Attachment B).
- Region Approval—Tom Madden gave approval on 5/3/2016 (Attachment B).
- HQ Approval—Marco Foster gave approval on 5/2/2016 (Attachment B).
- FHWA Approval—Anthony Sarhan gave approval on 5/2/2016 (Attachment B).
• Program Management—Mario Mathisen gave approval on 5/3/2016 (Attachment B).
• Engineer of Record—Monica Moravec signed plan sheets 12/22/2015 (See change order plans)
• City Funding Approval—Jon Gray approved direct costs on 3/4/2016 and approved extended overhead costs on 3/17/2016. (See Attachment B).

Entitlement & Price
The Contractor will be reimbursed for the added work as stated in the change order. The costs include both direct and indirect cost, including extended overhead for this added work. The Contractor will be compensated for the described added work that affected the critical path. The increased costs included retrenching costs for EN1 and EN3, the difficulty to shore and excavate along the substation for EN1, to rebuild a portion of the EN1 ductbank to tie in to the new alignment, and to build new ductbank EP5. The Contractor will be compensated for the described added work that affected the critical path. This change order is a negotiated amount of $511,217.11, which includes added direct and extended overhead costs associated with an added 28 working days to the contract. (See Estimate – Attachment C).

Contract Time
This change order adds 28 working days to the contract. There are no changes to contract interim completion dates as a result of this change order.

PF: jp
Attachments
cc: File 8549 3(I33)
WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER

DATE: 05/06/16
Page 1 of 15

CONTRACT NO: 008549
CONTRACT TITLE: SR 99, ALASKAN WAY VIADUCT - REPLACEMENT NORTH ACC
CHANGE ORDER NO: 133 R1, EN1, EN3, EN4, EP5 DUCT BANK CHGS.

PRIME CONTRACTOR: GUY F. ATKINSON CONSTRUCTION, LLC.
707 SOUTH GRADY WAY STE 500
RENTON WA 98057-3224

Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications

( ) Change proposed by Contractor

ENDORSED BY:

SIGNED BY:

DATE

ORIGINAL CONTRACT AMOUNT:

CURRENT CONTRACT AMOUNT:

ESTIMATED NET CHANGE THIS ORDER:

ESTIMATED CONTRACT TOTAL AFTER CHANGE:

Approval Required: ( ) Region ( ) Olympia Service Center ( ) Local Agency

( ) APPROVAL RECOMMENDED ( ) EXECUTED

EXECUTED:

PROJECT ENGINEER

5/11/16

STATE CONSTRUCTION ENGINEER

5/11/16

REGIONAL ADMIN:

5-11-2016

REPRESENTING

FHWA

CG02v04 (revised Feb 2005)
All work, materials, and measurements to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

**DESCRIPTION**

The change order compensates the Contractor for added work and extended overhead associated with new work. This change order revises ductbanks EN1 & EN4, EN3 and adds new ductbank EP5.

**EN1 and EN4 Ductbanks:**
Revises the horizontal and vertical alignment of ductbank EN1 as shown on UPA11, UP1 and UPR7. Raises EN1 vertical alignment to be above new ductbank EP5 and above EN2 and EN4 as shown on UFD33 and UFD33A. Revises horizontal alignment to run along the Substation Yard retaining wall foundation. This change order compensates the Contractor for the added effort and complexity for working along the SCL Substation retaining wall as shown on UFD33 and UFD33A.

Demolishes and replaces 10 ft. of installed EN1 duct bank to tie into the new alignment. This change order compensates the Contractor for demolishing and constructing 10 ft. of new ductbank.

This change order compensates the Contractor for re-trenching, re-shoring and backfilling a second time for EN1. It also covers additional costs for vactoring and supporting live communication power and other utilities.

Adds new reinforcement cage to EN4 per SCL Guideline U2-11.2 as shown on UPR10.

**EN3 Ductbank:**
Revises the horizontal and vertical alignments of ductbank EN3 as shown on UPA11, UP1, UP8, UPR8, UPR9, UFD11 and UFD33.

This change order compensates the Contractor for re-trenching, re-shoring and backfilling a second time at EN3. The change order also covers additional costs for vactoring and supporting in place existing utilities.

This change order makes ductbank adjustments to avoid future King County ductbank as shown on UPR9.

**EP5 Ductbank:**
Adds new ductbank EP5 feeders from Station EP5 350+00.00 to 350+10.86 to the SCL Substation yard as shown on UPA11, UP1, UPR7-UPR9, UPR10, UFD20, UFD33. New ductbank EP5 shall be positioned in between ductbanks EN1 and EN3 above and ductbanks EN4 and EN2 below.

This change order revises the following plan sheets UPA11, UP1, UP8,
WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER

CONTRACT NO: 008549
CHANGE ORDER NO: 133 R1

UPR7-UPR10, UPD11, UPD20, UPD33, and adds the following new plan sheet
UPD33A.

MATERIALS
All materials incorporated into the project shall meet the requirements of
all the Contract Documents.

MEASUREMENT
Measurement of the new lump sum item, "CO133 EN1, EN3, EN4, EP5 Ductbank
Changes", shall be in accordance with Standard Specification 1-09.1,
Measurement of Quantities of Lump Sum Items.

PAYMENT
This change order creates a new lump sum item, "CO133 EN1, EN3, EN4, EP5
Ductbank Changes" in the amount of $511,217.11. This amount shall be full
payment for all labor, equipment and materials to perform the work as
described above, including but not limited to engineering, planning,
scheduling, excavation and shoring, procuring ductbank materials and
installing them, placing high strength FIB, forming materials, setting forms
and stripping, placing low strength FIB, dirt export and disposal, vactoring,
dewatering the excavation area, supporting existing utilities and existing
foundations, mobilization and demobilization of equipment, survey, cleanup
and overhead for the added work per Section 1-09.1 of the Standard
Specifications.

CONTRACT TIME
There are 28 working days added to the contract time as a result of this
change order. No changes to contract interim milestones are made as a result
of this change order.
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<th>ITEM DESCRIPTION</th>
<th>UNIT MEASURE</th>
<th>UNIT PRICE</th>
<th>EST QTY CHANGE</th>
<th>EST AMT CHANGE</th>
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511,217.11

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511,217.11

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GENERAL NOTES:

1. REFER TO SHEETS UPA1-UPA13 FOR POWER ALIGNMENT TABLES.

2. THE CONTRACTOR SHALL FIELD ADJUST THE DUCT BANK AD NEEDED TO FIT BETWEEN THE SUBSTATION WALL FOOTING AND VAULT DETAIL.

STA. H 95+00 MATCHLINE - SEE LEFT

STA. H 98+20 MATCHLINE - SEE SHEET UPA13

SHEET KEY

SCALE 1:200

CHANGE ORDER NO. 133 R1

CONTRACT B549

ALASKAN WAY VIADUCT-REPLACEMENT
NORTH ACCESS CONNECTION

POWER ALIGNMENT PLAN

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

FED.AID PROJ.NO. 10 WASH

PROJECT NO. 13A003

DATE 12/17/2015

DRAWN BY J.L. MORGAN

CHECKED BY S. BARTLETT

REVISION DATE BT

 daytime WEST

 FIRM NAME kpfl Consulting Engineers

 1601 7th Avenue, Suite 1600

 Seattle, Washington 98101-2626

 (206) 922-3333 Fax (206) 922-0130

 POWER ALIGNMENT PLAN
GENERAL NOTES:

1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG 1-800-424-5555.

2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPN1-UPN2.

3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPA1-UPA3 AND UPN1-UPN2.

4. FOR DUCT BANK PROFILES, REFER TO THE FOLLOWING DRAWINGS:
   - ALIGNMENT ED1 - DRAWING UPR1
   - ALIGNMENT ED2 - DRAWING UPR3
   - ALIGNMENT ED3 - DRAWING UPR4
   - ALIGNMENT ED4 - DRAWING UPR5
   - ALIGNMENT EN1 - DRAWING UPR6
   - ALIGNMENT EN2 - DRAWING UPR7
   - ALIGNMENT EN3 - DRAWING UPR8
   - ALIGNMENT EN4 - DRAWING UPR9
   - ALIGNMENT EN5 - DRAWING UPR10

   APPROXIMATE LOCATION OF WALL FOOTING AS ENCOUNTERED IN THE FIELD, PER SURVEY RECEIVED ON 11/16/15.

CONSTRUCTION NOTES REFER TO DRAWING UPN1.

REFERENCE SHEET OF DRAWING UP1.

FILE NAME: K110000-1-000581/01/12 Alaskan Way Viaduct North Access (CAD Design WM-MWNA-CP01).dgn

DATE: 4:36am

TIME: 20/7/15

PREPARED BY: C. PARK

DESIGNED BY: C. PARK

CHECKED BY: S. BEADLE

PROD. ENG: T. TREHANER

M. L. H. ENGR.

PROJECT: ALASKAN WAY VIADUCT-REPLACEMENT

NORTH ACCESS CONNECTION

RATING: B549

CONTRACT NO: SR 99
CONSTRUCTION NOTES:
1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG. 1-800-847-4669.
2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPN1-UPN3.
3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPAL1-UPAL6 AND UPT1-UPT3.

GENERAL NOTES:
1. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPN1-UPN3.
2. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPAL1-UPAL6 AND UPT1-UPT3.

LEGEND
- COMMUNICATION CONDUIT
- FLUIDIZED THERMAL BACKFILL
- DISTRIBUTION CONDUIT

CHANGE ORDER NO. 33

CONTRACT 8549

SCALE IN FEET
GENERAL NOTES:
1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG 1-800-424-5555.
2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPN-UPT.
3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPN-UPT.
4. WHERE DUCT BANKS CROSS ABOVE PS AND PSD MAINS, INSTALL REINFORCING WITHIN THE DUCT BANK (PER SCL CONSTRUCTION GUIDELINE U2-11.2). MINIMUM OF 10' BEYOND THE CROSSING.

CONTRACT 8549

Sheet 8 of 15

Change Order No. 33&

Project No.

Construction Note

Reference to Drawing UPN1 Sheet of 7.

Power Profile

Alaskan Way Viaduct Replacement
North Access Connection

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

KPTT Consulting Engineers

SR 99 Alaskan Way Viaduct Replacement

Power Profile

Sheet 8 of 15

Change Order No. 33&

Contract 8549

General Notes:
1. Advanced notification is needed before any construction occurs. Call before you dig 1-800-424-5555.
2. For Seattle City Light undergrounding notes, legend, and structure notes, refer to drawings UPN-UPT.
3. For duct bank alignment information, refer to drawings UPN-UPT.
4. Where duct banks cross above PS and PSD mains, install reinforcing within the duct bank (per SCL construction guideline U2-11.2). Minimum of 10' beyond the crossing.

sheet 8 of 15

change order No. 33

constructon note

refer to drawing upn1 sheet 7

power profile

alaskan way viaduct replacement

north access connection
GENERAL NOTES:

1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG 1-800-424-5555.

2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPN1-UPN2.

3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPAL1-UPAL6 AND UPT1-UPT3.

4. WHERE DUCT BANKS CROSS ABOVE PS AND PSD MAINS, INSTALL REINFORCING WITHIN THE DUCT BANK (PER SCL CONSTRUCTION GUIDELINE U2-11.2) A MINIMUM OF 10' BEYOND THE CROSSING.

CONSTRUCTION NOTE REFER TO DRAWING UPN1
CONTRACTOR SHALL VERIFY LOCATIONS OF CROSSING UTILITIES PRIOR TO CONSTRUCTION

EXISTING GRADE

 sheets

EN3 PROFILE

EN3A PROFILE

EN3B PROFILE

GENERAL NOTES:
1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG 1-800-424-5555.
2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGEND, AND STRUCTURE NOTES, REFER TO DRAWINGS UPLM1-UPM2.
3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPL1-UPL6 AND UPT1-UPT3.
4. WHERE DUCT BANKS CROSS ABOVE PS AND PSD MAINS, INSTALL REINFORCING WITHIN THE DUCT BANK (PER SCL CONSTRUCTION GUIDELINE U2-11.2) A MINIMUM OF 10' BEYOND THE CROSSING

CONSTRUCTION NOTE REFER TO DRAWING UP11

FILE NAME X:\110000-110250\1110159\Alaskan Way Viaduct North Access\CADD\Design\005-MWNA-CPR1.doc

TIME 4:00am
DATE Dec 21 2015
PLOTTED BY J. LINNEN
DESIGNED BY C. PARK
DRAWN BY J. LUNACHEK
CHECKED BY S. BARRETT
PRELIMINARY 01/01/2016
PRELIMINARY EN3 PROFILE UPD10

SCALE IN FEET HORIZ. SCALE IN FEET VERT.
GENERAL NOTES:

1. ADVANCED NOTIFICATION IS NEEDED BEFORE ANY CONSTRUCTION OCCURS. CALL BEFORE YOU DIG 1-800-424-5555.

2. FOR SEATTLE CITY LIGHT UNDERGROUNDING NOTES, LEGENDS AND STRUCTURE NOTES, REFER TO DRAWINGS UPN1-UPN2.

3. FOR DUCT BANK ALIGNMENT INFORMATION, REFER TO DRAWINGS UPAL1-UPAL6 AND UPT1-UPT3.

4. WHERE DUCT BANKS CROSS ABOVE PS AND PSD MAINS, INSTALL REINFORCING WITHIN THE DUCT BANK (PER SCL CONSTRUCTION GUIDELINE U2-11.2) A MINIMUM OF 10' BEYOND THE CROSSING.

CONSTRUCTION NOTE REFER TO DRAWING UP11.
13.8kV DISTRIBUTION DUCT BANK SECTION

1. DIMENSIONAL ROUNDING: FOR DUCT BANK WIDTHS/HEIGHTS, DIMENSIONS HAVE BEEN ROUNDED UP TO THE NEAREST INCH. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE BOTTOM, SIDE, AND TOP MINIMUM ENCASMENT DIMENSIONS ARE OBTAINED. ENCASMENT OVERPOUR SHALL NOT EXCEED 6", UNLESS SPECIFICALLY NOTED.

2. ANCHOR SPACERS WITH 1/4 STEEL REINFORCEMENT AND STEEL WIRE TIES.

DISTRIBUTION DUCT BANK SECTION NOTES

Sheet 2 of 15
Change Order No. 12-3-01
Contract B5-49
DOWEL CONNECTION (TYP.)

1. DOWEL NEW DUCT BANK INTO EXISTING VAULT WALL TO PROVIDE SHEAR CONNECTION. DOWEL #1/2" STEEL REBAR INTO THE VAULT WALL WITH EPOXY (4" MIN. EMBEDMENT) INTO THE VAULT WALL WITH EPOXY (4" MIN. EMBEDMENT). DOWELS ARE REQUIRED FOR MORE THAN SIX CONDUITS IN A DUCT BANK.

DUCT BANK DOWEL DETAIL

SCALE: 1"=1'

NOTES

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DUCK BANK DOWEL DETAIL

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DUCT BANK DOWEL DETAIL

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DUCT BANK DOWEL DETAIL

SCALE: 1"=1'

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1. DOWEL new DUCT BANK INTO EXISTING VAULT WALL TO PROVIDE SHEAR CONNECTION. DOWEL #1/2" STEEL REBAR INTO THE VAULT WALL WITH EPOXY (4" MIN. EMBEDMENT) INTO THE VAULT WALL WITH EPOXY (4" MIN. EMBEDMENT). DOWELS ARE REQUIRED FOR MORE THAN SIX CONDUITS IN A DUCT BANK.

DUCT BANK DOWEL DETAIL

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CONSTRUCTION NOTES:
1. THIS DETAIL REFLECTS THE CONDUIT TERMINATION CONDITION DEPICTED WITHIN THE SR99 TUNNEL PROJECT DESIGN. THE CONTRACTOR SHALL CONNECT TO THE CAPPED CONDUITS IN THE LOCATIONS NOTED ON THE PLANS.
2. SAND-BACKFILL SHALL BE REMOVED VIA VACUUM TRUCK. CAVE SHALL BE TAKEN TO AVOID DAMAGING THE EXISTING CONDUITS AND WATERPROOFING.
3. DUCT BANK ENCASEMENT SHALL ENCOMPASS EXISTING DOWEL BARS TO CONNECT DUCT BANK TO TUNNEL STRUCTURE.
4. WHERE DUCT BANK HAS LESS THAN 3' COVER, A STEEL PLATE SHALL BE INSTALLED IMMEDIATELY ABOVE THE HSF TB ENCASEMENT.
Protect existing SCL vault, protect support substation yard and retaining wall.

Approximate location of EX. wall footing as encountered in the field, per survey, received on 11/16/15.

Contractor shall adjust the EN1 duct bank, as needed, to fit between the substation wall footing and vault OSTM030.

EN1 Duct Bank Section

Approximate location of vault as encountered in the field, per survey, received on 11/16/15.