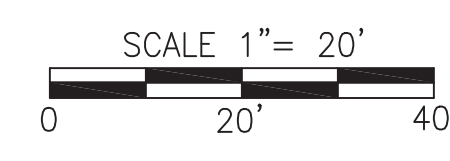


ALL SHEETS ARE
PRELIMINARY



WD NUMBER: 111015586		ULTIMATE DEVELOPMENT PLAN VIEW RICHARDS CREEK SUBSTATION	
REVISION DESCRIPTION: NEW 230KV SUBSTATION ORIGINAL ISSUE		DRAWING NO D-18550	
CADD	G MARTIN	DATE	2015-01-16
ENGINEER	M WOOD	REV NO	0
REVIEWED		SCALE: 1" = 20'	CLASS: ASSY
APPROVED		CADD NO: D-18550_01.dgn	FILE NO: CODE:

3/26/2015 6:26:20 AM USER: cmart1

THE WORK SHOWN ON THIS DRAWING SHALL BE IN ACCORDANCE WITH THE FOLLOWING

MINIMUM ELECTRICAL CLEARANCES FOR STANDARD BIL			
KV CLASS	BIL LEVEL KV	PHASE TO GROUND	PHASE TO PHASE
7.5	95	6"	7"
15	110	7"	12"
34.5	200	13"	18"
69	350	25"	31"
115	550	42"	53"
230	900	71"	89"

PSE STANDARDS

- 8575.6100 INSTALLING SWAGE-TYPE SUBSTATION CONNECTIONS
- 8575.6110 INSTALLING BOLTED SUBSTATION CONNECTIONS
- 8575.6120 INSTALLING WELDED SUBSTATION CONNECTIONS
- 8150.0010 PLACEMENT OF SUBSTATION SIGNS


GENERAL NOTES

1. DRILL A 1/4" DIAMETER DRAIN HOLE IN THE BOTTOM OF EACH ALUMINUM PIPE, CENTERED ON EACH SPAN BETWEEN BUS SUPPORTS.
2. INSTALL 336.4 KCMIL ACSR ORIOLE CABLE INSIDE ALL HORIZONTAL 4-INCH ALUMINUM PIPE BUS RUNS WITH SPANS GREATER THAN 15' AND 2.5-INCH ALUMINUM PIPE BUS RUNS WITH SPANS GREATER THAN 10' TO PREVENT VIBRATION.
3. WELD THE BASE OF TRANSFORMERS AND/OR REGULATORS AT EACH CORNER TO THE NEAREST FOUNDATION WIDE FLANGE BEAM WITH A 4-INCH LONG BY 1/4-INCH FILLET WELD. WELD METALCLAD SWITCHGEAR TO STEEL EMBEDS WITH A 4-INCH BY 1/4-INCH FILLET WELD. A BACKER ROD SHALL BE USED WHEN NECESSARY. GALVANIZED, PAINTED OR UNDERCOATED SURFACES, THAT RECEIVE WELDS, SHALL BE CLEANED TO BARE METAL BY WHEEL GRINDING BEFORE WELDING. WELDS SHALL BE CLEANED AND WIRE BRUSHED, AND A HOT ZINC STICK COATING APPLIED FOLLOWED BY A FINAL ZINC RICH PRIMER COATING.
4. THE PLACEMENT OF SIGNS SHALL BE IN ACCORDANCE TO PSE SUBSTATION WORK PRACTICE STANDARD 8150.0010:
2 SIGNS SHALL STATE:
XXX SUBSTATION
SUBSTATION ADDRESS (NO CITY REQUIRED)

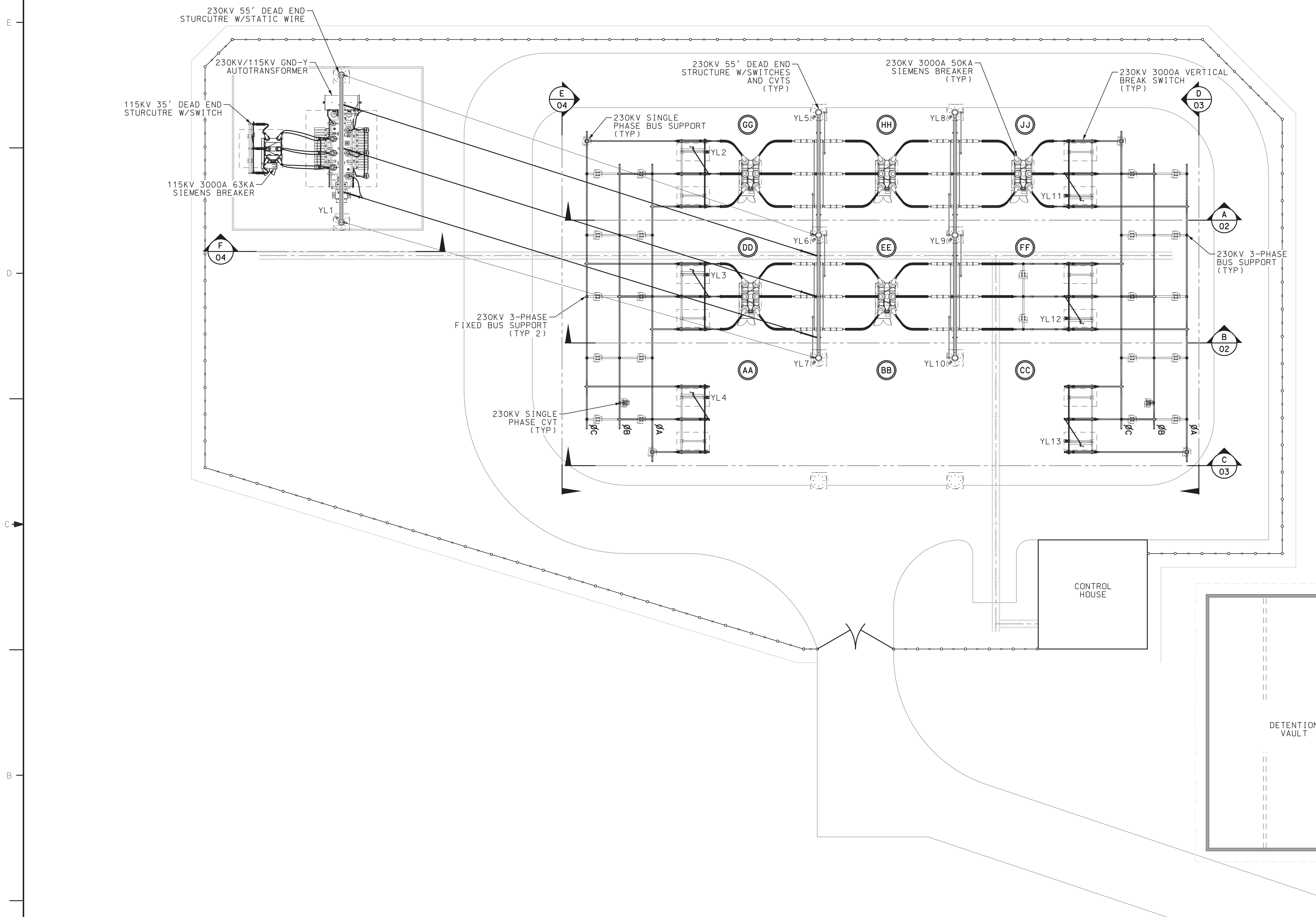
REFERENCE DRAWINGS

- D-18552 STATION CONDUIT
- D-18553 STATION GROUNDING
- D- FOUNDATION PLAN

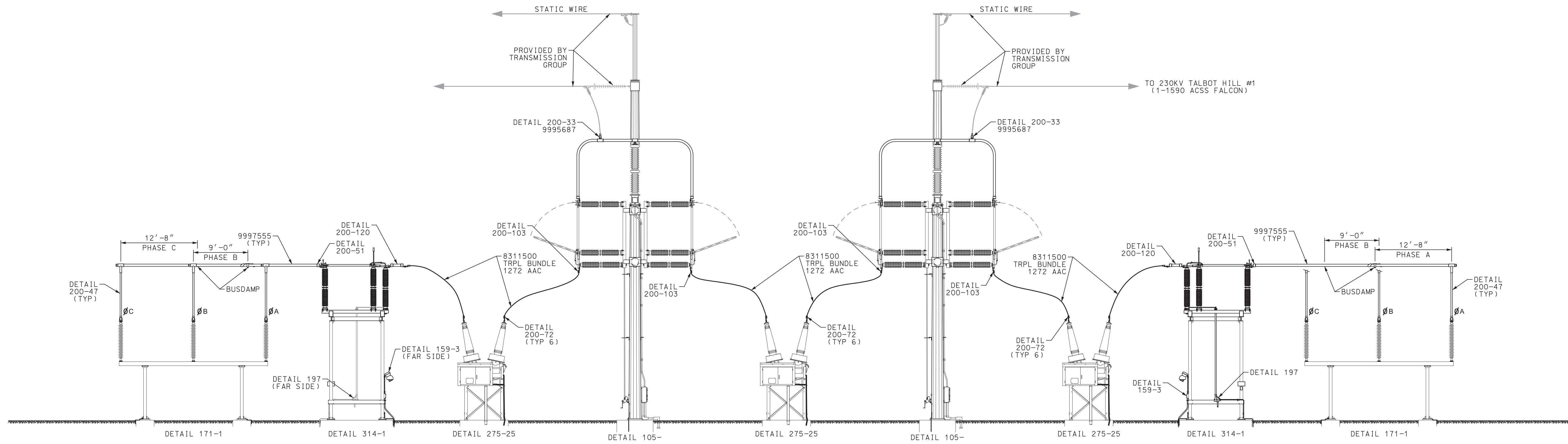
**STATION ELECTRICAL ASSEMBLY PLAN VIEW
RICHARDS CREEK SUBSTATION**

WD NUMBER: 111015586		REVISION DESCRIPTION: NEW 230KV SUBSTATION ORIGINAL ISSUE		DATE 2015-01-16	
CADD	G MARTIN	 PUGET SOUND ENERGY	ENGINEER	M WOOD	SUBSTATION ENGINEERING DEPARTMENT CLASS: ASSY
REVIEWED			DRAWING NO D-18551	REV NO 0	SHEET: 01 FILE NO:
APPROVED			SCALE: 1" = 20'	CLASS: ASSY	CADD NO: D-18551_01.dgn CODE:

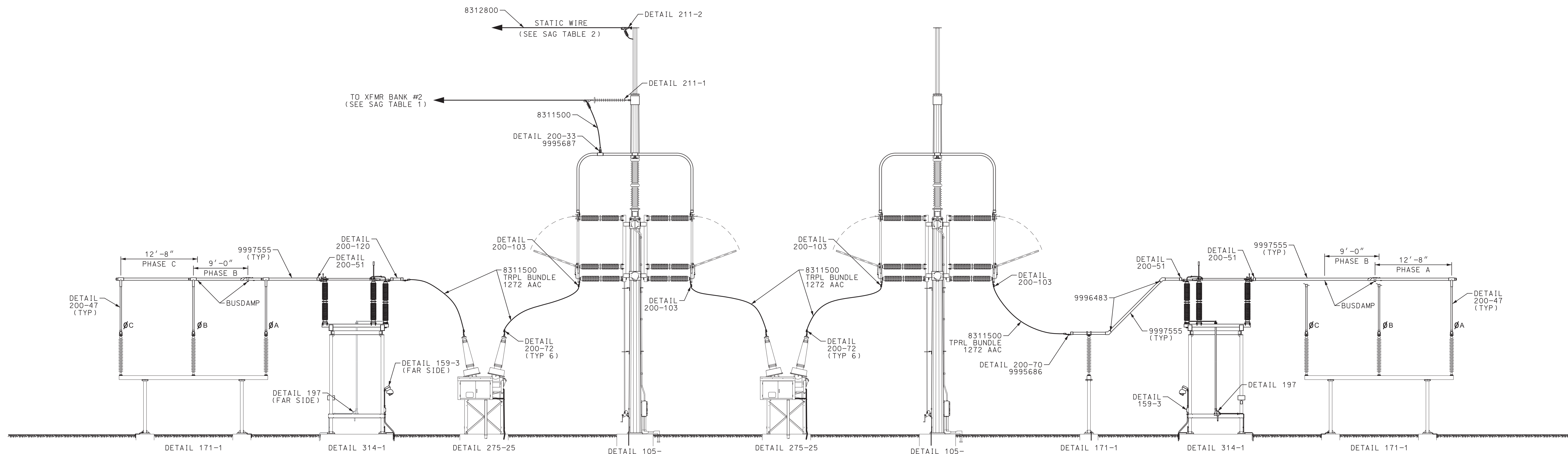
ALL SHEETS ARE PRELIMINARY



USER: cmort+i
 3/26/2015 6:26:22 AM



ELEVATION **A**
01



ELEVATION **B**
01

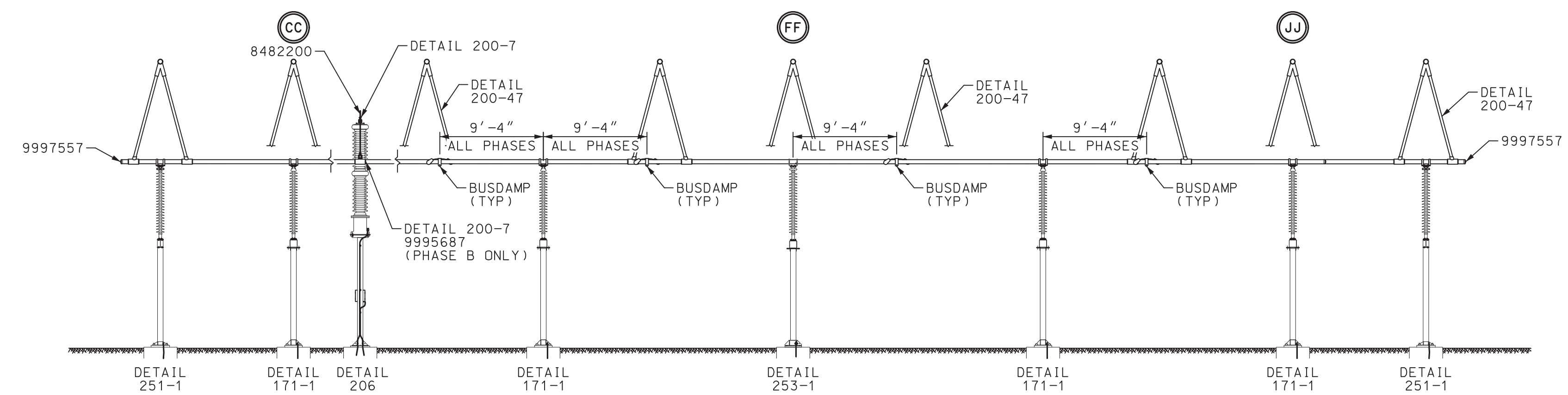
ALL SHEETS ARE
PRELIMINARY

WD NUMBER: 111015586		STATION ELECTRICAL ASSEMBLY ELEVATIONS RICHARDS CREEK SUBSTATION	
REVISION DESCRIPTION: NEW 230KV SUBSTATION ORIGINAL ISSUE		DRAWING NO D-18551	
CADD	G. MARTIN	DATE	2015-01-16
ENGINEER	M. WOOD	SCALE: 1" = 8'	CLASS: ASSY
REVIEWED		CADD NO: D-18551_02.dgn	FILE NO:
APPROVED			CODE:
			SHEET: 02
			REV NO 0

3/26/2015 6:26:24 AM
USER: cmar11



ELEVATION C
01



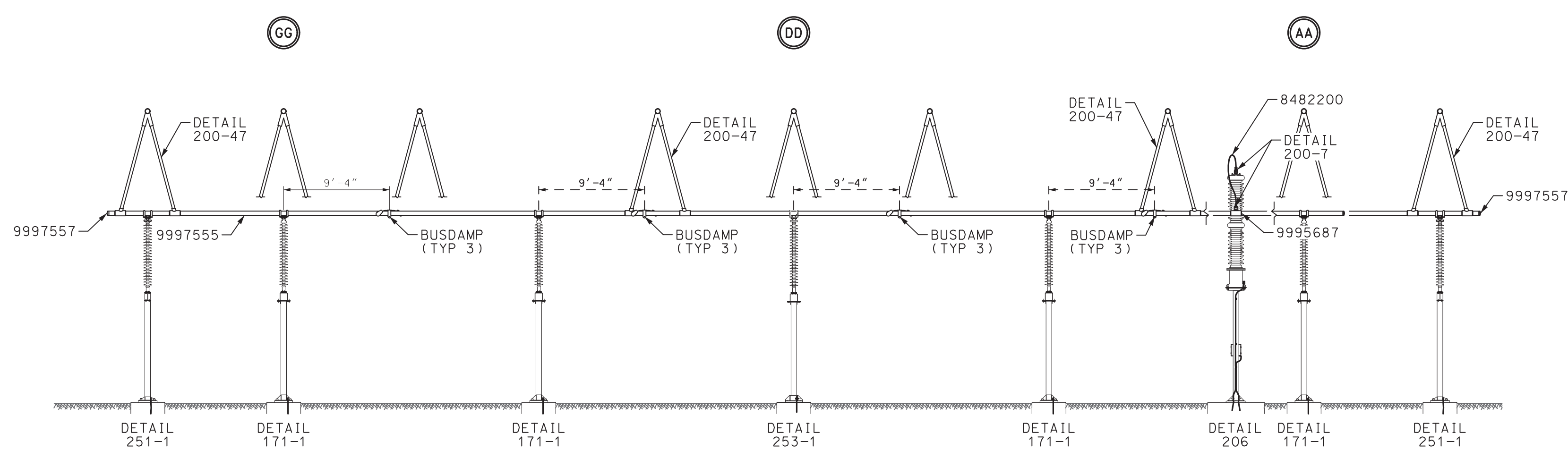
ELEVATION D
01

ALL SHEETS ARE
PRELIMINARY

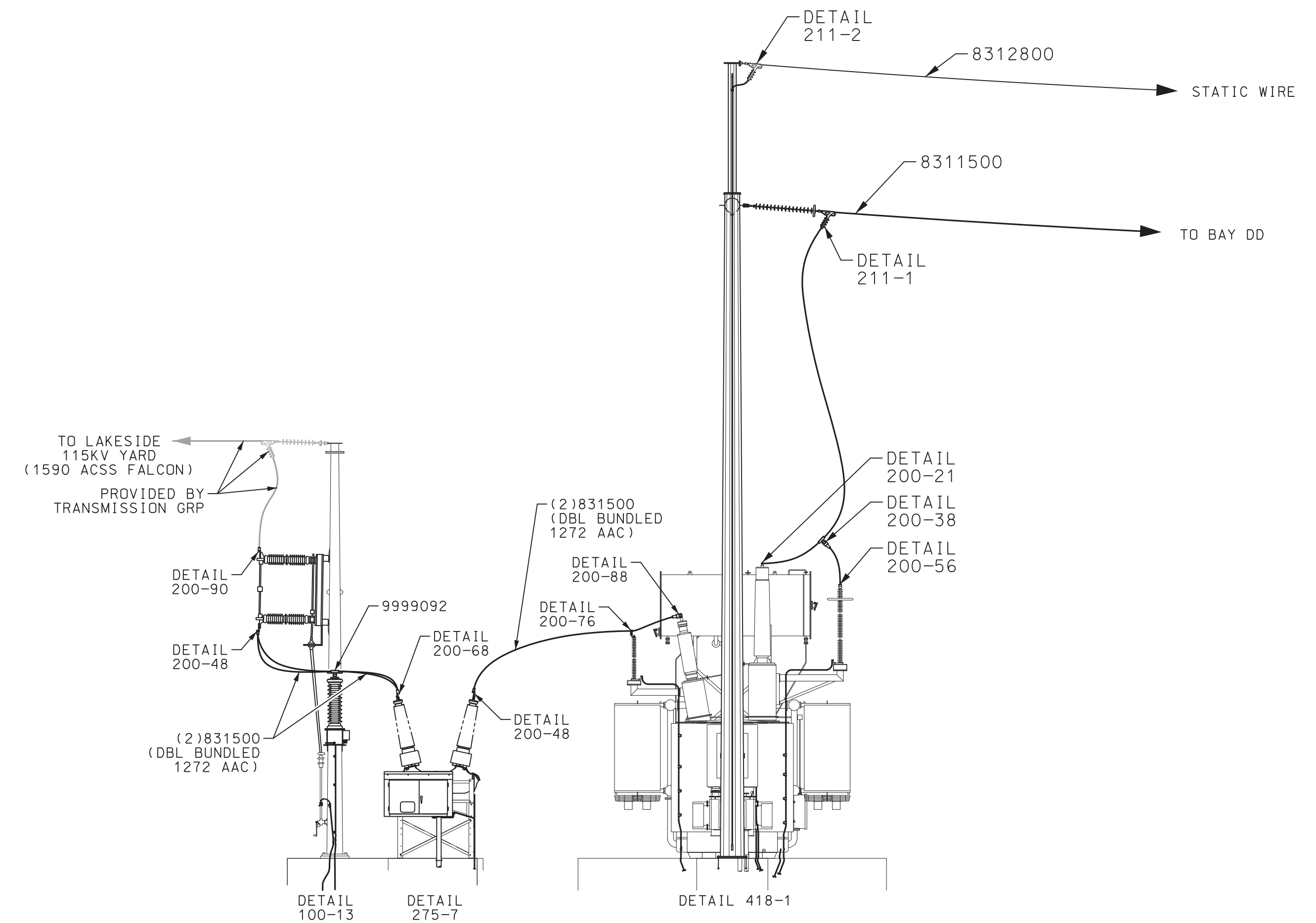
WD NUMBER: 111015586		STATION ELECTRICAL ASSEMBLY ELEVATIONS	
REVISION DESCRIPTION: NEW 230KV SUBSTATION ORIGINAL ISSUE		RICHARDS CREEK SUBSTATION	
CADD	G. MARTIN	 PUGET SOUND ENERGY	SUBSTATION ENGINEERING DEPARTMENT
ENGINEER	M. WOOD		DRAWING NO D-18551
REVIEWED		SCALE: 1" = 8' CADD NO: D-18551_03.dgn	SHEET: 03 REV NO 0
APPROVED		CLASS: ASSY	FILE NO: CODE:

USER: cmart1
 3/26/2015 6:26:25 AM

MID #	MATERIAL DESCRIPTION	QTY	UOM
8311500	WIRE 1272KCM AAC NARCISSUS	300	FT
9995687	CONN DTCH 4" 4-H TANG 90DEG TEE	1	EA
9997555	PIPE 4" ALUM SCH 80, L=40'	400	FT
9997557	END BELL 4" ALUM SCH 80	6	EA
9999092	T-TAP COMP 1590 ACSR w/4-HOLE TANG, DMC	3	EA
BUSDAMP	PR 4" PIPE VIBRATION BUS DAMPER	12	EA



ELEVATION E
01



ELEVATION F
01

ALL SHEETS ARE
PRELIMINARY

WD NUMBER: 111015586		STATION ELECTRICAL ASSEMBLY ELEVATIONS RICHARDS CREEK SUBSTATION	
REVISION DESCRIPTION: NEW 230KV SUBSTATION ORIGINAL ISSUE		DRAWING NO D-18551	
CADD	G MARTIN	DATE	2015-03-13
ENGINEER	M WOOD	SCALE: 1" = 8'	CLASS: ASSY
REVIEWED		CADD NO: D-18551_04.dgn	FILE NO:
APPROVED			CODE:
		SUBSTATION ENGINEERING DEPARTMENT	
		SHEET: 04	
		REV NO 0	

3/26/2015 6:26:27 AM USER: cmar11