

# **PORT HEIDEN POWER SYSTEM UPGRADE**

## **STAKING SHEETS**

**ISSUED FOR CONSTRUCTION – MARCH 2022**

**GRAY STASSEL ENGINEERING, INC**

**P.O. BOX 111405**

**ANCHORAGE, ALASKA 99511-1405**

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PORT HEIDEN DISTRIBUTION  
UPGRADE PROJECT  
PORT HEIDEN, ALASKA

REV. NO.	DATE	BY	DESCRIPTION	DESIGNER	DATE
2	March 14, 2022	CWV	ISSUED FOR CONSTRUCTION.	CWV	March 14, 2022

LOCATION NUMBER	PRIMARY				SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS	MISCELLANEOUS CONSTRUCTION UNITS	REMARKS, COMMENTS, NOTES	
	CONDUCTOR			PRIMARY ASSEMBLY	XFMRs	SERVICE		BACKFEED				
	No.	SIZE/TYPE	Back Span			No.	SIZE/TYPE	Back Span				No.

**PHASE 1**

SC2 (EXISTING)											1 UM6.C2	REMOVE ONE UM6.EL2 ELBOW AND TURN OVER TO UTILITY. SEE PLAN DRAWINGS FOR REMOVAL OF TRANSFORMER.
JB2W (EXISTING)				3 UM6.EL2								REMOVE THREE UM6.C2 CAPS AND TURN OVER TO UTILITY. SEE NOTE 6.
SC-AN-1	3 #1/0 JCN	NOTE 2	1 15US3.PJ.2222a 6 UM6.EL2 3 UM6.PK2 3 UM6.JN2222								1 UH1.1 9 UM6.C2	SEE PLAN DRAWINGS FOR ADDITIONAL DETAILS. SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.
SC-AN-2	3 #1/0 JCN	NOTE 2	1 15US3.PJ.2222a 7 UM6.EL2 3 UM6.PK2 3 UM6.JN2222								8 UM6.C2	SEE NOTE 6.
TR-AN-2	1 #1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1 UG1.3-25		1 #8 DUPLEX CU	NOTE 2			3 UJ2.4	1 UH1.1 2 UM6.C2	STREET LIGHT CONNECTION. SEE NOTE 6.
PED-AN-2A						1 #2 TRIPLEX 1 #1/0 TRIPLEX	NOTE 2 NOTE 2	1 #2/0 TRIPLEX		3 UJ4.1 1 UJ3.1 2 UQ1.1B1a		TWO SINGLE-PHASE SERVICES. SEE NOTE 8.
PED-AN-2B						2 #2 TRIPLEX	NOTE 2	1 #2/0 TRIPLEX		3 UJ4.1 1 UJ3.1 2 UQ1.1B1a		TWO SINGLE-PHASE SERVICES. SEE NOTE 8.
SC-AN-3	3 #1/0 JCN	NOTE 2	1 15US3.PJ.2222a 6 UM6.EL2 3 UM6.PK2 3 UM6.JN2222								1 UH1.1 9 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.

LOCATION NUMBER	PRIMARY				SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS	MISCELLANEOUS CONSTRUCTION		REMARKS, COMMENTS, NOTES	
	CONDUCTOR			PRIMARY ASSEMBLY	XFMRS	SERVICE		BACKFEED		UNITS			
	No.	SIZE/TYPE	Back Span			No.	SIZE/TYPE	Back Span		No.	SIZE/TYPE		No.
SC-AN-4	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 6 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							1 UH1.1 9 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
SC-AN-5		NOT USED											
SC-AN-6	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 10 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							1 UH1.1 5 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
TR-AN-6	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1 UG1.3-25		2 #1/0 TRIPLEX 1 #8 DUPLEX CU	NOTE 2 NOTE 2		3 UJ2.4 2 UQ1.1B1a	1 UH1.1 2 UM6.C2	TWO SINGLE-PHASE SERVICES. STREET LIGHT CONNECTION. SEE NOTE 6.	
PED-AN-6A							1 #2 TRIPLEX	NOTE 2	1 #2/0 TRIPLEX	3 UJ4.1 1 UQ1.1B1a		ONE SINGLE-PHASE SERVICE. SEE NOTE 8.	
SC3 EXISTING	3	#1/0 JCN	NOTE 2	3 UM6.EL2								EXISTING SECTIONALIZING CABINET. REMOVE THREE UM6.C2 AND TURN OVER TO THE UTILITY. SEE NOTE 6.	
SC-P-1	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 8 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							1 UH1.1 7 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
TR-P-1A	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1 UG1.3-15		1 #2 TRIPLEX			3 UJ2.4 1 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE SEE NOTE 6.	
TR-P-1B	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1 UG1.3-15		1 #2 TRIPLEX 1 #8 DUPLEX CU	NOTE 2		3 UJ2.4 1 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE. STREET LIGHT CONNECTION. SEE NOTE 6.	
SC-P-2		NOT USED											
SC-P-3	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 6 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							1 UH1.1 9 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
SC-P-4	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 7 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							1 UH1.1 8 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	

LOCATION NUMBER	PRIMARY				SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS	MISCELLANEOUS CONSTRUCTION		REMARKS, COMMENTS, NOTES						
	CONDUCTOR			PRIMARY ASSEMBLY	XFMRS	SERVICE		BACKFEED		UNITS								
	No.	SIZE/TYPE	Back Span			No.	SIZE/TYPE	Back Span		No.	SIZE/TYPE		No.	UNITS				
TR-P-4	1	#1/0 JCN	NOTE 2	1 UF1.BNa	1 UG1.3-15	2	#2 TRIPLEX			3 UJ2.4	1 UH1.1	TWO SINGLE-PHASE SERVICES. SEE NOTE 6.						
				1 UM6.EL2													2 UQ1.1B1a	2 UM6.C2
				1 UM6.PK2														
SC-P-5	3	#1/0 JCN	NOTE 2	1	15US3.PJ.2222a							1 UH1.1 8 UM6.C2 SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.						
				7	UM6.EL2													
				3	UM6.PK2													
				3	UM6.JN2222													
TR-P-5	1	#1/0 JCN	NOTE 2	1 UF1.BNa	1 UG1.3-15	1	#8 DUPLEX CU	NOTE 2		3 UJ2.4	1 UH1.1 2 UM6.C2	STREET LIGHT CONNECTION. SEE NOTE 6.						
				1									UM6.EL2					
				1									UM6.PK2					
PED-P-5A							2	#2 TRIPLEX	NOTE 2	1	#2/0 TRIPLEX	3 UJ4.1 2 UQ1.1B1a 1 UJ3.1	TWO SINGLE-PHASE SERVICES. SEE NOTE 8.					
SC-P-6	3	#1/0 JCN	NOTE 2	1	15US3.PJ.2222a						1 UH1.1 9 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.						
				6	UM6.EL2													
				3	UM6.PK2													
				3	UM6.JN2222													
SC-P-7	3	#1/0 JCN	NOTE 2	1	15US3.PJ.2222a						1 UH1.1 7 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.						
				8	UM6.EL2													
				3	UM6.PK2													
				3	UM6.JN2222													
TR-P-7A	1	#1/0 JCN	NOTE 2	1 UF1.BNa	1 UG1.3-15	4	#2 TRIPLEX	NOTE 2		3 UJ2.6	1 UH1.1 2 UM6.C2	FOUR SINGLE-PHASE SERVICES. SEE NOTE 6.						
				1									UM6.EL2					
				1									UM6.PK2					
PED-P-7A							1	#2 TRIPLEX	NOTE 2	1	#2/0 TRIPLEX	3 UJ4.1 1 UQ1.1B1a 1 UJ3.1	ONE SINGLE-PHASE SERVICE. STREET LIGHT CONNECTION. SEE NOTE 8.					
TR-P-7B	1	#1/0 JCN	NOTE 2	1 UF1.BNa	1 UG1.3-15	3	#2 TRIPLEX	NOTE 2		3 UJ2.6	1 UH1.1 2 UM6.C2	THREE SINGLE-PHASE SERVICES. SEE NOTE 6.						
				1									UM6.EL2					
				1									UM6.PK2					
PED-P-7B							1	#8 DUPLEX CU	NOTE 2	1	#2/0 TRIPLEX	3 UJ4.1 1 UJ3.1	STREET LIGHT CONNECTION. SEE NOTE 8.					
SC-P-8	3	#1/0 JCN	NOTE 2	1	15US3.PJ.2222a						1 UH1.1 9 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.						
				6	UM6.EL2													
				3	UM6.PK2													
				3	UM6.JN2222													
SC-P-9	3	#1/0 JCN	NOTE 2	1	15US3.PJ.2222a						1 UH1.1 11 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.						
				4	UM6.EL2													
				3	UM6.PK2													
				3	UM6.JN2222													

LOCATION NUMBER	PRIMARY				SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS	MISCELLANEOUS CONSTRUCTION		REMARKS, COMMENTS, NOTES		
	CONDUCTOR			PRIMARY ASSEMBLY	XFMRs	SERVICE		BACKFEED		UNITS				
	No.	SIZE/TYPE	Back Span			No.	SIZE/TYPE	Back Span		No.	SIZE/TYPE		No.	Units
TR-P-9	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1 UG1.3-15			3 #2 TRIPLEX	NOTE 2			3 UJ2.6 3 UQ1.1B1a	1 UH1.1 2 UM6.C2	THREE SINGLE-PHASE SERVICES. SEE NOTE 6.
PED-P-9								1 #2 TRIPLEX 1 #8 DUPLEX CU	NOTE 2 NOTE 2		1 #2/0 TRIPLEX	3 UJ4.1 1 UQ1.1B1a 1 UJ3.1		ONE SINGLE-PHASE SERVICE. STREET LIGHT CONNECTION. SEE NOTE 8.
SC7 EXISTING				2 UM6.EL2										REMOVE ONE UM6.C2 AND TURN OVER TO UTILITY. SEE NOTE 6.
SC-H-4	1	#1/0 JCN	NOTE 2	1 15US1.PJ.2222a 2 UM6.EL2 1 UM6.PK2 1 UM6.JN2222									1 UH1.1 2 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.
SC-H-5	1	#2 JCN	NOTE 2	1 15US1.PJ.2222a 2 UM6.EL2 1 UM6.PK2 1 UM6.JN2222									1 UH1.1 2 UM6.C2	SEE DETAIL ON PLAN SHEETS. SINGLE PHASE SECTIONALIZING CABINET. SEE NOTE 6.
TR-H-8B	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2 1 UM6.JN2222	1 UG1.3-15			1 #2 TRIPLEX	NOTE 2			3 UJ2.6 3 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE. SEE NOTE 6.

PHASE 2

SC3 EXISTING														SECTIONALIZING CABINET TO BE REMOVED IN ITS ENTIRETY. SEE PLAN SHEET.
SC-AN-6 (PHASE 1)				3 UM6.EL2										SEE NOTE 6. EXISTING SECTIONALIZING CABINET INSTALLED UNDER PHASE 1.
SC-DOT-1	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 7 UM6.EL2 3 UM6.PK2 3 UM6.JN2222									8 UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.

LOCATION NUMBER	PRIMARY				SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS	MISCELLANEOUS CONSTRUCTION		REMARKS, COMMENTS, NOTES		
	CONDUCTOR			PRIMARY ASSEMBLY	XFMRs	SERVICE		BACKFEED		No.	Units			
	No.	SIZE/TYPE	Back Span			No.	SIZE/TYPE	No.					SIZE/TYPE	No.
SC-DOT-2	1	#1/0 JCN	NOTE 2	1 15US1.PJ.2222a 2 UM6.EL2 2 UM6.PK2 1 UM6.JN2222							2	UM6.C2	SEE DETAIL ON PLAN SHEETS. SINGLE PHASE SECTIONALIZING CABINET. SEE NOTE 6.	
TR-DOT-2	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1	UG1.3-25					3	UJ2-4 1 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE. CONNECT TRANSFORMER TO EXISTING SECONDARY CONDUCTORS. SEE PLAN SHEETS. OPERATE DME ON GENERATOR DURING TRANSFORMER REPLACEMENT. COORDINATE WITH FAA.
SC-DOT-3	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 9 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							6	UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
SC-DOT-4	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 7 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							8	UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
TR-DOT-4	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1	UG1.3-15	1	#2 TRIPLEX	NOTE 2		3	UJ2-4 1 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE. SEE NOTE 6.
SC-DOT-5	1	#1/0 JCN	NOTE 2	1 15US1.PJ.2222a 2 UM6.EL2 2 UM6.PK2 1 UM6.JN2222							2	UM6.C2	SEE DETAIL ON PLAN SHEETS. SINGLE-PHASE SECTIONALIZING CABINET. SEE NOTE 6.	
SC-DOT-6	1	#1/0 JCN	NOTE 2	1 15US1.PJ.2222a 2 UM6.EL2 2 UM6.PK2 1 UM6.JN2222							2	UM6.C2	SEE DETAIL ON PLAN SHEETS. SINGLE-PHASE SECTIONALIZING CABINET. SEE NOTE 6.	
TR-DOT-6	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1	UG1.3-15	1	#2 TRIPLEX	NOTE 2		3	UJ2-4 1 UQ1.1B1a	1 UH1.1 2 UM6.C2	ONE SINGLE-PHASE SERVICE. SEE PLAN SHEET FOR SERVICE CONNECTION REQUIREMENTS. SEE NOTE 6.
SC-DOT-7	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 9 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							6	UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
TR-DOT-7	2	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1	UG1.3-25	2	#2 TRIPLEX	NOTE 2		3	UJ2-4 2 UQ1.1B1a	1 UH1.1 1 UM6.C2	TWO SINGLE-PHASE SERVICES. TRANSFORMER IS PROVIDED WITH 12.47 KV DELTA PRIMARY CONNECTION. SEE NOTE 6.
SC-DOT-8	3	#1/0 JCN	NOTE 2	1 15US3.PJ.2222a 7 UM6.EL2 3 UM6.PK2 3 UM6.JN2222							8	UM6.C2	SEE DETAIL ON PLAN SHEETS. SEE NOTE 6.	
TR-DOT-8	1	#1/0 JCN	NOTE 2	1 UF1.BNa 1 UM6.EL2 1 UM6.PK2	1	UG1.3-15	2	#2 TRIPLEX	NOTE 2		3	UJ2-4 2 UQ1.1B1a	1 UH1.1 2 UM6.C2	TWO SINGLE-PHASE SERVICES. SEE NOTE 6.

LOCATION NUMBER	PRIMARY			PRIMARY ASSEMBLY		XFMRS		SECONDARY CONDUCTOR				SECONDARY SERVICE UNITS		MISCELLANEOUS CONSTRUCTION UNITS		REMARKS, COMMENTS, NOTES	
	CONDUCTOR							SERVICE		BACKFEED		UNITS		UNITS			
	No.	SIZE/TYPE	Back Span	No.	Units	No.	Units	No.	SIZE/TYPE	Back Span	No.	SIZE/TYPE	No.	Units	No.		Units
SC-DOT-9	1	#1/0 JCN	NOTE 2	1	15US1.PJ.2222a									2	UM6.C2	SEE DETAIL ON PLAN SHEETS.	
				2	UM6.EL2											SINGLE-PHASE SECTIONALIZING CABINET.	
				2	UM6.PK2											SEE NOTE 6.	
				1	UM6.JN2222												
TR-DOT-9	1	#1/0 JCN	NOTE 2	1	UM1-7NC	1	UG1.3-15	1	#2 TRIPLEX	NOTE 2			3	UJ2-4	1	UH1.1	ONE SINGLE-PHASE SERVICE.
				1	UM6.EL2								1	UQ1.1B1a	2	UM6.C2	SEE PLAN SHEET FOR SERVICE CONNECTION REQUIREMENTS.
				1	UM6.PK2											SEE NOTE 6.	
SC-DOT-10	1	#1/0 JCN	NOTE 2	1	15US1.PJ.2222a									2	UM6.C2	SEE DETAIL ON PLAN SHEETS.	
				2	UM6.EL2											SINGLE-PHASE SECTIONALIZING CABINET.	
				2	UM6.PK2											SEE NOTE 6.	
				1	UM6.JN2222												
TR-DOT-10	1	#1/0 JCN	NOTE 2	1	UF1.BNa	1	UG1.3-15	1	#2 TRIPLEX	NOTE 2			3	UJ2-4	1	UH1.1	ONE SINGLE-PHASE SERVICE.
				1	UM6.EL2								1	UQ1.1B1a	2	UM6.C2	SEE NOTE 6.
				1	UM6.PK2												

**STAKING SHEET NOTES:**

- REFER TO THE DRAWINGS FOR PHYSICAL LAYOUT OF SYSTEM AND FOR ADDITIONAL NOTES OR ADDITIONAL INFORMATION. DETAILS OF DEMOLITION MAY NOT BE INCLUDED IN THE STAKING SHEETS. SEE PLAN SHEETS FOR ALL REQUIRED CONSTRUCTION ACTIVITIES AND COORDINATION.
- SEE PLAN SHEETS FOR BACKSPAN DISTANCE.
- RUS UNIT UJ3.1 SHALL BE A SINGLE-PHASE SECONDARY PEDESTAL WITHOUT A STAKE. SEE SPECIFICATIONS.
- ALL TRANSFORMERS SHALL HAVE GROUND SLEEVES. SEE SPECIFICATIONS.
- DUPLEX - DUPLEX UD CONDUCTOR. SEE SPECIFICATIONS.  
TRIPLEX - TRIPLEX UD CONDUCTOR. SEE SPECIFICATIONS.
- SELECT WIRE SIZE FOR UM6.EL2 BASED ON WIRE SIZE INDICATED.
- RUS UNITS UJ2.4, UJ2.6, AND UJ4.1 SHALL BE INSULATED. SEE SPECIFICATIONS.
- UJ4.1 ARE SECONDARY INSULATED CONNECTOR BLOCKS.