

174899

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TAMPA, FLORIDA

# JEA 230 KV TRANSMISSION LINE

## SECTION I

### SEMINOLE PLANT TO KEYSTONE

### PLAN & PROFILE

TA 90-08

JEA SEMINOLE TO  
KEYSTONE

AS-BUILTS

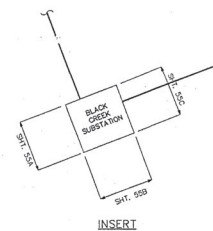
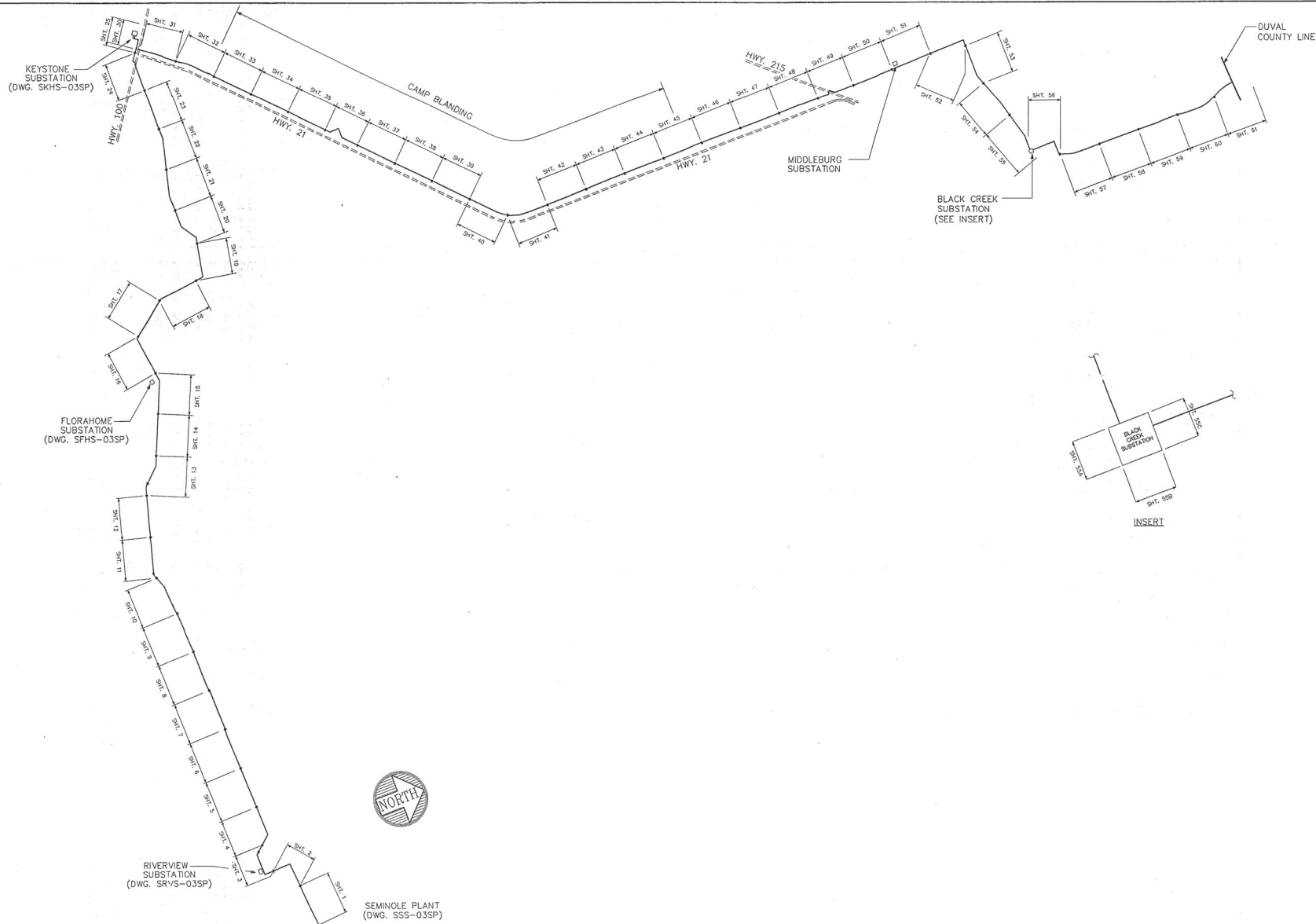
PRECEDENT  
EQUIPMENT & LUMP SUM  
FEB 03 1995

I, CHARLES W. GROSE, HAVE SERVED  
AS RESIDENT CONSTRUCTION MANAGER  
AND RESIDENT PROJECT ENGINEER, DO  
HEREBY CERTIFY THAT THE ATTACHED  
PRINTS (DWG. NOS P-0036-D-00 THRU  
P-0036-D-25 AND P-0036-D-29 THRU  
P-0036-D-61 AND P-0036-D-70)  
ACCURATELY REPRESENT THE AS-BUILT  
CONDITIONS OF THE SEMINOLE PLANT  
TO JEA 230 KV INTERCONNECTION  
PROJECT

P-0036-D-00



BUILT



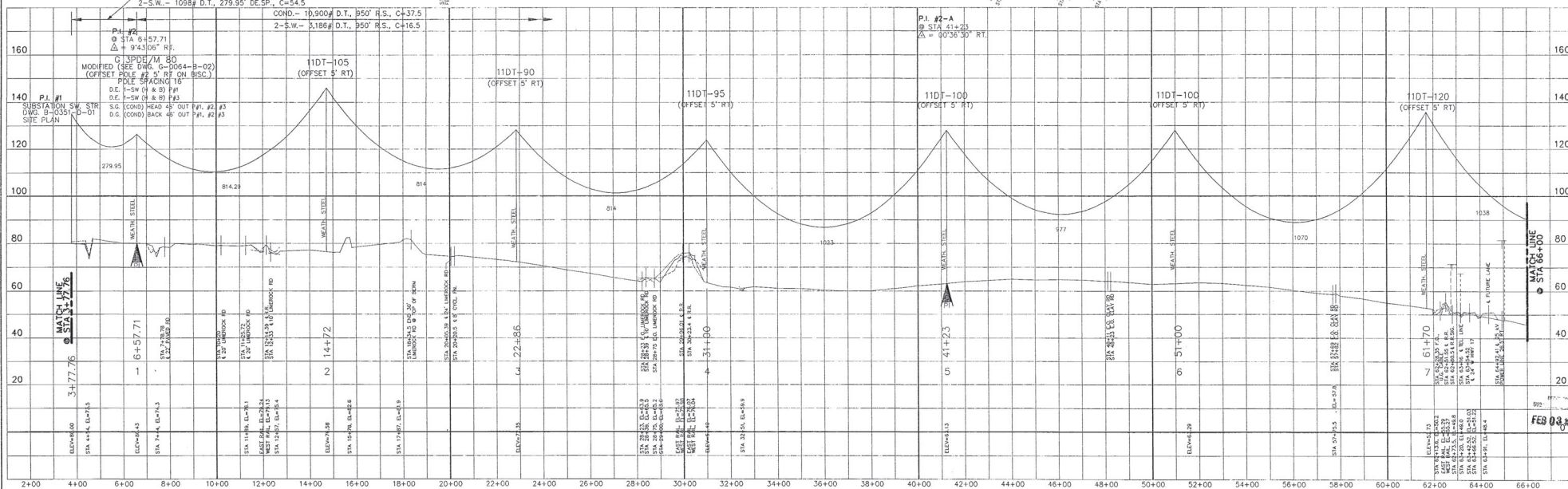
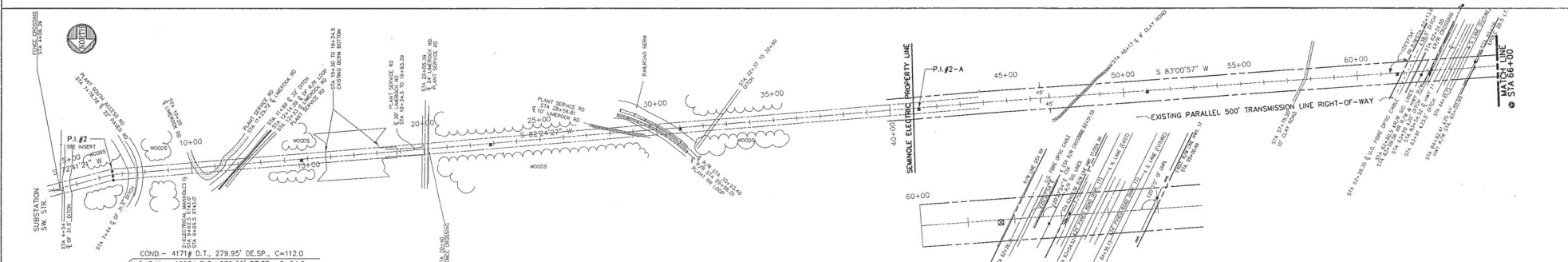
PARSONS MAIN, INC.  
CHARLOTTE • BOSTON • PASADENA

**SEMINOLE ELECTRIC COOPERATIVE INCORPORATED**  
TAMPA, FLORIDA

NO.	REVISIONS	BY	DATE
2	FOR CONSTRUCTION	WIL	1/22/73
1	AS BUILT	RSW	8/27/74
SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE 230 kV TRANSMISSION LINE SEMINOLE PLANT - DUVAL COUNTY LINE INDEX DRAWING			
DRAWN BY: R. B. CATO		NAME	DATE
DESIGN BY:		CAD	8/27/72
CHECKED BY:		PROJECT NO.	DWG NO. P-0036-D-70
APPROVED BY:		DATE	SHEET OF
		REA. REF.	REF. NO.

820 - 1  
FEB 0 1973





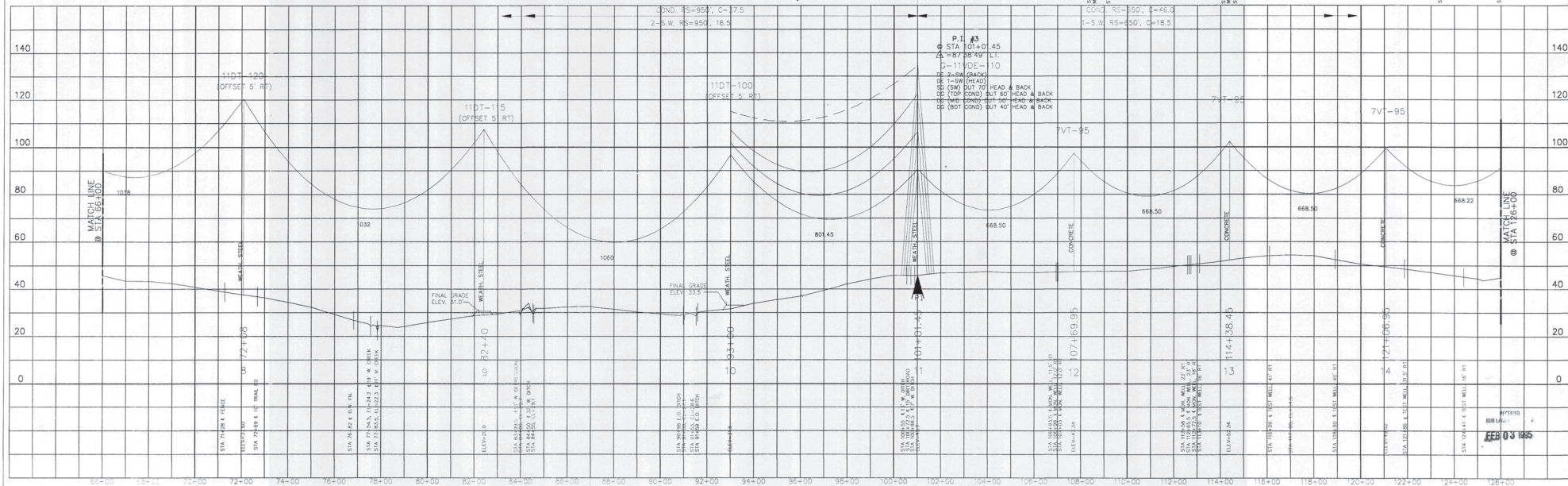
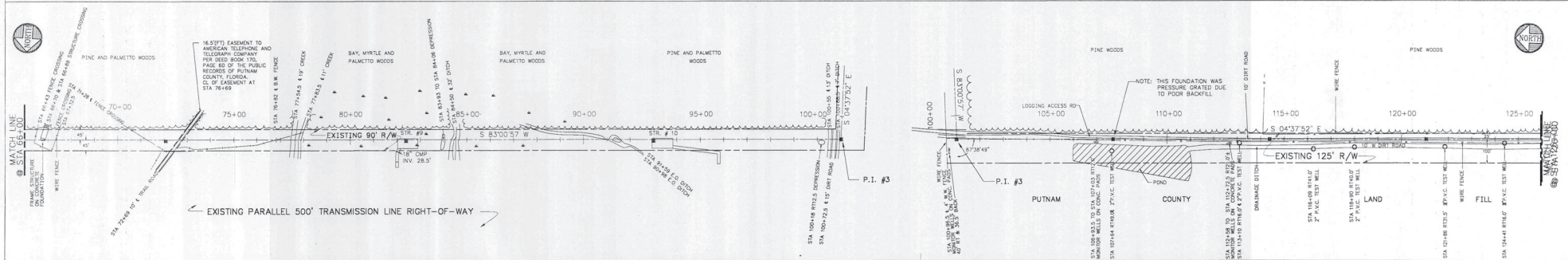
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE - JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F. No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TEMPERATURE	CONDUCTOR: (Final)	SHIELD WIRE: (Initial)	230 kv, 3-1,590 kcmil, 54/19 ACSS, D.T. See Above @ 30' F. No Ice, No Wind	2-7' Hls @ Aluminum D.T. See Above @ 30' F. No Ice, No Wind	ISSUED FOR CONSTRUCTION	RLH 12/24/93	NAME	DATE	CAD	DWG NO.
- - - -	18 FT RIGHT OF &	DESIGN TEMPERATURE: 120° F	RULING SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	901 N.W. 8th AVENUE, SUITE A-2	GAINESVILLE, FL 32601	(904) 378-9566	1	AS BUILT	RSW 05/09/94	DESIGN BY: P.W. HANSEBROUGH	2-25-92	P-0036-D-01
- - - -	18 FT LEFT OF &										CHECKED BY: J.M. PARSELL	2-25-92	
- - - -	PROPERTY LINE										APPROVED BY:		
- - - -	SURVEY &/OR T/A PI ONLY												
- - - -	T/A PI ONLY												

FEB 03 2004



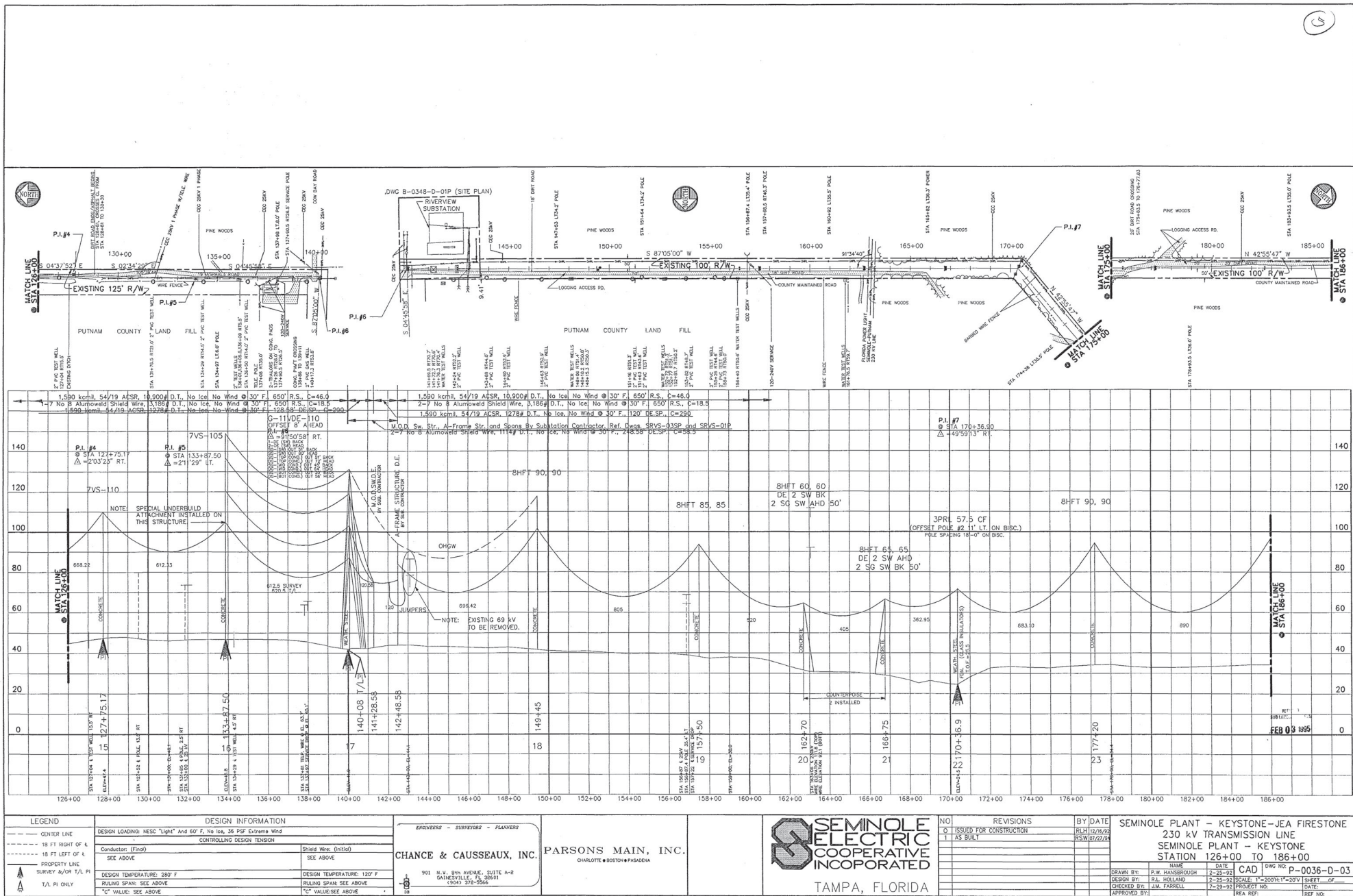
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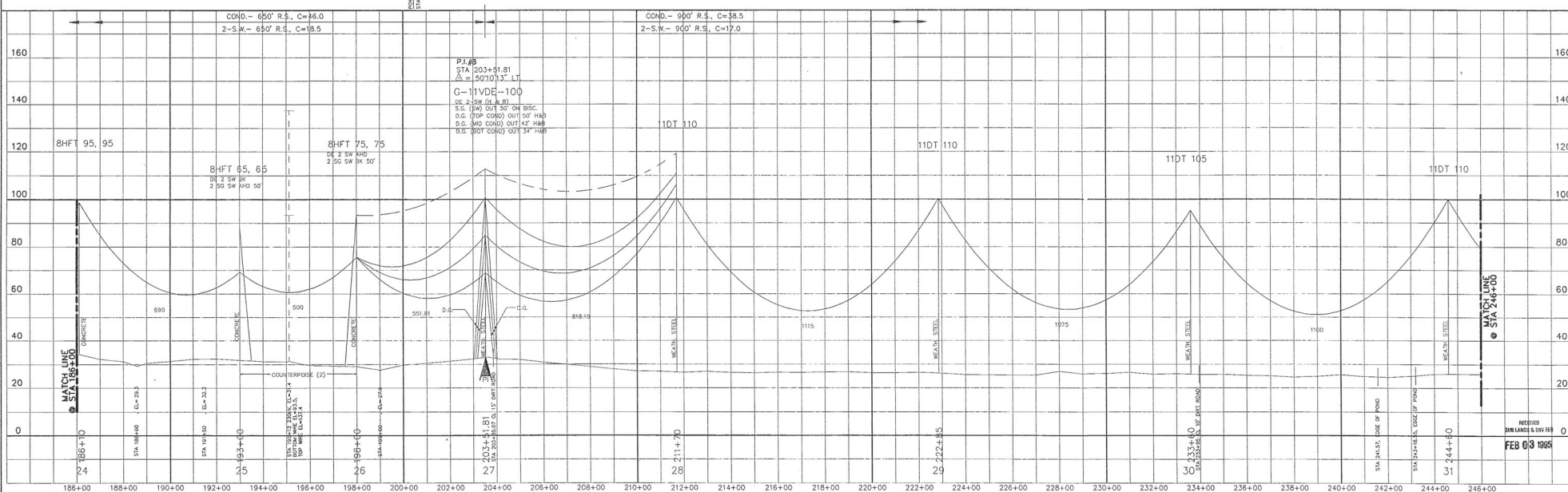
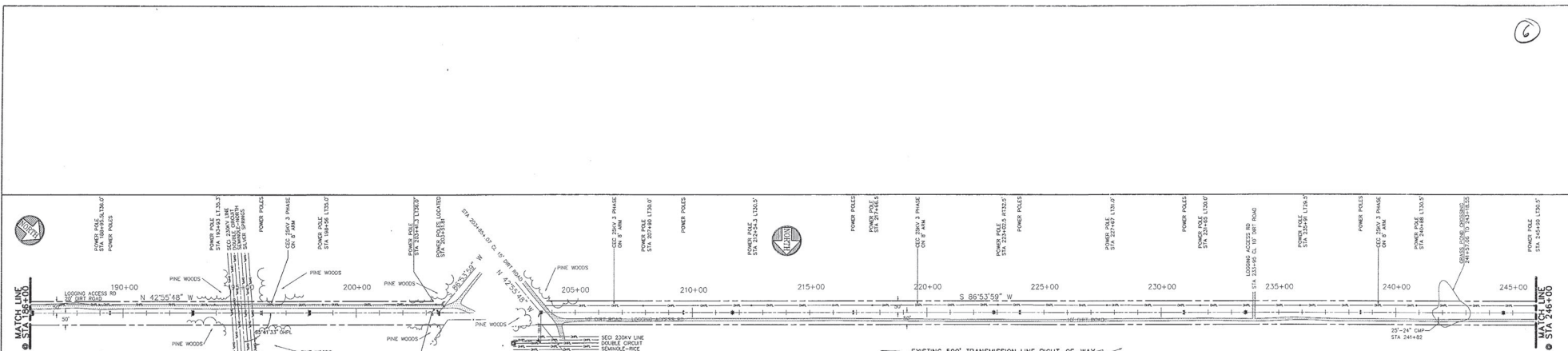
AS BUILT



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE 230 kV TRANSMISSION LINE	
---	CENTER LINE	DESIGN: 100' V.C. "Light" And 60' F. No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA	1	AS BUILT	1	AS BUILT	230 kV, 2-1/2" 150 kcmil, 54/19 ACSR, 10,800' D.T. @ 30° F. No Ice, No Wind	230 kV, 2-1/2" 150 kcmil, 54/19 ACSR, 10,800' D.T. @ 30° F. No Ice, No Wind
---	18 FT RIGHT OF C	CONSTRUCTION (7' WIDE)	2-7' NO. 8 ALUMINUM, 3/16" D.T. @ 30° F. No Ice, No Wind	901 D.W. 8th AVENUE, SUITE 400	CHARLOTTE • BOSTON • PASADENA	SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					DESIGN BY: P.W. HANSBROUGH	2-25-92
---	18 FT LEFT OF C	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	1542 370-5566		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					CHECKED BY: J.M. FARRELL	7-29-92
---	PROPERTY LINE	RULING SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE			SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					APPROVED BY:	7-29-92
---	SURVEY A/DR T/L R					SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					DATE: FEB 03 1995	
---	T/L PI ONLY					SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					SCALE: 1"=200' H=20' V=10'	
						SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					PROJECT NO. P-0036-D-02	
						SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA					REV. NO.	





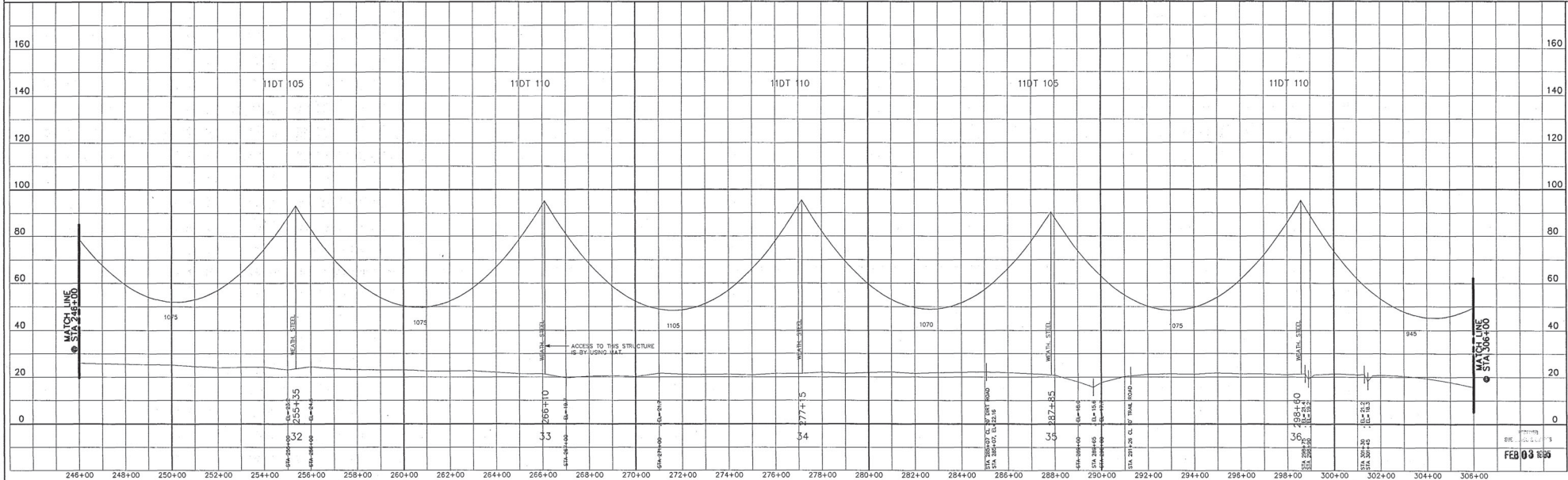
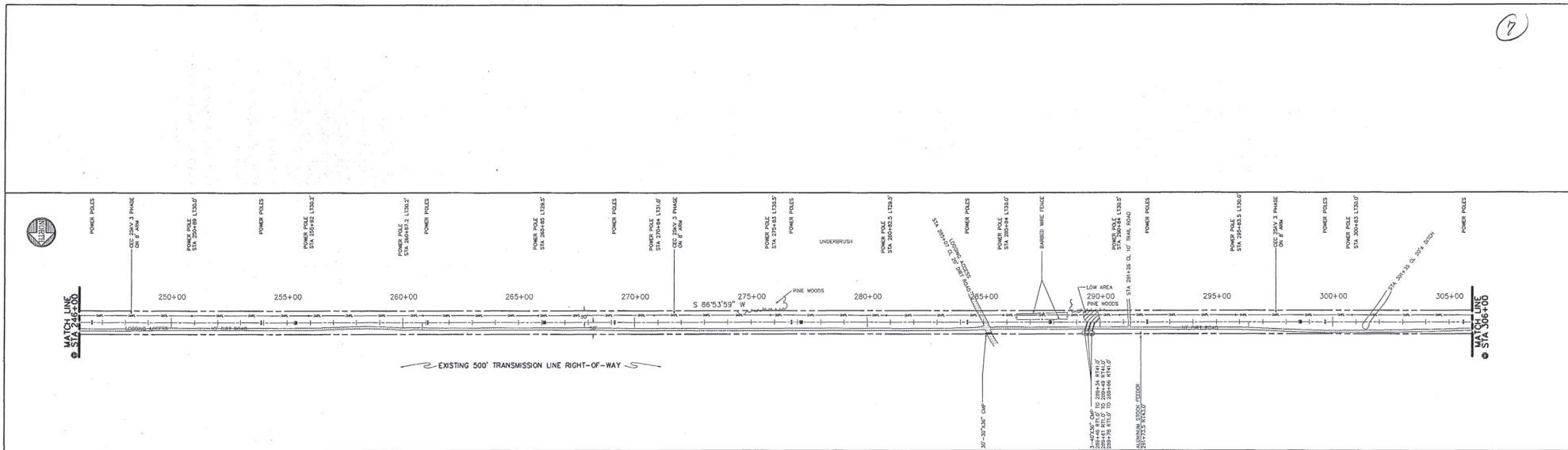


LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60° F. No Ice, 36 PSF Extreme Wind	CONDUCTING DESIGN TENSION	2-7 No. 8 Aluminum, 3/1659 D.T.	SHIELD WIRE: (Initials)	1	AS BUILT	1	AS BUILT	RLH 12/18/92	25W 05/05/04	230 kV TRANSMISSION LINE	SEMINOLE PLANT - KEYSTONE
---	18 FT RIGHT OF L	CONDUCTOR: (Final)	230 kV, 3-1,580 kcmil, 54/19 ACSS, 10,909lb D.T. @ 30° F. No Ice, No Wind	2-7 No. 8 Aluminum, 3/1659 D.T.	SHIELD WIRE: (Initials)							STATION 186+00 TO 246+00	
---	18 FT LEFT OF L	DESIGN TEMPERATURE: 280° F	RULING SPAN: SEE ABOVE	DESIGN TEMPERATURE: 120° F	RULING SPAN: SEE ABOVE								
---	PROPERTY LINE	"C" VALUE: SEE ABOVE											
---	SURVEY R/O/T, P.I.												
---	T/L, P.I. ONLY												

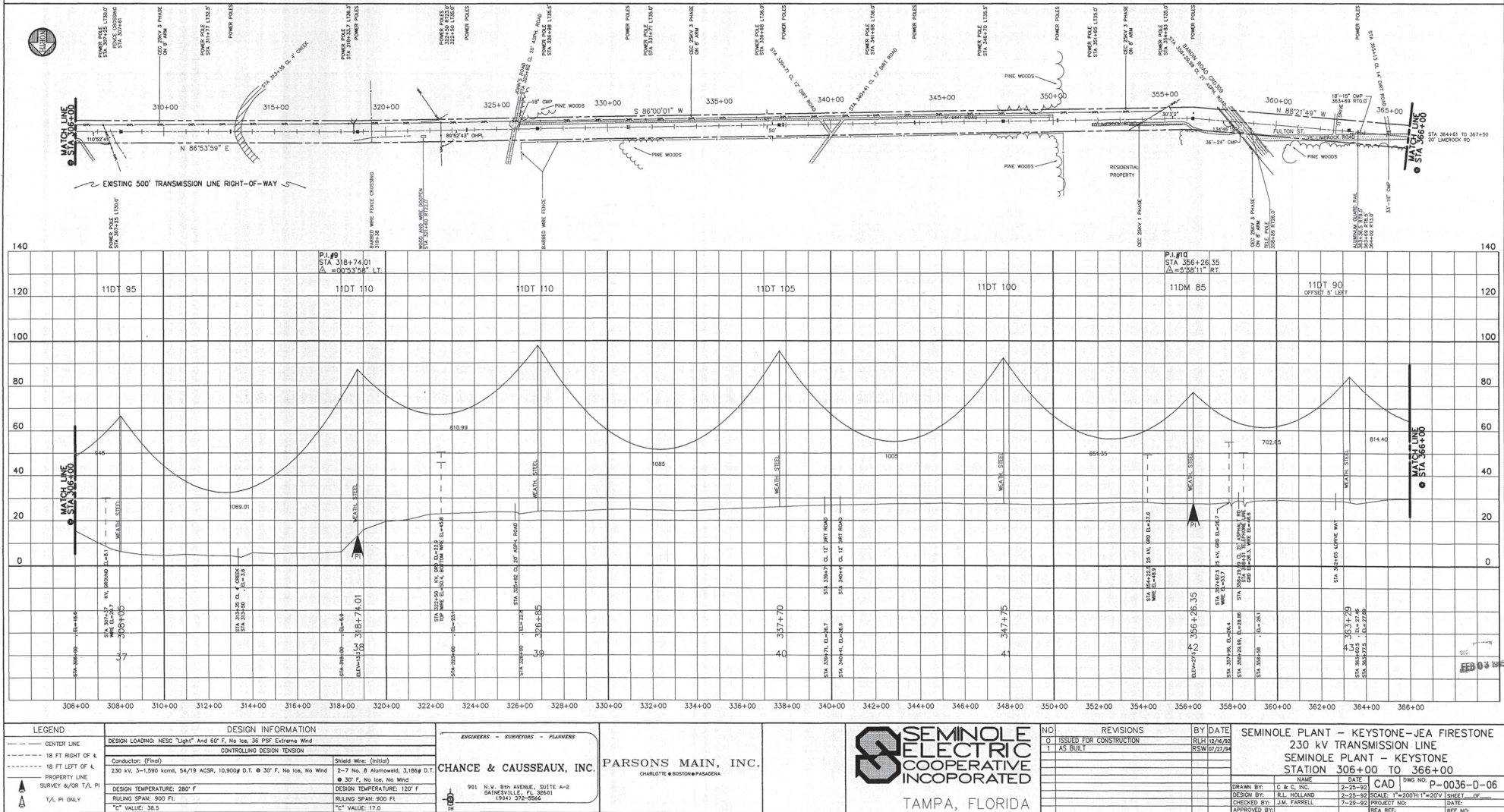
CHANCE & CAUSSEUX, INC. 901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (954) 378-2566  
 PARSONS MAIN, INC. CHARLOTTE • BOSTON • PASADENA  
 RECEIVED FEB 03 1995  
 DRAWN BY: C & C, INC. 2-25-92  
 DESIGN BY: R.L. HOLLAND 2-25-92  
 CHECKED BY: J.M. FARRELL 2-25-92  
 APPROVED BY: DATE:



7

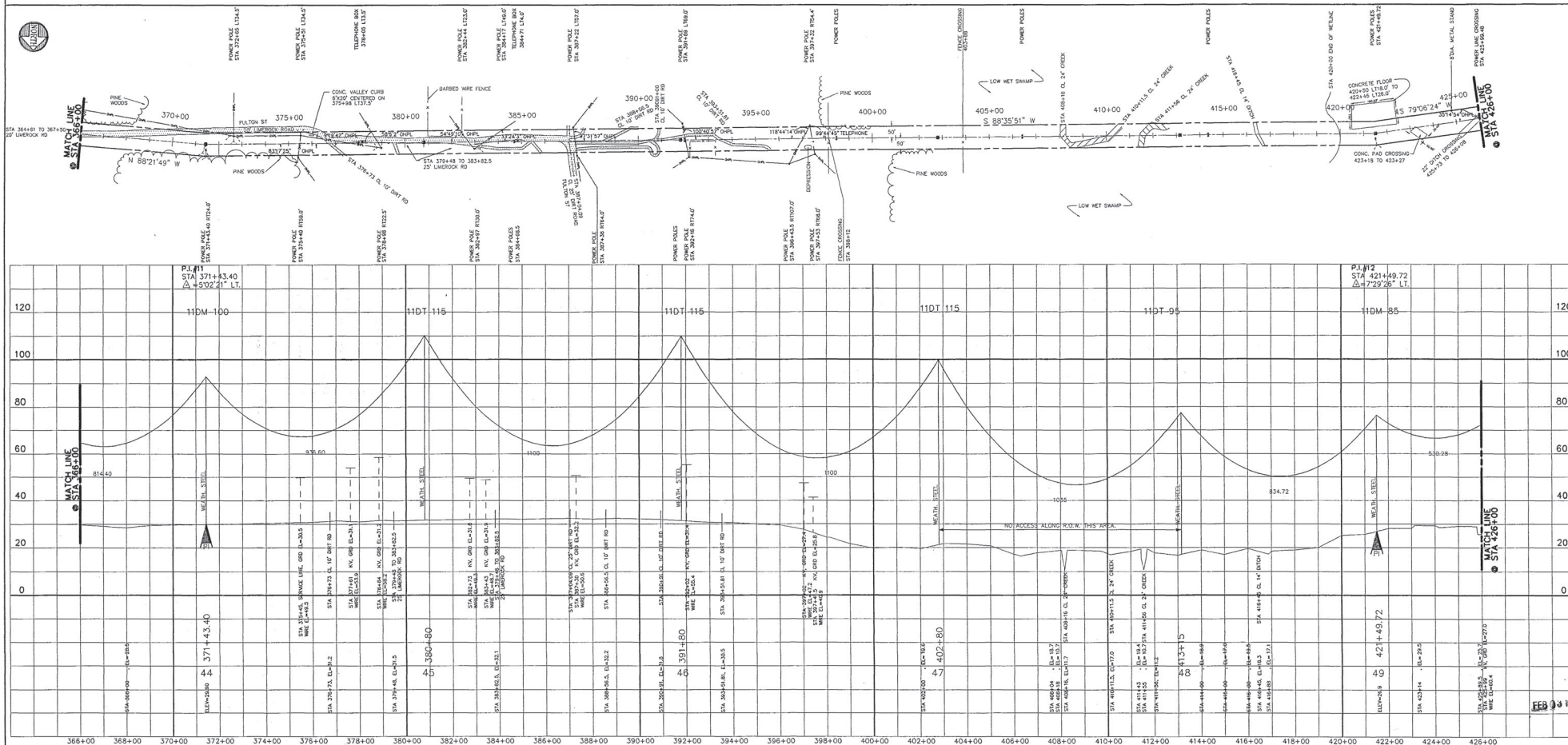


LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	ENGINEERS - SURVEYORS - PLANNERS	PLANNERS	SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	TAMPA, FLORIDA	0	ISSUED FOR CONSTRUCTION	RLH	12/18/99	230 kV TRANSMISSION LINE	
---	18 FT RIGHT OF A	Conductor: (Final)	Shield Wire: (Initial)	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.			1	AS BUILT	RSN	05/05/01	SEMINOLE PLANT - KEYSTONE	
---	18 FT LEFT OF A	230 kV, 3-1,590 kcmil, 54/119 ACSS, 10,900# D.T. @ 30' F, No Ice, No Wind	2-7 No. 8 Aluminum, 3,186# D.T. @ 30' F, No Ice, No Wind	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE • BOSTON • PASADENA							STATION 246+00 TO 306+00	
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.								P-0036-D-05
---	SURVEY &/OR T.V. PI	RULING SPAN: 900 FT	RULING SPAN: 900 FT										
---	T.V. PI ONLY	"C" VALUE: 38.5	"C" VALUE: 17.0										



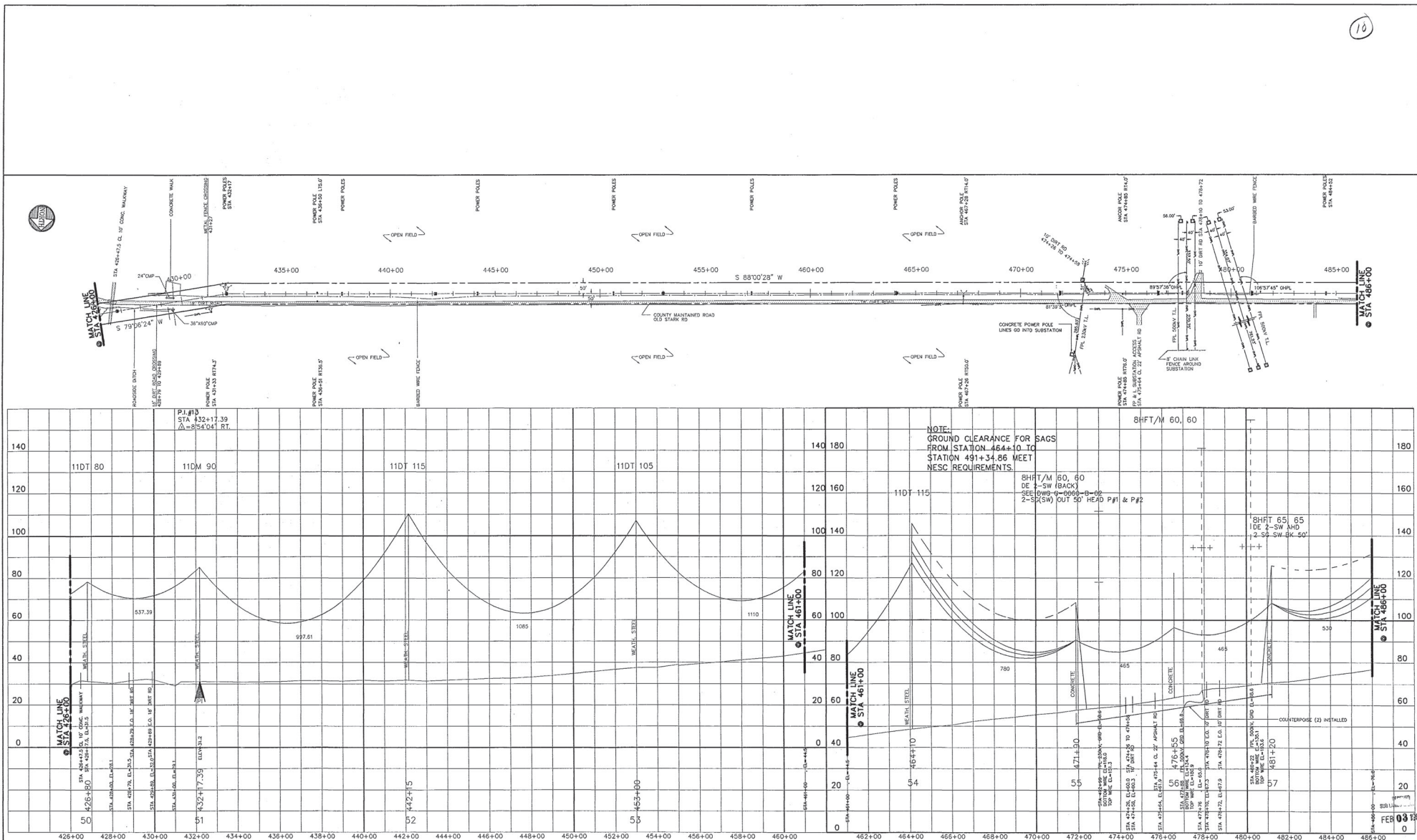


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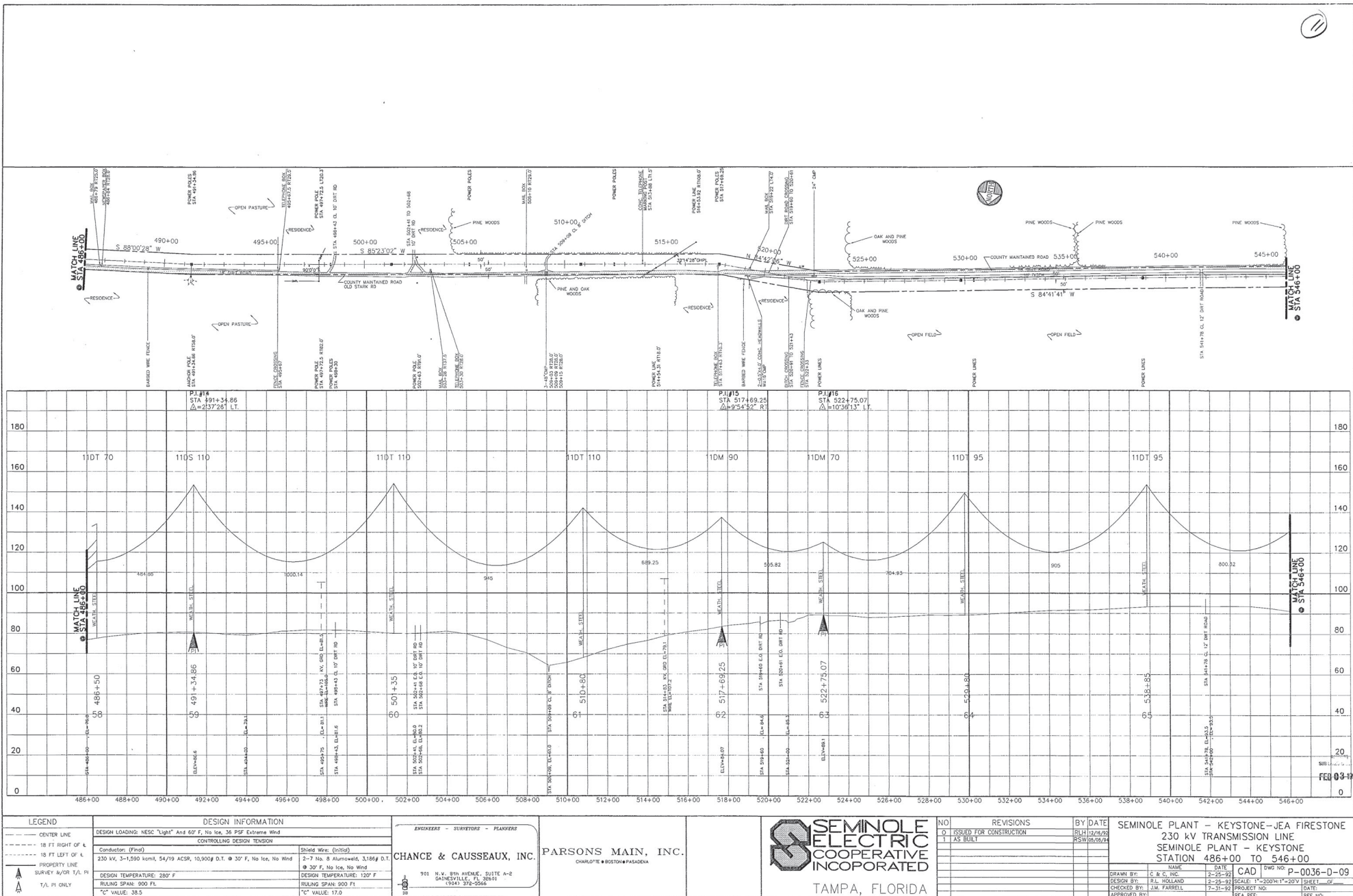
<b>LEGEND</b>		<b>DESIGN INFORMATION</b>		<b>ENGINEERS - SURVEYORS - PLANNERS</b>		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b>	
--- CENTER LINE		DESIGN LOADING: HESC "Light" And 60" F, No Ice, 35 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		TAMPA, FLORIDA	
- - - 18 FT RIGHT OF L		CONDUCTOR (Final)		PARSONS MAIN, INC.		NO. 1	
- - - 18 FT LEFT OF L		230 kV, 3-1,590 kmil, 54/19 ACSR, 10,900g D.T. @ 30° F, No Ice, No Wind		901 N.W. 8th Avenue, Suite A-2		BY DATE	
PROPERTY LINE		Shield Wire (Initial)		GAINESVILLE, FL 32601		ISSUED FOR CONSTRUCTION	
SURVEY 6x/08 T/L IN		2-7 No. 8 Aluminum, 3,186g D.T. @ 30° F, No Ice, No Wind		19043 378-0566		AS BUILT	
T/L IN ONLY		DESIGN TEMPERATURE: 280° F				BY DATE	
		RULING SPAN: 900 FT				BY DATE	
		T/C VALUE: 38.5				BY DATE	
		T/C VALUE: 17.0				BY DATE	

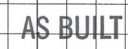
SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE		230 kV TRANSMISSION LINE	
STATION 366+00 TO 426+00		SCALE: 1"=200'H, 1"=20'V	
NAME		DATE	
C & C, INC.		2-25-92	
P.L. POLLARD		2-25-92	
J.M. FARRELL		7-31-92	
APPROVED BY		DATE	
		FEB 93	



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
--- CENTER LINE		DESIGN LOADINGS: NESC "Light" And 60" F. No Ice, 38 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		PARSONS MAIN, INC.		0 ISSUED FOR CONSTRUCTION		RJH 12/28/03		230 kV TRANSMISSION LINE	
- - - 18 FT RIGHT OF L		CONTROLLING DESIGN TENSION		901 N.W. 5th AVENUE, SUITE A-2		CHARLOTTE & BOSTON PASADENA		1 AS BUILT		RSW 05/09/04		SEMINOLE PLANT - KEYSTONE	
- - - 18 FT LEFT OF L		Conductor: (Final)		230 kV, 3-1,250 kcmil, 54/19 ACSR, 10,900# D.T. @ 30° F, No Ice, No Wind		TAMPA, FLORIDA						STATION 426+00 TO 486+00	
--- PROPERTY LINE		Shield Wire: (Initial)		2-7 No. 8 Aluminum, 3.18kg D.T.									
A SURVEY &/OR T/A PL		@ 30° F, No Ice, No Wind		DESIGN TEMPERATURE: 120° F									
T/A PL ONLY		RULING SPAN: 900 FT		RULING SPAN: 900 FT									
		"C" VALUE: 28.5		"C" VALUE: 17.0									







LEGEND

--- CENTER LINE

18 FT RIGHT OF E

18 FT LEFT OF E

PROPERTY LINE

SURVEY &/OR T.A. P

T.A. P ONLY

DESIGN INFORMATION

DESIGN LOADS: NEERC "Type I" And RPT 1, No ice, 34 PSF External Wind  
60 MPH, 10 PSF External Suction

Conditions: (Firm)  
130 kV, 2-1280 kcmil, 54/19 AC90, 100°C/250 °F, 3" Ø 3", No ice, No Wind  
DESIGN TEMPERATURE: 280 °F  
ROUND SPAN: 900 FT  
T/C VALUE: 38.5  
T/C VALUE: 17.0

ENGINEERS - SURVEYORS - PLANNERS

CHANCE & CAUSSEUX, INC.

901 N.W. 8th AVENUE, SUITE A-2  
GAINESVILLE, FL 32601  
(352) 322-5566

PARSONS MAIN, INC.

CHARLOTTE • BOSTON • PASADENA

SEMINOLE ELECTRIC COOPERATIVE INCORPORATED

TAMPA, FLORIDA

NO.	REVISIONS	BY DATE
0	ISSUED FOR CONSTRUCTION	SC - 3/24/25
1	AS BUILT	SC - 3/25/25

SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE

230 KV TRANSMISSION LINE

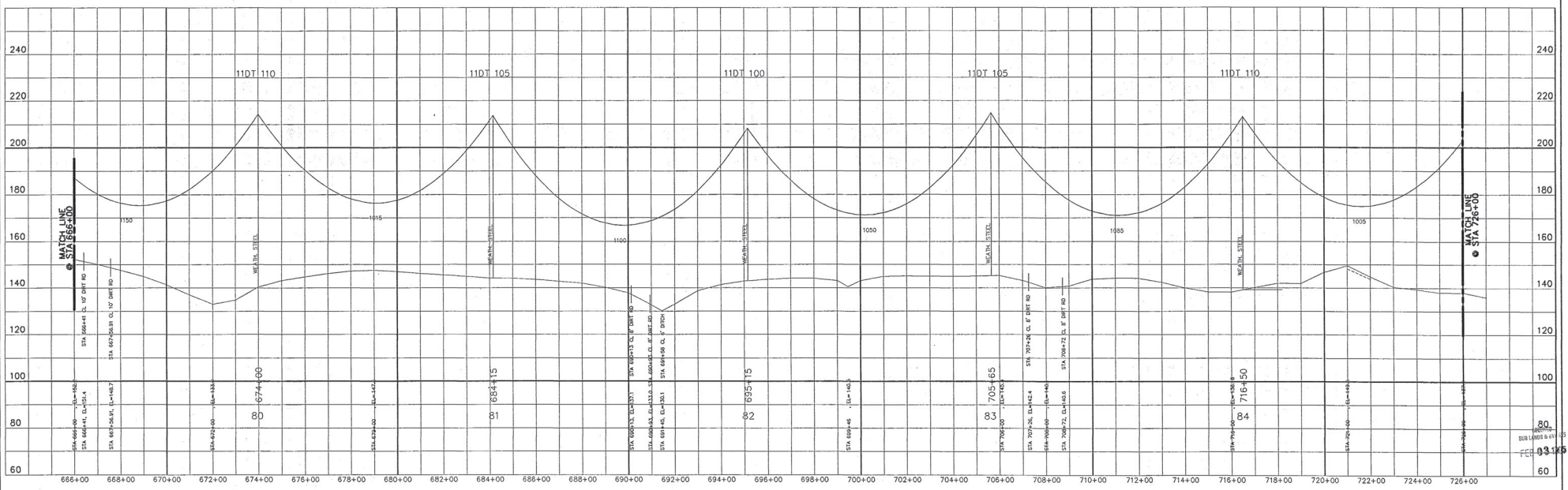
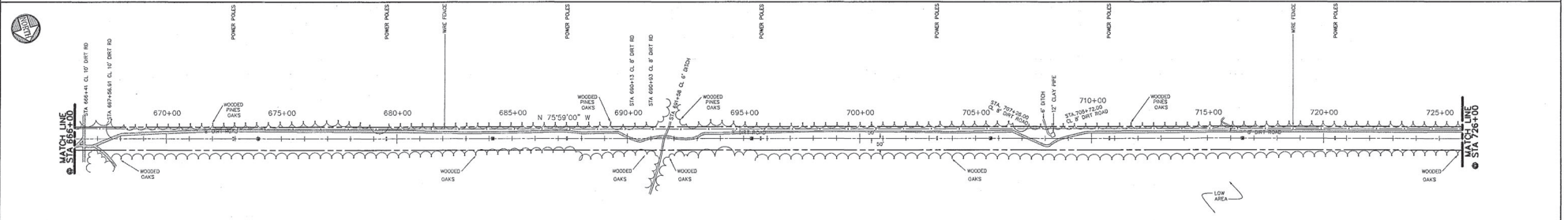
SEMINOLE PLANT - KEYSTONE


SECTION 546-00 TO 606-00

DRAWN BY	DATE	CAD	DWG NO.	P-0036-D-10
DESIGN BY: J.L. HOLLAND	2-25-82	SCALE: 1"=200' (1"=20V)	SHEET: 10F	
CHECKED BY: J.M. FARNELL	7-30-82	PROJECT NO.	DATE:	
APPROVED BY: [Signature]	REV. NO.			



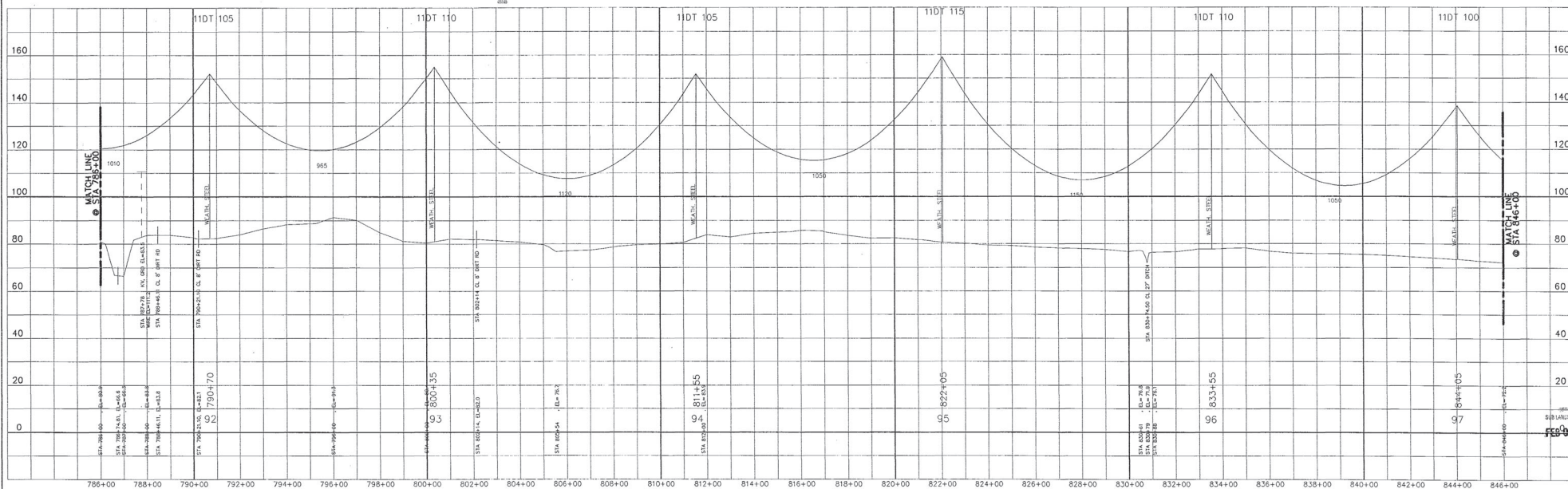
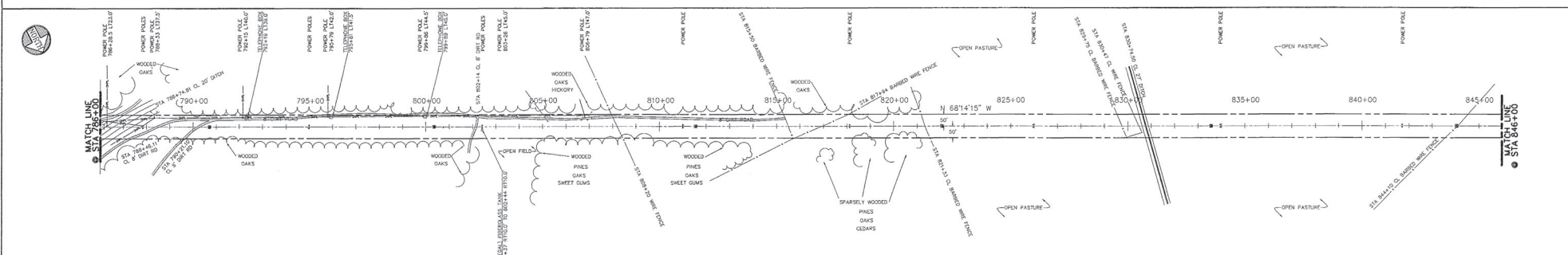
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<b>LEGEND</b>		<b>DESIGN INFORMATION</b>		<b>ENGINEERS - SURVEYORS - PLANNERS</b>				<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b>		<b>TAMPA, FLORIDA</b>		<table><tr><th>NO.</th><th>REVISIONS</th><th>BY</th><th>DATE</th></tr><tr><td>0</td><td>ISSUED FOR CONSTRUCTION</td><td>RLH</td><td>12/14/93</td></tr><tr><td>1</td><td>AS BUILT</td><td>ESW</td><td>05/05/94</td></tr></table>		NO.	REVISIONS	BY	DATE	0	ISSUED FOR CONSTRUCTION	RLH	12/14/93	1	AS BUILT	ESW	05/05/94	<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> <b>230 kV TRANSMISSION LINE</b> <b>SEMINOLE PLANT - KEYSTONE</b> <b>STATION 666+00 TO 726+00</b>																																											
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0	ISSUED FOR CONSTRUCTION	RLH	12/14/93																																																																		
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----- CENTER LINE ----- 18 FT RIGHT OF L ----- 18 FT LEFT OF L ----- PROPERTY LINE ▲ SURVEY &/OR T/L PI ▲ T/L PI ONLY		DESIGN LOADING: NESC "Light" And 80' F, No Ice, 38 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1,250 kcmil, 54/19 ACSR, 10,900g D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 1,000 FT "C" VALUE: 36.5		Shield Wire: (Initial) 2-7 No. 8 Aluminum, 3,186g D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 120° F RULING SPAN: 1,000 FT "C" VALUE: 16.0		<b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th Avenue, SUITE A-2 GAINESVILLE, FL 32603 (904) 376-5566		<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA		<table><tr><th>NAME</th><th>DATE</th><th>CAD</th><th>DWG NO.</th></tr><tr><td>C &amp; C, INC.</td><td>2-25-93</td><td></td><td>P-0036-D-12</td></tr><tr><td>R.L. ROLLAND</td><td>2-25-93</td><td></td><td>SCALE: 1"=200H:1"-20V</td></tr><tr><td>J.M. FASSELL</td><td>7-30-93</td><td></td><td>PROJECT NO.</td></tr><tr><td></td><td></td><td></td><td>DATE</td></tr><tr><td></td><td></td><td></td><td>REA REF:</td></tr><tr><td></td><td></td><td></td><td>REF NO:</td></tr></table>		NAME	DATE	CAD	DWG NO.	C & C, INC.	2-25-93		P-0036-D-12	R.L. ROLLAND	2-25-93		SCALE: 1"=200H:1"-20V	J.M. FASSELL	7-30-93		PROJECT NO.				DATE				REA REF:				REF NO:	<table><tr><th>NAME</th><th>DATE</th><th>CAD</th><th>DWG NO.</th></tr><tr><td>C &amp; C, INC.</td><td>2-25-93</td><td></td><td>P-0036-D-12</td></tr><tr><td>R.L. ROLLAND</td><td>2-25-93</td><td></td><td>SCALE: 1"=200H:1"-20V</td></tr><tr><td>J.M. FASSELL</td><td>7-30-93</td><td></td><td>PROJECT NO.</td></tr><tr><td></td><td></td><td></td><td>DATE</td></tr><tr><td></td><td></td><td></td><td>REA REF:</td></tr><tr><td></td><td></td><td></td><td>REF NO:</td></tr></table>		NAME	DATE	CAD	DWG NO.	C & C, INC.	2-25-93		P-0036-D-12	R.L. ROLLAND	2-25-93		SCALE: 1"=200H:1"-20V	J.M. FASSELL	7-30-93		PROJECT NO.				DATE				REA REF:				REF NO:
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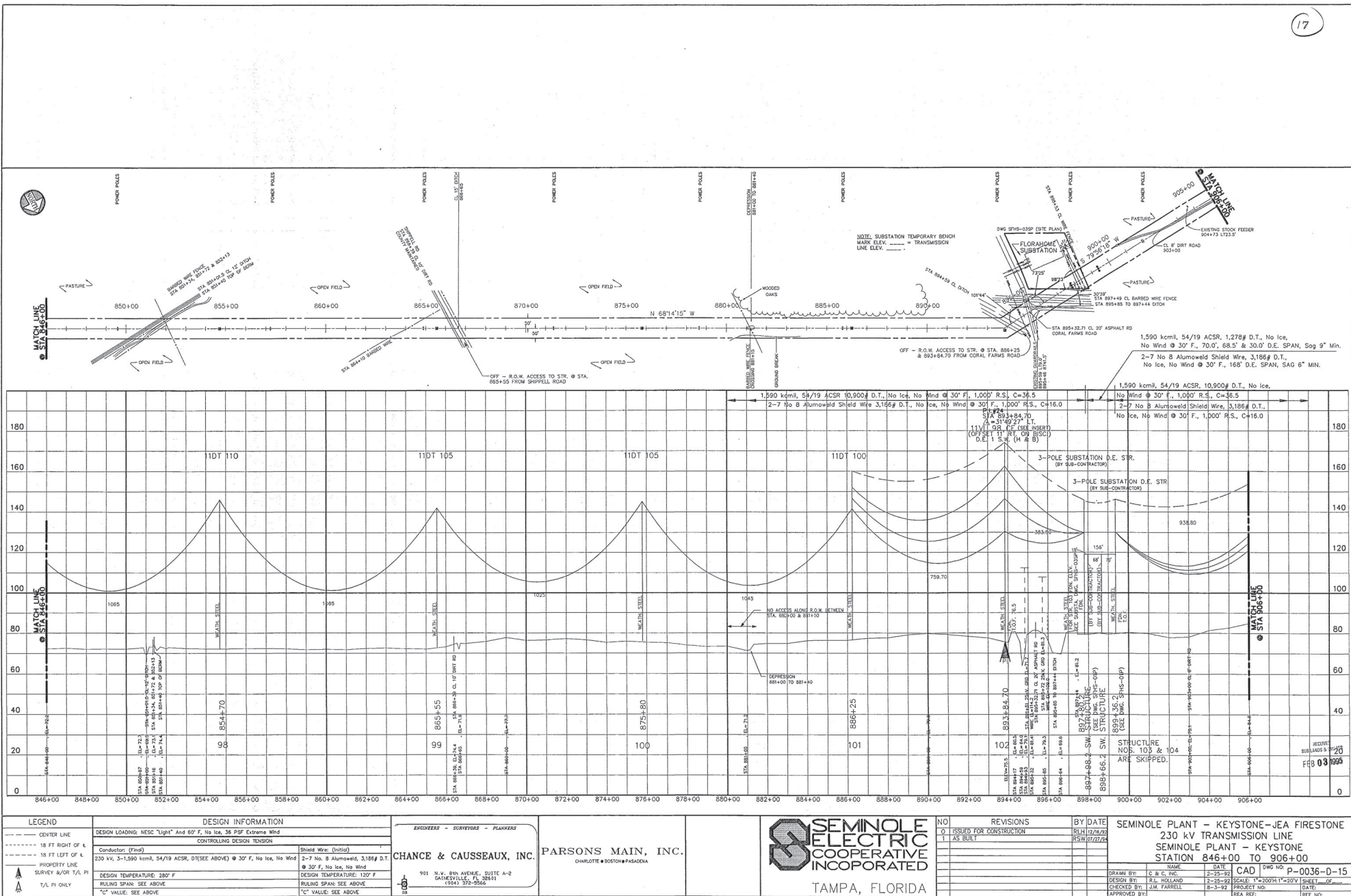


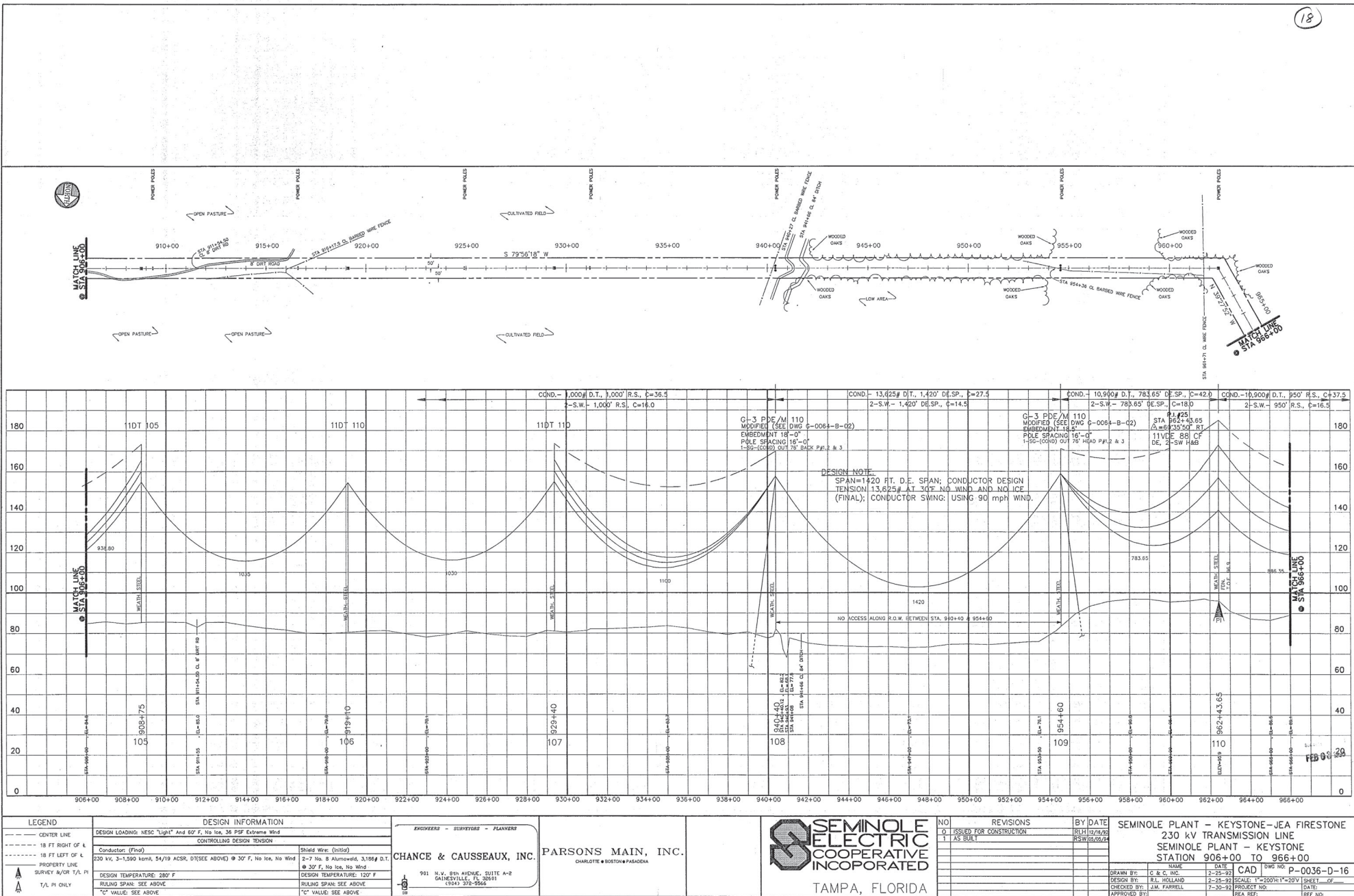
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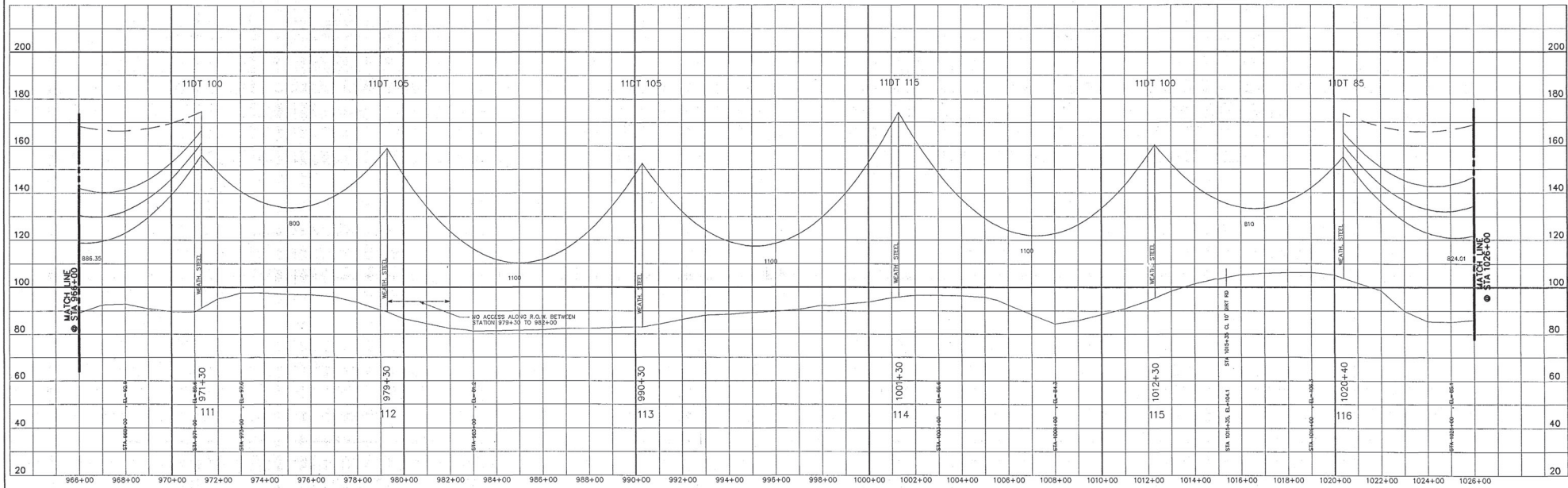
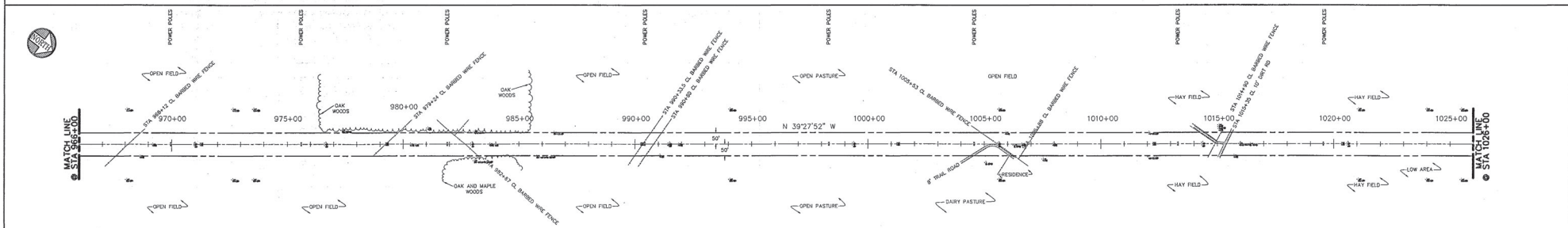
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. OF REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F. No Ice, 38 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	3	ISSUED FOR CONSTRUCTION	1	AS BUILT	RLH	12/28/93	2-25-93	CAD
---	18 FT RIGHT OF A	Conductor: (Fina)	Shield Wire: (Initial)	901 N.W. 8th AVENUE, SUITE A-2		TAMPA, FLORIDA		DATE		DRAWN BY: C & C, INC.		P-0036-D-14	
---	18 FT LEFT OF A	230 kV, 5-1,590 kcmil, 54/19 ACSR, 10,900' D.T. @ 30' F, No Ice, No Wind	2-7 No. 8 Aluminum, 3,180' D.T. @ 30' F, No Ice, No Wind	CHARLOTTE & BOSTON PASADENA		DESIGN BY: R.L. HOLLAND		2-25-93		CHECKED BY: J.M. FARRELL		SCALE: 1"=200H 1"=20V	
---	PROPERTY LINE	DESIGN TEMPERATURE: 120° F	RULING SPAN: 1,000 FT	901 N.W. 8th AVENUE, SUITE A-2		TAMPA, FLORIDA		DATE		APPROVED BY:		PROJECT NO.	
---	SURVEY &/OR T/A PI	"C" VALUE: 36.5	"C" VALUE: 16.0	901 N.W. 8th AVENUE, SUITE A-2		TAMPA, FLORIDA		DATE		PROJECT NO.		REF NO.	
---	T/A PI ONLY			901 N.W. 8th AVENUE, SUITE A-2		TAMPA, FLORIDA		DATE		PROJECT NO.		REF NO.	





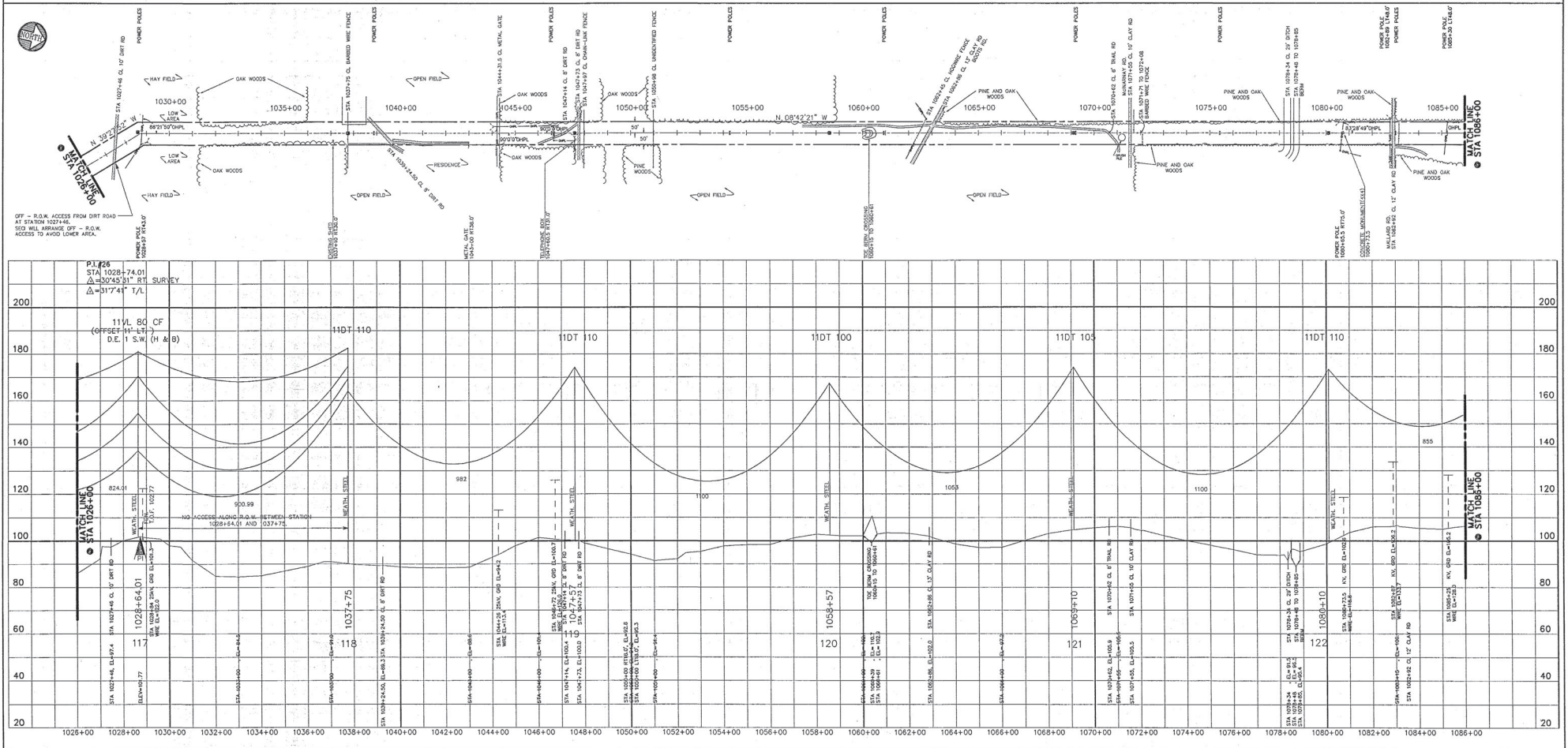






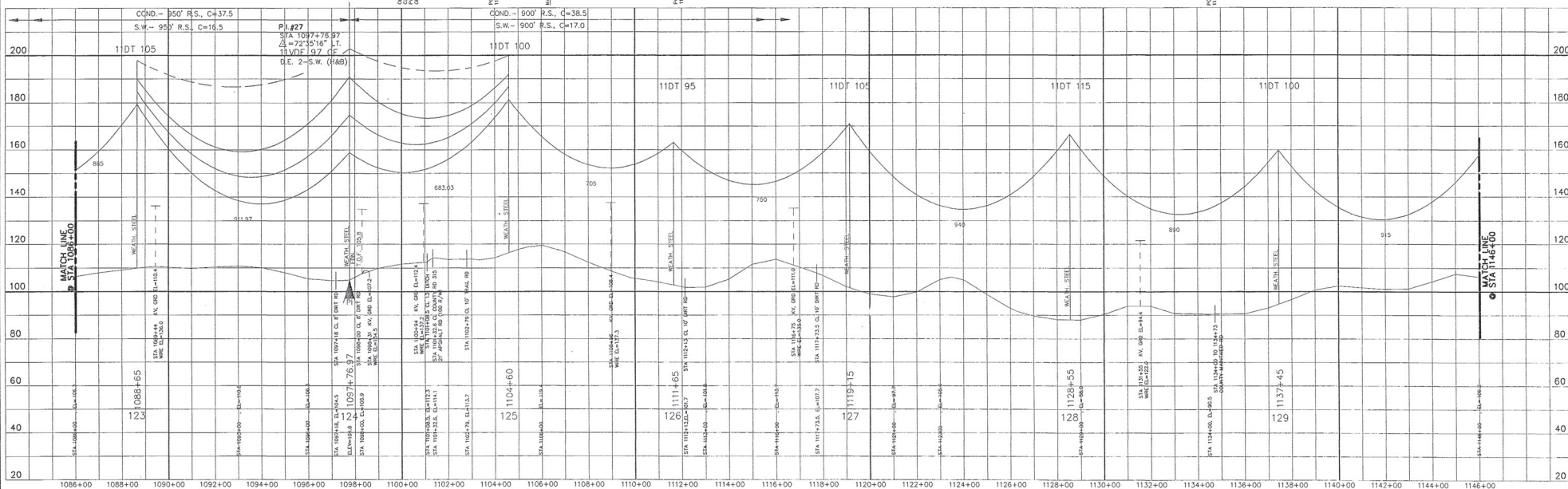
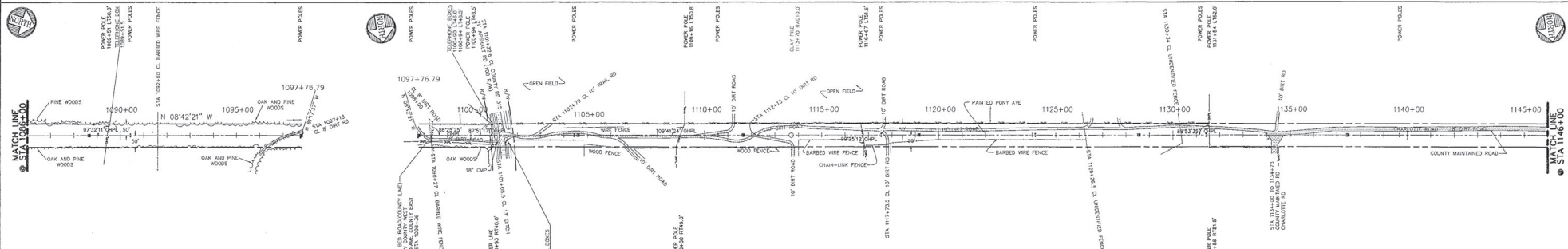
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		NO. OF REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60" F, No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	0	ISSUED FOR CONSTRUCTION	RLH	12/14/92	230 kV TRANSMISSION LINE	17
---	18 FT RIGHT OF A	Conductor: (Final)	Shield Wire: (Initial)	901 N.W. 8th AVENUE, SUITE A-2		1	AS BUILT	RSW	05/05/94	SEMINOLE PLANT - KEYSTONE	18
---	18 FT LEFT OF A	230 kV, 3-1,590 kcmil, 54/19 ACSR, 10,000' D.T. @ 30° F, No Ice, No Wind	2-7 No. 8 Aluminum, 3,185' D.T. @ 30° F, No Ice, No Wind	CHARLOTTE • BOSTON • PASADENA						STATION 966+00 TO 1026+00	19
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	31							
---	SURVEY &/OR T/L PI	RULING SPAN: 950 FT	RULING SPAN: 950 FT	901 N.W. 8th AVENUE, SUITE A-2						DRAWN BY: C & C, INC.	P-0036-D-17
---	T/L PI ONLY	"C" VALUE: 37.5	"C" VALUE: 16.5	GAINESVILLE, FL 32603						DESIGN BY: RLH	2-25-92
				(904) 376-2566						CHECKED BY: J.M. FASSELL	2-25-92
										APPROVED BY:	2-25-92
										PROJECT NO:	SCALE: 1"=200'H=1"=20'V
										DATE:	SHEET OF
										REA REF:	REF NO:



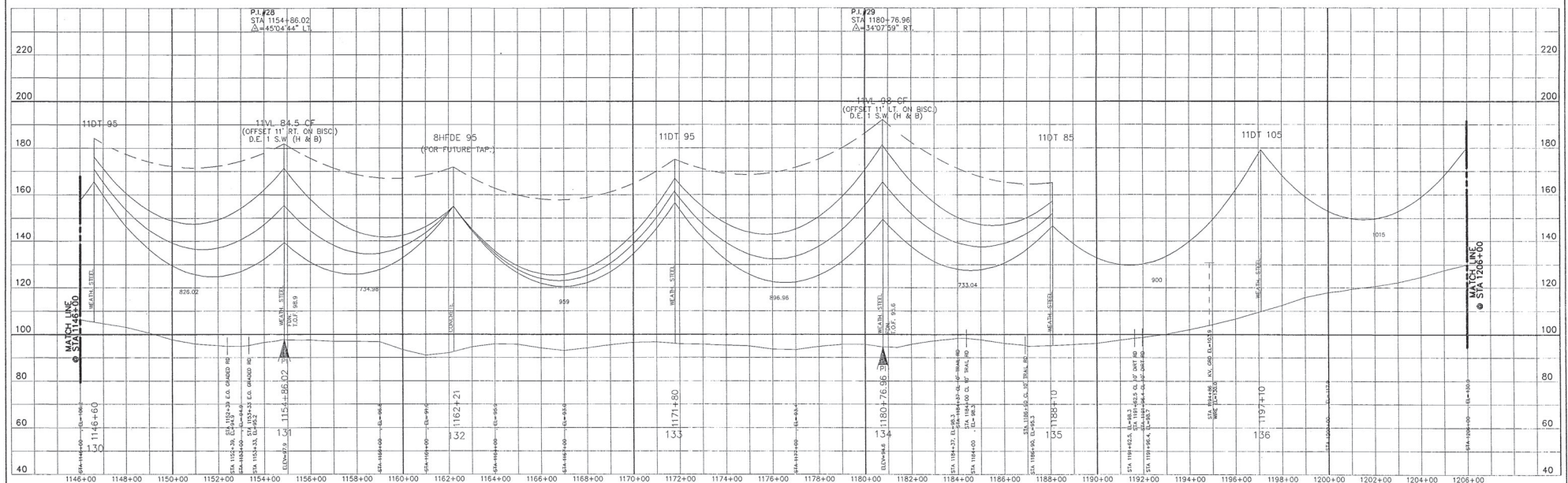
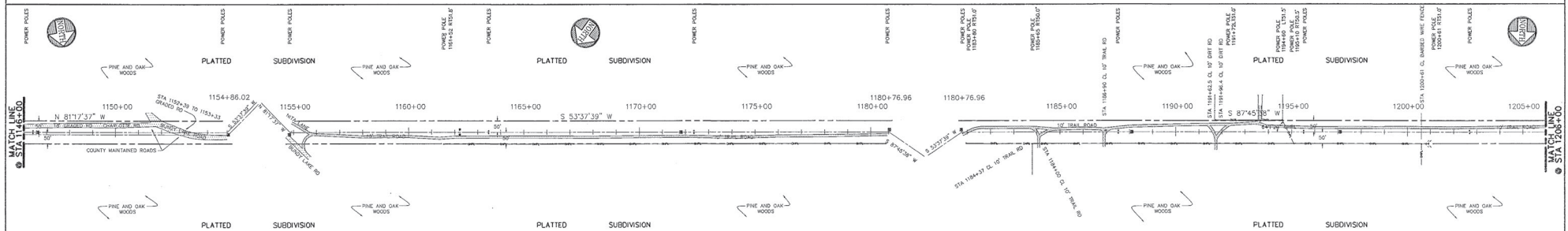


LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. 1		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CONVEY LINE	DESIGN LOADING: NESC "Light" And 60° F, No Ice, 35 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	3	ISSUED FOR CONSTRUCTION	1	AS BUILT	2-25-93	2-25-93	RLH 12/26/92	RSW 01/27/94	230 kV TRANSMISSION LINE	230 kV TRANSMISSION LINE
---	18 FT RIGHT OF L	Conductor: (Final)	Shield Wire: (Initial)	301 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PASADENA	4	DATE	5	DATE	NAME	DATE	NAME	DATE	STATION 1026+00 TO 1086+00	STATION 1026+00 TO 1086+00
---	18 FT LEFT OF L	230 kV, 3-1590 kcmil, 54/19 ACSR, 10,900# D.T. @ 30° F, No Ice, No Wind	2-7 No. 8 Aluminum, 3.185# D.T. @ 30° F, No Ice, No Wind	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PASADENA	6	DESIGN BY	7	DESIGN BY	C & C, INC.	2-25-93	CAD	DWG NO.	P-0036-D-18	P-0036-D-18
---	PROPERTY LINE	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PASADENA	8	CHECKED BY	9	CHECKED BY	R.L. HOLLAND	2-25-93	SCALE: 1"=200'H	20'V	SHEET	SHEET
---	SURVEY A/OR T/A PI	RULING SPAN: 850 FT	RULING SPAN: 850 FT	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PASADENA	10	APPROVED BY	11	APPROVED BY	J.M. FARRELL	7-30-93	PROJECT NO.	DATE	DATE	DATE
---	T/A PI ONLY	"C" VALUE: 37.5	"C" VALUE: 16.5	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PASADENA	12		13				REA REF.	REF NO.		





LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. 1		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADINGS: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	ISSUED FOR CONSTRUCTION	AS BUILT	1	AS BUILT	1	AS BUILT	1	AS BUILT	230 kV TRANSMISSION LINE	STATION 1086+00 TO 1146+00
---	18 FT RIGHT OF L	Conductor: (Final)	230 kV, 3-1,250 kcmil, 54/19 ACSR, 10,000# D.T. @ 30° F, No Ice, No Wind	901 N.W. 8th AVENUE, SUITE A-2	GAINESVILLE, FL 32601	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	SCALE: 1"=200'H 1"=20'V	SHEET 20F
---	18 FT LEFT OF L	Shield Wire: (Initial)	2-7 No. 8 Aluminum, 3,185# D.T.	CHARLOTTE • BOSTON • PASADENA		2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	2-25-99	PROJECT NO.	DATE
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F											REA REF.	REF NO.
---	SURVEY A/OR T/A PI	RULING SPAN: SEE ABOVE	RULING SPAN: SEE ABOVE												
---	T/A PI ONLY	"C" VALUE: SEE ABOVE	"C" VALUE: SEE ABOVE												



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE - JEA FIRESTONE, 230 kV TRANSMISSION LINE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 50' F, No Ice, 36 PSF Extreme Wind	CONDUCTOR: (7Fins)	2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.	0	ISSUED FOR CONSTRUCTION	RLH	12/14/93	DESIGNED BY: C & C, INC.	2-25-92
---	18 FT RIGHT OF E.	CONTROLLING DESIGN TENSION	Shield Wire: (2000)	2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.	1	AS BUILT	RSW	05/05/94	DRAWN BY: R.L. ROLLAND	2-25-92
---	18 FT LEFT OF E.			2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					CHECKED BY: J.M. FARRELL	7-30-92
---	PROPERTY LINE			2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					APPROVED BY: BEA REF.	7-30-92
---	SURVEY &/OR T/L R	DESIGN TEMPERATURE: 280° F		2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					NAME: CAD	P-0036-D-20
---	T/L R ONLY	RULING SPAN: 900' FT		2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					SCALE: T=200' H=20' V=20'	SHEET: 22
		"C" VALUE: 38.5		2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					DATE: FEB 6, 1995	
		"C" VALUE: 17.0		2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.					REF NO:	

CHANCE & CAUSSEUX, INC.

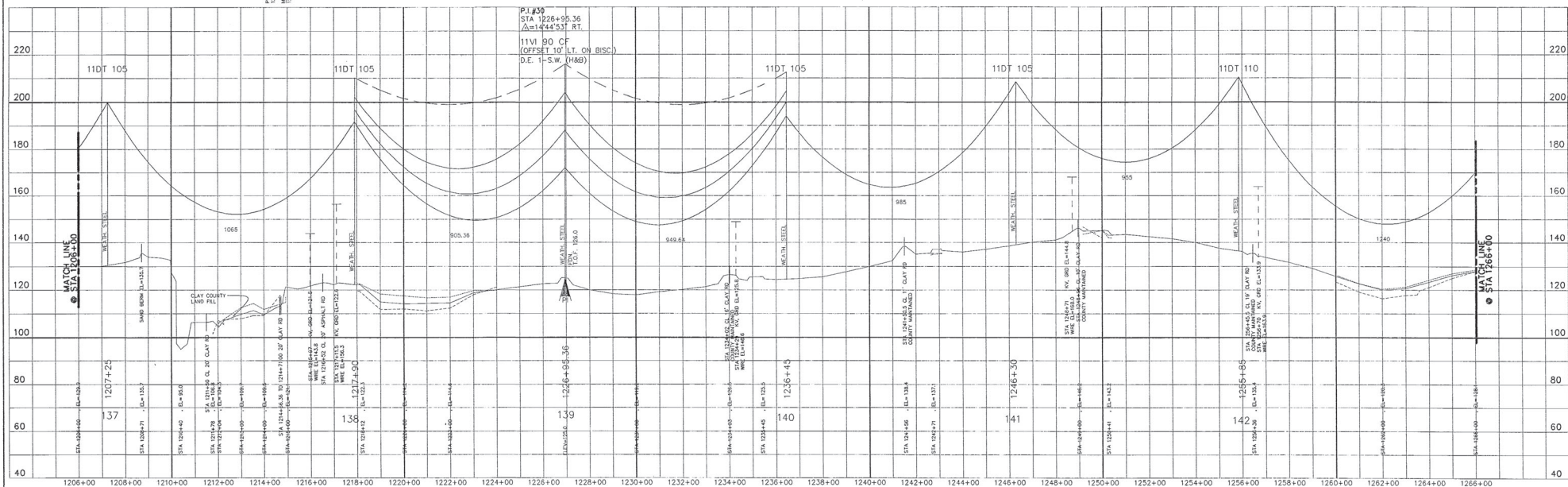
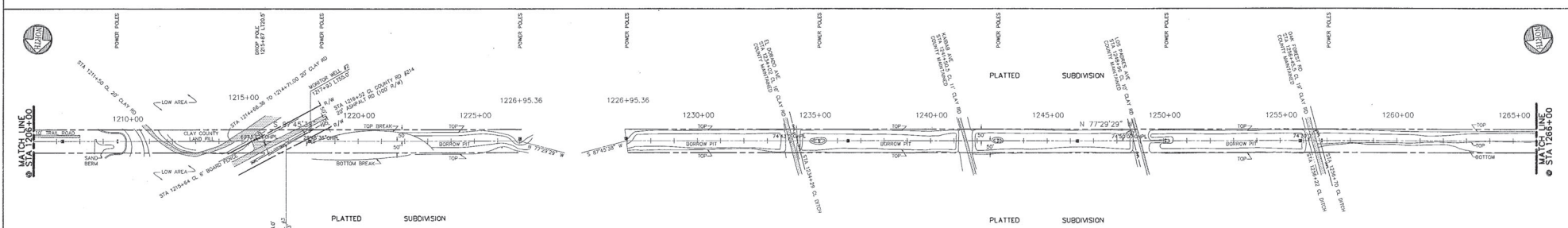
PARSONS MAIN, INC.

**SEMINOLE ELECTRIC COOPERATIVE INCORPORATED**  
TAMPA, FLORIDA

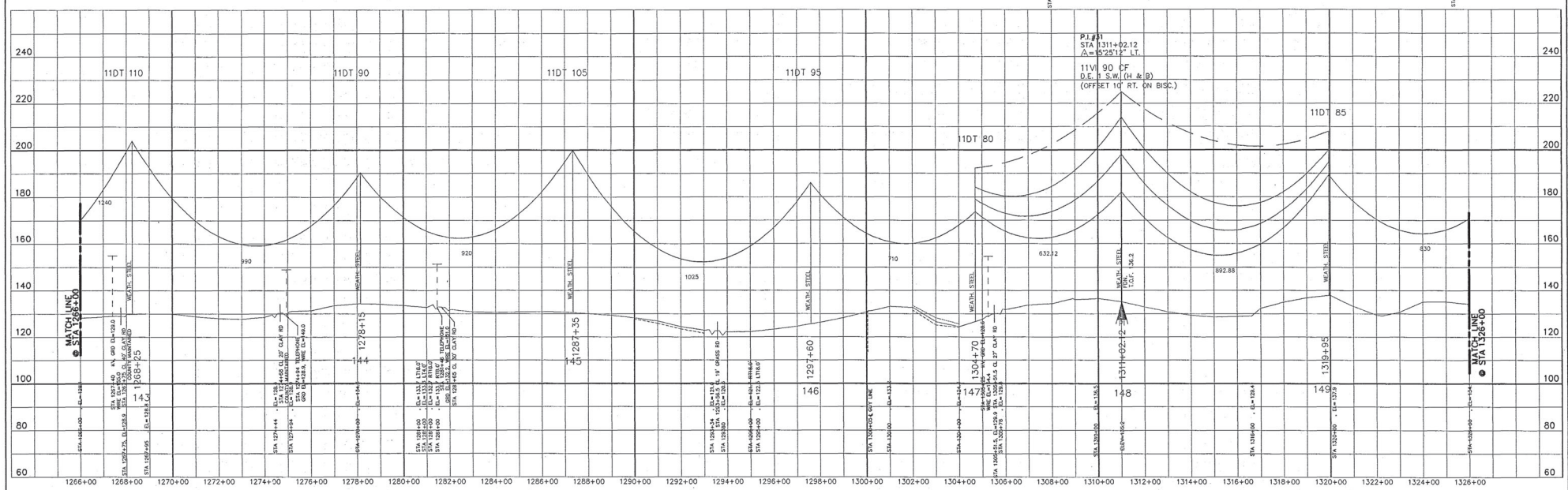
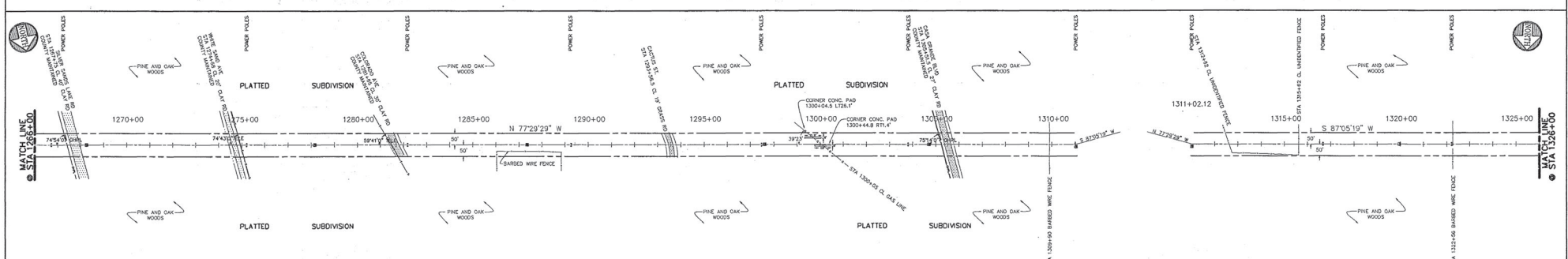
NO. REVISIONS  
BY DATE  
0 ISSUED FOR CONSTRUCTION  
1 AS BUILT  
BY DATE  
RLH 12/14/93  
RSW 05/05/94

SEMINOLE PLANT - KEYSTONE - JEA FIRESTONE, 230 kV TRANSMISSION LINE  
SEMINOLE PLANT - KEYSTONE  
STATION 1146+00 TO 1206+00  
FEB 6, 1995



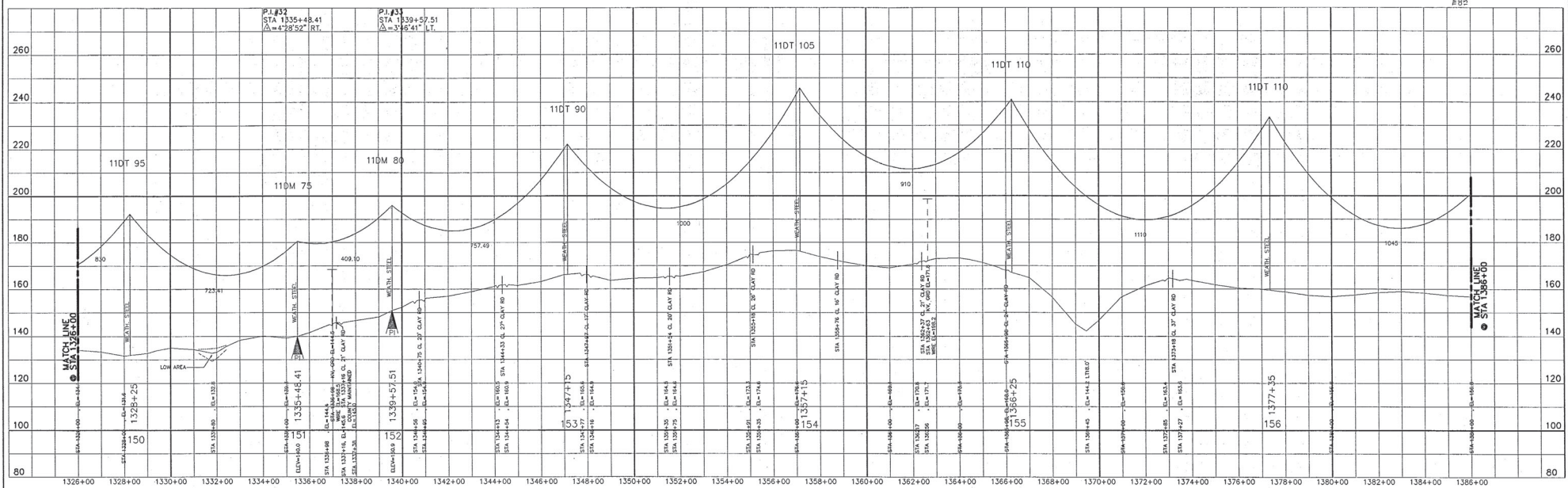
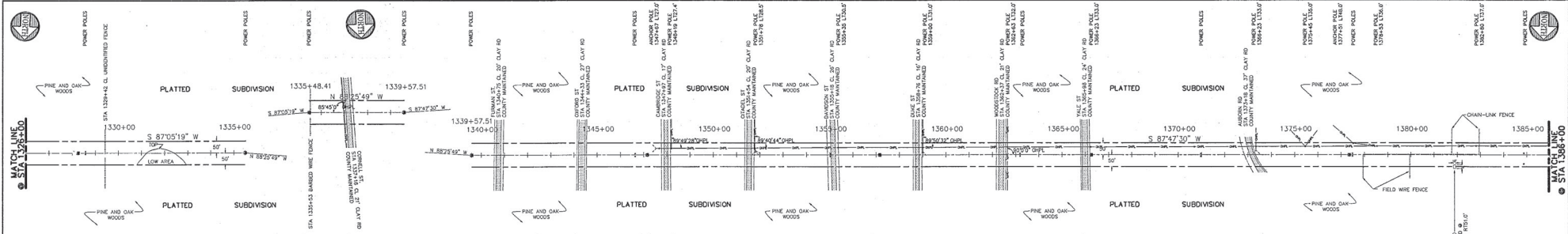


LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
CENTER LINE		DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		TAMPA, FLORIDA		0 ISSUED FOR CONSTRUCTION		RLH 12/26/02		230 KV TRANSMISSION LINE	
18 FT RIGHT OF L		CONDUCTOR (Final)		PARSONS MAIN, INC.				1 AS BUILT		RSW 02/05/04		STATION 1206+00 TO 1266+00	
18 FT LEFT OF L		230 KV, 3-1,590 kcmil, 54/19 ACSS, 10,900G D.T. @ 30' F, No Ice, No Wind		901 N.W. 8th AVENUE, SUITE A-2								DRAWN BY: C & C, INC.	
PROPERTY LINE		SHIELD WIRE (Initial)		GAINESVILLE, FL 32601								DESIGN BY: R.L. HOLLAND	
SURVEY &/OR T/L PI		DESIGN TEMPERATURE: 120° F		(954) 372-2566								CHECKED BY: J.M. FARRELL	
T/L PI ONLY		RULING SPAN: 900' FT										APPROVED BY:	
		"C" VALUE: 38.5										NAME: CAD	
												DATE: 2-25-02	
												PROJECT NO: 7-35-02	
												SHEET: 21	
												REF. NO:	



<b>LEGEND</b> --- CENTER LINE - - - 18 FT RIGHT OF L - - - 18 FT LEFT OF L A SURVEY &/OR T/A PI T/A PI ONLY		<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" and 60° F. No Ice, 35 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1,550 kcmil, 54/19 ACSSR, 10,900g D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 900 FT "C" VALUE: 38.5 Shield Wire: (Initial) 2-7 No. 8 Aluminum, 1,188g D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 120° F RULING SPAN: 900 FT "C" VALUE: 17.0		<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (352) 375-1556		<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA		<b>NO. 01</b> <b>REVISIONS</b> 0 ISSUED FOR CONSTRUCTION 1 AS BUILT <b>BY DATE</b> RLM 12/28/04 RSW 05/05/04		<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> <b>230 kV TRANSMISSION LINE</b> <b>SEMINOLE PLANT - KEYSTONE</b> <b>STATION 1266+00 TO 1326+00</b> DRAWN BY: C & C INC. DATE: 2-25-03 DESIGN BY: R.L. HOLLAND DATE: 2-25-03 CHECKED BY: J.M. FARRELL DATE: 7-30-03 APPROVED BY: DATE: SEA REF: REF NO:	
--	--	--	--	--	--	--	--	---	--	--	--	--	--

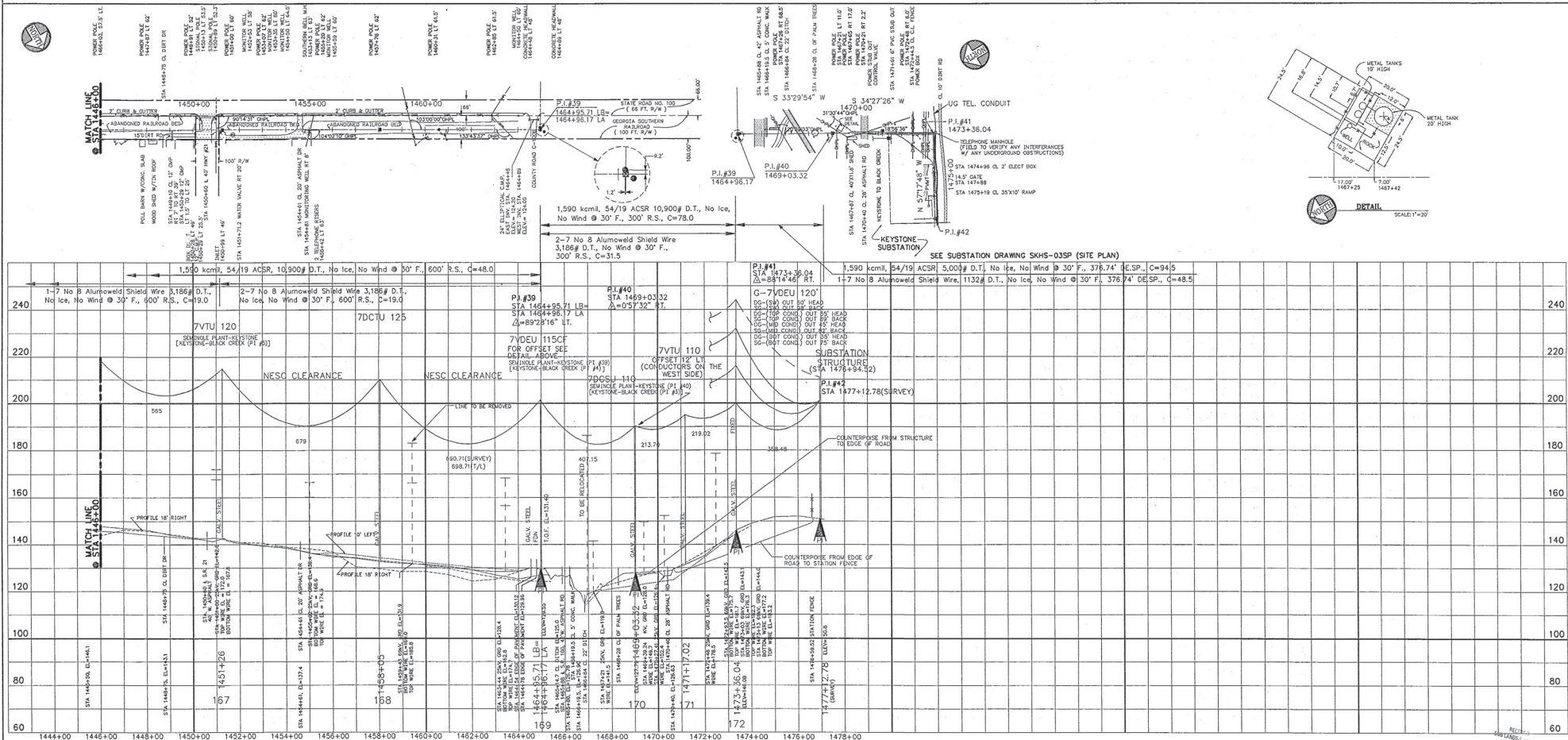




LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
--- CENTER LINE		DESIGN LOADING: NESC "Light" And 60" F, No Ice, 35 PSF Extreme Wind				TAMPA, FLORIDA		0 ISSUED FOR CONSTRUCTION		RLH 12/15/93		230 KV TRANSMISSION LINE	
--- 18 FT RIGHT OF &		CONTROLLING DESIGN TENSION				CHANCE & CAUSSEUX, INC.		1 AS BUILT		RSW 05/06/04		SEMINOLE PLANT - KEYSTONE	
--- 18 FT LEFT OF &		Conductor: (Final)		Shield Wire: (Initial)		PARSONS MAIN, INC.						STATION 1326+00 TO 1386+00	
--- PROPERTY LINE		230 kV, 3-1550 kcmil, 54/19 ACSS, 10,900# D.T. @ 30° F, No Ice, No Wind		2-7 No. 8 Aluminum, 3,185# D.T. @ 30° F, No Ice, No Wind		CHARLOTTE & BOSTON PARADES						FEB 03 1993	
--- SURVEY &/OR T/L P		DESIGN TEMPERATURE: 280° F		DESIGN TEMPERATURE: 120° F		901 N.W. 5th AVENUE, SUITE A-2						CAD DWG NO. P-0036-D-23	
--- T/L P ONLY		RULING SPAN: 800 FT		RULING SPAN: 800 FT		GAINESVILLE, FL 32601						SCALE: 1"=200' H-T 20'	
		"C" VALUE: 38.5		"C" VALUE: 17.0		(352) 375-5566						SHEET OF	









TAMPA, FLORIDA

JEA 230 KV TRANSMISSION LINE

SECTION II

KEYSTONE TO DUVAL COUNTY LINE

PLAN & PROFILE



LEGEND

--- CENTER LINE

--- 15 FT RIGHT OF L

--- 15 FT LEFT OF L

--- PROPERTY LINE

SURVEY N/20 S 1/4 R

T/4 P ONLY

DESIGN INFORMATION

DESIGN LOADING: WESC "Light" And 60' F. No Ice, 36 PSF Extra Wind

CONTROLLING DESIGN TENSION

Conductor: (Final)

230 kV 3-1,590 kcmil 54/19 ACSR, SEE ABOVE D.T. @ 30' F, No Ice, No Wind

Shield Wire: (Initial)

2-7 No. 8 Aluminum, See Above D.T. @ 30' F, No Ice, No Wind

DESIGN TEMPERATURE: 230° F

RULING SPAN: SEE ABOVE

"C" VALUE: SEE ABOVE

"D" VALUE: SEE ABOVE

ENGINEERS - SURVEYORS - PLANNERS

CHANCE & CAUSSEUX, INC.

901 N.W. 2nd AVENUE, SUITE A-2

GAINESVILLE, FL 32601

9543 336-0556

PARSONS MAIN, INC.

CHARLOTTE • DORTCH • PALMDALE

S

SEMINOLE ELECTRIC COOPERATIVE INCORPORATED

TAMPA, FLORIDA

NO

REVISIONS

BY DATE

0

DESIGNED FOR CONSTRUCTION

RLH 10/26/05

1

AS BUILT

RSW 02/27/06

SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE

230 kV TRANSMISSION LINE

KEYSTONE - BLACK CREEK

STATION 6+63.31 TO 30+50

DRAWN BY:

C. C. JUNG

DATE:

2-25-05

CAD

DWG NO:

P-0036-D-30

DESIGN BY:

R. L. HOLLAND

SCALE:

1"=200'H

1"=20'V

SHEET

OF

CHECKED BY:

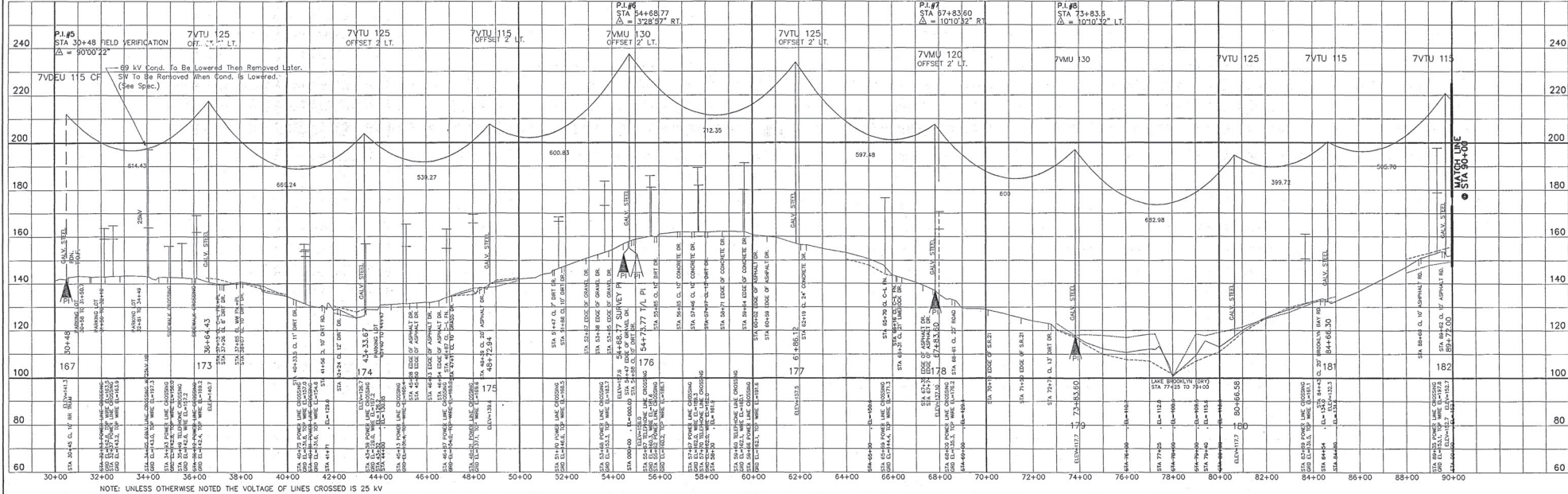
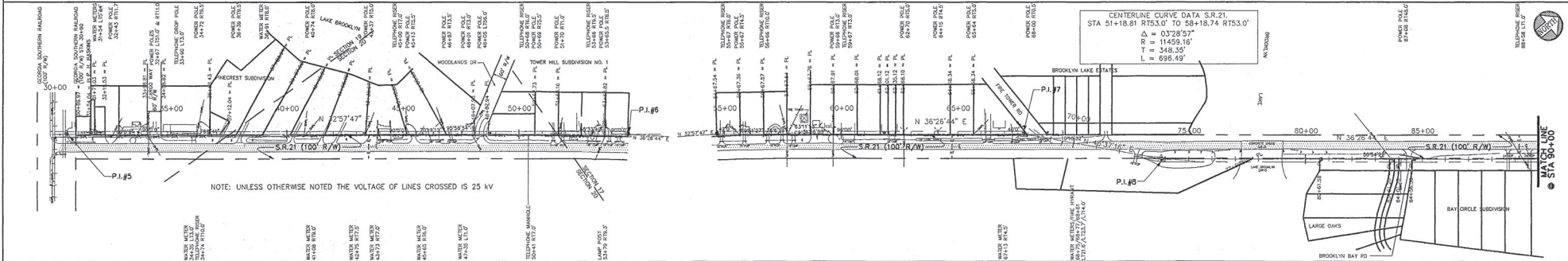
S. R. WOLFE

7-29-92

PROJECT NO:

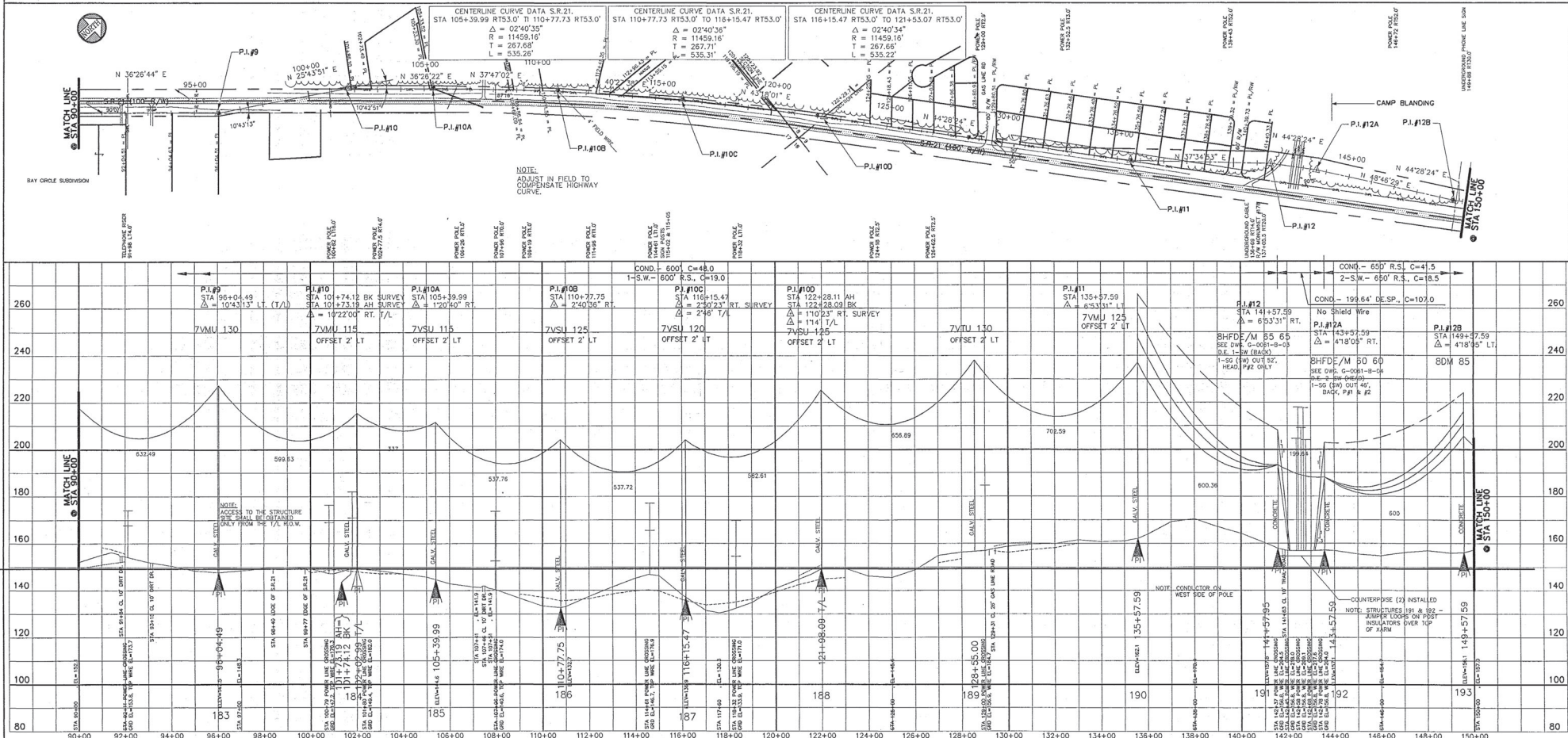
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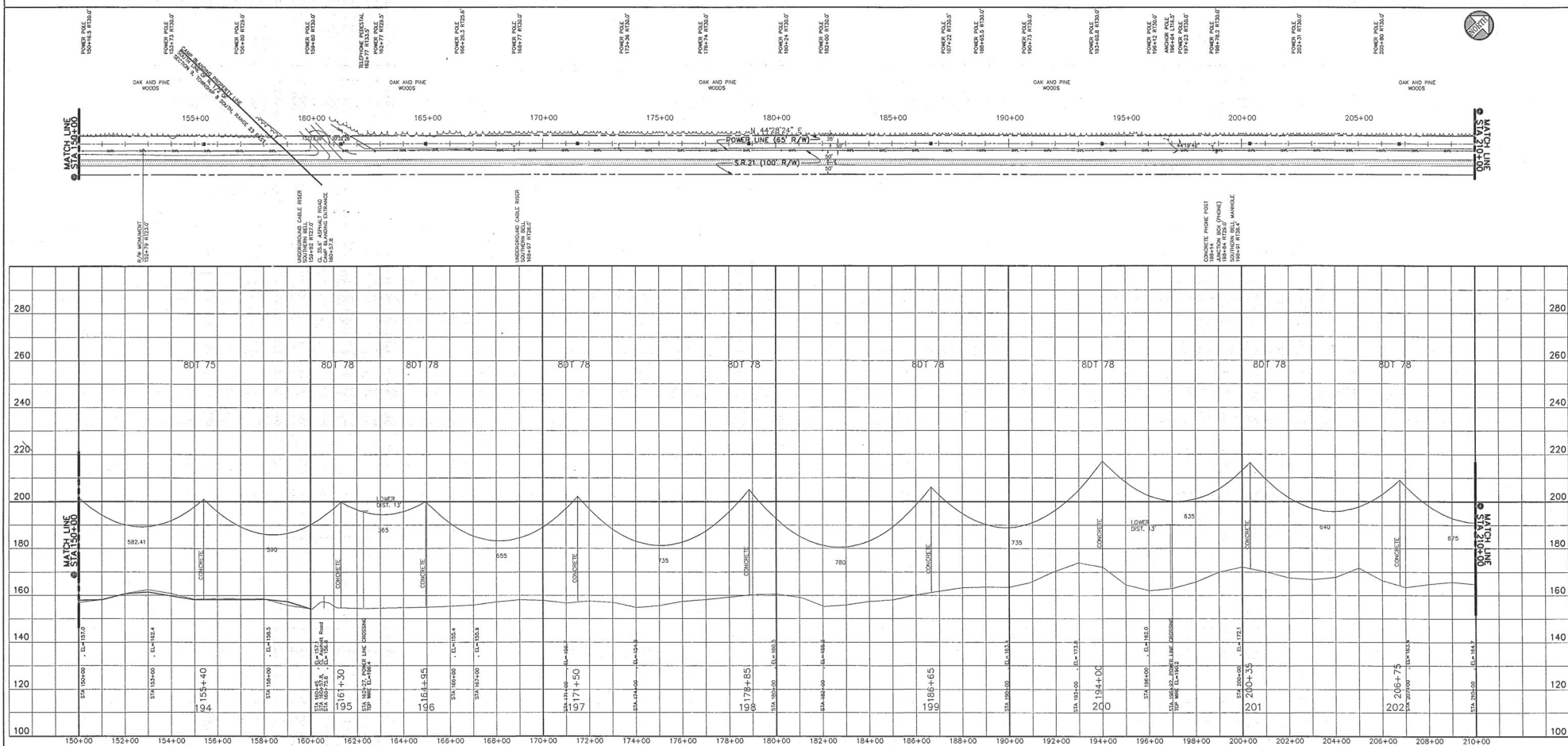
LEGEND		DESIGN INFORMATION		ENGINEERS - SUPERVISORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADINGS: NESC "Light" And 60' F, No Ice, 38 PSF Extreme Wind	CONDUCTING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	NO. 1	REVISIONS	BY DATE	230 kV TRANSMISSION LINE
---	18 FT RIGHT OF L	Conductor (Final)	Shield Wire (Initial)	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PARK AVENUE	AS BUILT	1	1/11/78	KEYSTONE - BLACK CREEK
---	18 FT LEFT OF L	230 kV, 3-1,500 kcmil, 54/19 ACSR, 10,000 D.T. @ 30° F, No Ice, No Wind	1-7 No. 8 Aluminum, 3.186 g D.T. @ 30° F, No Ice, No Wind	3151 37th AVENUE, SUITE A-2					STATION 30+00 TO 90+00
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	19341 37th AVENUE					P-0036-D-31
---	SURVEY A/C ONLY	RULING SPAN: 600 FT	RULING SPAN: 600 FT						
---	T/A, P, ONLY	"C" VALUE: 48.0	"C" VALUE: 18.0						





<b>LEGEND</b> --- CENTER LINE --- 18 FT RIGHT OF L. --- 18 FT LEFT OF L. --- PROPERTY LINE --- SURVEY A/OF T/L PI --- T/L PI ONLY		<b>DESIGN INFORMATION</b> DESIGN LOADING: NESO "Light" And 60° F, No Ice, 38 PSF Extreme Wind Conductor: (Final) 230 kV, 3-1500 kcmil, 54/19 ACSR, 10,000 D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: SEE ABOVE "C" VALUE: SEE ABOVE		<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAITHERSBURG, MD 20878 (301) 372-5566		<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA		<b>REVISIONS</b> NO. 1 ISSUED FOR CONSTRUCTION 1 AS BUILT		<b>BY DATE</b> RLM 12/19/93 PSN 02/07/94		<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> 230 kV TRANSMISSION LINE KEYSTONE - BLACK CREEK STATION 90+00 TO 150+00 DRAWN BY: C & C, INC. DESIGN BY: R.L. HOLLAND CHECKED BY: R.S. WOLFE APPROVED BY:		<b>CAD DWS NO. P-0036-D-32</b> DATE: 2-25-94 SCALE: 1"=200' HORIZ. 1"=20' VERT. PROJECT NO. 7-30-93 REF. NO.	
---	--	--	--	---	--	--	--	---	--	---	--	--	--	---	--	--	--

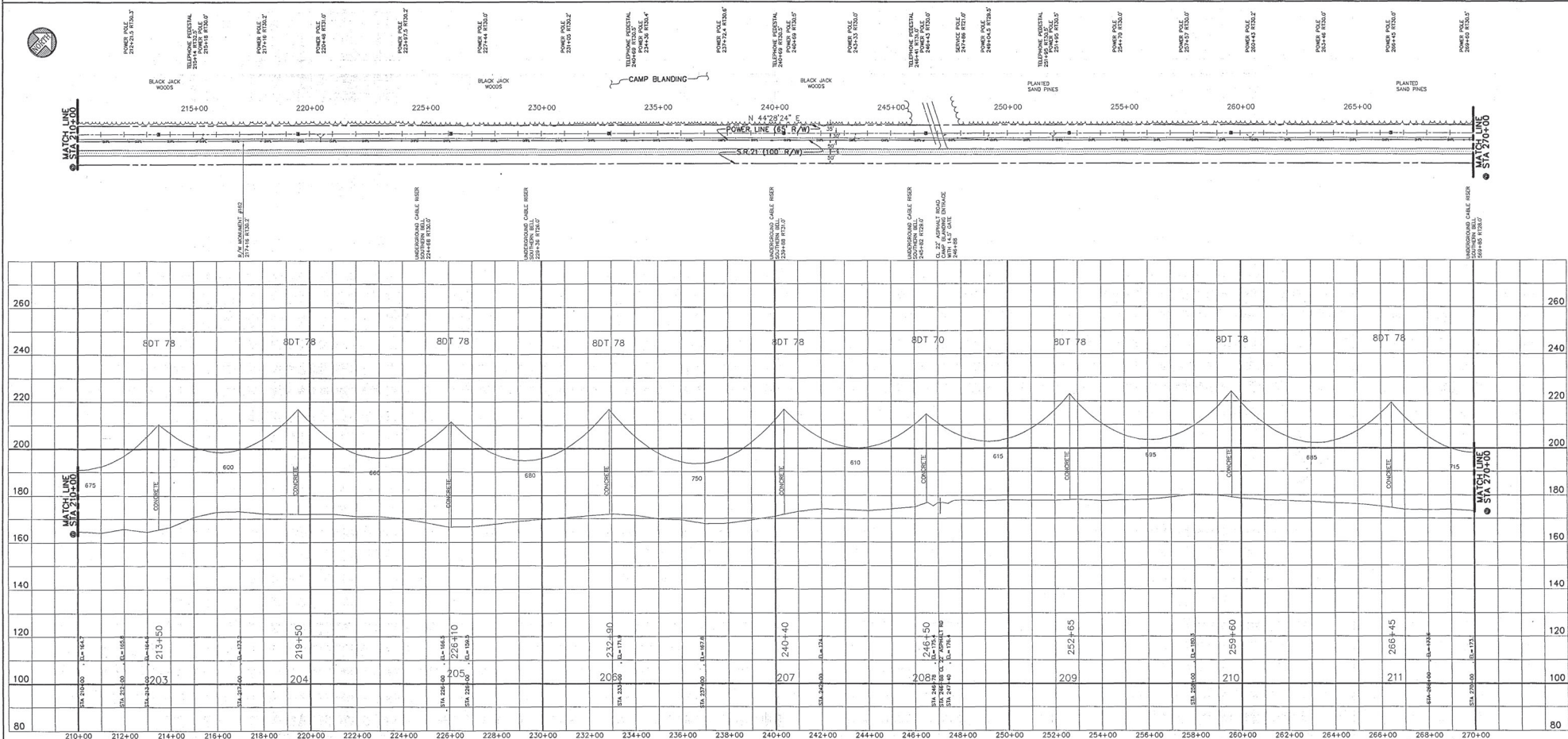
NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



<b>LEGEND</b> --- CENTER LINE --- 18 FT RIGHT OF L --- 18 FT LEFT OF L --- PROPERTY LINE --- SURVEY &/OR T/L PI T/L PI ONLY	<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1,050 kcmil, 54/19 ACSR, 13,625# D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 650 FT "C" VALUE: 41.5 Shield Wire: (Initial) 2-7 No. 8 Aluminum, 3,189# D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 120° F RULING SPAN: 650 FT "C" VALUE: 18.5	<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAITHERVILLE, FL 33551 (954) 372-2566	<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA	<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA	<b>NO. REVISIONS</b> 0 ISSUED FOR CONSTRUCTION 1 AS BUILT <b>BY DATE</b> RLH 12/24/75 RSW 02/17/76	<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> 230 kV TRANSMISSION LINE KEYSTONE - BLACK CREEK STATION 150+00 TO 210+00 <b>NAME DATE</b> C & C, INC. 2-25-92 R.L. HOLLAND 2-25-92 R.S. WOLFE 7-30-92 P-0036-D-33 SCALE: 1"=200' H-T=20' V PROJECT NO. DATE REA REF. REF. NO.
---	---	---	--	---	---	---



NOTE: (FROM STRUCTURE 195 TO 311)  
1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



LEGEND	
---	CENTER LINE
---	18 FT RIGHT OF C
---	18 FT LEFT OF C
---	PROPERTY LINE
A	SURVEY M/VOR T/A PI
A	T/A PI ONLY

DESIGN INFORMATION	
DESIGN LOADING: NESC "Light" And 60 F, No Ice, 36 PSF Extreme Wind	
CONTROLLING DESIGN TENSION	
Conductor: (Final)	Shield Wire: (Initial)
230 kV, 3-1,590 kcmil, 54/19 ACSR, 13.625 D.T. @ 30° F, No Ice, No Wind	2-7 No. 8 Aluminum, 3.186 D.T. @ 30° F, No Ice, No Wind
DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F
RULING SPAN: 650 FT	RULING SPAN: 650 FT
"C" VALUE: 41.5	"C" VALUE: 18.5

ENGINEERS - SURVEYORS - PLANNERS  
**CHANCE & CAUSSEUX, INC.**  
901 N.W. 9th AVENUE, SUITE A-2  
GAINESVILLE, FL 32601  
(352) 375-2566

**PARSONS MAIN, INC.**  
CHARLOTTE • BOSTON • PASADENA

**SEMINOLE ELECTRIC COOPERATIVE INCORPORATED**  
TAMPA, FLORIDA

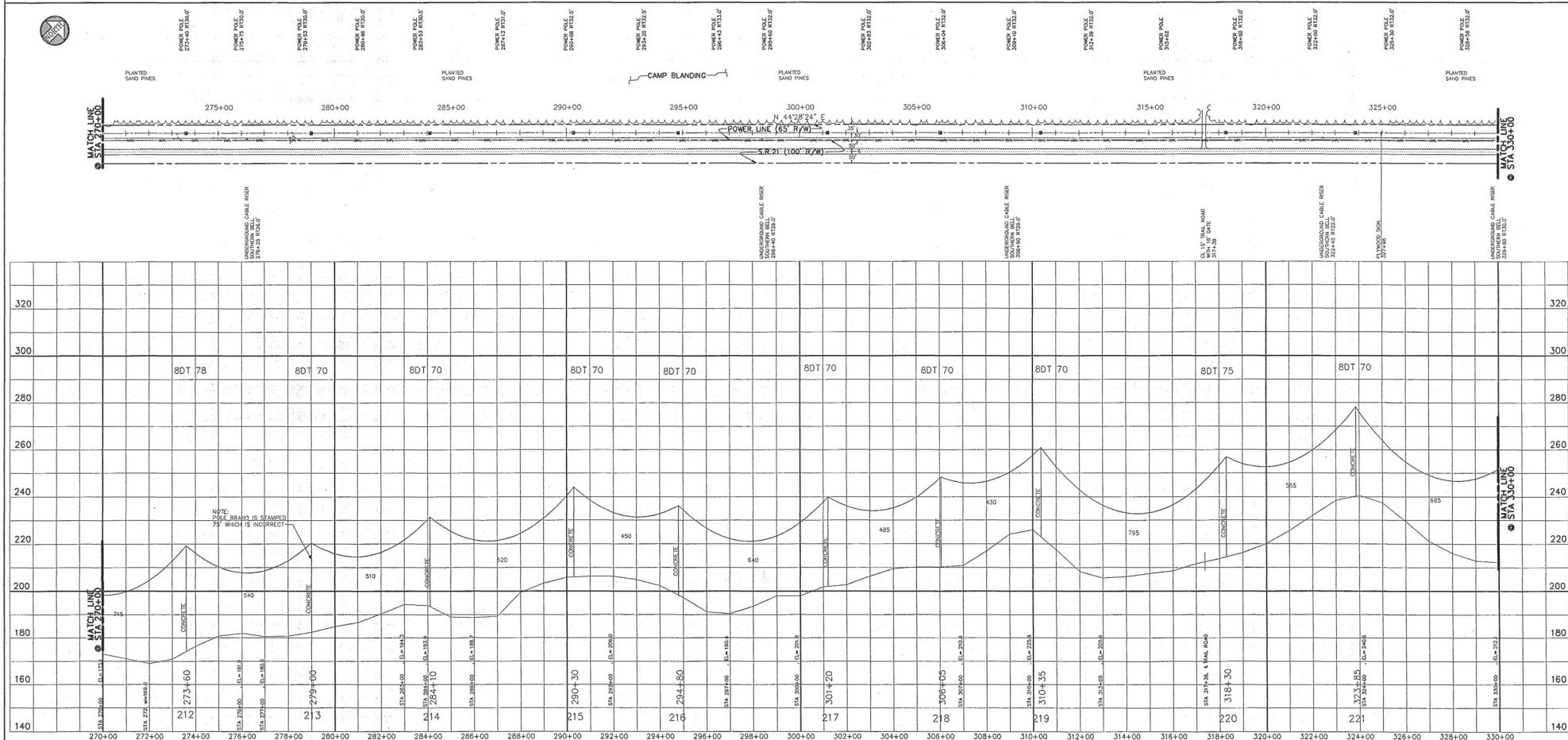
NO. REVISIONS		BY DATE
0	ISSUED FOR CONSTRUCTION	RLH 11/28/07
1	AS BUILT	RSW 05/08/08

SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
230 kV TRANSMISSION LINE	
KEYSTONE - BLACK CREEK	
STATION 210+00 TO 270+00	

NAME	DATE	CAD	DWG NO.
C & C, INC.	11-28-07		P-0036-D-34
DESIGN BY: R.L. HOLLAND	2-18-02	SCALE: 1"=200'H 1"=20'V	SHEET 33 OF 37
CHECKED BY: J.S. WALFE	7-30-02	PROJECT NO.	DATE
APPROVED BY:		SEA REF.	REF NO.

FEB 04 2008

NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



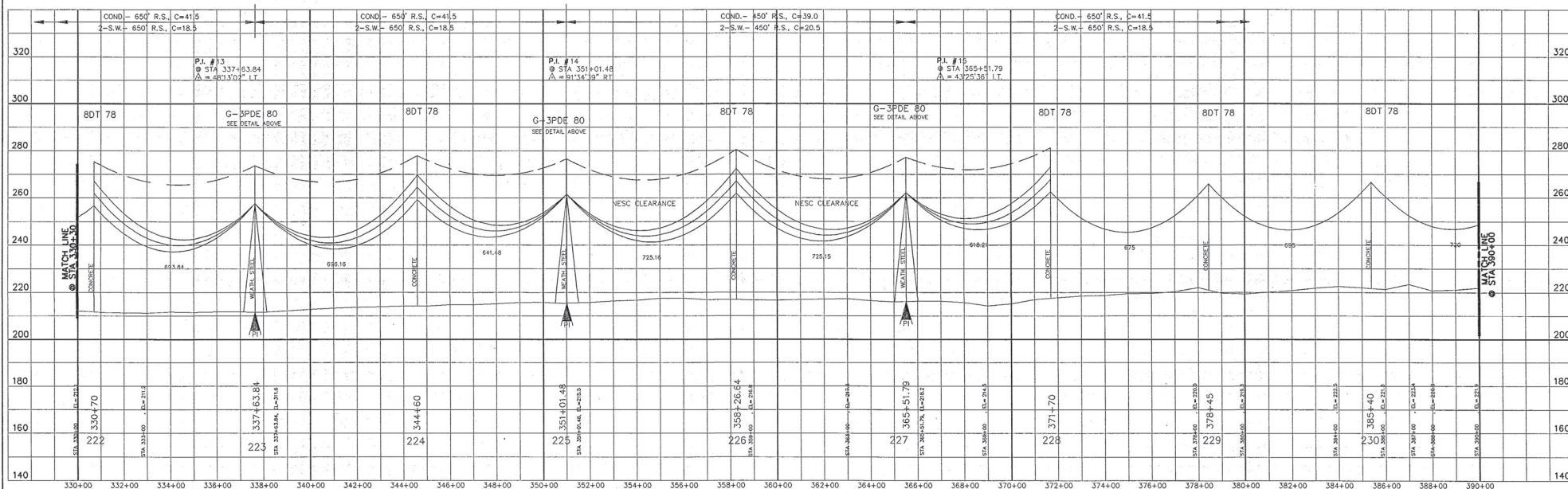
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		NO. OF REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F, No Ice, 35 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.	0	ISSUED FOR CONSTRUCTION	R.H.	12/18/92	230 kV TRANSMISSION LINE	
---	18 FT RIGHT OF L	Conductor: (Final)	Shield Wire: (Initial)	901 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE • BOSTON • PASADENA	1	AS BUILT	R.S.W.	02/27/94	KEYSTONE - BLACK CREEK	
---	18 FT LEFT OF L	230 kV, 3-1,590 kcmil, 54/19 ACSR, 13,825 D.T. @ 30° F, No Ice, No Wind	SEE ABOVE-7 No. 8 Aluminum, 3.189 D.T. @ 30° F, No Ice, No Wind	3101 N.W. 8th AVENUE, SUITE A-2						STATION 270+00 TO 330+00	
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	3101 N.W. 8th AVENUE, SUITE A-2							
---	SURVEY &/OR T/A PI	RULING SPAN: 850 FT	RULING SPAN: 850 FT	3101 N.W. 8th AVENUE, SUITE A-2							
---	T/A PI ONLY	"C" VALUE: 41.5	"C" VALUE: 18.5	3101 N.W. 8th AVENUE, SUITE A-2							



NO. OF REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
0	ISSUED FOR CONSTRUCTION	R.H.	12/18/92	230 kV TRANSMISSION LINE	
1	AS BUILT	R.S.W.	02/27/94	KEYSTONE - BLACK CREEK	
				STATION 270+00 TO 330+00	

RECORD  
 100 LINES & 600 PAGES  
 FEB 03 1998





LEGEND

--- CENTER LINE

--- 18 FT RIGHT OF L

--- 15 FT LEFT OF L

▲ PROPERTY LINE

▲ SURVEY 600' T/A

▲ T/A PI ONLY

DESIGN INFORMATION

DESIGN LOADING: NESC "Light" And 600' F, No Ice, 36 PSF Extreme Wind

CONTROLLING DESIGN TEMPERATURE

Conductor: (Final)

230 kV, 3-1590 kcmil, 54/19 ACSR, 13,625 @ 0.3° D, 30° F, No Ice, No Wind

Shield Wire: (Initial)

2-7 No. 8 Aluminum, 3,185 @ 0.3° D, 30° F, No Ice, No Wind

DESIGN TEMPERATURE: 280° F

ROLLING SPAN: SEE ABOVE

"C" VALUES: SEE ABOVE

ENGINEERS - SURVEYORS - PLANNERS

CHANCE & CAUSSEUX, INC.

901 N.W. 9th AVENUE, SUITE A-2  
MIAMI, FLORIDA 33136  
(305) 375-5556

PARSONS MAIN, INC.

CHARLOTTE • BOSTON • MIAMI

S

SEMINOLE ELECTRIC COOPERATIVE INCORPORATED

TAMPA, FLORIDA

NO.

REVISIONS

BY DATE

1

ISSUED FOR CONSTRUCTION

PSM/02/01/04

2

AS BUILT

PSM/02/01/04

SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE

230 kV TRANSMISSION LINE

KEYSTONE - BLACK CREEK

STATION 330+00 TO 390+00

NAME

DATE

CAD

DWG NO.

P-0036-D-36

DRAWN BY: C. K. INC.

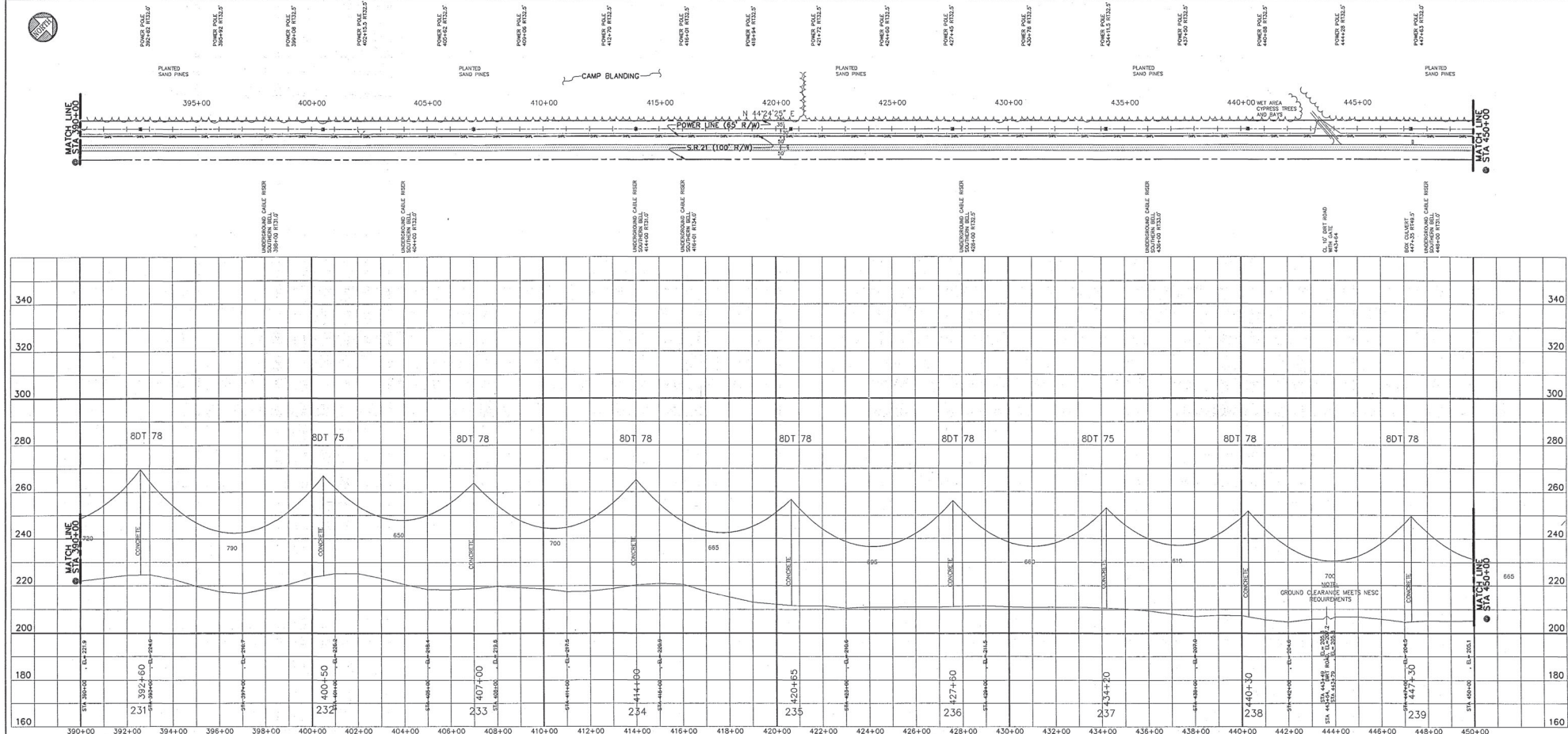
2-25-02

DESIGN BY: R.L. HOLLAND

2-25-02

CHECKED BY: S.R. WOLFE

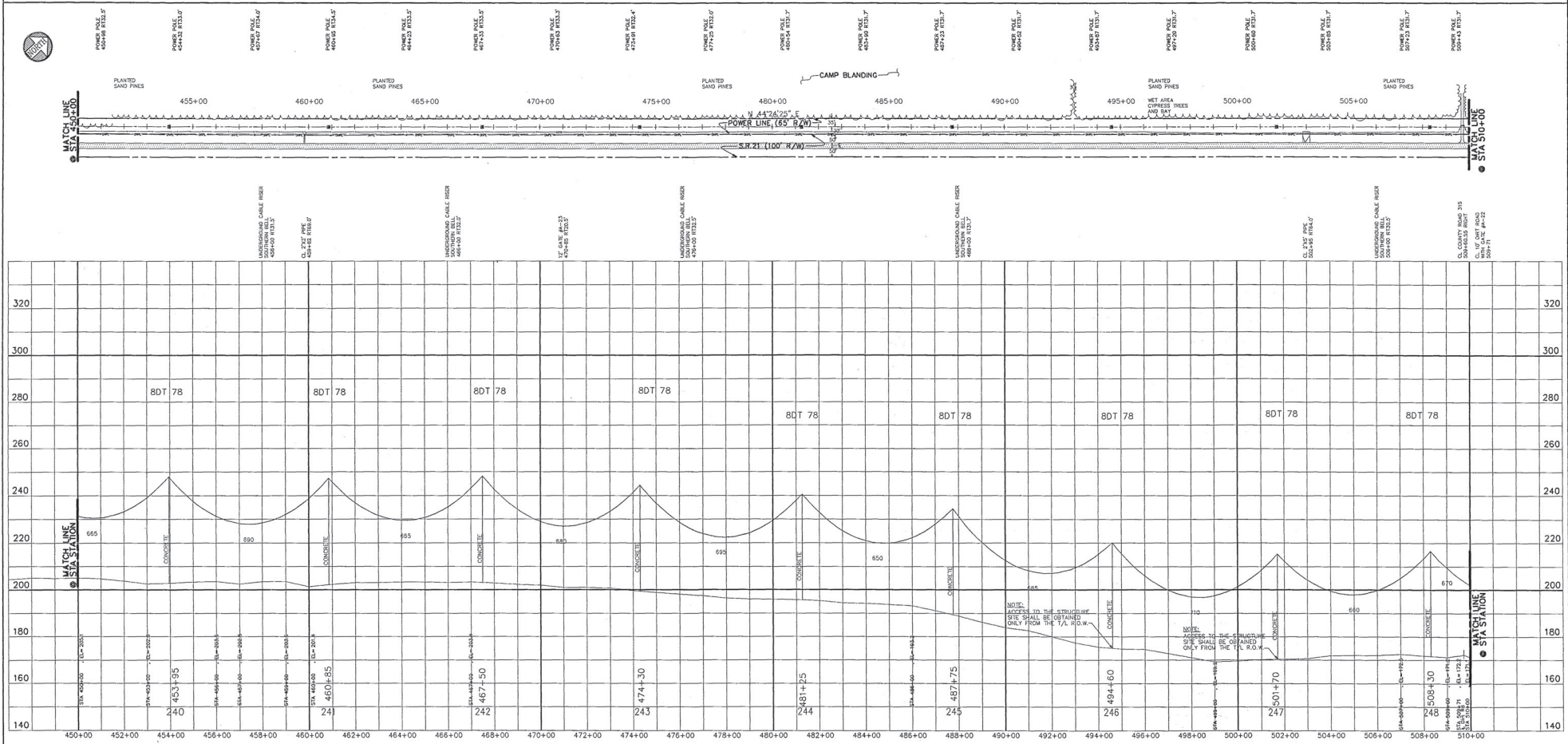
7-30-02



<b>LEGEND</b> --- CENTER LINE --- 18 FT RIGHT OF L. --- 18 FT LEFT OF L. A T/L ONLY	<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60' F, No Ice, 30 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1550 kcmil, 54/19 ACSR, 13.625 @ D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 650 FT "C" VALUE: 41.5 Shield Wire: (Initial) 2-7 No. 8 Aluminum, 3.186 @ D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 120° F RULING SPAN: 650 FT "C" VALUE: 18.5	<b>ENGINEER - SURVEYOR - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 2ND AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (352) 376-2554	<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA	<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA	NO. 1 0 ISSUES FOR CONSTRUCTION 1 AS BUILT REVISIONS BY DATE RSW/05/06/14	SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE 230 KV TRANSMISSION LINE KEYSTONE - BLACK CREEK STATION 390+00 TO 450+00 NAME: _____ DATE: _____ DWN NO: P-0036-D-37 DRAWN BY: C. C. INC. 2-25-99 SCALE: 1"=200FT 1"=20V SHEET OF DESIGN BY: R.L. HOLLAND 7-30-99 PROJECT NO. CHECKED BY: K.S. WOLFE 7-30-99 DATE: APPROVED BY: _____
--	---	--	--	---	--	--



NOTE: (FROM STRUCTURE 195 TO 311)  
1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



<b>LEGEND</b>		<b>DESIGN INFORMATION</b>	
--- CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	
--- 16 FT RIGHT OF L	Conductor: (Tina)	Shield Wire: (Infil)	
--- 16 FT LEFT OF L	230 kV, 3-1,200 kcmil, 54/19 ACSR, 13.625# D.T. @ 30' F, No Ice, No Wind	2-7 No. 8 Aluminum, 3,186# D.T. @ 30' F, No Ice, No Wind	
PROPERTY LINE	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	
SURVEY A/ OR T/A PI	ROUND SPAN: 650 FT	ROUND SPAN: 650 FT	
T/A PI ONLY	"C" VALUE: 41.5	"C" VALUE: 18.5	

ENGINEERS - SURVEYORS - PLANNERS

**CHANCE & CAUSSEUX, INC.**

901 N.W. 8th AVENUE, SUITE A-2  
GAINESVILLE, FL 32601  
(904) 375-9558

**PARSONS MAIN, INC.**

CHARLOTTE • BOSTON • PASADENA

**SEMINOLE ELECTRIC COOPERATIVE INCORPORATED**

TAMPA, FLORIDA

NO.	REVISIONS		BY DATE
	0	ISSUED FOR CONSTRUCTION	RLH 12/17/92
1	AS BUILT		PSM 05/05/94

**SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE**

**230 kV TRANSMISSION LINE**

**KEYSTONE - BLACK CREEK**

**STATION 450+00 TO 510+00**

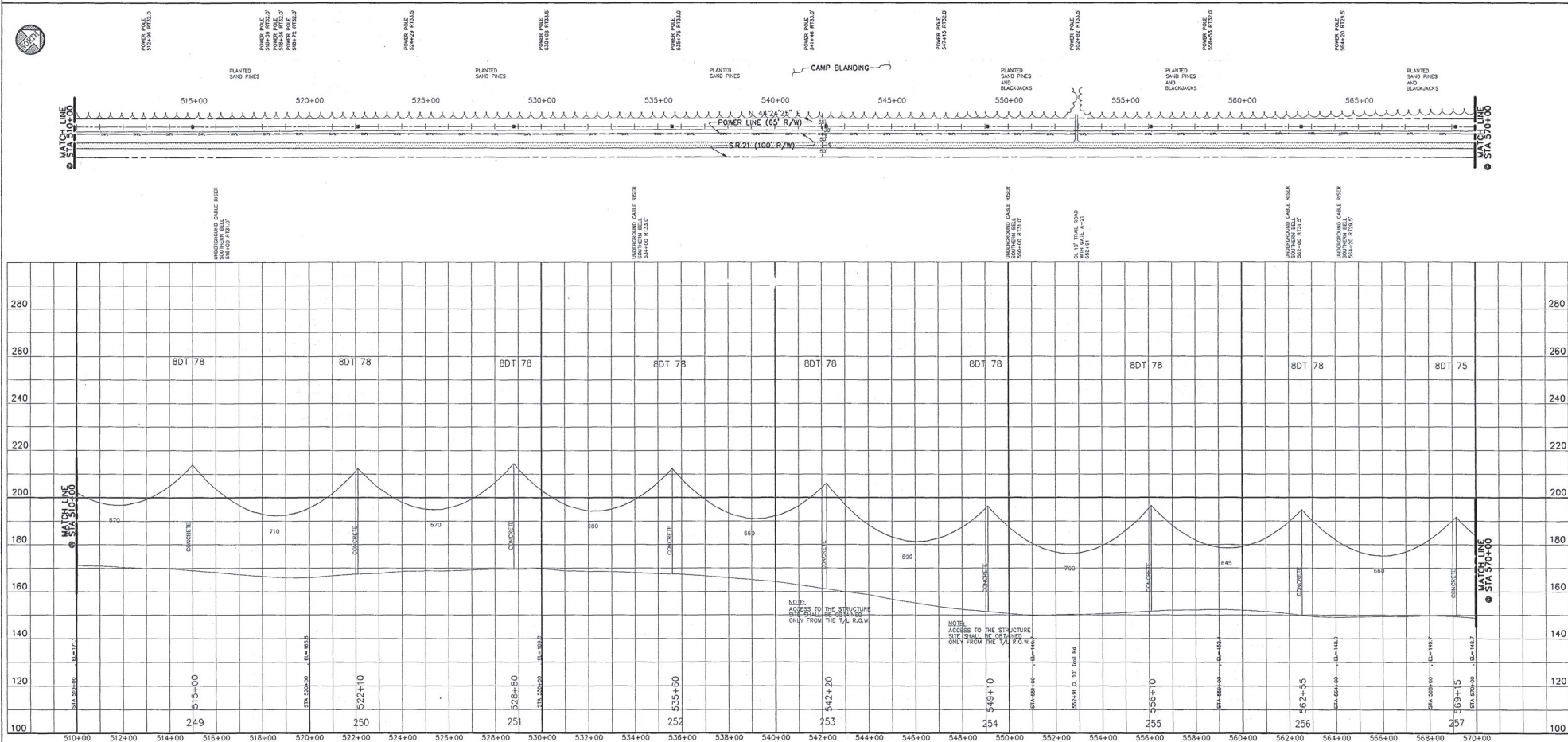
NAME	DATE	CAD	DWG NO.
DESIGN BY: C. B. C. INC.	2-22-92		P-0036-D-38
DESIGN BY: R.L. HOLLAND	2-23-92		
CHECKED BY: R.S. WOLFE	7-30-92		
APPROVED BY:			

SCALE: 1"=200'H 1"=20'V

PROJECT NO. \_\_\_\_\_

REA REF. \_\_\_\_\_

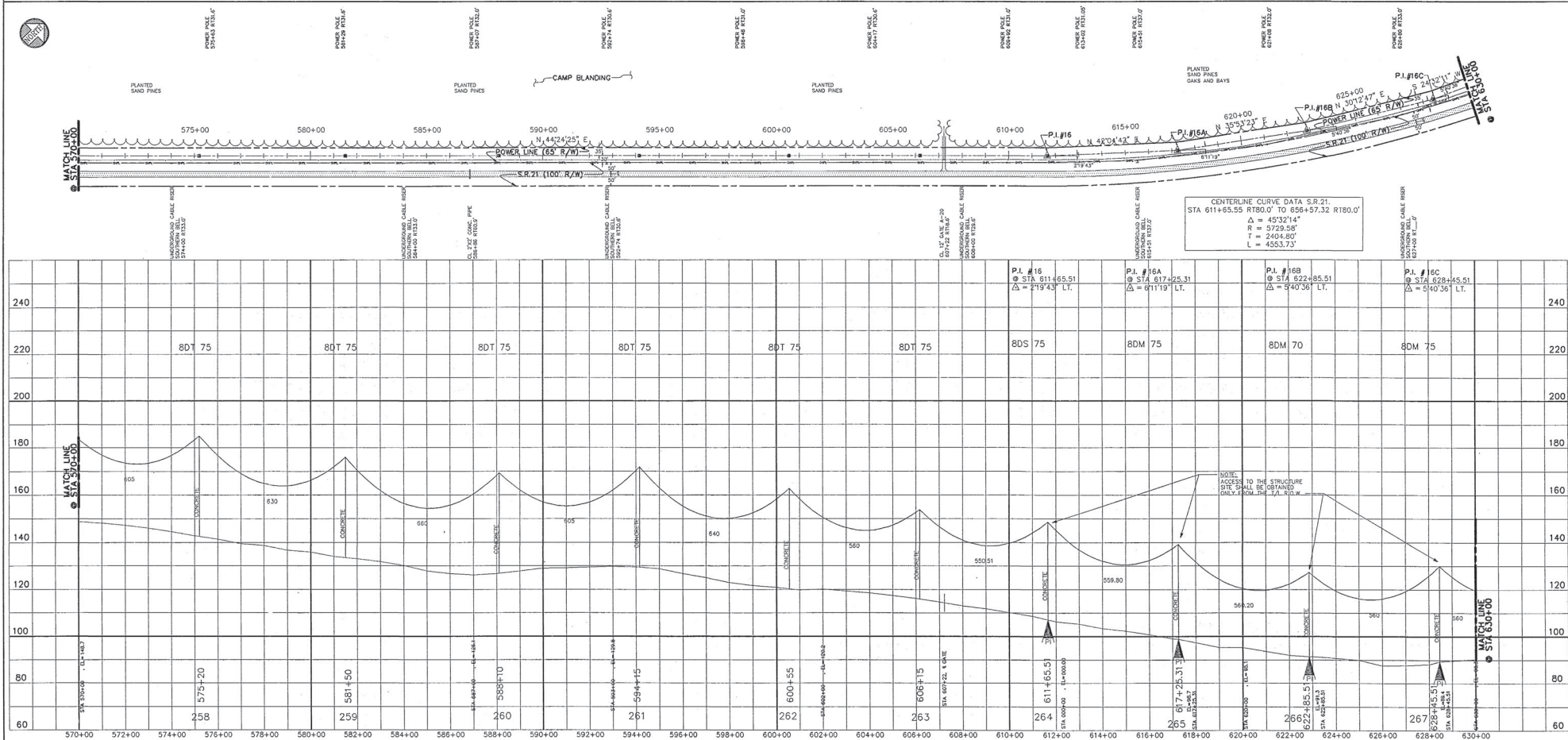
NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		PARSONS MAIN, INC.		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. 01		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADINGS: NESC "Light" And 50' F, No Ice, 36 PSF Extreme Wind	CONSTRUCTION (FIND)	230 kv, 3-1,590 kcmil, 54/19 ACSR, 13.625g D.T. @ 30° F, No Ice, No Wind	2-7 No. 8 Aluminum, 3.186g D.T. @ 30° F, No Ice, No Wind	931 N.W. 8th AVENUE, SUITE A-2	CHARLOTTE & BOSTON PARKWAY	11 AS BUILT	ISSUED FOR CONSTRUCTION	RLH 12/28/93	25/01/93/94	1	1	1	1	230 kv TRANSMISSION LINE	KEYSTONE - BLACK CREEK
---	18 FT RIGHT OF &	CONTROLLING DESIGN TENSION	CONCRETE	250	251	252	253	254	255	256	257	258	259	260	261	STATION 510+00 TO 570+00	
---	18 FT LEFT OF &	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	PROPERTY LINE	SCALE: 1"=200'H	SCALE: 1"=20'V
---	SURVEY &/OR T/L PI	DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DATE	DATE
---	T/L PI ONLY	"C" VALUE: 41.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	"C" VALUE: 18.5	PROJECT NO.	PROJECT NO.
																APPROVED BY	APPROVED BY

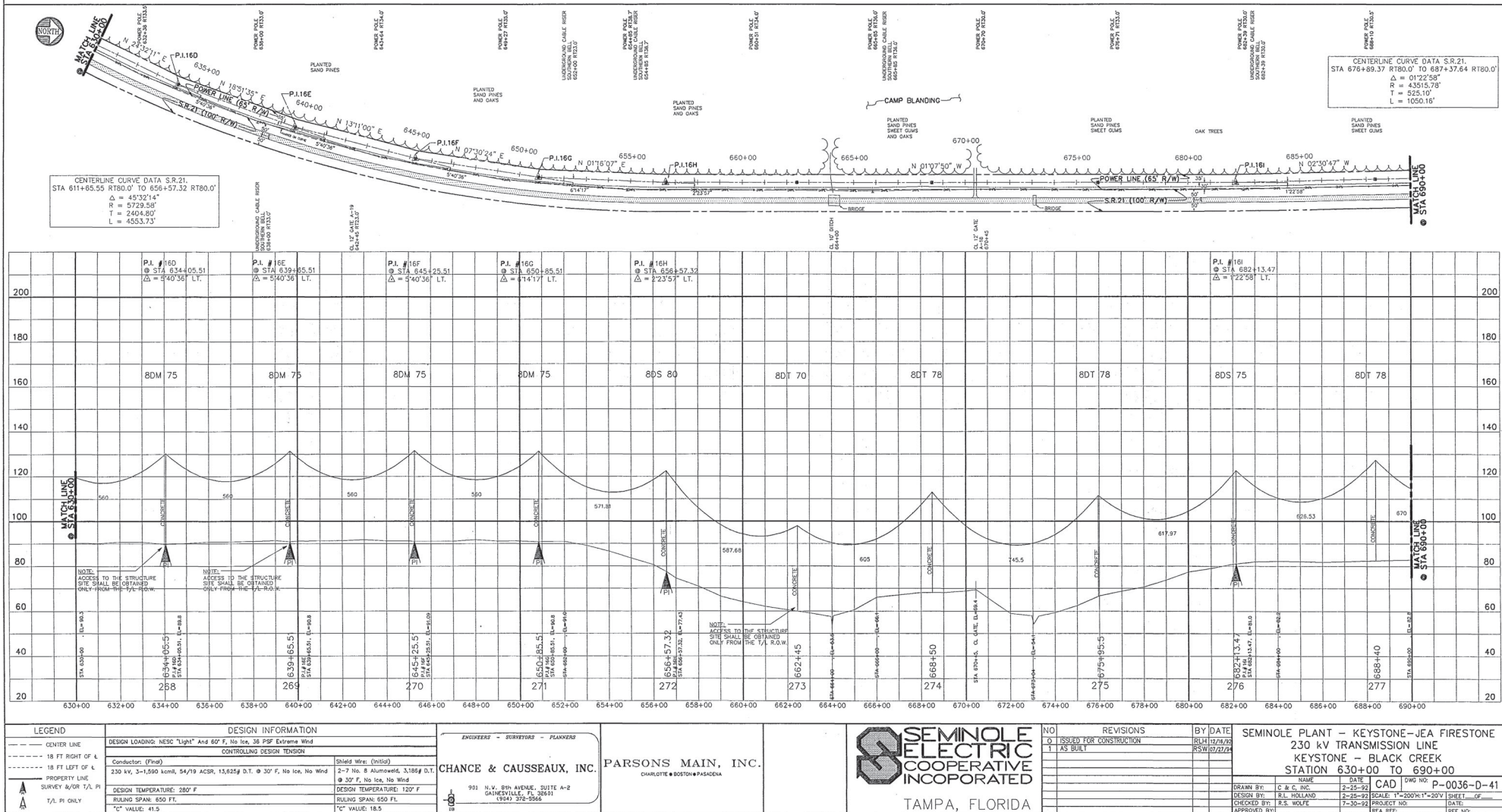


NOTES: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



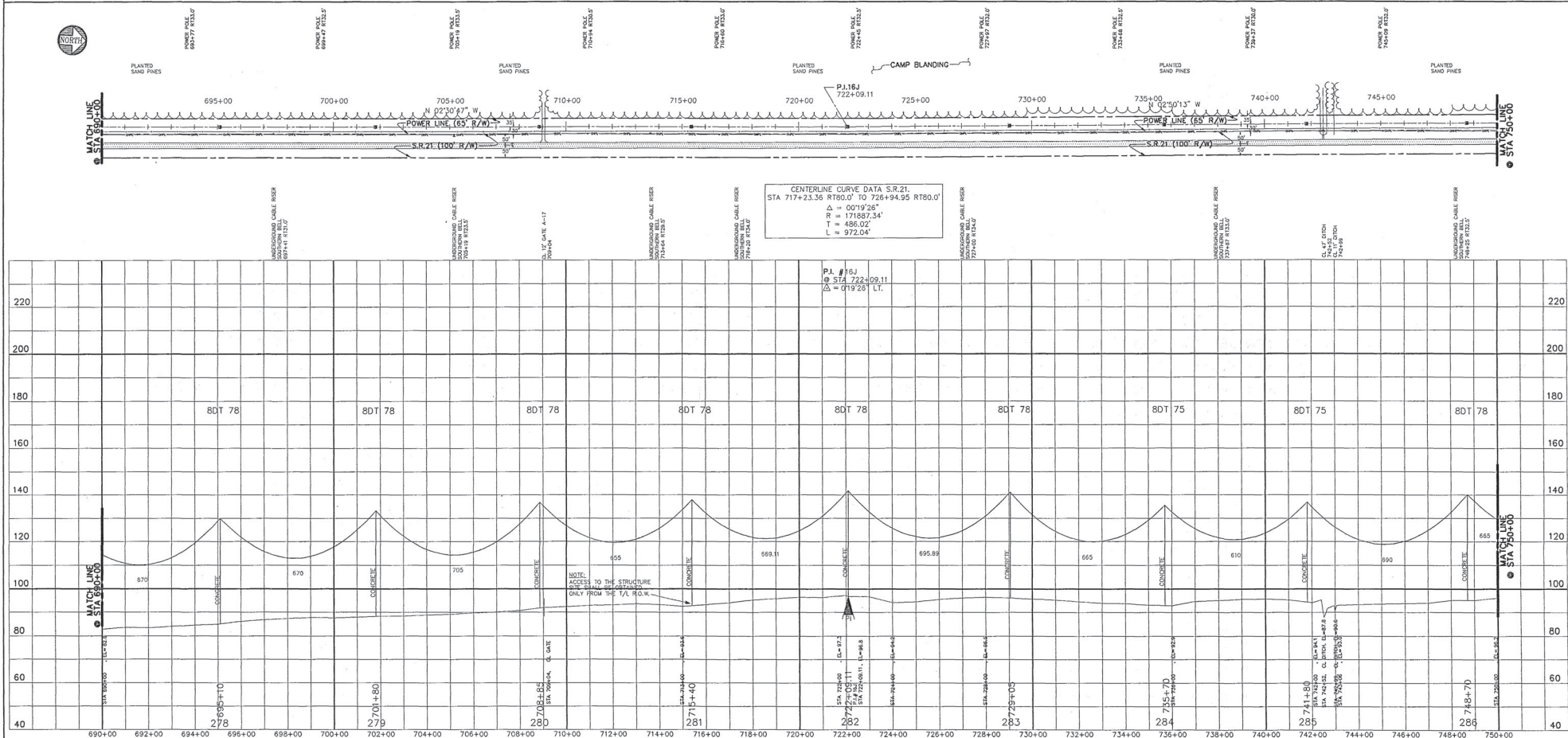
<b>LEGEND</b> --- CENTER LINE - - - 18 FT RIGHT OF L - - - 18 FT LEFT OF L --- PROPERTY LINE A SURVEY 6/09 T/L PI T/L PI ONLY	<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor (Final): 230 kV, 3-1,580 kcmil, 54/19 ACSR, 13,625# D.T. @ 30' F, No Ice, No Wind Shield Wire (Initial): 2-7 No. 8 Aluminum, 3,185# D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 120° F RULING SPAN: 850 FT "C" VALUE: 41.5	<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th Avenue, Suite A-2 Gainesville, FL 32601 (352) 370-2566	<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA	<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA	<b>REVISIONS</b> 0 ISSUED FOR CONSTRUCTION 1 AS BUILT	<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> 230 kV TRANSMISSION LINE KEYSTONE - BLACK CREEK STATION 570+00 TO 630+00 DRAWN BY: C & C, INC. DATE: 2-25-92 DESIGN BY: R.L. HOLLAND DATE: 2-25-92 CHECKED BY: R.S. WOLFE DATE: 2-25-92 APPROVED BY: _____ DWG NO: P-0036-D-40 SHEET: 39 OF 40
---	--	--	--	---	---	--

NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



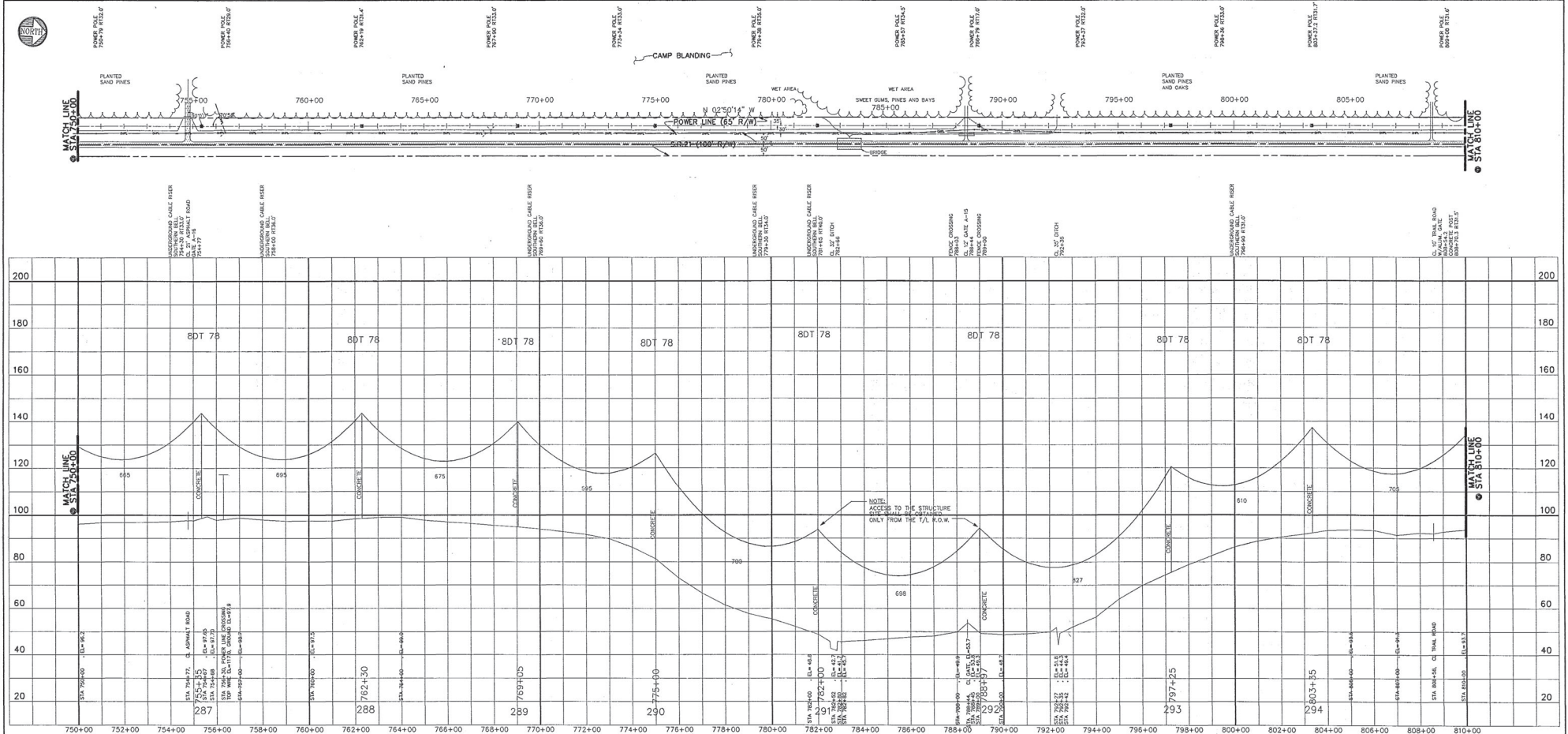


NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
—	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F. No Ice, 35 PSF Extreme Wind	CONTROLLING DESIGN TENSION	2-7 No. 8 Aluminum, 3.186g D.T.	2-7 No. 8 Aluminum, 3.186g D.T.	1	AS BUILT	SLH	12/18/93	230 kV TRANSMISSION LINE	
- - -	18 FT RIGHT OF L	Conductor: (Final)	230 kV, 3-1,550 kcmil, 54/19 ACSR, 13.625g D.T. @ 30° F. No Ice, No Wind	Shield Wire: (Initial)	2-7 No. 8 Aluminum, 3.186g D.T.			RSW	05/26/94	KEYSTONE - BLACK CREEK	
- - -	18 FT LEFT OF L	PROPERTY LINE	DESIGN TEMPERATURE: 250° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F					STATION 690+00 TO 750+00	
A	SURVEY &/OR T/L PI ONLY	RULING SPAN: 650 FT.	"C" VALUE: 41.5	"C" VALUE: 18.5	"C" VALUE: 18.5						
		CHANCE & CAUSSEUX, INC.		PARSONS MAIN, INC.		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		DRAWN BY: C & C, INC.		DATE: 2-25-99	
		991 N.W. 8th AVENUE, SUITE A-2		CHARLOTTE & BOSTON/PASADENA		DESIGN BY: R.L. HOLLAND		CHECKED BY: R.S. WOLFE		DATE: 7-30-93	
		(924) 372-5565				TAMPA, FLORIDA		APPROVED BY:		DATE: 7-30-93	
								NAME: CAD		DWD NO: P-0036-D-42	
								SCALE: 1"=200H:1"=30V		SHEET: 42	
								PROJECT NO:		REF NO:	

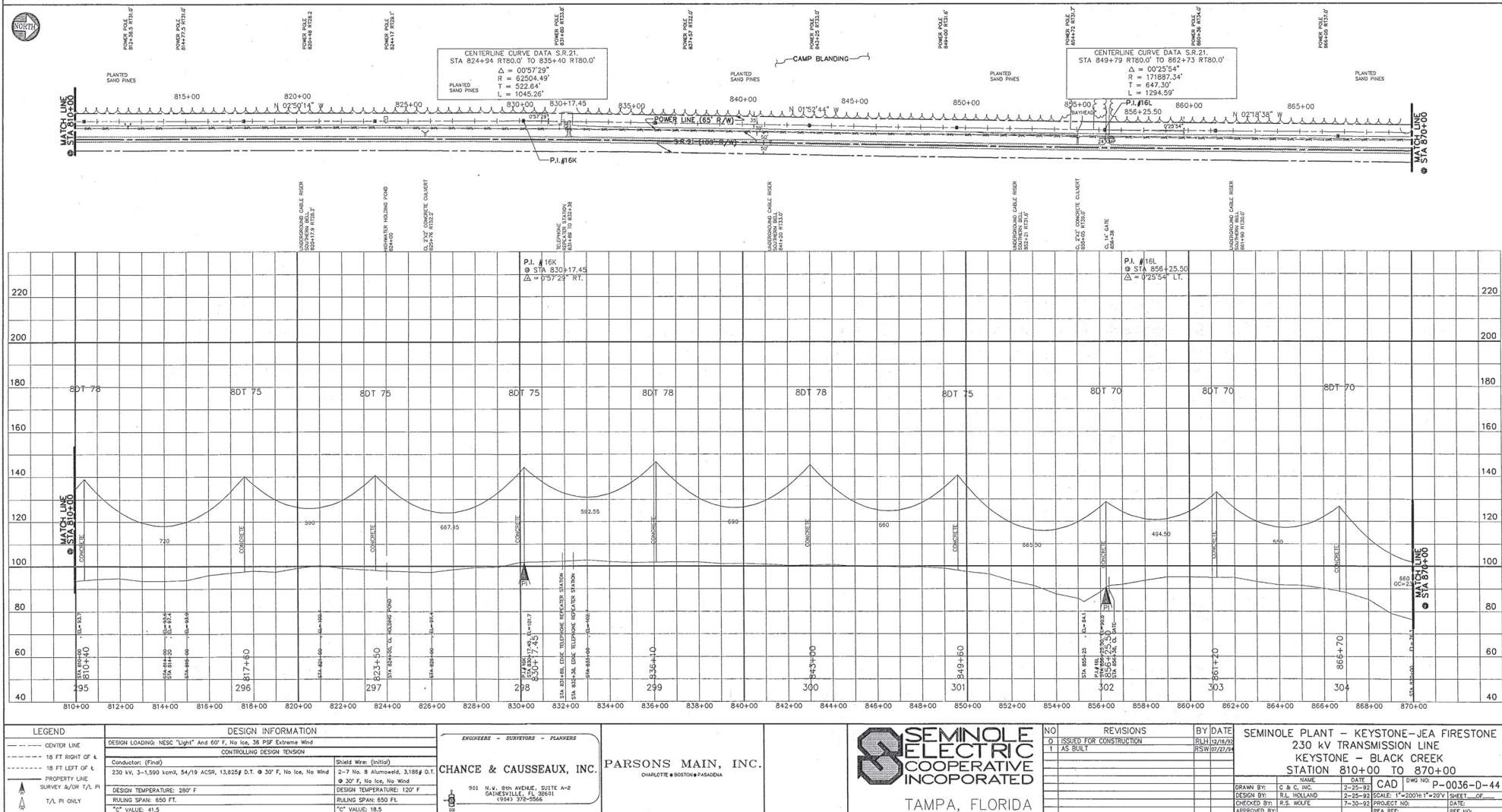
NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



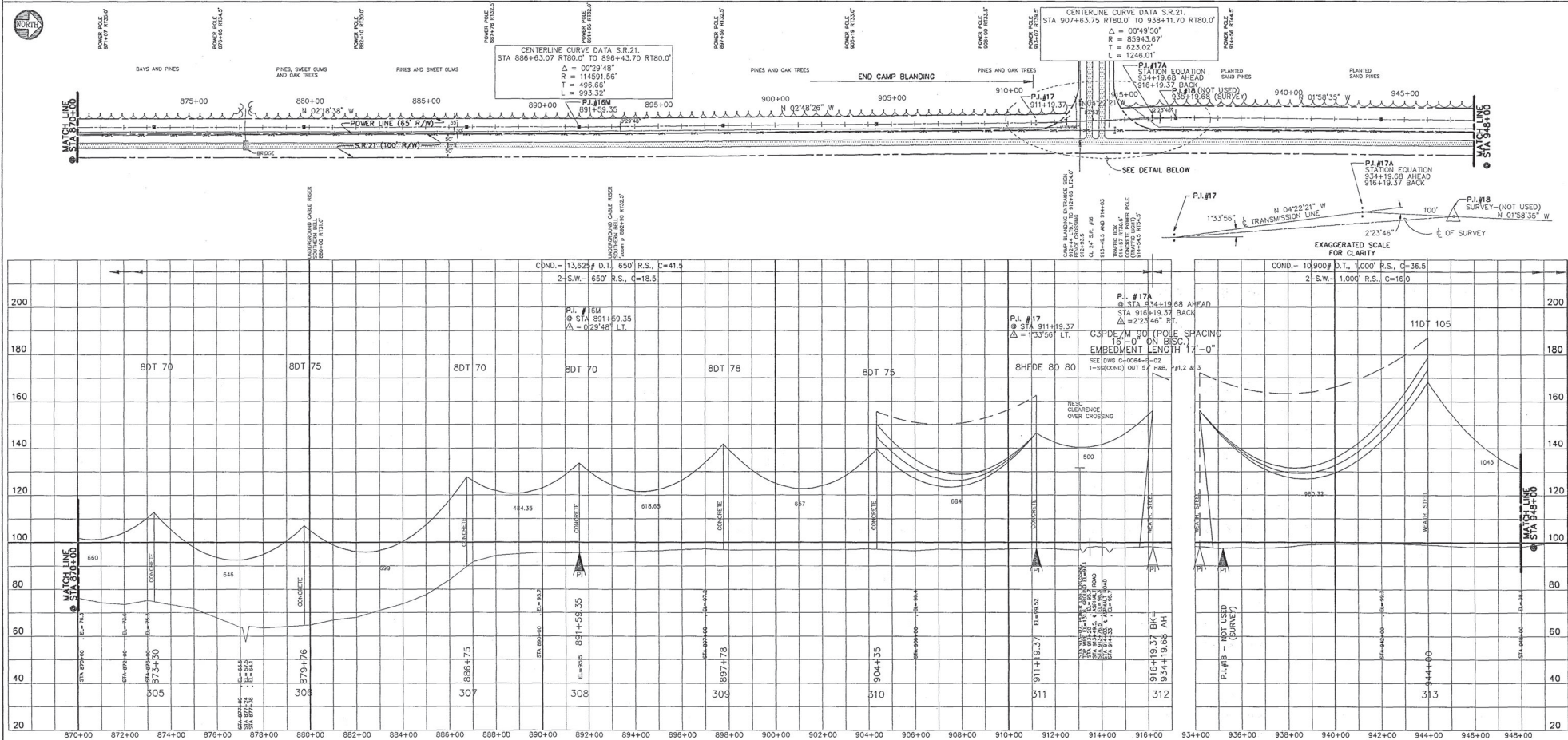
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60° F, No Ice, 36 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		TAMPA, FLORIDA		0	ISSUED FOR CONSTRUCTION	R.H.	12/15/82	230 kV TRANSMISSION LINE	
----	18 FT RIGHT OF A	CONTROLLING DESIGN TENSION		PARSONS MAIN, INC.				1	AS BUILT	R.S.W.	07/21/84	KEYSTONE - BLACK CREEK	
----	18 FT LEFT OF A	CONDUCTOR: (Final)		901 N.W. 8th AVENUE, SUITE A-2								STATION 750+00 TO 810+00	
----	PROPERTY LINE	230 kV, 3-1,580 kcmil, 54/19 ACSR, 13,625 D.T. @ 30° F, No Ice, No Wind		DANKSVILLE, FL 32621								P-0036-D-43	
----	SURVEY A/OR T/L PI	SHIELD WIRE: (Initial)		(304) 375-2500								DRAWN BY: C & C, INC.	
----	T/L PI ONLY	2-7 No. 8 Alumoweld, 3,185# D.T.										DATE: 2-25-82	
		@ 30° F, No Ice, No Wind										DESIGN BY: R.L. HOLLAND	
		DESIGN TEMPERATURE: 280° F										CHECKED BY: R.S. MOYE	
		RULING SPAN: 650 FT										APPROVED BY:	
		"C" VALUE: 41.5										DATE: 7-29-82	
		"C" VALUE: 18.5										PROJECT NO:	
												SHEET NO:	
												SHEET OF:	



NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



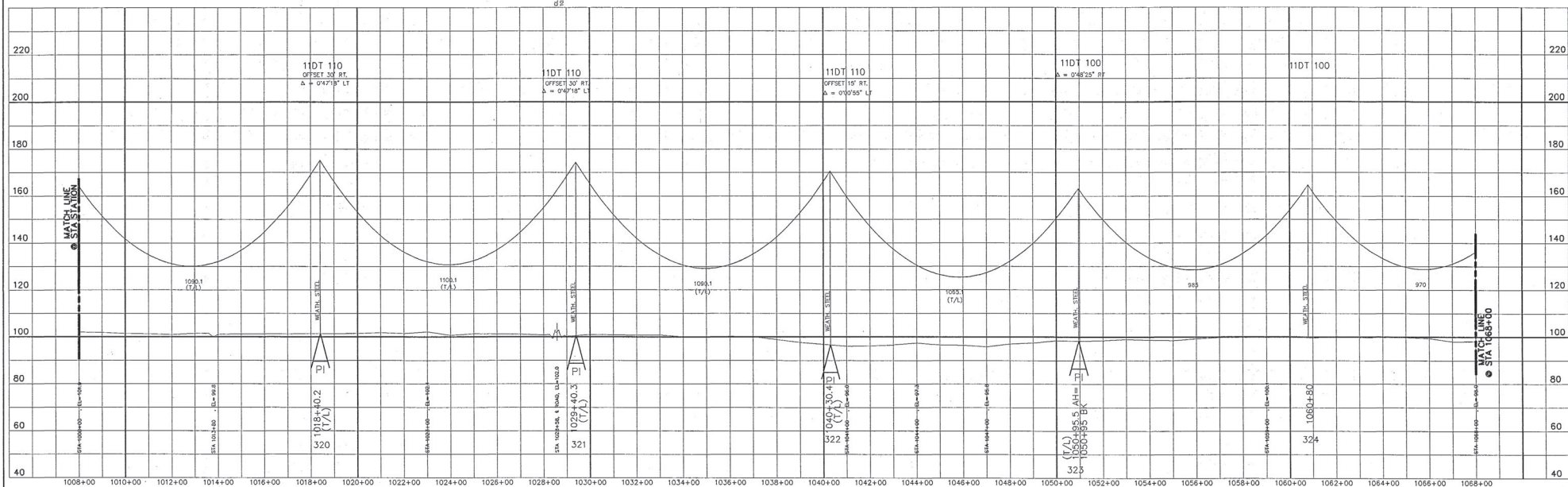
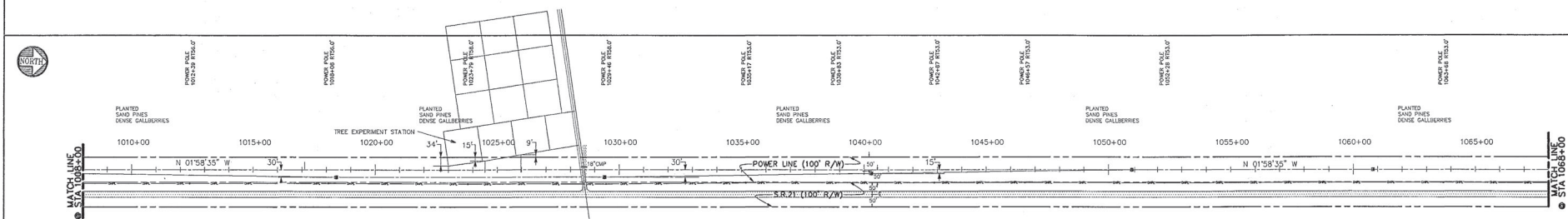
NOTE: (FROM STRUCTURE 195 TO 311)  
 1. SPAN GUARD LINE MARKER ON SHIELD WIRES AT CENTER SPAN ALTERNATING FROM LEFT TO RIGHT SIDE.  
 2. FENCE GROUNDED TO COUNTERPOISE AT EACH STRUCTURE.



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60' F, No Ice, 38 PSF Extreme Wind	CONTROLLING DESIGN TENSION	2-7 No. 8 Aluminum, 3188# D.T.	30' F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F	PLUNG SPAN: SEE ABOVE	10° VALUE: SEE ABOVE	1	ISSUED FOR CONSTRUCTION	BLH 12/26/93	230 kV TRANSMISSION LINE	KEYSTONE - BLACK CREEK
---	18 FT RIGHT OF L	Conductor: (Final)	Shield Wire: (Initial)	2-7 No. 8 Aluminum, 3188# D.T.	30' F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F	PLUNG SPAN: SEE ABOVE	10° VALUE: SEE ABOVE	1	AS BUILT	BLH 12/26/93	STATION 870+00 TO 948+00	STATION 870+00 TO 948+00
---	18 FT LEFT OF L	230 kV, 3-1,590 kcmil, 54/19 ACSR, SEE ABOVE D.T. @ 30' F, No Ice, No Wind	2-7 No. 8 Aluminum, 3188# D.T.	30' F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F	PLUNG SPAN: SEE ABOVE	10° VALUE: SEE ABOVE	10° VALUE: SEE ABOVE	1	AS BUILT	BLH 12/26/93	STATION 870+00 TO 948+00	STATION 870+00 TO 948+00
---	PROPERTY LINE	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	1	AS BUILT	BLH 12/26/93	STATION 870+00 TO 948+00	STATION 870+00 TO 948+00
---	SURVEY &/OR T/L R	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	1	AS BUILT	BLH 12/26/93	STATION 870+00 TO 948+00	STATION 870+00 TO 948+00
---	T/L R ONLY	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	DESIGN TEMPERATURE: 120° F	1	AS BUILT	BLH 12/26/93	STATION 870+00 TO 948+00	STATION 870+00 TO 948+00



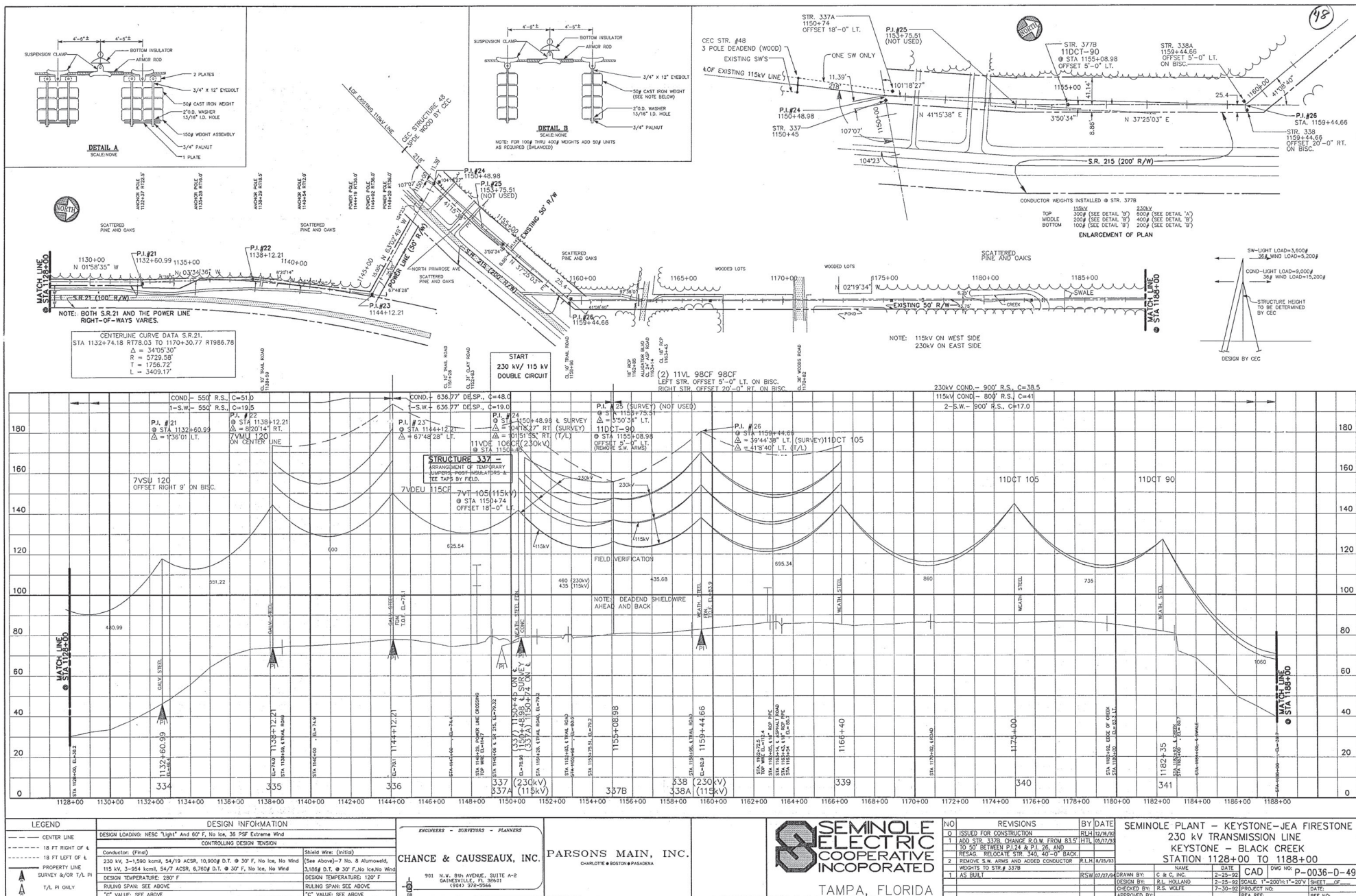




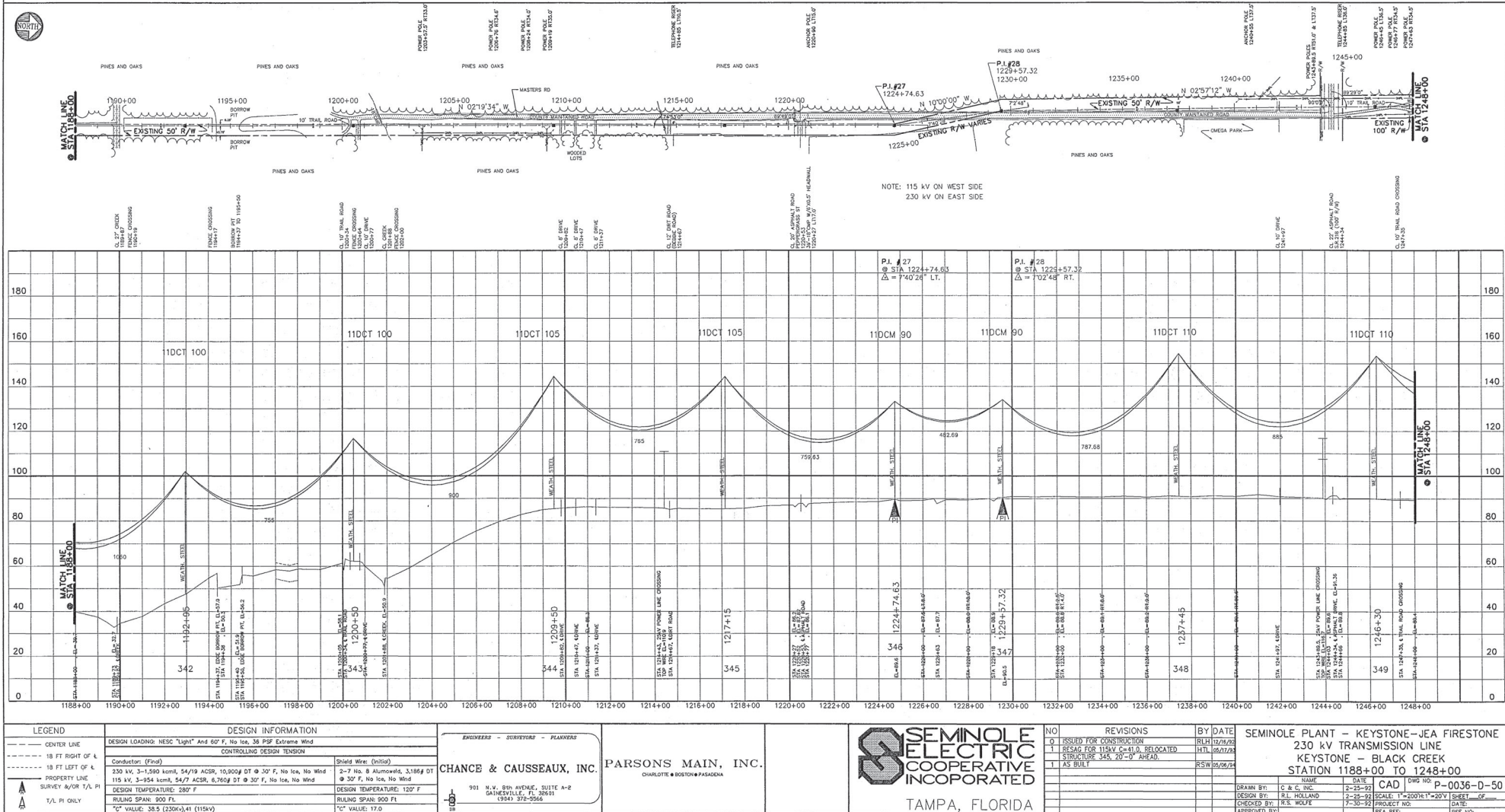
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
CENTER LINE		DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 P.S.F. Extreme Wind		CHANCE & CAUSSEAU, INC.		TAMPA, FLORIDA		0		ISSUED FOR CONSTRUCTION		230 kV TRANSMISSION LINE	
18 FT RIGHT OF A		CONDUCTOR (Final)		PARSONS MAIN, INC.				1		RELOCATED STR. 320 & 321 30' EAST		KEYSTONE - BLACK CREEK	
18 FT LEFT OF A		Shield Wires (Initial)		901 N.W. 8th Avenue, Suite A-2				2		AND STRUCTURE 322 15' EAST		STATION 1008+00 TO 1068+00	
PROPERTY LINE		2-7 No. 8 Aluminum, 3/189 D.T.		CHARLOTTE - BOSTON - PASADENA				AS BUILT		DATE 02/28/92		DRAWN BY: C & C, INC.	
SURVEY &/OR T/L PI		DESIGN TEMPERATURE: 280° F		2-7 No. 8 Aluminum, 3/189 D.T.						DATE 02/28/92		DESIGN BY: R.L. HOLLAND	
T/L PI ONLY		RULING SPAN: 1000 FT.		RULING SPAN: 1000 FT.						DATE 02/28/92		CHECKED BY: P.S. WOLFE	
		"C" VALUE: 36.5		"C" VALUE: 16.0						DATE 02/28/92		APPROVED BY:	
										DATE 02/28/92		PROJECT NO: P-0036-D-47	
										DATE 02/28/92		SHEET: 01	
										DATE 02/28/92		REF. NO:	

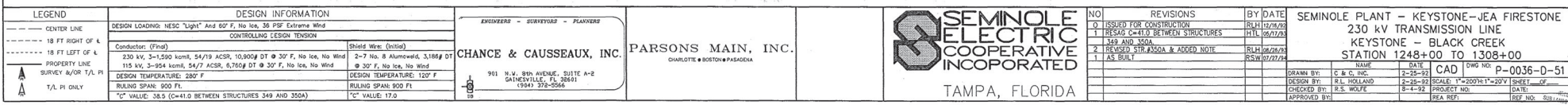




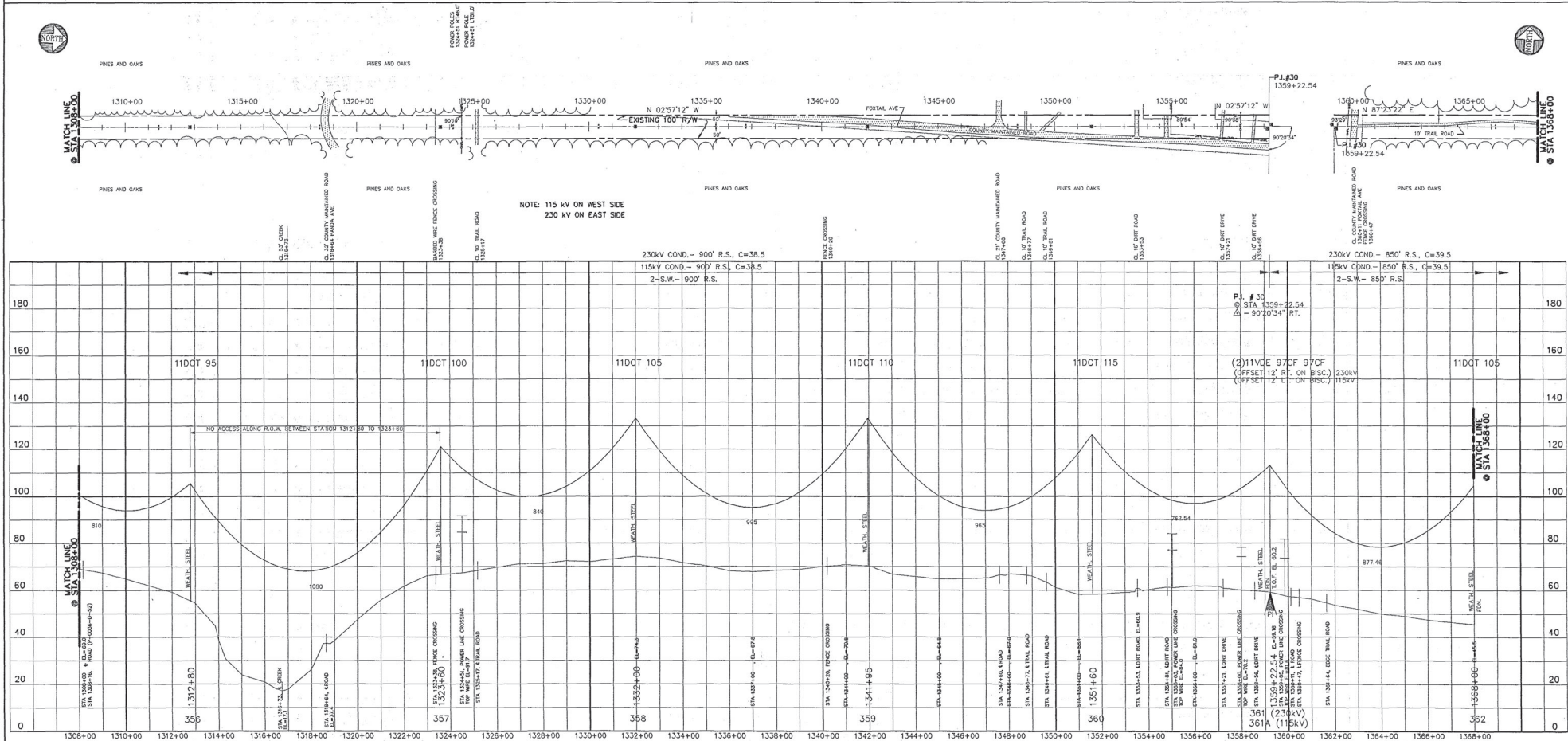




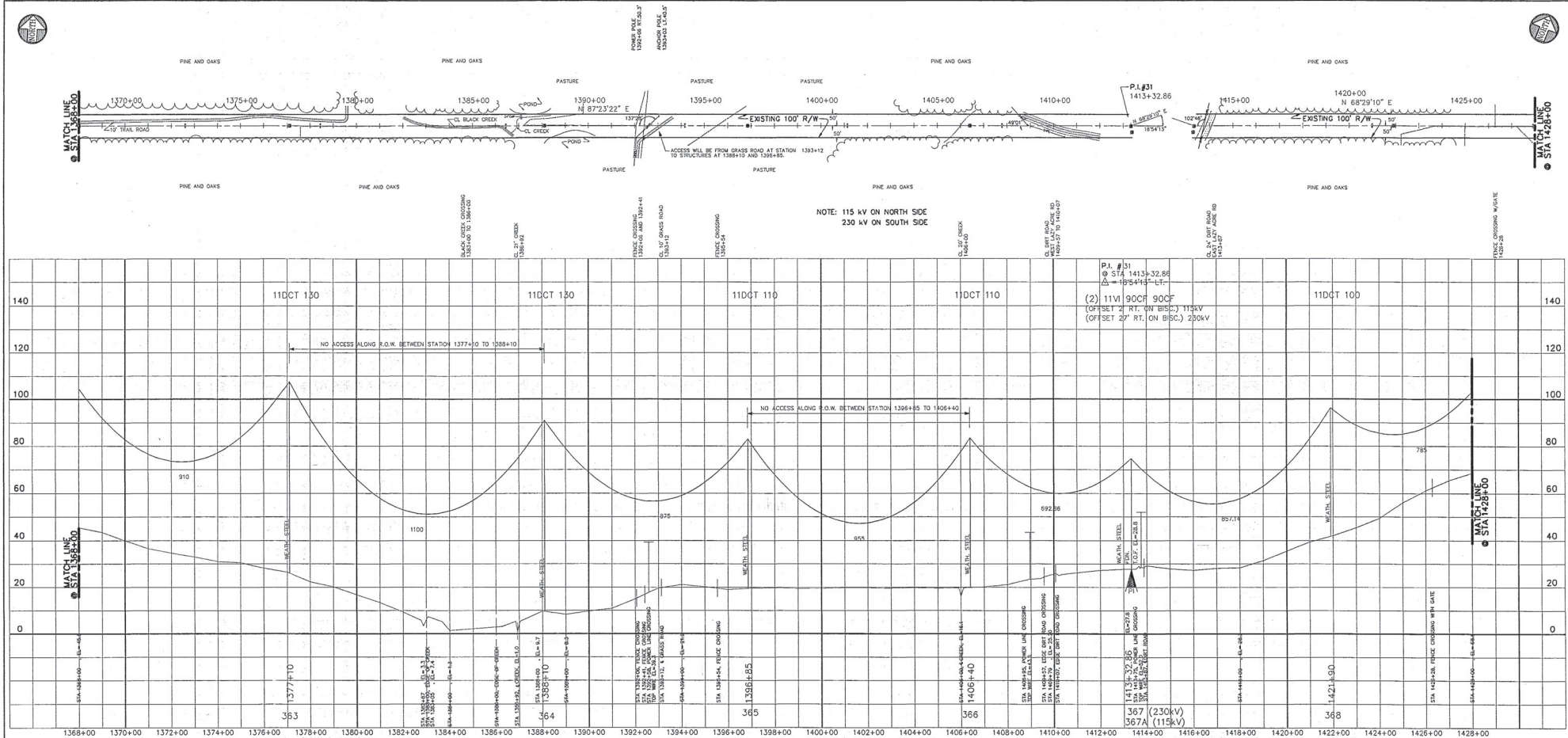






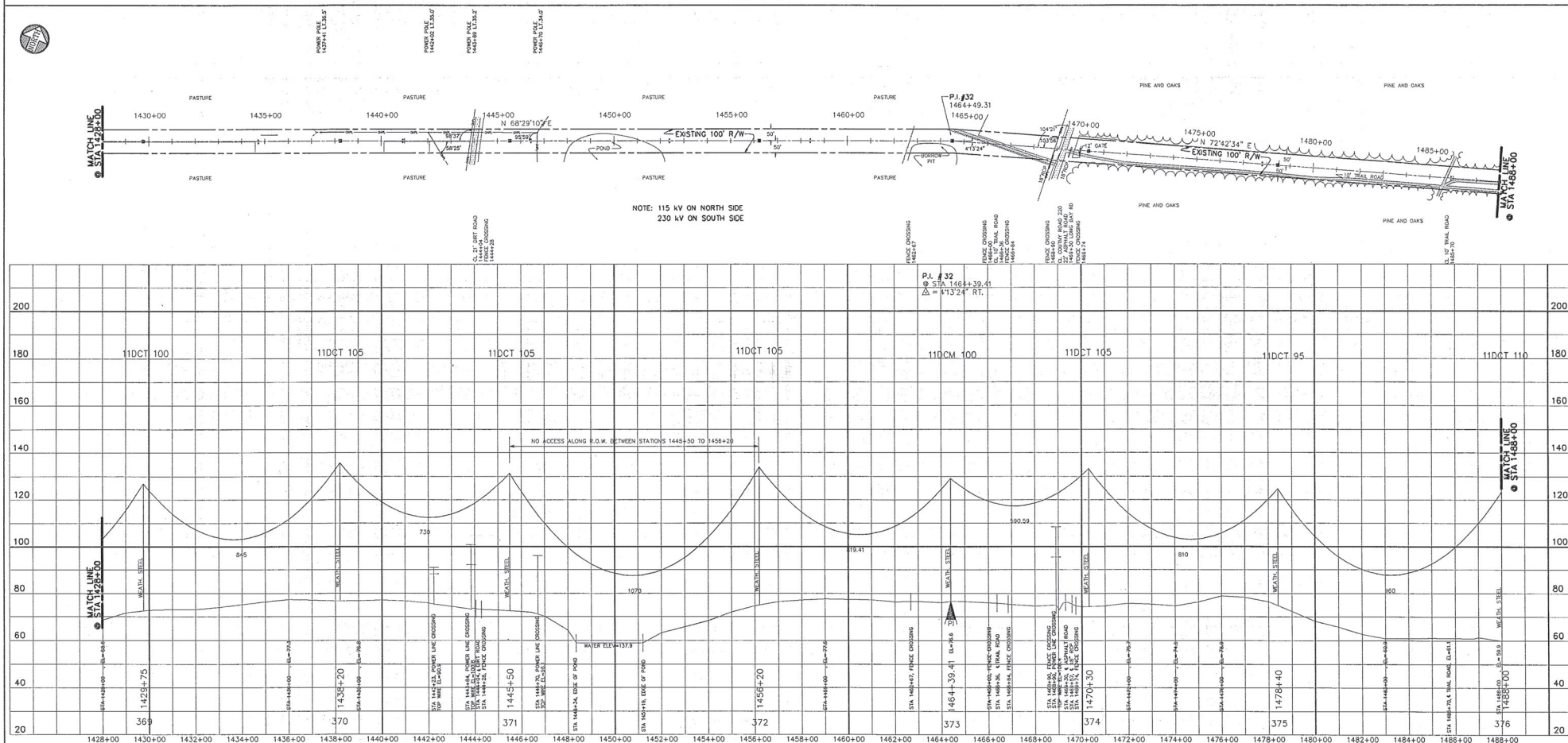



<b>LEGEND</b> --- CENTER LINE - - - 18 FT RIGHT OF E - - - 18 FT LEFT OF E A SURVEY A/SOR T/L IN T/L IN ONLY	<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60° F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1580 kmil, 54/19 ACSR, 10,900 DT @ 30° F, No Ice, No Wind 115 kV, 3-954 kmil, 54/7 ACSR, 6,760 DT @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F ROLING SPAN: SEE ABOVE "C" VALUE: SEE ABOVE	<b>ENGINEER - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th Avenue, Suite A-2 Gainesville, FL 32601 (352) 375-5565	<b>PARSONS MAIN, INC.</b> CHARLOTTE & BOSTON/PASADENA	<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA	<b>REVISIONS</b> NO. 0 ISSUED FOR CONSTRUCTION 1 AS BUILT <b>DATE</b> 01/23/09 02/26/04	<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> <b>230 kV TRANSMISSION LINE</b> <b>KEYSTONE - BLACK CREEK</b> <b>STATION 1308+00 TO 1368+00</b> DRAWN BY: C & C, INC. DESIGN BY: R.L. HOLLAND CHECKED BY: R.S. WOLFE APPROVED BY: SEA REP. DATE: 2-25-92 DATE: 2-25-92 DATE: 8-5-92 CAD: DWG NO. P-0036-D-52 SCALE: 1"=200H, 1"=20V PROJECT NO.: SHEET OF: REF NO.:
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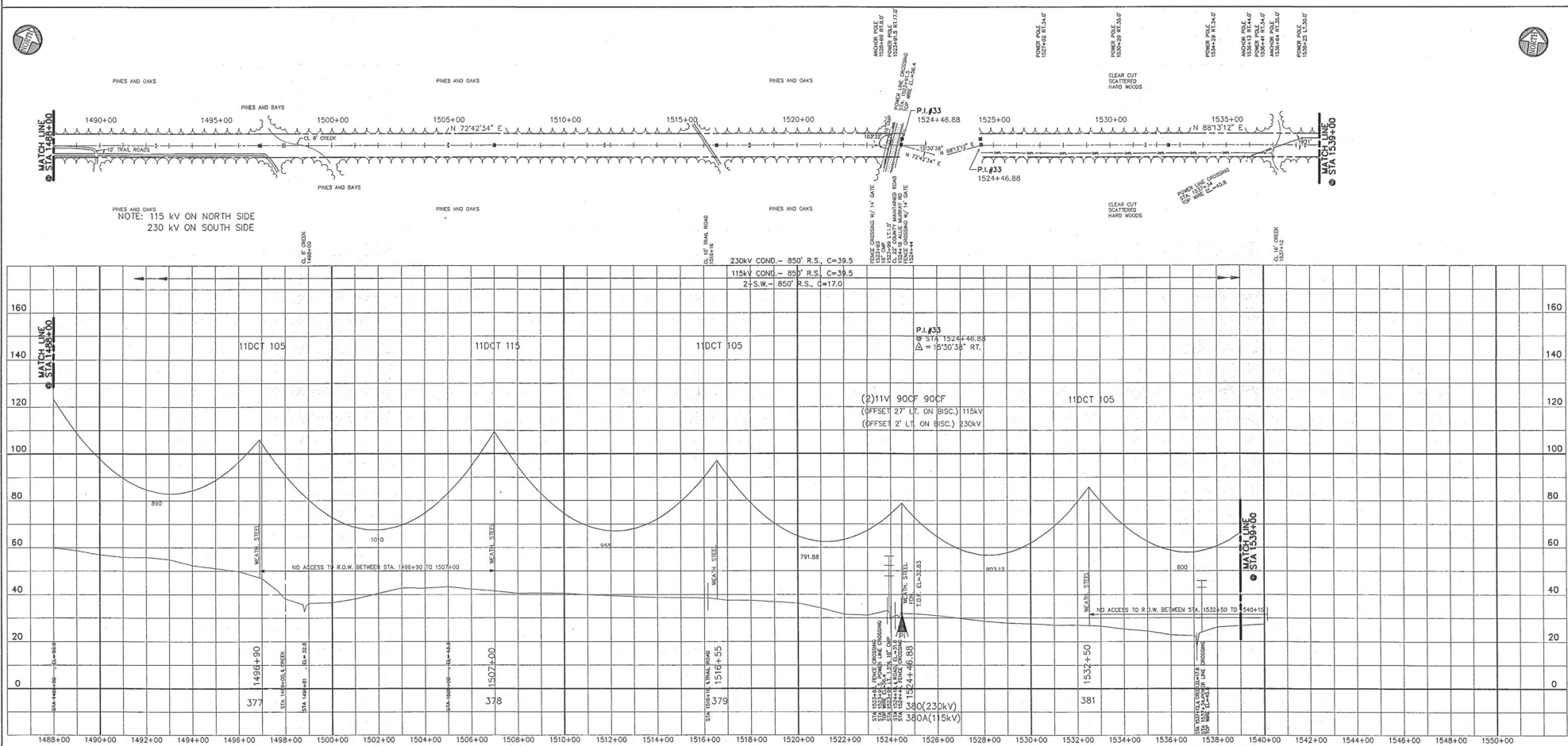


<b>LEGEND</b> --- CENTER LINE - - - 18 FT RIGHT OF C. - - - 18 FT LEFT OF C. --- PROPERTY LINE --- SURVEY A/OR T/L PI T/L PI ONLY	<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60° F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1500 kcmil, 54/19 ACSSR, 10.000g DT @ 30° F, No Ice, No Wind 115 kV, 3-554 kcmil, 54/7 ACSSR, 6.750g DT @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 850 FT "C" VALUE: 39.5	<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (754) 372-5566	<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA	<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA	<b>NO. REVISIONS</b> 0 ISSUED FOR CONSTRUCTION 1 AS BUILT	<b>BY DATE</b> RLM 12/16/02 RSW 07/27/04 <b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> <b>230 kV TRANSMISSION LINE</b> <b>KEYSTONE - BLACK CREEK</b> <b>STATION 1368+00 TO 1428+00</b> NAME: C & C, INC. DATE: 2-25-92 DESIGN BY: R.L. HOLLAND 2-25-92 CHECKED BY: R.S. WOLFE 9-4-92 APPROVED BY: [Signature] CAD: [Signature] DWG NO.: P-0036-D-53 SCALE: 1"=200'H T=20' V SHEET: 0F PROJECT NO.: DES. REF.: REF. NO.:
---	---	--	--	---	---	---





<b>LEGEND</b> --- CENTER LINE --- 18 FT RIGHT OF L. --- 18 FT LEFT OF L. --- PROPERTY LINE --- SURVEY 8/ OR T/ L/ P T/ L/ P ONLY		<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1-1990 kcmil, 54/19 ACSR, 10,900 g.D. @ .30" F, No Ice, No Wind 110 kV, 3-1-1954 kcmil, 54/19 ACSR, 6,760 g.D. @ .30" F, No Ice, No Wind DESIGN TEMPERATURE: 280 F RULING SPAN: 350 FT "C" VALUE: 38.3		<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (904) 376-0565		<b>PARSONS MAIN, INC.</b> CHAULTOFF @ BOSTON @ PASADENA		 <b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA		<b>NO. 1</b> <b>ISSUED FOR CONSTRUCTION</b> <b>AS BUILT</b> 01/13/04 05/06/04		<b>BY DATE</b> 01/13/04 05/06/04		<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> <b>230 kV TRANSMISSION LINE</b> <b>KEYSTONE - BLACK CREEK</b> <b>STATION 1428+00 TO 1488+00</b> NAME DATE CAD DWG NO. P-0036-D-54 DESIGN BY: R.L. ROLLAND 7-25-92 SCALE: 1"=200' H1=20' V1 SHEET 1 OF 4 CHECKED BY: R.S. WOLFE 8-4-92 PROJECT NO. 88-001 APPROVED BY: JEA OFF.	
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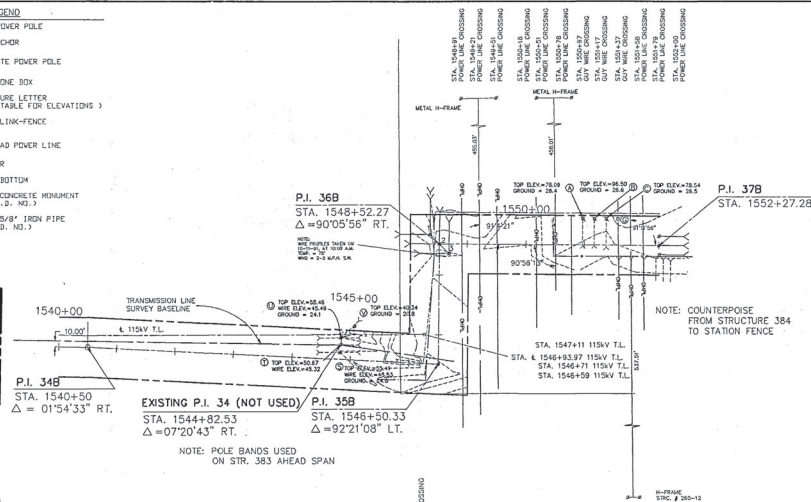


<b>LEGEND</b>		<b>DESIGN INFORMATION</b>		<b>ENGINEERS - SURVEYORS - PLANNERS</b>		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b>		<b>NO</b>		<b>REVISIONS</b>		<b>BY</b>		<b>DATE</b>		<b>SEMINOLE PLANT - KEYSTONE - JEA FIRESTONE</b>	
----- CENTER LINE		DESIGN LOADINGS: NESC "Light" And 60° F, No Ice, 36 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		PARSONS MAIN, INC.		0		ISSUED FOR CONSTRUCTION		RLH		12/16/02		230 kV TRANSMISSION LINE	
- - - - - 18 FT. RIGHT OF L.		CONTROLLING DESIGN TENSION		901 N.W. 8th AVENUE, SUITE A-2		CHARLOTTE • BOSTON • PASADENA		1		AS BUILT		RSW		07/07/04		KEYSTONE - BLACK CREEK	
- - - - - 18 FT. LEFT OF L.		Conductor: (Final)		230 KV, 3-550 kcmil, 54/19 ACSR, 10,000 D.T. @ 30° F, No Ice, No Wind		2-7 No. 8 Aluminum, 3.186g D.T.										STATION 1488+00 TO 1539+00	
--- PROPERTY LINE		Shield Wire: (Initial)		115 KV, 3-354 kcmil, 54/7 ACSR, 6,780 D.T. @ 30° F, No Ice, No Wind		2-7 No. 8 Aluminum, 3.186g D.T.										FEB 03 2003	
SURVEY &/OR T.Y. PI		DESIGN TEMPERATURE: 280° F		115 KV, 3-354 kcmil, 54/7 ACSR, 6,780 D.T. @ 30° F, No Ice, No Wind		DESIGN TEMPERATURE: 120° F											
T.Y. PI ONLY		RULING SPAN: SEE ABOVE		RULING SPAN: SEE ABOVE		RULING SPAN: SEE ABOVE											
		"C" VALUE: SEE ABOVE		"C" VALUE: SEE ABOVE		"C" VALUE: SEE ABOVE											

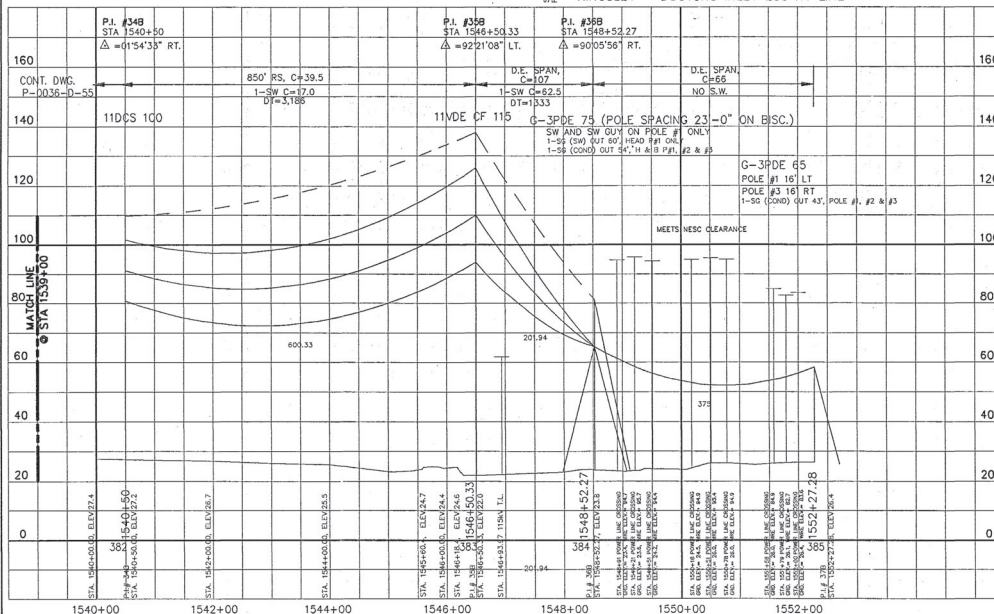


- LEGEND**
- WOOD POWER POLE
  - GUY ANCHOR
  - CONCRETE POWER POLE
  - TELEPHONE BOX
  - STRUCTURE LETTER
  - CHAIN-LINK FENCE
  - OVERHEAD POWER LINE
  - CONTOUR
  - DITCH BOTTOM
  - FOUND CONCRETE MEASUREMENT
  - FOUND 5/8" IRON PIPE

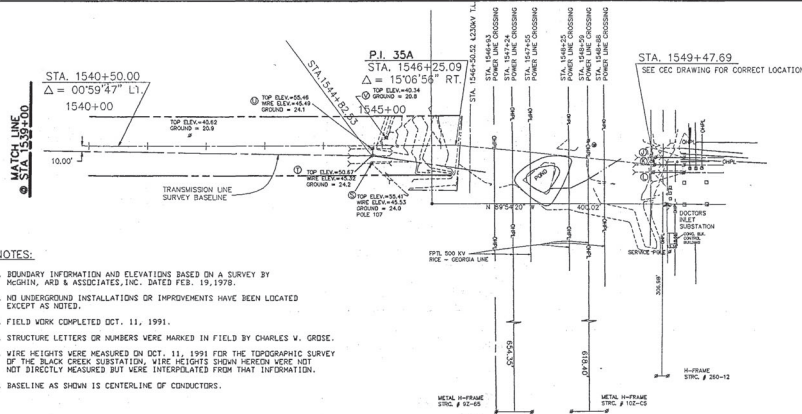
MATCH LINE  
@ STA 1539+00



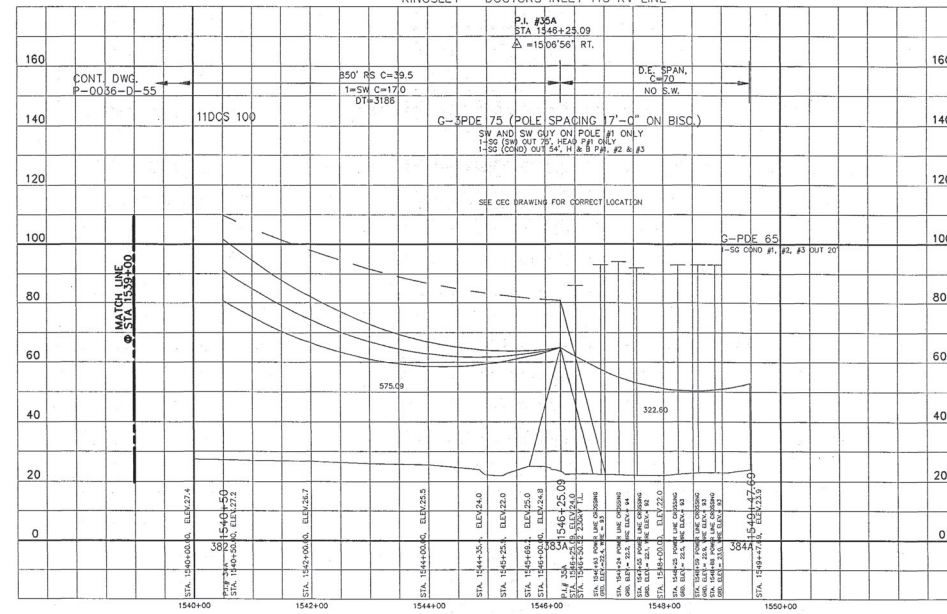
KINGSLEY - DOCTORS INLET 230 KV LINE



- NOTES:**
- BOUNDARY INFORMATION AND ELEVATIONS BASED ON A SURVEY BY MCHIN, W.B. & ASSOCIATES, INC., DATED FEB. 19, 1978.
  - NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS NOTED.
  - FIELD WORK COMPLETED OCT. 11, 1991.
  - STRUCTURE LETTERS OR NUMBERS WERE MARKED IN FIELD BY CHARLES V. GRODE.
  - WIRE HEIGHTS WERE MEASURED ON OCT. 11, 1991 FOR THE TOPOGRAPHIC SURVEY OF THE BLACK CREEK SUBSTATION. WIRE HEIGHTS SHOWN HEREON WERE NOT DIRECTLY MEASURED BUT WERE INTERPOLATED FROM THAT INFORMATION.
  - BASELINE AS SHOWN IS CENTERLINE OF CONDUCTORS.



KINGSLEY - DOCTORS INLET 115 KV LINE



LEGEND	
—	CENTER LINE
---	18 FT RIGHT OF C
---	18 FT LEFT OF C
---	PROPERTY LINE
---	SURVEY A/OR T/ PI
---	T/ PI ONLY

DESIGN INFORMATION	
DESIGN LOADING: NESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind	
CONTROLLING DESIGN TENSION	
Conductor: (Final)	Shield Wire: (Initial)
230 KV, 3-1500 kcmil, 54/19 ACSSR, 10,900 D.T. @ 30° F, No Ice, No Wind	7 No. 8 Aluminum, SEE ABOVE FOR D.T. @ 30° F, No Ice, No Wind
DESIGN TEMPERATURE: 280° F	DESIGN TEMPERATURE: 120° F
RULING SPAN: SEE ABOVE	RULING SPAN: SEE ABOVE
"C" VALUE: SEE ABOVE	"C" VALUE: SEE ABOVE

ENGINEERS - SURVEYORS - PLANNERS	
CHANCE & CAUSSEUX, INC.	PARSONS MAIN, INC.
901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (904) 379-2566	CHARLOTTE • BOSTON • PASADENA

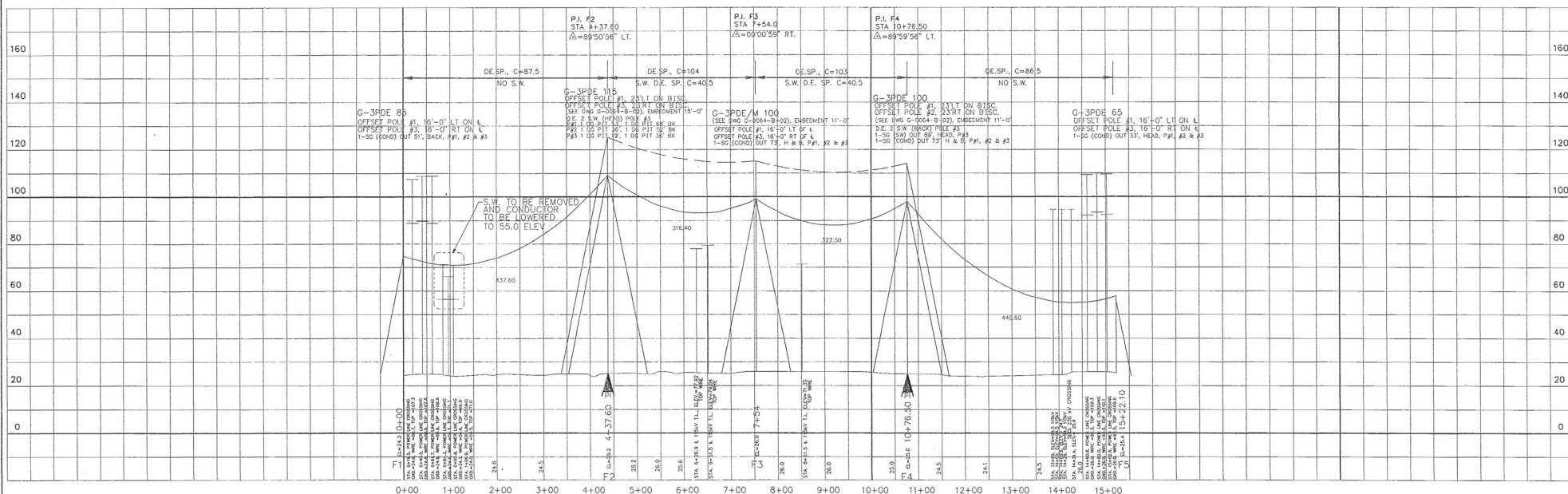
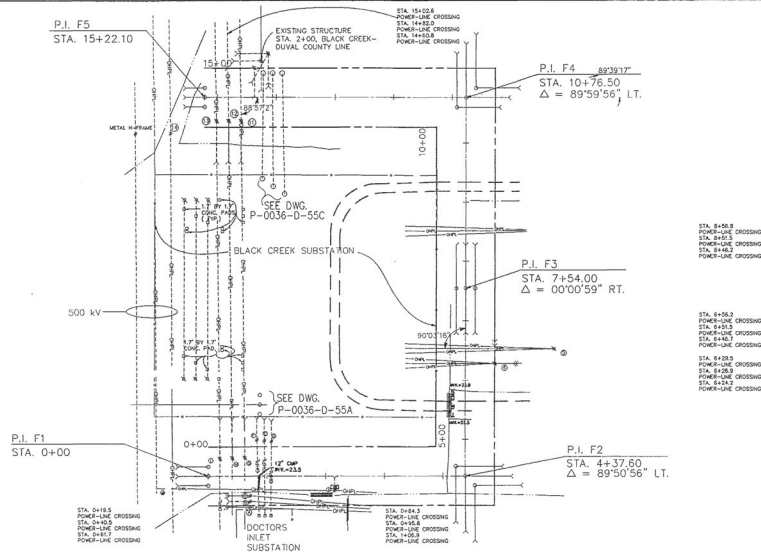
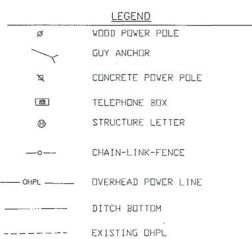
SEMINOLE ELECTRIC COOPERATIVE INCORPORATED	
TAMPA, FLORIDA	


NO. REVISIONS		BY DATE
0	ISSUED FOR CONSTRUCTION	RLM 12/12/93
1	AS BUILT	RSW 02/21/94
SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE 230 KV TRANSMISSION LINE KEYSTONE - BLACKCREEK STATION 1540+00 TO 1552+27		
NAME	DATE	DWG NO.
C & C, INC.	2-25-93	CAD P-0036-D-55-0001
DESIGN BY: H.T. LAW	SCALE: 1"=100' H.T.-20V	SHEET 01
CHECKED BY: R.S. WOLFE	PROJECT NO.	DATE
APPROVED BY:	REA REF.	REF NO.

55

15003

1. BOUNDARY INFORMATION AND ELEVATIONS BASED ON A SURVEY BY MCGINN, ARD & ASSOCIATES, INC. DATED FEB. 19, 1978.
2. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS NOTED.
3. FIELD WORK COMPLETED OCT. 11, 1991.
4. STRUCTURE LETTERS OR NUMBERS WERE MARKED IN FIELD BY CHARLES W. GROSE.
5. WIRE HEIGHTS WERE MEASURED ON OCT. 11, 1991 FOR THE TOPOGRAPHIC SURVEY OF THE BLACK CREEK SUBSTATION. WIRE HEIGHTS SHOWN HEREON WERE NOT DIRECTLY MEASURED BUT WERE INTERPOLATED FROM THAT INFORMATION.
6. BASELINE AS SHOWN IS CENTERLINE OF CONDUCTORS.



LEGEND		DESIGN INFORMATION	
---	CENTER LINE	DESIGN (LOADING: NESC "Light" And 60' F, No Ice, 36 PSF External Wind	
---	15 FT RIGHT OF C.	CONTROLLING DESIGN DIVISION	
---	15 FT LEFT OF C.	Conductor: (Final)	
---	PROPERTY LINE	230 kV, 3-1590 kcmil, 54/19 ACSR, 4170# @ 2.0' 30" F, No Ice, No Wind	
---	SURFACE 4'X10' TYPICAL	Shared Wire: (Initial)	
	T/O PL ONLY	2-7' No. 8 Aluminum, 1776# @ 2.0' 30" F, No Ice, No Wind	
		DESIGN TEMPERATURE: 280° F	
		PULLING SPAN: SEE ABOVE	
		DESIGN TEMPERATURE: 120° F	
		PULLING SPAN: SEE ABOVE	
		"C" VALUE: SEE ABOVE	

ENGINEERS - SURVEYORS - PLANNERS

CHANCE & CAUSSEUX, INC.

PARSONS MAIN, INC.  
CHARLOTTE • BOSTON • PASADENA

901 N.W. 8th AVENUE, SUITE A-2  
GAINESVILLE, FL 32601  
(904) 372-5544



TAMPA, FLORIDA

NO	REVISIONS	BY DATE	SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE 230 KV TRANSMISSION LINE F.P.L. BYPASS OF BLACK CREEK STATION 0+00 TO 15+22.10					
1	ISSUED FOR CONSTRUCTION	RJL 12/04/00	DRAWN BY:	C & B, INC.	DATE:	2-5-92	CAD FILE:	P-0036-D-55-0002
2	AS BUILT	RSW 07/27/84	DESIGN BY:	M.T. LAM	SCALE:	"P"=100' H=20' V	SHEET:	OF 01
			CHECKED BY:	R.S. WOLFE	PROJECT NO.:		DATE:	03/01/01
			APPROVED BY:					

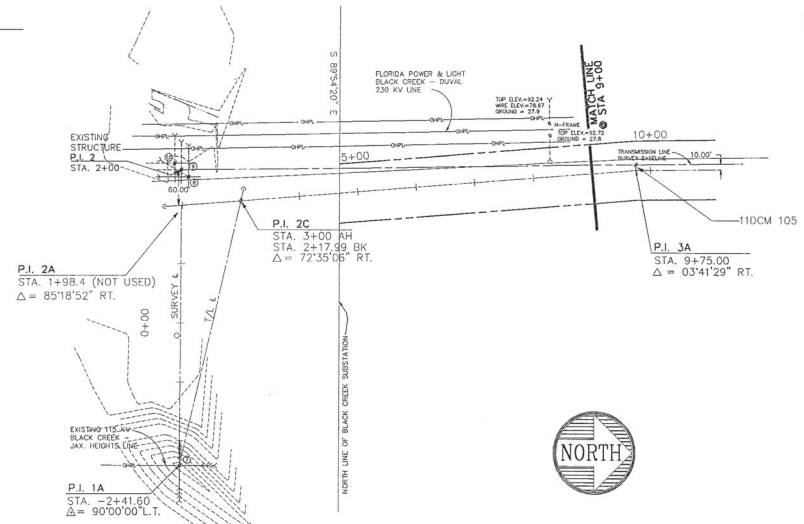
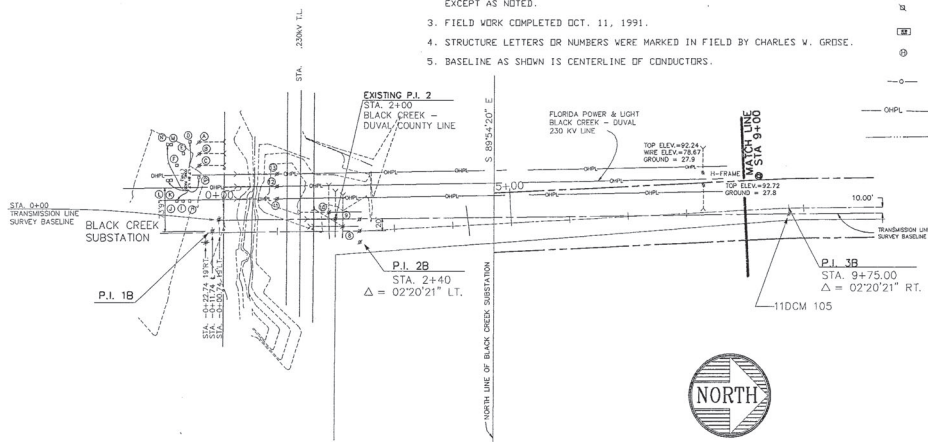


# NOTES:

1. BOUNDARY INFORMATION AND ELEVATIONS BASED ON A SURVEY BY MCGHIN, ARD & ASSOCIATES, INC. DATED FEB. 19, 1978.
2. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS NOTED.
3. FIELD WORK COMPLETED OCT. 11, 1991.
4. STRUCTURE LETTERS OR NUMBERS WERE MARKED IN FIELD BY CHARLES V. GROSE.
5. BASELINE AS SHOWN IS CENTERLINE OF CONDUCTORS.

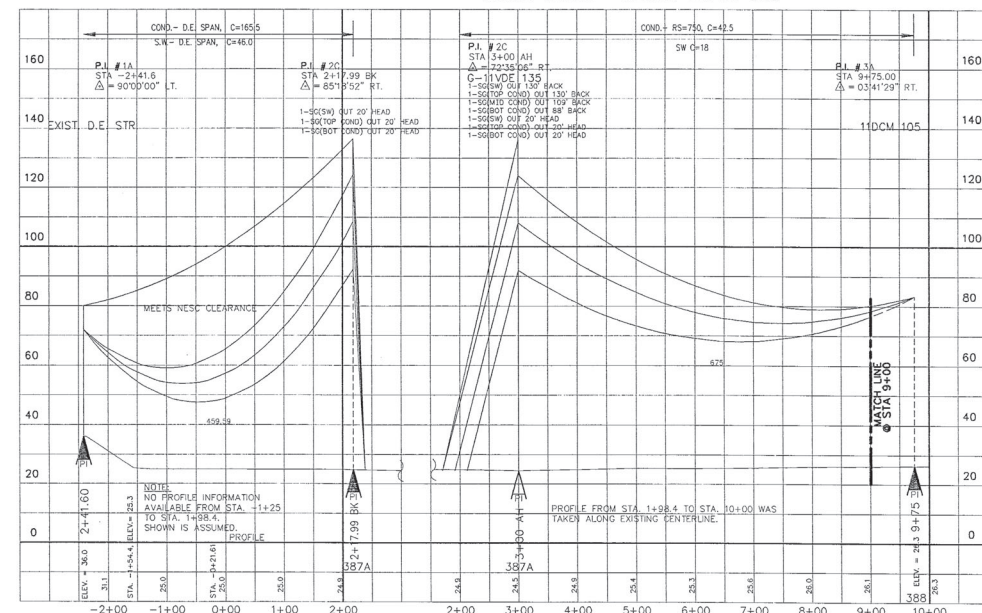
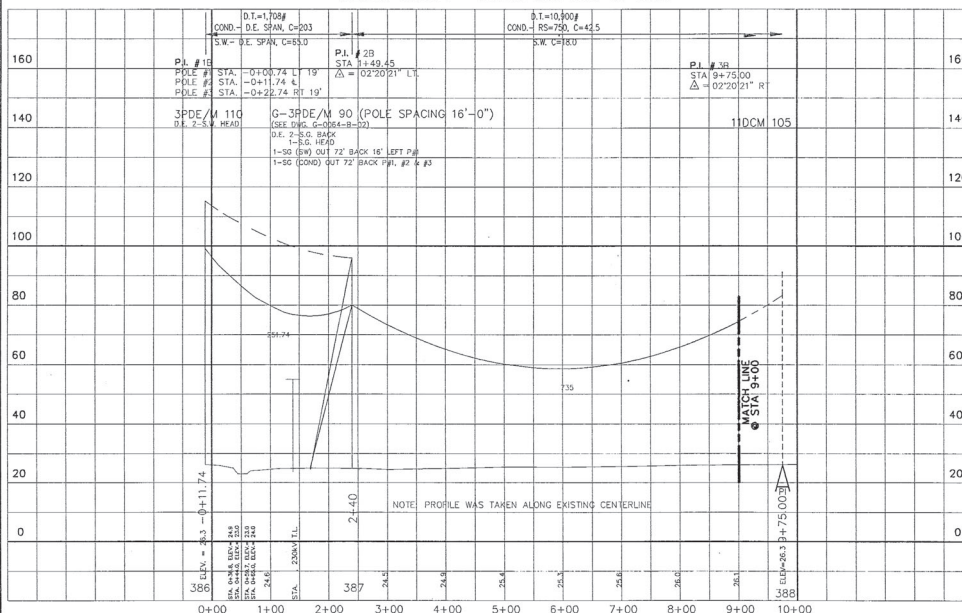
# LEGEND

- WOOD POWER POLE
- GUY ANCHOR
- CONCRETE POWER POLE
- TELEPHONE BOX
- STRUCTURE LETTER
- CHAIN-LINK FENCE
- OVERHEAD POWER LINE
- DITCH BOTTOM

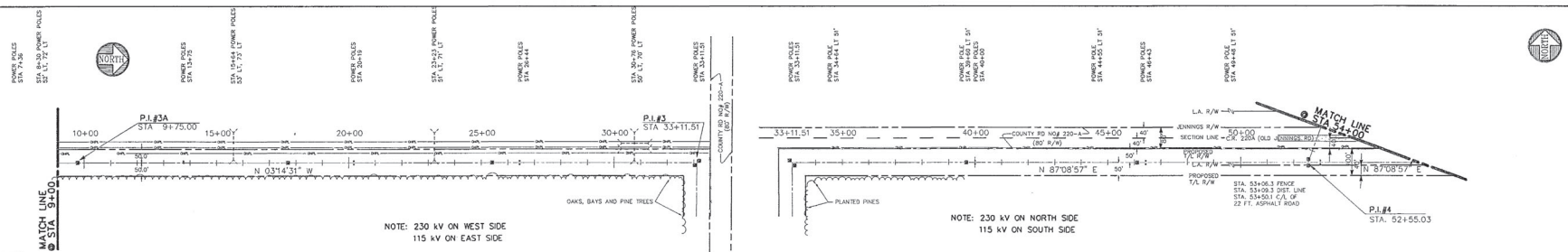


BLACK CREEK - FIRESTONE 230 kV LINE

BLACK CREEK - BELAIR 115 kV LINE



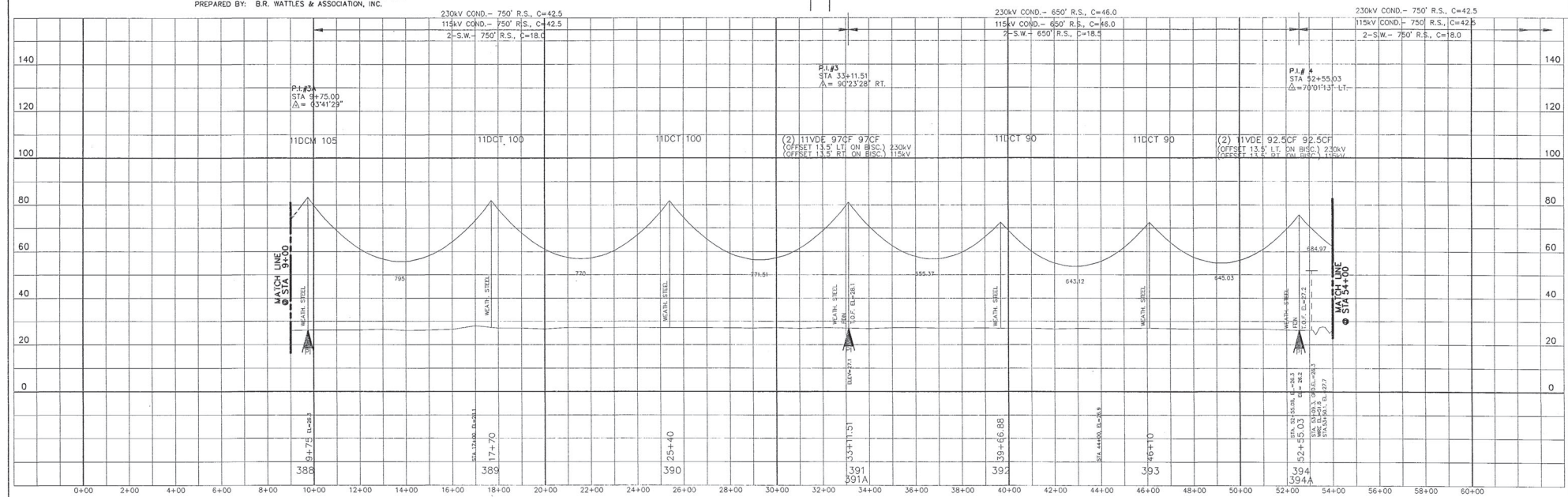
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADINGS: NESC "Light" And 60° F. No Ice, 36 PSF Extreme Wind	CONTROLLING DESIGN TENSION	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: C & C, INC.	DATE: 2-25-92	CAD: P-0036-D-55-0003	SCALE: 1"=100 FT
---	18 FT. RIGHT OF A	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: H. LECROY	DATE: 02-11-92	CHECKED BY: L.M.E.	DATE: 02-11-92	PROJECT NO.:	DATE:
---	18 FT. LEFT OF A	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: H. LECROY	DATE: 02-11-92	CHECKED BY: L.M.E.	DATE: 02-11-92	PROJECT NO.:	DATE:
---	PROPERTY LINE	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: H. LECROY	DATE: 02-11-92	CHECKED BY: L.M.E.	DATE: 02-11-92	PROJECT NO.:	DATE:
---	SURVEY A/OR T/A P.I.	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: H. LECROY	DATE: 02-11-92	CHECKED BY: L.M.E.	DATE: 02-11-92	PROJECT NO.:	DATE:
---	T/A P.I. ONLY	CONDUCTOR: (Fm)	SHIELD WIRE: (Initial)	2-7 No. 8 Aluminum, 3/16" Ø, 115 kV, 3-554 kcmil, 54/7 ACSS. See above for D.T. @ 30° F. No Ice, No Wind	DESIGN TEMPERATURE: 280° F	DESIGN SPAN: SEE ABOVE	"C" VALUE: SEE ABOVE	DESIGN BY: H. LECROY	DATE: 02-11-92	CHECKED BY: L.M.E.	DATE: 02-11-92	PROJECT NO.:	DATE:



NOTE: PROPOSED BRANHAN FIELD / CHAFFEE ROAD INFORMATION TAKEN FROM RIGHT-OF-WAY MAPS DATED: 6/28/89 AND PREPARED BY: B.R. WATLIES & ASSOCIATION, INC.

NOTE: 230 kV ON WEST SIDE  
115 kV ON EAST SIDE

NOTE: 230 kV ON NORTH SIDE  
115 kV ON SOUTH SIDE



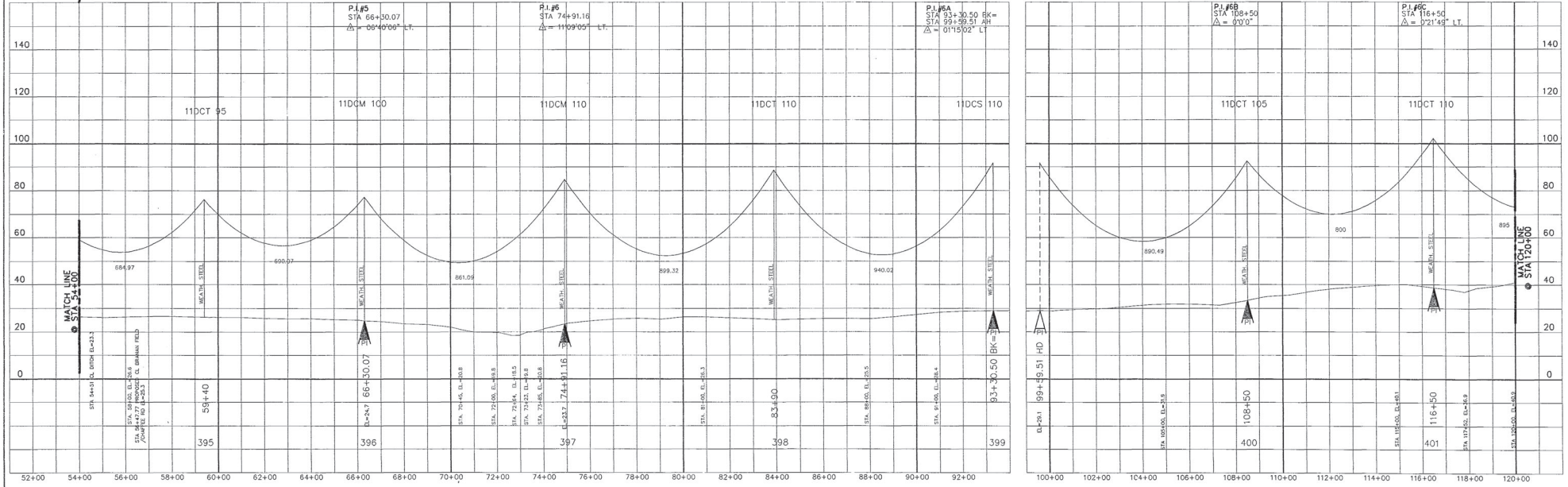
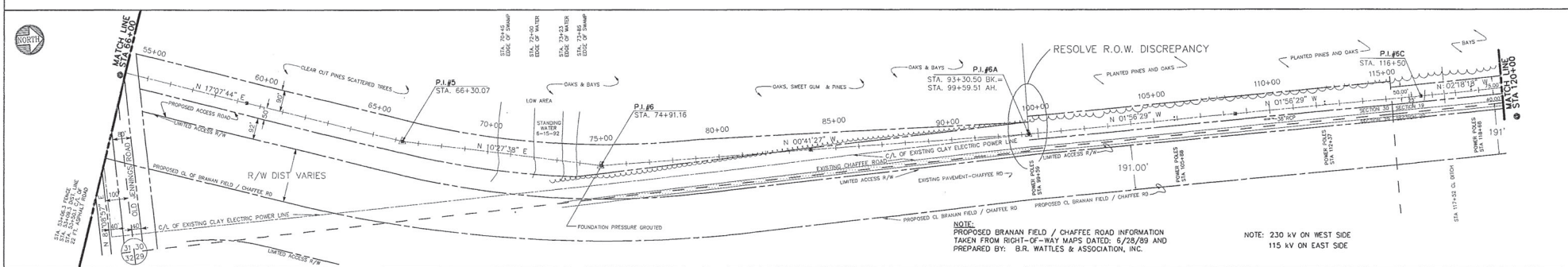
LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADS: NESC "Light" And 60" F, No Ice, 36 PSF Extreme Wind	CONROLLING DESIGN TENSION	CHANCE & CAUSSEUX, INC.		PARSONS MAIN, INC.		0	ISSUED FOR CONSTRUCTION	RLH	12/29/82	230 kV TRANSMISSION LINE	
---	18 FT RIGHT OF A	CONDUCTOR (Final)	Shield Wire (Initial)	901 N.W. 8TH AVENUE, SUITE A-2 GALVESTON, TEXAS 77551 (936) 372-5566		CHARLOTTE & BOSTON & PASADENA		1	AS BUILT	RSW	05/09/84	BLACK CREEK - DUVAL COUNTY LINE	
---	18 FT LEFT OF A	230 kV, 3-1250 kcmil, 54/19 ACSS, 10,900 g D.T. @ 30° F, No Ice, No Wind	2-7 No. 8 Aluminum, 3.186 g D.T. @ 30° F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F		DESIGN TEMPERATURE: 280° F						STATION 0+00 TO 60+00	
---	PROPERTY LINE	DESIGN TEMPERATURE: 280° F	RULING SPAN: SEE ABOVE	RULING SPAN: SEE ABOVE		RULING SPAN: SEE ABOVE						NAME	
---	SURVEY &/OR T/L PI	"C" VALUE: SEE ABOVE	"C" VALUE: SEE ABOVE									DATE	
A	T/L PI ONLY											CAD	
												DWG NO.	
												P-0036-D-56	
												SCALE: 1"=200'H	
												SHEET	
												OF	
												PROJECT NO.	
												SEA REF.	
												REF NO.	

CHANCE & CAUSSEUX, INC.

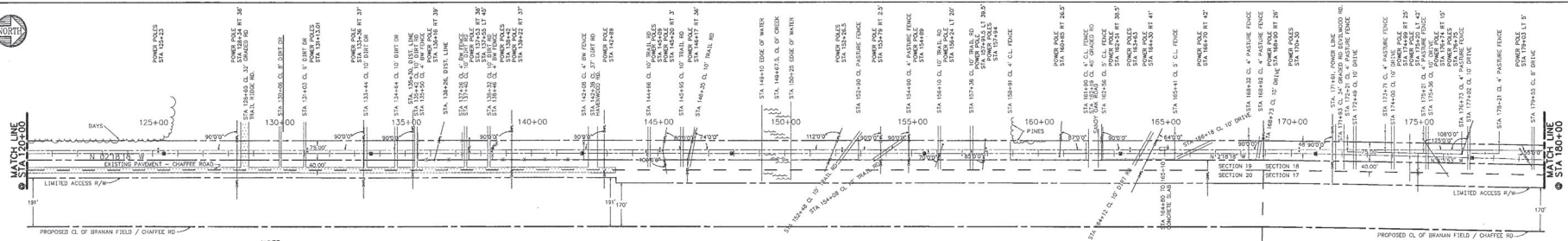
PARSONS MAIN, INC.

SEMINOLE ELECTRIC COOPERATIVE INCORPORATED  
TAMPA, FLORIDA



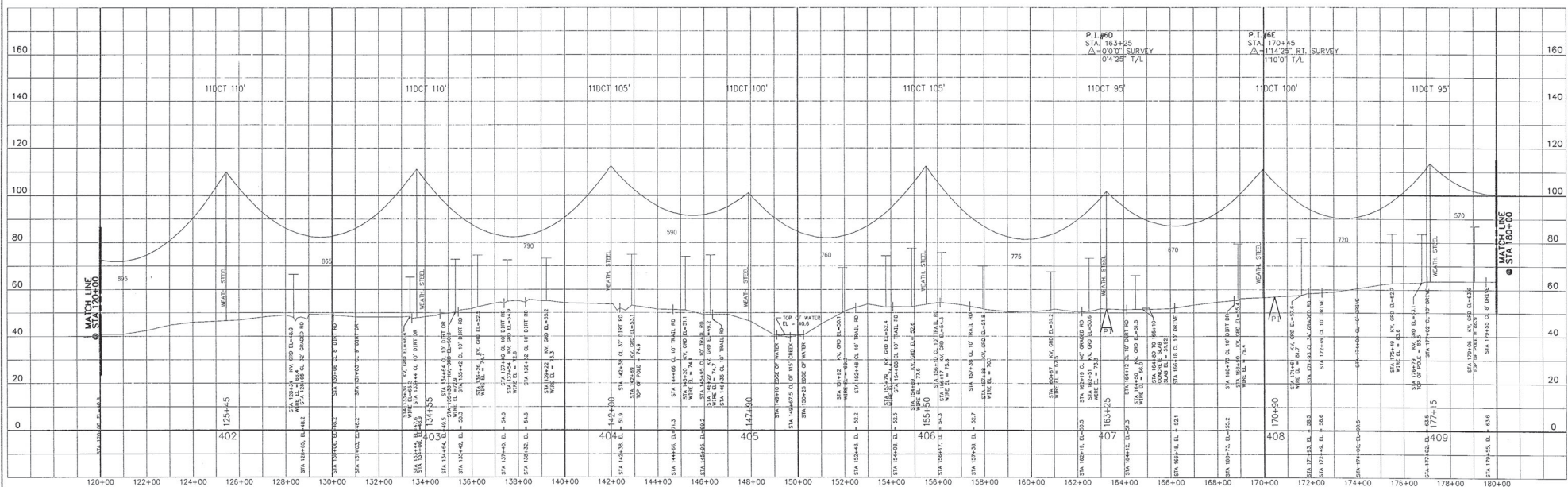


LEGEND		DESIGN INFORMATION		ENGINEERS - DESIGNERS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
CENTER LINE		DESIGN LOADING: NESC "Light" And 60° F. No Ice, 36 PSF Extreme Wind		CHANCE & CAUSSEUX, INC.		TAMPA, FLORIDA		0 ISSUED FOR CONSTRUCTION		R.H. 12/16/94		230 kV TRANSMISSION LINE	
18 FT RIGHT OF A		CONDUCTOR: (F70d)		PARSONS MAIN, INC.				1 AS BUILT		R.S. 05/06/94		BLACK CREEK - DUVAL COUNTY LINE	
18 FT LEFT OF A		230 kV, 3-1.590 inch, 54/19 ACSR, 10,900# D.T. @ 30° F. No Ice, No Wind		901 N.W. 8th AVENUE, SUITE A-2								STATION 60+00 TO 120+00	
PROPERTY LINE		115 kV, 3-0.54 inch, 54/7 ACSR, 6760# D.T. @ 30° F. No Ice, No Wind		GAINESVILLE, FL 32601								DRAWN BY: C & C, INC.	
SURVEY A/D/R T/L, P/L		DESIGN TEMPERATURE: 250° F		(904) 372-5566								DESIGN BY: R.L. HOLLAND	
T/L, P/L ONLY		RULING SPAN: 750 FT										CHECKED BY: R.S. WOLF	
		"C" VALUE: 42.5										APPROVED BY:	
												NAME: DATE: PROJECT NO: SCALE: 1"=200'H T=20'V SHEET NO. OF	



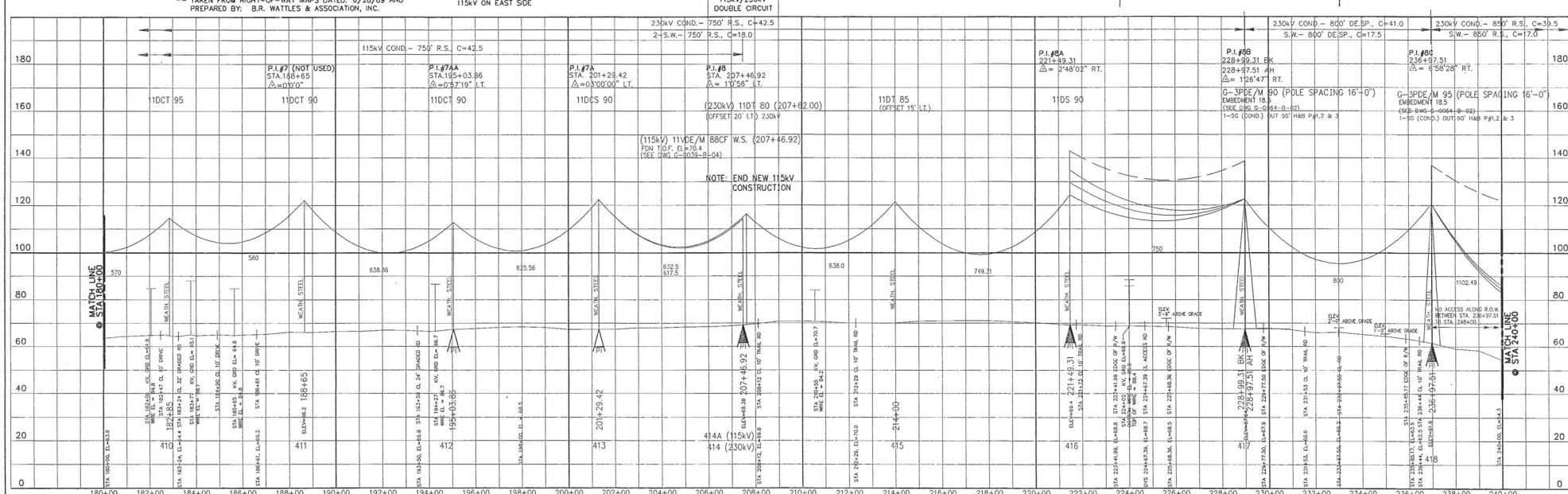
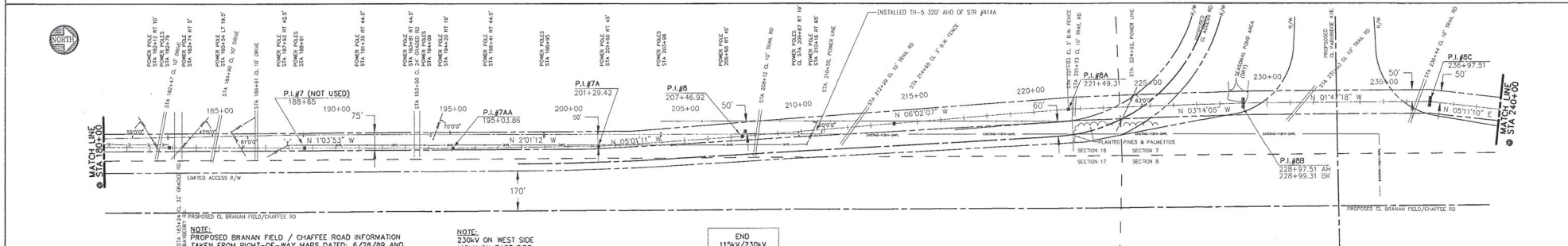
NOTE:  
PROPOSED BRANNAN FIELD / CHAFFEE ROAD INFORMATION  
TAKEN FROM RIGHT-OF-WAY MAPS DATED: 6/28/89 AND  
PREPARED BY: B.R. WATLIES & ASSOCIATION, INC.

NOTE: 230 KV ON WEST SIDE  
115 KV ON EAST SIDE



<b>LEGEND</b> --- CENTER LINE - - - - - 18 FT RIGHT OF A - - - - - 18 FT LEFT OF A --- PROPERTY LINE SURVEY A/OR T/L P1 T/L P1 ONLY		<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 50' F, No Ice, 36 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1,260 kcmil, 54/10 ACSSR, 10,000g D.T. @ 30' F, No Ice, No Wind 115 kV, 3-554 kcmil, 54/7 ACSSR, 5,750g D.T. @ 30' F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 750 FT "C" VALUE: 42.5		<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 931 N.W. 8th AVENUE, SUITE A-2 GAITHERSVILLE, MD 20878 301-372-9566		<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA 931 N.W. 8th AVENUE, SUITE A-2 GAITHERSVILLE, MD 20878 301-372-9566		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA		<table border="1"> <tr> <th colspan="2">NO. REVISIONS</th> <th>BY DATE</th> </tr> <tr> <td>0</td> <td>ISSUED FOR CONSTRUCTION</td> <td>RLH 12/24/92</td> </tr> </table>		NO. REVISIONS		BY DATE	0	ISSUED FOR CONSTRUCTION	RLH 12/24/92	<b>SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE</b> 230 kV TRANSMISSION LINE BLACK CREEK - DUVAL COUNTY LINE STATION 120+00 TO 180+00 FEB 03 1993	
NO. REVISIONS		BY DATE																	
0	ISSUED FOR CONSTRUCTION	RLH 12/24/92																	
DRAWN BY: C & C, INC. DESIGN BY: R.L. HOLLAND CHECKED BY: R.S. WOLFE APPROVED BY:		CAD: 2-25-93 2-25-92 SCALE: 1"=200'H PROJECT NO: P-0036-D-58 SHEET: 60 OF 60 REF. NO:																	





LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
---	CENTER LINE	DESIGN LOADING: NESC "Light" And 60° F, No Ice, 36 PSF Extreme Wind	CONDUCTOR: (Final)	230 kV 3-1500 kcmil 54/19 ACSSR, 10,500 lb. D.T. @ 30° F, No Ice, No Wind	Shield Wire: (Initial)	2-7 No. 8 Aluminum, 3,185 lb. D.T. @ 30° F, No Ice, No Wind	0	ISSUED FOR CONSTRUCTION	RLH	12/08/02	NAME	DATE	CAD
---	18 FT RIGHT OF C	CONROLLING DESIGN TENSION	DESIGN TEMPERATURE: 280° F	115 kV 3-554 kcmil 54/7 ACSSR, 6,700 lb. D.T. @ 30° F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F	RULING SPAN: SEE ABOVE	1	AS-BUILT	RSW	7/04	NAME	DATE	CAD
---	18 FT LEFT OF C	PROPERTY LINE	"C" VALUE: SEE ABOVE	115 kV 3-554 kcmil 54/7 ACSSR, 6,700 lb. D.T. @ 30° F, No Ice, No Wind	DESIGN TEMPERATURE: 120° F	RULING SPAN: SEE ABOVE					NAME	DATE	CAD
---	SURVEY &/OR T/L P1										NAME	DATE	CAD
---	T/L P1 ONLY										NAME	DATE	CAD

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CHANCE & CAUSSEUX, INC. PARSONS MAIN, INC.  
CHARTERED BOSTON/PASADENA

901 N.W. 8th AVENUE, SUITE A-2  
GAINESVILLE, FL 32601  
(941) 372-5566

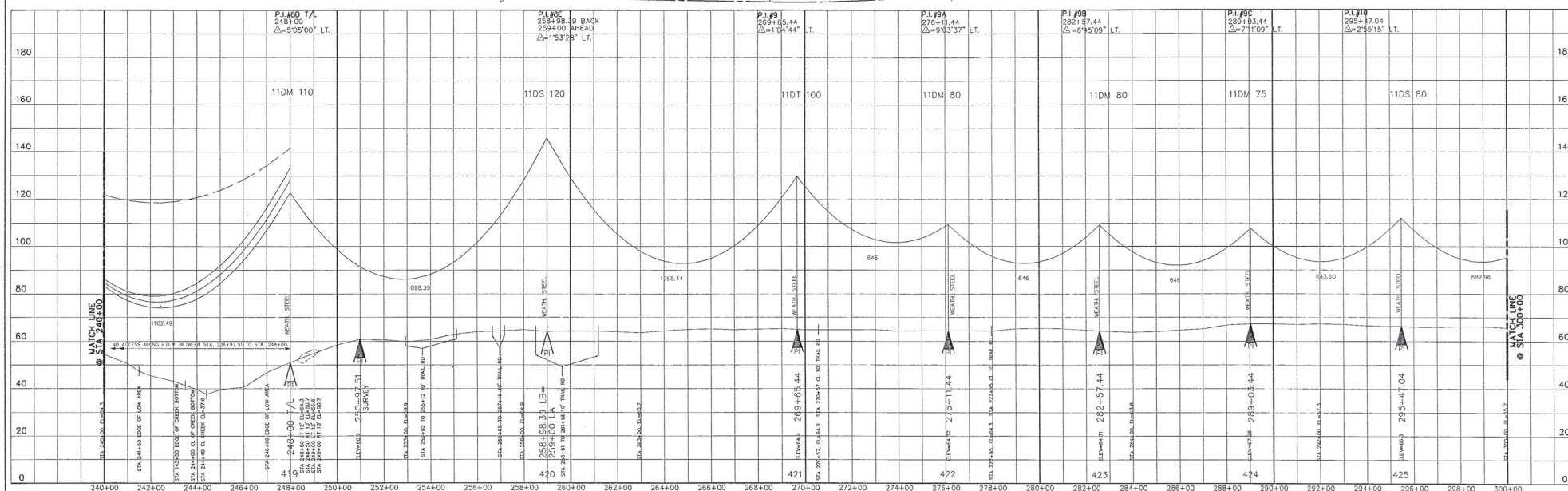
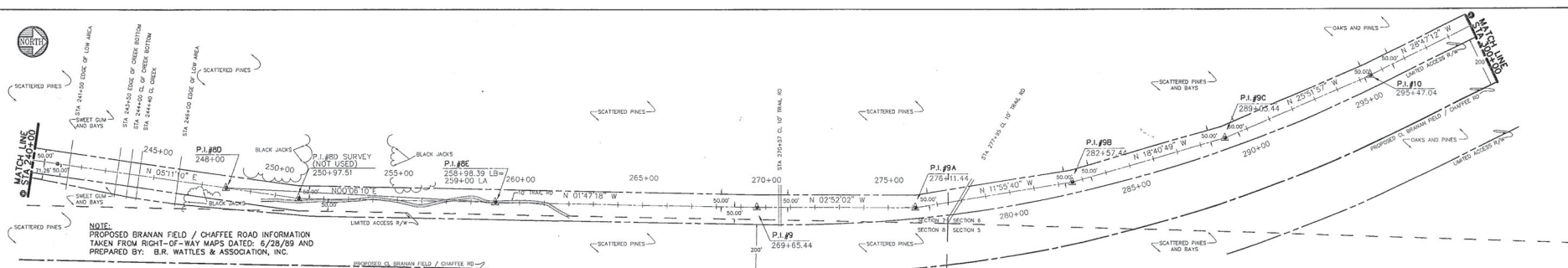
SEMINOLE ELECTRIC COOPERATIVE INCORPORATED  
TAMPA, FLORIDA

NO. 0  
REVISIONS  
BY DATE  
0 ISSUED FOR CONSTRUCTION  
1 AS-BUILT

SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE  
230 kV TRANSMISSION LINE  
BLACK CREEK - DUVAL COUNTY LINE  
STATION 180+00 TO 240+00  
P-0036-D-59

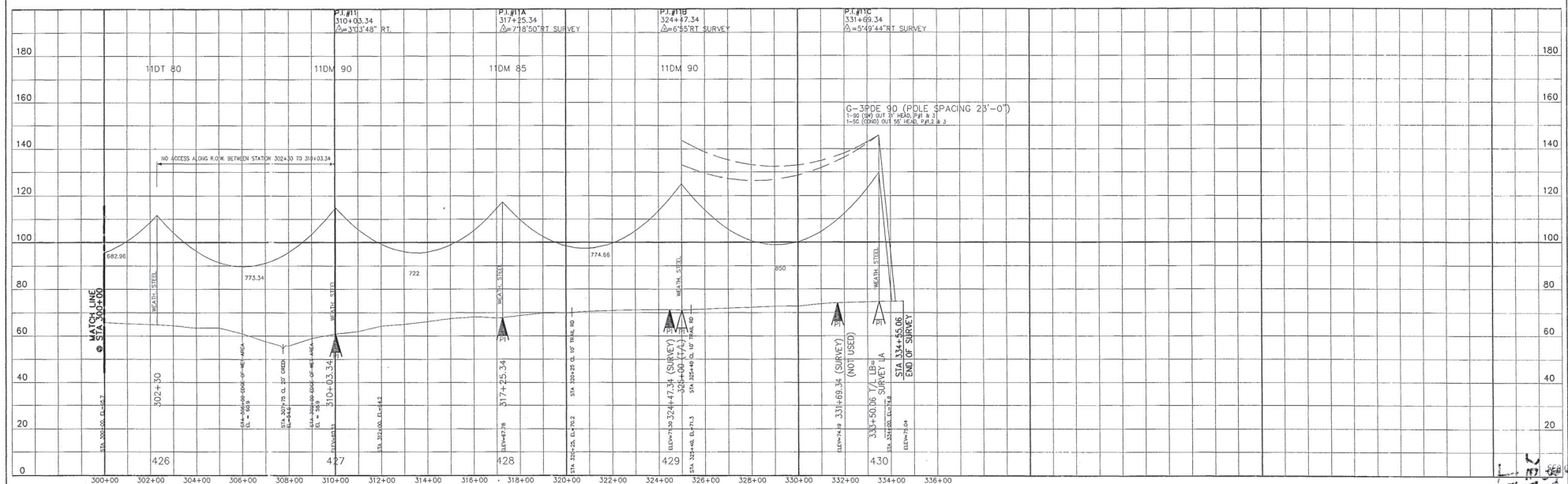
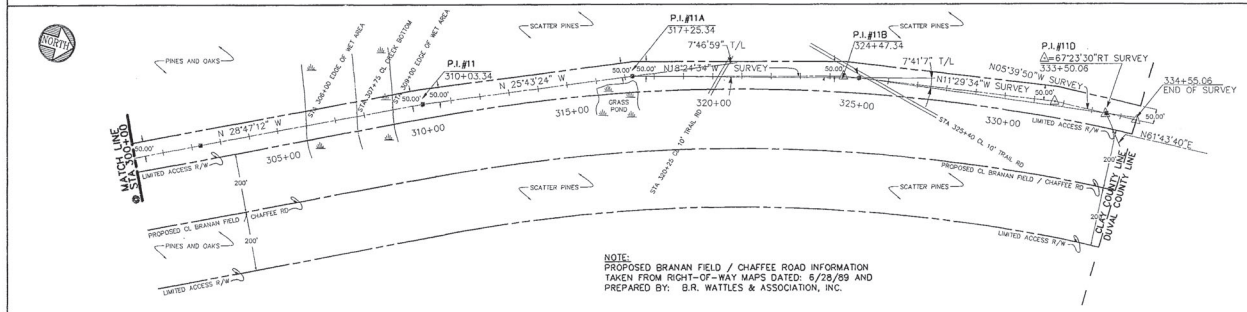
DESIGNED BY: C & C, INC.  
CHECKED BY: R.S. MOSE  
APPROVED BY:

DATE: 2-25-92  
SCALE: 1"=200' H=20' V=20'  
PROJECT NO.: 8-3-92  
SHEET: 1 OF 1



LEGEND		DESIGN INFORMATION		ENGINEERS - SURVEYORS - PLANNERS		PARSONS MAIN, INC.		SEMINOLE ELECTRIC COOPERATIVE INCORPORATED		NO. OF REVISIONS		BY DATE		SEMINOLE PLANT - KEYSTONE-JEA FIRESTONE	
--- CENTER LINE		DESIGN LOADING: HESC "Light" And 60' F, No Ice, 36 PSF Extreme Wind						TAMPA, FLORIDA		0 ISSUED FOR CONSTRUCTION		RJA 12/24/76		230 KV TRANSMISSION LINE	
--- 18 FT RIGHT OF C.		CONTROLLING DESIGN TENSION								1 AS-BUILT		SSM 7/94		BLACK CREEK - DUVAL COUNTY LINE	
--- 18 FT LEFT OF C.		Conductor: (Final)		Shield Wire: (Initial)		CHANCE & CAUSSEUX, INC.								STATION 240+00 TO 300+00	
A SURVEY 4/30' (L/R)		230 kV, 3-1550 kcmil, 54/19 ACSR, 10,900 D.I. @ 30' F, No Ice, No Wind		2-7 No. 8, Aluminumweld, 3,186 D.I. @ 30' F, No Ice, No Wind		901 N.W. 8TH AVENUE, SUITE A-2								NAME DATE CAD DWG NO.	
T/L H ONLY		DESIGN TEMPERATURE: 280F F		DESIGN TEMPERATURE: 120F F		GAINESVILLE, FL 32601								GRABIN BY: C & C, INC. 2-25-93	
		RULING SPAN: 820 F		RULING SPAN: 820 F		(352) 325-0544								DESIGN BY: R.L. HOLLAND 2-25-92 SCALE: 1"=200'H-1"=20'V	
		T/L VALUE: 39.5		T/L VALUE: 17.0										CHECKED BY: R.S. WOLFE 8-3-92 PROJECT NO.	
														ISS. REF. NO.	
														SHEET OF	
														DATE	





<b>LEGEND</b> --- CENTER LINE - - - 18 FT. RIGHT OF L. - - - 18 FT. LEFT OF L. --- PROPERTY LINE --- SURVEY 8/8 OR 1/1 PI --- T/L PI ONLY		<b>DESIGN INFORMATION</b> DESIGN LOADING: NESC "Light" And 60° F, No Ice, 35 PSF Extreme Wind CONTROLLING DESIGN TENSION Conductor: (Final) 230 kV, 3-1,590 kcmil, 54/19 ACSR, 10,900# D.T. @ 30° F, No Ice, No Wind DESIGN TEMPERATURE: 280° F RULING SPAN: 850 FL. "C" VALUE: 39.5		<b>ENGINEERS - SURVEYORS - PLANNERS</b> <b>CHANCE &amp; CAUSSEUX, INC.</b> 901 N.W. 8th AVENUE, SUITE A-2 GAINESVILLE, FL 32601 (352) 372-0566		<b>PARSONS MAIN, INC.</b> CHARLOTTE • BOSTON • PASADENA		<b>SEMINOLE ELECTRIC COOPERATIVE INCORPORATED</b> TAMPA, FLORIDA		<b>NO. 1</b> REVISIONS 0 ISSUED FOR CONSTRUCTION 1 CHANGES DUE TO SURVEYOR'S INFORMATION 2 AS-BUILT BY DATE RLM 10/10/89 RSW 7/94		<b>SEMINOLE PLANT - KEYSTONE-JEA DISTRICT</b> 230 kV TRANSMISSION LINE BLACK CREEK - DUVAL COUNTY LINE STATION 300+00 TO 334+55.06 DRAWN BY: C & C, INC. DESIGN BY: R.L. HOLLAND CHECKED BY: R.S. WOLFE APPROVED BY: DATE: 2-25-92 SCALE: 1"=200'H PROJECT NO.: SHEET NO.: REA REF:	
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