



July 13, 2016

TO: *mf* Marco Foster,
MS-47354

THRU: *TJM* T. Madden / K. Klingman,
NB82-230

FROM: *PF* P. Fuller
NB82-66

SUBJECT: Contract 8549
AWV-Replacement NA Connection
F.A. Project No: STPF-0099(122)
CHANGE ORDER #169
King County Ductbank

Attached for your review and further processing is HQ executed change order No. "CO169 King County Ductbank". This change order has been processed in accordance with the attached change order checklist.

Description of Change

This change order installs a new King County Metro (KCM) ductbank along Harrison St. between 6th Ave. and Taylor Ave. This work is a King County Metro ductbank relocation.

Development of the Change

On 5/29/2016 via RFI#349, the Contractor informed our office there was a conflict with the new pavement roadway section and an existing KCM power duct bank vault located at approximately H line Station 95+20. The Contractor also noticed that the cover between the bottom of new PCCP and top of existing ducts gets reduced down to a little over 1ft at the vault. KCM discussed various alternatives, leaving the ductbank in place and adjusting the road superelevation to gain clearance, reducing the roadway x-section to gain more clearance, and reinforcing the roadway cross section with steel plates. After much discussion about how to solve this issue, KCM's preferred option was to construct a parallel ductbank that meets current standards for cover and duct capacity. This option is a betterment compared to the existing ductbank.

We directed our Contractor to perform the scoping and design of this ductbank in November 2015.

SDOT (Seattle Department of Transportation) will address payment to WSDOT. SDOT will fund the cost of this duct bank relocation and then they will pursue reimbursement

Marco Foster
C8549 CO169
July 13, 2016
Page 2

directly from King County Metro. Amendment 2 for Task Order WSDOT-SDOT-AH was approved and signed on June 28, 2016 (*Attachment E*).

Schedule Analysis

The Contractor claimed this added work would require an additional 54 working days. The work to construct the ductbank is on the critical path and it is all added work. We performed an independent analysis of the added work and we agreed with the Contractor's assessment. All of the work included in this change order is on the critical path of the approved schedule (*Attachment D*).

Approvals

- PE Approval – Patrick Fuller gave approval on 6/29/2016 (*Attachment B*).
- Region Approval – Dave Sowers gave approval on 6/28/2016 (*Attachment B*).
- HQ Approval – Craig McDaniel gave approval on 6/29/2016 (*Attachment B*).
- FHWA Approval – Anthony Sarhan gave approval on 6/29/2016 (*Attachment B*).
- City Funding Approval – Jonathan Layzer approval on 6/28/2016 (*Attachment B*).
- Program Management – Mario Mathisen gave approval on 7/06/2016 (*Attachment B*).

Entitlement & Price

The Contractor is entitled to additional compensation for added work to the Contract. This change results in a significant amount of added work to the Contract. The total amount of this change order is \$1,359,776.70 which includes a lump sum of \$1,221,941.00 and contract unit items making up the difference. The work also includes added bid item work to restore existing pavement.

We performed an independent estimate of \$1,336,478.37 and all parties WSDOT, SDOT and King County agreed to the scope and cost of the added work including the overhead costs for the added 54 working days. (*See Estimate – Attachment C*).

Contract Time

This change order adds 54 working days. The added work was on the critical path. There are no changes to contract interim completion dates as a result of this change order.

PF:jp
Attachments
File: C8549 3(169)

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 06/29/16
Page 1 of 10

CONTRACT NO: 008549 FEDERAL AID NO: STPF-0099(122)
 CONTRACT TITLE: SR 99, ALASKAN WAY VIADUCT - REPLACEMENT NORTH ACC
 CHANGE ORDER NO: 169 KING COUNTY DUCTBANK

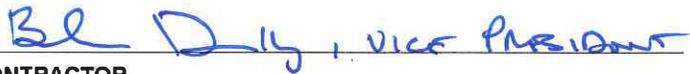
PRIME CONTRACTOR: XXXXXXXXXX GUY F. ATKINSON CONSTRUCTION, LLC.
 707 SOUTH GRADY WAY STE 500

ORIGINAL

RENTON WA 98057-3224

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

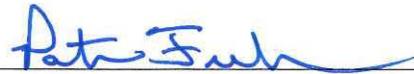
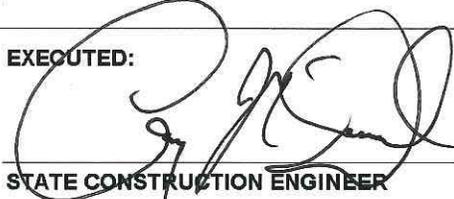
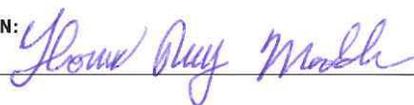
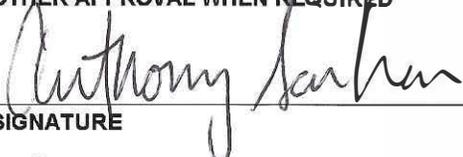
Change proposed by Contractor

ENDORSED BY:  CONTRACTOR 7/5/16 DATE	SURETY CONSENT: <hr/> ATTORNEY IN FACT <hr/> DATE
-------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------

ORIGINAL CONTRACT AMOUNT: 41,640,622.60
 CURRENT CONTRACT AMOUNT: 48,099,523.88
 ESTIMATED NET CHANGE THIS ORDER: 1,359,776.70
 ESTIMATED CONTRACT TOTAL AFTER CHANGE: 49,459,300.58

Approval Required: Region Olympia Service Center Local Agency

CAPS ✓
CCIS ✓
NB 8/5/2016

<input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED  PROJECT ENGINEER 7/14/16 DATE	EXECUTED:  STATE CONSTRUCTION ENGINEER July 25 th 2016 DATE
<input checked="" type="checkbox"/> APPROVAL RECOMMENDED <input type="checkbox"/> EXECUTED REGIONAL ADMIN:  BY: 7-18-2016 DATE	OTHER APPROVAL WHEN REQUIRED  SIGNATURE 7/21/16 DATE FHWA REPRESENTING

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 06/29/16
Page 2 of 10

CONTRACT NO: 008549

CHANGE ORDER NO: 169

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

This change order installs a new King County Metro ductbank as shown on the plans.

This change order adds the following plan sheets: C2.1-C2.6.

MATERIALS

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

MEASUREMENT

Measurement of the new lump sum item, "C0169 King County Ductbank", 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, "C0169 King County Ductbank" in the amount of \$1,221,941.00. This amount shall be full payment for all labor, equipment and materials to install the King County Metro ductbank and overhead costs associated with added days to complete the work described above per Section 1-09.1 of the Standard Specifications.

This change order shall include the following Contract Item increases:

Contract Item 16, "Removing Cement Conc. Pavement" by 317 SY, for a total of \$7,291.00.

Contract Item 25, "Handling, Hauling and Disposing Dangerous Waste" adding by EST., for a total of \$10,000.00.

Contract Item 27, "Roadway Excavation Incl. Haul" by 40 CY, for a total of \$760.00.

Contract Item 31, "Disposing of Contaminated Material" by 837 TON, for a total of \$40,259.70.

Contract Item 139, "Crushed Surfacing Base Course" by 75 TON, for a total of \$1,800.00.

Contract Item 142, "C.O.S. Conc. Pavement" by 110 CY, for a total of \$27,830.00.

Contract Item 146, "Epoxy Coated Dowel Bar" by 220 EACH, for a total of

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 06/29/16
Page 3 of 10

CONTRACT NO: 008549

CHANGE ORDER NO: 169

\$2,200.00.

Contract Item 147, "C.O.S. Tie Bar with Drill Hole" by 75 EACH, for a total of \$1,125.00.

Contract Item 161, "Street Cleaning" by 100 HR, for a total of \$11,500.00.

Contract Item 163, "Erosion/Water Pollution Control" by EST, for a total of \$10,000.00.

Contract Item 216, "C.O.S. Cement Conc. Curb" by 30 LF, for a total of \$870.00.

Contract Item 281, "Flaggers and Spotters" by 320 HR, for a total of \$13,280.00.

Contract Item 282, "Other Traffic Control Labor" by 20 HR, for a total of \$920.00.

Contract Item 329, "Force Account Potholing Utilities" by EST, for a total of \$10,000.00.

This change order totals \$1,359,776.70.

CONTRACT TIME

This change order adds 54 working days to this Contract. No changes to contract interim milestones are made as a result of this change order.

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 06/29/16
Page 4 of 10

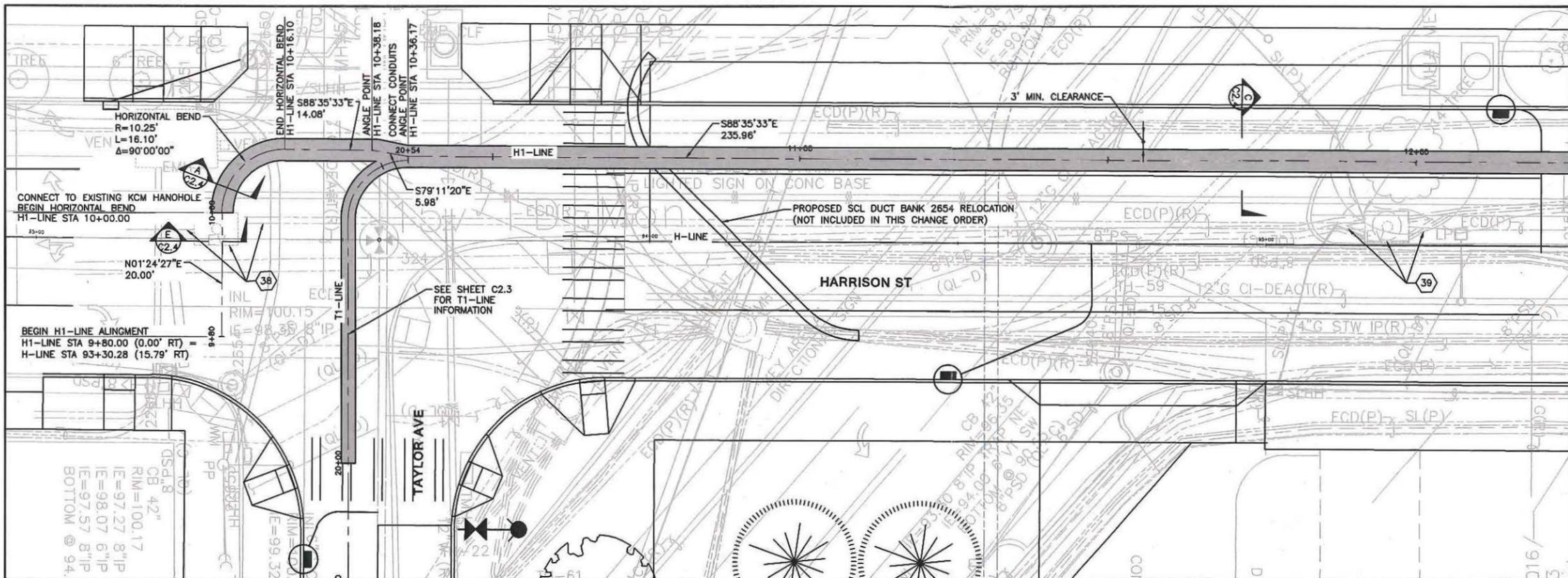
CONTRACT NO: 008549

CHANGE ORDER NO: 169

ITEM NO	GROUP NO	STD ITEM	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE
0016	72	0090	REMOVING CEMENT CONC. PAVEMENT	S.Y.	23.00	317.00	7,291.00 ✓
0025	72		HANDLING, HAULING AND DISPOSING DANGEROUS	EST.	35,000.00	0.00	10,000.00 ✓
0027	72	0310	ROADWAY EXCAVATION INCL. HAUL	C.Y.	19.00	40.00	760.00 ✓
0031	72		DISPOSING OF CONTAMINATED MATERIAL	TON	48.10	837.00	40,259.70 ✓
0139	72	5100	CRUSHED SURFACING BASE COURSE	TON	24.00	75.00	1,800.00 ✓
0142	72		C.O.S. CONC. PAVEMENT	C.Y.	253.00	110.00	27,830.00 ✓
0146	72		EPOXY COATED DOWEL BAR	EACH	10.00	220.00	2,200.00 ✓
0147	72		C.O.S. TIE BAR WITH DRILL HOLE	EACH	15.00	75.00	1,125.00 ✓
0161	72	6470	STREET CLEANING	HOURL	115.00	100.00	11,500.00 ✓
0163	72	6490	EROSION/WATER POLLUTION CONTROL	EST.	1,757,000.00	0.00	10,000.00 ✓
0216	72		C.O.S. CEMENT CONC. CURB	L.F.	29.00	30.00	870.00 ✓
0281	72	6980	FLAGGERS AND SPOTTERS	HOURL	41.50	320.00	13,280.00 ✓
0282	72	6992	OTHER TRAFFIC CONTROL LABOR	HOURL	46.00	20.00	920.00 ✓
0329	72	7715	FORCE ACCOUNT POTHOLING UTILITIES	EST.	256,652.89	0.00	10,000.00 ✓
1182	72		CO169 KING COUNTY DUCTBANK	L.S.	0.00	0.00	1,221,941.00 ✓

485
486
72

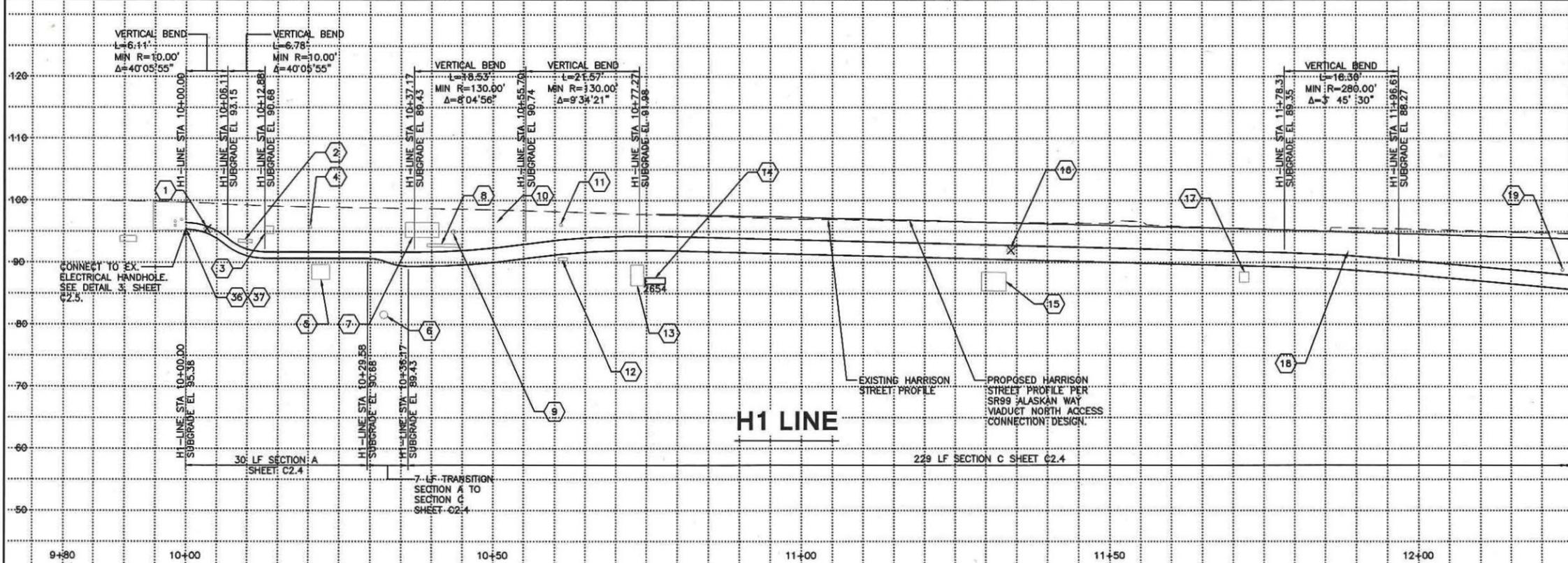
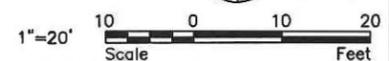
1,359,776.70
=====



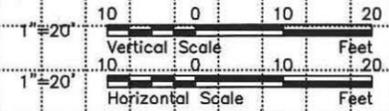
MATCHLINE STA 12+25.00 - SEE SHEET C2.2

- NOTES:**
- UNLESS NOTED OTHERWISE, ELEVATION AND SIZE (DIA. OR WIDTH AND HEIGHT) OF EXISTING UTILITIES ARE BASED ON POT HOLE DATE PROVIDED BY ATKINSON.
 - POWER DUCT ELEVATION AND SITE NOT FOUND BY POT HOLEING. DEPTH AND SIZE ESTIMATED FROM "SEATTLE CENTER 5TH AVE NORTH GARAGE FRANCHISE UTILITY RELOCATION - PHASE 1" PLANS BY OTHERS.
 - POWER DUCT ELEVATION AND SIZE ESTIMATED FROM "SR99 ALASKA WAY VIADUCT REPLACEMENT NORTH ACROSS CONNECTION" POWER PLANS AND PROFILING DATE 12/17/15. BY OTHERS.
 - FIELD VERIFY LOCATION, ELEVATION AND SIZE OF UTILITY CROSSINGS PRIOR TO INSTALLATION OF NEW DUCT BANK. FIELD ADJUST NEW DUCT BANK PROFILE TO PROVIDE MIN. COVER OF 3.5 FEET AND MIN. VERTICAL SEPARATION OF 1 FOOT FROM POWER TRANSMISSION DUCTS AND 0.5 FEET FROM ALL OTHER UTILITIES.
 - SCL DUCT BANKS IDENTIFIED ARE NOT INCLUDED IN THIS CHANGE ORDER.
 - ASSUME ALL CROSSING UTILITIES ARE LIVE AND MUST BE MAINTAINED AND SUPPORTED UNLESS NOTED OTHERWISE ON PLANS.
- SEE SHEET C2.4 FOR CONSTRUCTION NOTES.

CONTRACT 8549
 CHANGE ORDER N 109
 PAGE 5 OF 10



MATCHLINE STA 12+25.00 - SEE SHEET C2.2



No.	R VISION	BY	APPD	DATE
2	100% DESIGN SUBMITTAL	JJT	JJT	6-07-16
1	90% DESIGN SUBMITTAL	JJT	JJT	5-02-16

SDA Civil Engineering
 Project Management
 Planning
 1724 W. Marine View Drive, Suite 140, Everett, Washington 98201
 Office: 425.486.6963 Fax: 425.486.6593 www.sdaengineers.com



DESIGNED: JEFF ZIGWEID	PROJECT MANAGER: JOHN TURCOIT	SCALE: 1"=20'
DRAWN: ERIC JACKSON	APPROVED:	SITE LOCATION NO.:
CHECKED: JOHN TURCO	KC PROJECT NO.:	HALF INCH AT FULL SIZE
RECOMMENDED:	KC CONTRACT NO.:	IF NOT HALF INCH SCALE ACCORDINGLY



METRO TRANSIT DIVISION
 NORTH PORTAL
 DUCT BANKS
**UNDERGROUND
 POWER PLAN**

DATE: June 7, 2016
DRAWING NO.:
C2.1
SHEET NO. OF 1 OF 6

NOTES:

- UNLESS NOTED OTHERWISE, ELEVATION AND SIZE (DIA. OR WIDTH AND HEIGHT) OF EXISTING UTILITIES ARE BASED ON POTHOLE DATE PROVIDED BY ATKINSON.
 - POWER DUCT ELEVATION AND SITE NOT FOUND BY POTHOLING. DEPTH AND SIZE ESTIMATED FROM "SEATTLE CENTER 5TH AVE NORTH GARAGE FRANCHISE UTILITY RELOCATION - PHASE 1" PLANS BY OTHERS.
 - POWER DUCT ELEVATION AND SIZE ESTIMATED FROM "SR99 ALASKA WAY VIADUCT REPLACEMENT NORTH ACROSS CONNECTION" POWER PLANS AND PROFILES DATE 12/17/15, BY OTHERS.
 - FIELD VERIFY LOCATION, ELEVATION AND SIZE OF UTILITY CROSSINGS PRIOR TO INSTALLATION OF NEW DUCT BANK. FIELD ADJUST NEW DUCT BANK PROFILE TO PROVIDE MIN. COVER OF 3.5 FEET AND MIN. VERTICAL SEPARATION OF 1 FOOT FROM POWER TRANSMISSION DUCTS AND 0.5 FEET FROM ALL OTHER UTILITIES.
 - SCL DUCT BANKS IDENTIFIED ARE NOT INCLUDED IN THIS CHANGE ORDER.
 - ASSUME ALL CROSSING UTILITIES ARE LIVE AND MUST BE MAINTAINED AND SUPPORTED UNLESS NOTED OTHERWISE ON PLANS.
- # SEE SHEET C2.4 FOR CONSTRUCTION NOTES.

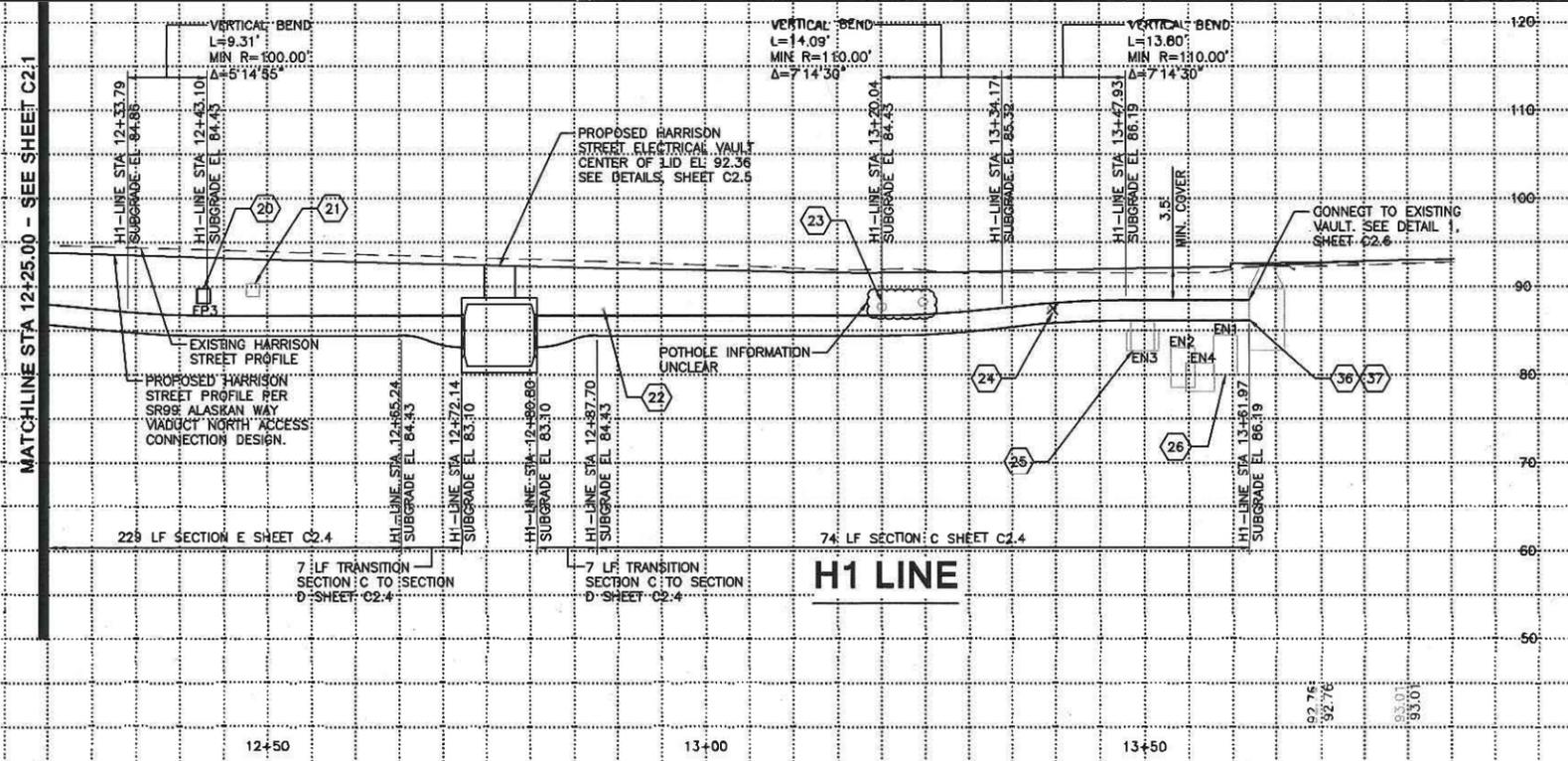
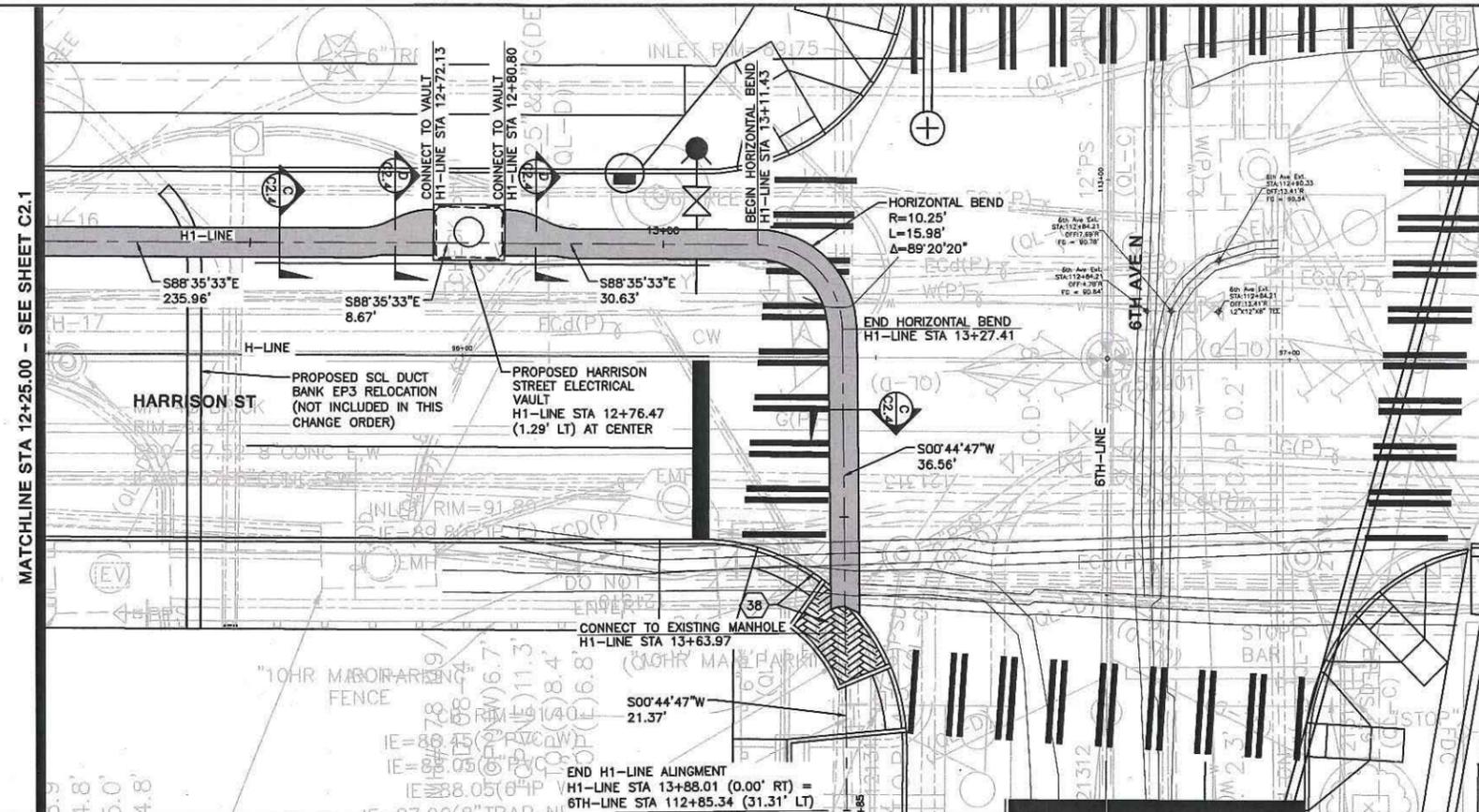
CONTRACT 8549
 CHANGE ORDER 169
 PAGE 6 OF 10



1"=20' 10 0 10 20
 Scale Feet

MATCHLINE STA 12+25.00 - SEE SHEET C2.1

MATCHLINE STA 12+25.00 - SEE SHEET C2.1



1"=20' 10 0 10 20
 Vertical Scale Feet
 1"=20' 10 0 10 20
 Horizontal Scale Feet

2	100% DESIGN SUBMITTAL	JJT	JJT	6-07-16
1	50% DESIGN SUBMITTAL	JJT	JJT	5-02-16
Nr.	REVISION	BY	APPD	DATE

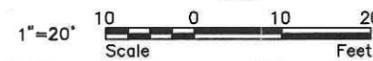
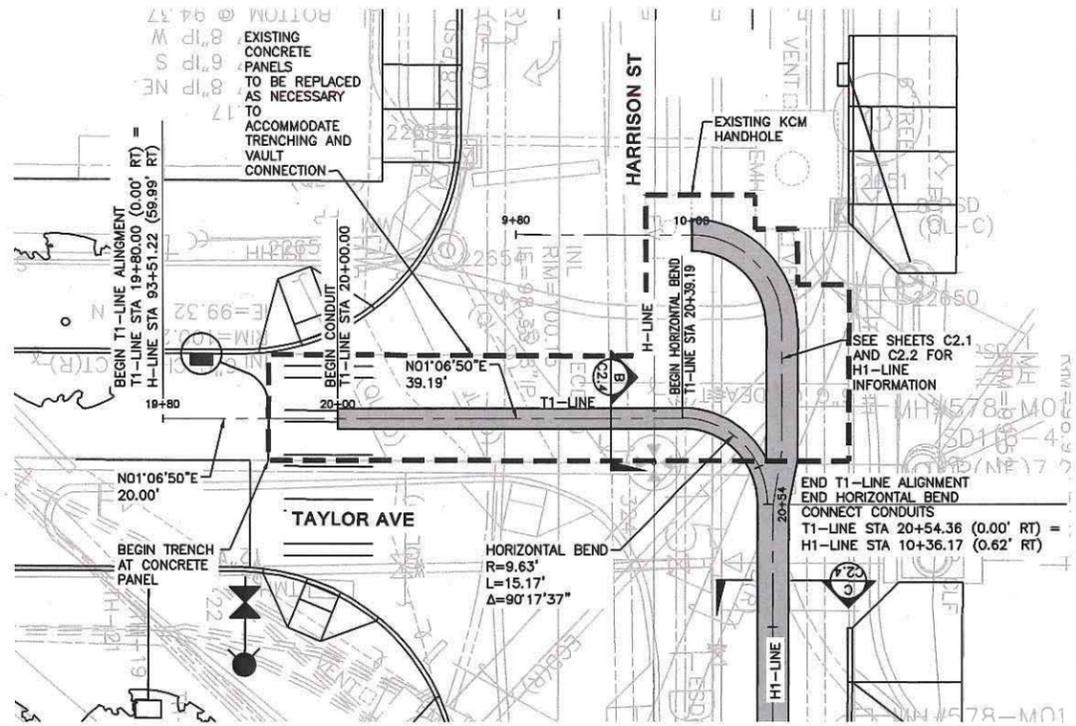
SDA Civil Engineering
 Project Management
 Planning
 1724 W. Main View Drive, Suite 140, Everett, Washington 98201
 Office: 425.486.6533 Fax: 425.486.6593 www.sdaeng.com



DESIGNED: JEFF ZIGWEID	PROJECT MANAGER: JON TURCOTT	SCALE: 1"=20'
DRAWN: ERIC JACKSON	APPROVED:	SITE LOCATION NO.:
CHECKED: JON TURCOTT	IC PROJECT #:	HALF INCH AT FULL SIZE
RECOMMENDED:	IC CONTRACT #:	IF NOT HALF INCH SCALE ACCORDINGLY

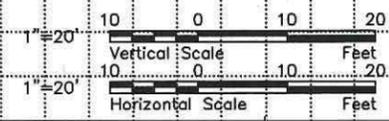
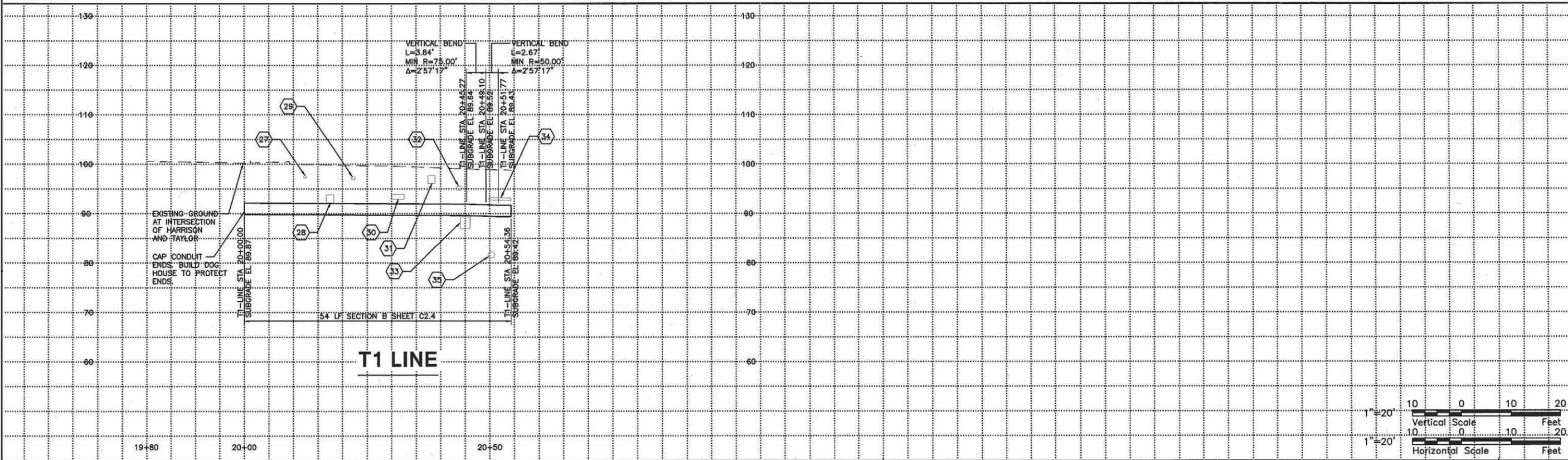


METRO TRANSIT DIVISION
 NORTH PORTAL
 DUCT BANKS
**UNDERGROUND
 POWER PLAN**
 DATE: June 7, 2016
 DRAWING NO: C2.2
 SHEET NO. OF: 2 OF 6



- NOTES:**
- UNLESS NOTED OTHERWISE, ELEVATION AND SIZE (DIA. OR WIDTH AND HEIGHT) OF EXISTING UTILITIES ARE BASED ON POT-HOLE DATE PROVIDED BY ATKINSON.
 - POWER DUCT ELEVATION AND SITE NOT FOUND BY POT-HOLING. DEPTH AND SIZE ESTIMATED FROM "SEATTLE CENTER 5TH AVE NORTH GARAGE FRANCHISE UTILITY RELOCATION - PHASE 1" PLANS BY OTHERS.
 - POWER DUCT ELEVATION AND SIZE ESTIMATED FROM "SR99 ALASKA WAY VIADUCT REPLACEMENT NORTH ACROSS CONNECTION" POWER PLANS AND PROFILES DATE 12/17/15, BY OTHERS.
 - FIELD VERIFY LOCATION, ELEVATION AND SIZE OF UTILITY CROSSINGS PRIOR TO INSTALLATION OF NEW DUCT BANK. FIELD ADJUST NEW DUCT BANK PROFILE TO PROVIDE MIN. COVER OF 3.5 FEET AND MIN. VERTICAL SEPARATION OF 1 FOOT FROM POWER TRANSMISSION DUCTS AND 0.5 FEET FROM ALL OTHER UTILITIES.
 - EXISTING KCM DUCT BANK ELEVATION NOT POT-HOLED. ELEVATION ESTIMATED FROM MEASURE DOWN IN EX-KCM HANDHOLE. CONDUIT TO BE REPLACED BUT MUST BE PROTECTED (REMAIN LIVE) DURING CONSTRUCTION.
 - ASSUME ALL CROSSING UTILITIES ARE LIVE AND MUST BE MAINTAINED AND SUPPORTED UNLESS NOTED OTHERWISE ON PLANS.
- # SEE SHEET C2.4 FOR CONSTRUCTION NOTES.

CONTRACT 8549
 CHANGE ORDER 1169
 PAGE 7 OF 10



No.	REVISION	BY	APPD	DATE
2	100% DESIGN SUBMITTAL	JJT	JJT	6-07-16
1	90% DESIGN SUBMITTAL	JJT	JJT	5-02-16

SDA Civil Engineering
 Project Management
 Planning
 1724 W. Marine View Drive, Suite 140, Everett, Washington 98201
 Office: 425.486.6533 Fax: 425.486.6593 www.sdoengineers.com

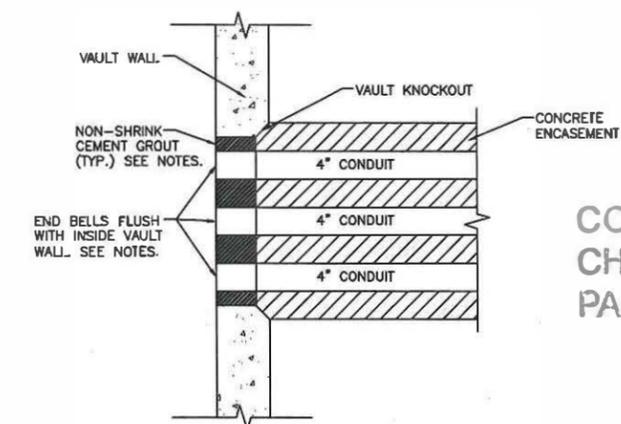
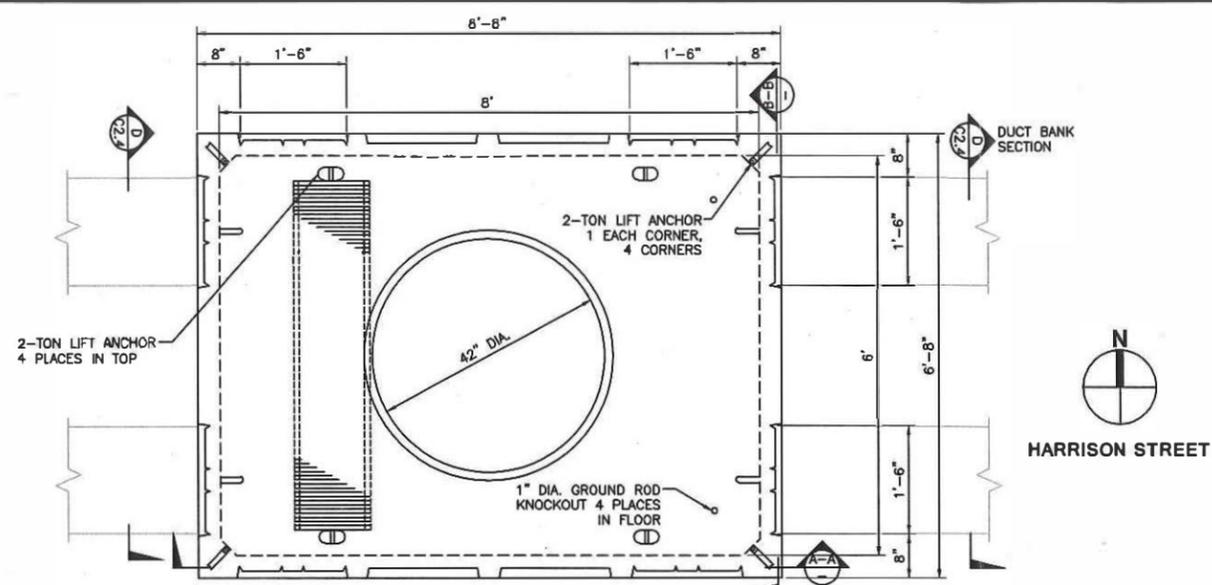


DESIGNED: JEFF ZISWEID	PROJECT MANAGER: JON TURCOTT	SCALE: 1"=20'
DRAWN: ERIC JACKSON	APPROVED:	SITE LOCATION NO:
CHECKED: JON TURCOTT	RC PROJECT NO:	HALF INCH AT FULL SIZE
RECOMMENDED:	RC CONTRACT NO:	IF NOT HALF-INCH, SCALE ACCORDINGLY



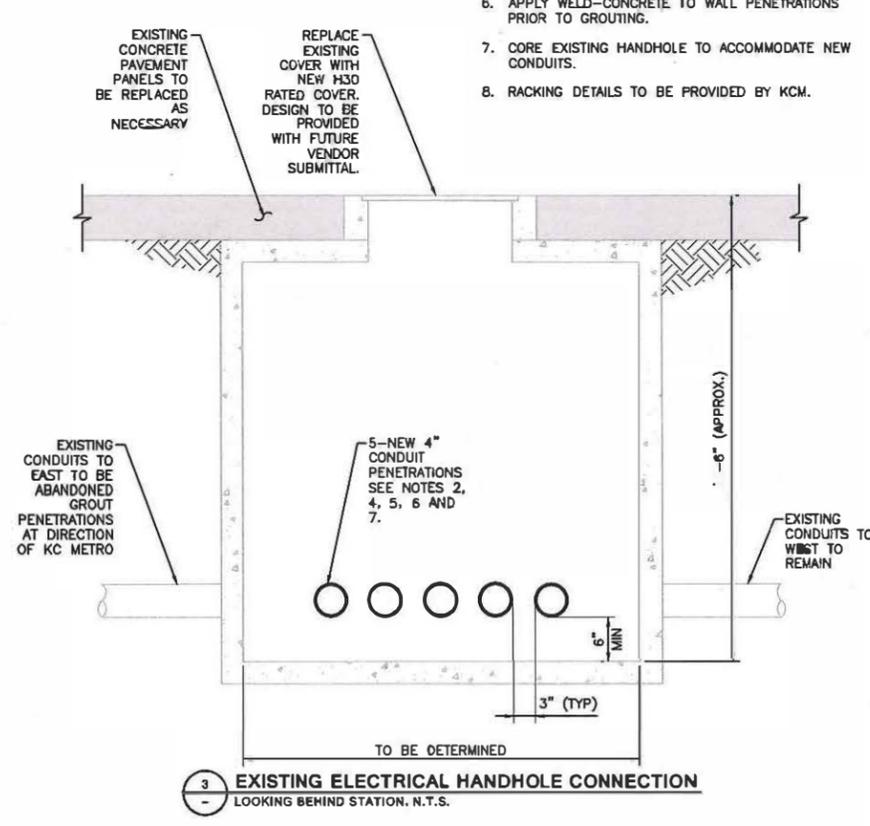
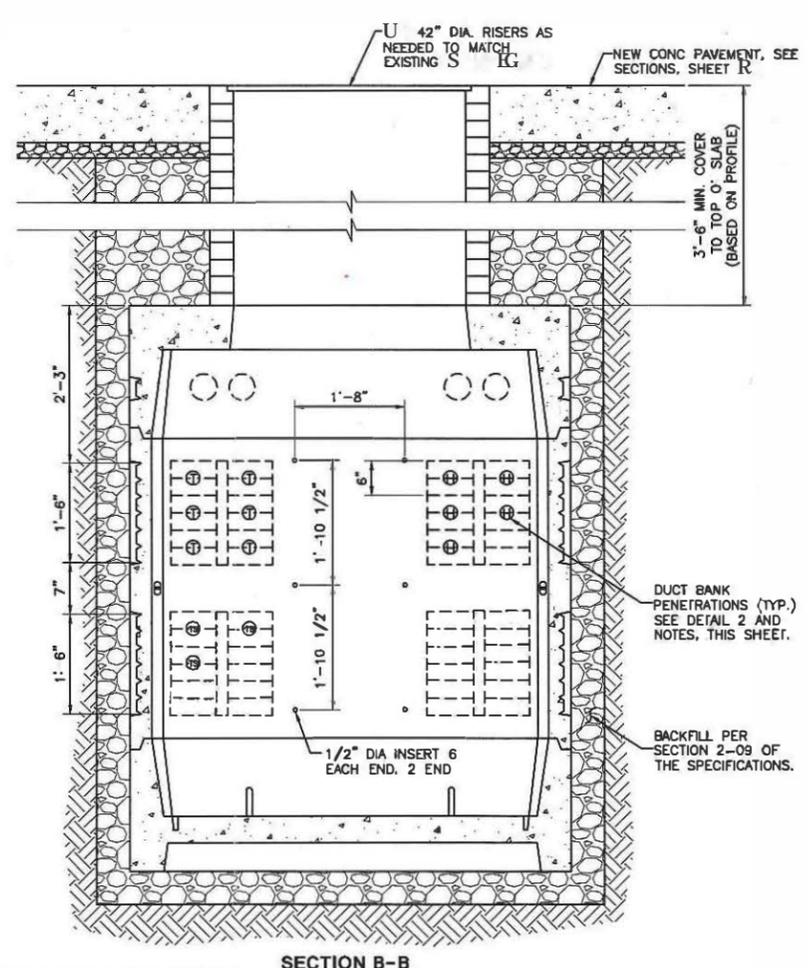
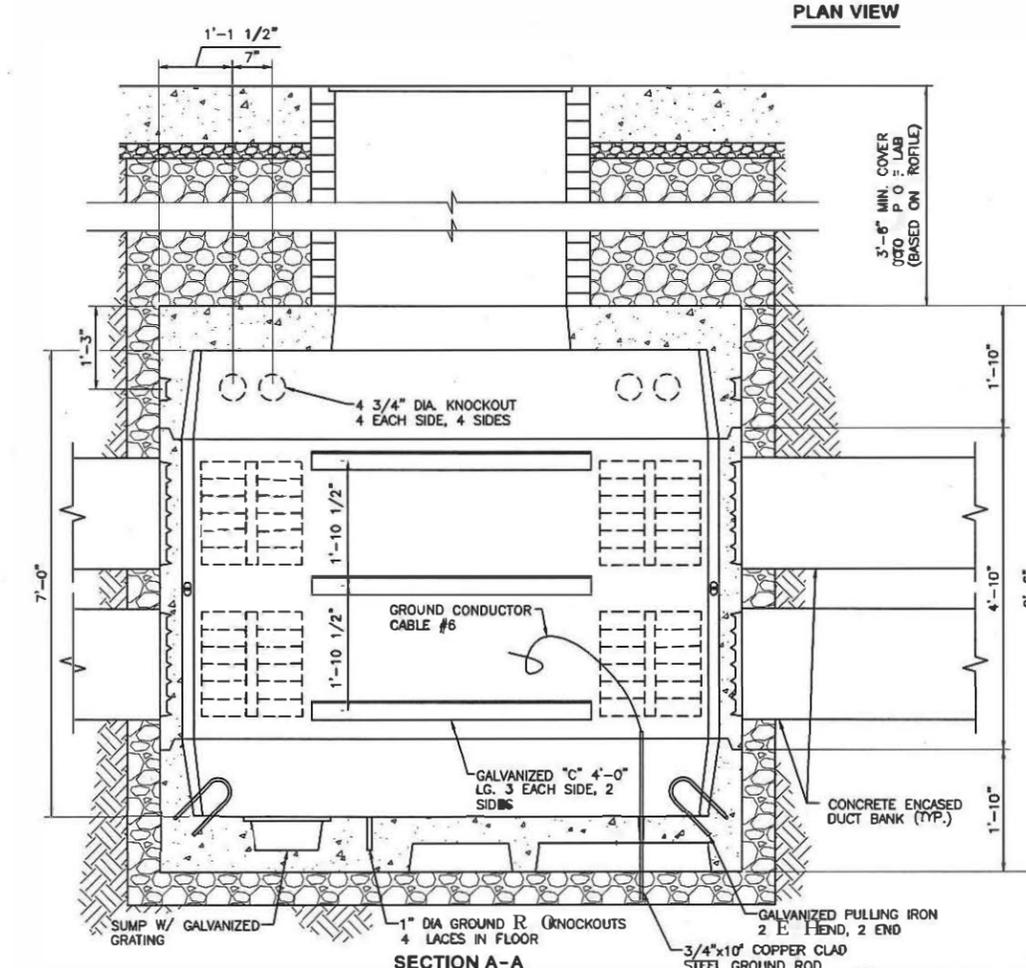
METRO TRANSIT DIVISION
 NORTH PORTAL
 DUCT BANKS
**UNDERGROUND
 POWER PLAN**

DATE: June 7, 2016
DRAWING NO: C2.3
SHEET NO. OF 3 OF 6



CONTRACT 8549
 CHANGE ORDER 169
 PAGE 9 OF 10

- NOTES:**
1. SEE PROFILE, SHEET C2.2 FOR ELEVATION OF VAULT LID.
 2. SEAL EXTERIOR SURFACE AND ALL CONDUIT PENETRATIONS TO PREVENT WATER ENTRY.
 3. SEAL ALL VAULT JOINTS WITH CONSEAL CS-101 OR APPROVED EQUAL.
 4. GROUT ALL VOIDS CONTINUOUSLY THROUGH VAULT WALL.
 5. INSIDE VAULT WALL TO BE FINISHED SMOOTH AT CONDUIT PENETRATIONS.
 6. APPLY WELD-CONCRETE TO WALL PENETRATIONS PRIOR TO GROUTING.
 7. CORE EXISTING HANDHOLE TO ACCOMMODATE NEW CONDUITS.
 8. RACKING DETAILS TO BE PROVIDED BY KCM.



1 HARRISON STREET ELECTRICAL VAULT
 OLDCASTLE PRECAST No. 887-LA OR APPROVED EQUAL
 N.T.S.

3 EXISTING ELECTRICAL HANDHOLE CONNECTION
 LOOKING BEHIND STATION. N.T.S.

No.	REVISION	BY	APP'D	DATE
2	100% DESIGN SUBMITTAL	JJT	JJT	6-07-16
1	90% DESIGN SUBMITTAL	JJT	JJT	5-02-16

SDA Civil Engineering
 Project Management
 Planning
 1724 W. Marine View Drive, Suite 140, Everett, Washington 98201
 Office: 425.486.6533 Fax: 425.486.6593 www.sdaengineers.com

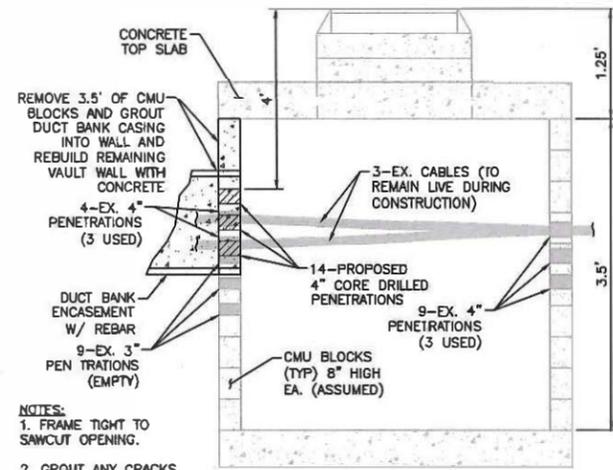


DESIGNED: JEFF ZIGWEID	PROJECT MANAGER: JON TURCOTT	SCALE: HALF INCH AT FULL SIZE
DRAWN: ERIC JACKSON	APPROVED:	IF NOT HALF IN CH. SCALE ACCORDINGLY
CHECKED: JON TURCOTT	KC PROJECT NO.:	
RECOMMENDED:	KC CONTRACT NO.:	



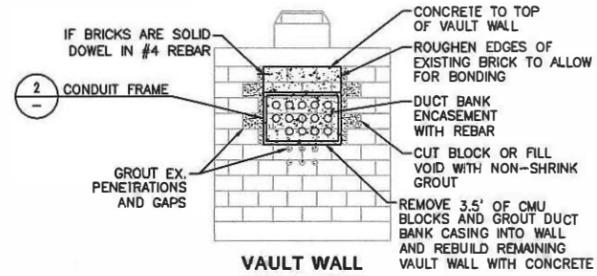
METRO TRANSIT DIVISION
 NORTH PORTAL
 DUCT BANKS
**UNDERGROUND
 POWER DETAILS**

DATE: June 7, 2016
DRAWING NO: C2.5
SHEET NO. OF 5 OF 6



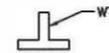
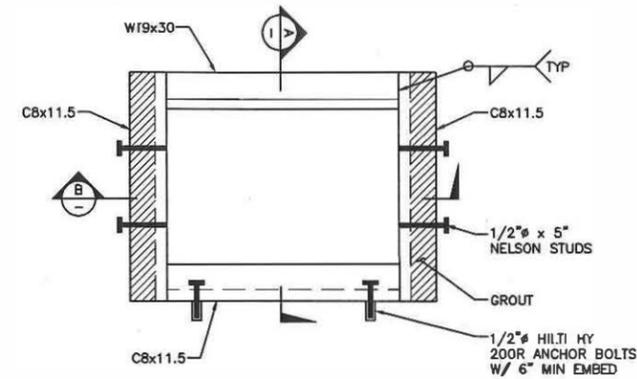
- NOTES:
 1. FRAME TIGHT TO SAWCUT OPENING.
 2. GROUT ANY CRACKS WITH NON-SHRINK GROUT.
 3. FRAME TO SUPPORT FUTURE LOADS.

VAULT SECTION
 EX. DIMENSIONS MEASURED IN FIELD

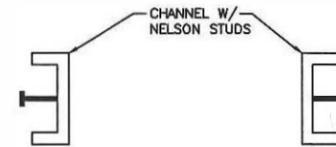


VAULT WALL

1 EXISTING ELECTRICAL VAULT CONNECTION
 N.T.S.



SECTION A



SECTION B

2 CONDUIT FRAME
 N.T.S.

No.	REVISION	BY	APP'D	DATE
2	100% DESIGN SUBMITTAL	JJT	JJT	6-07-16
1	90% DESIGN SUBMITTAL	JJT	JJT	5-02-16



Civil Engineering
 Project Management
 Planning

1724 W. Marine View Drive, Suite 140, Everett, Washington 98201
 Office: 425.486.6533 Fax: 425.486.6593 www.sdaengineers.com



DESIGNED: JEFF ZIGWEID	PROJECT MANAGER: JON TURCOTT	SCALE: 1"=20'
DRAWN: ERIC JACKSON	APPROVED:	SITE LOCATION NO.:
CHECKED: JON TURCOTT	KC PROJECT NO.:	HALF INCH AT FULL SIZE
RECOMMENDED:	KC CONTRACT NO.:	IF NOT HALF INCH SCALE ACCORDINGLY



METRO TRANSIT DIVISION
 NORTH PORTAL
 DUCT BANKS

**UNDERGROUND
 POWER PLAN**

DATE: June 7, 2016
DRAWING NO.:
C2.6
SHEET NO. OF 6 OF 6