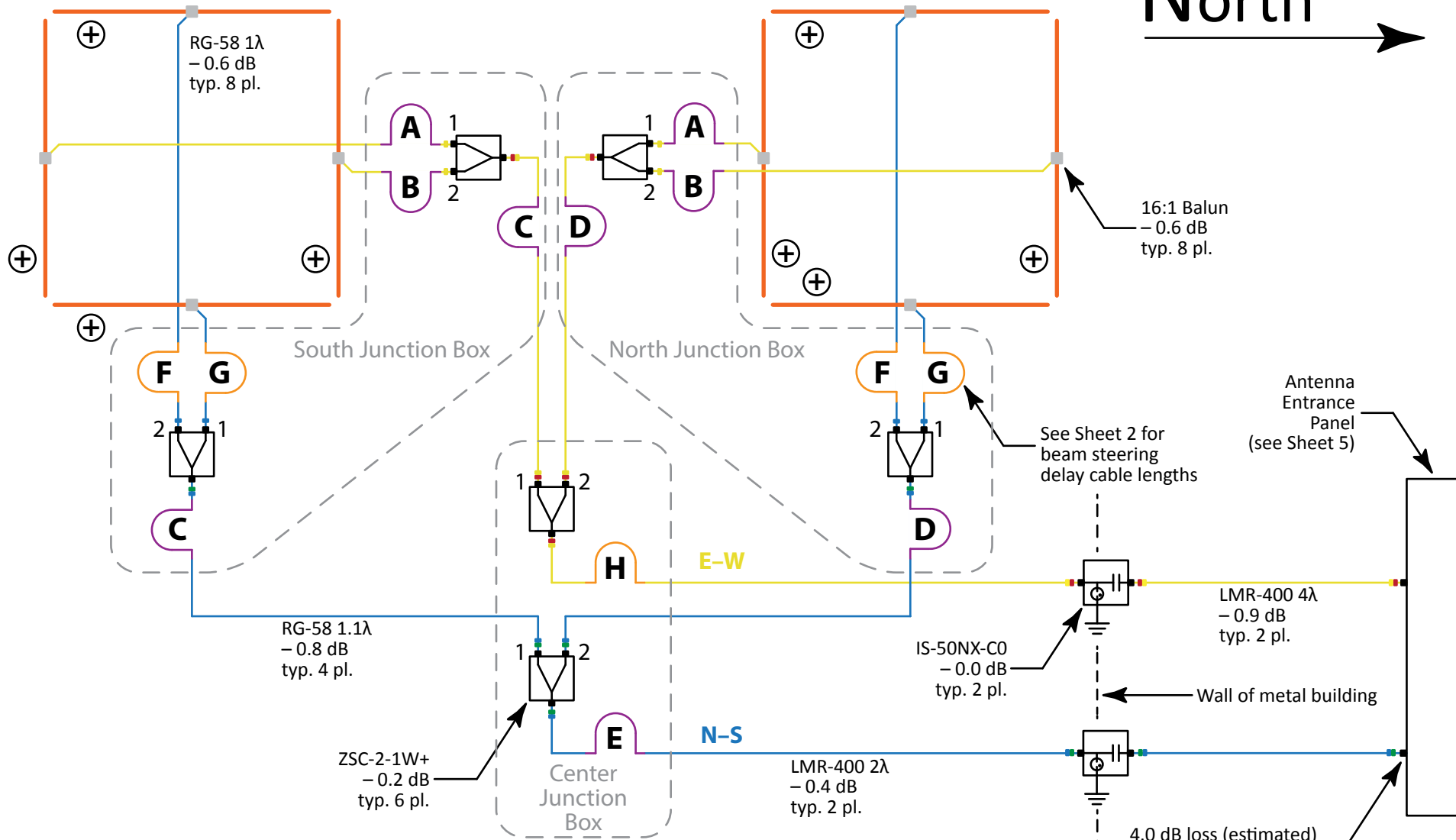


North →



TFD ARRAY CONFIGURATION C CP MODE

See Sheet 5 for XY to CP 90° Hybrid

Noted coax lengths are in terms of wavelength at 20.1 MHz.

30' folded dipoles, top wire 9'2" height, 8" wire spacing, 32' element spacing, 800 Ω termination resistors, 16:1 baluns.

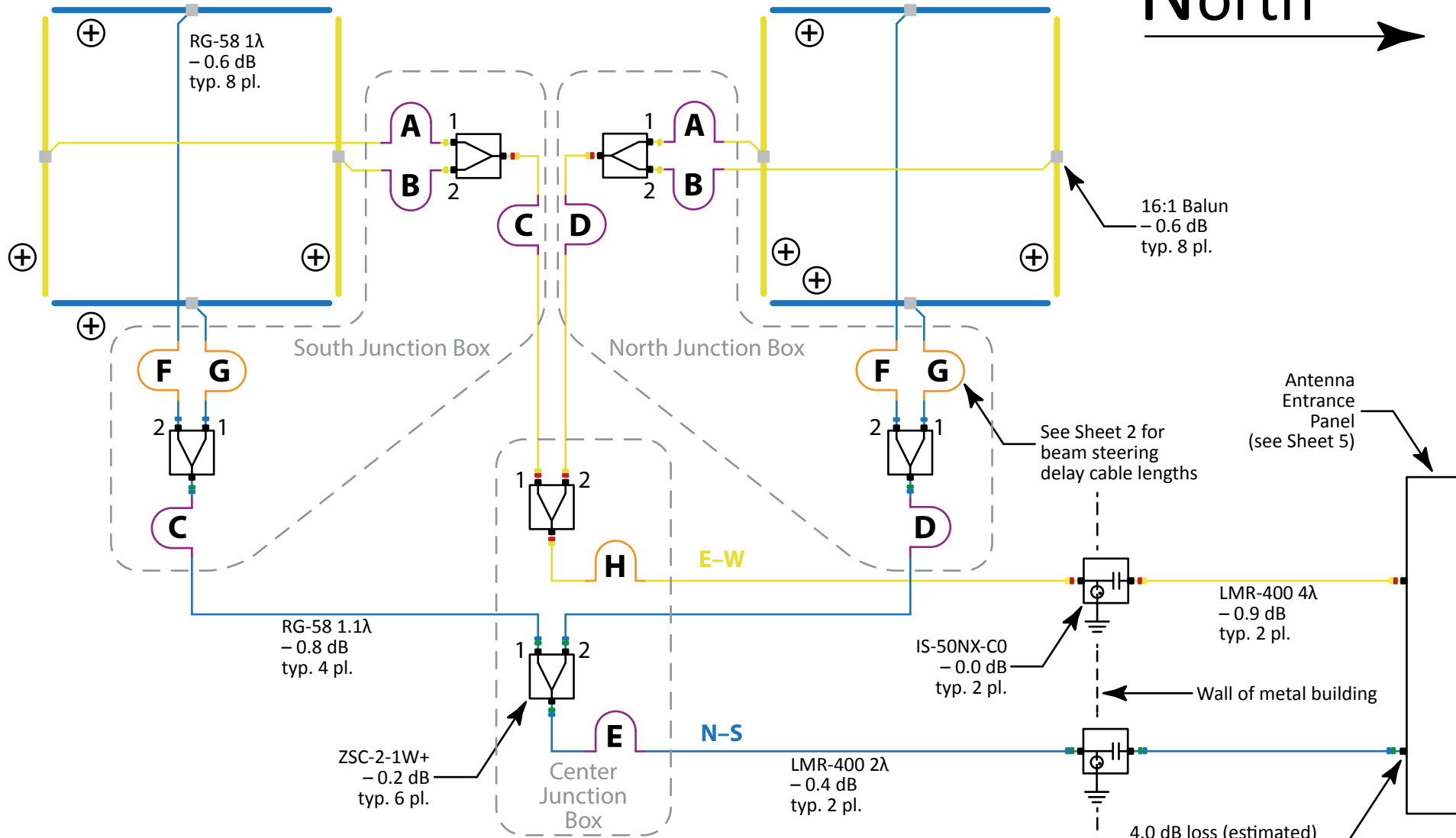
N-S BW ~10° E-W BW ~20°
for < 3 dB response variance at 24 MHz



AJ4CO Observatory Diagram

SIZE	DATE	PART NUMBER	REV
A	15 JAN 2014	N/A	
SCALE	DRAWN BY	SHEET	1 OF 5
NONE	DAVE TYPINSKI		

North →



TFD ARRAY CONFIGURATION C CP MODE

See Sheet 5 for XY to CP 90° Hybrid

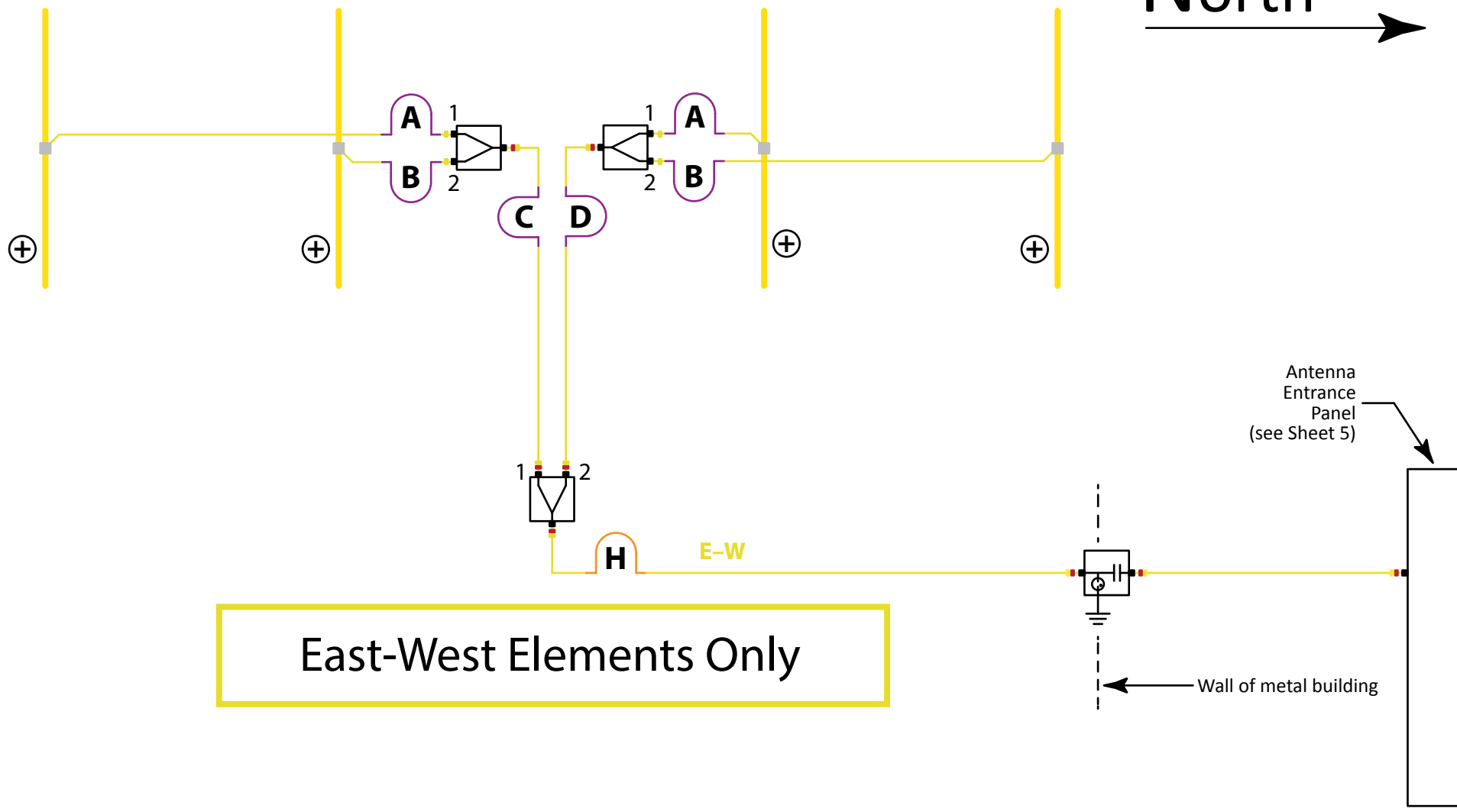
Noted coax lengths are in terms of wavelength at 20.1 MHz.

30' folded dipoles, top wire 9'2" height, 8" wire spacing, 32' element spacing, 800 Ω termination resistors, 16:1 baluns.

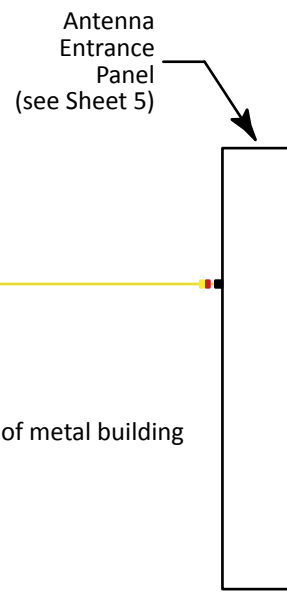
N-S BW ~10° E-W BW ~20°
for < 3 dB response variance at 24 MHz

		<h2>AJ4CO Observatory Diagram</h2>		
		SIZE A	DATE 15 JAN 2014	PART NUMBER N/A
SCALE NONE	DRAWN BY DAVE TYPINSKI	SHEET 1 OF 5		

North 



East-West Elements Only

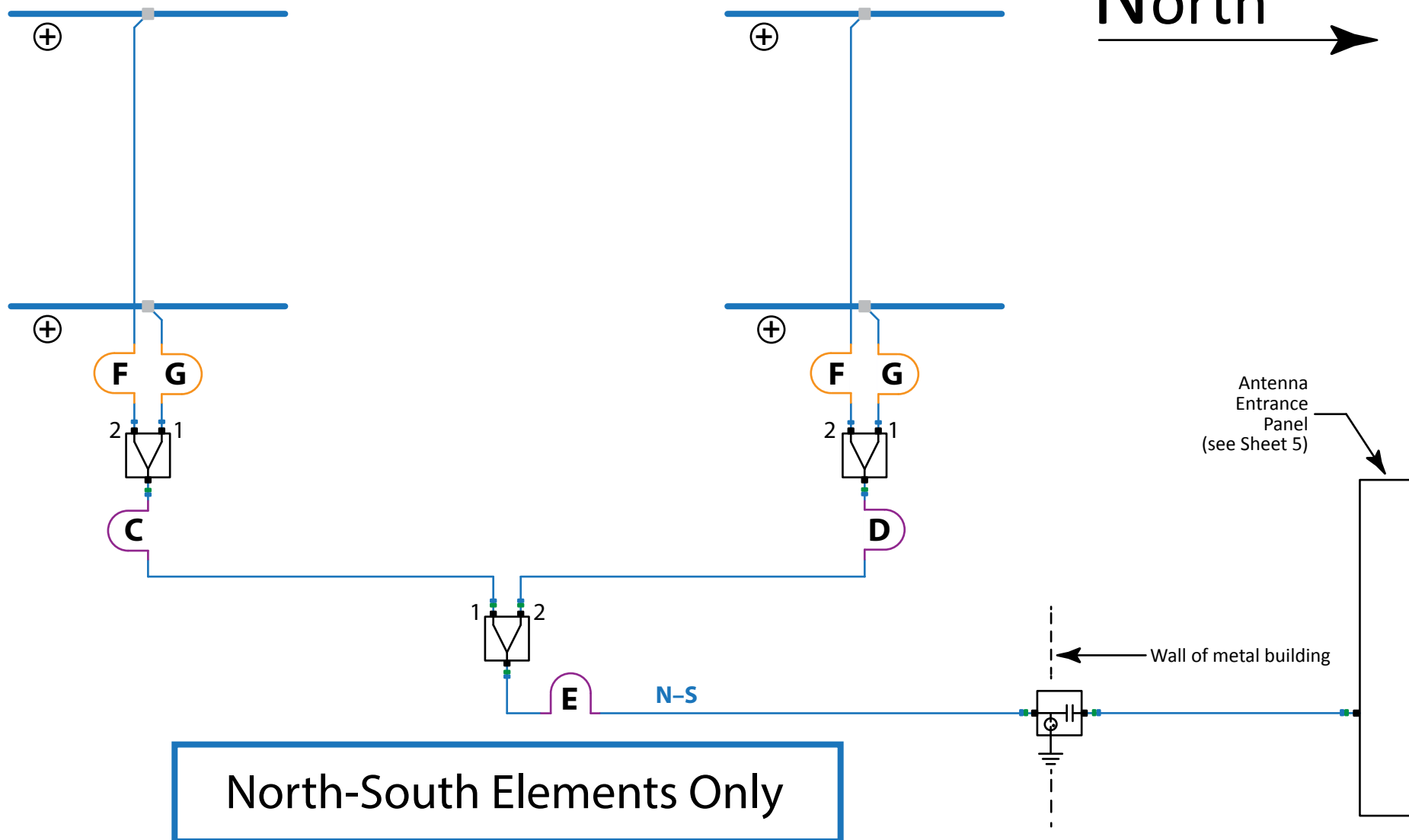


**TFD ARRAY
CONFIGURATION C
CP MODE**
See Sheet 5 for XY to CP 90° Hybrid

Noted coax lengths are in terms of wavelength at 20.1 MHz.
30' folded dipoles, top wire 9'2" height, 8" wire spacing, 32' element spacing, 800 Ω termination resistors, 16:1 baluns.
N-S BW ~10° E-W BW ~20° for < 3 dB response variance at 24 MHz

AJ4CO OBSERVATORY	AJ4CO Observatory Diagram			
	SIZE A	DATE 15 JAN 2014	PART NUMBER N/A	REV
	SCALE NONE	DRAWN BY DAVE TYPINSKI	SHEET 1 OF 5	

North →



North-South Elements Only

**TFD ARRAY
CONFIGURATION C
CP MODE**

See Sheet 5 for XY to CP 90° Hybrid

Noted coax lengths are in terms of wavelength at 20.1 MHz.

30' folded dipoles, top wire 9'2" height,
8" wire spacing, 32' element spacing,
800 Ω termination resistors, 16:1 baluns.

N-S BW ~10° E-W BW ~20°
for < 3 dB response variance at 24 MHz

AJ4CO OBSERVATORY		AJ4CO Observatory Diagram		
		SIZE A	DATE 15 JAN 2014	PART NUMBER N/A
SCALE NONE		DRAWN BY DAVE TYPINSKI	SHEET 1 OF 5	

TFD Array Beam Steering

Time Delay Cable VoP: **66%** ray elements N-S baseline spacing (feet): **32**
 Array elements E-W baseline spacing (feet): **32**

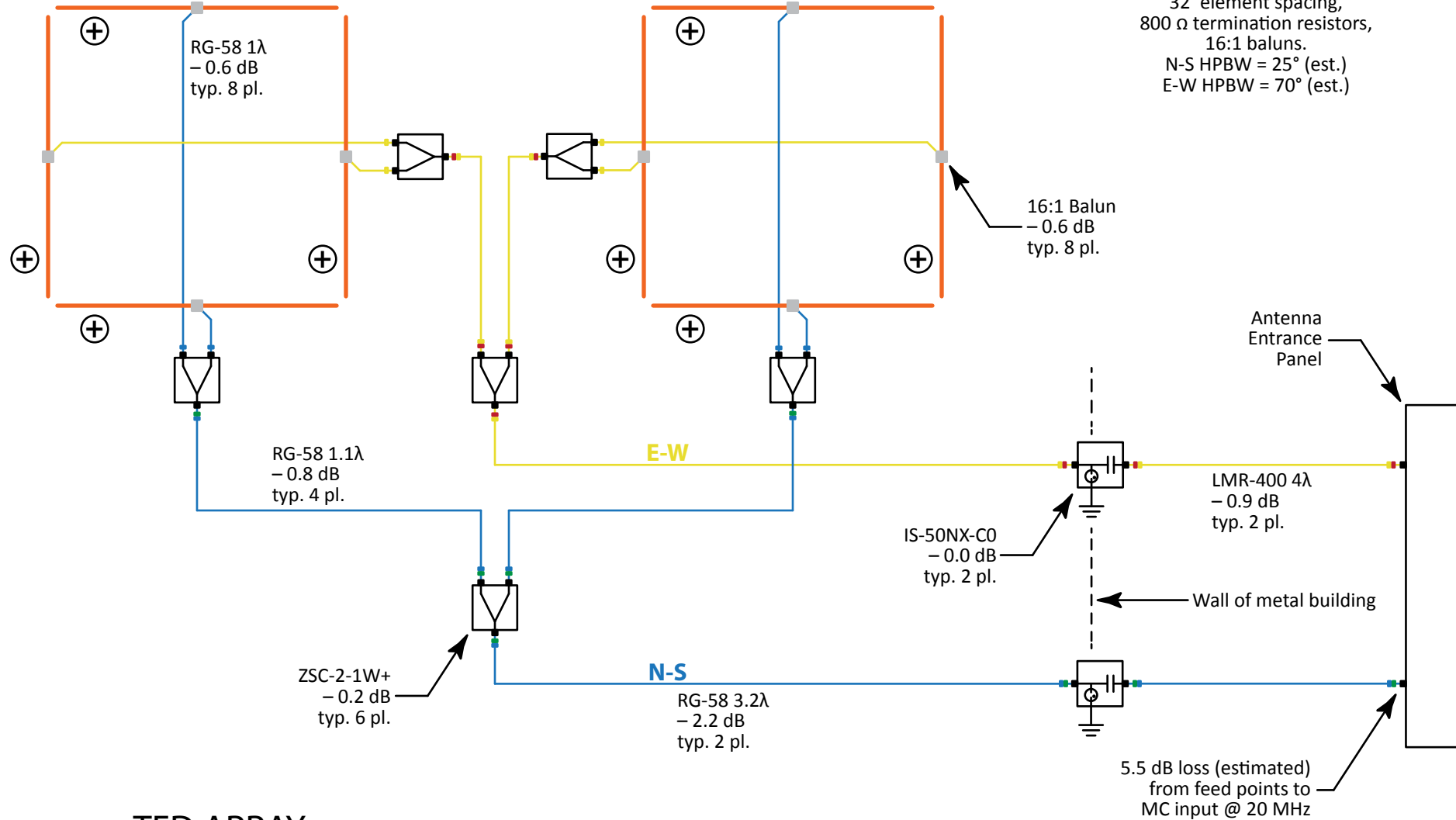
N-S Offset (degrees)	E-W Offset (degrees)	Delay Cable Lengths (feet & inches)					AZ (degrees)	EL (degrees)
		A (S) / B (N)	C (S) / D (N)	E	F (W) / G (E)	H		
5 N	60 E	1' 10"	3' 8-1/4"	11"	18' 3-1/2"	9' 1-3/4"	87	30
5 N	45 E	1' 10"	3' 8-1/4"	11"	14' 11-1/4"	7' 5-1/2"	85	45
5 N	30 E	1' 10"	3' 8-1/4"	11"	10' 6-3/4"	5' 3-1/4"	81	60
5 N	15 E	1' 10"	3' 8-1/4"	11"	5' 5-1/2"	2' 8-3/4"	72	74
5 N	0	1' 10"	3' 8-1/4"	11"	0"	0"	360	85
5 N	15 W	1' 10"	3' 8-1/4"	11"	5' 5-1/2"	2' 8-3/4"	288	74
5 N	30 W	1' 10"	3' 8-1/4"	11"	10' 6-3/4"	5' 3-1/4"	279	60
5 N	45 W	1' 10"	3' 8-1/4"	11"	14' 11-1/4"	7' 5-1/2"	275	45
5 N	60 W	1' 10"	3' 8-1/4"	11"	18' 3-1/2"	9' 1-3/4"	273	30
<hr/>								
0	60 E	0"	0"	0"	18' 3-1/2"	9' 1-3/4"	90	30
0	45 E	0"	0"	0"	14' 11-1/4"	7' 5-1/2"	90	45
0	30 E	0"	0"	0"	10' 6-3/4"	5' 3-1/4"	90	60
0	15 E	0"	0"	0"	5' 5-1/2"	2' 8-3/4"	90	75
0	0	0"	0"	0"	0"	0"	180	90
0	15 W	0"	0"	0"	5' 5-1/2"	2' 8-3/4"	270	75
0	30 W	0"	0"	0"	10' 6-3/4"	5' 3-1/4"	270	60
0	45 W	0"	0"	0"	14' 11-1/4"	7' 5-1/2"	270	45
0	60 W	0"	0"	0"	18' 3-1/2"	9' 1-3/4"	270	30
<hr/>								
5 S	60 E	1' 10"	3' 8-1/4"	11"	18' 3-1/2"	9' 1-3/4"	93	30
5 S	45 E	1' 10"	3' 8-1/4"	11"	14' 11-1/4"	7' 5-1/2"	95	45
5 S	30 E	1' 10"	3' 8-1/4"	11"	10' 6-3/4"	5' 3-1/4"	99	60
5 S	15 E	1' 10"	3' 8-1/4"	11"	5' 5-1/2"	2' 8-3/4"	108	74
5 S	0	1' 10"	3' 8-1/4"	11"	0"	0"	180	85
5 S	15 W	1' 10"	3' 8-1/4"	11"	5' 5-1/2"	2' 8-3/4"	252	74
5 S	30 W	1' 10"	3' 8-1/4"	11"	10' 6-3/4"	5' 3-1/4"	261	60
5 S	45 W	1' 10"	3' 8-1/4"	11"	14' 11-1/4"	7' 5-1/2"	265	45
5 S	60 W	1' 10"	3' 8-1/4"	11"	18' 3-1/2"	9' 1-3/4"	267	30



AJ4CO Observatory Diagram

SIZE A	DATE 01 FEB 2014	PART NUMBER N/A	REV
SCALE NONE	DRAWN BY DAVE TYPINSKI	SHEET 2 OF 5	

North



TFD ARRAY CONFIGURATION A X-Y MODE

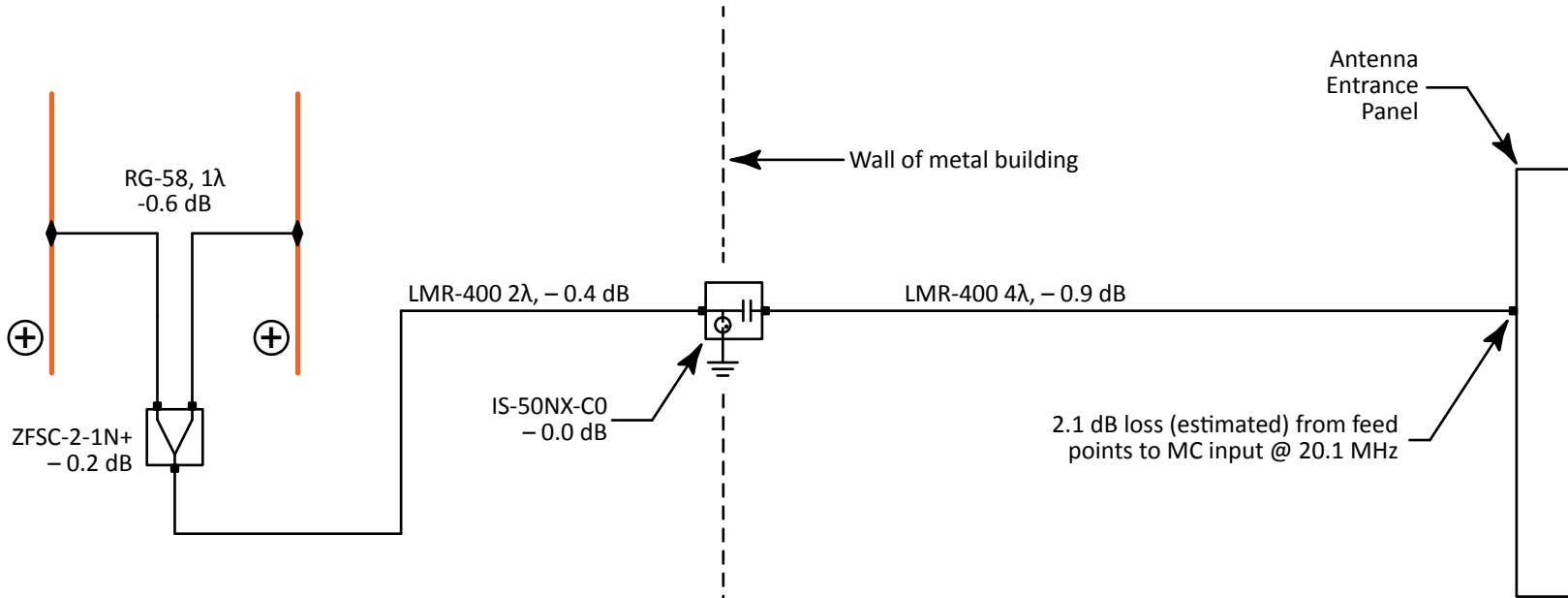
NOTE: All coax lengths given in terms
of wavelength at 20.1 MHz.



AJ4CO Observatory Diagram

SIZE	DATE	PART NUMBER	REV
A	10 DEC 2013	N/A	
SCALE	DRAWN BY	SHEET	3 OF 5
NONE	DAVE TYPINSKI		

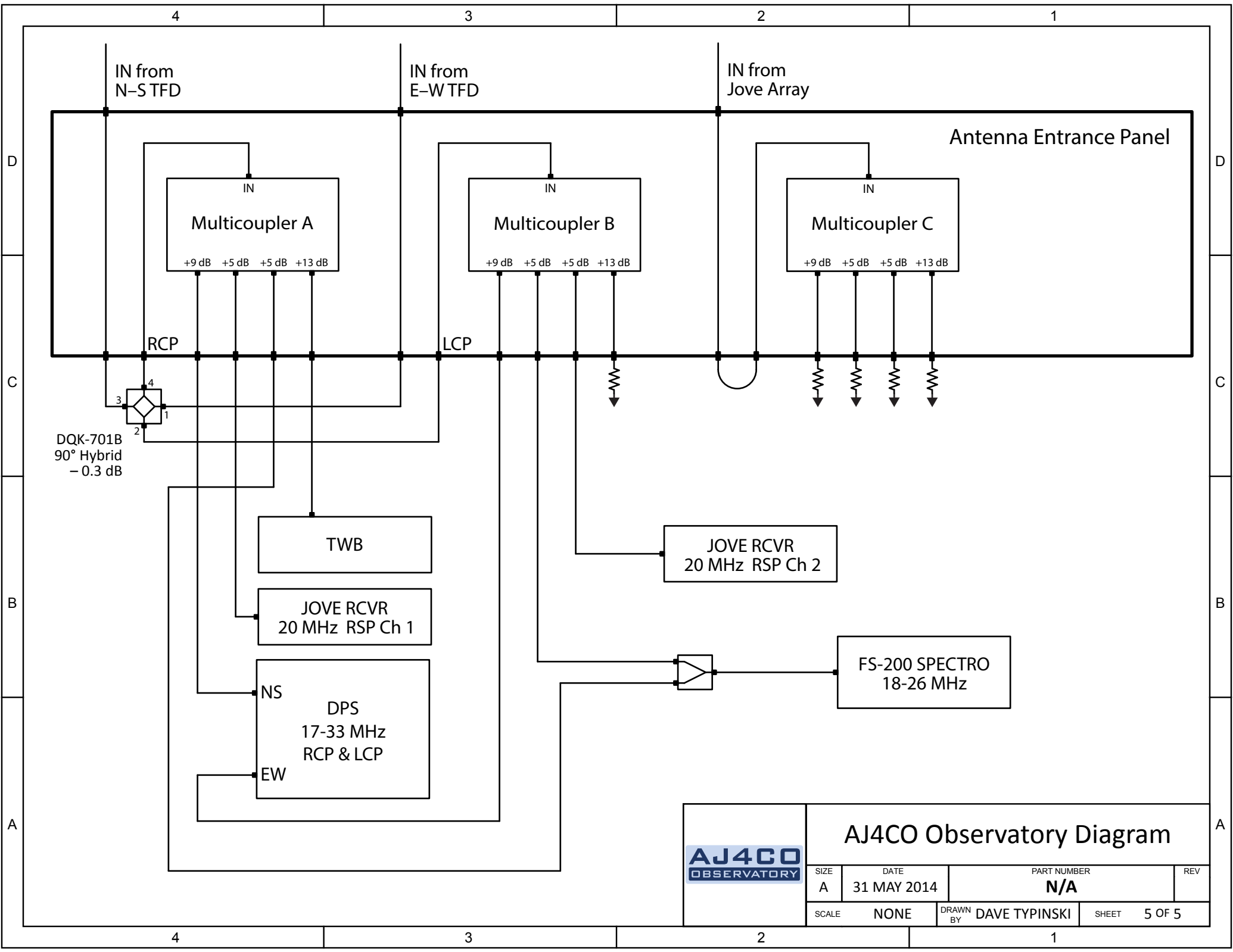
North
→



JOVE ARRAY
 no phasing,
 22'8" dipoles,
 11'8" element height
 20' element spacing,
 HPBW N-S = 71°, E-W = 71°,
 7.9 dBi gain (EZNEC).

NOTE: All coax lengths given in terms of wavelength at 20.1 MHz.

	AJ4CO Observatory Diagram			
	SIZE A	DATE 10 DEC 2013	PART NUMBER N/A	REV
	SCALE NONE	DRAWN BY DAVE TYPINSKI	SHEET 4 OF 5	



AJ4CO OBSERVATORY	AJ4CO Observatory Diagram			
	SIZE A	DATE 31 MAY 2014	PART NUMBER N/A	REV
	SCALE NONE	DRAWN BY DAVE TYPINSKI	SHEET 5 OF 5	



DATE: 22 OCT 2013
SCALE: 1 mm = 1 ft

AJ4CO
OBSERVATORY

UFRO

AJ400
OBSERVATORY

LGM

