



March 18, 2015

TO: Marco Foster, PE MS 47354 / 360-705-7824

THRU: Matthew D. Preedy, PE NB82-230 / 206-805-2863

FROM: Paul E. Johnson, PE NB82-230 / 206-805-2920

SUBJECT: 007999 – SR99 Bored Tunnel Alternative Design-Build Project
Federal-Aid No. BR-NH-STP-STPF-0099(111)
CO# 088 – S. Portal 26kV Vista Switch Rev

Attached for HQ review and execution is Change Order No. 088 "S. Portal 26kV Vista Switch Rev".

DESCRIPTION:

This change order revises the scope of work and associated costs for the installation of a 26kV vista switch vault along with additional ductbanks in the vicinity of the south tunnel portal area. These are changes to the work specified in Technical Requirement Section 2.56.4.2, Electrical Power, for the Design-Builder. WSDOT will seek reimbursement from the Seattle City Light (SCL) based on the change order cost and the betterments requested.

EVOLUTION OF CHANGE:

- October 18, 2010, Seattle City Light (SCL) issued a memorandum to Elcon Electric (firm representing the Design-Builder), titled: *Seattle City Light Service Strategy/ WSDOT SR 99 Bored Tunnel-Seattle*. The memorandum stated the Design-Builder would be required to construct the pad for a 7-position switch enclosure and extend ducts from an existing vault as a requirement for the South Portal Permanent Service. The letter also indicated the pad and switch would be located south of S. Charles Street on the City Side Trail.
- October 28, 2010, proposals due from prospective bidders.
- November 10, 2010, SCL sends a letter to WSDOT requesting the Design-Builder install a 7-position switch enclosure. SCL included their recommendation for cost responsibility. With SCL and WSDOT each being responsible for 3 positions (42.9% of the cost) and the Design-builder for one position (14.2% of the cost)
- December 8, 2011, the Design-Builder issued plans for the 26kV service to the South Operations Building (SOB) and the associated vista switch vault. The plans included the vault and pad for the switch as required by SCL in their October 18, 2010 memo to the Design-Builder. During this time, WSDOT was working with the City on the urban design for the project. As part of the urban design, decisions were made to try to minimize the visual impact from the east due to the elevated SR 99 NB off-ramp by providing a landscaped mound. The soil mounding made the Design-Builder's plan for locating the vista switch impractical as SCL had stated in their October 18, 2010 letter. Thus on April 2, 2012 WSDOT presented conceptual plans with different options for locating the vista switch to Seattle Department of Transportation (SDOT) and SCL. A determination was made to place the vista switch at the preferred location, approximately 350 feet north of S. Charles Street.

- On November 28, 2012, The Design-Builder released for construction plans based on the preferred vista switch location. The design was not complete since power to the new vault and the number of conduit needed had not been determined. However, the Design-Builder wanted to construct the ductbank to the SOB prior to having the area inaccessible due to staging needs for the TBM assembly.
- Mid February 2013, SCL proposed the final configuration for the ductbanks incorporating the Design-Builder's November 28, 2012 design from the vault to the SOB. SCL's proposal includes both SCL and WSDOT revisions. SCL added conduit for future connections to the north and WSDOT added conduits for future connections by property owners once WSDOT surpluses the properties along 1st Ave. WSDOT made a decision to add the conduit to the future properties to potentially increase the value of the property. More importantly, adding the conduit now would ensure that the new path, landscaping and other infrastructure would not need to be rebuilt in the future in order to provide electrical services to the properties. This would also reduce impacts to the users of the new path.
- March 2013, The Design-Builder starts design of the SCL proposed revisions after requesting and receiving Notice to Proceed (NTP).
- April 9, 2013, Susan Everett- WSDOT Program Design Manager, writes a letter to SCL summarizing recent coordination meeting discussions, and identifies WSDOT's understanding of agreed on cost responsibilities based on SCL's February 2013 proposed configuration
- July 9, 2013, The Design-Builder releases for construction the revised design (NDC 060) for the 26kV service to the SOB.
- August 26, 2013, Susan Everett- WSDOT Program Design Manager writes a follow up letter to SCL with updated design elements, again identifying WSDOT's understanding of cost responsibilities. This follow up letter is a result of the D-B's released for construction plans that finalize ductbank configurations and locations. WSDOT was able to finalize shared cost responsibilities based on prorated ratios of conduits based on each parties is responsible.
- Early December 2013, WSDOT develops initial cost estimate of \$426,372. The initial estimate was lower than the actual cost incurred by the Design-Builder since it did not include cost for removal and disposal of contaminated material, vault placement requiring demolition of old building foundations for shoring installation, deeper excavation than expected, coordination with other work in a congested work site and higher material cost.
- Early December 2013, The Design-Builder constructs the revised SOB 26kV service.

ENTITLEMENT:

The decision to add additional conduit, move the vista switch from the location originally identified by SCL and to delay some of the work, was made by WSDOT with input from SCL and SDOT. Thus the Design-Builder is entitled to an equitable adjustment for this additional work pursuant to Section 11.4 (a) of the Contract.

PRICING THE CHANGE:

The Design-Builder submitted a cost proposal for the SOB vista switch, which after review a final negotiated cost of \$1,985,000 was agreed upon.

PRICE:

WSDOT has agreed to compensate the Design-Builder for all Work pursuant to one new lump sum item, "CO 88, S. Portal 26kV Vista Switch Rev" in the agreed to amount of \$1,985,000.

CONTRACT TIME:

The Design-Builder and WSDOT agreed that this Change Order has no impact to Contract time.

APPROVALS:

- Andy Walter- Asst. Contract Administrator, gave approval to proceed March 13, 2014
- Matt Preedy- Deputy Program Administrator, gave change approval March 9, 2015
- Marco Foster- HQ Construction, gave change approval March 9, 2015
- Anthony Sarhan- FHWA, gave change approval March 9, 2015.
- Diane McCreery-WSDOT Business Group gave funding concurrence March 9, 2015

ATTACHMENTS TO THE MEMO:

- Change Order No. 088
- Change Order Checklist
- Change Order Cost Justification
- Approval e-mails listed above
- November 10, 2010 Letter from SCL, Dave Smith- Sr. Capital Projects Coordinator
- February 26, 2013 Meeting Minutes w/ STP, WSDOT, SCL, SDOT and HNTB; and SCL conceptual design plans
- April 9, 2013 Letter from WSDOT, Susan Everett- Program Design Manager
- August 26, 2013 Letter from WSDOT, Susan Everett- Program Design Manager
- September 16, 2013 Letter from WSDOT, Andy Walter- Assistant Contract Administrator
- December 10, 2013 Email from WSDOT , Doug Murdock- Interlocal and Utility Agreements

If you have any questions, please contact Paul E Johnson at (206) 805-2920.

cc: Project File

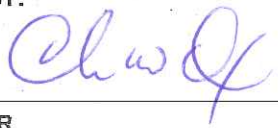
**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 03/10/15
Page 1 of 14

CONTRACT NO: 007999 **FEDERAL AID NO:** STP-BR-IM-0099(11)
CONTRACT TITLE: SR 99, BORED TUNNEL ALTERNATIVE - DESIGN BUILD PRO
CHANGE ORDER NO: 88 S.PORTAL 26KV VISTA SWITCH REV

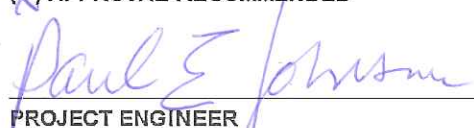

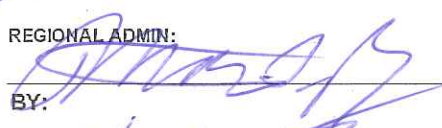

PRIME CONTRACTOR: SW0080679 SEATTLE TUNNEL PARTNERS
 999 THIRD AVE STE 2424
 SEATTLE WA 98104-4044

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

ENDORSED BY:  <hr/> CONTRACTOR 3/10/15 <hr/> DATE	SURETY CONSENT: <hr/> ATTORNEY IN FACT <hr/> DATE
---	--

ORIGINAL CONTRACT AMOUNT: 1,089,700,002.00
CURRENT CONTRACT AMOUNT: 1,109,325,166.27
ESTIMATED NET CHANGE THIS ORDER: 1,985,000.00
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 1,111,310,166.27

Approval Required: Region Olympia Service Center Local Agency

<input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED  <hr/> PROJECT ENGINEER 3/18/15 <hr/> DATE	EXECUTED:  <hr/> STATE CONSTRUCTION ENGINEER 3-14-2015 <hr/> DATE
<input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED REGIONAL ADMIN:  <hr/> BY: 3/18/2015 <hr/> DATE	OTHER APPROVAL WHEN REQUIRED  <hr/> SIGNATURE 3/18/15 <hr/> DATE FHWA-NP <hr/> REPRESENTING vcap vcap 3/19/15

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 03/10/15
Page 2 of 14

CONTRACT NO: 007999

CHANGE ORDER NO: 88

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:

The first paragraph above is deleted and replaced with:
All work, materials and measurements to be in accordance with the Contract Documents for this Project. Unless specifically modified herein, all provisions in the Contract Documents shall remain in full force and effect.

DESCRIPTION:

This change order revises appropriation of work for the installation of a 26kV Vista Switch and Ductbanks in the vicinity of the south tunnel portal area. These changes (as shown in RFC, NDC 060; pages 4 through 14 of this change order) restore switching capabilities to the underground 26kV system, or are betterments; and are supplemental to the work specified in Technical Requirement Section 2.56.4.2, Electrical Power.

The revised Work includes, but is not limited to, the following:

- A. (8) 5-inch conduits extending from the new underground 26kV Vista Vault to RV 8.
- B. (4) 5-inch conduits extending south from the new underground 26kV Vista Vault and stubbed out near RV8, within the WOSCA property.
- C. (4) 5-inch conduits extending from the new underground 26kV Vista Vault to RV 9.
- D. (2) 4-inch conduits extending from the new underground 26kV Vista Vault to RV 8 and RV 9.
- E. (4) 4-inch conduits extending north from the new underground 26kV Vista Vault and stubbed out on the south side of S. Dearborn St.
- F. Work associated with a larger vista switch vault and surface mounted support pad.

MEASUREMENT:

No specific unit of measurement shall apply to the new lump sum item "CO 88, S.Portal 26kV Vista Switch Rev".

PAYMENT:

The lump sum price for "CO 88, S.Portal 26kV Vista Switch Rev ", in the amount of \$1,985,000 shall clear any and all issues associated with PCO#124 and shall be full pay for all costs, including design, relating to the revisions described above and within NDC 060 (including any associated RFI changes), and any other costs incurred to provide a completed system.

CONTRACT TIME:

The Design Builder and WSDOT agree that this Change Order has no impact to Contract Time, and as such, no extension of Contract Time will be granted as a result of this Change Order.

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 03/10/15
Page 3 of 14

CONTRACT NO: 007999 CHANGE ORDER NO: 88

ITEM NO	GROUP NO	STD ITEM	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE
1073 <i>94</i>	02		CO 88, S.PORTAL 26KV VISTA SWITCH REV	L.S.	0.00	0.00	1,985,000.00

1,985,000.00

SR 99 Tunnel Project



CONTRACT 7999
CHANGE ORDER 088
SHEET 4 OF 14

Seattle Tunnel Partners

Notice of Design Change

DESIGNER: HNTB
NDC NO.: 060
DATE: 03/11/2013

Note: This form serves as advance notice of changes being made to documents that have been previously RFCd.

RFC Package, Title: South Operations Building - Mechanical
RFC Package, Original Doc Control Number: H-D-PAK-SOB-TR2.34-00362-04-RFC-1211-21
NDC Package Name: S. Ops Service Revisions
NDC Package Doc Control Number: H-D-PAK-SOB-TR2.34-00362-10-NDC-1303-11

REASON FOR CHANGE

- Conflict in plans
- Design progress
- Contractor Requested Change
- Other: _____

DESCRIPTION OF CHANGE

(Note. Work should not be constructed until plans are reissued):

Change profile of power service for S. Ops Bldg. to accommodate temporary UG utilities to TBM;
Add feeder conduit ductbanks into and out of new Vista Vault to existing SCL ring vaults per revised SCL requirements.
Add Vista Vault design plan, elevation and detail, per SCL. This design will be provided by SCL and added to this NDC.

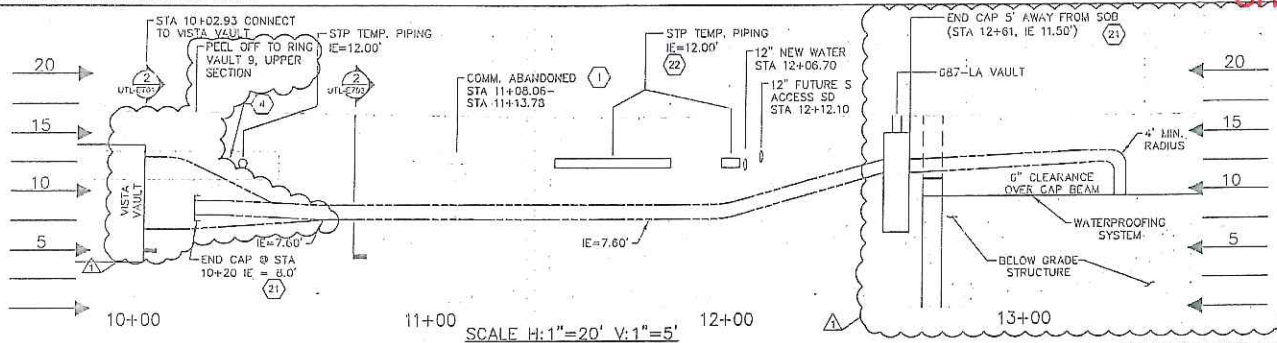
DRAWINGS AND/OR SPECIFICATIONS TO BE REVISED AND/OR ADDED

Revised UTL-E100; E701, E701
Add plan, profile, detail sheets for feeder conduit ductbanks between SCL Ring vaults #8 and #9 and new Vista Vault. E702,
Add plan, elevation and detail sheets for new Vista Vault E702, E703, E704, E705, E706, E707

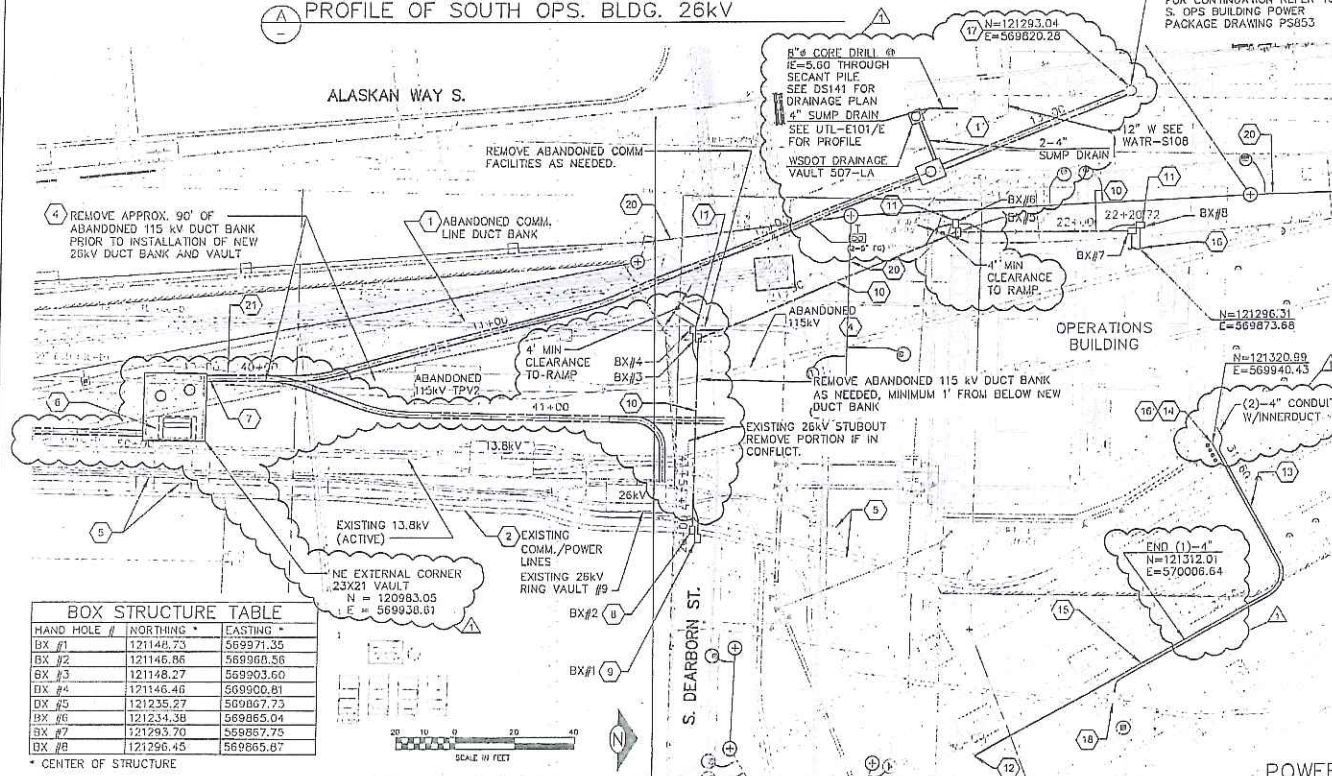
DWGS FOR IRCR WILL BE PROVIDED ON 3/18/13 EXPECTED RFC DATE: 3/29/13

	<u>3/11/13</u>
Design Manager	Date
	<u>3/11/13</u>
Post Design Services Manager	Date

H-D-PAK-SOB-TR2.34-00362-14-NDC-1306-17
 H-D-PAK-SOB-TR2.34-362-04-NDC-1206-17



SCALE H:1"=20' V:1"=5'
 PROFILE OF SOUTH OPS. BLDG. 26KV



- CONSTRUCTION NOTES**
- 1 COMM. DUCT BANK 19"x20" IS ABANDONED. REMOVE WHERE INDICATED OR IN CONFLICT & CAP PER SCL STANDARDS.
 - 2 EXISTING ACTIVE COMM./POWER PROTECT IN PLACE.
 - 4 ABANDONED 115KV DUCT BANK, REMOVE WHERE INDICATED OR IN CONFLICT & CAP PER SCL STANDARDS.
 - 5 EXISTING ACTIVE 115KV/26KV, PROTECT IN PLACE.
 - 6 23'L x 21'W VISTA SWITCH VAULT - BELOW GROUND SWITCH 9'5"L x 6'5"W - ABOVE GROUND SEE UTL-E704 FOR VAULT DETAILS.
 - 7 CONNECT TO VISTA VAULT WITH (6)-4" PVC & (6)-5" FG CONDUIT.
 - 8 RELOCATE EXISTING WSDOT FIBER PULLBOX TO AS SHOWN. REPAIR/EXTEND CONDUIT AS REQUIRED. CONNECT TO RELOCATED WSDOT PULLBOX (FIBER) (2)-4" PVC CONDUIT W/(4) INNERDUCTS PER WSDOT STD SPEC 9-29.(5).
 - 9 RELOCATE EXISTING WSDOT POWER JUNCTION BOX TO AS SHOWN. REPAIR/EXTEND CONDUIT AS REQUIRED. CONNECT TO RELOCATED WSDOT JUNCTION BOX (2)-4" PVC CONDUIT W/PULLTAPE.
 - 10 COMMON TRENCH W (4)-4" PVC CONDUIT - FOR PROFILE SEE SHEET UTL-E101, B (2)-4" PVC CONDUIT W/PULLTAPE. (2)-4" PVC CONDUIT W/INNERDUCT.
 - 11 WSDOT STANDARD BOXES WITH NON SLIP LIDS WHERE IN PEDESTRIAN TRAFFIC AREAS. (1)-POWER PER WSDOT STD PLAN J-11b TYPE 6 (1)-COMMUNICATIONS (FIBER) PER WSDOT STD PLAN J-90.10-00.
 - 12 CONNECT (2)-4" PVC W/PULLTAPE TO CENTURY LINK EXISTING PHONE VAULT.
 - 13 (3)-4" PVC CONDUIT W/PULLTAPE, MIN. 24" OF COVER. (2)-4" PVC CONDUIT W/INNERDUCT. FOR PROFILE SEE SHEET E101, C. FOR X-SECTION, SEE SHEET E701-1.
 - 14 END (3)-4" PVC W/PULLTAPE. END (1)-4" PVC W/PULLTAPE @ STA 30+80 CAPPING END.
 - 15 (2)-4" PVC CONDUIT WITH PULL TAPE, (2)-4" PVC W/INNERDUCT. MIN 36" COVER. FOR PROFILE, SEE SHEET UTL-E101, C. FOR X SECTION, SEE SHEET E701-3.
 - 16 END CONDUITS WITHIN 5' OF BLDG; CAP, MARK LOCATION IN FIELD. SEE FS151 S. OPS. BLDG SYSTEMS FOR CONTINUATION OF CONDUITS.
 - 17 DUCT BANK CONTINUES TO SWITCH GEAR ROOM.
 - 18 CONNECT (2)-4" PVC W/INNERDUCT TO EXISTING DOT VAULT.
 - 20 FUTURE SOUTH ACCESS STORM DRAIN.
 - 21 LOCATION OF EXISTING (2-5" FG) DUCT BANK. REMOVE AS REQUIRED FOR VAULT AND CONNECTIONS. TO INSTALL AT ELEVATIONS SHOWN.
 - 22 TEMP. FACILITIES FOR TUNNELING WORKS - NEW UTILITIES MAY BE IN CONFLICT UNTIL TEMP. FACILITIES ARE REMOVED.

NDC060 - UTL-E100
 POWER & COMM. SERVICE UTILITIES, PLAN & PROFILE

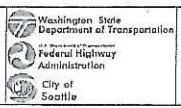
BOX STRUCTURE TABLE

HAND HOLE #	NORTHING *	EASTING *
BX #1	121148.73	569971.35
BX #2	121146.86	569960.56
BX #3	121148.27	569903.60
BX #4	121146.46	569900.81
BX #5	121235.27	569867.73
BX #6	121234.38	569865.04
BX #7	121293.70	569867.75
BX #8	121296.45	569865.87

* CENTER OF STRUCTURE



CALL 48 HOURS BEFORE YOU DIG
 1-800-424-5555



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle

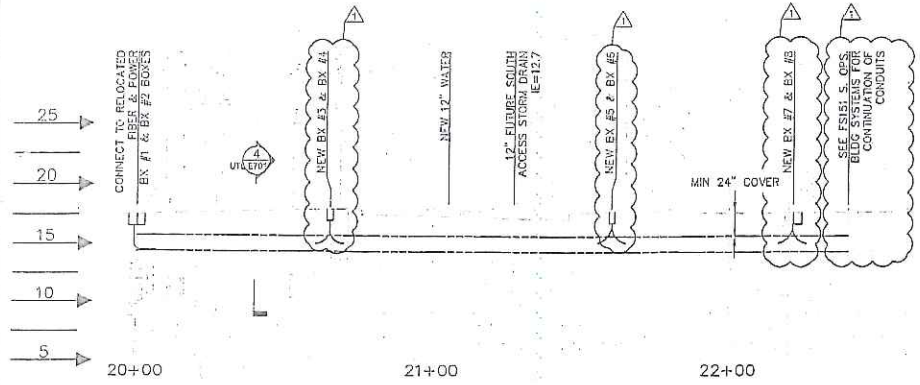
DATE OF INITIAL APPROVAL	DATE OF CHANGE



RELEASED FOR CONSTRUCTION

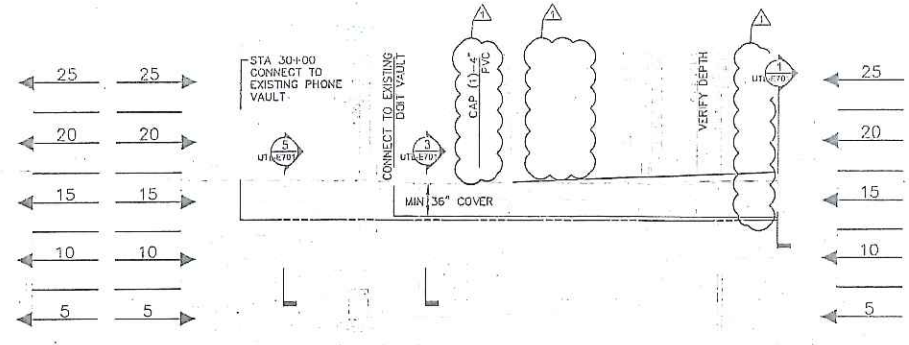
SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITIES

DATE	BY	CHKD	APP'D



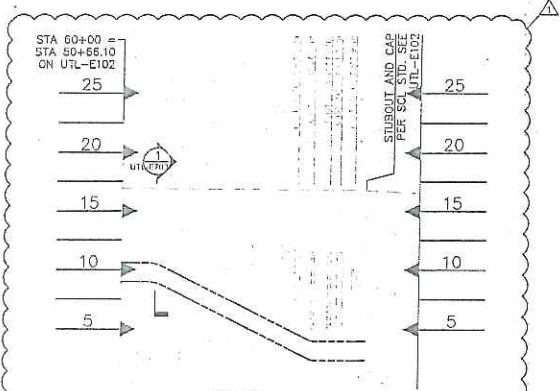
SCALE H:1"=20' V:1"=5'

PROFILE OF DEARBORN WSDOT POWER AND FIBER



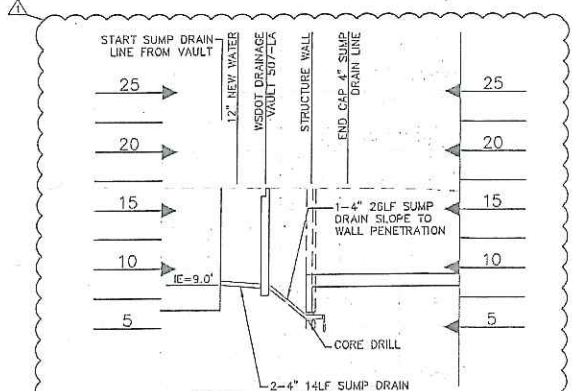
SCALE H:1"=20' V:1"=5'

PROFILE OF RAILROAD WAY COMM AND FIBER



SCALE H:1"=20' V:1"=5'

PROFILE 26KV STUBOUT SPUR



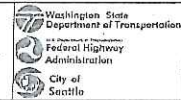
SCALE H:1"=20' V:1"=5'

PROFILE VAULT SUMP DRAIN LINE
SEE UTL-E707 FOR DETAILS

NDC060 - UTL-E101
POWER & COMM. SERVICE UTILITIES PROFILE

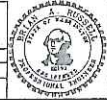
UTL-E101
 UTL-E102
 UTL-E103
 UTL-E104
 UTL-E105
 UTL-E106
 UTL-E107
 UTL-E108
 UTL-E109
 UTL-E110
 UTL-E111
 UTL-E112
 UTL-E113
 UTL-E114
 UTL-E115
 UTL-E116
 UTL-E117
 UTL-E118
 UTL-E119
 UTL-E120
 UTL-E121
 UTL-E122
 UTL-E123
 UTL-E124
 UTL-E125
 UTL-E126
 UTL-E127
 UTL-E128
 UTL-E129
 UTL-E130
 UTL-E131
 UTL-E132
 UTL-E133
 UTL-E134
 UTL-E135
 UTL-E136
 UTL-E137
 UTL-E138
 UTL-E139
 UTL-E140
 UTL-E141
 UTL-E142
 UTL-E143
 UTL-E144
 UTL-E145
 UTL-E146
 UTL-E147
 UTL-E148
 UTL-E149
 UTL-E150

CALL 48 HOURS
BEFORE YOU DIG
1-800-424-5555



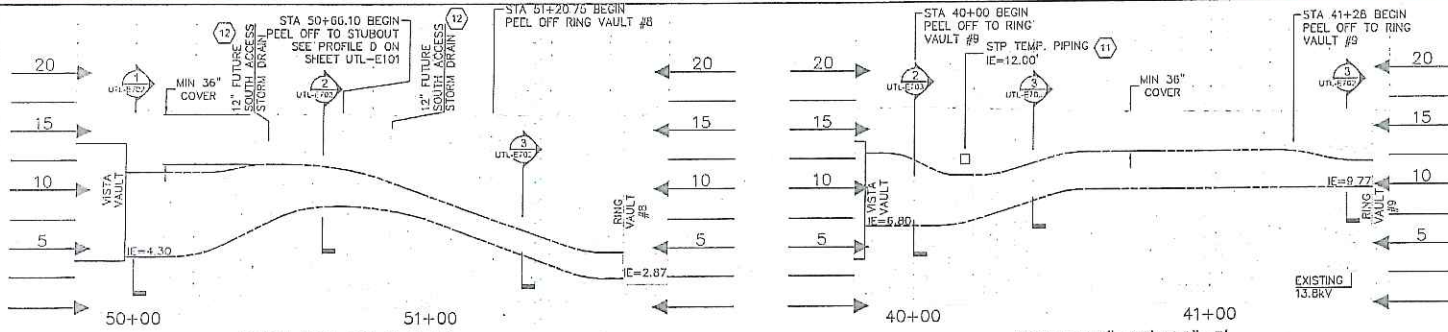
0 0 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle		NAME OR DETAILS AND DATE
Work Order No.	0000000000	DESIGNED AND CHECKED CLR
Control File		DATE
Project No.		1-1-2018 MNC
Sheet No.		CHECKED JMS
Revised		DATE
3000		



SR 99 TUNNEL PROJECT
CONTRACT PACKAGE 14
S. OPS BLDG UTILITIES

PC	XL7999
R/W	###
CC	###
VAULT PLAN NO.	###
SHEET	3 OF 12



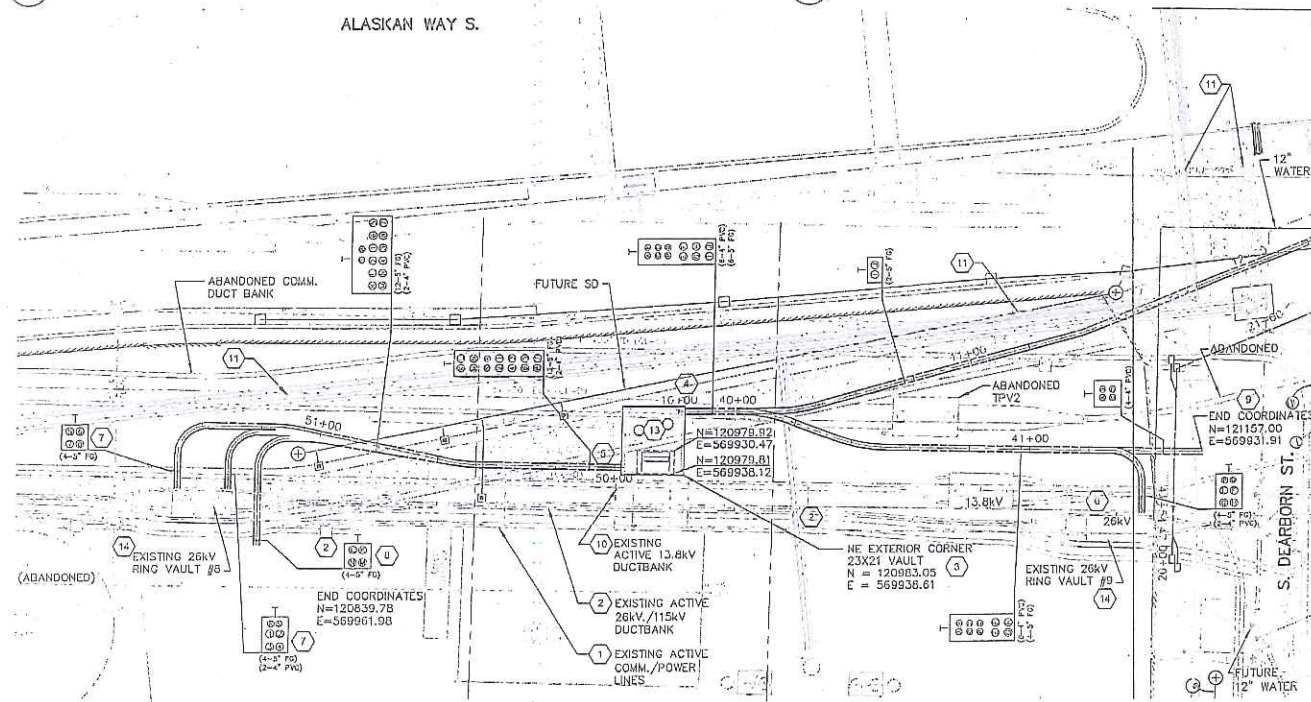
SCALE H: 1"=20' V: 1"=5'

SCALE H: 1"=20' V: 1"=5'

26kV VISTA VAULT TO RING VAULT #8

26kV VISTA VAULT TO RING VAULT #9

ALASKAN WAY S.



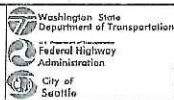
CONSTRUCTION NOTES

- 1 EXISTING COMM./POWER PROTECT IN PLACE.
- 2 EXISTING 26kV/115kV, PROTECT IN PLACE.
- 3 VISTA SWITCH VAULT 23'x21' - BELOW GROUND. SWITCH 8'-5"L x 6'-5"W - ABOVE GROUND. SEE UTL-E704 FOR VAULT DETAILS.
- 4 CONNECT TO VISTA VAULT WITH (6) 5" FG AND (4) 4" PVC CONDUIT. SEE UTL-E704.
- 5 CONNECT TO VISTA VAULT WITH (12) 5" FG CONDUIT. SEE UTL-E704.
- 6 CONNECT (4) 5" FG CONDUITS TO EXISTING RING VAULT #9. SEE UTL-E704 FOR BUTTERFLY DETAILS OF VAULT.
- 7 CONNECT (4) 5" FG CONDUITS TO EXISTING RING VAULT #8. SEE UTL-E704 FOR BUTTERFLY DETAIL OF VAULT.
- 8 STUBOUT & CAP (4) 5" FG CONDUITS, SEE E101/D FOR PROFILE.
- 9 STUBOUT & CAP (4) 4" PVC CONDUITS.
- 10 13.8kV DUCT BANK LOCATION. POTHOLE TO VERIFY EDGE OF EXISTING 13.8kV DUCT BANK. PROTECT IN PLACE. SHORING FOR VISTA VAULT TO NOT CONFLICT W/EXISTING SCL FACILITIES. REMOVE TEMP. SHORING AT COMPLETION OF VAULT.
- 11 APPROX. LOCATION OF TEMPORARY TUNNEL PIPING & VALVE BOXES. TEMP. FACILITIES FOR TUNNELING WORKS - NEW UTILITIES MAY BE IN CONFLICT UNTIL TEMP. FACILITIES ARE REMOVED.
- 12 TOP OF SCL DUCT BANK SHALL NOT EXCEED EL 12.00.
- 13 REFER TO SHEETS UTL-E704, UTL-E705, UTL-E706, AND UTL-E707 FOR VAULT DETAILS AND VAULT EXCAVATION AND BACKFILL DETAILS.
- 14 DUCT BANK INVERTS AT RV8 & 9 BASED ON INFO PROVIDED BY SCL. MAY NOT LINE UP WITH EXISTING VAULT KNOCKOUTS. CONFIRM LOCATION WITH SCL CORE OR SAW CUT IF REQUIRED.



NDC060 - UTL-E102
POWER & COMM. SERVICE UTILITIES, PLAN & PROFILE

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle		NAME OR NUMBER AND DATE DESIGNED JMT	NEW SHEET
CHECKED EJB		CHECKED EJB	
DATE	BY	DATE	BY



SR 99 TUNNEL PROJECT
CONTRACT PACKAGE 14
S. OPS BLDG UTILITIES

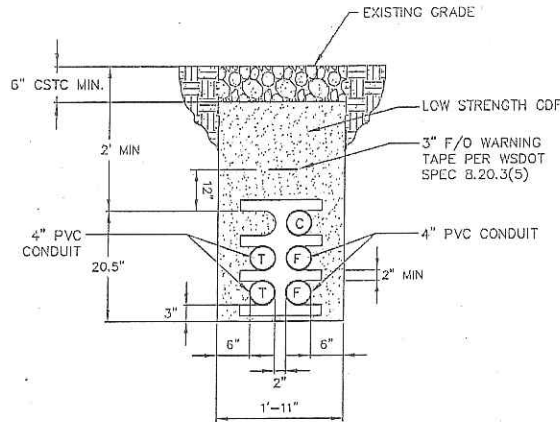
PG XL7000
R/W
CD
VAULT PLAN R3
SHEET 4 OF 12

NOTE:

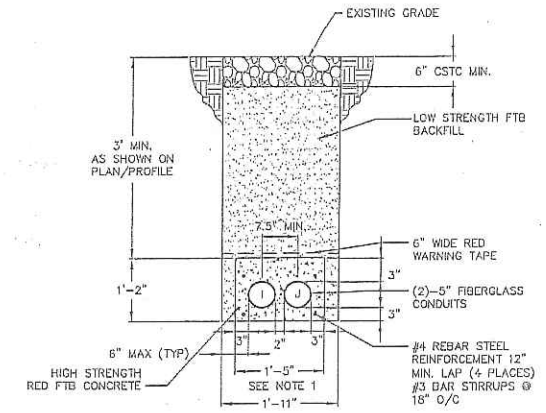
1. DIMENSIONS USED ARE BASED ON OUTSIDE DIAMETER OF CONDUITS AND ROUNDED TO NEAREST INCH. ACTUAL WIDTH TO BE DETERMINED BY CONTRACTOR TO FACILITATE DUCT BANK CONSTRUCTION.

LEGEND:

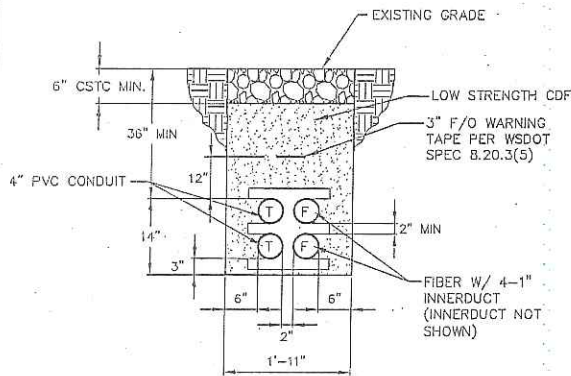
F - FIBER (EXCEPT SCL FACILITIES)
C - CABLE
P - POWER
T - PHONE



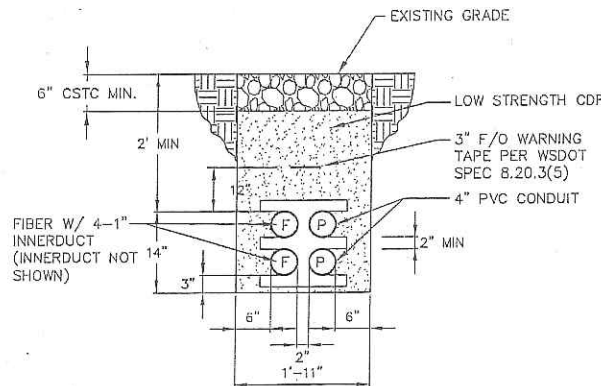
1 COMBINED PHONE/DOIT AND CABLE DUCT BANK
UTL-E101



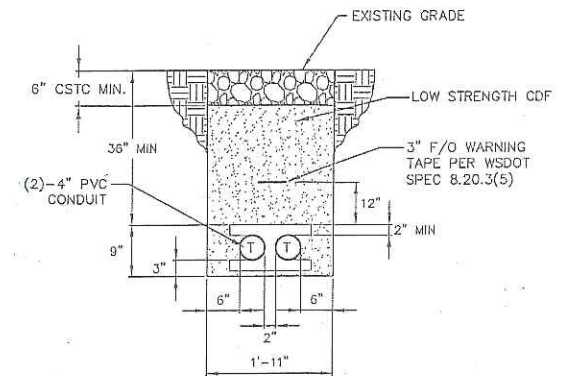
2 SCL - 26kV DUCT BANK SECTION
UTL-E100



3 PHONE/DOIT DUCT BANK
UTL-E101



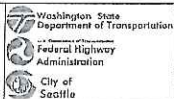
4 WSDOT FIBER/POWER COMBINED BANK SECTION
UTL-E101



5 PHONE DUCT BANK
UTL-E101

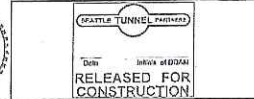
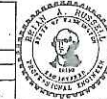
NDC060 - UTL-E701
POWER & COMM. SERVICE UTILITIES, TYPICAL SECTIONS

CALL 48 HOURS BEFORE YOU DIG
1-800-424-5555



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE

City of Seattle		NAME OR INITIALS AND DATE
DESIGNED: JMS	APPROVED:	CHECKED: DLB
PERMIT NO.:	DESIGNER'S SIGNATURE:	DRAWN: BPPC
DATE:	DATE:	DIVIDED: JMS

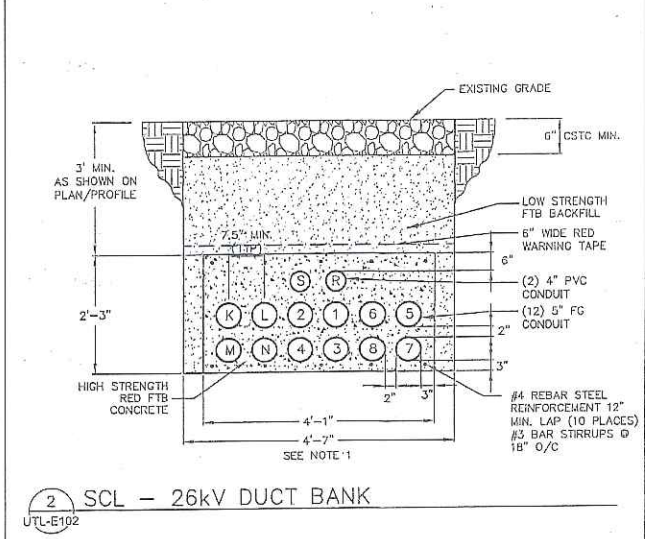
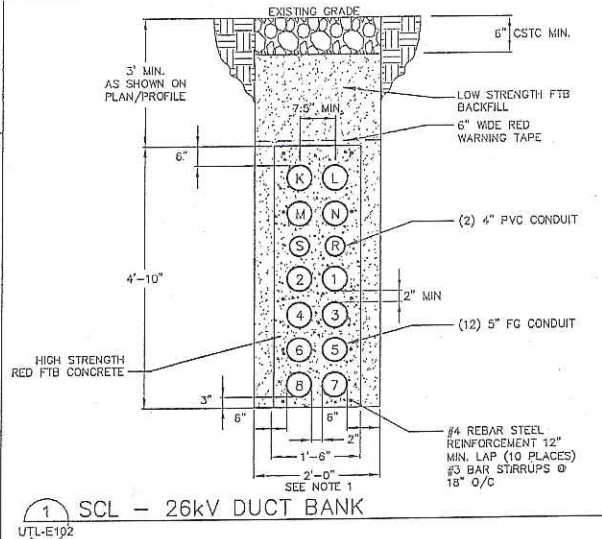


SR 99 TUNNEL PROJECT
CONTRACT PACKAGE 14
S. OPS BLDG UTILITIES

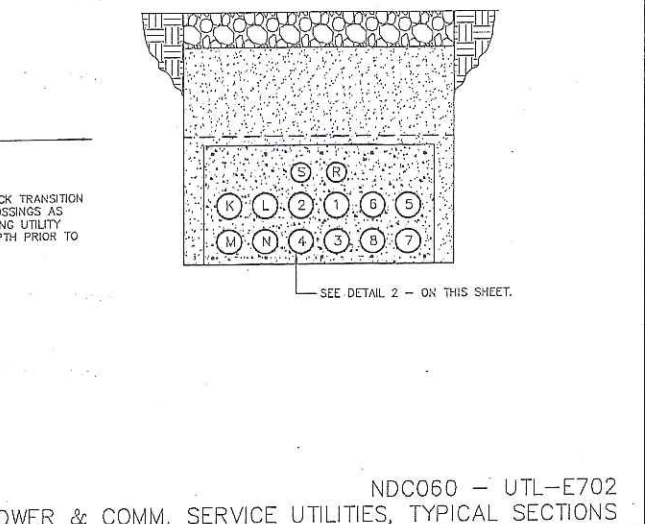
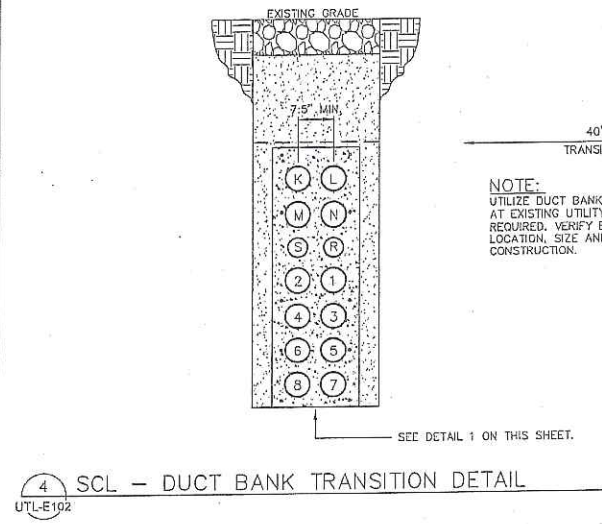
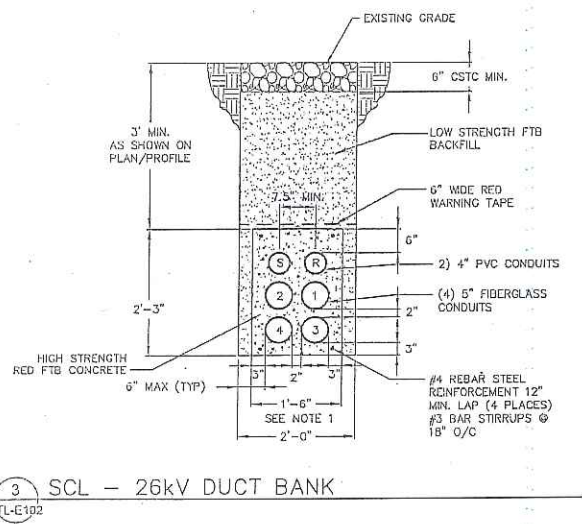
g/c: XL7099
m/w: _____
c/o: _____
VAULT PLAN NO. _____
SHEET 5 OF 12

NOTE:

1. DIMENSIONS USED ARE BASED ON OUTSIDE DIAMETER OF CONDUITS AND ROUNDED TO NEAREST INCH. ACTUAL WIDTH TO BE DETERMINED BY CONTRACTOR TO FACILITATE DUCT BANK CONSTRUCTION.



SHEET NO. 9 OF 14
 CONTRACT NO. 7999
 PROJECT NO. SR 99 TUNNEL PROJECT
 DATE: 08/11/09



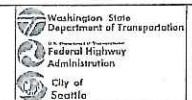
NOTE:
 UTILIZE DUCT BANK STACK TRANSITION AT EXISTING UTILITY CROSSINGS AS REQUIRED. VERIFY EXISTING UTILITY LOCATION, SIZE AND DEPTH PRIOR TO CONSTRUCTION.

3 SCL - 26kV DUCT BANK
 UTL-E102

4 SCL - DUCT BANK TRANSITION DETAIL
 UTL-E102

NDC060 - UTL-E702
 POWER & COMM. SERVICE UTILITIES, TYPICAL SECTIONS

CALL 48 HOURS BEFORE YOU DIG
 1-800-424-5555



0 2 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle
 Mark Under No. _____
 Approved: _____
 Inspector's Book: _____
 Revisions: _____
 Printed At: DUB
 DATE: _____

NAME OR INITIALS AND DATE RECEIVED ASG. CHECKED DLB
 DRAWN: MPK
 CHECKED: JVS
 ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND SHALL BE SUBJECT TO THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND SHALL BE SUBJECT TO THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS.

NEW SHEET



CRATGE TUNNEL PARTNER
 D-16 10/11/09
 RELEASED FOR CONSTRUCTION

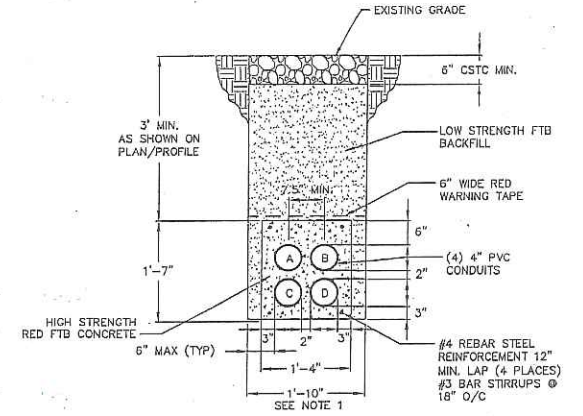
SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITES

XC XL7999
 R/W _____
 CO _____
 VAULT PLAN NO. _____
 SHEET 6 OF 12

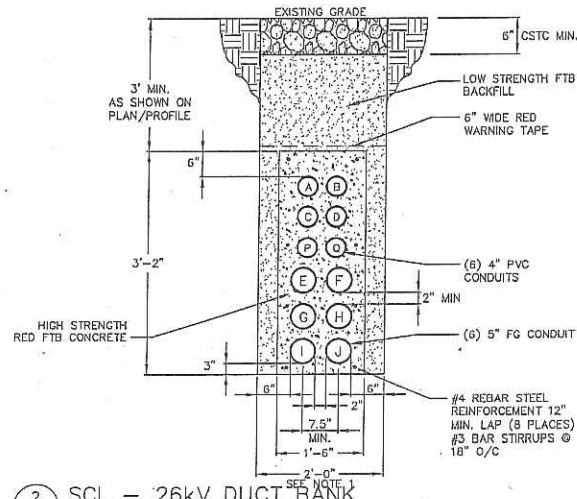
H-D-PAK-SOB-TR2.34-00362-14-NDC-1306-17
 H-D-PAK-SOB-TR2.34-362-04-NDC-1306-17

NOTE:

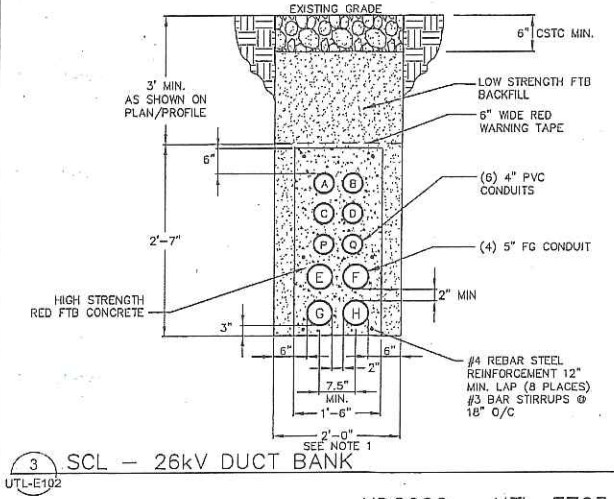
1. DIMENSIONS USED ARE BASED ON OUTSIDE DIAMETER OF CONDUITS AND ROUNDED TO NEAREST INCH. ACTUAL WIDTH TO BE DETERMINED BY CONTRACTOR TO FACILITATE DUCT BANK CONSTRUCTION.



1 SCL - 26kV DUCT BANK
 UTL-E102



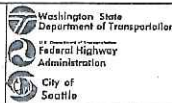
2 SCL - 26kV DUCT BANK
 UTL-E102



3 SCL - 26kV DUCT BANK
 UTL-E102

NDC060 - UTL-E703
 POWER & COMM. SERVICE UTILITIES, TYPICAL SECTIONS

CALL 48 HOURS
 BEFORE YOU DIG
 1-800-424-5555

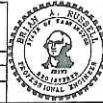


0 0 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle
 Work Order No. _____
 Date: _____
 Approved: _____
 Inspector's Sign: _____
 Location: _____
 Revised At: _____

NAME OR INITIALS AND DATE
 DESIGNED JMS
 CHECKED DLB

NEW SHEET



SEATTLE TUNNEL PARTNER
 Date: _____
 Initials: JMS/DML
 RELEASED FOR CONSTRUCTION

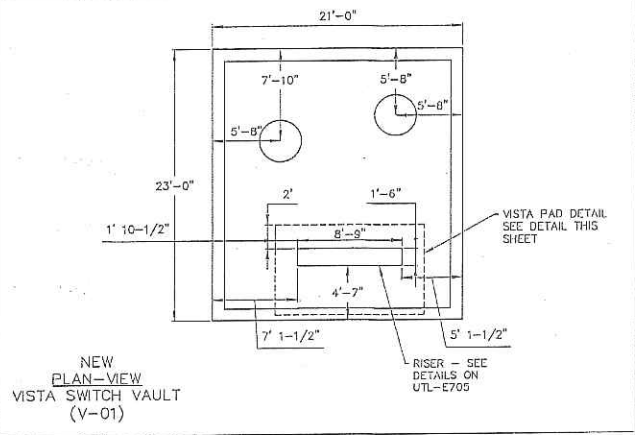
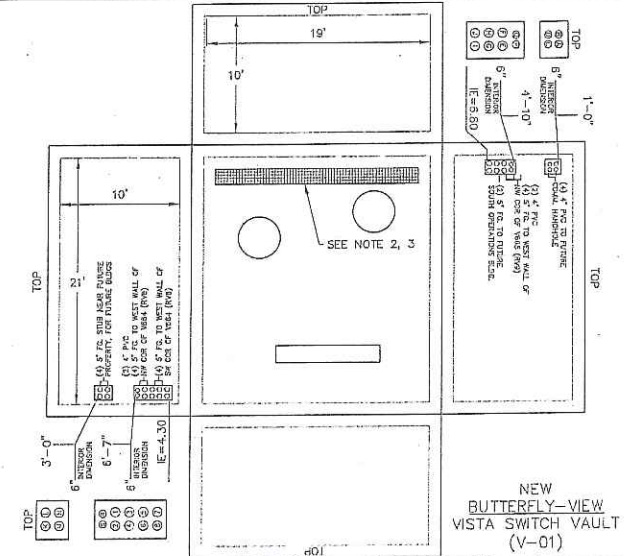
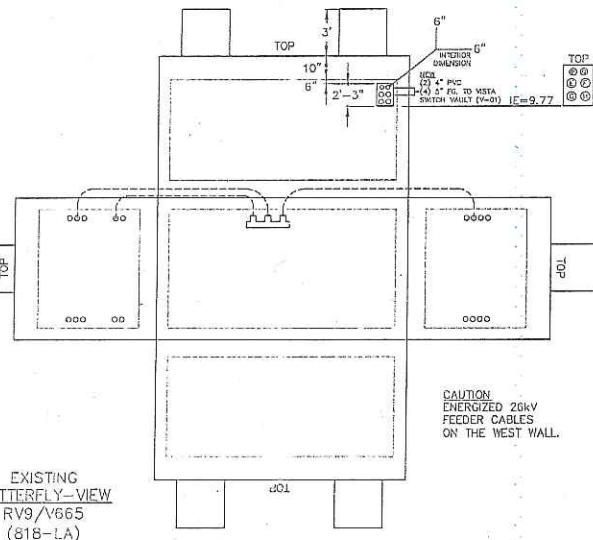
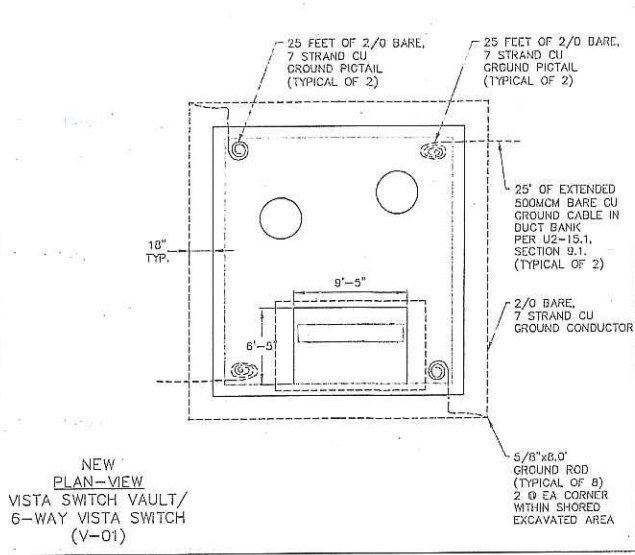
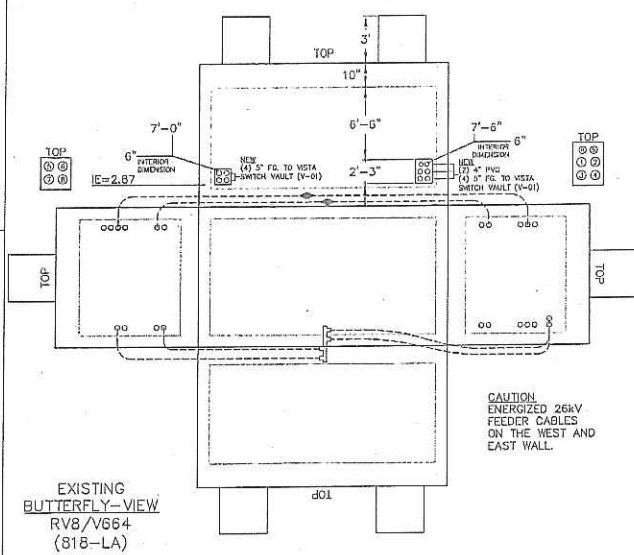
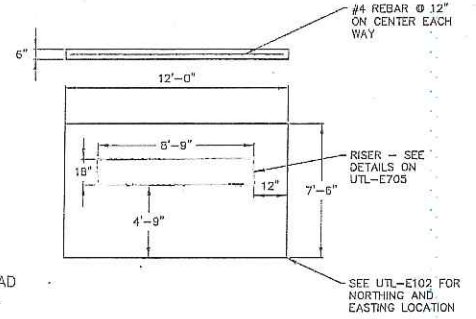
SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITIES

PC XL7999
 R/W _____
 CD _____
 VULVT PLAN NO. _____
 SHEET 7 OF 12

H-D-PAK-SOB-TR2.34-00362-14-NDC-1306-17
 H-D-PAK-SOB-TR2.34-362-04-NDC-1306-17

NOTES:

- DIMENSIONS USED ARE BASED ON OUTSIDE DIAMETER OF CONDUITS AND ROUNDED TO NEAREST INCH. ACTUAL WIDTH TO BE DETERMINED BY CONTRACTOR TO FACILITATE DUCT BANK CONSTRUCTION.
- SUMP PER SCL CONSTRUCTION STANDARD NUMBER U2-12.1/NVH60.
- SCL TO PROVIDE ALL REQUIRED MATERIALS AND PERFORM ALL WORK NECESSARY TO FIT OUT VAULT, INCLUSIVE OF RACKING, GROUNDING, CABLING SPLICING, SWITCHES, LIGHTING AND SUMP PUMP SYSTEM.



1 VISTA SWITCH VAULT/6-WAY VISTA SWITCH AND RING VAULTS 8 & 9
 UTL-E102
 NDC060 - UTL-E704
 26KV VISTA VAULT DETAILS

CALL 48 HOURS BEFORE YOU DIG
 1-800-424-5555



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLUTED TO ORIGINAL SCALE.

City of Seattle

Draw Order No. _____
 Permit No. _____
 Date: _____

MADE ON INITIALS AND DATE
 DESIGNED JMS
 CHECKED AUB

NEW SHEET

DRAWN JMS
 CHECKED JMS



SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITES

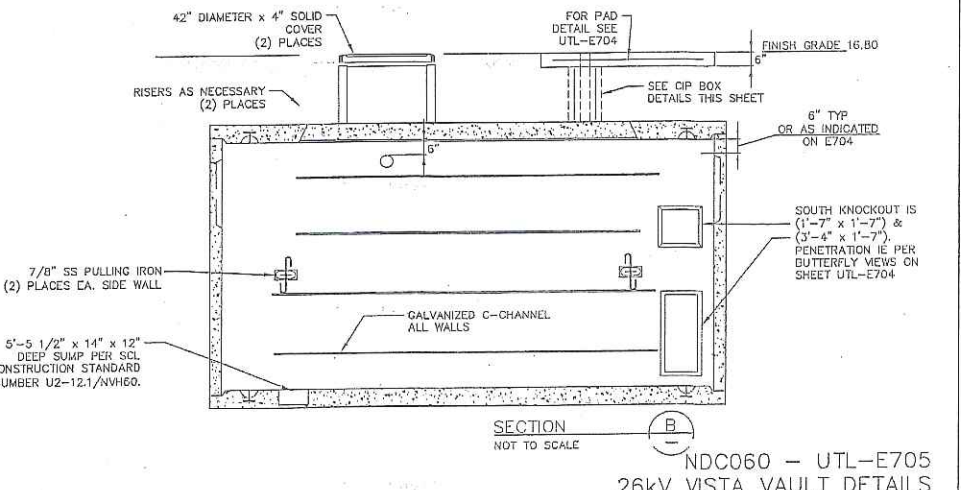
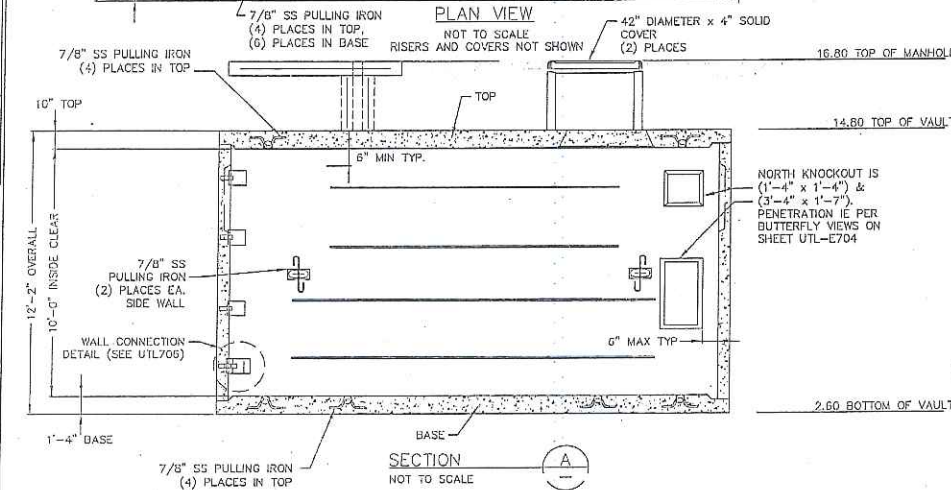
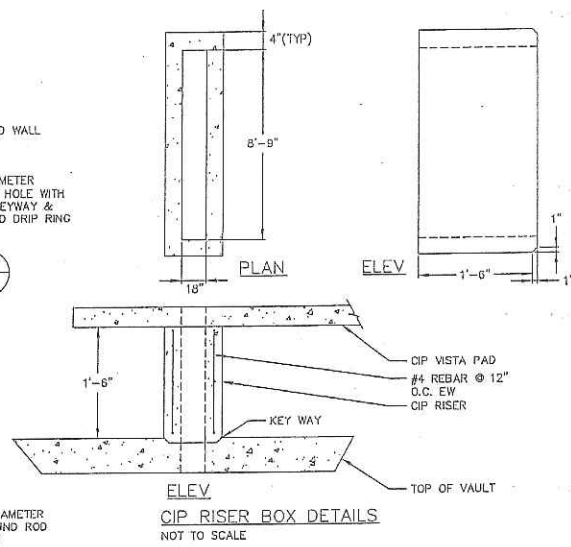
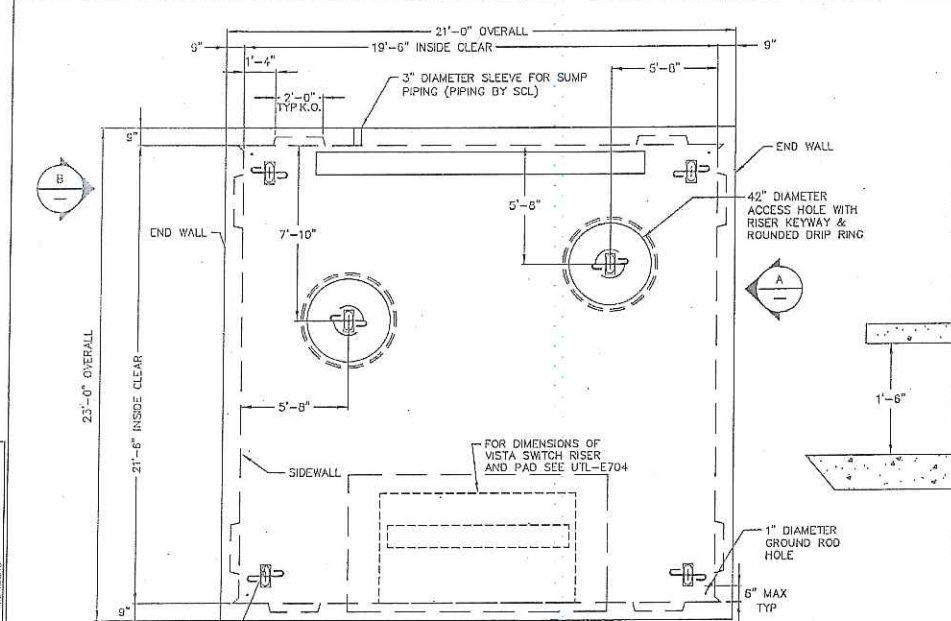
PC	XL7999
R/W	
CO	
VAULT PLAN NO	
SHEET	B OF 12

C:\cortado\p\user\va\va010327\17999-PP-UTL-E704.dwg
 Date: 10/1/1999

H-D-PAK-SOB-TR2.34-00362-14-NDC-1306-17
 H-D-PAK-SOB-TR2.34-362-04-NDC-1306-17

NOTES:

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH F'C = 7000 PSI
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-02 BUILDING CODE
5. LOADS: AASHTO H-25 TRUCK WHEEL P=20.0 kips
 ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
 30% IMPACT FOR LESS THAN 3 FT. SOIL COVER
 SOIL DENSITY 120 pcf
 40 pcf EQUIVALENT FLUID PRESSURE (E.F.P) LATERAL SOIL PRESSURE ABOVE WATERTABLE
 80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE
 100 pcf LIVE LOAD SURCHARGE FOR SOIL COVER > 6/0" TOP OF VAULT 5'-0" BELOW FINISHED GRADE (ASSUMED) WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)
6. DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL
7. PULLING IRONS SHALL BE PROVIDED AT LOCATIONS SHOWN ON DRAWINGS AND SHALL BE DESIGNED FOR 20 KIPS MAXIMUM WORKING TENSION AND 40 KIPS ULTIMATE STRENGTH.
8. PROVIDE SIX 1/2" DIAMETER THREADED INSERT IN THE KNOCKOUT PERIMETER AT DUCT BANK ALL KNOCKOUTS AND FOR VISTA SWITCH RISER AND CIP BOX.
9. INSTALL 4-5/8"x8" COPPER CLAD STEEL GROUND RODS. 6" FROM INSIDE WALL CORNER OF VAULT.
10. VAULT SHALL HAVE A IDENTIFICATION MARKER INSIDE THE VAULT. MARKER SHALL CONTAIN THE FOLLOWING INFORMATION: VAULT MANUFACTURE, MANUFACTURE DATE, DESIGN LOADING, PULLING IRON CAPACITY.
11. VAULT BASE PREP & BACKFILL PER SCL STD SEE SHEET UTL-E707 VAULT EXCAVATION AND BACKFILL DETAILS.
12. SEE SHEET UTL-E706 TYPICAL PANEL VAULT DETAILS.

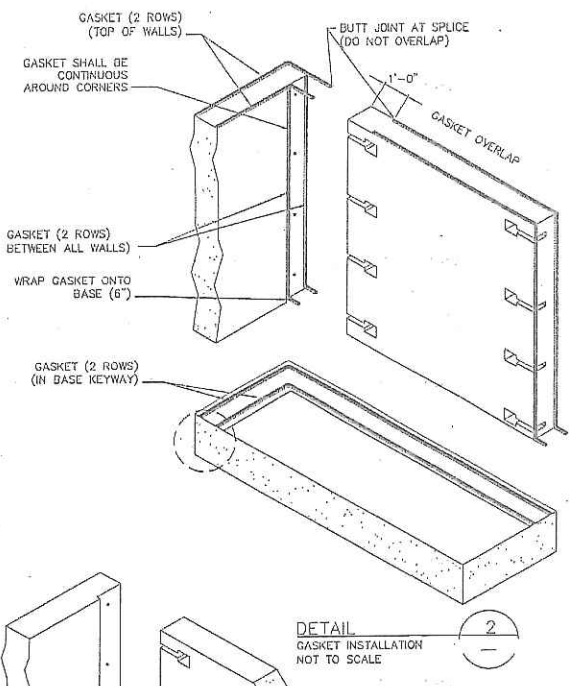
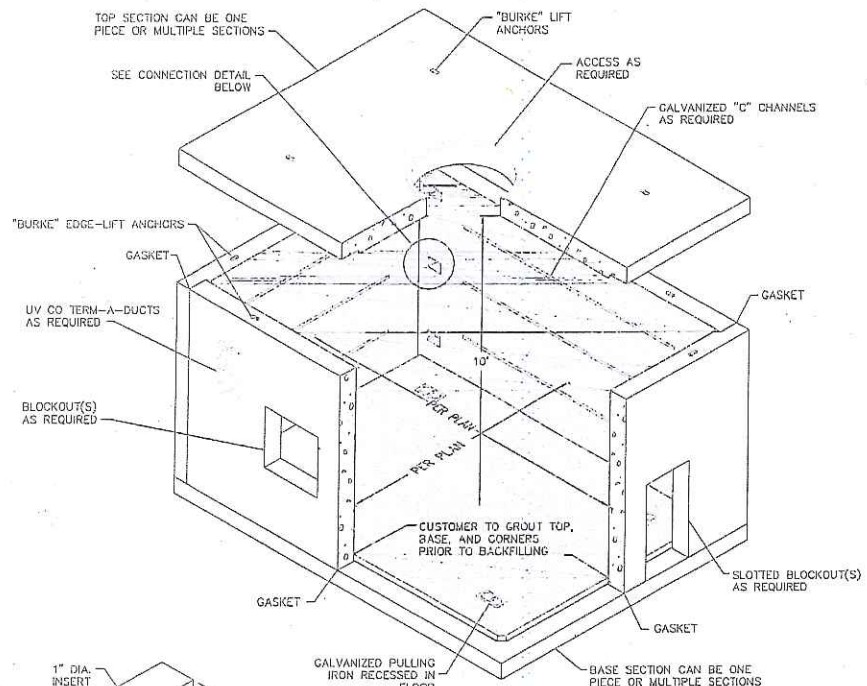


NDC060 - UTL-E705
 26KV VISTA VAULT DETAILS

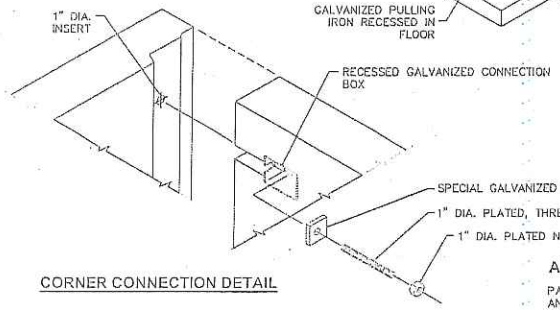
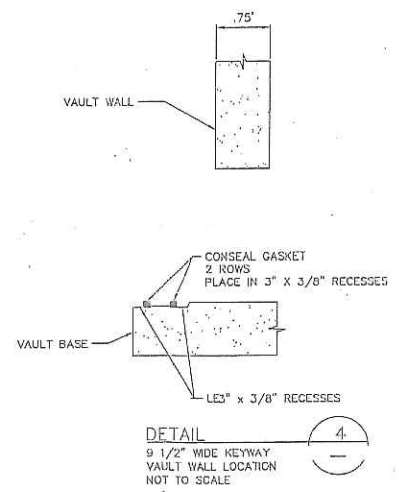
CALL 48 HOURS BEFORE YOU DIG 1-800-424-5555		City of Seattle Dept. Order No. _____ Permit No. _____ Received At _____	NAME OR INITIALS AND DATE DESIGNED _____ CHECKED _____ DRAWN _____ CHECKED _____ ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER APPROVED RULES AND REGULATIONS, WITH A 10% TOLERANCE UNLESS OTHERWISE NOTED.	NEW SHEET			SR 99 TUNNEL PROJECT CONTRACT PACKAGE 14 S. OPS BLDG UTILITES	PC XL7999 R/W _____ CD _____ VAULT PLAN NO. _____ SHEET 9 OF 12

© 2011 by the City of Seattle. All rights reserved. 10/11/10 31013 047999-P-001-E705.dwg
 Date: 10-11-2011 1:09pm

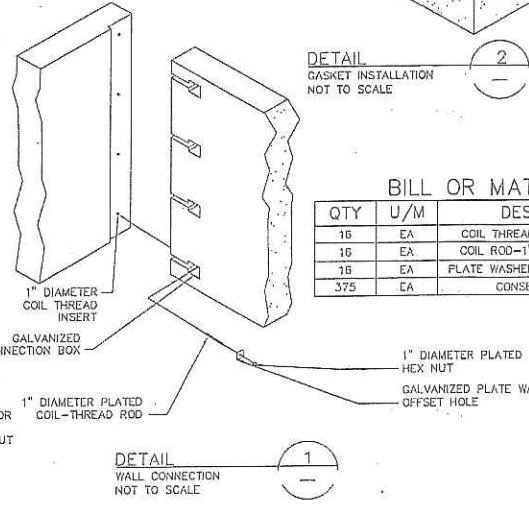
H-D-PAK-SOB-TR2.34-00362-14-NDC-1306-17
 H-D-PAK-SOB-TR2.34-362-04-NDC-1306-17



- NOTES:**
- ALL VAULTS SHALL BE UTILITY VAULT & ITEMS DEPICTED ON THIS GENERAL UV PANEL VAULT DWG'S SHALL BE SUBMITTED AS A SHOP DRAWING FOR EACH SPECIFIC PROJECT VAULT.

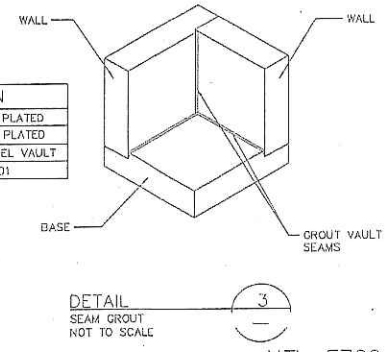


ABOUT PANEL VAULTS:
 PANEL VAULTS ARE CUSTOM DESIGNED TO ANY SIZE AND CONFIGURATION FOR JOB REQUIREMENTS. ACCESS, BLOCKOUTS AND EMBEDS AS REQUIRED.
 CONTRACTOR IS RESPONSIBLE FOR SUPPLYING CRANE FOR OFF-LOADING AND ASSEMBLY OF VAULT AND GROUTING ALL JOINTS AND BOLT POCKETS WITH NON-SHRINK GROUT. CONTACT OLDCASTLE REPRESENTATIVE FOR DETAILS.



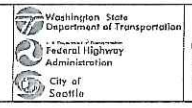
BILL OF MATERIAL

QTY	U/M	DESCRIPTION
16	EA	COIL THREAD NUT 1" - PLATED
16	EA	COIL ROD-1" X 10 1/4" PLATED
16	EA	PLATE WASHER GALV. PANEL VAULT
375	EA	CONSEAL 1" CS-101



UTL-E706
 SEATTLE CITY LIGHT
 TYPICAL PANEL VAULT DETAILS

CALL 48 HOURS BEFORE YOU DIG
 1-800-424-5555



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle

Work Order No. _____
 Permit No. _____
 Project Name _____

DATE: _____

DATE OR REVISIONS AND DATE DESIGNED
 CHECKED
 DRAWN
 CHECKED

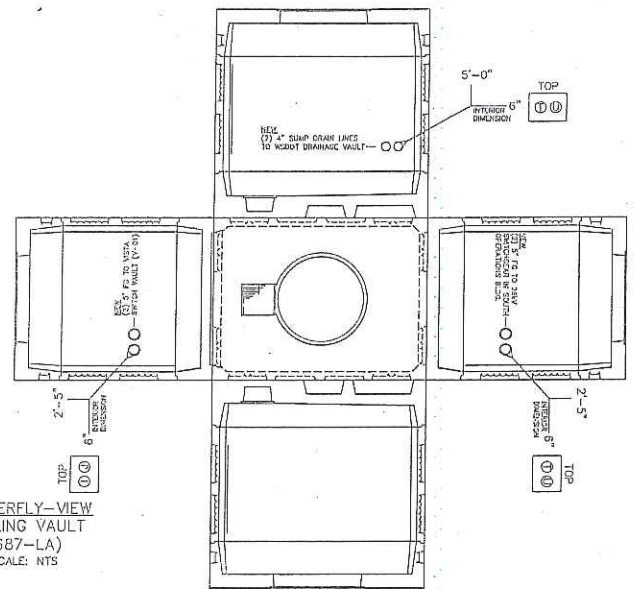


SEATTLE TUNNEL PARTNER
 RELEASED FOR CONSTRUCTION

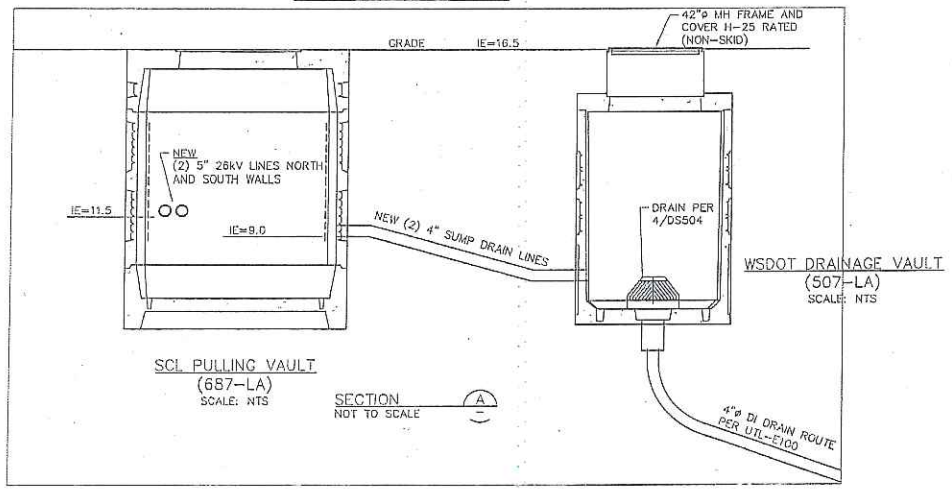
SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITIES

PC	XL7889
R/W	
CD	
VAULT PLAN NO.	
SHEET	10 OF 12

© 2008 Oldcastle Infrastructure, Inc. All rights reserved. 11/08/07 11:01:01 AM - E706.dwg
 10/27/13 11:21am



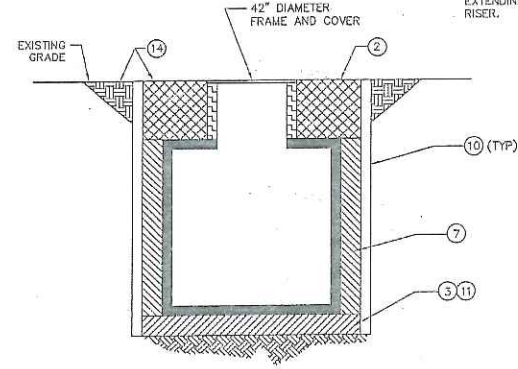
BUTTERFLY-VIEW
 PULLING VAULT
 (687-LA)
 SCALE: NTS



SCI PULLING VAULT
 (687-LA)
 SCALE: NTS

SECTION A-A
 NOT TO SCALE

WSDOT DRAINAGE VAULT
 (507-LA)
 SCALE: NTS



SECTION B-B
 NOT TO SCALE

NOTES:

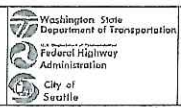
1. REFER TO GENERAL NOTES DRAWING UTL-CG01 UNDER SEPARATE COVER.
2. BACKFILL WITH CSBC OR CDF.
3. INSTALL PANEL VAULT AND BEDDING MATERIAL AND LEVEL PANEL VAULT.
4. ORIENTATION OF PANEL VAULTS ARE SHOWN ON UTL-E102 & E704.
5. PANEL VAULT INSTALLATION SHALL PRECEDE DUCT BANK INSTALLATION.
6. DEWATERING BY CONTRACTOR AS REQUIRED. SEE CONTRACT PROVISIONS "DEWATERING".
7. BACKFILL SHALL BE CDF.
8. REFER TO VISTA VAULT DETAIL UTL-E705.
9. REFER TO TYP. PANEL VAULT DETAIL UTL-E706.
10. CONTRACTOR SHALL SUBMIT A SHORING PLAN FOR REVIEW AND APPROVAL PRIOR TO EXCAVATION.
11. OVEREXCAVATION BELOW NEATLINE OF BEDDING MATERIAL MAY BE REQUIRED TO REMOVE SOFT SOILS. REPLACE OVEREXCAVATED SOILS 11/6" MINUS QUARRY SPALLS.
12. CONTRACTOR SHALL POTHOLE AND LOCATE ADJACENT AND ACTIVE UTILITIES PRIOR TO EXCAVATION TO DETERMINE ANY POTENTIAL CONFLICTS. THIS INFORMATION SHALL BE INCLUDED WITH SHORING SUBMITTAL.
13. CONTRACTOR SHALL SUBMIT A UTILITY PROTECTION PLAN PRIOR TO EXCAVATION.
14. PROVIDE TEMPORARY SURFACE RESTORATION TO MATCH EXIST. GRADE.
15. DRAINAGE VAULT TO INCLUDE FIXED GALVANIZED LADDER EXTENDING FROM BASE THROUGH THROAT OF 42" ACCESS RISER.

LEGEND:

- CRUSH SURFACING BASE COURSE (CSBC) OR CDF
- LOW STRENGTH FTB
- NATIVE UNDISTURBED SOIL OR COMPACTED BACKFILL TO 95% DRY DENSITY. (ASTM 698)

UTL-E707
 SEATTLE CITY LIGHT
 DRAINAGE VAULTS & VAULT EXCAVATION & BACKFILL DETAILS

CALL 48 HOURS
 BEFORE YOU DIG
 1-800-424-5555



0 0 1
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT PLOTTED TO ORIGINAL SCALE.

City of Seattle		NAME OR DATALS AND DATE
Project Order No.	Approved	DESIGNED
Project No.	Inspector's Sign	CHECKED
Drawn	Reviewed	
CHECKED	Fielded And Built	

NEW SHEET



RELEASED FOR CONSTRUCTION

SR 99 TUNNEL PROJECT
 CONTRACT PACKAGE 14
 S. OPS BLDG UTILITES

PC	XL7999
R/W	
CD	
VAULT PLAN NO.	
SHEET 11 OF 12	

Contract 7999 Design-Build Change Order Checklist

Cont. #: 7999	Cont. Title: SR 99 Bored Tunnel Alternative- Design Build Project	Approval from State Construction Office Required
C.O. #: 088	C.O. Title: South Portal 26kV Vista Switch Revisions	
<input checked="" type="checkbox"/> Design-Builder Initiated. <input type="checkbox"/> Agency Initiated.		
I. Executed by the State Construction Office 1. Cost or credit equal to or exceeding \$200,000.*1 2. Change in the contract documents beyond the scope, intent or termini of the original contract.*2 3. Change in DBE conditions 4. Change in contract time greater than 30 working days. *1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X X X X
II. Executed by the Region 5. Cost or credit greater than \$100,000 but less than \$200,000.*1 6. Change in contract time greater than 10 and less than or equal to 30 working days, must be related to changes implemented by change order.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X X
III. Executed by the Project Engineer 7. Determination of impacts and/or overhead. 8. Design or construction work that does not comply with the Mandatory Standards. 9. A change to Section 1 thru 26 of the Conformed Contract. 10. A change to a technical requirement in any of the following sections: Design Deviations, Geotechnical Design, Pavement, Project Documentation, Bridges and Structures, Control of Materials, MWBE Goals, QMP Requirements, or WSDOT Standard Specifications. 11. Determination of changed condition (Section 5.7.3 of the Conformed Contract). 12. Settlement of a claim (Section 24.3 of the Conformed Contract). 13. Changes in work (Section 11 of the Conformed Contract). 14. Design Builder initiated changes (Section 12 of the Conformed Contract).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	X X X X X X X X

Approvals obtained:

Project Engineer:	<i>(REQUIRED)</i>	Andy Walter	Date:	3/13/2014
Region:	<i>(REQUIRED if yes marked)</i>	Matt Preedy	Date:	3/9/2015
State Construction Office:		Marco Foster	Date:	3/9/2015
FHWA:		Anthony Sarhan	Date:	3/9/2015
Other:(Funding/Maintenance/Local Agency/Surety)		Dianna McCreery	Date:	3/9/2015
CO Reason(s) (See CCIS Source/Outcome) :		AP 03 TP AWDW		
Change Order Prepared By:		Nathan C. Bergeman	Date:	3/9/2015
Has change been entered as lesson learned?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Has design documentation been updated?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Is change approved by program management?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

To be completed by the Region :

Is the change eligible for Federal participation? *1		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Change Order Reviewed by:			Date:	3/10/15

This form represents the minimum information required by the State Construction Office

*1 Cost or Credit greater than \$200,000 or an extension in contract time over 30 working days on Projects under full Federal oversight requires FHWA approval (see Construction Manual - Ch.1-2.4C(3) and Ch. 1-3.4)

*2 Per RCW 47.28.050, any change beyond \$7,500 that is beyond the original scope shall go through the competitive bidding process..