

Engineering and Land Surveying, P.C.

370 7th Avenue **SUITE 1604** New York, NY 10001



25 Mohawk Avenue Sparta, NJ 07871

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A FINAL SUBMISSION 12/12/2022 DRW BY CHK BY DATE



@Hitachi Energy 901 Main Campus Drive Raleigh, North Carolina 27606

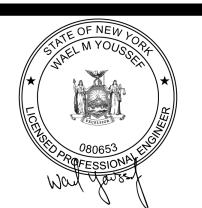


Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

TYPICAL METAL DECK

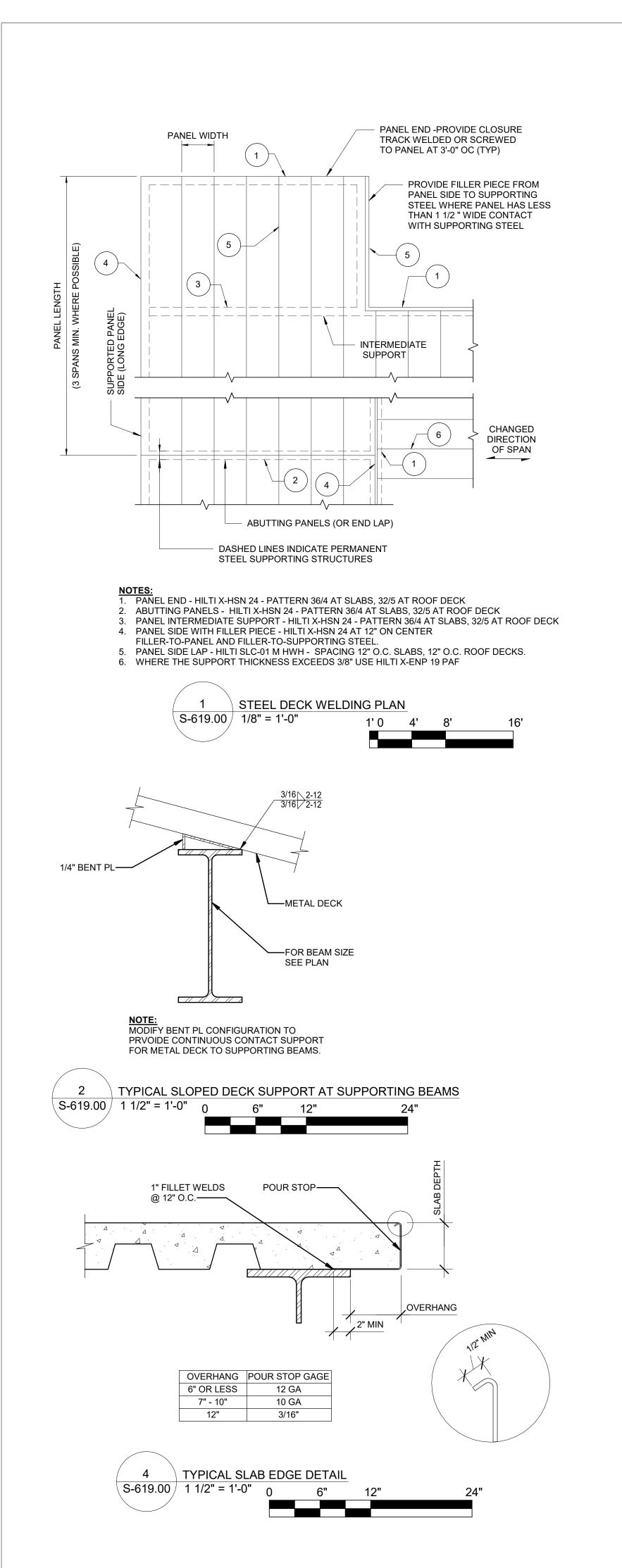
ATTACHMENT DETAILS



12/12/2022 PROJECT NO 105121 D. FLYNN CHECKED BY W. ABBASSI DRAWING NO S-618.00

CADD FILE N0

Autodesk Docs://CHPE Astoria/CHA-KIE-000-XX-M2-S-001.rvt



SHEET NOTES:

WELDED STUDS

AT CL OF BEAM

COMPOSITE DECK

SEE NOTES

TYP SECTION

DECK PERPENDICULAR TO BEAM

1. SEE DRAWINGS S-001.00 THRU S-006.00 FOR GENERAL NOTES, LEGEND, ABBREVIATIONS, AND COMPONENTS AND CLADDING WIND LOAD DIAGRAMS.

ISSUED FOR PERMIT

Land Surveying, P.C.

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25 Mohawk Avenue

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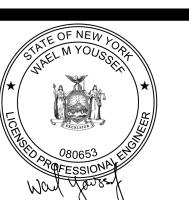


Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105

Block #850 - Lot #310 - BIN #4624437

TYPICAL METAL DECK **ATTACHMENT DETAILS**



PROJECT NO 105121 D. FLYNN CHECKED BY W. ABBASSI DRAWING NO

Autodesk Docs://CHPE Astoria/CHA-KIE-000-XX-M2-S-001.rvt

5. MAINTAIN 1" CLEARANCE AROUND ALL STUDS. FOR NUMBER OF STUDS REQ'D SEE FRAMING PLANS EQUALLY SPACED WITHIN CONC FOR No OF STUDS REQD SEE FRAMING PLANS COMPOSITE DECK SEE NOTES AND DETAILS CL SUPPORT CL BEAM CL BEAM CL SUPPORT WELDED STUDS ÇL SUPPORT SEE NOTES WELDED STUDS SEE NOTES SEE FRAMING PLANS SEE FRAMING PLANS -**BEAM ELEVATION GIRDER ELEVATION** <20> INDICATES 20 STUDS EQUALLY — SPACED BETWEENS BEAMS FRAMING TO GIRDER.STUDS CAN BE DISTRIBUTED UNIFORMLYALONG THE LENGHT OF THE GIRDER IF SO INDICATED ON FRAMING PLANS (SIMILAR TO BEAM) <20> INDICATES 25 STUDS EQUALLY SPACED ACROSS BEAM AS NOTED ON PLANS **GIRDER PLAN BEAM PLAN**

TYP. WELDED STUD DETAIL

S-619.00 / 3/4" = 1'-0"

TYP. WELDED STUD DETAIL

2 ROWS WHERE REQD (5 1/2" MIN BM WIDTH REQD

COMPOSITE DECK

1" MIN. TO 1 1/2" MAX

SEE NOTE 1 BELOW

PROVIDED. PROVIDE AN EQUAL NUMBER OF STUDS AT EACH SIDE OF BEAM SPAN CENTER LINE.

3. STUDS WELDED THROUGH STEEL DECKING MAY BE SUBSTITUTED FOR A PUDDLE WELD, TYPICAL.

4. PROVIDE STUDS @ 12" O.C. MIN. AT ALL FRAMED BEAMS WHERE NO. OF STUDS IS NOT INDICATED.

NOTES:
1. ALL WELDED STUDS SHALL BE 3/4" DIA. HEADED STUDS. STUDS SHALL EXTEND 1 1/2" MINIMUM ABOVE TOP OF STEEL DECK.

2. WHERE THE NUMBER OF STUDS EXCEEDS THE NUMBER OF DECK FLUTES, PROVIDE MIN. ONE STUD PER FLUTE & DOUBLE STUDS AT EACH FLUTE STARTING AT EACH SUPPORT WORKING TOWARD CENTER OF THE BEAM UNTIL THE REQ'D NUMBER OF STUDS ARE

3/4" DIA WELDED STUDS AT CL OF

1 1/4" MIN 🗡

TYP SECTION

DECK PARALLEL TO BEAM

SEE PLAN

RIDGE AT REACTOR/DC HALL 78'-8 1/2" ROOF LEVEL REACTOR/DC HALL																						RIDGE AT REACTOR/DC HALL 78'-8 1/2" ROOF LEVEL REACTOR/DC HALL
73'-1"	CL SPLICE								.8/2 9	1. 3 13/16""	2' 2 3/16"		3' 0 1/2"	3' 10 13/16"	4. 9 3/16"		4' 93/16"	3' 10 13/16"	3, 0 1/2"	2' 2 3/16"	1. 3 13/16""	73'-1"
	W14X90	W14X90		W14X90	W14X90	W14X90		W14X90	W14X132	W14X132	W14X132	70,00	W14X132	W14X132	W14X132	W14X145	W14X132	W14X132	W14X132	W14X132	W14X132	
FIN. FLOOR	1'-6 1/2" TYP																					FIN. FLOOR
15'-0" Column Locations	CO-1-CO-A	CO-1	-СО-В СС)-1-CO-C	CO-1-CO)-D CO-1	-CO-E	CO-1-CO-F	CO-2-CO-	A CO-3	-CO-A CO-	4-CO-A	CO-5-CO-A	CO-6-CO-	-A CO-7-CO-A	CO-8-C	:O-A CO-9-CO-	A CO-10-C	O-A CO-11-0	CO-A CO-12	-CO-A CO-13-CO-	15'-0"

RIDGE AT REACTOR/DC HALL																RIDGE AT REACTOR/DC HALL
78'-8 1/2" ROOF LEVEL REACTOR/DC HALL																78'-8 1/2" ROOF LEVEL REACTOR/DC HALL
73'-1"	8/2 9															73'-1"
	CL SPLICE														_	
	W14X132		W14X90		W14X90		W14X90		W14X90		W14X90		W14X90			
	>		>		^		>		^		Λ		>			
														40'-0"		
	d d d d d															
FIN. FLOOR	76 1/2"															FIN. FLOOR
15'-0"																15'-0"
Column Locations	CO-14	I-CO-A	CO-15-0	CO-A	CO-15	-CO-B	CO-15	-CO-C	CO-15	-CO-D	CO-15	-CO-E	CO-15	-CO-F	:	



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Α	FINAL SUBMISSION	JB	WA	12/12/20

DESCRIPTION



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PROJECT

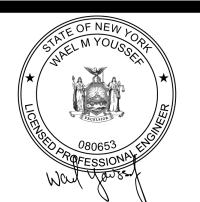


Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

CONVERTER BUILDING -

CONVERTER BUILDING -REACTOR HALL COLUMN SCHEDULE



 DATE
 12/12/2022

 PROJECT NO
 105121

 DRAWING BY
 D. FLYNN

 CHECKED BY
 W. ABBASSI

 DRAWING NO

S-701.00

todesk Docs://CHPE storia/CHA-KIE-081-ZZ-M3-S-001.rvt

RIDGE AT VALVE HALL																												RIDGE AT VALVE HALL
83'-8 1/2" ROOF LEVEL VALVE HALL]					+]	83'-8 1/2" ROOF LEVEL VALVE HALL
78'-1"	CL SPLICE															1.93/16"		13 10"	4' 9 3/16"	3' 10 13/16"		3, 10 13/16"	3, 0 1/2"	3' 0 1/2"		2' 2 3/16"		78'-1"
	W14X145		W14X211	W14X211		W14X211	1 CVALM		W14X211		W14X211	W14X211		W14X211	W14X145		W14X90	W14X90	W14X90		W14X90	W14X90		W14X90	W14X90	W14X90		
	2" TYP																										400"	
FIN. FLOOR	1'-6 1/2'																											FIN. FLOOR
15'-0"														•		1												15'-0"
Column Locations	CO-8	-CO-G C0	D-8-CO-H	CO-8-	-CO-I	CO-8-C0	O-J CO-	8-CO-K	CO-8-C0	O-L CO	D-8-CO-M	I CO-8-0	CO-N	CO-8-CO-	O CO-8	-CO-P (O-9-CO-G	CO-9-CC)-P CO-1	0-CO-G CO-	10-CO-P (O-11(-1'-6	")-CO-G CO-^	11-CO-P C	D-12-CO-G	CO-12	2-CO-P	

RIDGE AT VALVE HALL																RIDGE AT VALVE HALL
83'-8 1/2" ROOF LEVEL VALVE HALL		+	+.		*											83'-8 1/2" ROOF LEVEL VALVE HALL
78'-1"	2' 2 3/16"	1, 3 13/16"	1.3 13/16"	"8/2 9	. 8/1/8"											78'-1"
	CL SPLICE	_									-	_			_	
	W14X90	W14X90	W14X90	W14X90	W14X109	W14X109	W14X109	W14X109	W14X109	W14X109	W14X109	W14X109	W14X109		W14X109	
																400"
FIN. FLOOR	1'-6 1/2" TYP															FIN. FLOOR
15'-0"														1		15'-0"
Column Locations	CO-13-C	O-G CO-13-C	O-P CO-14-CO-G	CO-14-CO-P	CO-15-CO-G	CO-15-CO-H	CO-15-CO-I	CO-15-CO-J	CO-15-CO-K	CO-15-CO-L	CO-15-0	CO-M CO-15-0	CO-N CO-15	5-CO-O	CO-15-CO-P	



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	REV	DESCRIPTION	DRW BY	CHK BY	DATE



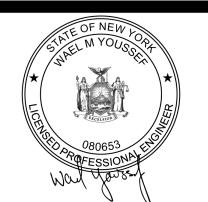
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Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

CONVERTER BUILDING -VALVE HALL AREA C COLUMN SCHEDULE



DATE	12/12/2022
PROJECT NO	105121
DRAWING BY	D. FLYNN
CHECKED BY	W. ABBASSI
DRAWING NO	
\sim \sim	0 0 0

S-702.00

RIDGE AT VALVE HALL																						RIDGE AT VALVE HALL
3'-8 1/2" ROOF LEVEL VALVE HALL															+	+1						83'-8 1/2" ROOF LEVEL VALVE HALL
3'-1"	Cl												"8/2 9	"8/7 8	1.3 13/16"	1, 3 13/16"	2, 2, 3/16"	2' 2 3/16"	3' 0 1/2"	3.01/2"		78'-1"
	W14X109 CT	W14X109	W14X100	14X109	W14X109	W14X109	W14X109	W14X109	W14X109	W14X109		W14X109	W14X90	W14X90	W14X90	W14X90	W14X90	W14X90	W14X90	W14X90	400"	
N. FLOOR	1'-6 1/2" TYP																				4(FIN. FLOOR
)"				l				1				1				I	1	I	I	L		15'-0"

RIDGE AT VALVE HALL					RIDGE AT VALVE HALL
83'-8 1/2" ROOF LEVEL VALVE HALL					83'-8 1/2" ROOF LEVEL VALVE HALL
78'-1"	3, 10 13/16"	3' 10 13/16"	4.93/16"	4' 9 3/16"	78'-1"
	SPLICE	W14X90	W14X90	W14X90	
FIN. FLOOR 15'-0"	1'-6 1/2" TYP				FIN. FLOOR 15'-0"
Column Locations	CO-6-CO-G	CO-6-CO-P	CO-7-CO-G	CO-7-CO-P	



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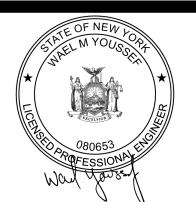
901 Main Campus Drive Raleigh, North Carolina 27606



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

CONVERTER BUILDING -VALVE HALL AREA D **COLUMN SCHEDULE**



PROJECT NO D. FLYNN CHECKED BY W. ABBASSI DRAWING NO

S-703.00

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RIDGE AT REACTOR/DC HALL																				RIDGE AT REACTOR/DC HALL
78'-8 1/2" ROOF LEVEL REACTOR/DC HALL																1				78'-8 1/2" ROOF LEVEL REACTOR/DC HALL
73'-1"																3 13/16"	. 2 3/16"	3' 0 1/2"		73'-1"
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									W14X	W14X	W14X	W14X	W14X	W14X	W14X	W143	W14		W	
					1.6 1/2"	1. 6 1/2"	1.6 1/2"	1. 6 1/2"											400"	
	(33	(33	(33	0X33	0X33	W10X33	W10X33	10X33												
	TYP W10X33	W10X33	W10X33	W10>	W10	W11	W11	W10												
FIN. FLOOR	1'-6 1/2"																			FIN. FLOOR
15'-0"									1		İ						1			15'-0"
Column Locations	CO-0.4-CO-P.08	8 CO-0.4-CO-Q	CO-0.4-CO-F	CO-0.4-CO-S	6.1 CO-0.9-CO-F	.08 CO-0.9-C	D-Q CO-0.9-CO	O-R CO-0.9-CO-S	.1 CO-1-C	O-Q CO-1-CO-R	CO-1-CO-S	CO-1-CO-	Г CO-1-CO-U	CO-1-CO-V	CO-2-C	O-V CO-3-CO-	-V CO-4-C0	D-V CC)-5-CO-V	

NDCE AT BEACTOR/DC HALL																											
IDGE AT REACTOR/DC HALL 8'-8 1/2" OOF LEVEL REACTOR/DC HALL	<u> </u>]							+]	+]	<u> </u>														RIDGE AT REACTOR/DC HALL 78'-8 1/2" ROOF LEVEL REACTOR/DC HALL
3'-1"	3' 10 13/16"		4. 9 3/16"				4.93/16"	3' 10 13/16"	3, 0 1/2"		2' 2 3/16"		1, 3 13/16"		"8/1 9												73'-1"
	CL SPLICE						_										+					_ _		_		_	
	W14X132		W14X132		W14X145		W14X132	W14X132	W14X132		W14X132		W14X132		W14X132		W14X90	W14X90		W14X90		W14X90	W14X90		W14X90		
																										400"	
N. FLOOR	1'-6 1/2" TYP																										FIN. FLOOR
-0"																											15'-0"
olumn Locations	CO-6	-CO-V	CO-7-0	CO-V	CO-8-C	CO-V	CO-9-C0	D-V CO-10-	-CO-V CO-1	1-CO-V	CO-12	2-CO-V	CO-13-	-CO-V	CO-14-	-co-v cc	-15-CO-	-Q CO-15	5-CO-R	CO-15-0	co-s	CO-15-CO-T	CO-15	s-CO-U	CO-15-	·CO-V	



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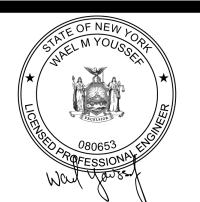
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Astoria HVDC Converter Station -45 20th Avenue Astoria Queens NY 1110

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

CONVERTER BUILDING -DC HALL COLUMN SCHEDULE



 DATE
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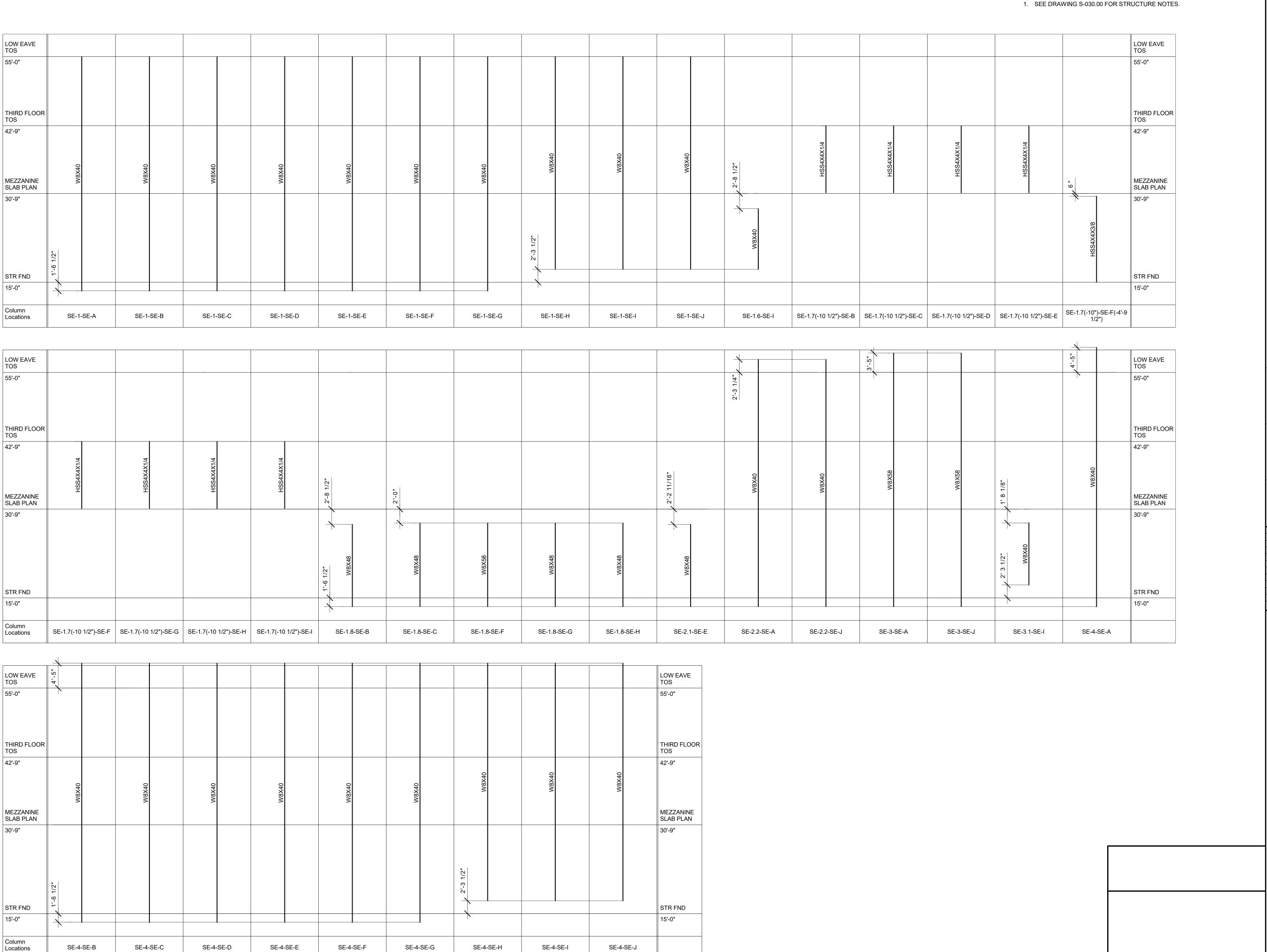
 DRAWING BY
 D. FLYNN

 CHECKED BY
 W. ABBASSI

 DRAWING NO

S-704.00

CADD FILE NO 73 (
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ustoria/CHA-KIE-081-ZZ-M3-S-001.rvt



SHEET NOTES:

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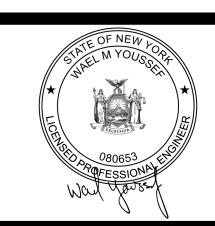
PROJECT



Astoria HVDC Converter Station

31-45 20th Avenue, Astoria, Queens NY 11105 Block #850 - Lot #310 - BIN #4624437

SERVICE BUILDING COLUMN SCHEDULE



 DATE
 12/12/2022

 PROJECT NO
 105121

 DRAWING BY
 D. FLYNN

 CHECKED BY
 W. ABBASSI

 DRAWING NO

S-711.00

CADD FILE NO
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Astoria/CHA-KIE-111-ZZ-M3-S-001.rvt