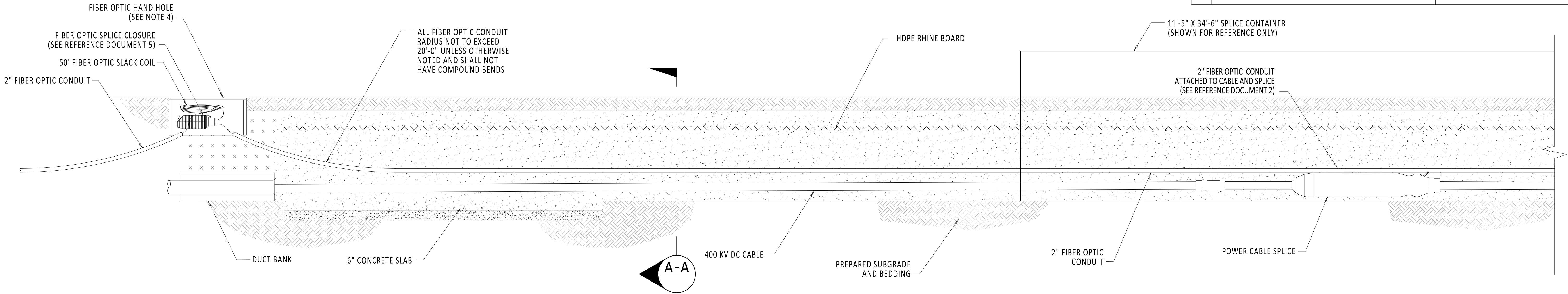


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- NOTES:**
- 1. ADD HAND HOLE TO ALL OPEN SPLICE LOCATIONS.
 - 2. FIBER OPTIC SPLICE CLOSURE ONLY AT SPECIFIC LOCATIONS. SEE PLAN AND PROFILE FOR DETAILS.
 - 3. SEE REFERENCE DOCUMENTS 2 FOR HAND HOLE LOCATION DETAILS.
 - 4. SEE REFERENCE DOCUMENT 4 FOR FIBER OPTIC HAND HOLE DETAILS.
 - 5. MAINTAIN A MINIMUM FIBER OPTIC CABLE BEND RADIUS OF 8" UNLESS OTHERWISE STATED (WHEN BENDING THE CABLE).

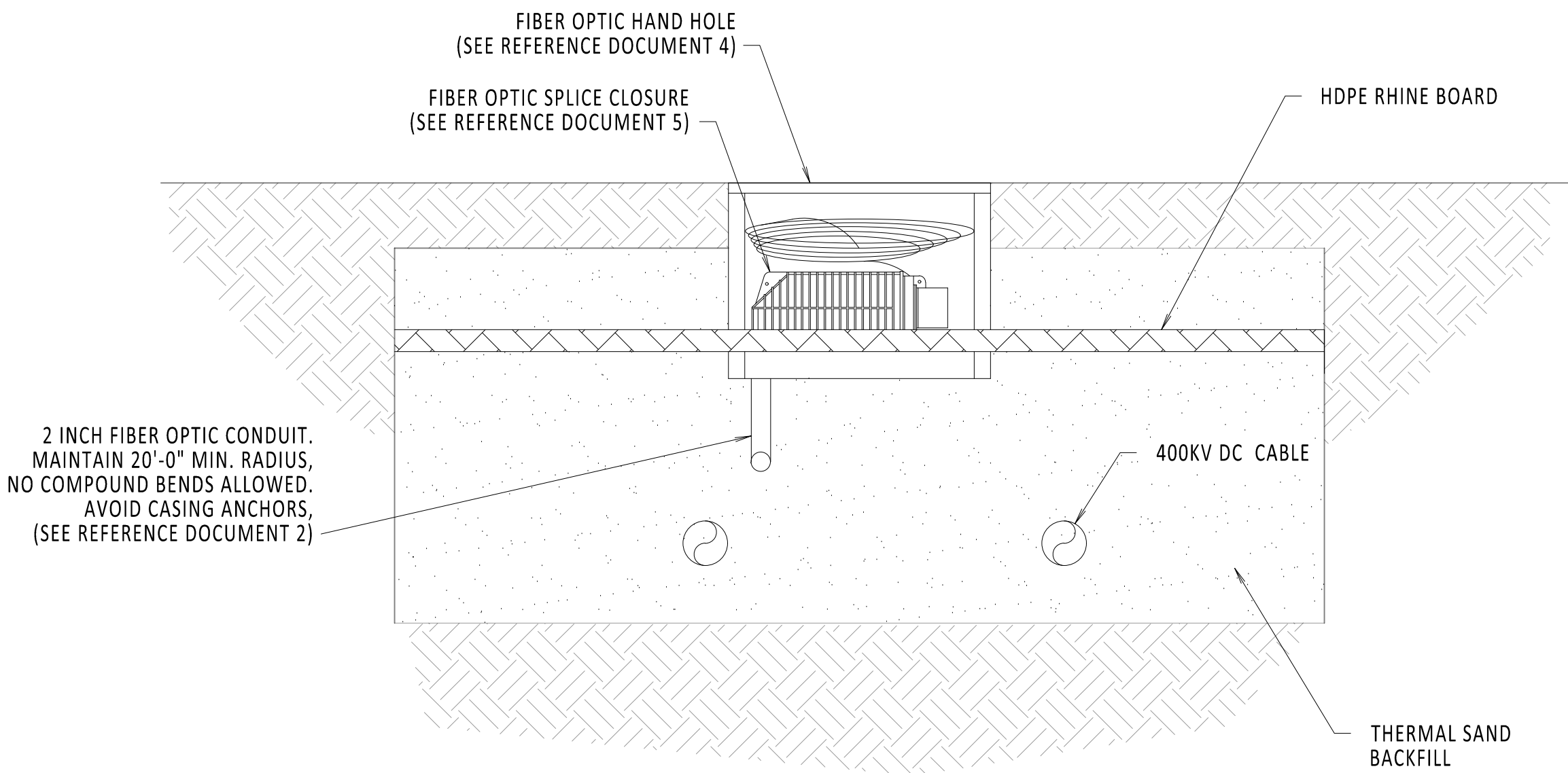
REFERENCE DOCUMENTS

LIST NO.	DOCUMENT NAME	DOCUMENT NO.
1	FRP FIBER COMMUNICATION HAND HOLE	S-771
2	TYPICAL OPEN PIT SPLICE DETAILS	C-808
3	DTS HUT CONNECTION FIBER OPTIC SPLICE AND HAND HOLE	C-851
4	FIBER OPTIC HAND HOLE DETAILS	C-854
5	FIBER OPTIC SPLICE DETAILS	C-855



OPEN SPLICE w/ HAND HOLE PROFILE VIEW

SCALE: 3/8" = 1'-0"



SECTION A-A

SCALE: 3/4" = 1'-0"



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CHAMPLAIN HUDSON POWER EXPRESS

**OPEN SPLICE w/ FIBER OPTICS
HAND HOLE**

DRAWN BY:	TJM	DESIGNED BY:	MK	APPROVED BY:	XX	SCALE		DATE	06/08/2023
						REV. NO.	0	SH.NO.	OF

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-853
DATE	06/08/2023
SH.NO.	OF

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1

2

3

4

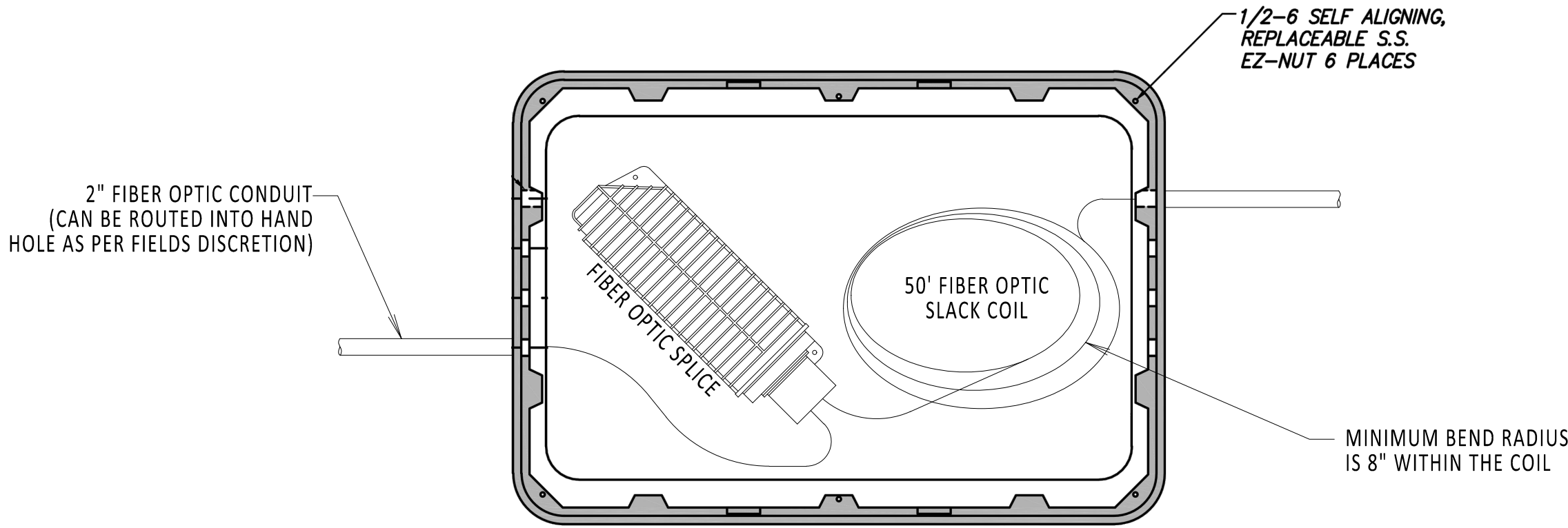
NOTES:

- 1. FIBER OPTIC COIL TO BE PLACED IN BOTTOM OF HAND HOLE. OBSERVE MINIMUM BEND RADIUS.
- 2. SPLICE ALL FIBERS STRAIGHT THROUGH.
- 3. FIBER OPTIC SPLICE CLOSURE ONLY AT SPECIFIC LOCATIONS. SEE PLAN AND PROFILE FOR DETAILS.
- 4. GROUNDING REQUIREMENTS TO BE DETERMINED.
- 5. HAND HOLE AT ALL OPEN SPLICE LOCATIONS. SEE REFERENCE DOCUMENTS 1 AND 2 FOR DETAILS ON HAND HOLE PLACEMENT IN OPEN PIT.
- 6. DRILLED HOLES ARE INTENDED TO ROUTE FIBER OPTIC CONDUIT AND CAN BE DRILLED AND SEALED ON ANY SIDE OF HAND HOLE AS REQUIRED BY THE FIELD.

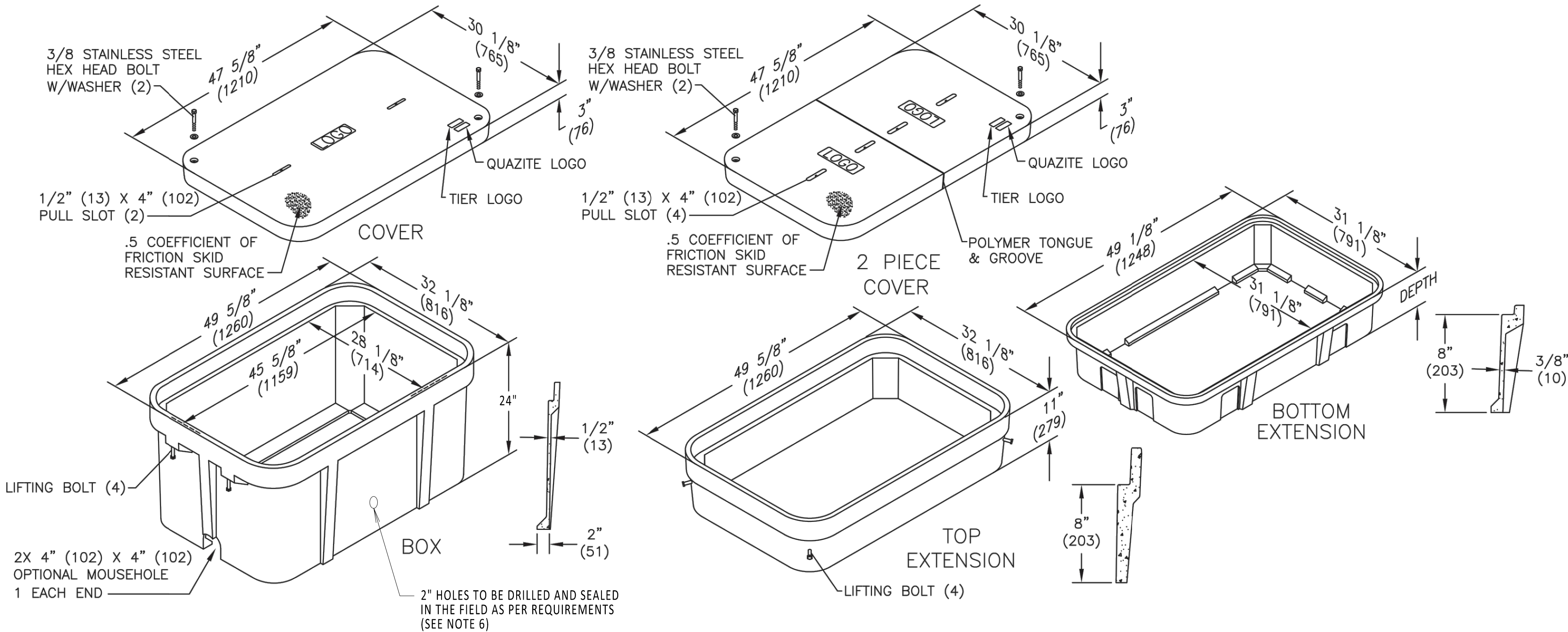
REFERENCE DOCUMENTS

LIST NO.	DOCUMENT NAME	DOCUMENT NO.
1	TYPICAL OPEN PIT SPLICE DETAILS	C-808
2	OPEN VAULT w/FIBER OPTIC HAND HOLE	C-853
3	FIBER OPTIC SPLICE DETAILS	C-855
4	HUBBELL QUAZITE (HAND HOLE)	MODEL NO. PG3048BA24

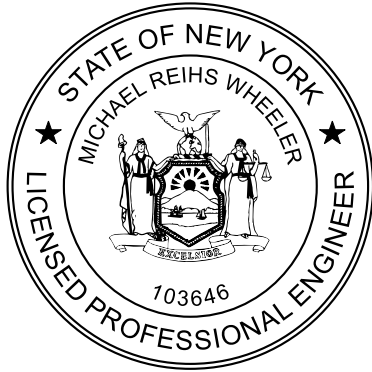
A



HAND HOLE
TOP VIEW
NOT TO SCALE



ISOMETRIC VIEW
NOT TO SCALE



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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP	

CHAMPLAIN HUDSON POWER EXPRESS

FIBER OPTIC HAND HOLE DETAILS

DRAWN BY: DLM DESIGNED BY: NM APPROVED BY: MK SCALE: REV. NO. 0

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-854
DATE	06/08/2023
SH.NO.	OF

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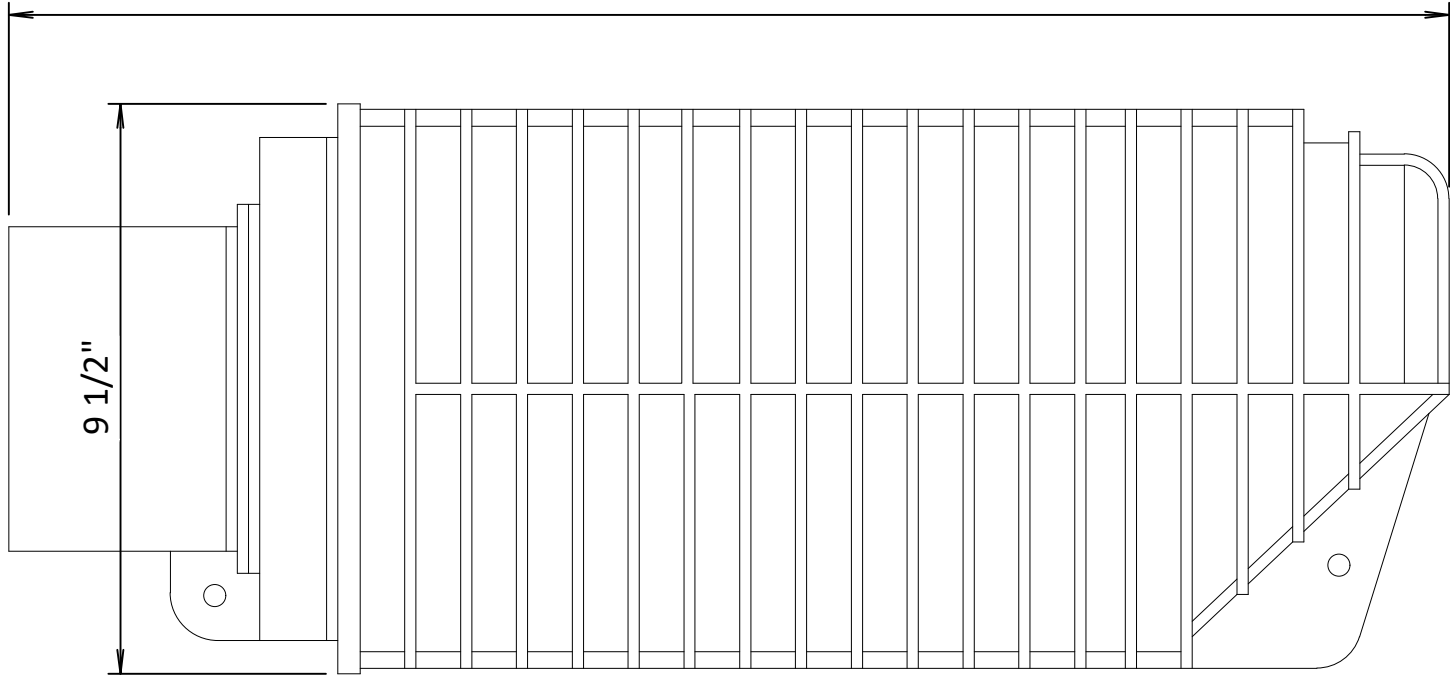
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NOTES:

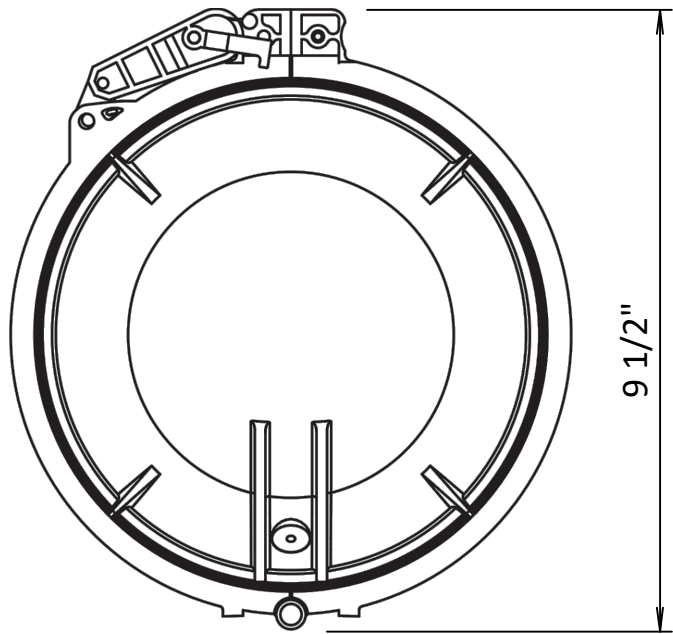
- 1. MAINTAIN 18" SWEEPS ON ALL CONDUITS.
- 2. DTS HUT FIBERS WILL SPLICE TO BLUE TUBE FIBER COLORS BLUE, ORANGE, GREEN AND BROWN.
- 3. SEE REFERENCE DOCUMENTS 2, 3, 4 AND 5 FOR PLACEMENT DETAILS.
- 4. FIBER OPTIC SPLICE CLOSURE ONLY IN SPECIFIC LOCATIONS. SEE PLAN AND PROFILES FOR DETAILS.

REFERENCE DOCUMENTS

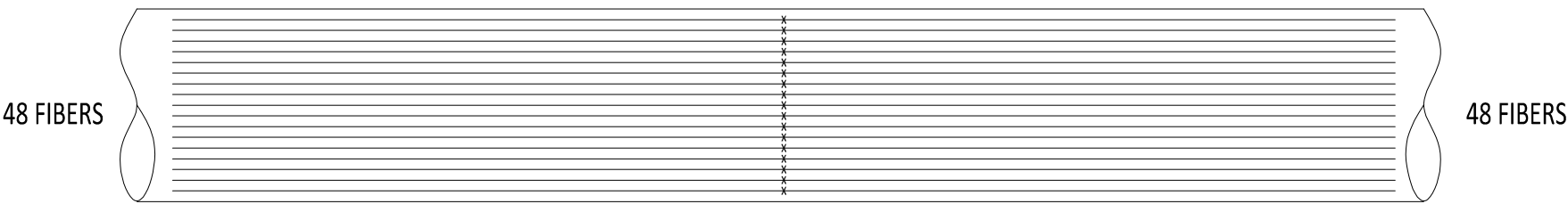
LIST NO.	DOCUMENT NAME	DOCUMENT NO.
1	FIBER OPTIC SPLICE CLOSURE	COMMSCOPE: MODEL NO. FOSC450-B6-6-24-1-B3V
2	TRANSITION VAULT FIBER OPTIC DETAIL	C-850
3	DTS HUT CONNECTION FIBER OPTIC SPLICE AND HANDHOLE	C-851
4	ENCLOSED VAULT w/FIBER OPTICS	C-852
5	OPEN VAULT w/FIBER OPTICS HAND HOLE	C-853



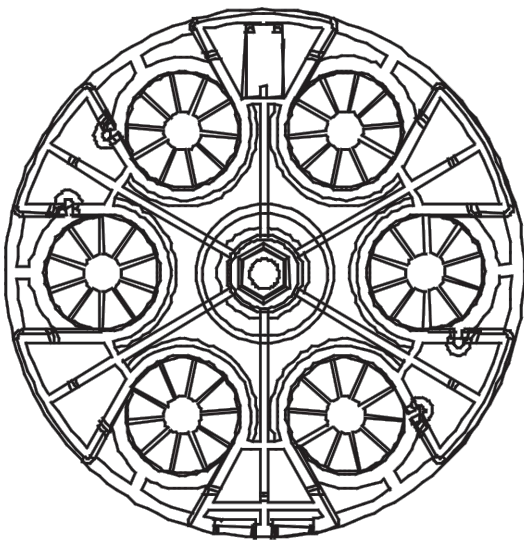
FIBER OPTIC SPLICE CLOSURE
NOT TO SCALE



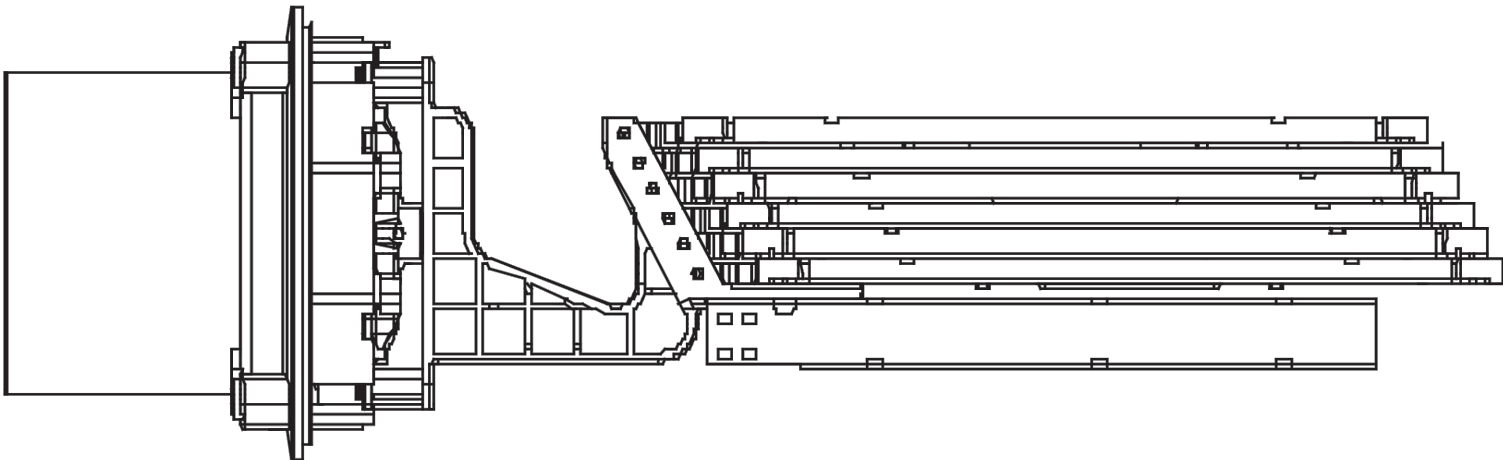
FIBER OPTIC SPLICE CLOSURE
NOT TO SCALE



FIBER OPTIC CABLE SPLICE
DIAGRAM TYPICAL
NOT TO SCALE



FIBER OPTIC SPLICE CLOSURE
GEL-BLOCK PROFILE
NOT TO SCALE



FIBER OPTIC SPLICE CLOSURE
INSIDE DIAGRAM
NOT TO SCALE



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FIBER OPTIC SPLICE DETAILS

DRAWN BY:	DLM	DESIGNED BY:	NM	APPROVED BY:	MK	SCALE		DATE	06/08/2023
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KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-855
DATE	06/08/2023
SH.NO.	OF

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Champlain Hudson Power Express



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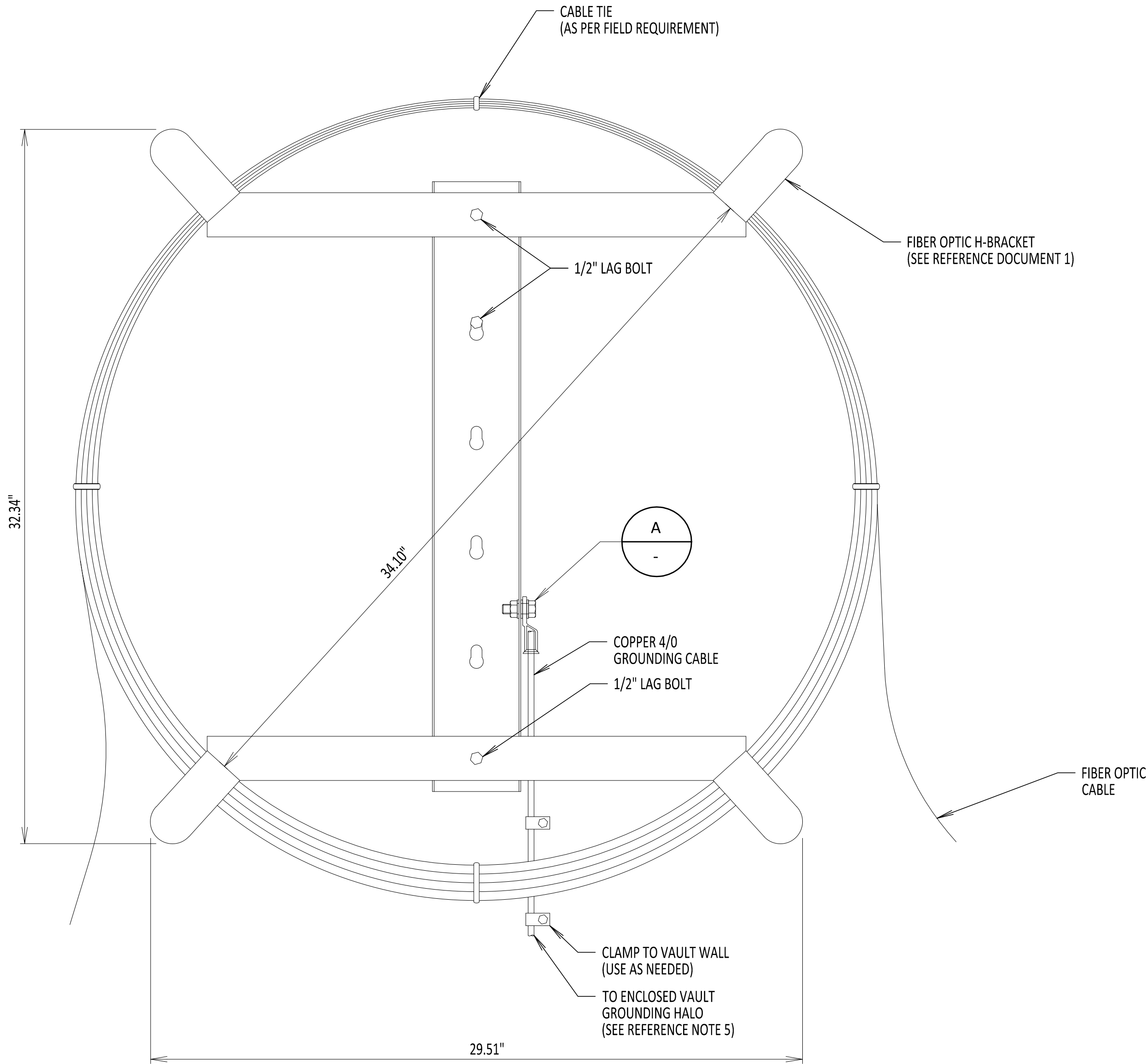
0	06/08/2023	ISSUED FOR CONSTRUCTION SUBMISSION		DLM	ASM
No.	DATE	SUBMITTAL / REVISION DESCRIPTION		DB	APP

CHAMPLAIN HUDSON POWER EXPRESS

FIBER OPTIC H-FRAME BRACKET DETAIL

DRAWN BY:	DLM	DESIGNED BY:	NM	APPROVED BY:	MK	SCALE		DATE	06/08/2023
						REV. NO.	0	SH.NO.	OF

KIEWIT PROJECT NO.	21162
CHA PROJECT NO.	066076
DRAWING NO.	C-856
DATE	06/08/2023
SH.NO.	OF



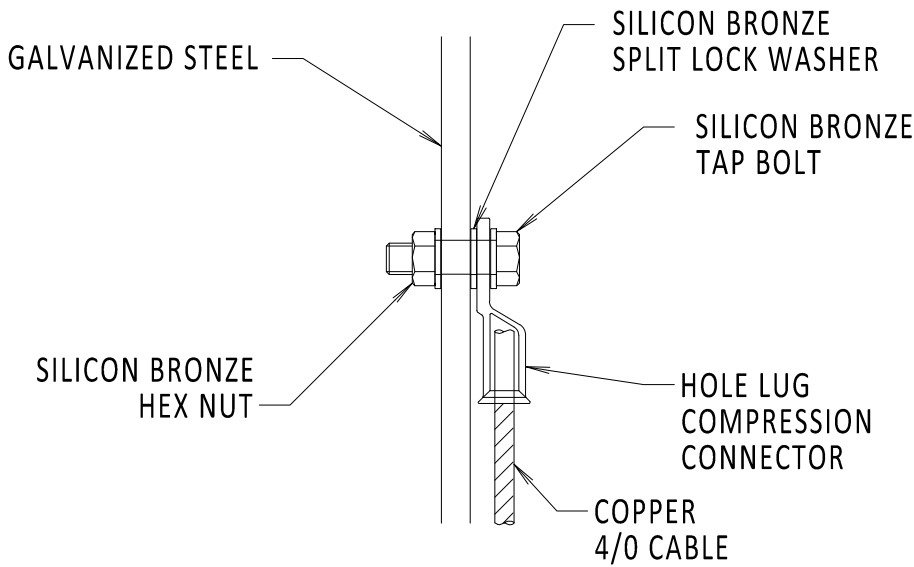
FIBER OPTIC H-FRAME BRACKET
NOT TO SCALE

NOTES:

- DO NOT KINK OR TWIST FIBER OPTIC CABLE.
- IN VAULT PULL FROM DISTANT MANHOLE THEN COIL AND PLACE ON H-FRAME BRACKET.
- H-FRAME IS ONLY USED IN ENCLOSED VAULTS. SEE REFERENCE DOCUMENTS 2 AND 3 FOR PLACEMENT DETAILS.
- H-FRAME BRACKET DEPTH IS 4.50".
- H-FRAME BRACKET TO BE GROUNDED TO THE GROUNDING HALO WITHIN AN ENCLOSED VAULT. SEE DRAWING C-803 FOR ENCLOSED VAULT GROUNDING DETAILS.
- H-FRAME BRACKET IS MADE OF 12GA GALVANIZED STEEL.
- 1/2" LAG BOLT DOES NOT COME WITH H-BRACKET ASSEMBLY AND NEEDS TO BE PROCURED AS NEEDED. BOLT TO BE INSTALLED INTO VAULT WALL BY FIELD PERSONNEL.

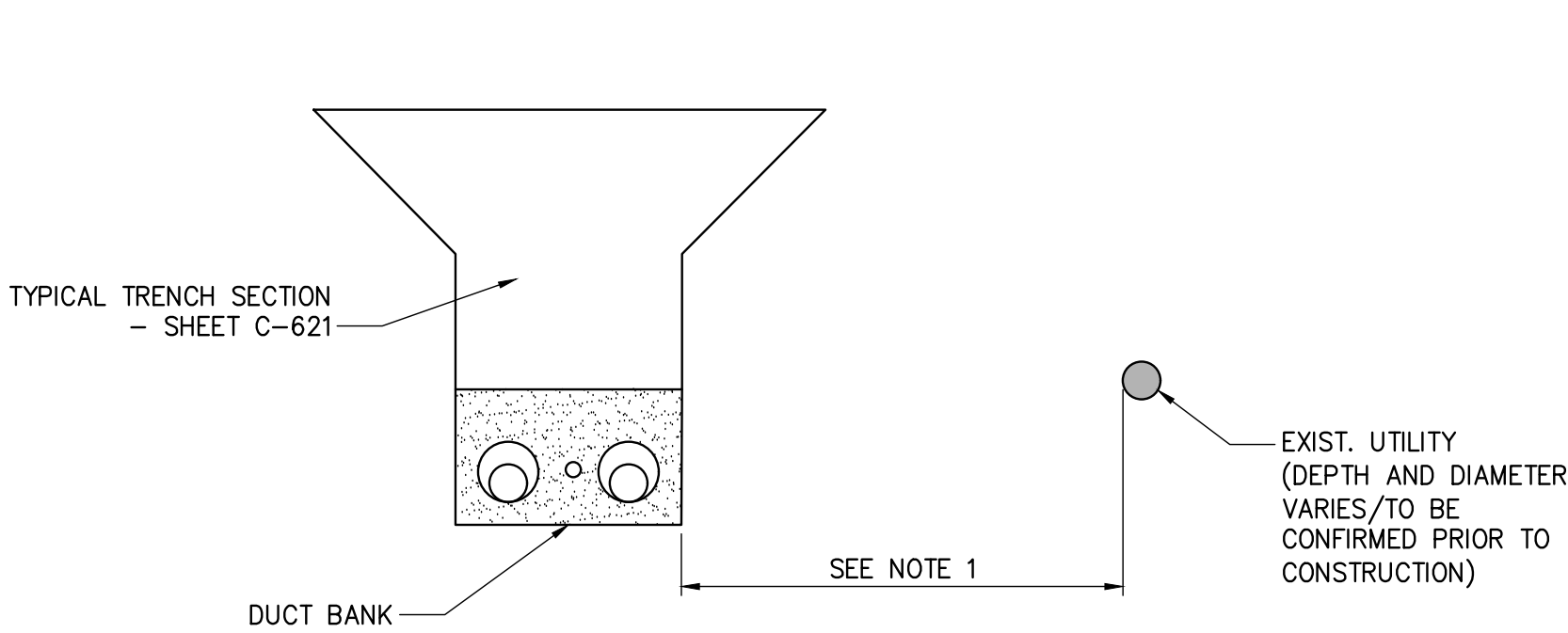
REFERENCE DOCUMENTS

LIST NO.	DOCUMENT NAME	DOCUMENT NO.
1	AMERICAN PRODUCT	H-FRAME POLE BRACKET MODEL NO: AM-3432-FSF-G-B x2
2	TYPICAL VAULT GROUNDING DETAILS	C-803
3	TRANSITION VAULT FIBER OPTIC DETAILS	C-850
4	ENCLOSED VAULT w/FIBER OPTICS	C-852

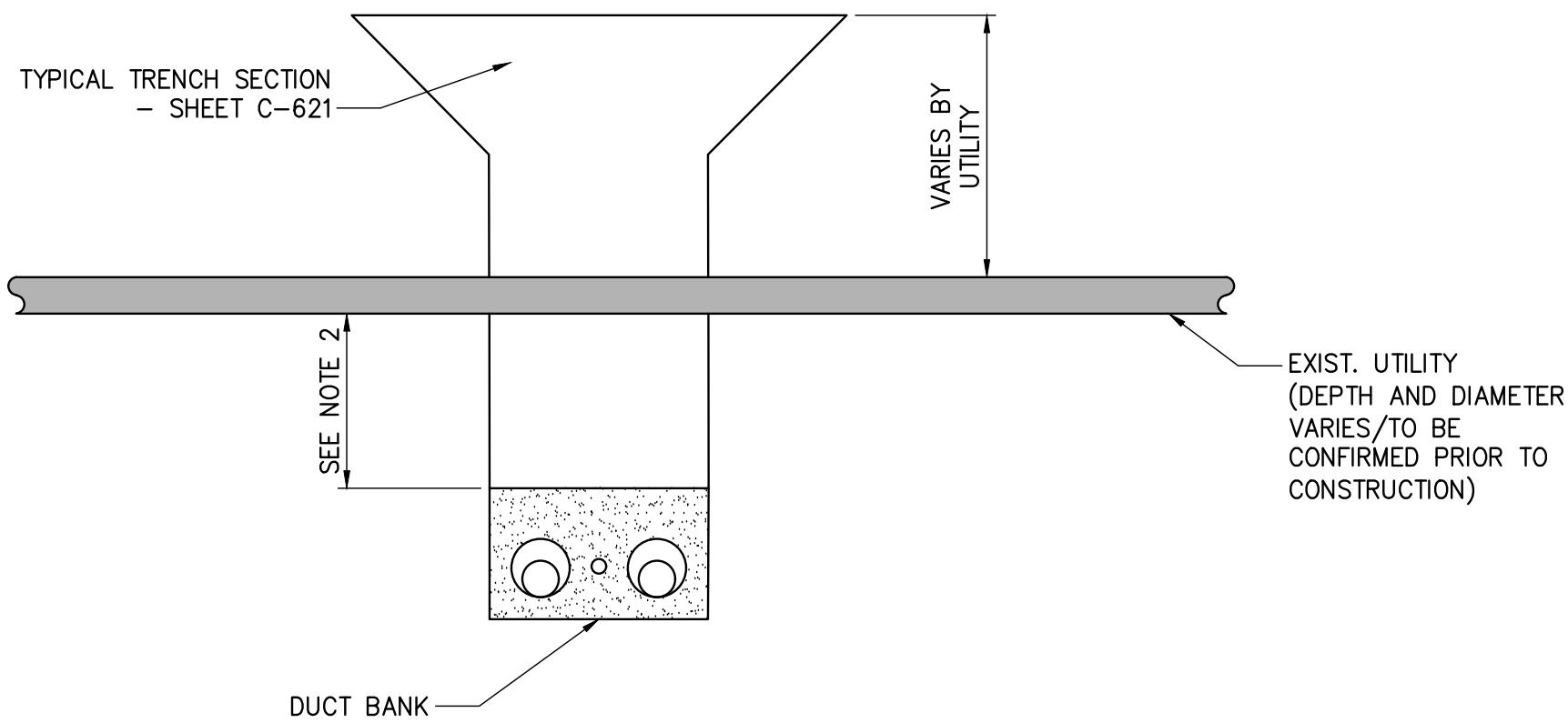


DETAIL A
NOT TO SCALE

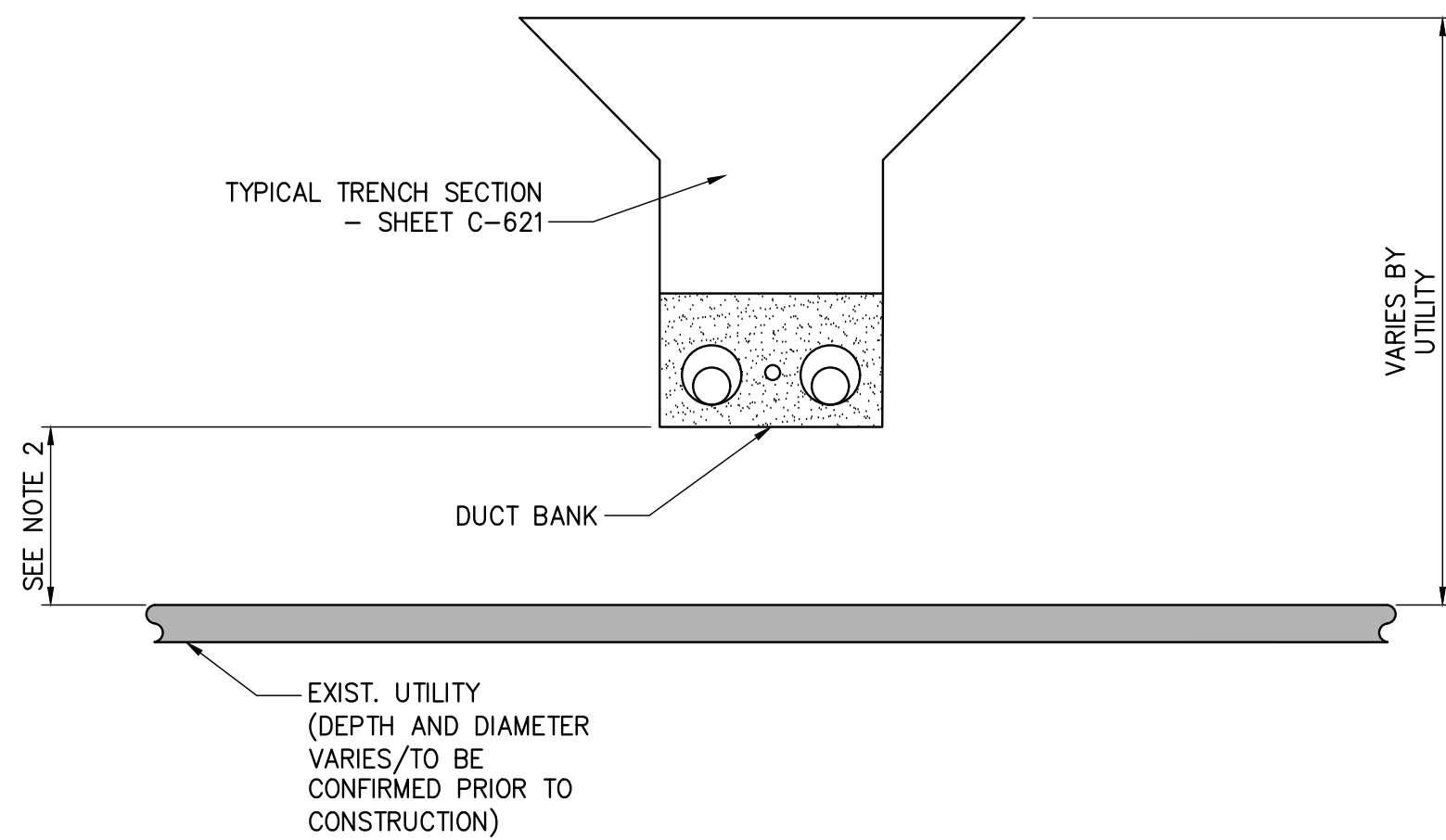
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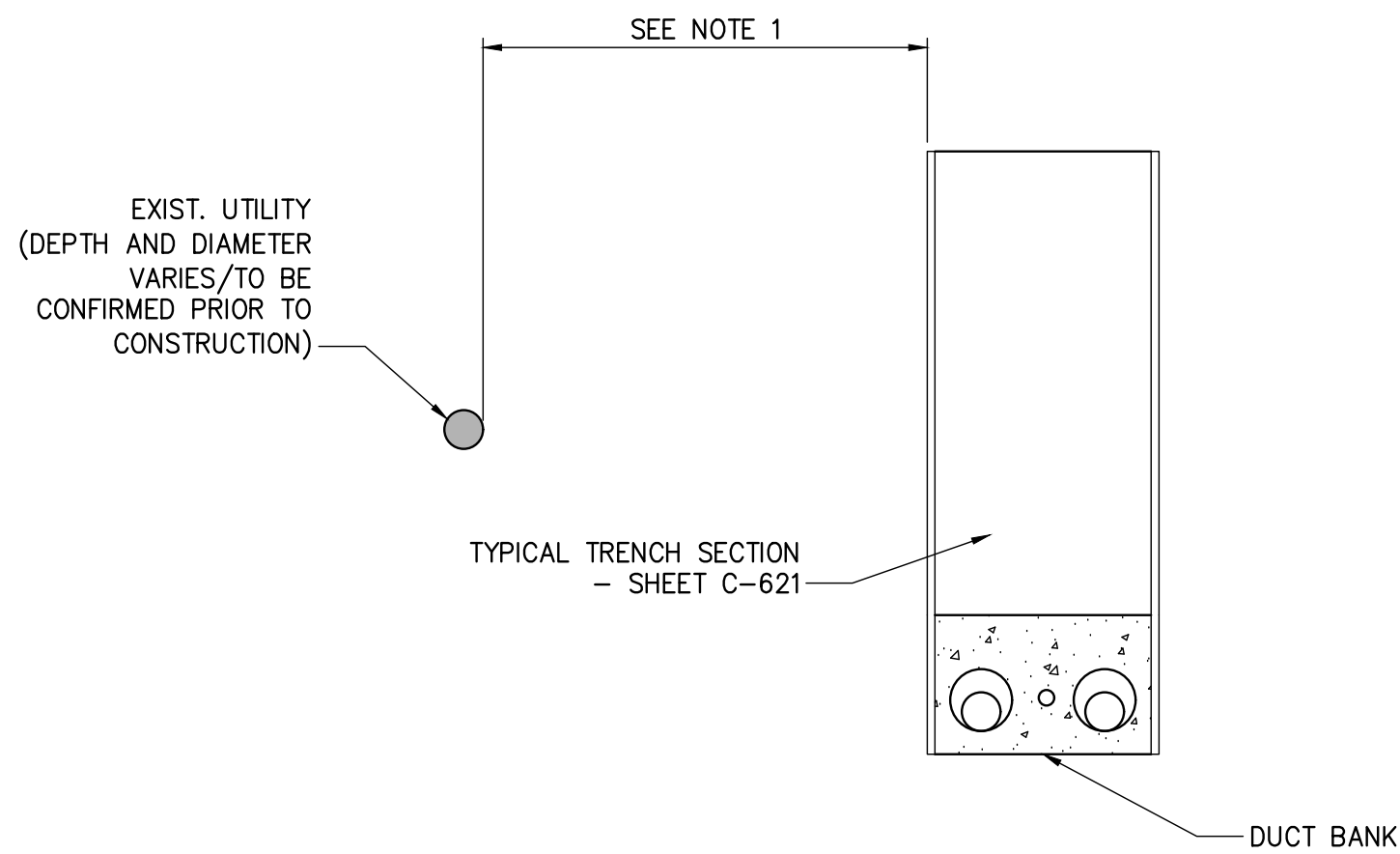
1 OPEN TRENCH - HORIZONTAL SEPARATION
NOT TO SCALE



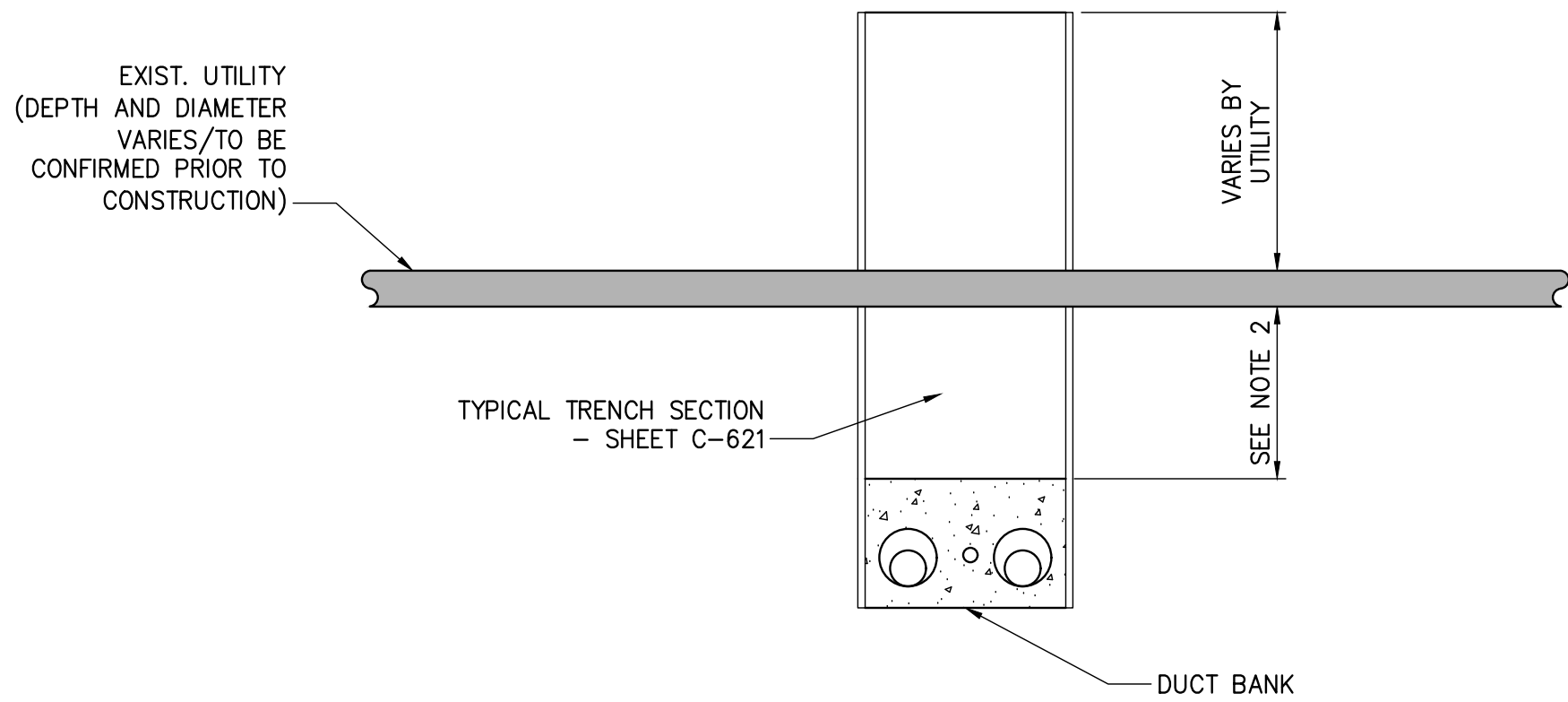
3 OPEN TRENCH - VERTICAL SEPARATION (UNDER)
NOT TO SCALE



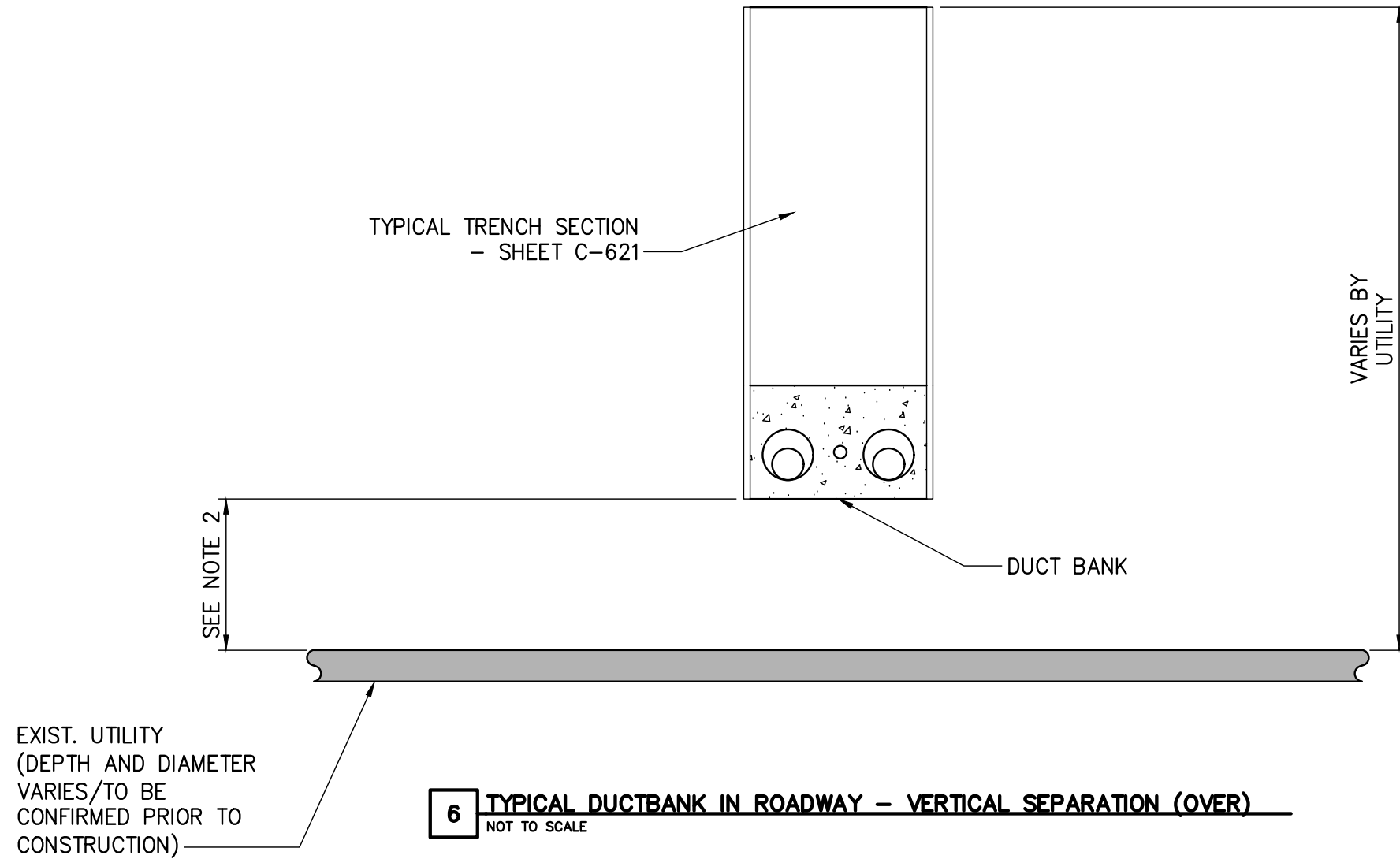
5 OPEN TRENCH - VERTICAL SEPARATION (OVER)
NOT TO SCALE



2 TYPICAL DUCTBANK IN ROADWAY - HORIZONTAL SEPARATION
NOT TO SCALE



4 TYPICAL DUCTBANK IN ROADWAY - VERTICAL SEPARATION (UNDER)
NOT TO SCALE



6 TYPICAL DUCTBANK IN ROADWAY - VERTICAL SEPARATION (OVER)
NOT TO SCALE

NOTES:

1. a. 5' MINIMUM HORIZONTAL SEPARATION FOR ALL EXISTING UTILITIES OTHER THAN GAS TRANSMISSION.
b. 10' MINIMUM HORIZONTAL SEPARATION FOR ALL GAS TRANSMISSION ASSETS.
2. a. 2' MINIMUM VERTICAL SEPARATION FOR ALL EXISTING UTILITIES OTHER THAN GAS.
b. 3' MINIMUM VERTICAL SEPARATION FOR ALL GAS SERVICE CONNECTION ASSETS.
c. 5' MINIMUM VERTICAL SEPARATION FOR ALL GAS TRANSMISSION AND DISTRIBUTION ASSETS.



TETRA TECH ENGINEERING AND SURVEYING P.C.
(A NEW YORK PROFESSIONAL CORPORATION)



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No.	DATE	SUBMITTAL / REVISION DESCRIPTION	DB	APP	

CHAMPLAIN HUDSON POWER EXPRESS
SEGMENT 11 (PACKAGE 7A) - CSX: CATSKILL
UTILITY TYPICAL
SEPARATION DETAILS

DRAWN BY:	AR	DESIGNED BY:	BV	APPROVED BY:	TK	SCALE	AS SHOWN	DATE	06/19/2023
						REV. NO.		SH.NO.	OF

KIEWIT PROJECT NO.	21162
TT PROJECT NO.	204-3701
DRAWING NO.	C-901
DATE	06/19/2023
SH.NO.	OF