

DESIGN CONDITIONS:  
 0.495" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



9200 E. MINERAL AVE.  
 SUITE 400  
 ENGLEWOOD, CO 80112

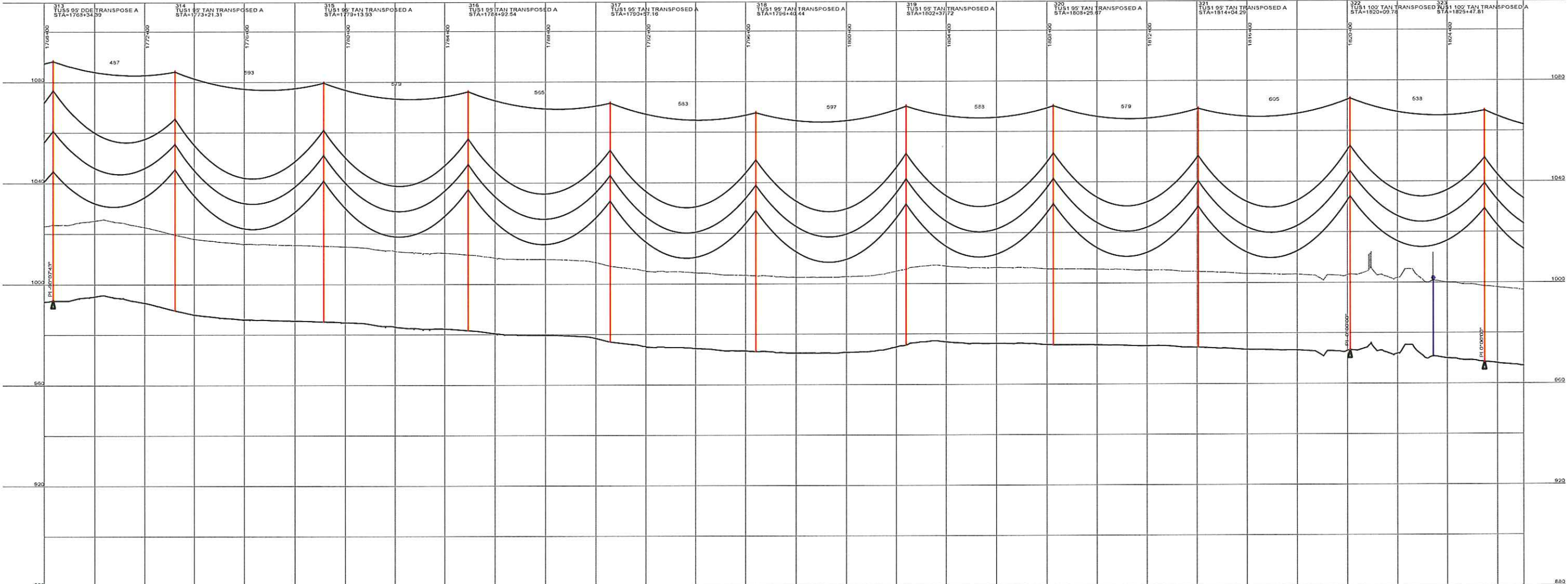
A STANLEY GROUP COMPANY  
 ENGINEERING, ENVIRONMENTAL AND  
 CONSTRUCTION SERVICES - WORLDWIDE

DESIGNED T. FRANCIS  
 DRAWN T. FRANCIS  
 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

MINNKOTA POWER COOPERATIVE  
 GRAND FORKS, ND

400.0 FT. HORIZ SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 40 OF 73



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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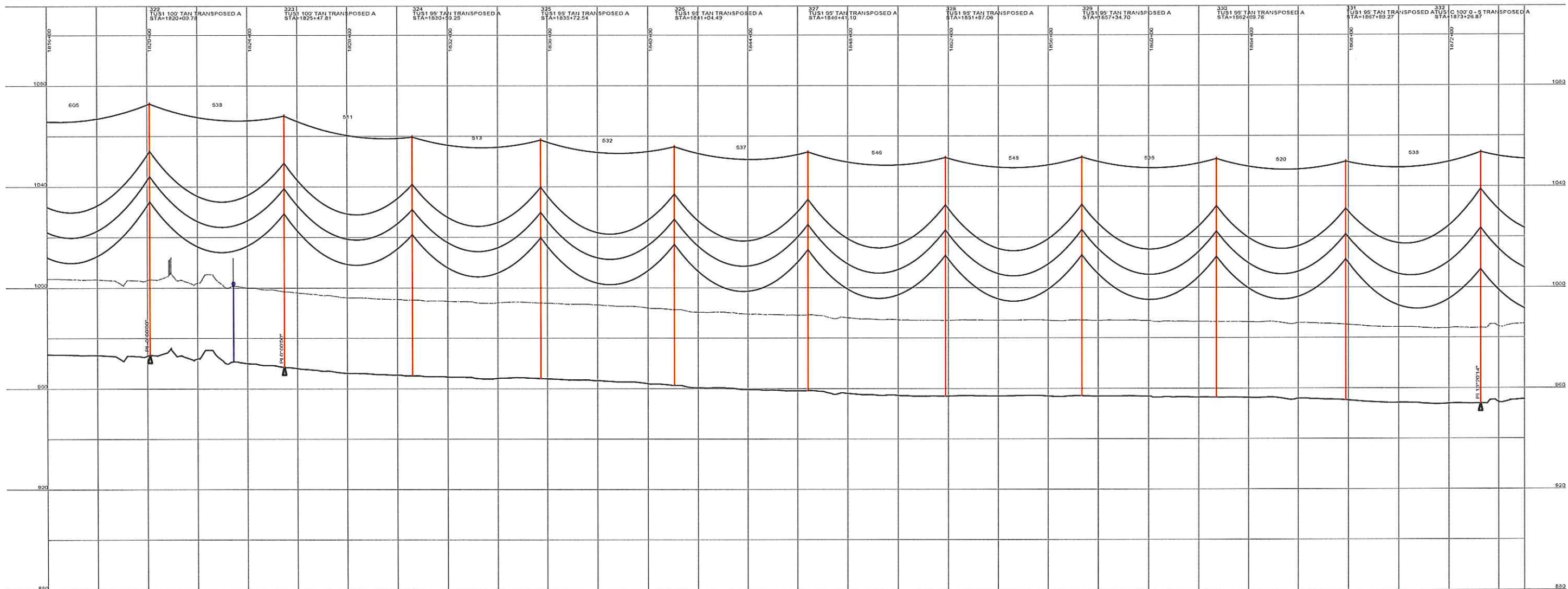
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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

WIND GENERATION TIE 41 OF 73

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

↑ NORTH



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



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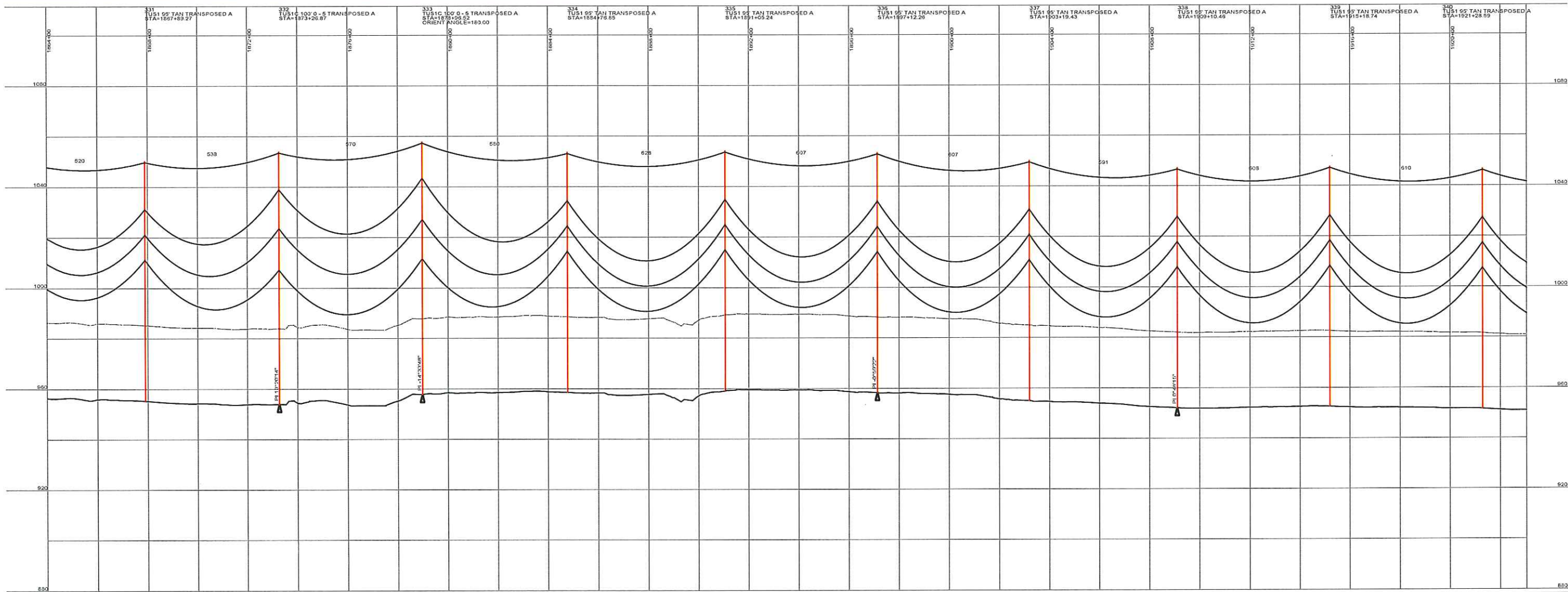
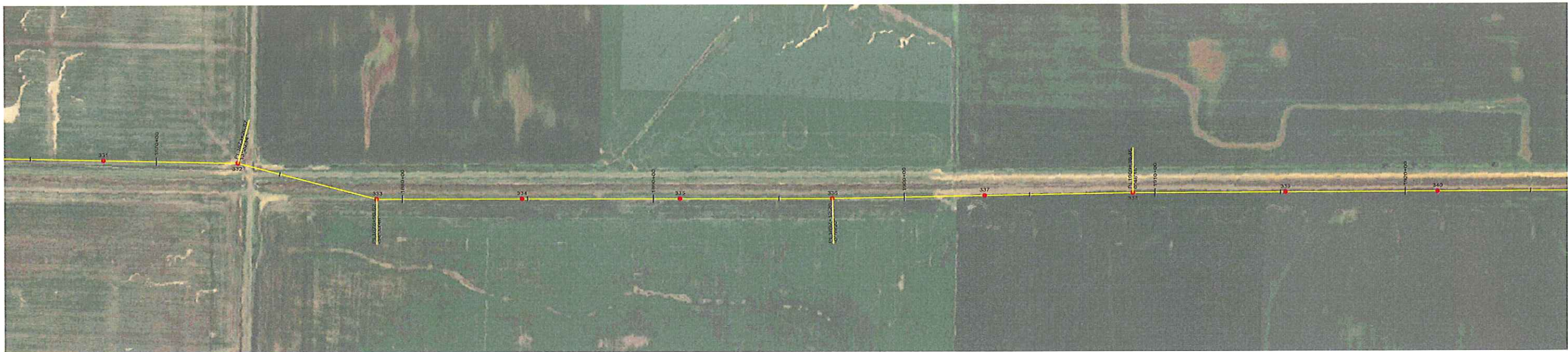
9200 E. MINERAL AVE.  
 SUITE 400  
 ENGLEWOOD, CO 80112

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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 42 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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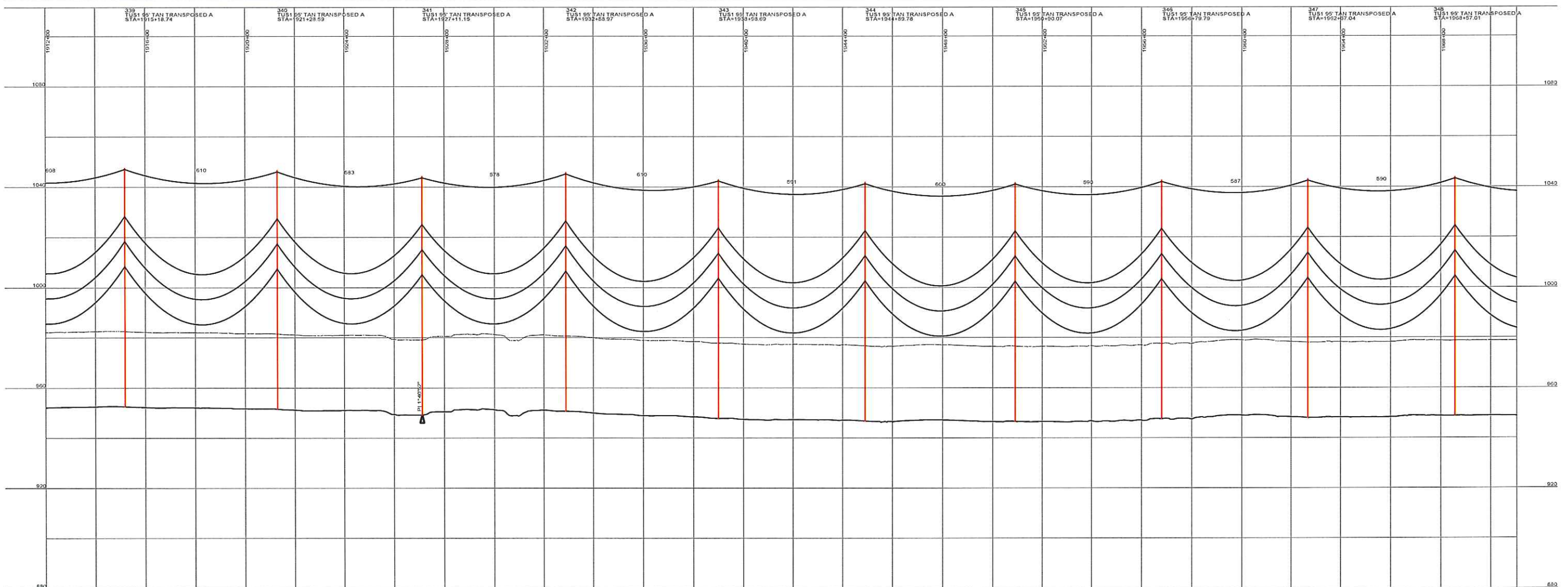
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 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

WIND GENERATION TIE 43 OF 73

400 0 FT. HORIZ SCALE  
 40 0 FT. VERT. SCALE

NORTH ↑



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF

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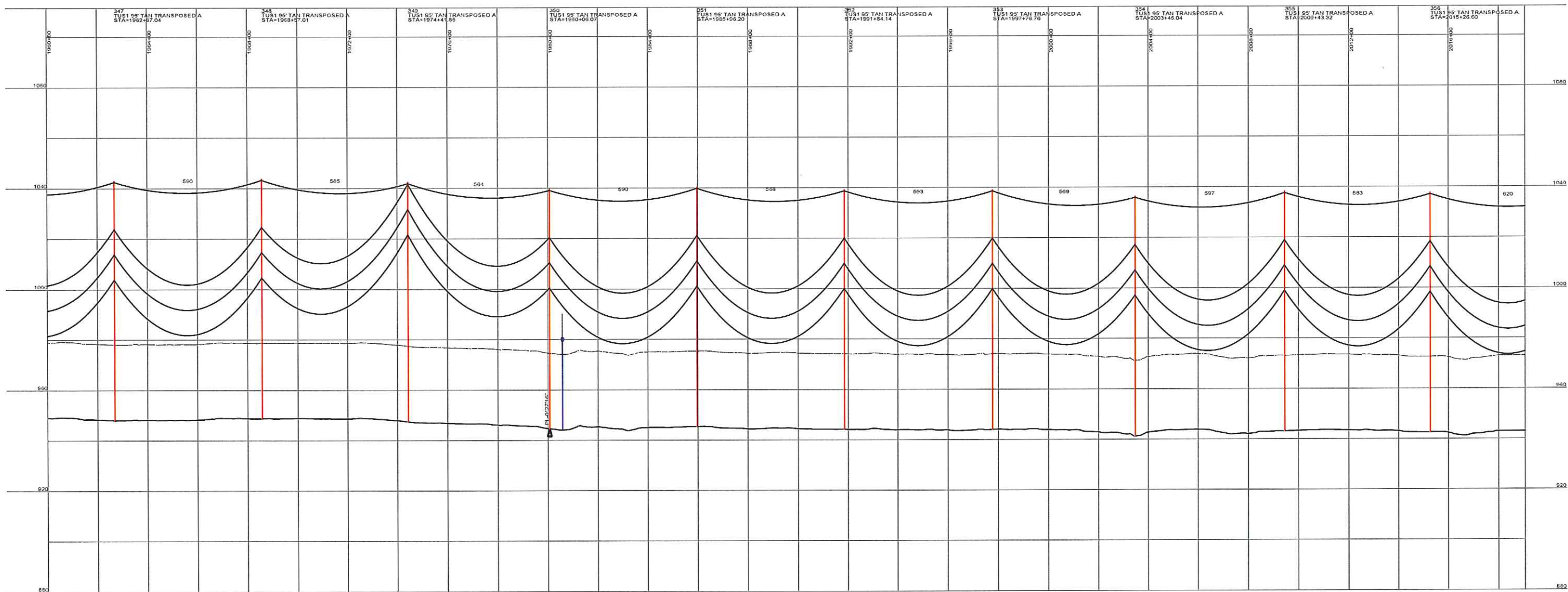
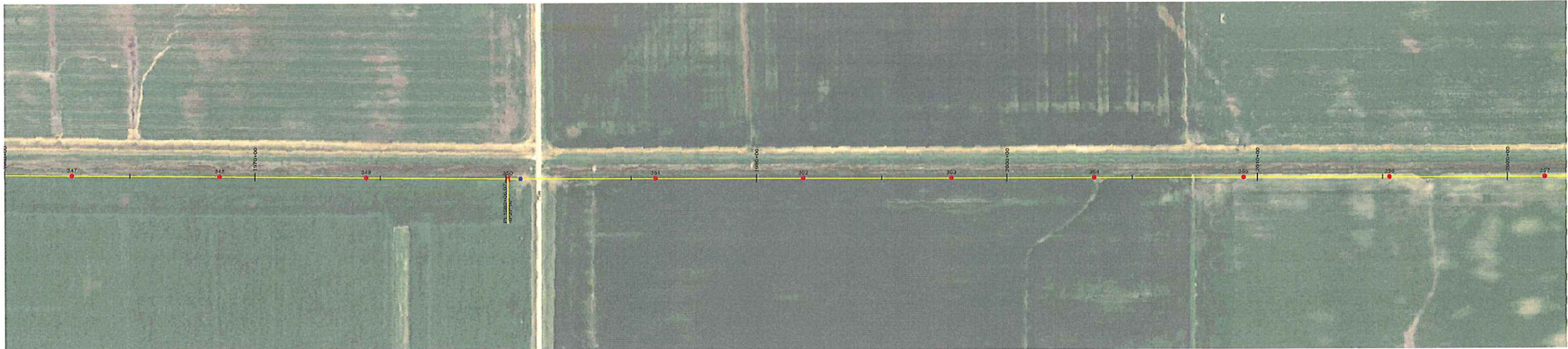
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 APPROVED \_\_\_\_\_  
 DATE 06/06/08

MINNKOTA POWER COOPERATIVE  
 GRAND FORKS, ND

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 44 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



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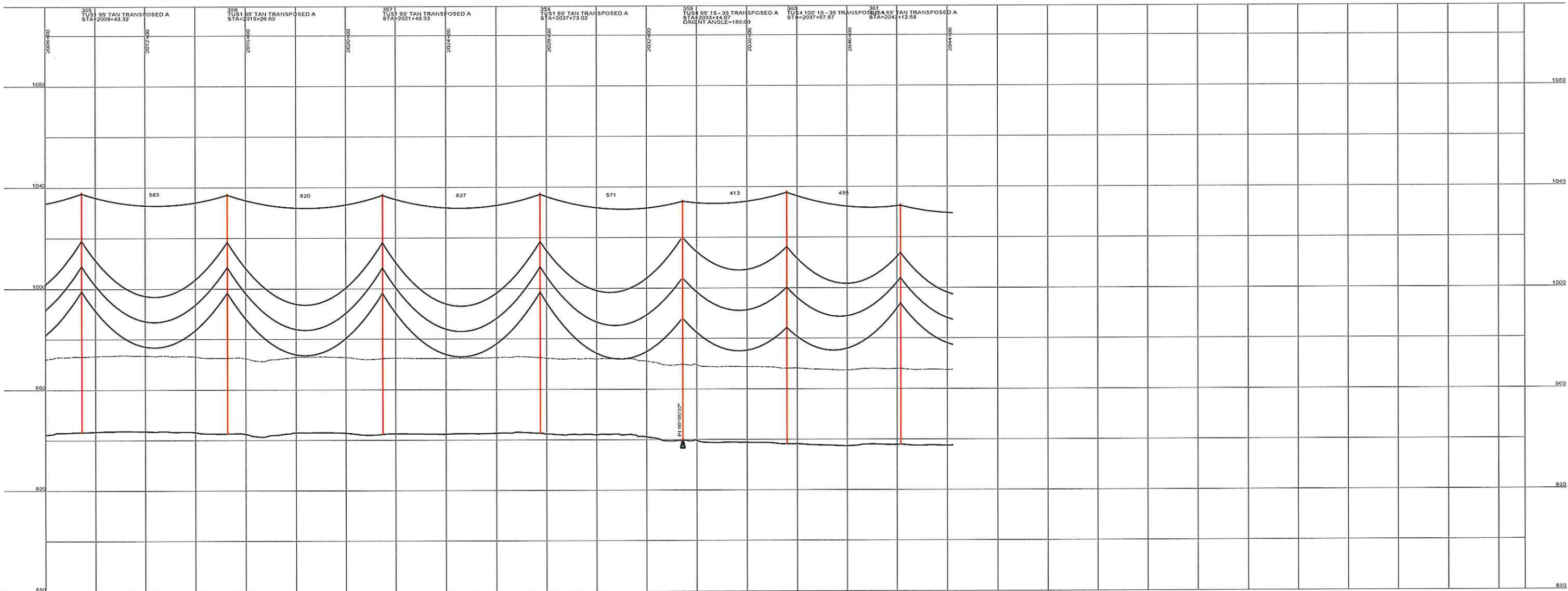
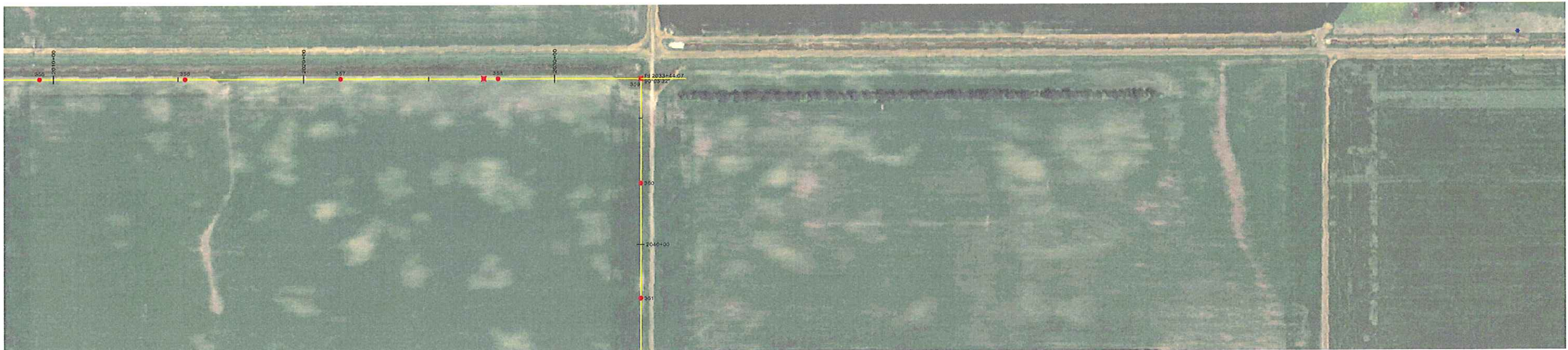
9200 E. MINERAL AVE.  
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 ENGLEWOOD, CO 80112

DESIGNED T. FRANCIS  
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 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 45 OF 73



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



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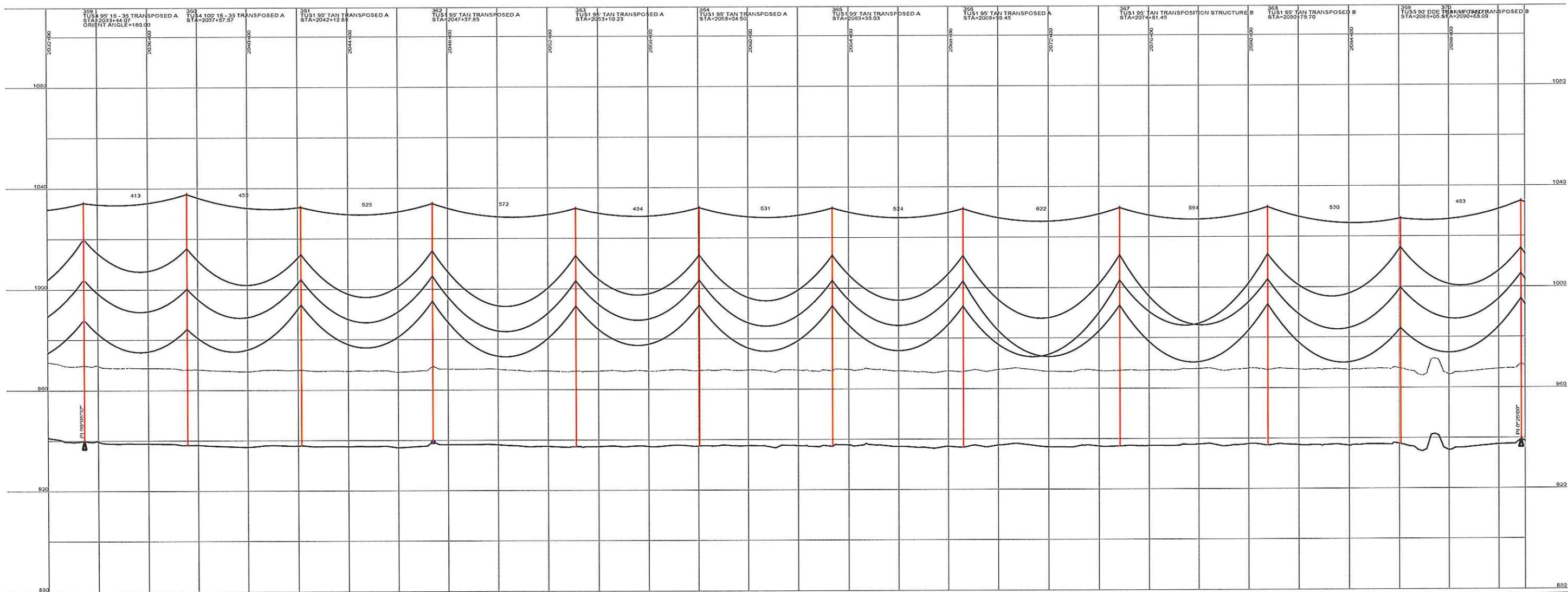
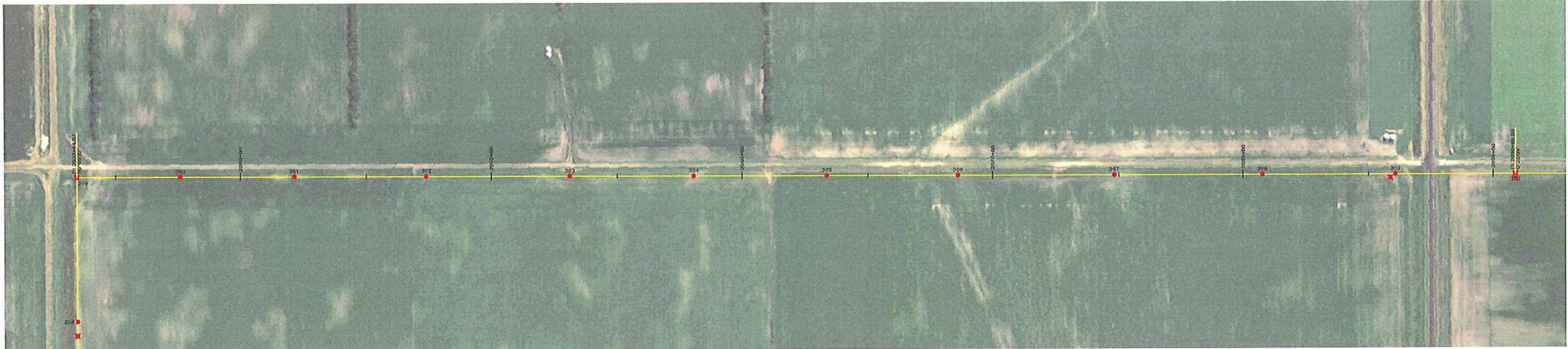
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 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 46 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER 1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30' 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



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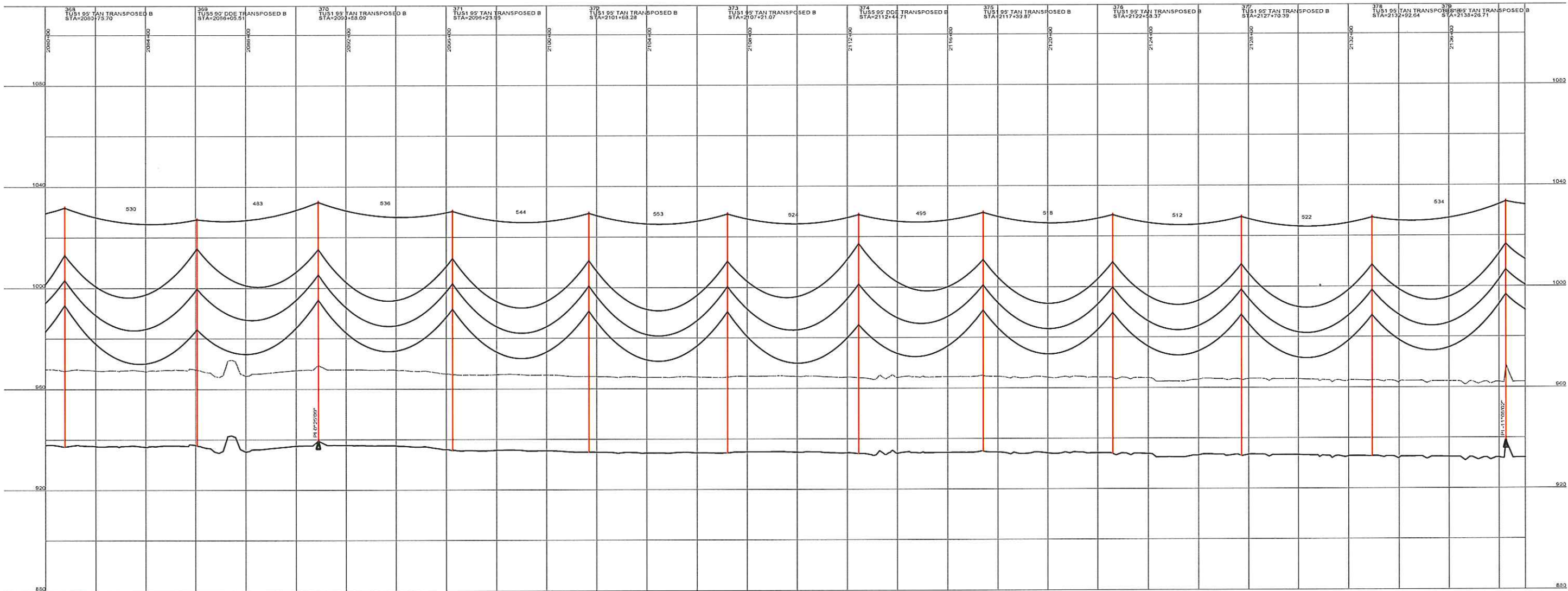
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 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 47 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF

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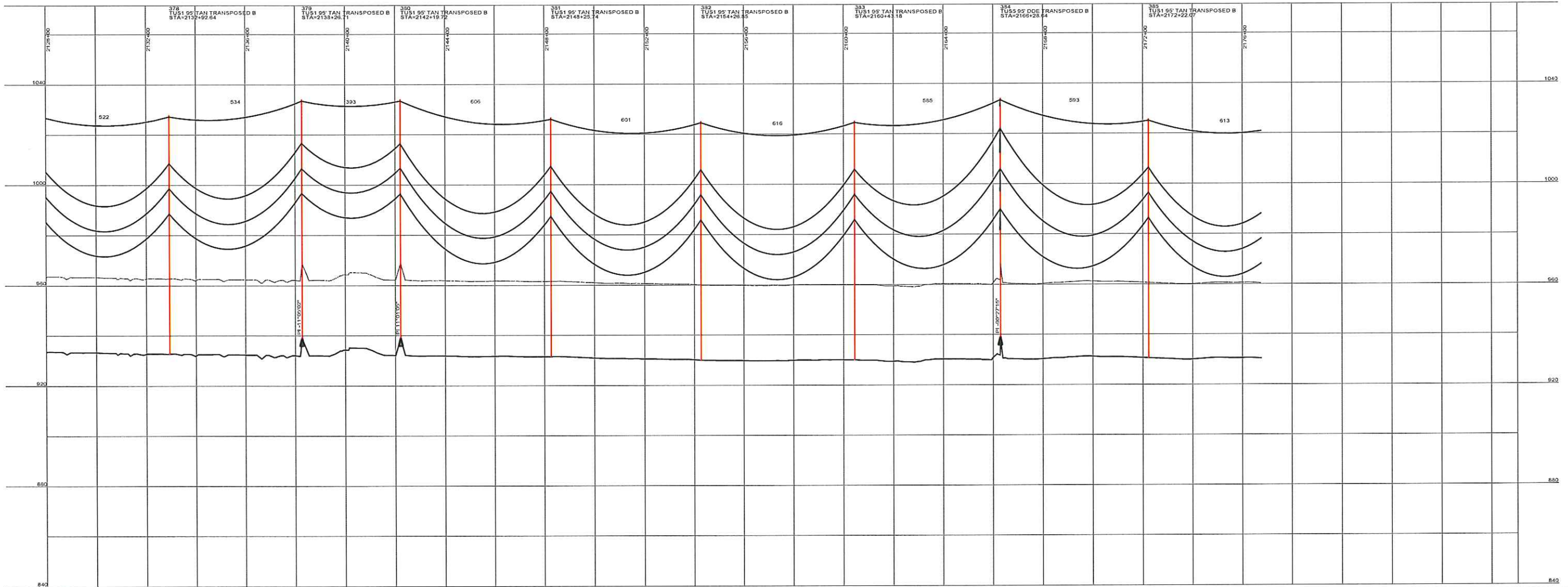
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 CONSTRUCTION SERVICES - WORLDWIDE

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 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 48 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER 1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL 20% RTS @ -20 DEGREES F, INITIAL  
 CLEARANCE LINE: 30'

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



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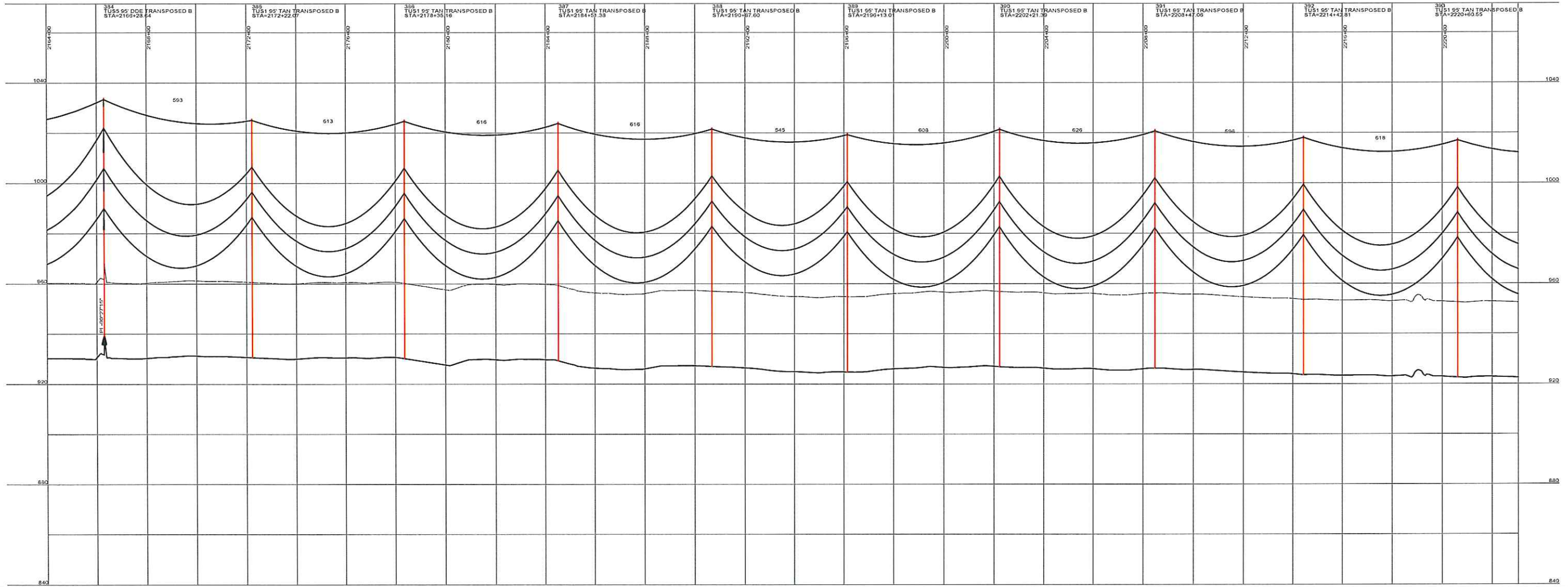
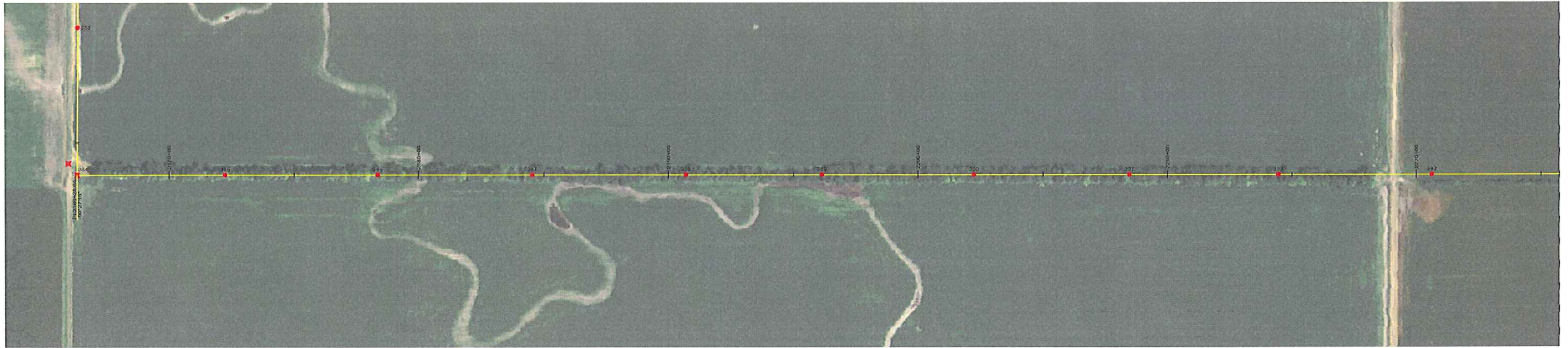
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 CONSTRUCTION SERVICES - WORLDWIDE

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 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

**WIND GENERATION TIE 49 OF 73**



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MJF	ISSUED FOR CONSTRUCTION	TMF

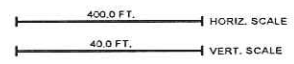

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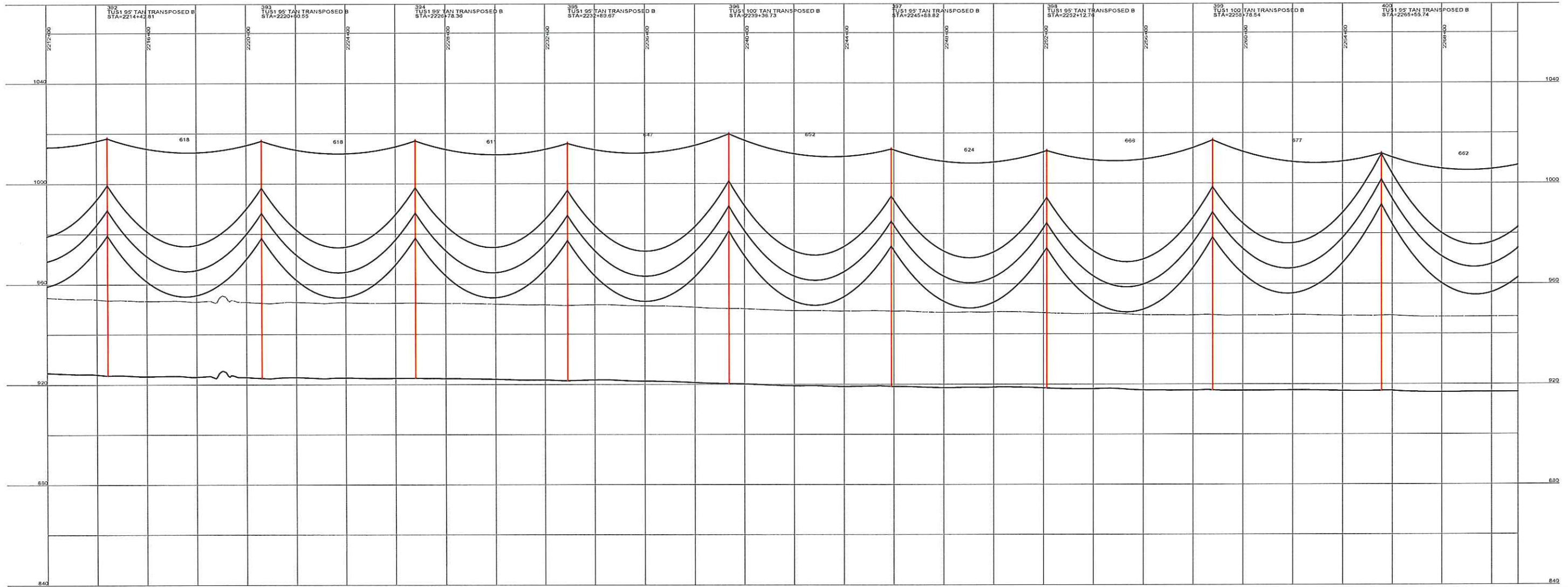
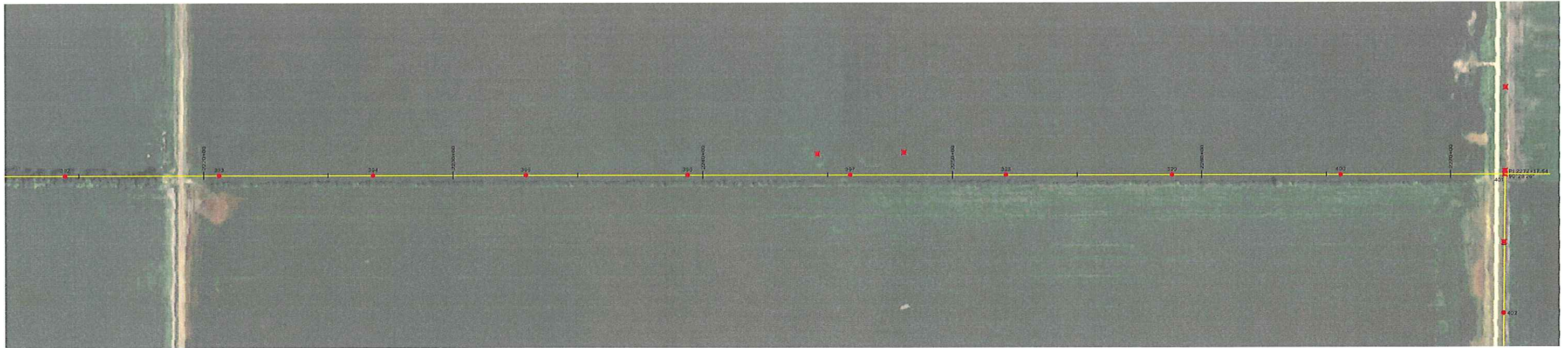
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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**



WIND GENERATION TIE 50 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF

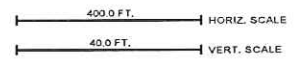


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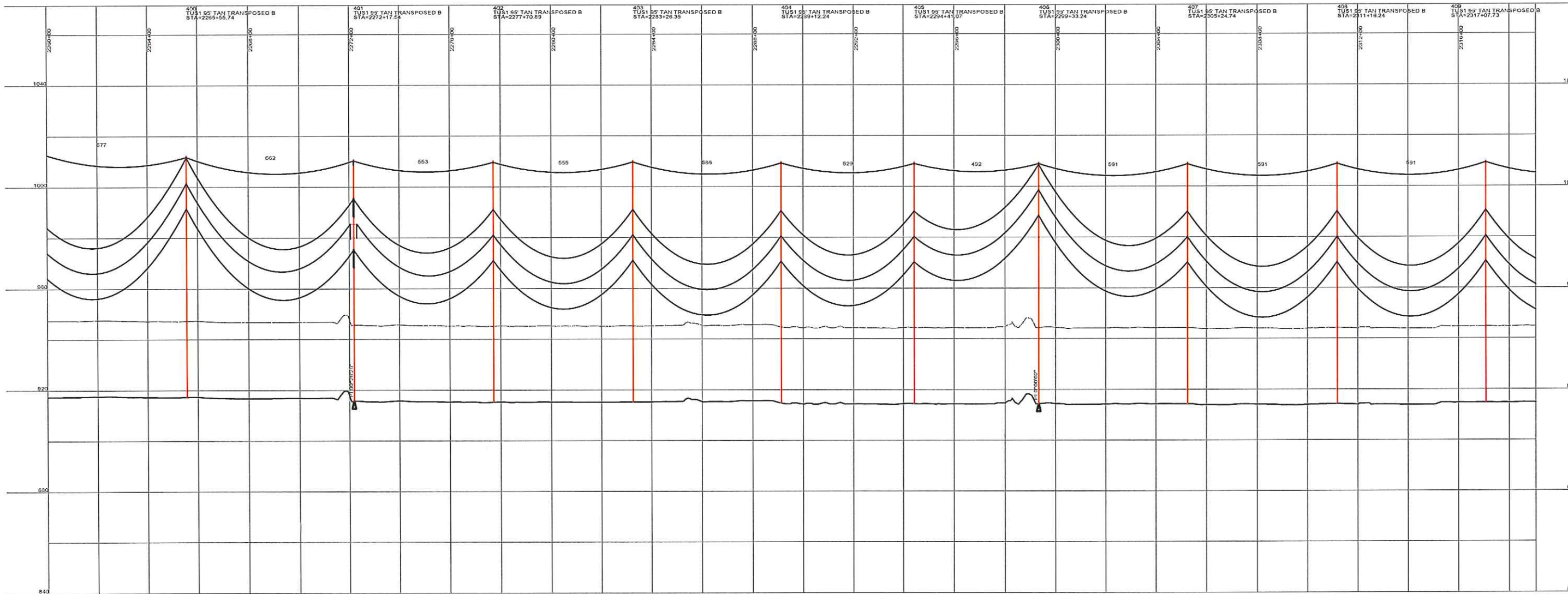
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 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

**WIND GENERATION TIE**      51 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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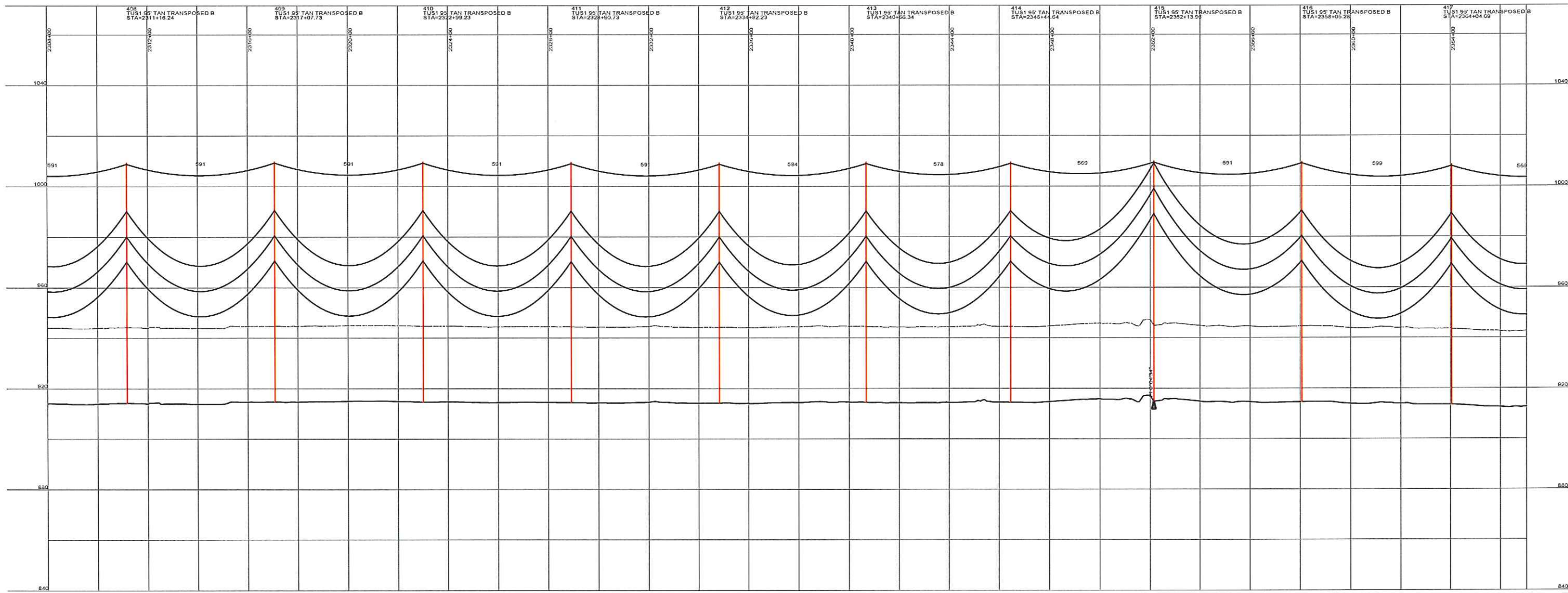
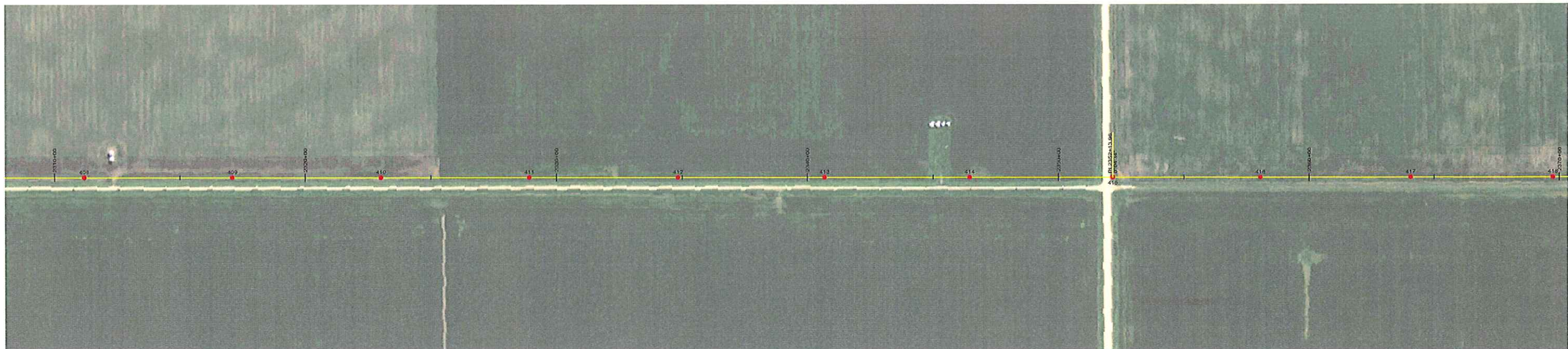
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 CONSTRUCTION SERVICES - WORLDWIDE

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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

MINNKOTA POWER COOPERATIVE  
 GRAND FORKS, ND

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 52 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL  
 CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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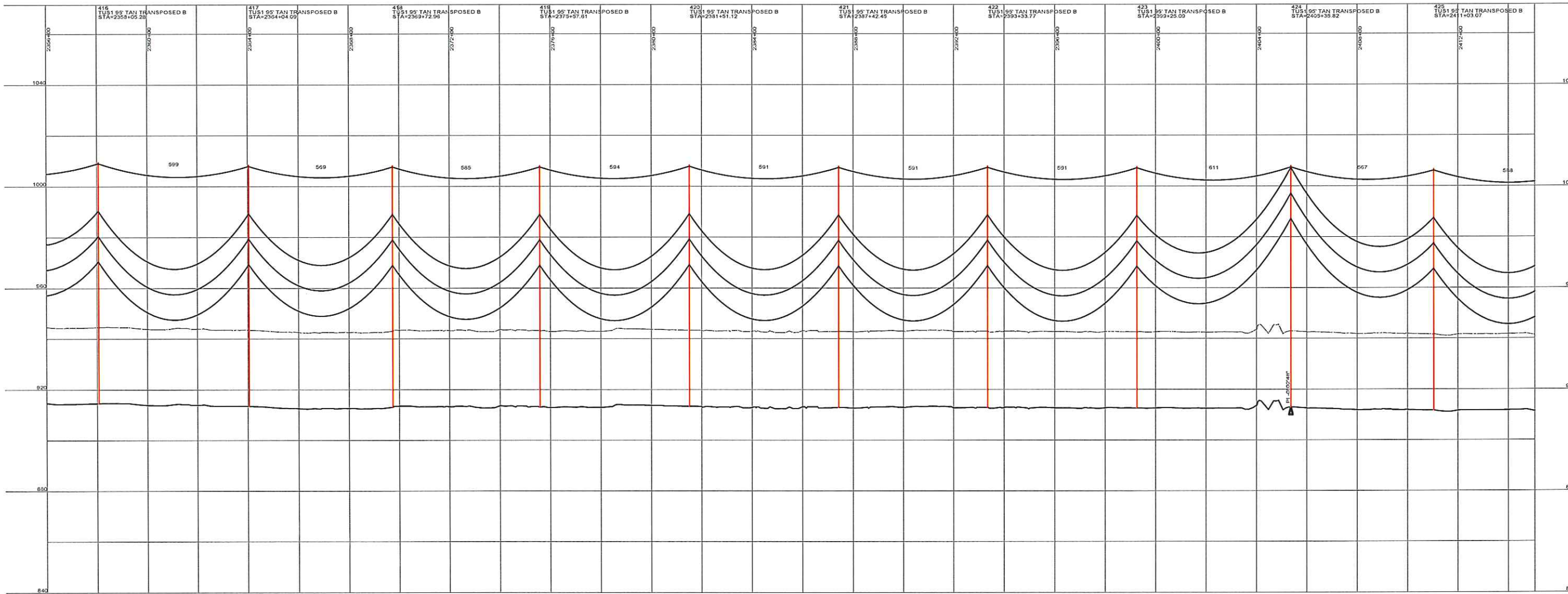
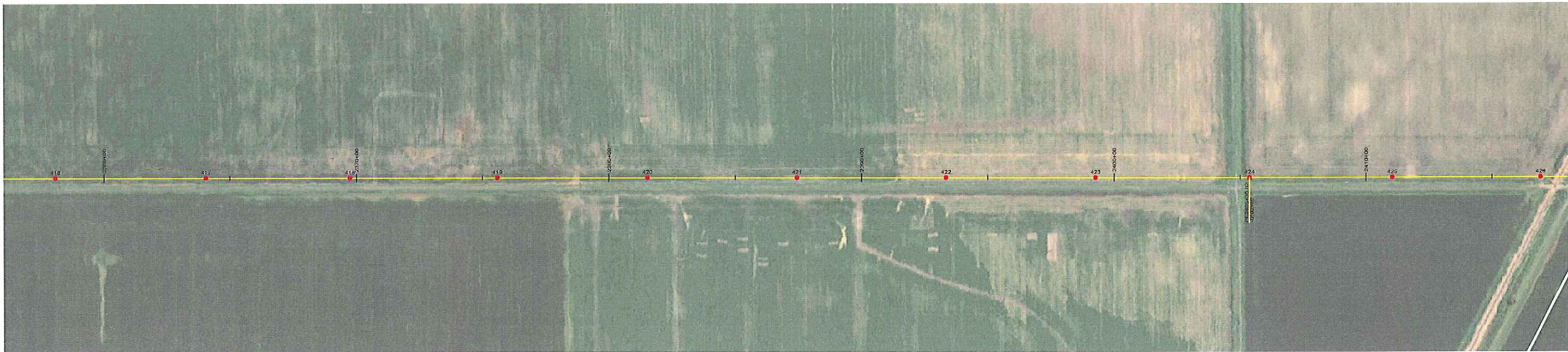
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 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE


WIND GENERATION TIE 53 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

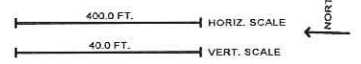

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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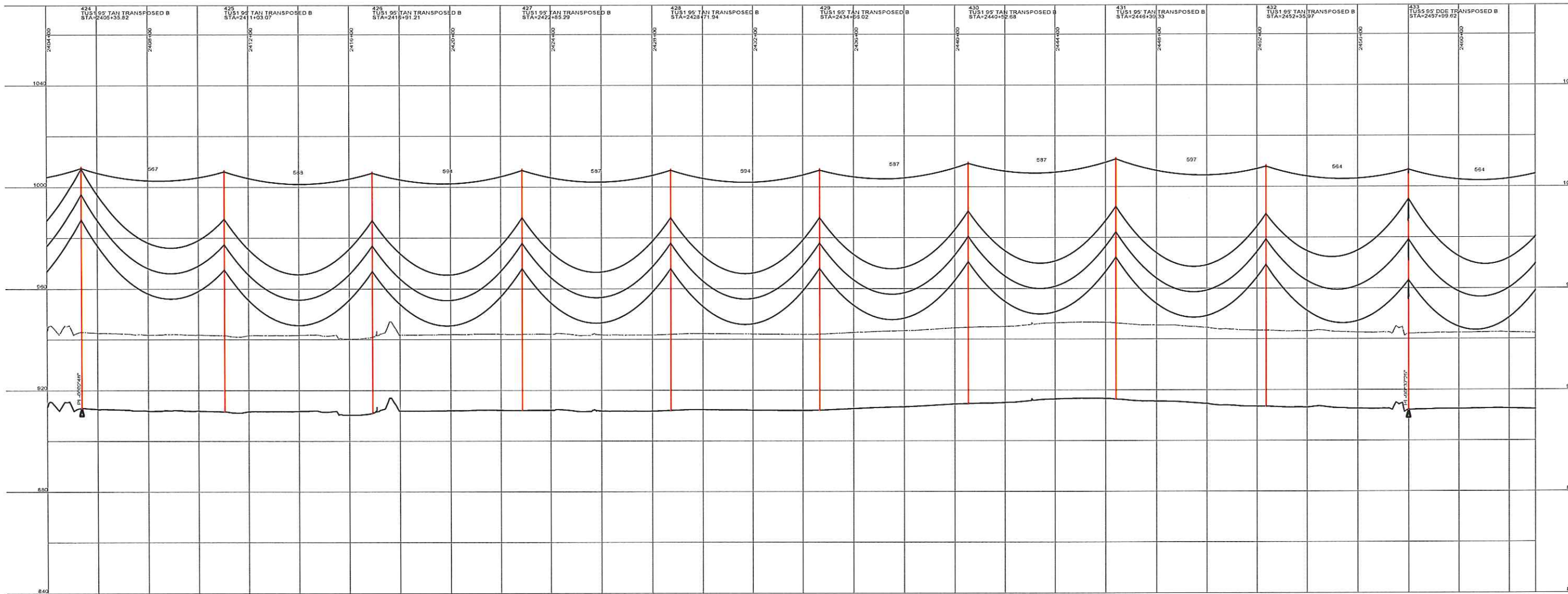
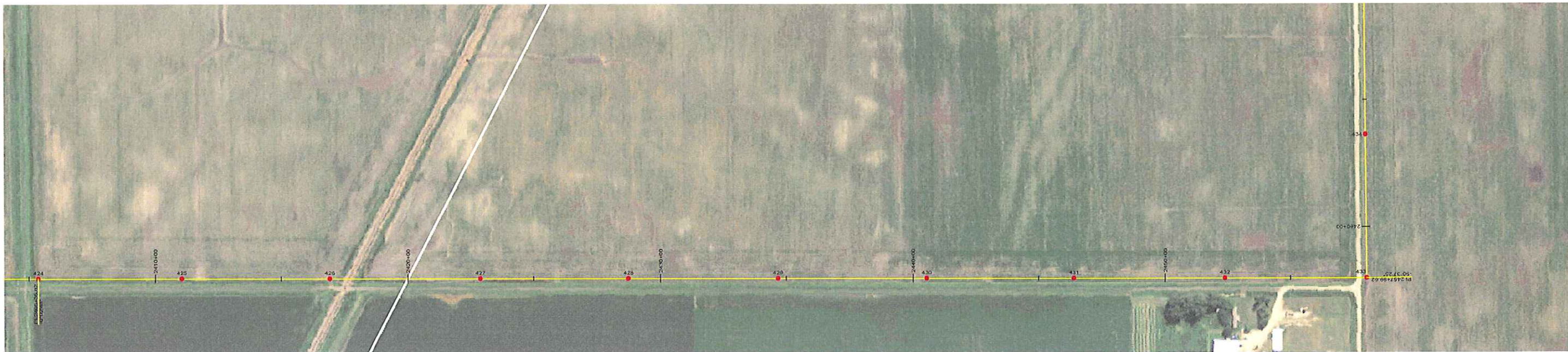

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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

**WIND GENERATION TIE 54 OF 73**



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

REV	DATE	APP	DESCRIPTION	DFTR
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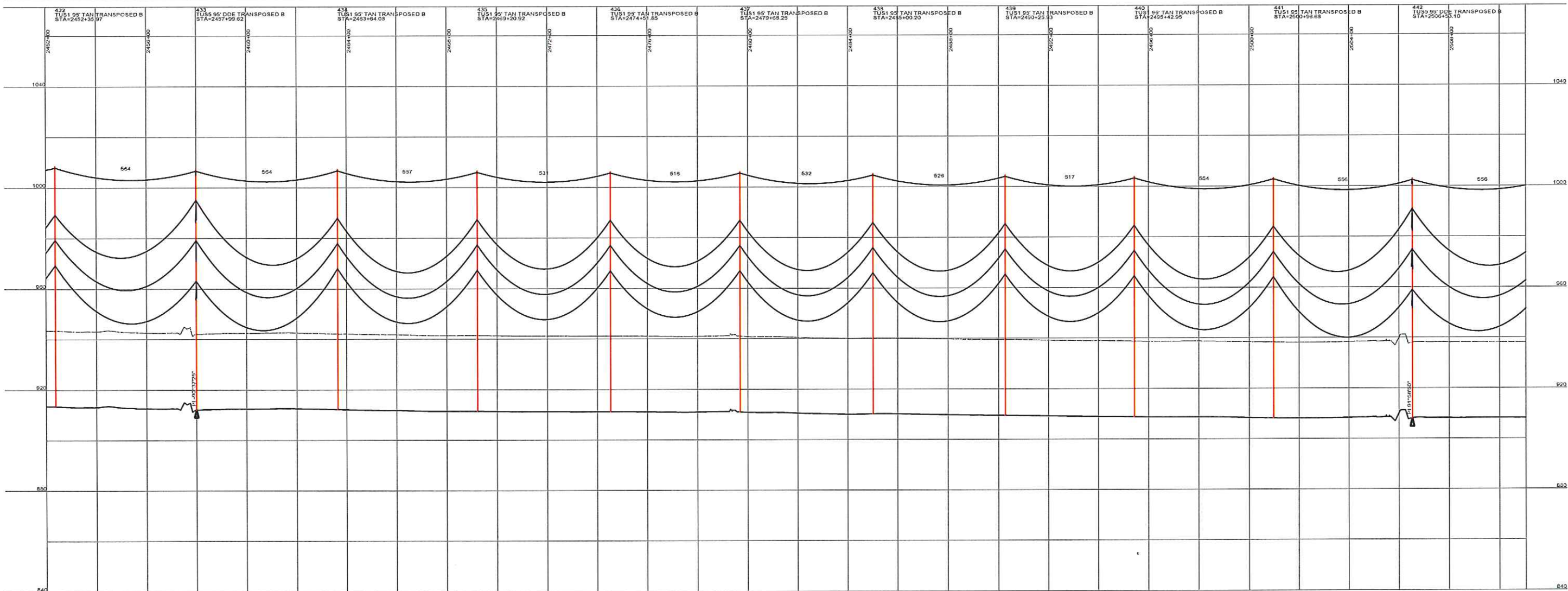
9200 E. MINERAL AVE.  
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 DRAWN T. FRANCIS  
 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 55 OF 73



DESIGN CONDITIONS:  
 0.465" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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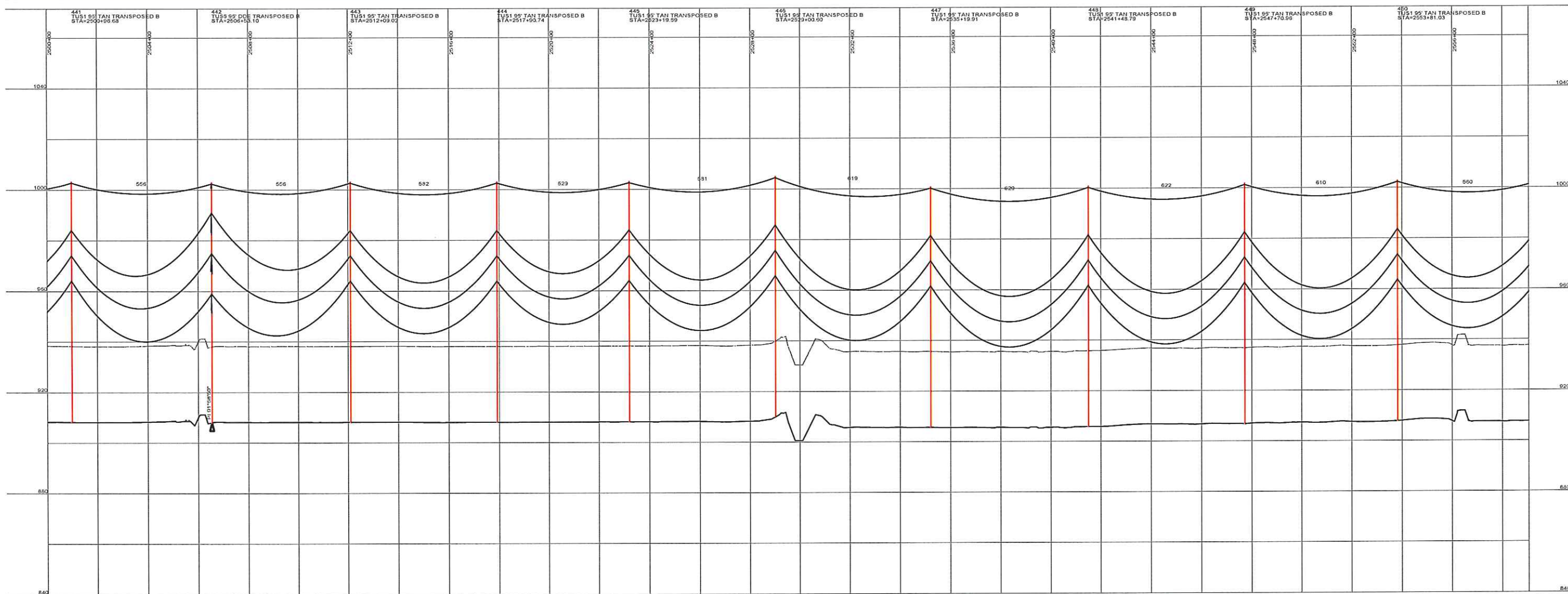
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 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

WIND GENERATION TIE 56 OF 73



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
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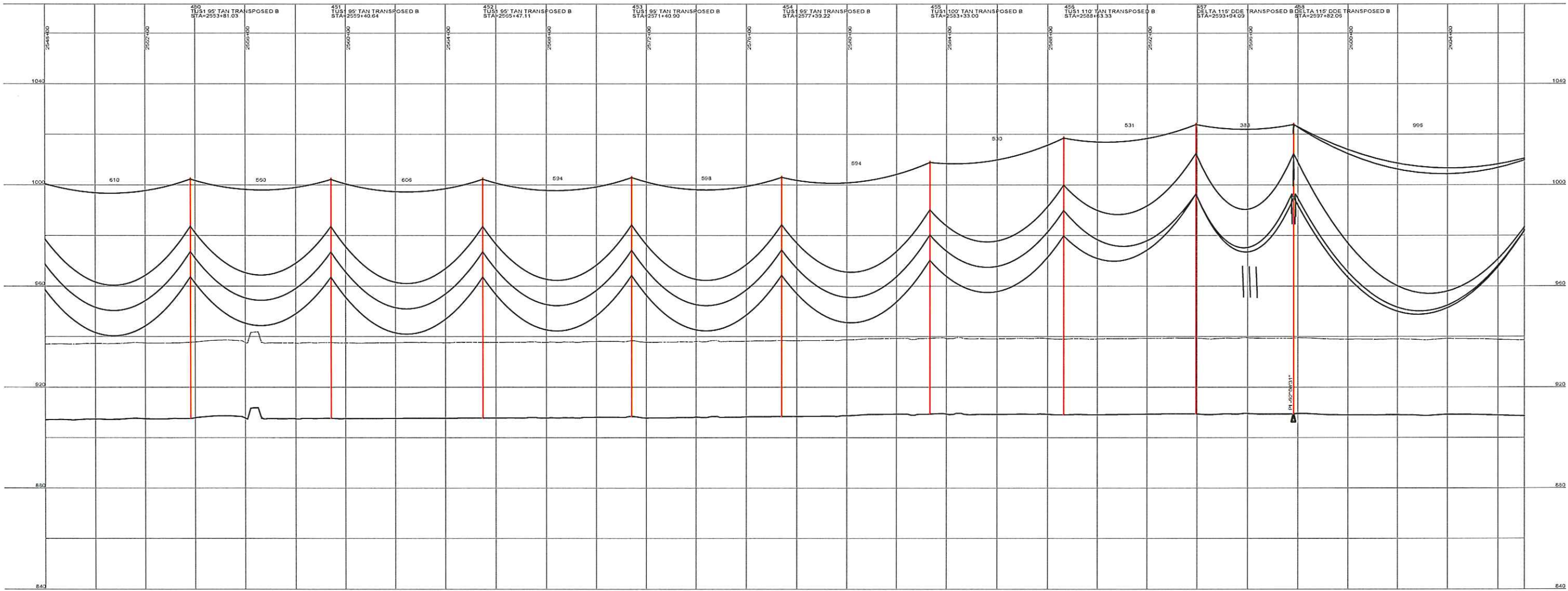
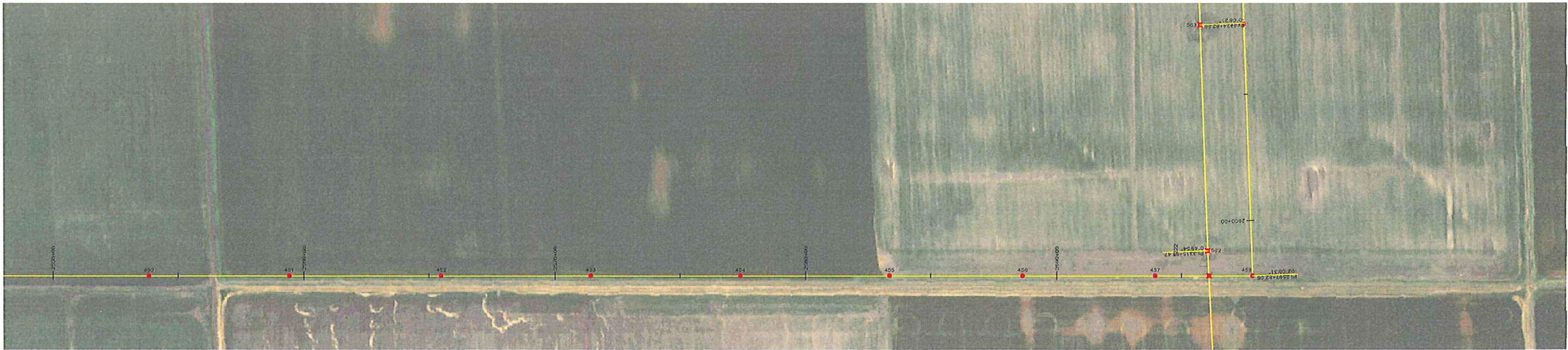
9200 E. MINERAL AVE.  
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 DRAWN T. FRANCIS  
 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE


WIND GENERATION TIE 57 OF 73



DESIGN CONDITIONS:  
 0.485" OPGW, 24 FIBER  
 20% RTS @ -20 DEGREES F, INITIAL CLEARANCE LINE: 30'

1272 ACSR 45/7 "BITTERN"  
 20% RTS @ -20 DEGREES F, INITIAL

REV	DATE	APP	DESCRIPTION	DFTR
0	06/06/08	MFJ	ISSUED FOR CONSTRUCTION	TMF



9200 E. MINERAL AVE.  
 SUITE 400  
 ENGLEWOOD, CO 80112

A STANLEY GROUP COMPANY  
 ENGINEERING, ENVIRONMENTAL AND  
 CONSTRUCTION SERVICES - WORLDWIDE

DESIGNED T. FRANCIS  
 DRAWN T. FRANCIS  
 CHECKED H. DILLABOUGH  
 APPROVED M. JURGEMEYER  
 APPROVED \_\_\_\_\_  
 DATE 06/06/08

**MINNKOTA POWER COOPERATIVE**  
**GRAND FORKS, ND**

WIND GENERATION TIE 58 OF 73

400.0 FT. HORIZ. SCALE  
 40.0 FT. VERT. SCALE

← NORTH