



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NORFOLK DISTRICT
FORT NORFOLK
803 FRONT STREET
NORFOLK VA 23510-1011

January 2, 2018

Southern Virginia Regulatory Section
NAO-2012-00080 / 13-V0408 (James River)

Virginia Electric & Power Company
c/o: Dominion Energy
Mr. Robert M. Blue; President & CEO
701 E. Cary Street; 12th Floor
Richmond, Virginia 23219

Dear Mr. Blue:

In accordance with Dominion's October 31, 2017 request for permit modification, Department of the Army Permit (NAO-2012-00080 / 13-V0408) issued July 3, 2017, and most recently modified August 22, 2017, is hereby modified once more to capture after-the-fact conversion impacts to 0.11 acres of forested to non-forested wetlands. These additional selective hand clearing (SHC) impacts bring the new total to 0.67 acres. In summary, this modification revises the acreage originally permitted at SHC1 from 0.01 to 0.08 acres and captures a new impact site, SHC9, which includes 0.04 acres of conversion. All other conditions of the original permit and August 22nd modification remain unchanged.

Pursuant to this modification, the Corps accepts Dominion's proof of purchase for 0.11 credits from Great Dismal Swamp Restoration Bank – Lewis Farm Bank on October 30, 2017 and therefore is not conditioning this modification to require any additional compensation.

Updated Jurisdictional Area Impacts Map, Figures 1 thru 23, dated October 17, 2017 were provided pursuant to this request. To avoid any confusion moving forward, an updated final set of complete permit drawings are enclosed.

If you have any questions concerning this matter or would like further assistance, please contact Randy Steffey at (757) 201-7579 or randy.l.steffey@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "William T. Walker", written over a white background.

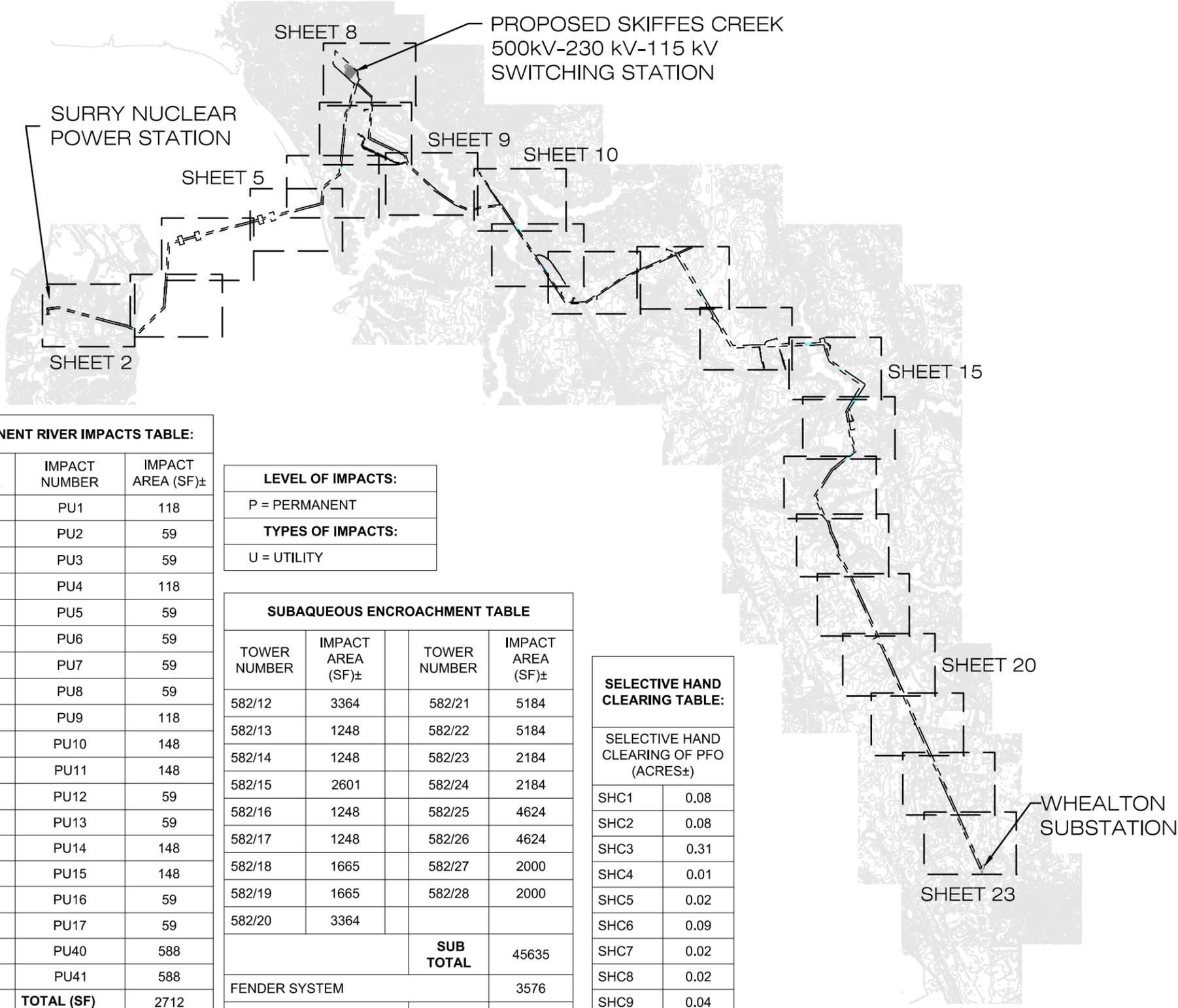
William T. Walker
Chief, Regulatory Branch

Enclosures

PERMIT DRAWINGS

SITE DATA:

PROJECT LENGTH	27.75 MILES ±
JAMES RIVER CROSSING LENGTH	21,715 L.F. ±
PROJECT AREA	632.13 ACRES ±
WETLANDS	71.80 ACRES ±
OPEN WATER	14.04 ACRES ±
STREAM CHANNELS	0.73 ACRES ± (4,477 L.F. ±)
TIDAL WETLANDS	1.45 ACRES ±
TIDAL STREAM CHANNELS	94.16 ACRES ± (420 L.F. ±)
JURISDICTIONAL DITCHES	1.07 ACRES ± (3,473 L.F. ±)
NON-JURISDICTIONAL DITCHES	0.01 ACRES ± (244.87 L.F. ±)



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

US Army Corps of Engineers
Norfolk District Regulatory
Office
Received by: RLS
Date: Oct 31, 2017

NOTES:

1. COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.
2. BASE MAPPING PROVIDED BY DOMINION VIRGINIA POWER AND NATURAL RESOURCES GROUP, INC.
3. THE LIMITS OF THE WATERS OF THE U.S., INCLUDING WETLANDS, CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS, CONFIRMATION # NAO-2011-01096, NAO-2012-01096, NAO-2013-00451.
4. SEE INDEX SHEET FOR TOWER FOUNDATION PILE IMPACTS (PERMANENT RIVER IMPACTS TABLE) AND TOWER FOOTPRINTS (SUBAQUEOUS ENCROACHMENT TABLE).



PERMANENT WETLANDS IMPACTS TABLE:		
TOWER NUMBER	IMPACT NUMBER	PSS/PEM (SF)±
285/463	PU18	10
58/276	PU19	10
58/277	PU20	10
58/278	PU21	10
58/279	PU22	10
58/280	PU23	10
58/281	PU24	10
58/282	PU25	10
58/287	PU26	10
58/288	PU27	10
58/289	PU28	10
58/290	PU29	10
292/594	PU30	10
292/595	PU31	10
292/598	PU32	10
292/606	PU33	10
292/607	PU34	10
292/612	PU35	10
292/625	PU36	10
292/626	PU37	10
292/627	PU38	10
292/628	PU39	10
58/292	PU42	10
58/296	PU43	10
58/300	PU44	10
209/546	PU 45	10
7/16	PU 46	21
	TOTAL (SF)	284-271
	TOTAL (AC)	0.01

PERMANENT RIVER IMPACTS TABLE:		
TOWER NUMBER	IMPACT NUMBER	IMPACT AREA (SF)±
582/12	PU1	118
582/13	PU2	59
582/14	PU3	59
582/15	PU4	118
582/16	PU5	59
582/17	PU6	59
582/18	PU7	59
582/19	PU8	59
582/20	PU9	118
582/21	PU10	148
582/22	PU11	148
582/23	PU12	59
582/24	PU13	59
582/25	PU14	148
582/26	PU15	148
582/27	PU16	59
582/28	PU17	59
FENDER	PU40	588
FENDER	PU41	588
	TOTAL (SF)	2712
	TOTAL (AC)	0.06

LEVEL OF IMPACTS:
P = PERMANENT
TYPES OF IMPACTS:
U = UTILITY

SUBAQUEOUS ENCROACHMENT TABLE			
TOWER NUMBER	IMPACT AREA (SF)±	TOWER NUMBER	IMPACT AREA (SF)±
582/12	3364	582/21	5184
582/13	1248	582/22	5184
582/14	1248	582/23	2184
582/15	2601	582/24	2184
582/16	1248	582/25	4624
582/17	1248	582/26	4624
582/18	1665	582/27	2000
582/19	1665	582/28	2000
582/20	3364		
		SUB TOTAL	45635
FENDER SYSTEM			3576
		TOTAL	49211

SELECTIVE HAND CLEARING TABLE:	
SHC	SELECTIVE HAND CLEARING OF PFO (ACRES±)
SHC1	0.08
SHC2	0.08
SHC3	0.31
SHC4	0.01
SHC5	0.02
SHC6	0.09
SHC7	0.02
SHC8	0.02
SHC9	0.04
TOTAL	0.67

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<p>5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6869 FAX: (757) 229-4507</p>	FOR:	JURISDICTIONAL AREA IMPACTS MAP	FIGURE: 1
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:
203446520	MAC/MGS/AWT	SS	CPG
			DATE:
			10/17/2017

SURRY NUCLEAR POWER STATION

LEGEND:

-  APPROXIMATE WETLAND LIMITS
-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  APPROXIMATE TIDAL WETLAND LIMITS
-  APPROXIMATE TIDAL STREAM CHANNEL LIMITS
-  APPROXIMATE JURISDICTIONAL DITCH LIMITS
-  APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
-  SELECTIVE HAND CLEARING
-  PROJECT LIMITS
-  RECONDUCTOR EXISTING TOWER
-  REMOVE AND REPLACE EXISTING TOWER
-  NEW TOWER

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MATCHLINE-SHEET 2
MATCHLINE-SHEET 3



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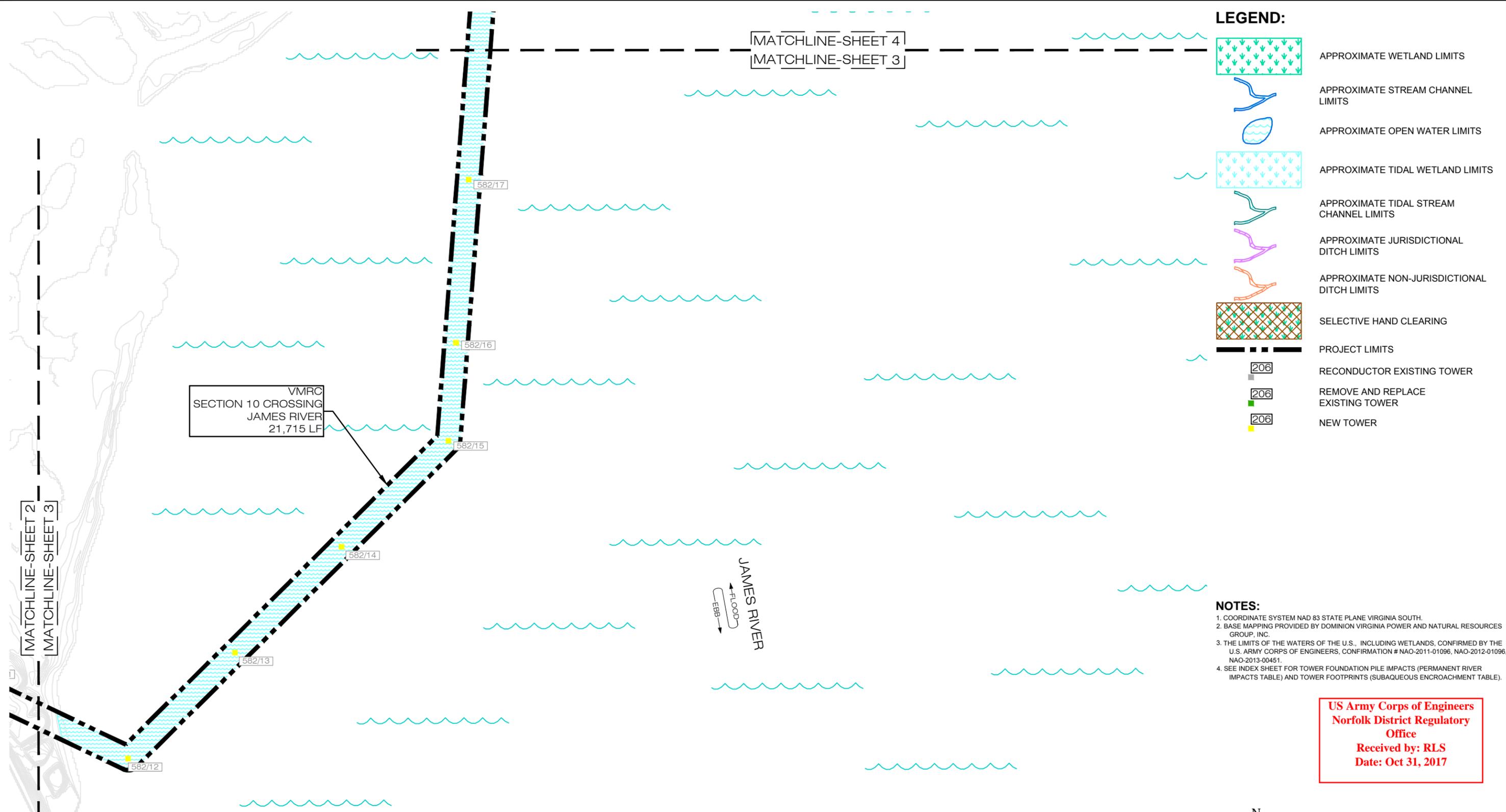
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 5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6889 FAX: (757) 229-4507	FOR:		JURISDICTIONAL AREA		FIGURE:	
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		IMPACTS MAP		2	
JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017		



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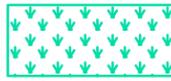
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JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017

JAMES RIVER
FLOOD
EBB

FENDER SYSTEM PU40
588 S.F. PERMANENT RIVER BOTTOM IMPACT
1,788 S.F. ENCROACHMENT OF SUBAQUEOUS BOTTOM

SECONDARY CHANNEL CROSSING
MINIMUM VERTICAL
CLEARANCE = 188 FT

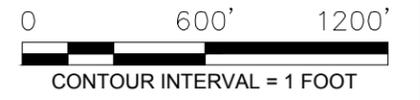
LEGEND:

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-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  APPROXIMATE TIDAL WETLAND LIMITS
-  APPROXIMATE TIDAL STREAM CHANNEL LIMITS
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-  RECONDUCTOR EXISTING TOWER
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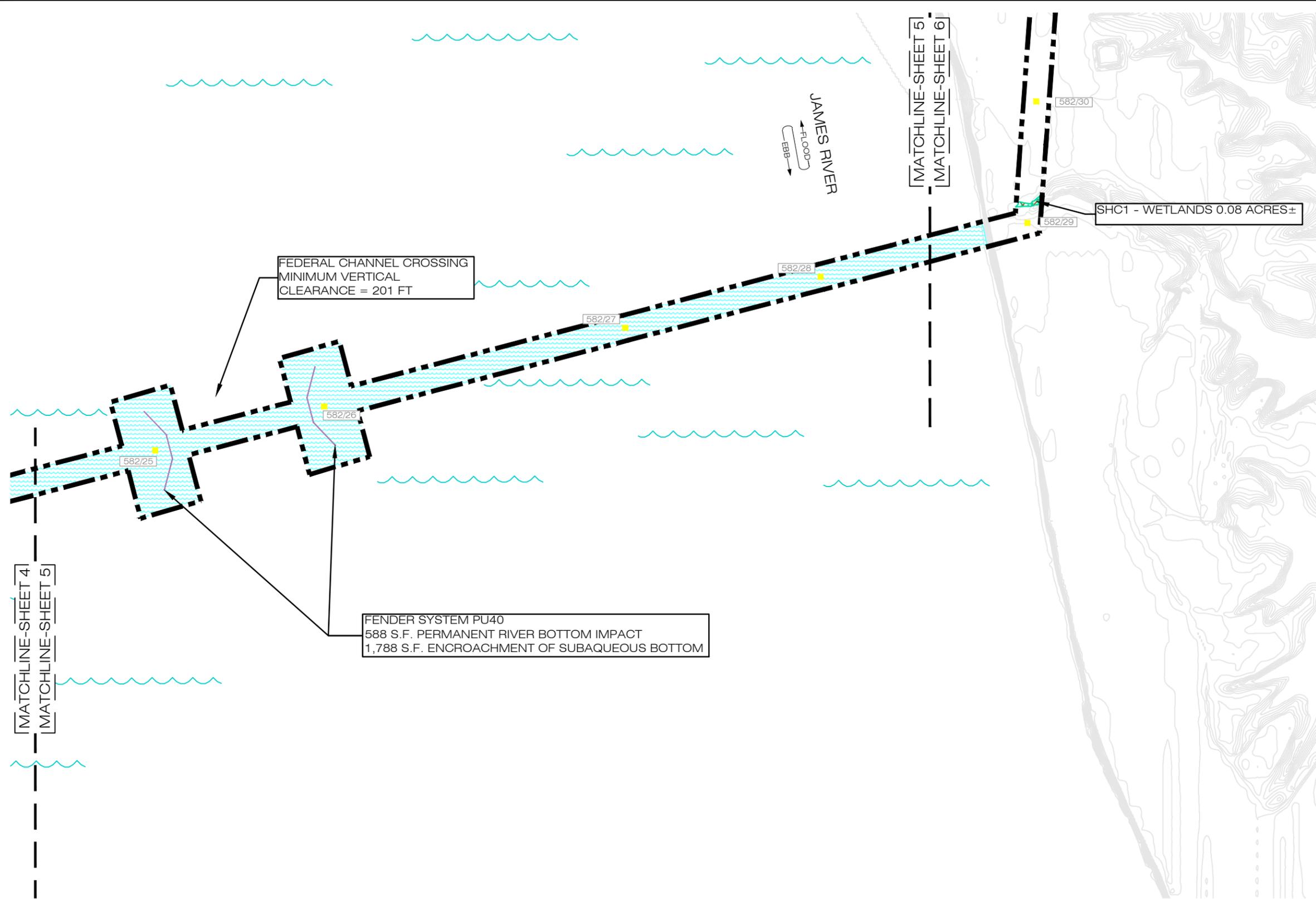
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	JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
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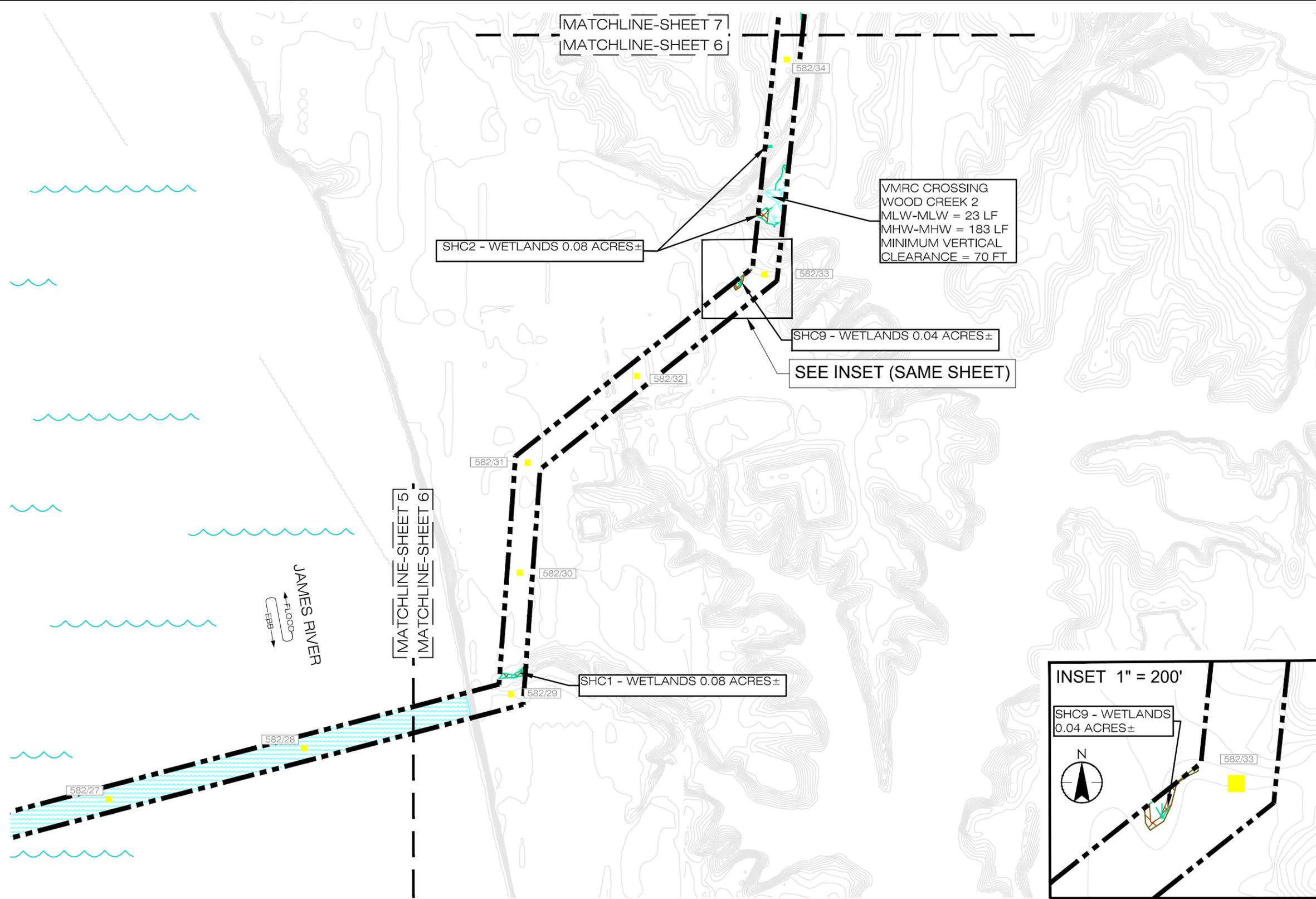
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		IMPACTS MAP		5	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:		
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LEGEND:

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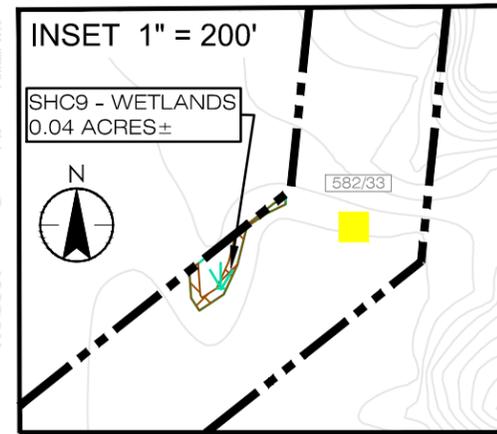
VMRC CROSSING
WOOD CREEK 2
MLW-MLW = 23 LF
MHW-MHW = 183 LF
MINIMUM VERTICAL
CLEARANCE = 70 FT

SHC2 - WETLANDS 0.08 ACRES±

SHC9 - WETLANDS 0.04 ACRES±

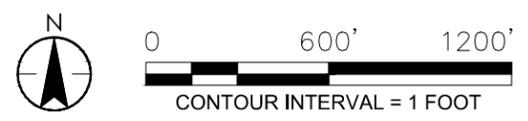
SEE INSET (SAME SHEET)

SHC1 - WETLANDS 0.08 ACRES±



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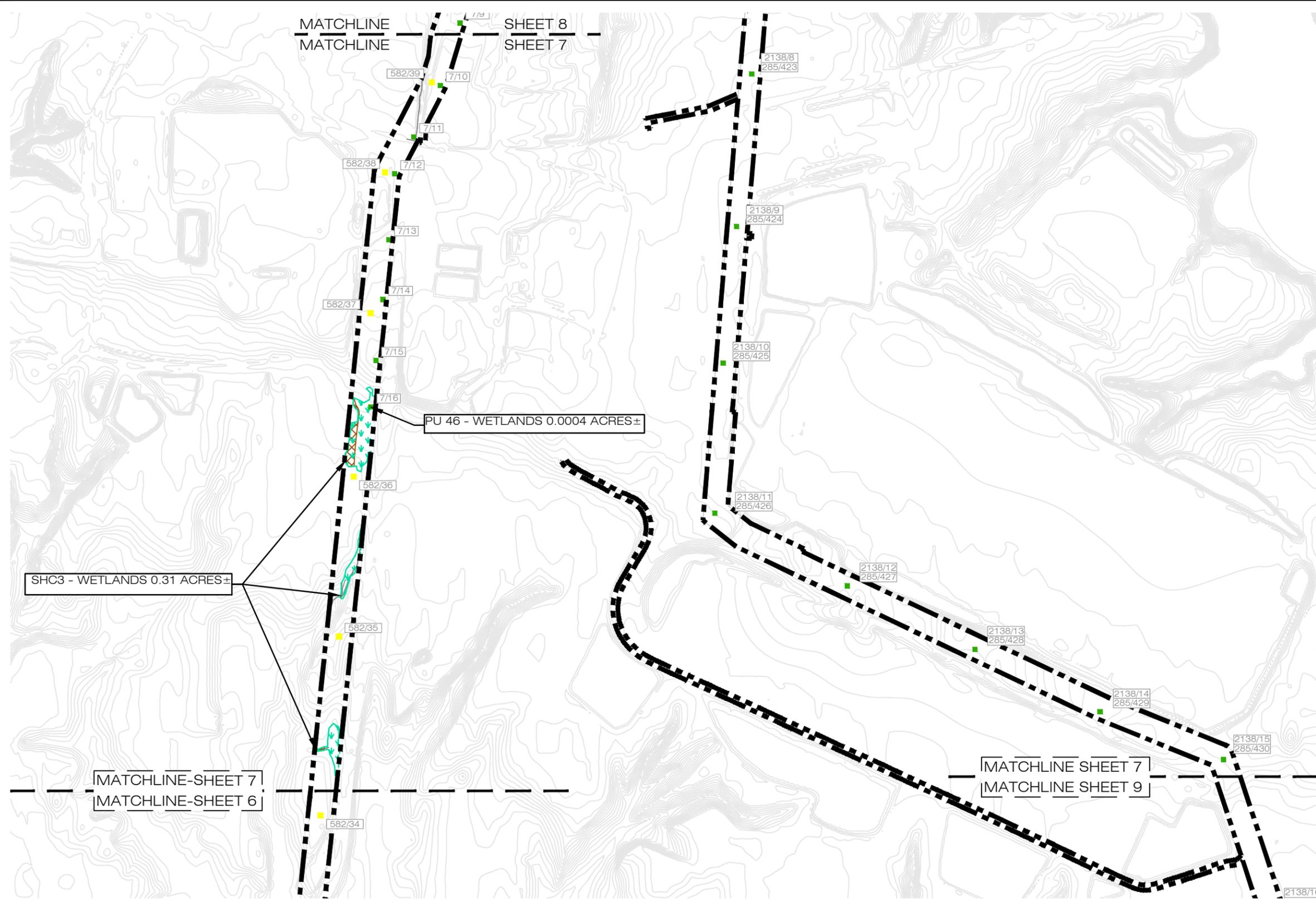
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	JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
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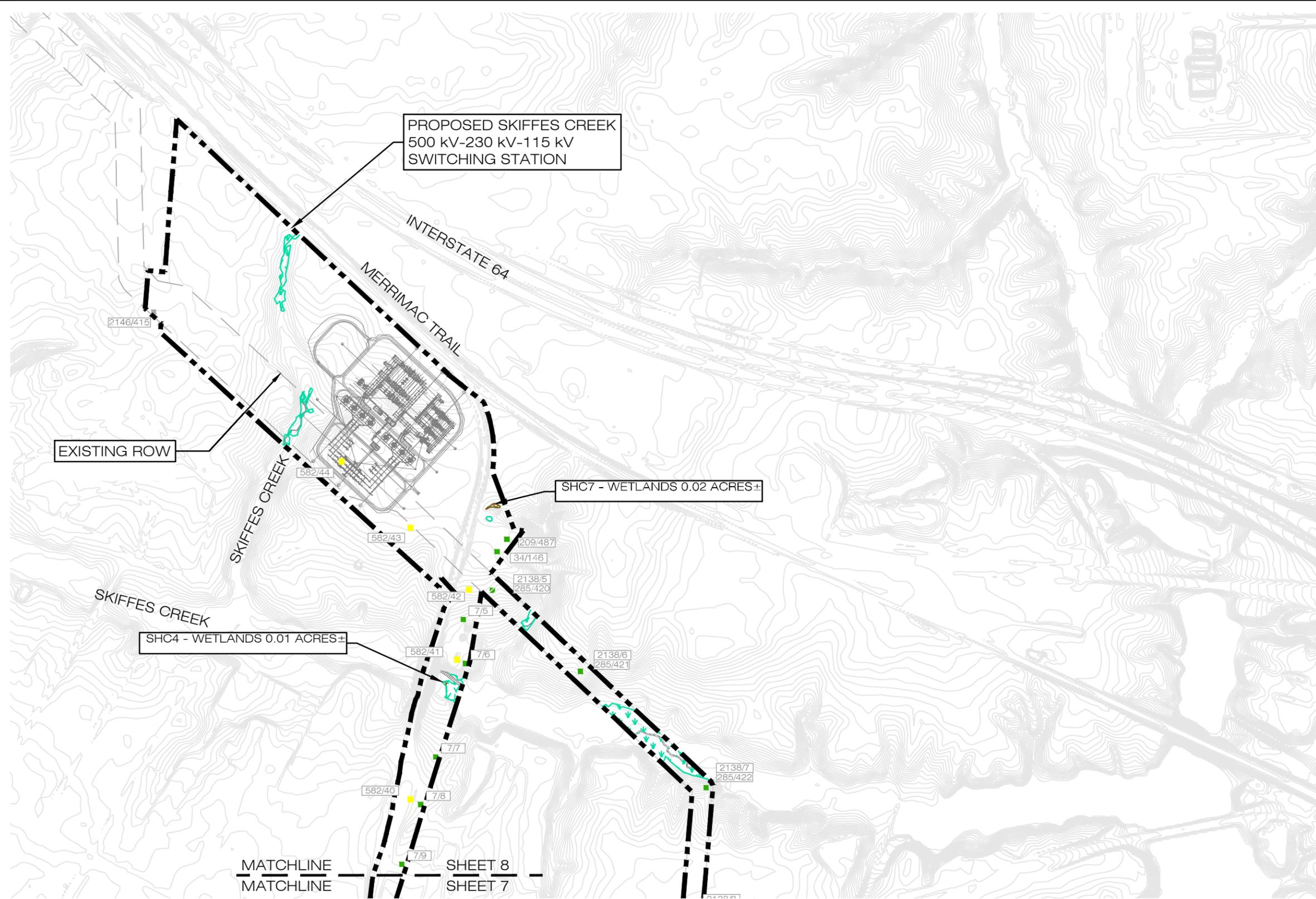
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- LEGEND:**
- APPROXIMATE WETLAND LIMITS
 - APPROXIMATE STREAM CHANNEL LIMITS
 - APPROXIMATE OPEN WATER LIMITS
 - APPROXIMATE TIDAL WETLAND LIMITS
 - APPROXIMATE TIDAL STREAM CHANNEL LIMITS
 - APPROXIMATE JURISDICTIONAL DITCH LIMITS
 - APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
 - SELECTIVE HAND CLEARING
 - PROJECT LIMITS
 - RECONDUCTOR EXISTING TOWER
 - REMOVE AND REPLACE EXISTING TOWER
 - NEW TOWER

- NOTES:**
1. COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.
 2. BASE MAPPING PROVIDED BY DOMINION VIRGINIA POWER AND NATURAL RESOURCES GROUP, INC.
 3. THE LIMITS OF THE WATERS OF THE U.S., INCLUDING WETLANDS, CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS, CONFIRMATION # NAO-2011-01096, NAO-2012-01096, NAO-2013-00451.
 4. SEE INDEX SHEET FOR TOWER FOUNDATION PILE IMPACTS (PERMANENT RIVER IMPACTS TABLE) AND TOWER FOOTPRINTS (SUBAQUEOUS ENCROACHMENT TABLE).

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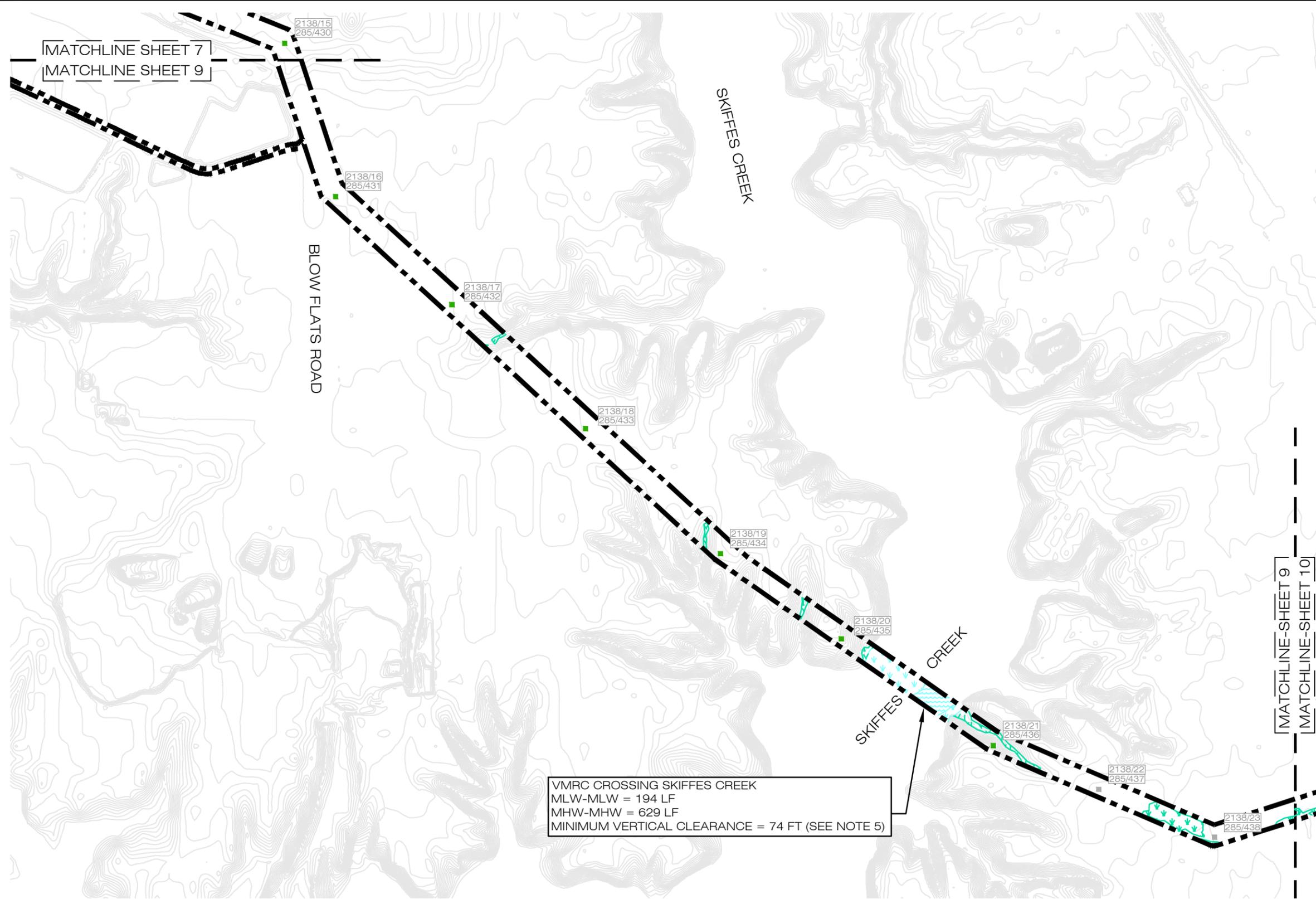
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<p>5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6869 FAX: (757) 229-4507</p>	FOR:		FIGURE:	
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		8	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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- LEGEND:**
- APPROXIMATE WETLAND LIMITS
 - APPROXIMATE STREAM CHANNEL LIMITS
 - APPROXIMATE OPEN WATER LIMITS
 - APPROXIMATE TIDAL WETLAND LIMITS
 - APPROXIMATE TIDAL STREAM CHANNEL LIMITS
 - APPROXIMATE JURISDICTIONAL DITCH LIMITS
 - APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
 - SELECTIVE HAND CLEARING
 - PROJECT LIMITS
 - RECONDUCTOR EXISTING TOWER
 - REMOVE AND REPLACE EXISTING TOWER
 - NEW TOWER

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- NOTES:**
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 4. SEE INDEX SHEET FOR TOWER FOUNDATION PILE IMPACTS (PERMANENT RIVER IMPACTS TABLE) AND TOWER FOOTPRINTS (SUBAQUEOUS ENCROACHMENT TABLE).
 5. THE SKIFFES CREEK CROSSING WILL BE CONSTRUCTED WITH A TEMPORARY CONDITION WHERE THE NEW CONDUCTOR FOR LINE 2138 WILL BE STRUNG ON THE EXISTING LINE 285 LATTICE TOWERS HAVING A TEMPORARY MINIMUM VERTICAL CLEARANCE >48 FT ABOVE MHW WHICH WILL BE AT/OR ABOVE THE EXISTING MINIMUM VERTICAL CLEARANCE OF LINE 285. THIS CONDITION IS EXPECTED TO LAST APPROXIMATELY THREE MONTHS, AT WHICH POINT THE NEW POLE STRUCTURES WILL BE ERRECTED AND BOTH LINES MOVED TO THE PROPOSED MINIMUM VERTICAL CLEARANCE OF 74 FT ABOVE MHW.

VMRC CROSSING SKIFFES CREEK
 MLW-MLW = 194 LF
 MHW-MHW = 629 LF
 MINIMUM VERTICAL CLEARANCE = 74 FT (SEE NOTE 5)

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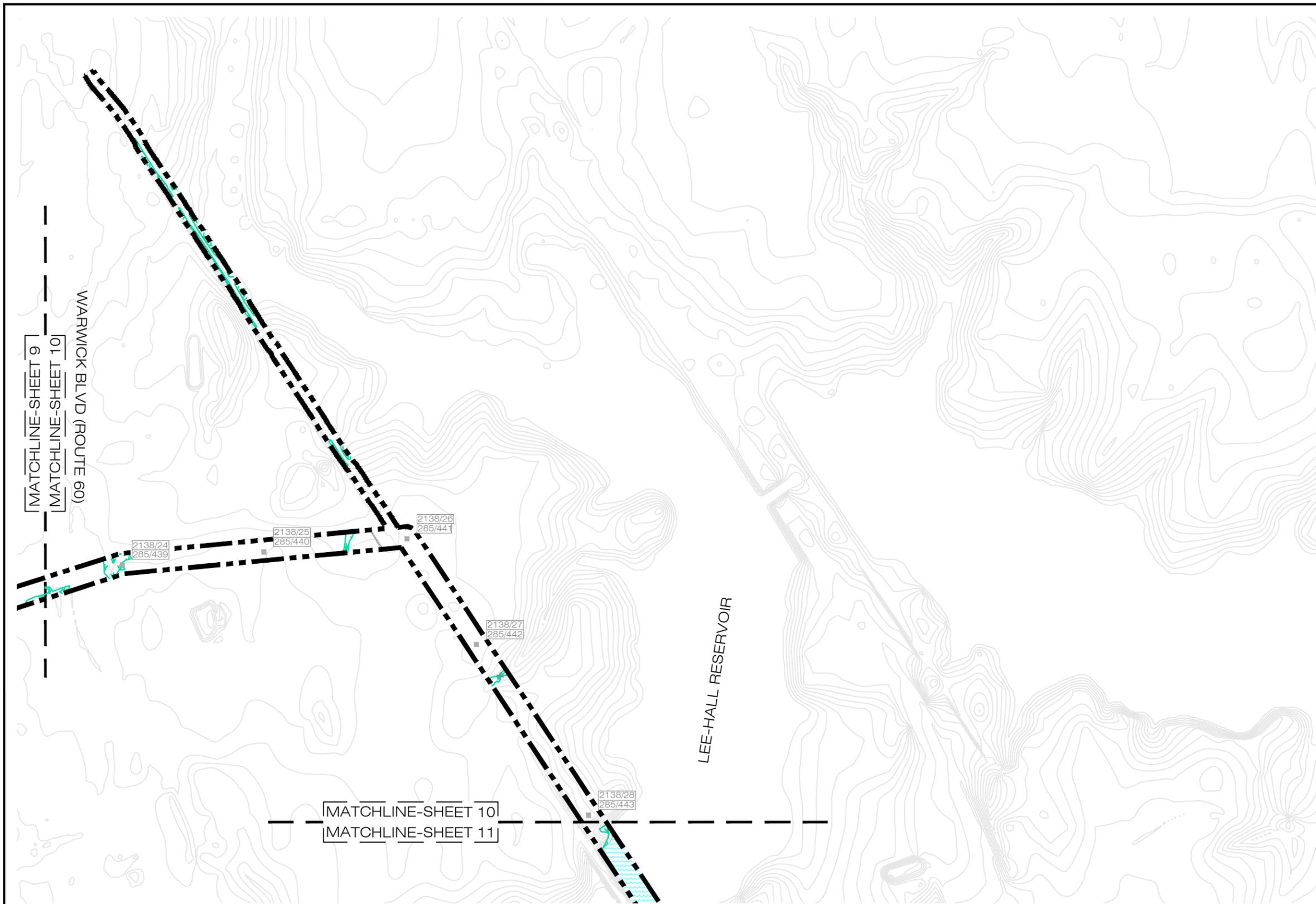
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	FOR:		FIGURE:		
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		9		
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LEGEND:

-  APPROXIMATE WETLAND LIMITS
-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  APPROXIMATE TIDAL WETLAND LIMITS
-  APPROXIMATE TIDAL STREAM CHANNEL LIMITS
-  APPROXIMATE JURISDICTIONAL DITCH LIMITS
-  APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
-  SELECTIVE HAND CLEARING
-  PROJECT LIMITS
-  RECONDUCTOR EXISTING TOWER
-  REMOVE AND REPLACE EXISTING TOWER
-  NEW TOWER

NOTES:

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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		JOB NUMBER: 203446520		DRAWN BY: MAC/MGS/AWT
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MATCHLINE-SHEET 10
MATCHLINE-SHEET 11

VMRC CROSSING
LEE-HALL RESERVOIR
CROSSING WIDTH = 49 LF
MINIMUM VERTICAL
CLEARANCE = >26 FT

LEGEND:

-  APPROXIMATE WETLAND LIMITS
-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  APPROXIMATE TIDAL WETLAND LIMITS
-  APPROXIMATE TIDAL STREAM CHANNEL LIMITS
-  APPROXIMATE JURISDICTIONAL DITCH LIMITS
-  APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
-  SELECTIVE HAND CLEARING
- PROJECT LIMITS
-  RECONDUCTOR EXISTING TOWER
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FOR:
SURREY - SKIFFES CREEK - WHEALTON
SURREY COUNTY, JAMES CITY COUNTY,
YORK COUNTY, CITY OF NEWPORT NEWS
AND CITY OF HAMPTON, VIRGINIA

JOB NUMBER:
203446520

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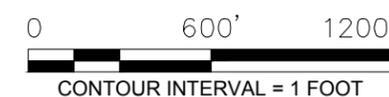
JURISDICTIONAL AREA
IMPACTS MAP

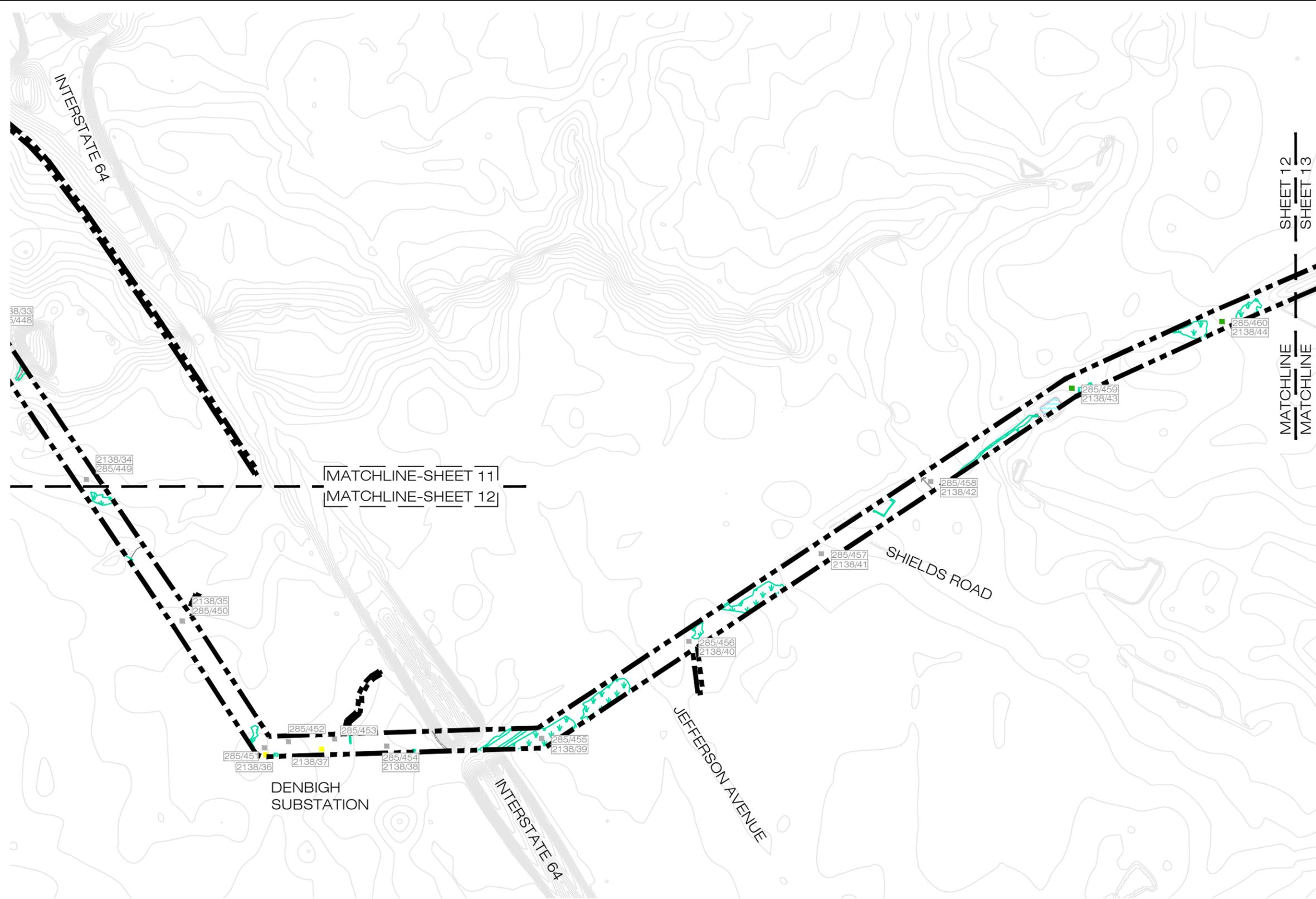
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SS

APPROVED BY:
CPG

FIGURE:
11

DATE:
10/17/2017





LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

- NOTES:**
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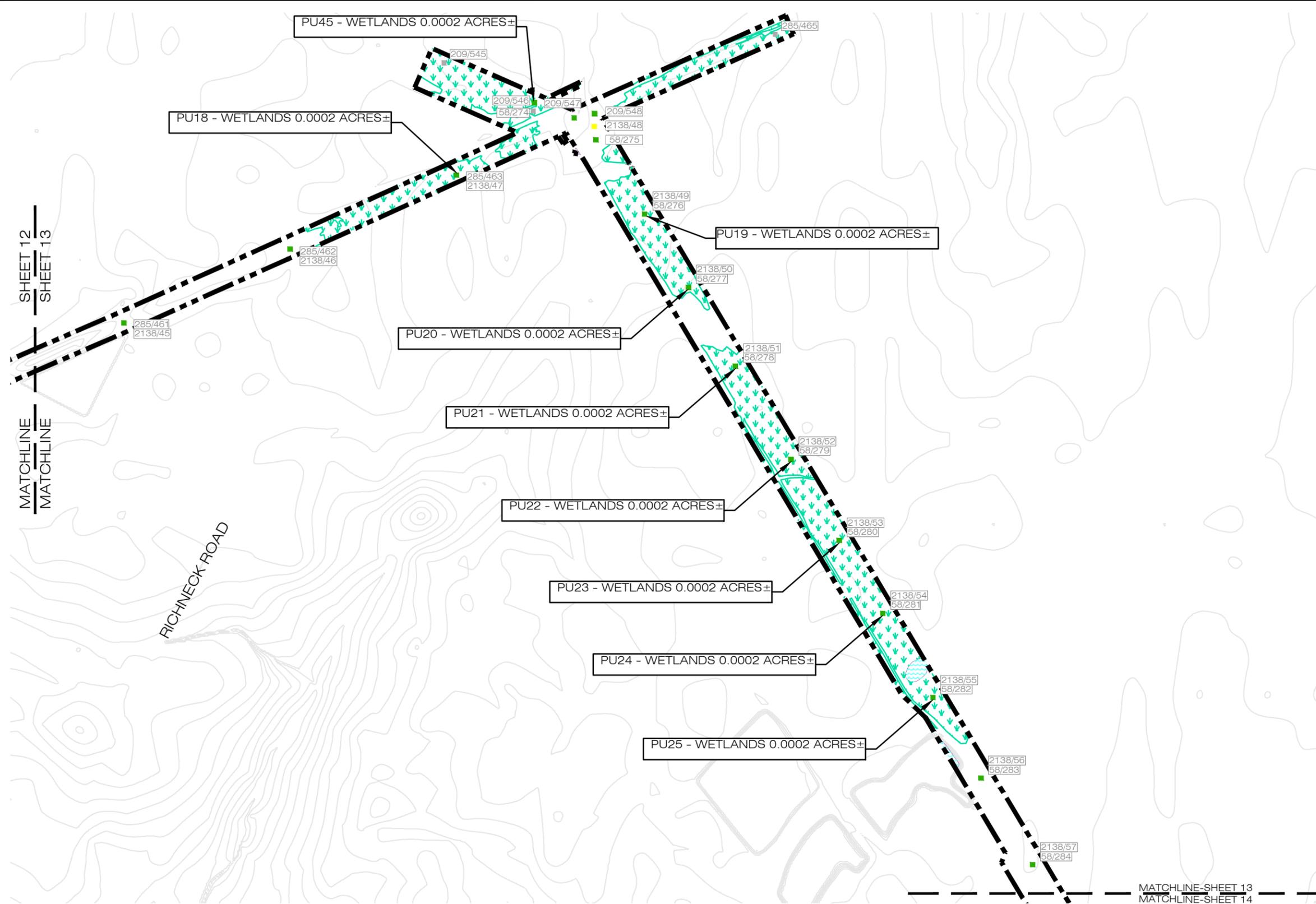
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	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
	203446520	MAC/MGS/AWT	SS	CPG	10/17/2017	



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
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- NEW TOWER

- NOTES:**
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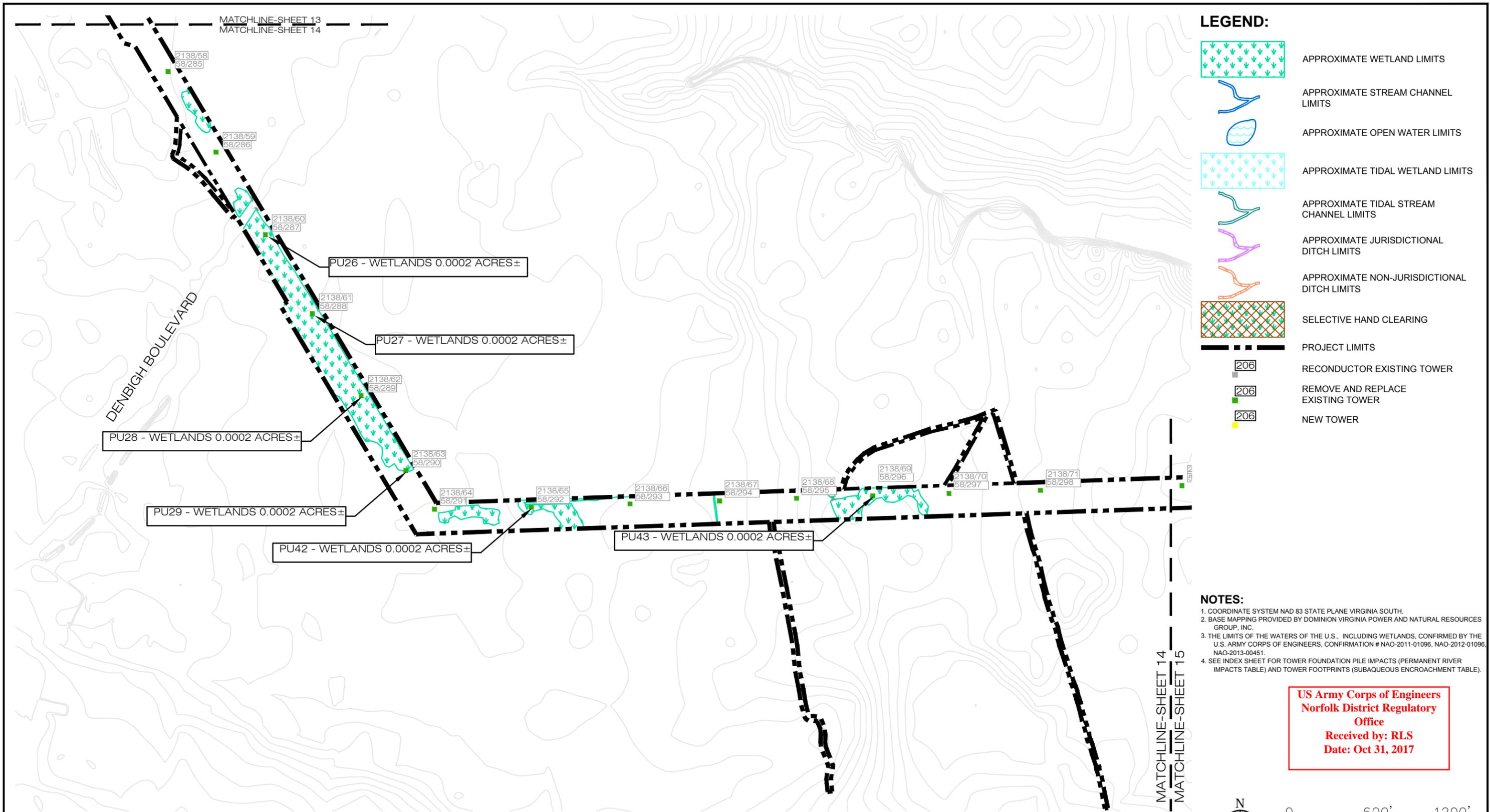
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MATCHLINE-SHEET 13
MATCHLINE-SHEET 14



	FOR:		FIGURE:		
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		13		
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LEGEND:

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- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
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- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

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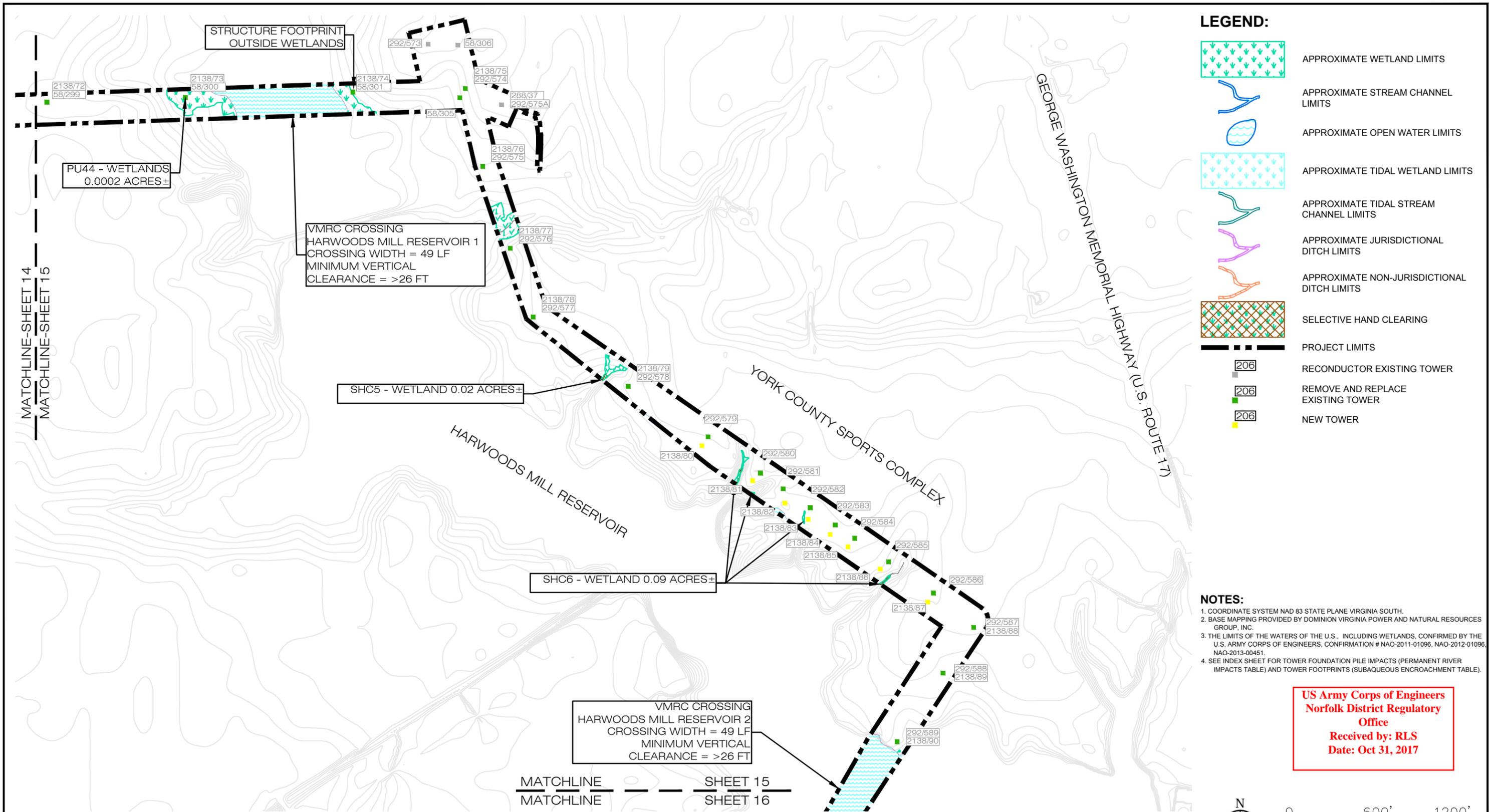
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<p>5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6869 FAX: (757) 229-4507</p>	FOR: SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		JURISDICTIONAL AREA IMPACTS MAP		FIGURE: 14
	JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017



LEGEND:

-  APPROXIMATE WETLAND LIMITS
-  APPROXIMATE STREAM CHANNEL LIMITS
-  APPROXIMATE OPEN WATER LIMITS
-  APPROXIMATE TIDAL WETLAND LIMITS
-  APPROXIMATE TIDAL STREAM CHANNEL LIMITS
-  APPROXIMATE JURISDICTIONAL DITCH LIMITS
-  APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
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NOTES:

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MATCHLINE-SHEET 14
MATCHLINE-SHEET 15

MATCHLINE SHEET 15
MATCHLINE SHEET 16

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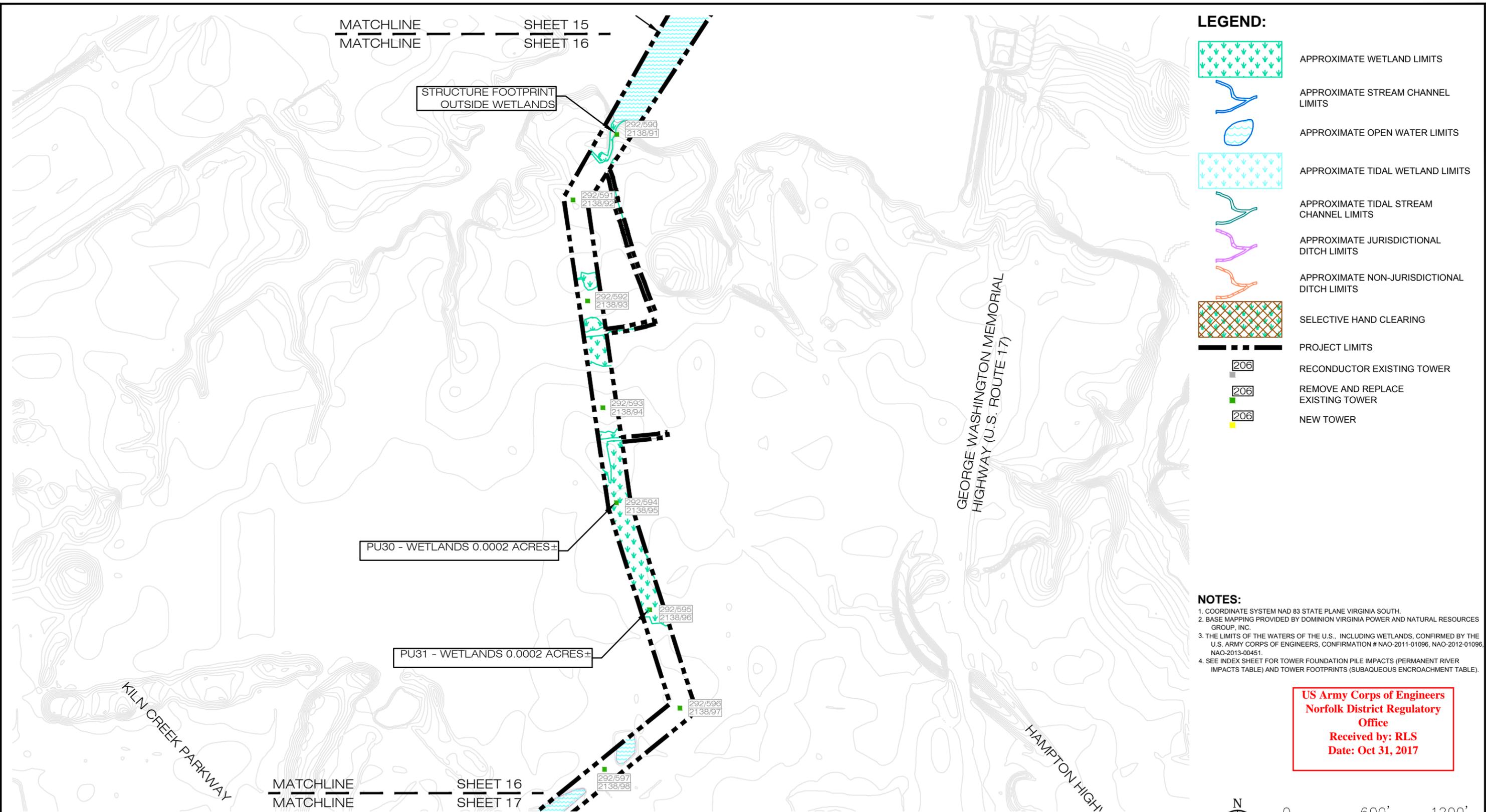
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		IMPACTS MAP		15	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:		
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017		



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
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- NOTES:**
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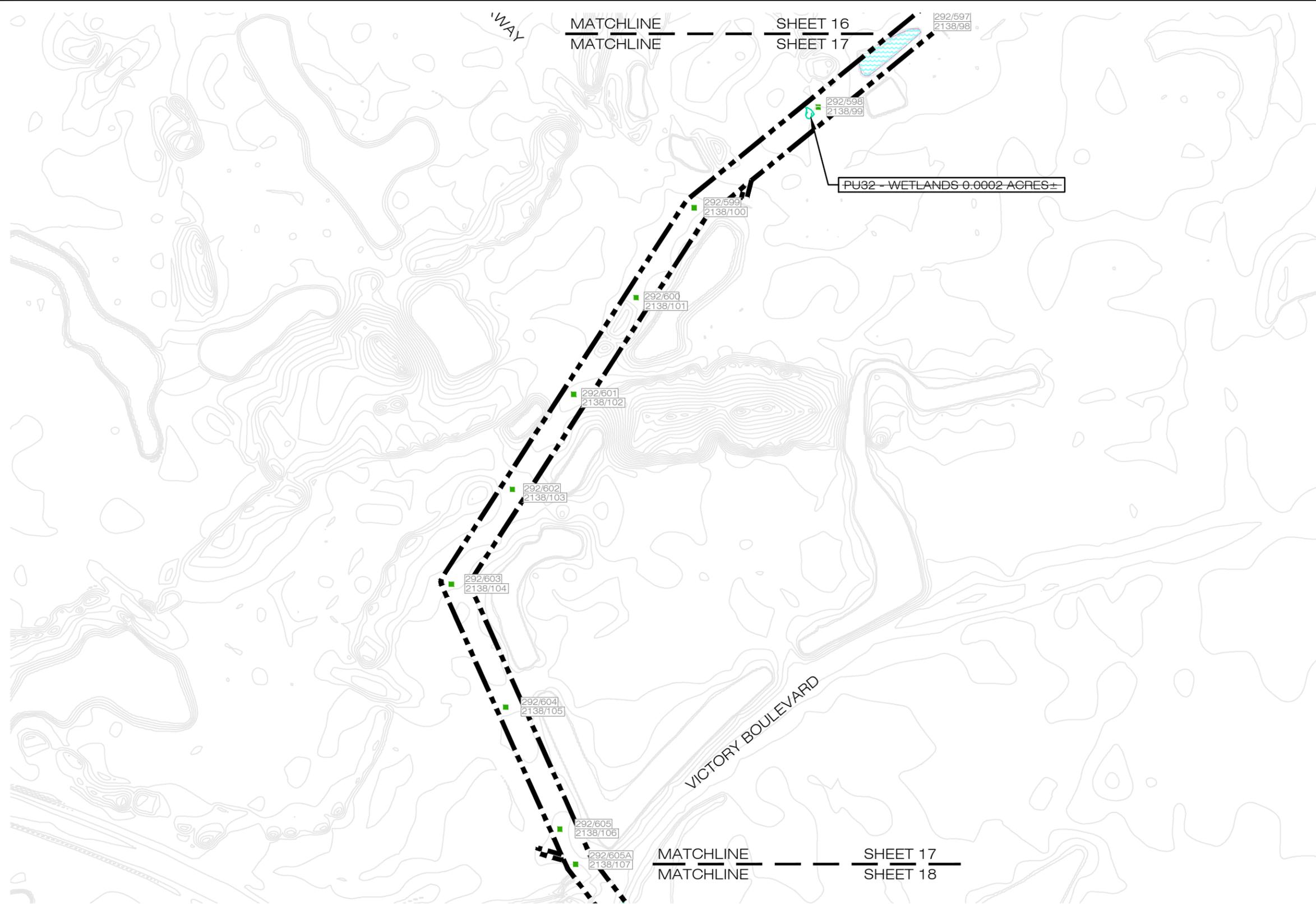
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<p>5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6889 FAX: (757) 229-4507</p>	FOR:		FIGURE:	
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		16	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

- NOTES:**
- COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.
 - BASE MAPPING PROVIDED BY DOMINION VIRGINIA POWER AND NATURAL RESOURCES GROUP, INC.
 - THE LIMITS OF THE WATERS OF THE U.S., INCLUDING WETLANDS, CONFIRMED BY THE U.S. ARMY CORPS OF ENGINEERS, CONFIRMATION # NAO-2011-01096, NAO-2012-01096, NAO-2013-00451.
 - SEE INDEX SHEET FOR TOWER FOUNDATION PILE IMPACTS (PERMANENT RIVER IMPACTS TABLE) AND TOWER FOOTPRINTS (SUBAQUEOUS ENCROACHMENT TABLE).

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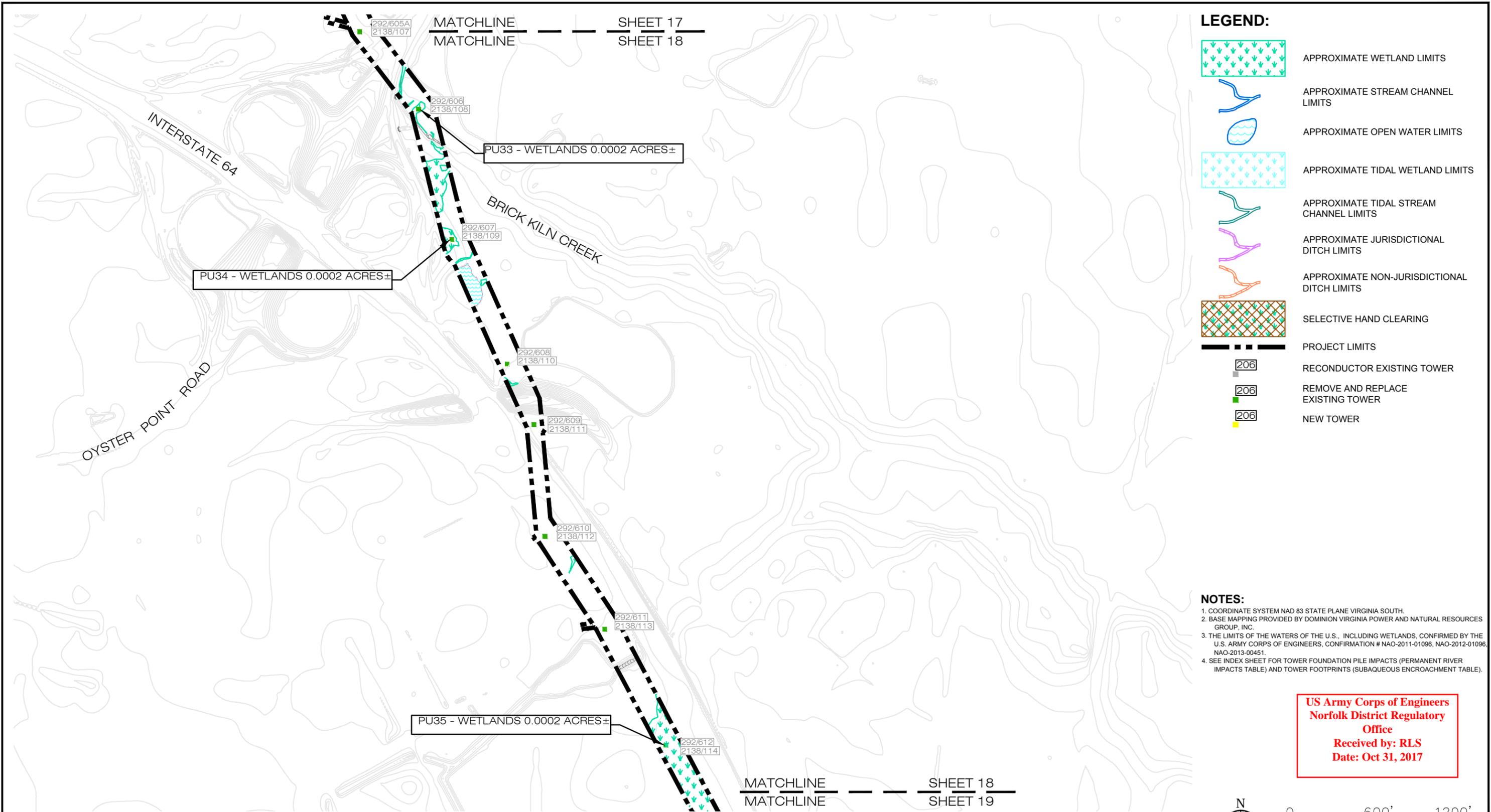
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<p>5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6889 FAX: (757) 229-4507</p>	FOR:		JURISDICTIONAL AREA		FIGURE:	
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		IMPACTS MAP		17	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:		
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017		



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

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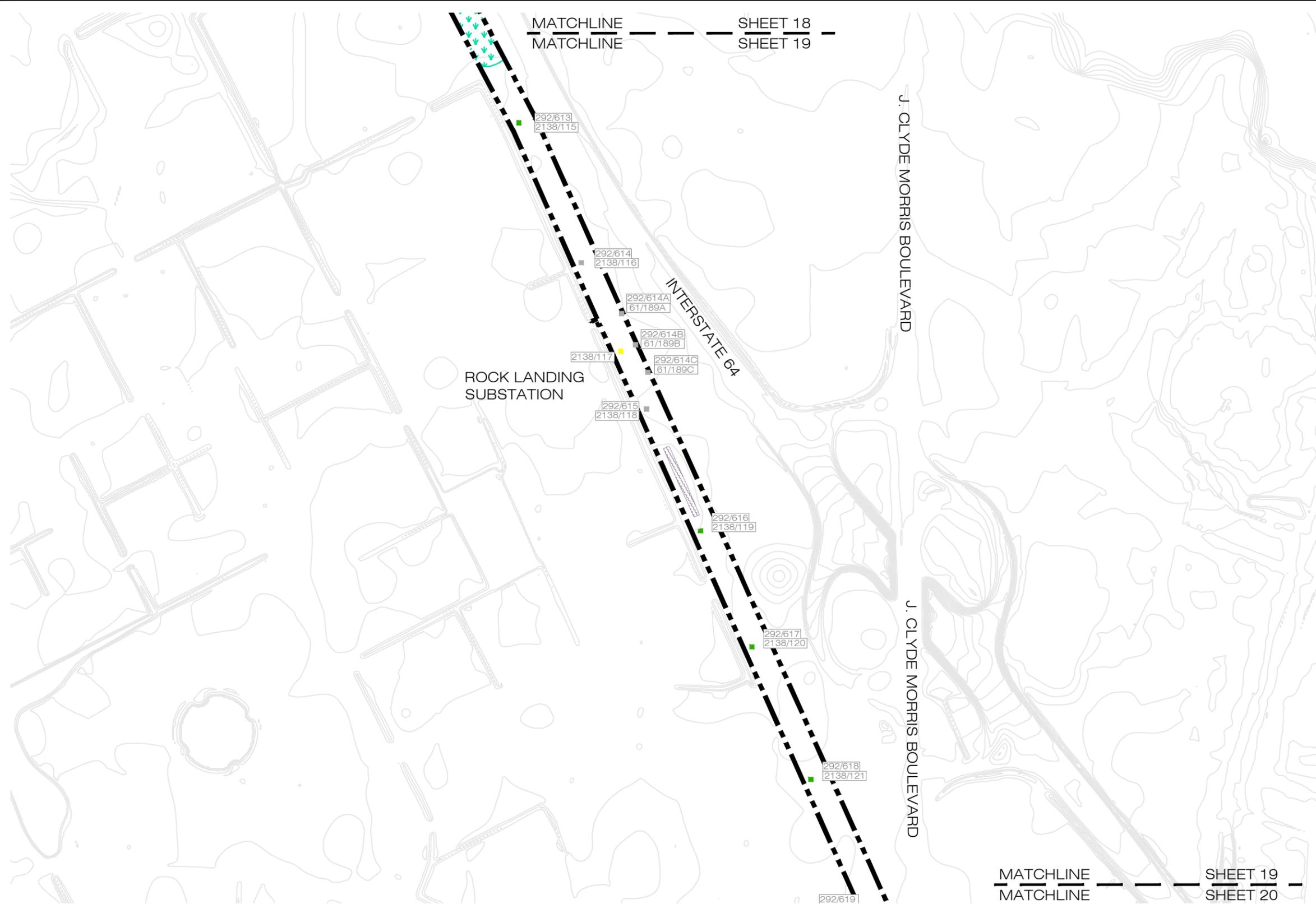
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	JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- RECONDUCTOR EXISTING TOWER
- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

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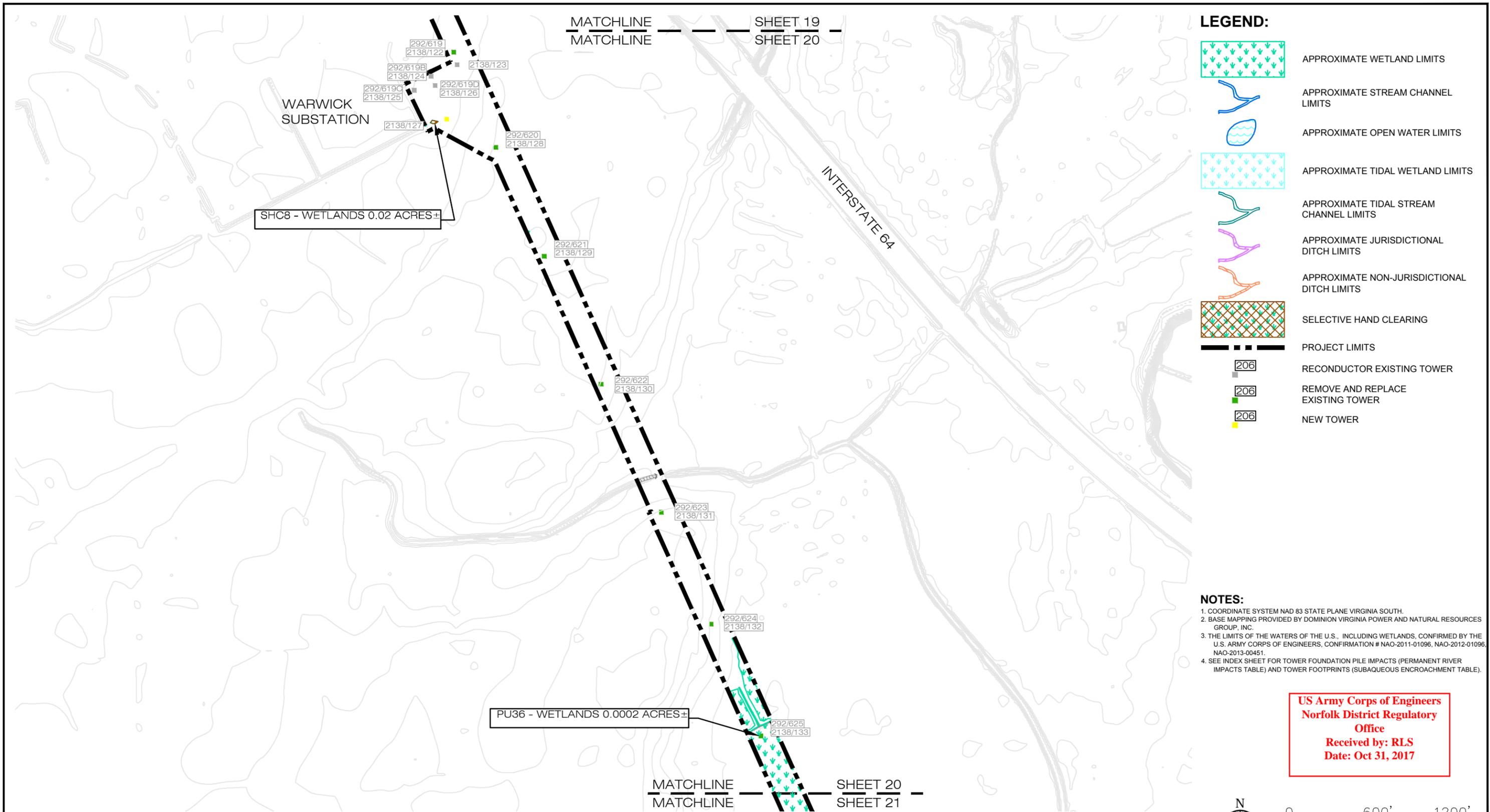
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		19	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
- APPROXIMATE NON-JURISDICTIONAL DITCH LIMITS
- SELECTIVE HAND CLEARING
- PROJECT LIMITS
- 206 RECONDUCTOR EXISTING TOWER
- 206 REMOVE AND REPLACE EXISTING TOWER
- 206 NEW TOWER

NOTES:

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4. SEE INDEX SHEET FOR TOWER FOUNDATION PILE IMPACTS (PERMANENT RIVER IMPACTS TABLE) AND TOWER FOOTPRINTS (SUBAQUEOUS ENCROACHMENT TABLE).

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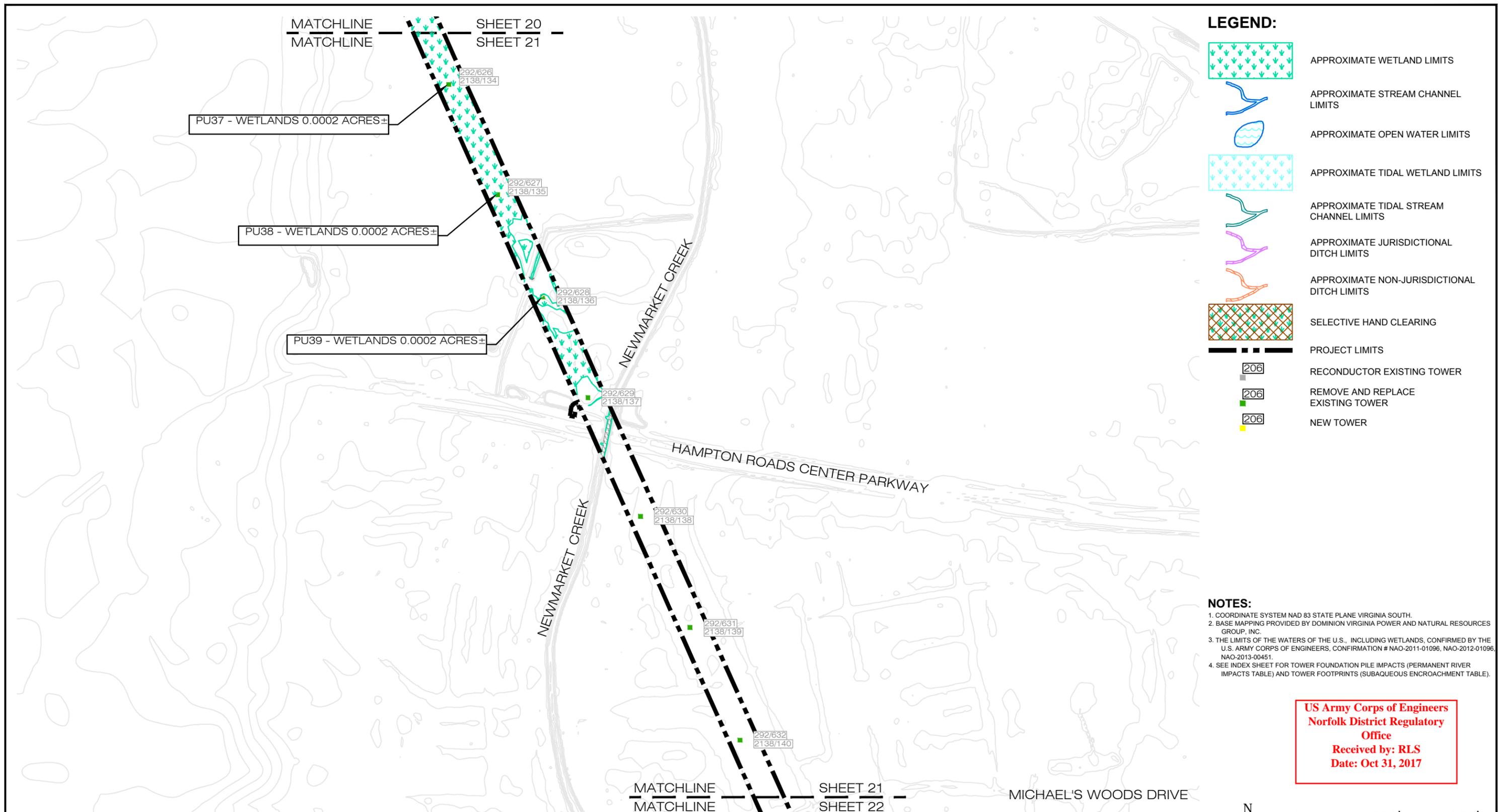
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		IMPACTS MAP		20
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017	



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
- APPROXIMATE JURISDICTIONAL DITCH LIMITS
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- PROJECT LIMITS
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- REMOVE AND REPLACE EXISTING TOWER
- NEW TOWER

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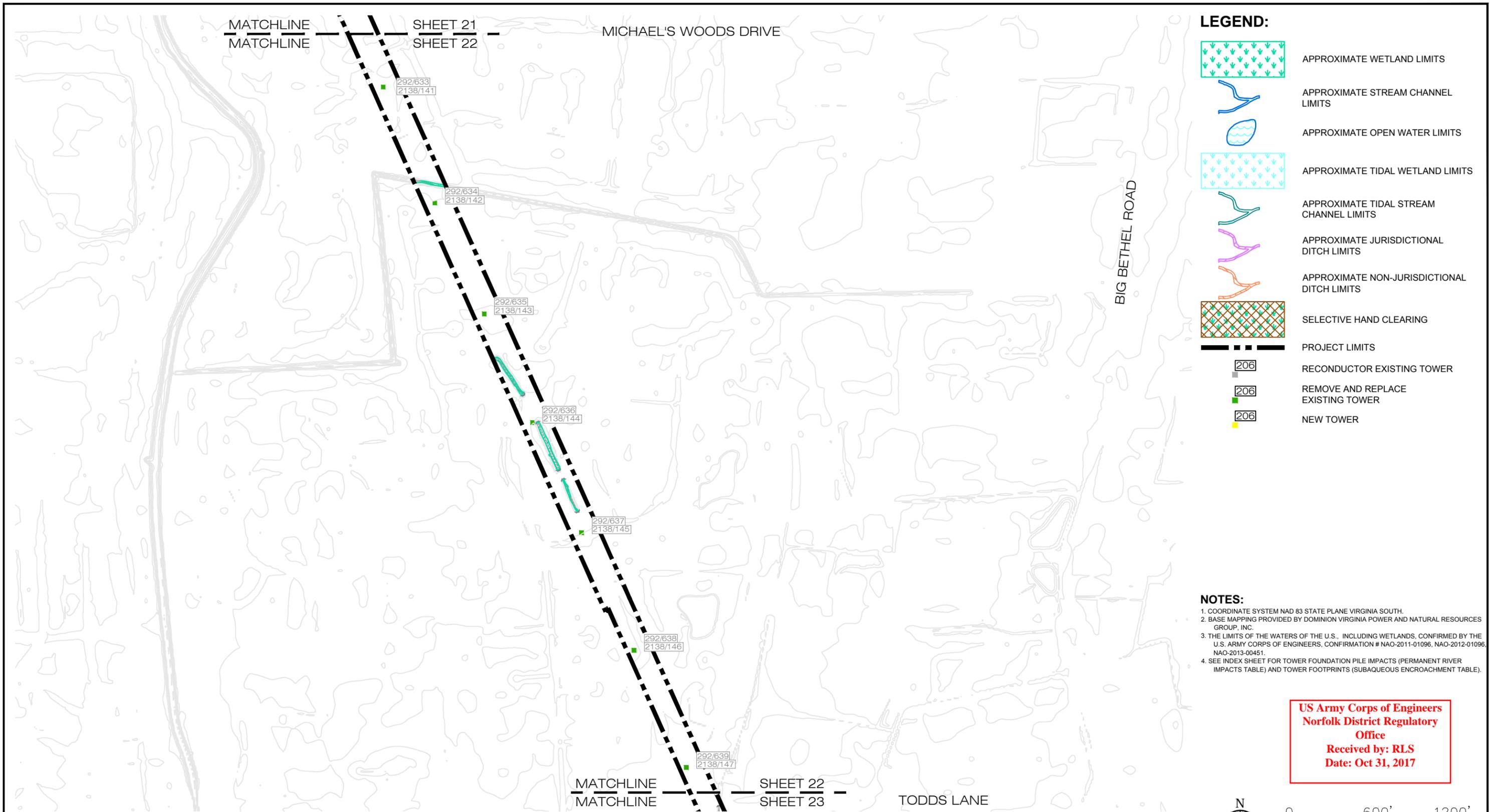
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		21	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
203446520	MAC/MGS/AWT	SS	CPG	10/17/2017



LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
- APPROXIMATE OPEN WATER LIMITS
- APPROXIMATE TIDAL WETLAND LIMITS
- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
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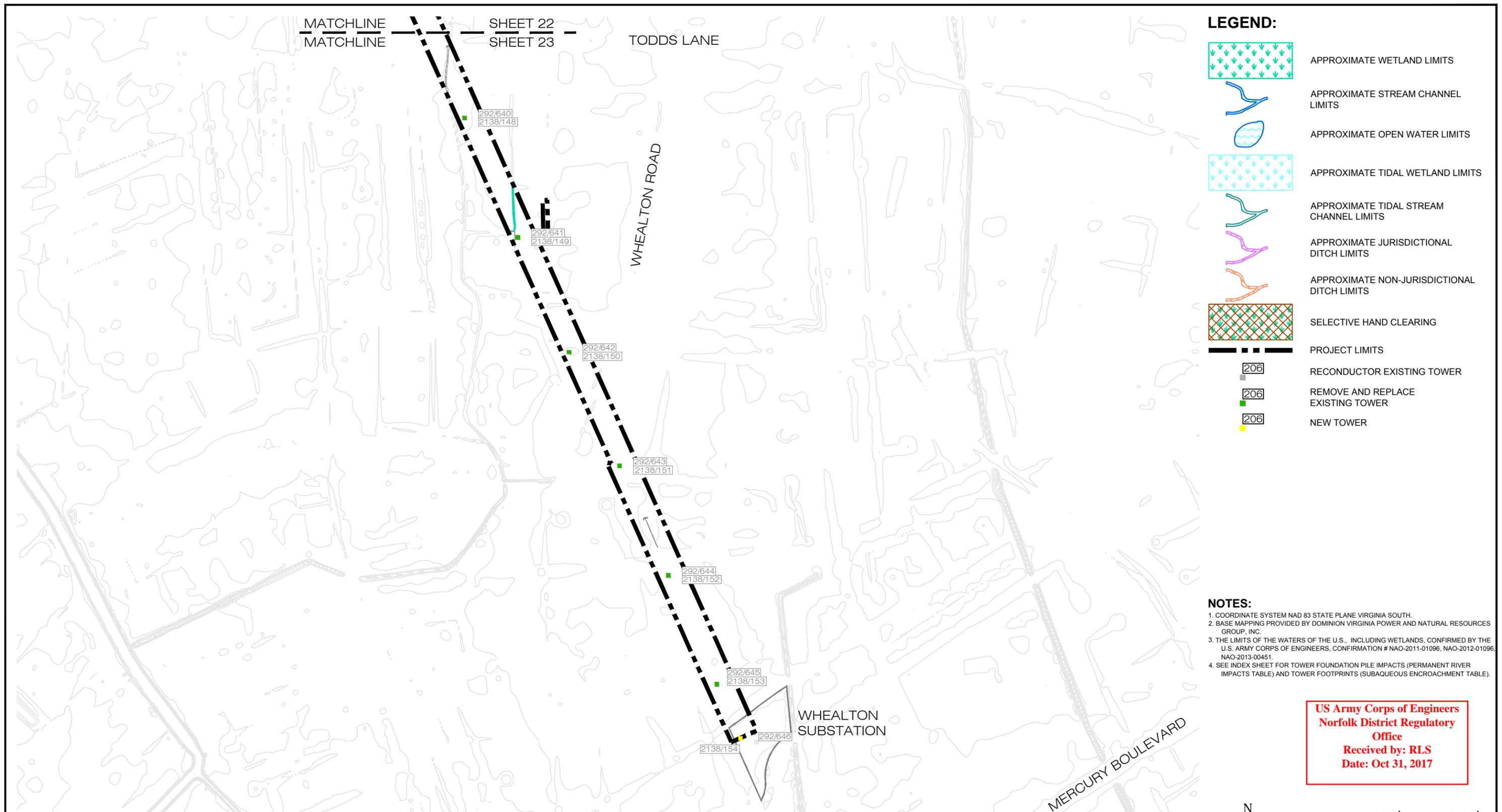
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		22	
JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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LEGEND:

- APPROXIMATE WETLAND LIMITS
- APPROXIMATE STREAM CHANNEL LIMITS
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- APPROXIMATE TIDAL STREAM CHANNEL LIMITS
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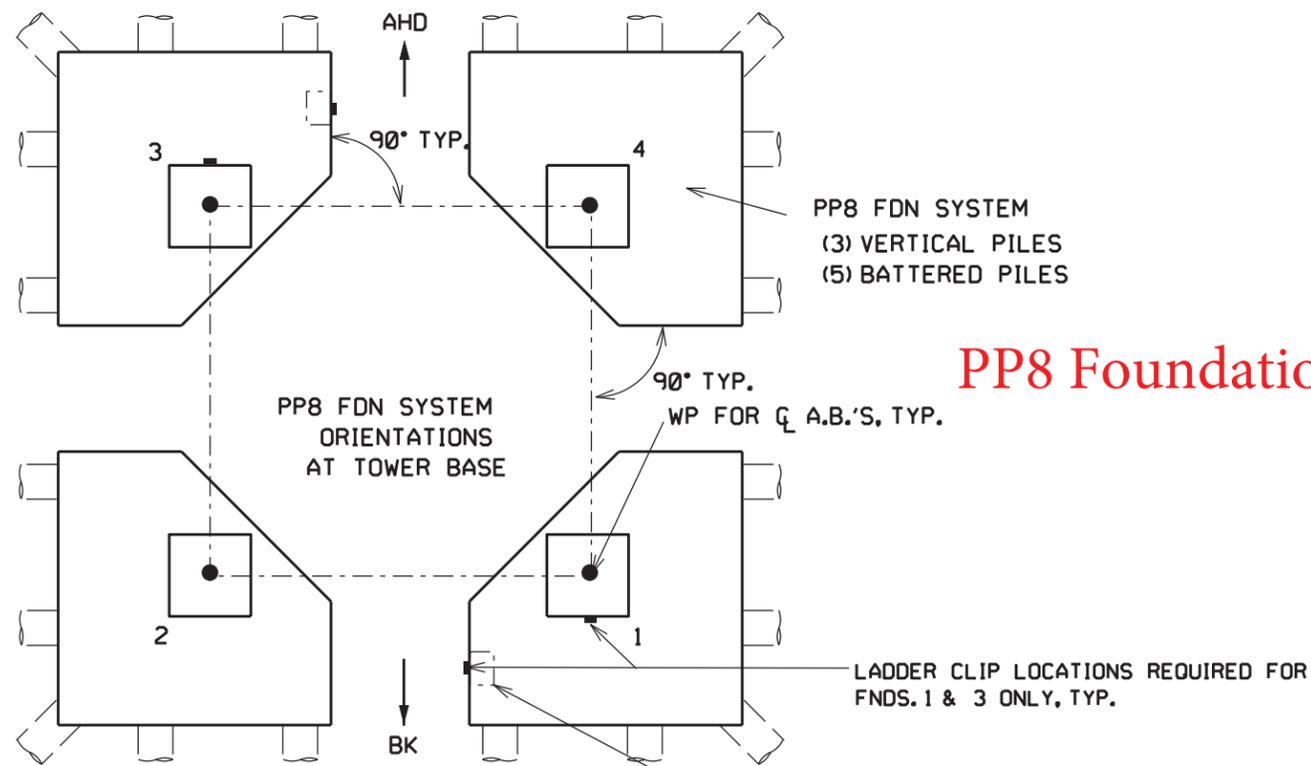
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	JOB NUMBER: 203446520	DRAWN BY: MAC/MGS/AWT	CHECKED BY: SS	APPROVED BY: CPG	DATE: 10/17/2017

James River Foundation Details

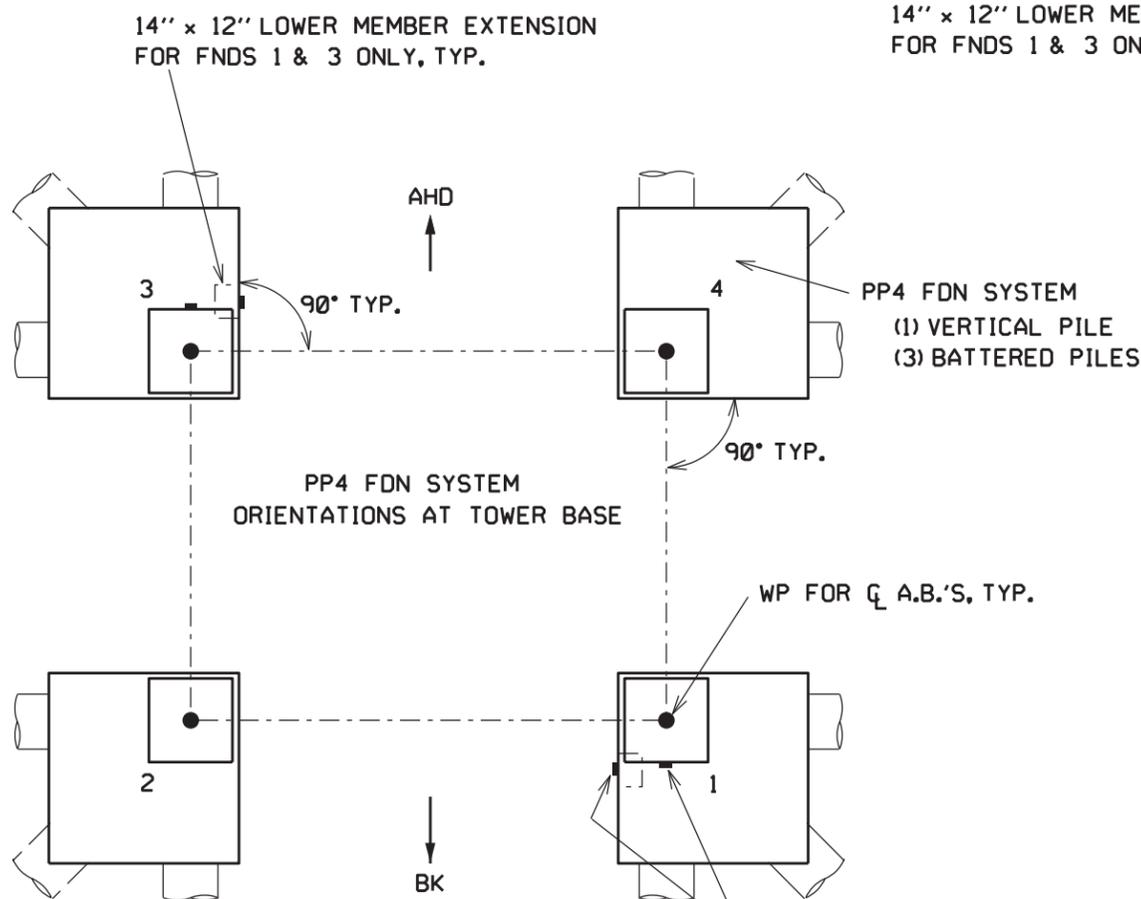
NOTE:

1. LADDER CLIPS TO BE INSTALLED ON FNDS.1 & 3 ONLY.
2. 14" X 12" REINFORCED CONCRETE MEMBER EXTENSION IS REQUIRED ON FNDS.1 & 3 WHERE LADDER CLIPS ARE SPECIFIED.
3. ON A SPECIFIED FOUNDATION, TWO LADDER CLIPS WILL BE REQUIRED ON THE PEDESTAL, CAP AND THE 14" X 12" LOWER MEMBER EXTENSION. A TOTAL OF SIX LADDER CLIPS WILL BE REQUIRED ON A SPECIFIED FOUNDATION.
4. FOR LADDER CLIP INSERT INSTALLATION DETAILS, SEE DWGS.1-582-1-29 & 1-582-1-63. FOR LADDER CLIP INSTALLATION DETAILS, SEE DWG.1-582-1-62.



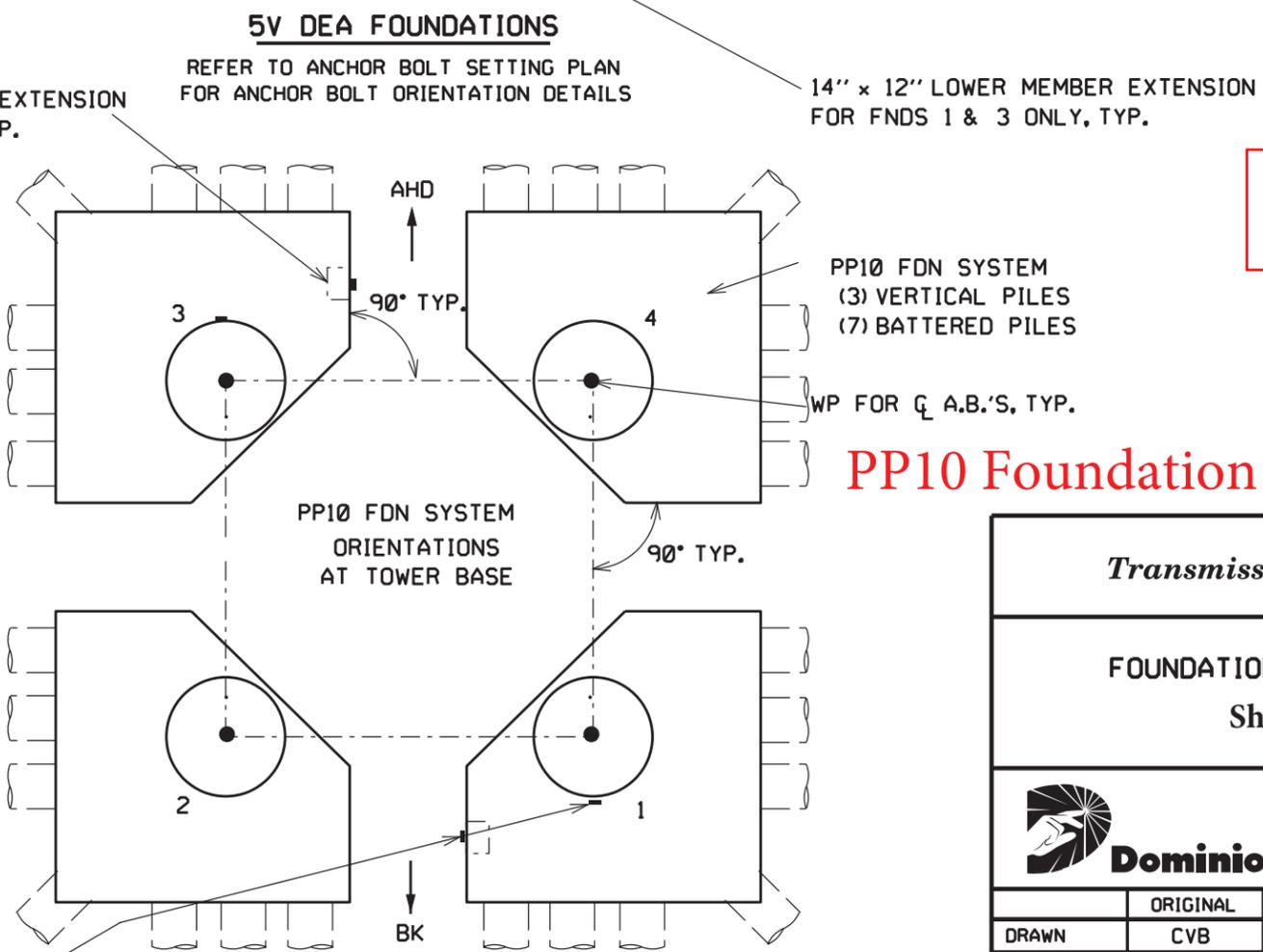
PP8 Foundation

PP4 Foundation



5V HT FOUNDATIONS

REFER TO ANCHOR BOLT SETTING PLAN FOR ANCHOR BOLT ORIENTATION DETAILS
LADDER CLIP LOCATIONS REQUIRED FOR FNDS.1 & 3 ONLY, TYP.



PP10 Foundation

CHANNEL CROSSING TOWER FOUNDATIONS

REFER TO ANCHOR BOLT SETTING PLAN FOR ANCHOR BOLT ORIENTATION DETAILS

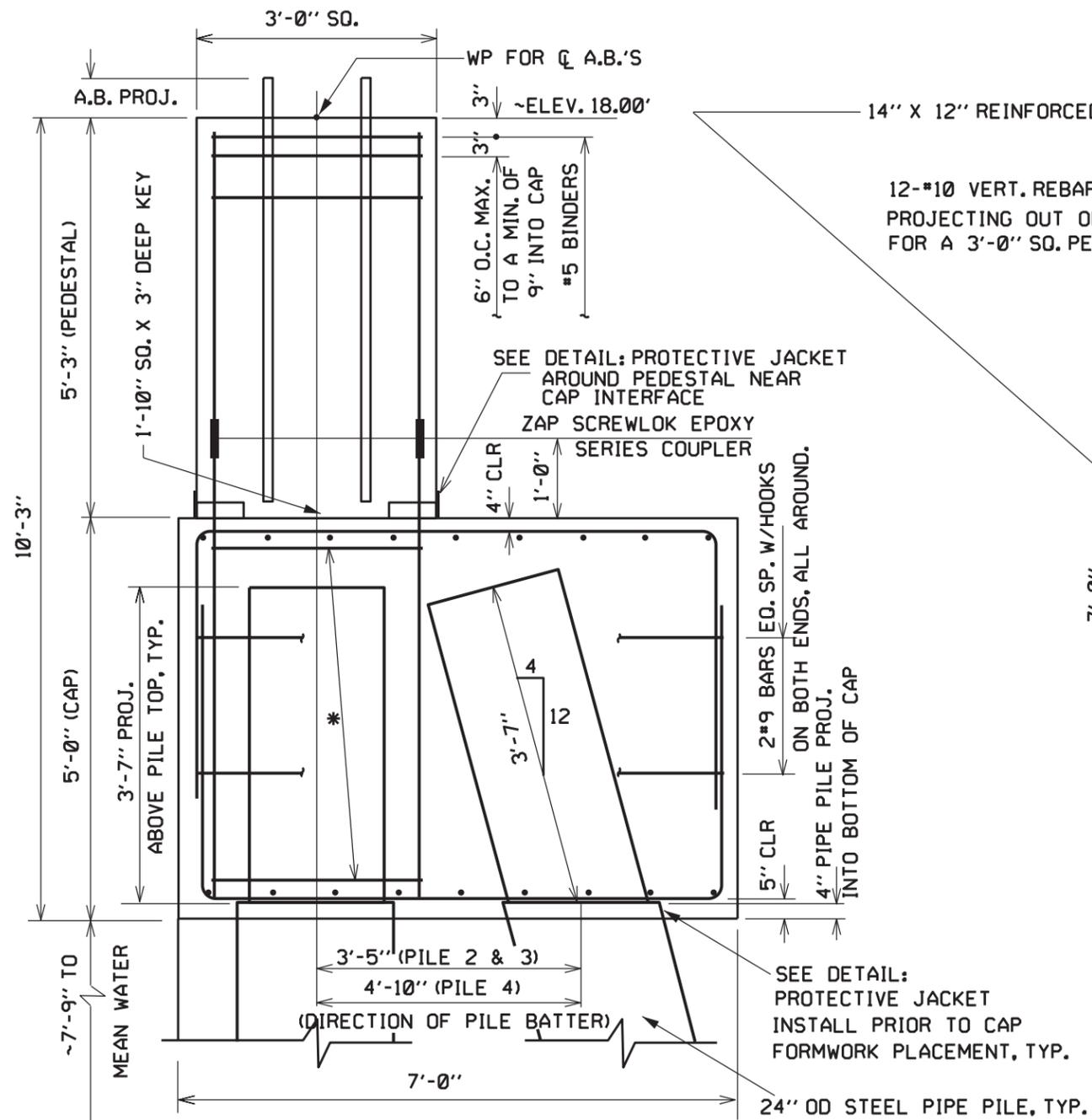
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Date: Dec 22, 2014

1	10/23/14
RBS	RBS
ADDED LADDER CLIP LOCATIONS. ADDED 14" X 12" LOWER MEM. EXT. TO FNDS.1 & 3.	

Transmission Construction			
FOUNDATION ORIENTATIONS			
Sheet 1 of 4			
		Dominion 701 E. Cary Street Richmond, VA 23219	
	ORIGINAL	REVISION	DRAWING NO.
DRAWN	CVB		1-582-1-55
CHECKED			
APPROVED	RBS		
DATE	2/5/14		CAD NO. 05820100055

\$SYTIME\$
\$DGNSPEC\$
TES11X17

PP4 Foundation System (10 Towers)

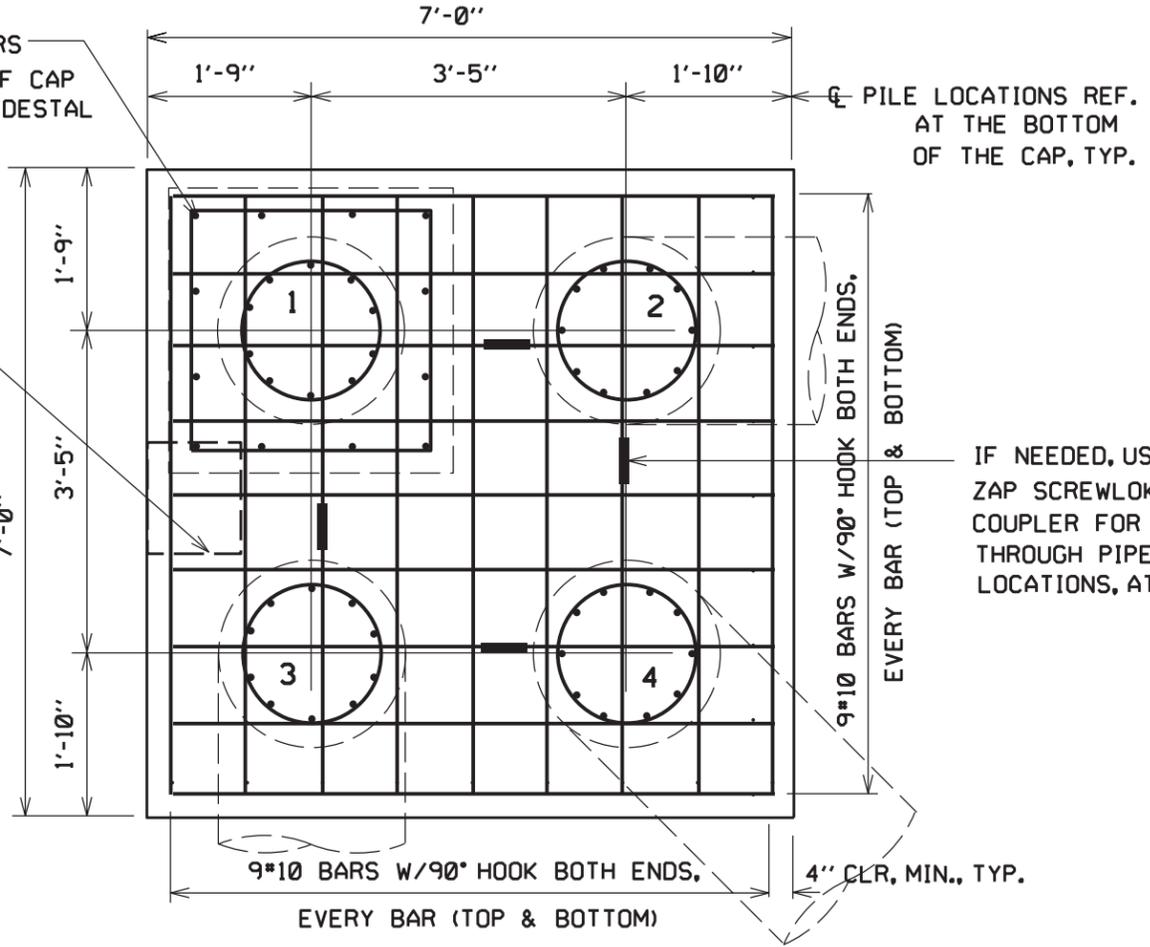


ELEVATION

* USE #5 BINDERS AS REQ'D TO MAINTAIN VERTICAL REBAR SPACING IN CAP

14" X 12" REINFORCED CONCRETE MEMBER EXTENSION REQUIRED FOR FNDS. 1 & 3 ONLY. SEE DWGS. 1-582-1-29, 55 & 63.

12-#10 VERT. REBARS PROJECTING OUT OF CAP FOR A 3'-0" SQ. PEDESTAL



PLAN

- NOTE
1. VERTICAL REBARS IN PEDESTAL & EXTENDING INTO CAP TO BE HOT DIP GALV.
 2. CAP REBARS TO BE EPOXY COATED.
 3. ALL BINDERS TO BE EPOXY COATED.

IF NEEDED, USE BARSPlice ZAP SCREWLOK EPOXY SERIES COUPLER FOR #9 REBAR INSTALL THROUGH PIPE PILE REBAR LOCATIONS, AT BOTTOM LAYER, TYP.

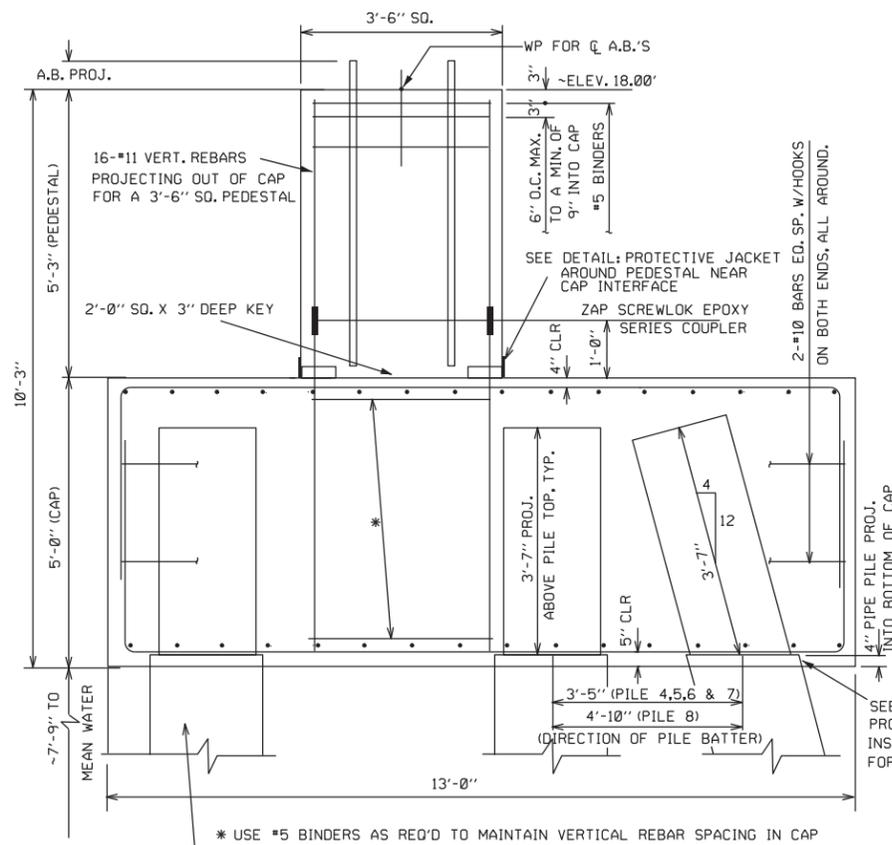
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 Date: Dec 22, 2014

SEE DWG 1-582-1-55 FOR FDN SYSTEM ORIENTATION AT EACH TOWER LEG.

REVISION	NO.	DATE	1	9-26-14	2	10-23-14					BY: CVB	Transmission Construction Dominion 701 E. Cary Street Richmond, VA 23219	DRAWING NUMBER 1-582-1-23 Sheet 2 of 4
	CHKD	APPD	RBS	RBS	RBS	RBS					APD: RBS		
	DESCRIPTION		PEDESTAL VERT. REBAR CHG'D TO #10 VS #9. CAP HORZ. REBAR CHG'D TO #10 VS #9.		ADDED LOWER MEM. EXT. REQUIREMENT FOR FNDS. 1 & 3.						DATE: 2/4/14		
											W.O.:		
										IRE: 99-2245	5V HT TOWER PP4 FDN SYSTEM PER LEG		

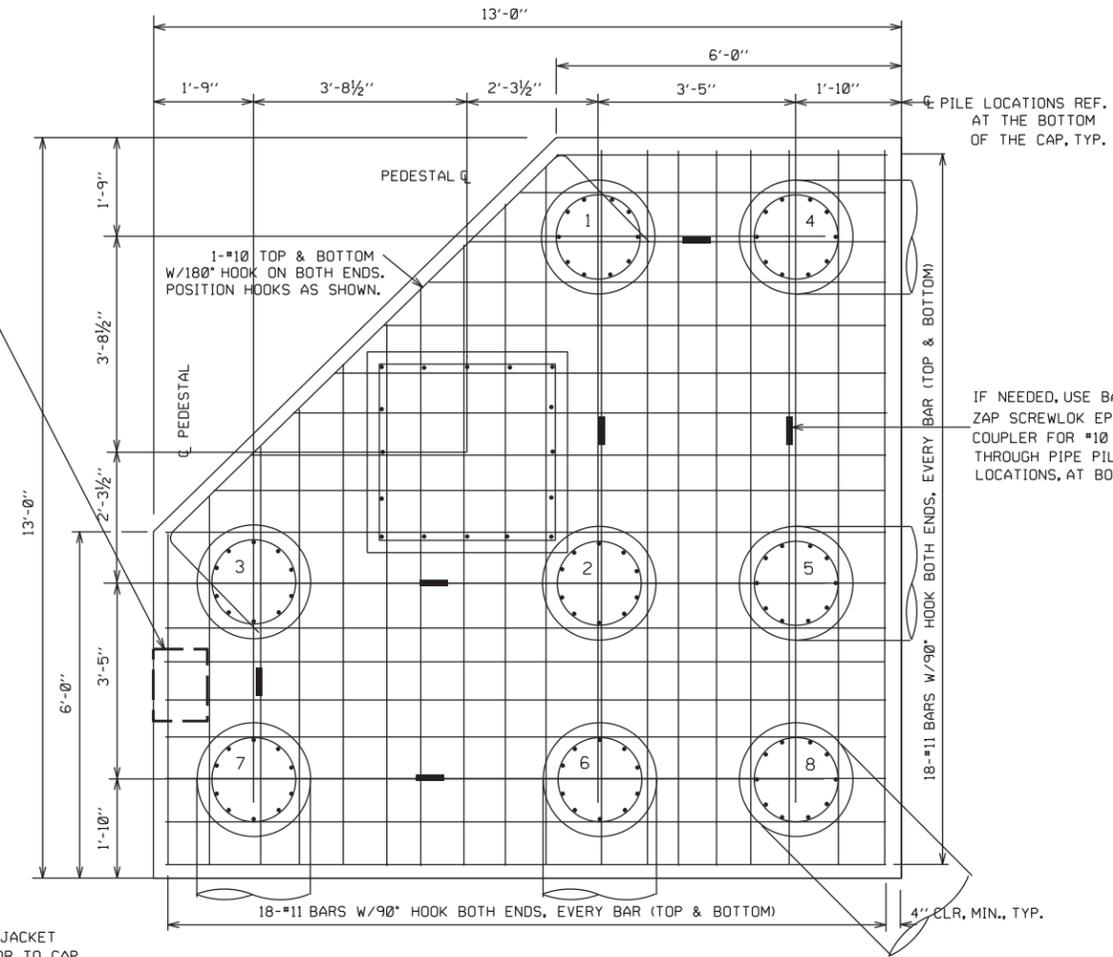
PP8 Foundation System (3 Towers)

14" X 12" REINFORCED CONCRETE MEMBER EXTENSION REQUIRED FOR FND. 1 & 3 ONLY. SEE DWGS. 1-582-1-29, 55 & 63.



ELEVATION

24" OD STEEL PIPE PILE, TYP.



PLAN

- NOTE
1. VERTICAL REBARS IN PEDESTAL & EXTENDING INTO CAP TO BE HOT DIP GALV.
 2. CAP REBARS TO BE EPOXY COATED.
 3. ALL BINDERS TO BE EPOXY COATED.

SEE DWG 1-582-1-55 FOR FDN SYSTEM ORIENTATION AT EACH TOWER LEG.



Dominion
701 E. Cary Street
Richmond, VA 23219

5V HA & DEA TOWER PP8 FDN SYSTEM PER LEG

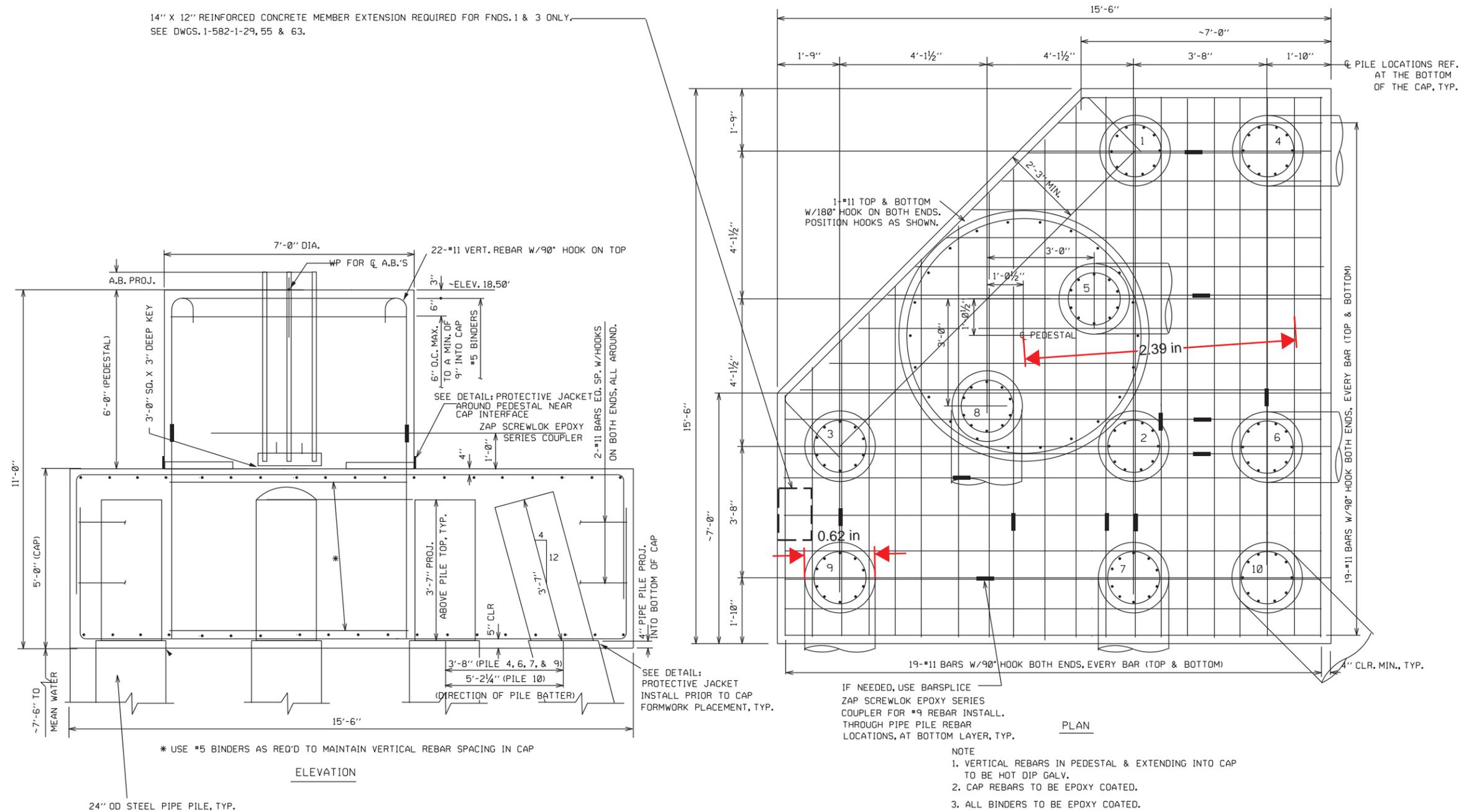
NAME	DATE	PROJECT NO.	SHEET NO.
DRAWN	CVB	2/5/14	Sheet 3 of 4
CHECKED		SCALE	
INSPECTED		1/2" = 1'-0"	
REVISIONS			
CORRECT			
APPROVED	RBS	2/5/14	
WORK ORDER	B/M NO.	DRAWING NO.	
		1-582-1-24	

US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: Dec 22, 2014

REV	BY	DATE	DESCRIPTION
REV 1	RBS	9-26-14	PEDESTAL VERT. REBAR CHG'D TO #11 VS #10. CAP HORZ. REBAR CHG'D TO 18-#11 VS 16-#10.
REV 2	RBS	10-23-14	ADDED LOWER MEM. EXT. REQUIREMENT FOR FND. 1 & 3.

\$DGN\$SPEC\$ \$SYTIME\$

14" X 12" REINFORCED CONCRETE MEMBER EXTENSION REQUIRED FOR FND. 1 & 3 ONLY.
SEE DWGS. 1-582-1-29, 55 & 63.



PP10 Foundation System - Channel Crossings (4 Towers)

REV 1 RBS 9-26-14	REV 2 RBS 10-23-14
PEDESTAL VERT. REBAR CHG'D TO 22-#11 VS 20-#11.	ADDED LOWER MEM. EXT. REQUIREMENT FOR FND. 1 & 3.

US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: Dec 22, 2014

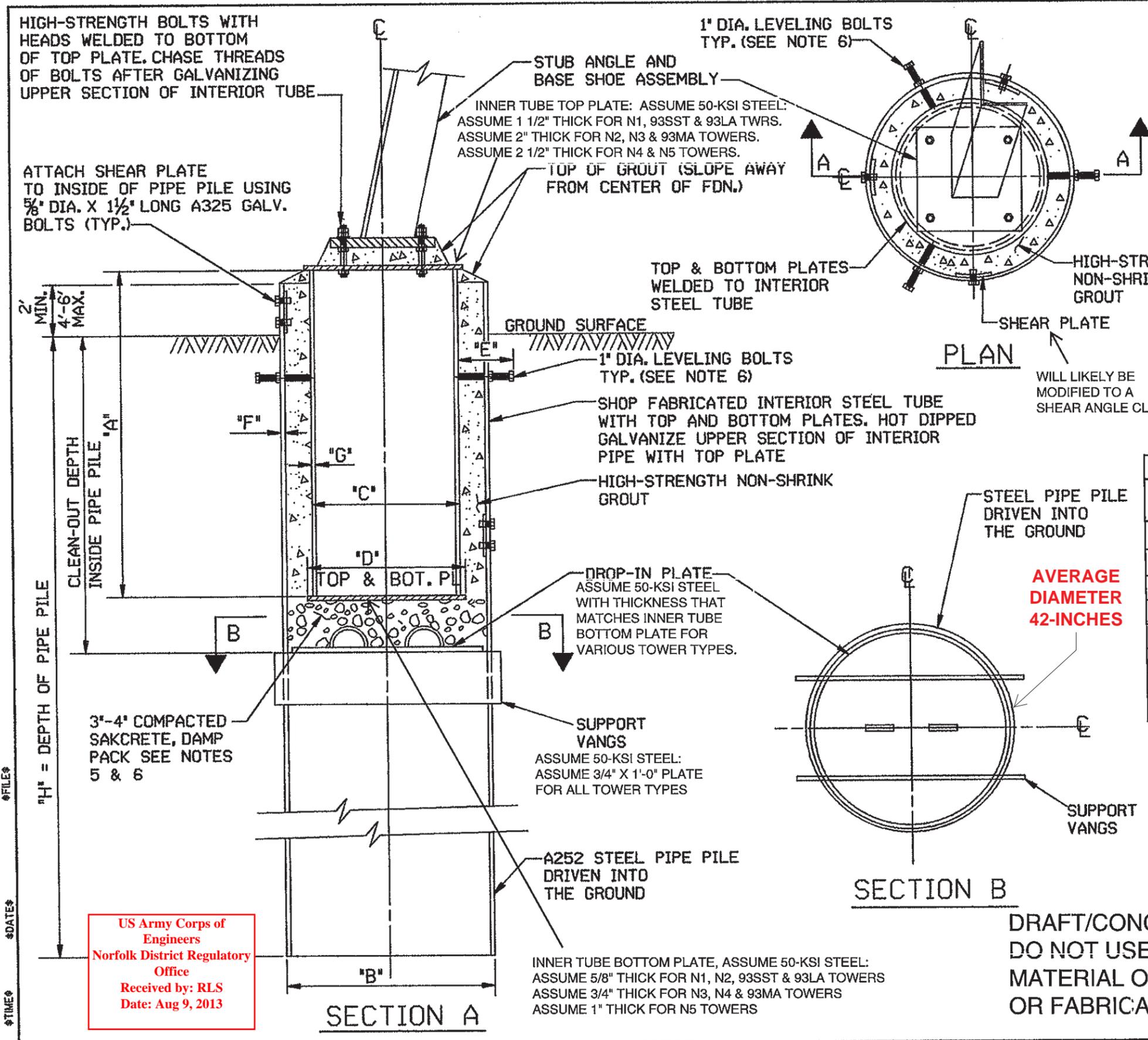
SEE DWG 1-582-1-55 FOR FDN SYSTEM ORIENTATION AT EACH TOWER LEG.

Dominion		Dominion 701 E. Cary Street Richmond, VA 23219	
CHANNEL CROSSING TOWER PPI0 FDN SYSTEM PER LEG			
DRAWN	NAME	DATE	PROJECT NO.
CVB		1/24/14	
CHECKED			SCALE
INSPECTED			1/2"=1'-0"
CORRECT			REVISIONS
APPROVED	RBS		
WORK ORDER	B/M NO.	DRAWING NO.	
		1-582-1-26	

\$DGN\$SPEC\$
 \$SYTIME\$
 CS1ZE17X22

Terrestrial Foundation Details

Typical Pipe Pile Foundation Detail



NOTES

1. DRIVE PIPE PILE TO REQUIRED DEPTH.
2. PRE-EXCAVATE AS REQUIRED PRIOR TO PILE DRIVING TO PREVENT SOIL FROM ENTERING UPPER SECTION OF PIPE PILE.
3. POSITION INTERIOR STEEL TUBE AT REQUIRED LOCATION AND ELEVATION.
4. INSTALL BASE SHOE AND STUB ANGLE ASSEMBLY AND LEVEL AS REQUIRED WITH LEVELING NUTS.
5. DAMP PACK APPROXIMATELY 3' TO 4' OF SAKCRETE OR EQUAL ABOVE THE DROP-IN PLATE TO PROVIDE A LEVEL SURFACE PRIOR TO THE INTERIOR STEEL TUBE INSTALLATION.
6. POSITION AND ORIENT INTERIOR STEEL TUBE INSIDE THE PIPE PRIOR TO THE SET UP OF THE DAMP PACK SAKCRETE. POSITION INTERIOR STEEL TUBE WITH SPECIFIED LENGTH OF 1' DIA. LEVELING BOLTS AS NOTED BELOW (DIM 'E')

TABLE OF DIMENSIONS

TOWER	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
N1	4'-6"	30"	18"	20"		0.375"	0.375"	
N2	4'-6"	42"	30"	32"		0.375"	0.562"	
N3	4'-6"	42"	30"	32"		0.375"	0.562"	
N4	4'-6"	42"	30"	33"		0.5"	0.562"	
N5	4'-6"	42"	30"	34"		0.75"	0.562"	
93SST	4'-6"	30"	18"	20"		0.375"	0.375"	
93LA	4'-6"	30"	18"	20"		0.5"	0.375"	
93MA	4'-6"	42"	30"	33"		0.375"	0.562"	

Virginia Dominion Power
 Surry - Skiffes Creek - Whealton

Typical Pipe Pile Foundation Detail

Dominion DOMINION
 701E. CARY STREET
 RICHMOND, VA 23219

DRAWN	GY	DRAWING NO.
CHECKED	BLR	DWG. MODIFIED BY RBS, 07/03/09
APPROVED		
DATE	06/01/09	CAD NO.

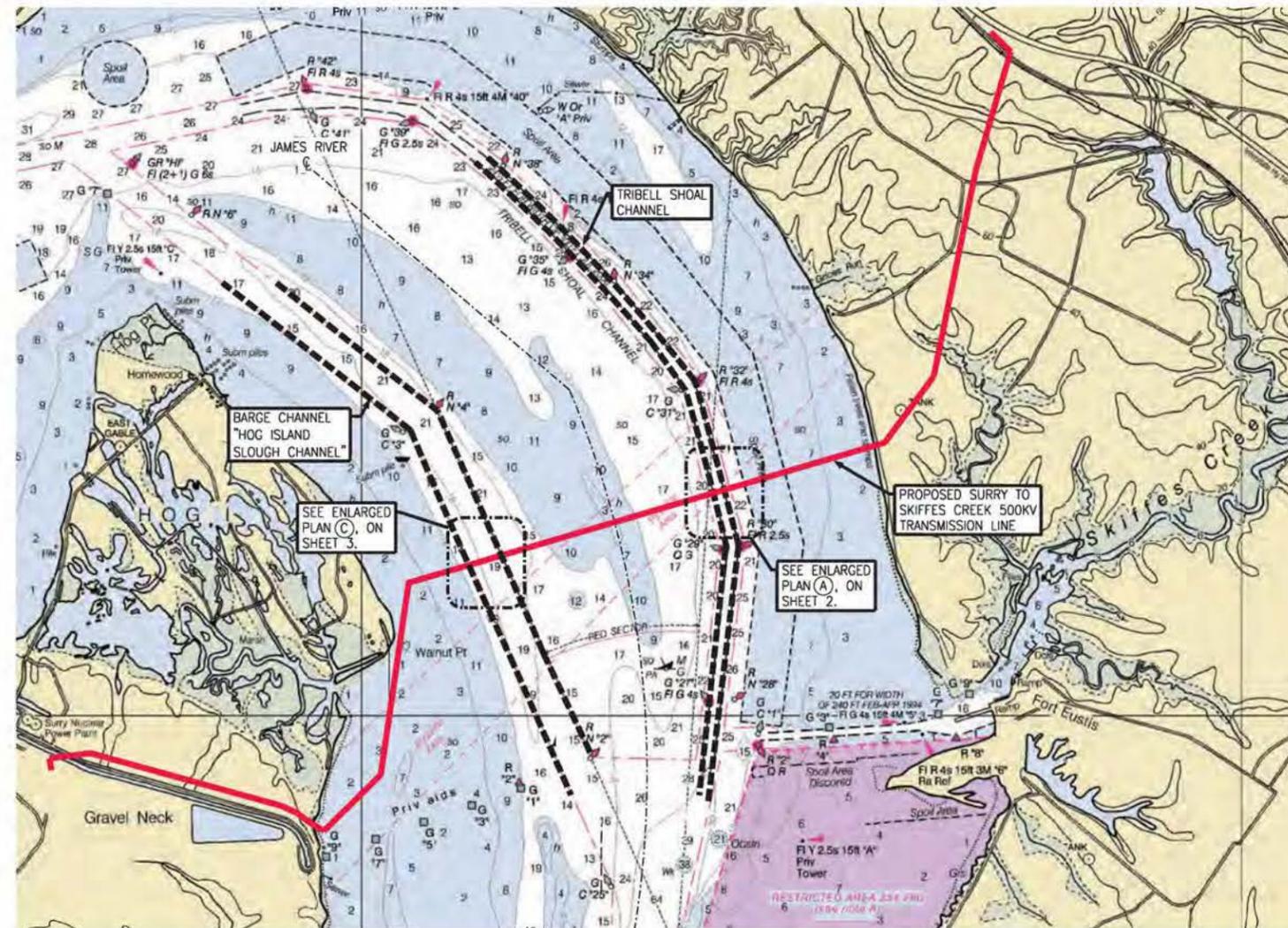
US Army Corps of Engineers
 Norfolk District Regulatory Office
 Received by: RLS
 Date: Aug 9, 2013

DRAFT/CONCEPTUAL
 DO NOT USE FOR
 MATERIAL ORDERING
 OR FABRICATION

FILE
 DATE
 TIME

James River Fender Design Details

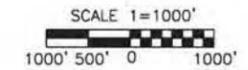
DOMINION POWER JAMES RIVER FENDER DESIGN SURRY TO SKIFFES CREEK 500KV TRANSMISSION LINE SURRY AND JAMES CITY COUNTIES, VIRGINIA



US Army Corps of
Engineers
Norfolk District
Regulatory Office
Received by: RLS
Date: Sept 14, 2015

**KEY PLAN
INDEX AND DRAWINGS**

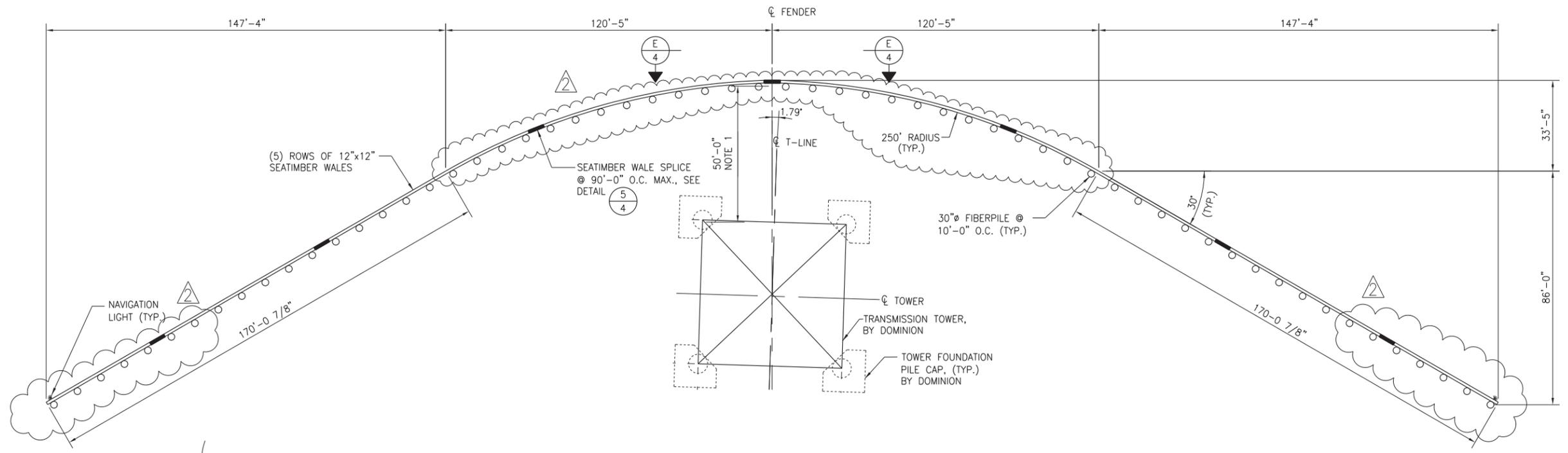
SHEET	DRAWING TITLE
1 OF 4	KEY PLAN AND INDEX DRAWINGS
2 OF 4	ENLARGED FENDER PLANS AT TRIBELL SHOAL CHANNEL
3 OF 4	ENLARGED FENDER PLANS AT BARGE CHANNEL
4 OF 4	FENDER SECTIONS AND DETAILS



Standard Transmission Construction			
		Dominion 701 E. Cary Street Richmond, VA 23219	
SURRY TO SKIFFES CREEK 500KV T-LINE FENDER DESIGN JAMES RIVER CROSSING, VA KEY PLAN			
DRAWN	NAME	DATE	PROJECT NO.
CHECKED	SLS	02/05/2014	C120222
INSPECTED			SCALE
CORRECT			AS NOTED
APPROVED			REVISIONS
WORK ORDER		BM NO.	
			DRAWING NO. 1-582-1-70
CAD NO. KEY PLAN.dgn			

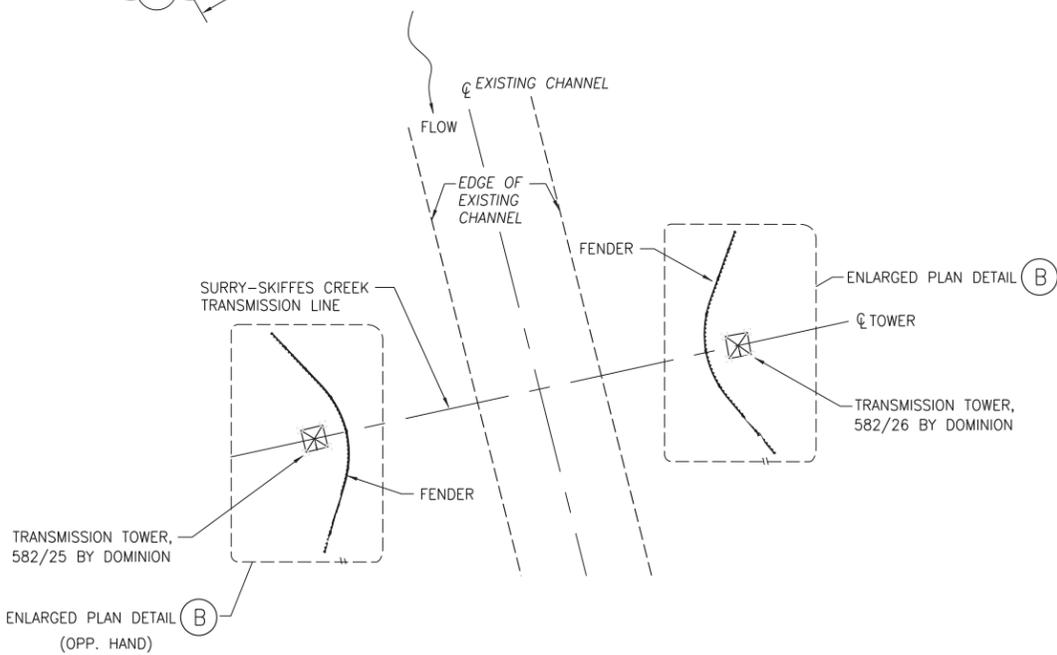
NO	DATE	BY	DESCRIPTION	WORK ORDER	P. N.	BM
1	10/20/14	SLS	FENDER CURVATURE AND BID OPTION REVISION	WORK ORDER	P. N.	BM
2	11/18/14	JCS	FENDER DETAIL REVISION	WORK ORDER	P. N.	BM
3	11/18/14	JRT				

Z:\PROJECTS\2014\C1210419 - DOM JAMES RIVER BRIDGE T-LINE\KEY PLAN-COMPOUND.DWG 8:22 AM



ENLARGED PLAN DETAIL (B)
SCALE: 1" = 20'

NOTES:
1. LOCATE CENTERLINE OF FENDER PILES 50'-0" FROM BASE OF NEAREST TOWER LEG.



ENLARGED PLAN (A)
SCALE: 1" = 200'

TRIBELL SHOAL CHANNEL FENDER LOCATION



NOTES:
1. DESIGN VESSEL SHALL BE 5500 TON, 4.4 KNOTS.
2. FENDER ENERGY DESIGN CAPACITY 1800 FT-KIP

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Standard Transmission Construction

Dominion Dominion
701 E. Cary Street
Richmond, VA 23219

SURRY TO SKIFFES CREEK 500KV T-LINE FENDER DESIGN
JAMES RIVER CROSSING, VA
TRIBELL SHOAL CHANNEL FENDER PLANS

NAME	DATE	PROJECT NO.	SHEET NO.
SLS	02/05/2014	C120222	2 OF 4
CHECKED		SCALE	AS NOTED
INSPECTED			
CORRECT			
APPROVED			

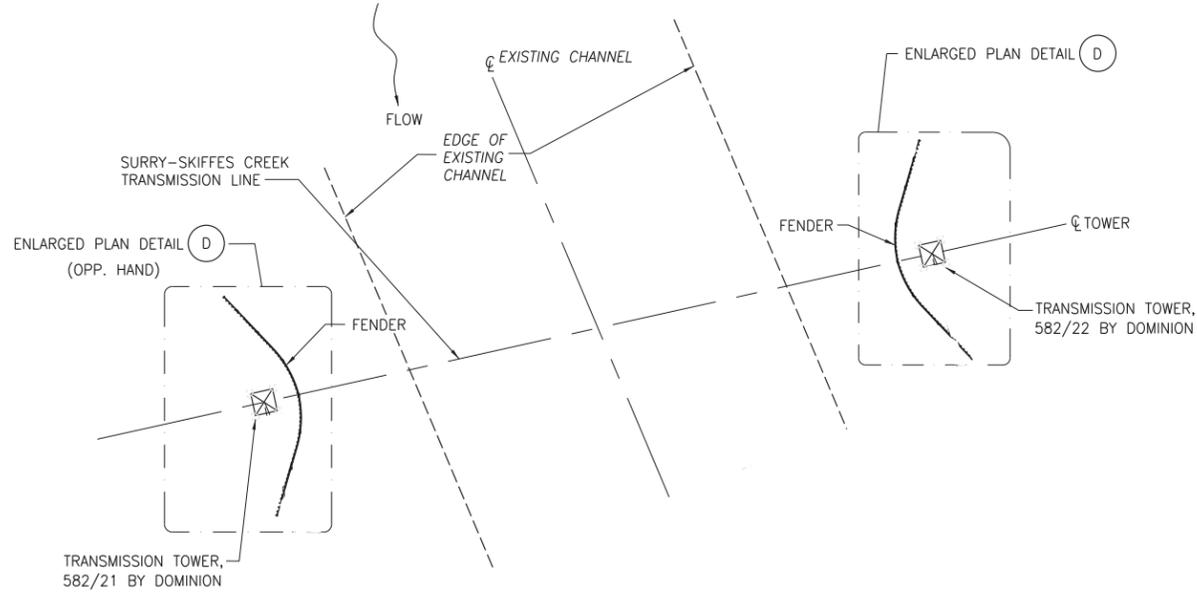
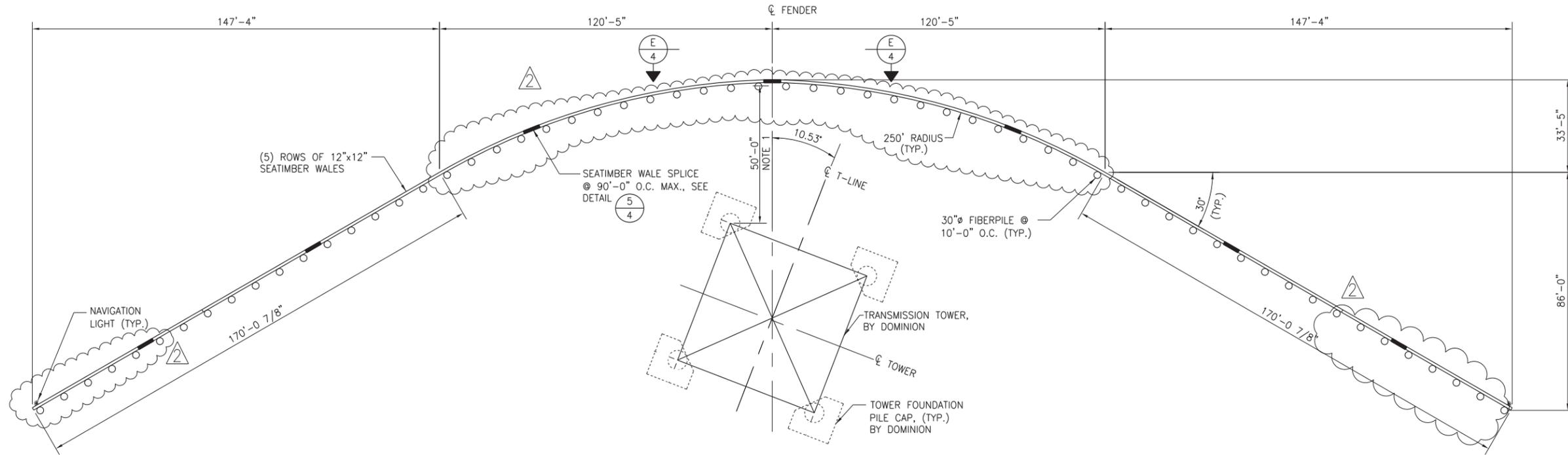
REVISIONS

WORK ORDER	B/M NO.	DRAWING NO.
		1-582-1-70

CAD NO.FENDER PLAN - TRIBELL SHOAL.dgn

NO.	DATE	BY	CHKD	APPRD	DESCRIPTION	WORK ORDER P.N.	WORK ORDER B.M.
1	7/22/14	JCS	JRT		FENDER DETAIL REVISION		
2	10/20/14	SLS	JCS		FENDER CURVATURE AND BID OPTION REVISION		
3	11/18/14	SLS	JCS				

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ENLARGED PLAN DETAIL (D)
SCALE: 1" = 20'

BARGE CHANNEL FENDER

- NOTES:
1. LOCATE CENTERLINE OF FENDER PILES 50'-0" FROM BASE OF NEAREST TOWER LEG.



ENLARGED PLAN (C)
SCALE: 1" = 200'

BARGE CHANNEL FENDER LOCATION



- NOTES:
1. DESIGN VESSEL SHALL BE 5500 TON, 4.7 KNOTS.
2. FENDER ENERGY DESIGN CAPACITY 1425 FT-KIP

Fender System Specifications:

30 inch pile = 4.9 SF

60 piles per fender = 294 SF (Direct Impact)

Seatimber Wall = 1 ft x 600 ft = 600 SF

Total Encroachment over Subaqueous Bottom per fender = 294 SF + 600 SF = 894 SF

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Norfolk District
Regulatory Office
Received by: RLS
Date: Sept 14, 2015**

Standard Transmission Construction

Dominion
Dominion
701 E. Cary Street
Richmond, VA 23219

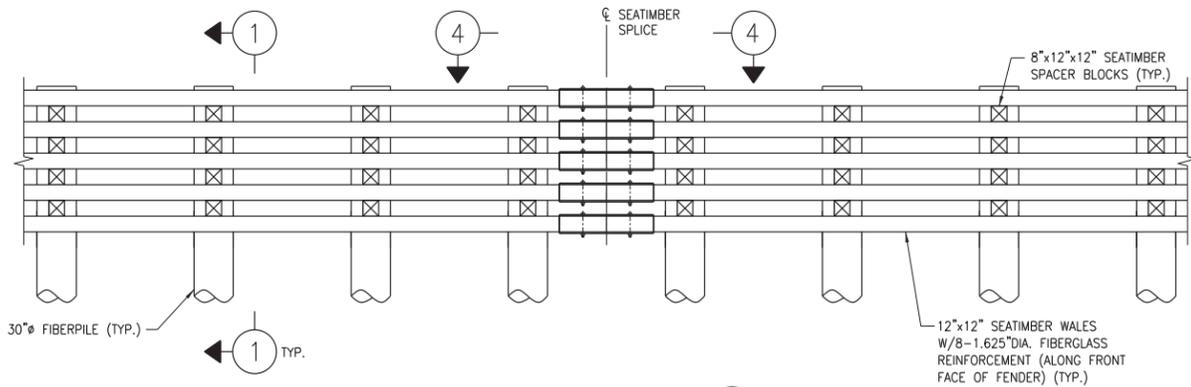
**SURRY TO SKIFFES CREEK 500KV T-LINE FENDER DESIGN
JAMES RIVER CROSSING, VA
BARGE CHANNEL FENDER PLANS**

NAME	DATE	PROJECT NO.	SHEET NO.
SLS	02/05/2014	C120222	3 OF 4
CHECKED		SCALE	
INSPECTED		AS NOTED	
CORRECT		REVISIONS	
APPROVED			

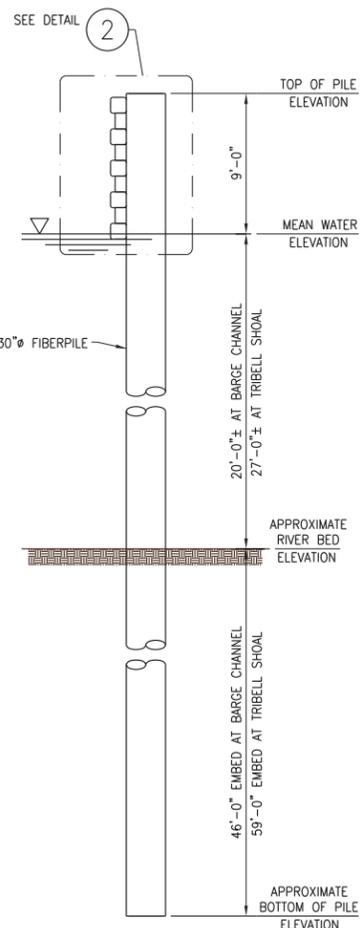
WORK ORDER: B/M NO. DRAWING NO. CAD NO. FENDER PLAN - BARGE CHANNEL

NO.	DATE	BY	CHKD	APPRD	DESCRIPTION	WORK ORDER	P.N.	B/M
1	7/22/14	JCS	JRT		FENDER DETAIL REVISION	WORK ORDER	P.N.	B/M
2	10/20/14	SLS	JCS		FENDER CURVATURE AND BID OPTION REVISION	WORK ORDER	P.N.	B/M
	11/18/14	JCS	JRT					
	11/18/14	SLS	JCS					

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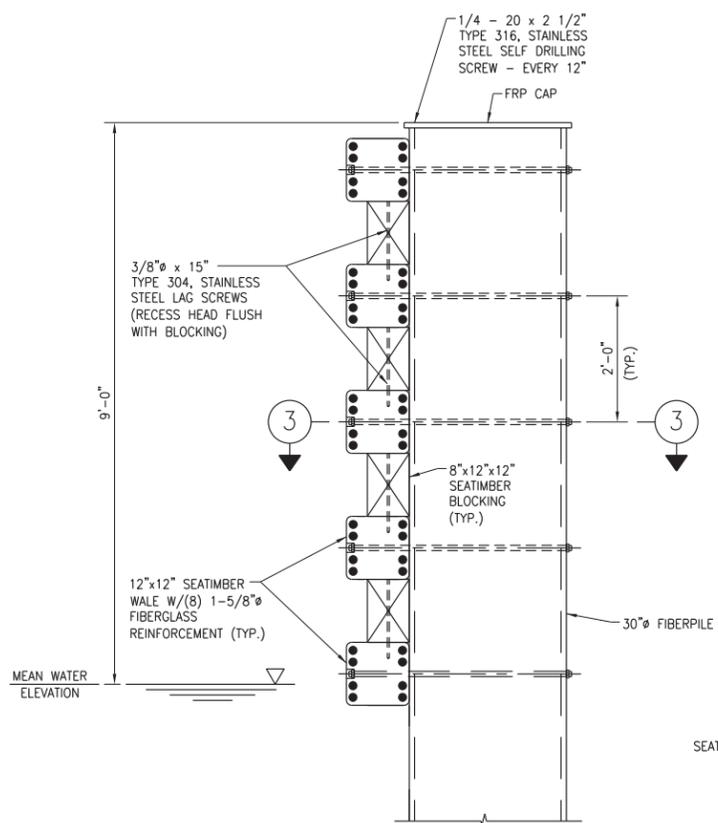


TYPICAL ELEVATION
SCALE: 3/16" = 1'-0"
E 2,3

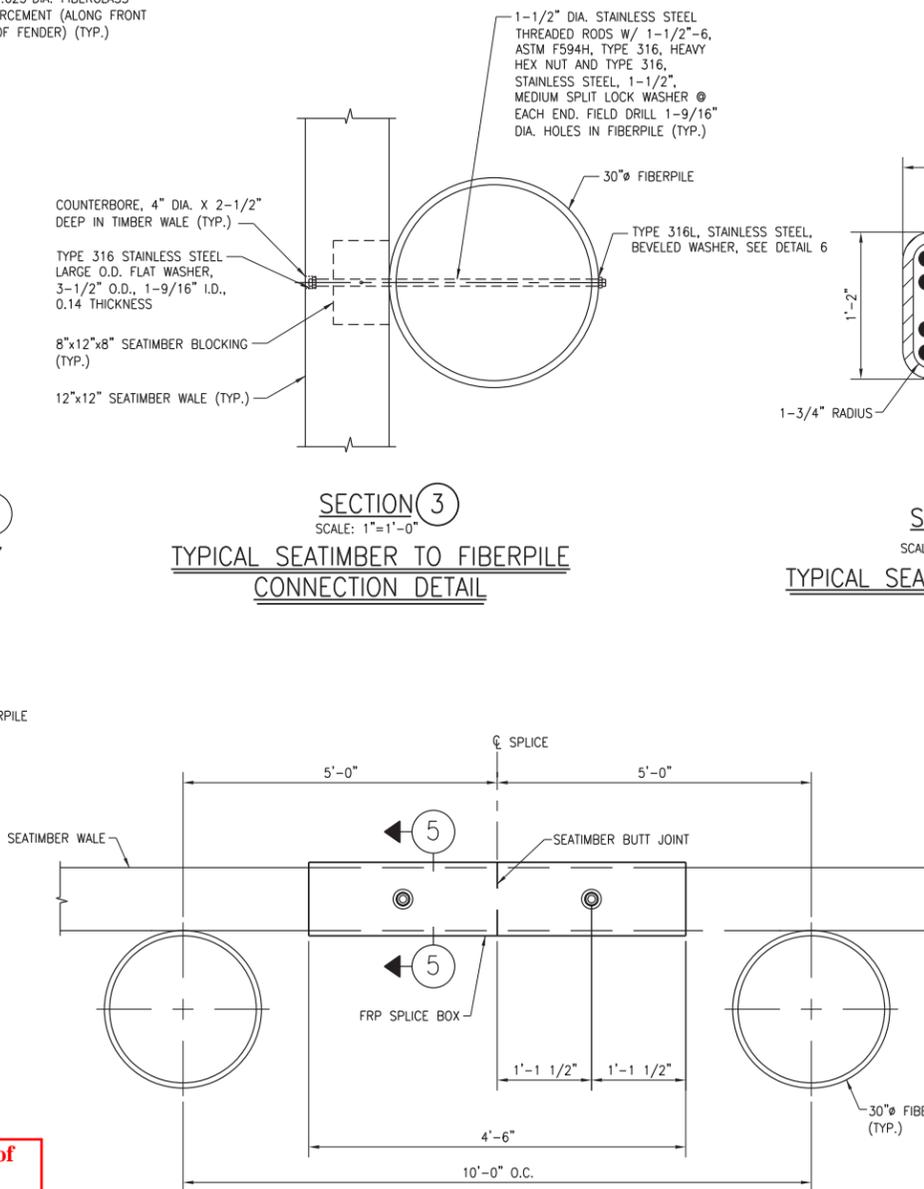


SECTION 1
SCALE: 3/16" = 1'-0"
TYPICAL FIBERPILE INSTALLATION

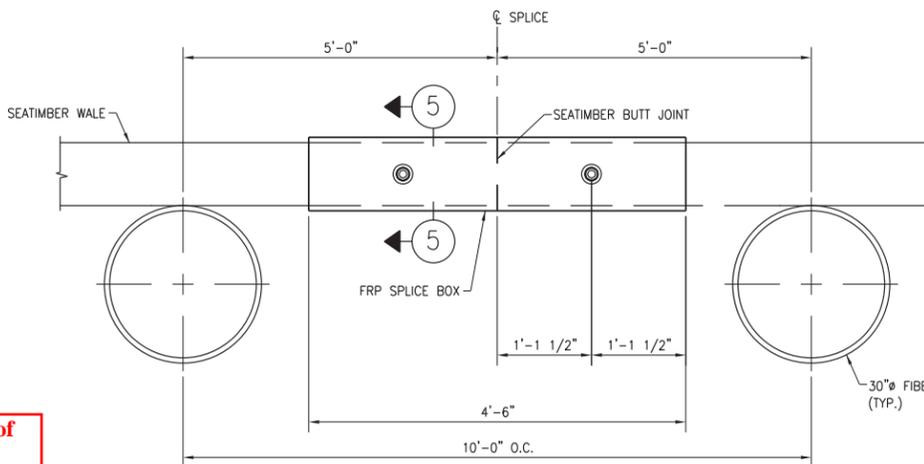
NOTES:
1. WATER LEVELS SHOWN ARE DESIGN WATER LEVELS.



DETAIL 2
SCALE: 3/4" = 1'-0"
TYPICAL SEATIMBER TO FIBERPILE CONNECTION



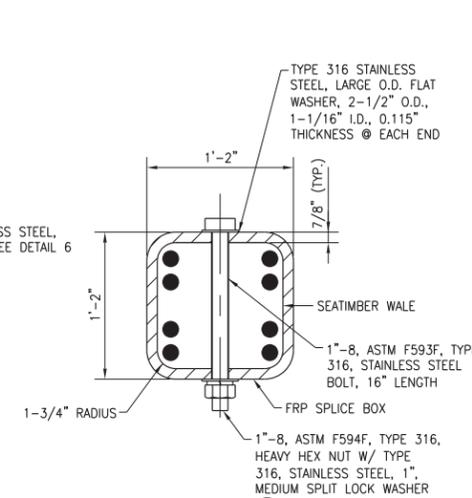
SECTION 3
SCALE: 1" = 1'-0"
TYPICAL SEATIMBER TO FIBERPILE CONNECTION DETAIL



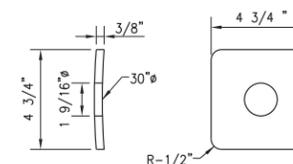
PLAN DETAIL 4
SCALE: 3/4" = 1'-0"
TYPICAL SEATIMBER SPLICE

MATERIAL QUANTITIES							
LOCATION	NUMBER OF FENDERS	NUMBER OF PILES PER FENDER (a)	INDIVIDUAL PILE LENGTH (FT)	TOTAL PILE LENGTH (FT)	NUMBER OF WALES (b)(c)	INDIVIDUAL WALE LENGTH (FT)	TOTAL WALE LENGTH (FT)
BARGE CHANNEL	2	60	75	9,000	10	600	6,000
TRIBELL SHOAL	2	60	95	11,400	10	600	6,000

(a) COMPOSITE ADVANTAGE'S FIBERPILE PRODUCT, MODEL NO. 30FP100 (30" O.D. x 1" WALL)
(b) BEDFORD TECHNOLOGY'S SEATIMBER PRODUCT, MODEL NO. 12x12ST-8F13
(c) QUANTITIES SHOWN ARE TOTAL QUANTITIES FOR TWO (2) FENDERS, UNLESS NOTED.



SECTION 5
SCALE: 1-1/2" = 1'-0"
TYPICAL SEATIMBER SPLICE DETAIL



DETAIL 6
SCALE: 3" = 1'-0"
CURVED WASHER

**US Army Corps of Engineers
Norfolk District
Regulatory Office
Received by: RLS
Date: Sept 14, 2015**

NO.	DATE	BY	CHKD	APP'D	DESCRIPTION
1	7/22/14	JCS	JRT		FENDER CURVATURE AND BID OPTION REVISION
2	10/20/14	SLS	JCS		FENDER CURVATURE AND BID OPTION REVISION
3	11/18/14	JCS	JRT		FENDER CURVATURE AND BID OPTION REVISION
4	7/22/14	JCS	JRT		FENDER CURVATURE AND BID OPTION REVISION

DRAWING REFERENCE	TITLE	NUMBER

Standard Transmission Construction

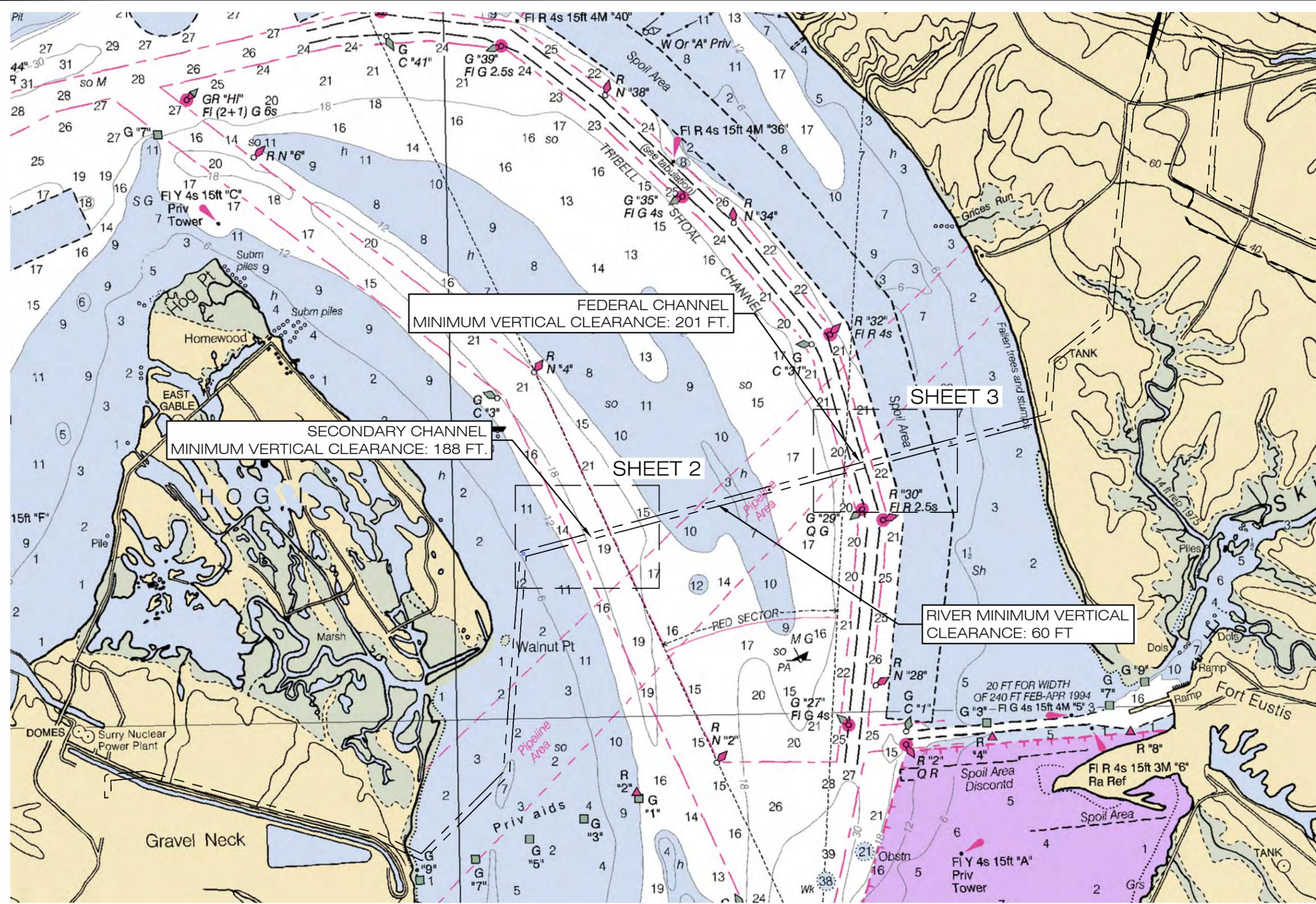
Dominion
701 E. Cary Street
Richmond, VA 23219

**SURRY TO SKIFFES CREEK 500KV T-LINE FENDER DESIGN
JAMES RIVER CROSSING, VA
FENDER SECTIONS AND DETAILS**

DRAWN	NAME	DATE	PROJECT NO.	SHEET NO.
CHECKED	SLS	7/23/13	C120222	4 OF 4
INSPECTED			SCALE	
CORRECT			AS NOTED	
APPROVED			REVISIONS	
WORK ORDER	B.M. NO.		DRAWING NO.	1-582-1-70
			CAD NO.	FENDER DETAIL-S.dgn

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**James River Crossing
Secondary & Federal
Channel Navigational
Clearances**



US Army Corps of Engineers
Norfolk District
Regulatory Office
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Date: Sept 14, 2015

NOTES:
 1. COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.



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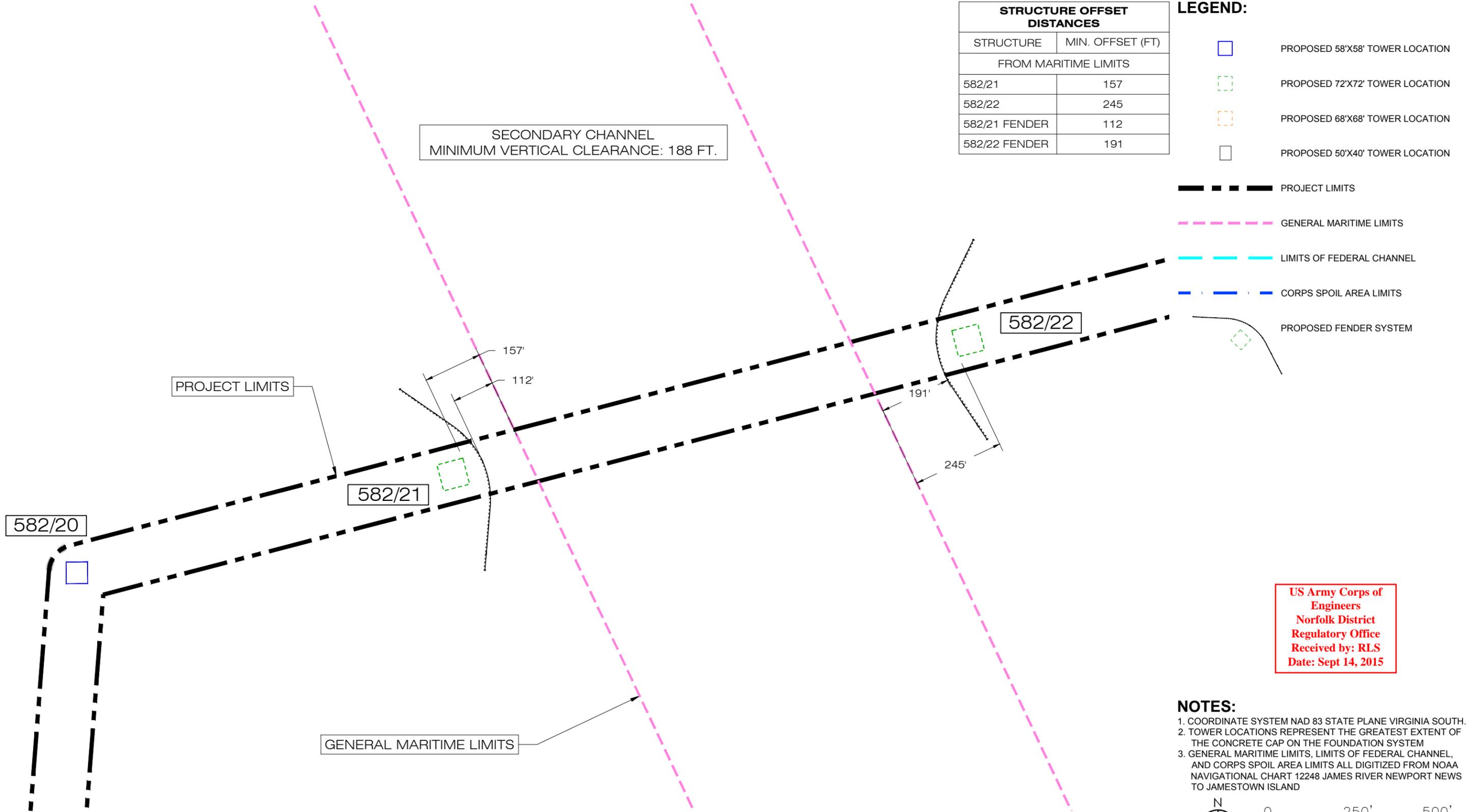
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 5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6869 FAX: (757) 229-4507	FOR:	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA		FIGURE:	1
	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
	203446520	MGS	CPG	CFC	09-04-2015

STRUCTURE OFFSET DISTANCES	
STRUCTURE	MIN. OFFSET (FT)
FROM MARITIME LIMITS	
582/21	157
582/22	245
582/21 FENDER	112
582/22 FENDER	191

	PROPOSED 58'X58' TOWER LOCATION
	PROPOSED 72'X72' TOWER LOCATION
	PROPOSED 68'X68' TOWER LOCATION
	PROPOSED 50'X40' TOWER LOCATION
	PROJECT LIMITS
	GENERAL MARITIME LIMITS
	LIMITS OF FEDERAL CHANNEL
	CORPS SPOIL AREA LIMITS
	PROPOSED FENDER SYSTEM

SECONDARY CHANNEL
MINIMUM VERTICAL CLEARANCE: 188 FT.



US Army Corps of Engineers
Norfolk District
Regulatory Office
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Date: Sept 14, 2015

- NOTES:**
- COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.
 - TOWER LOCATIONS REPRESENT THE GREATEST EXTENT OF THE CONCRETE CAP ON THE FOUNDATION SYSTEM
 - GENERAL MARITIME LIMITS, LIMITS OF FEDERAL CHANNEL, AND CORPS SPOIL AREA LIMITS ALL DIGITIZED FROM NOAA NAVIGATIONAL CHART 12248 JAMES RIVER NEWPORT NEWS TO JAMESTOWN ISLAND



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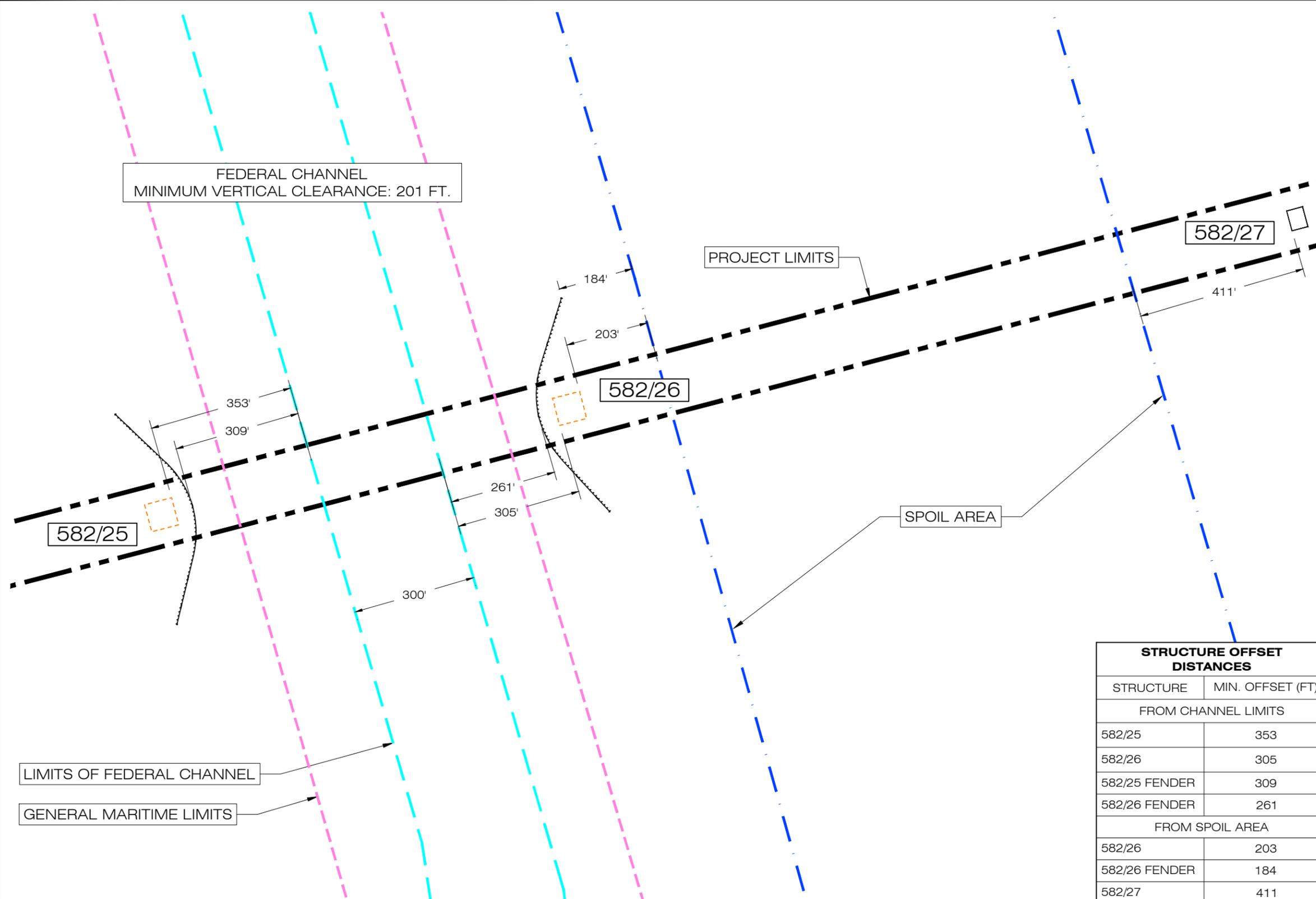
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 5209 Center Street Williamsburg, Virginia 23188 PHONE: (757) 220-6869 FAX: (757) 229-4507	FOR:	PROPOSED JAMES RIVER CROSSING NAVIGATIONAL CLEARANCES		FIGURE:
	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA	JOB NUMBER:	DRAWN BY:	CHECKED BY:
	203446520	MGS	CPG	CFC
				DATE:
				09-04-2015

LEGEND:

-  PROPOSED 58'X58' TOWER LOCATION
-  PROPOSED 72'X72' TOWER LOCATION
-  PROPOSED 68'X68' TOWER LOCATION
-  PROPOSED 50'X40' TOWER LOCATION
-  PROJECT LIMITS
-  GENERAL MARITIME LIMITS
-  LIMITS OF FEDERAL CHANNEL
-  CORPS SPOIL AREA LIMITS
-  PROPOSED FENDER SYSTEM



STRUCTURE OFFSET DISTANCES	
STRUCTURE	MIN. OFFSET (FT)
FROM CHANNEL LIMITS	
582/25	353
582/26	305
582/25 FENDER	309
582/26 FENDER	261
FROM SPOIL AREA	
582/26	203
582/26 FENDER	184
582/27	411

US Army Corps of Engineers
Norfolk District
Regulatory Office
Received by: RLS
Date: Sept 14, 2015

NOTES:

1. COORDINATE SYSTEM NAD 83 STATE PLANE VIRGINIA SOUTH.
2. TOWER LOCATIONS REPRESENT THE GREATEST EXTENT OF THE CONCRETE CAP ON THE FOUNDATION SYSTEM
3. GENERAL MARITIME LIMITS, LIMITS OF FEDERAL CHANNEL, AND CORPS SPOIL AREA LIMITS ALL DIGITIZED FROM NOAA NAVIGATIONAL CHART 12248 JAMES RIVER NEWPORT NEWS TO JAMESTOWN ISLAND



LIMITS OF FEDERAL CHANNEL
 GENERAL MARITIME LIMITS

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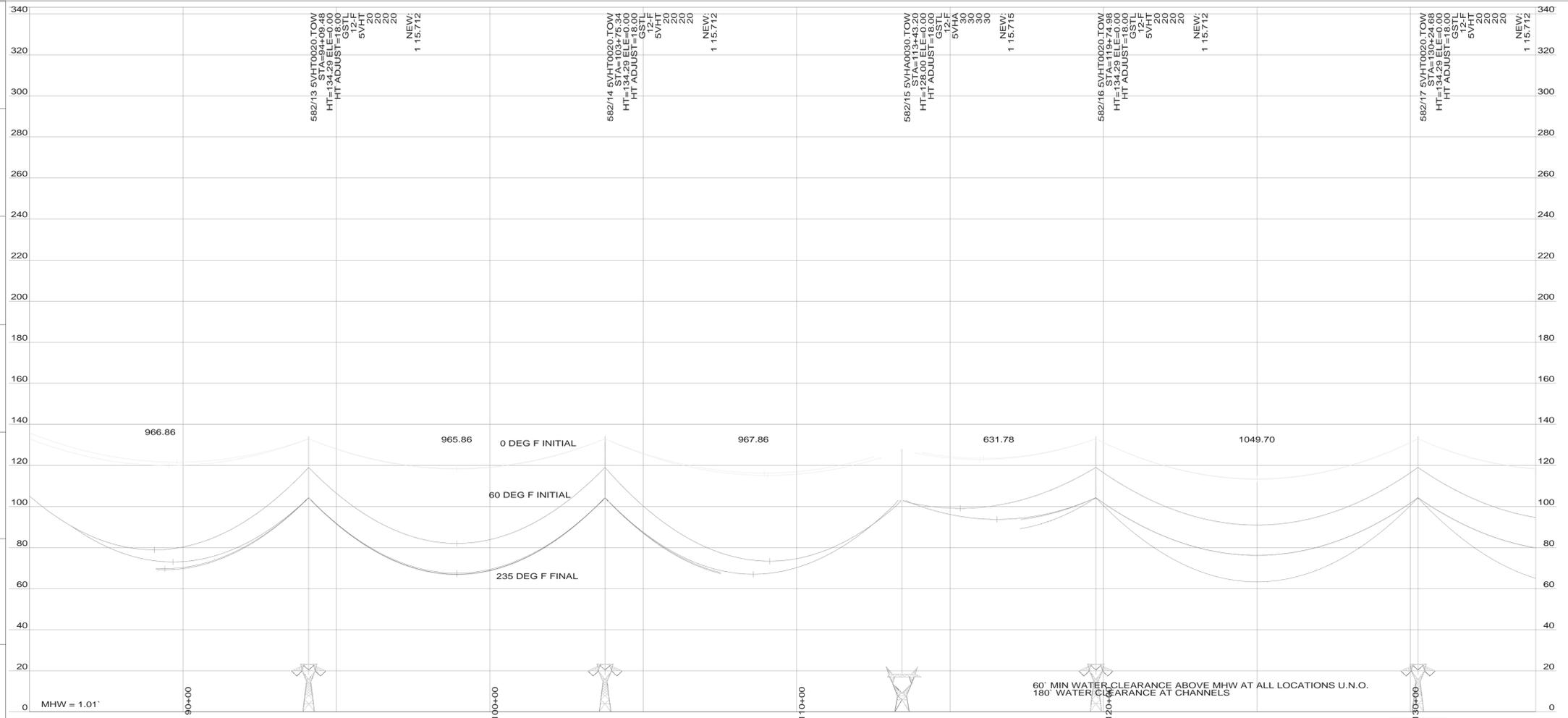
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	SURRY - SKIFFES CREEK - WHEALTON SURRY COUNTY, JAMES CITY COUNTY, YORK COUNTY, CITY OF NEWPORT NEWS AND CITY OF HAMPTON, VIRGINIA				3
JOB NUMBER: 203446520	DRAWN BY: MGS	CHECKED BY: CPG	APPROVED BY: CFC	DATE: 09-04-2015	

James River Crossing Profile



SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)	
582/12 - 582/15	979	DNO 9809	60°F INITIAL 3827	MAXIMUM 8500
582/12 - 582/15	955	DNO 9809	60°F INITIAL 3878	MAXIMUM 8500
582/12 - 582/15	966	1351 ACSR 45/7 "DIPPER"	60°F INITIAL 7690	MAXIMUM 14500
582/15 - 582/20	1113	DNO 9809	60°F INITIAL 3579	MAXIMUM 8500
582/15 - 582/20	1124	DNO 9809	60°F INITIAL 3560	MAXIMUM 8500
582/15 - 582/20	1118	1351 ACSR 45/7 "DIPPER"	60°F INITIAL 7523	MAXIMUM 14500

'X' - S = NUMBER OF STATIC DAMPERS
'X' - C = NUMBER OF CONDUCTOR DAMPERS

- EROSION & SEDIMENTATION NOTES:
- EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE COMPANY'S GENERAL CONSTRUCTION PROVISIONS AND GENERAL EROSION AND SEDIMENTATION CONTROL PLAN.
 - EROSION & SEDIMENTATION MEASURES TAKEN AT EACH STRUCTURE SHALL BE SPECIFIED BY THE PROJECT COORDINATOR AND IMPLEMENTED PRIOR TO EARTH DISTURBING ACTIVITIES.
 - AT A MINIMUM, AREAS MARKED ON THE PLAN AND PROFILE DRAWING BY SHALL BE PROTECTED AGAINST EROSION WHEN ANY EARTH DISTURBING ACTIVITIES OCCUR UPSTREAM OF THESE AREAS.

PROFILE IS ALONG SURVEY LINE
20' RIGHT -----
20' LEFT -----



US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015

Dominion
701 E. Cary Street
Richmond, VA 23219

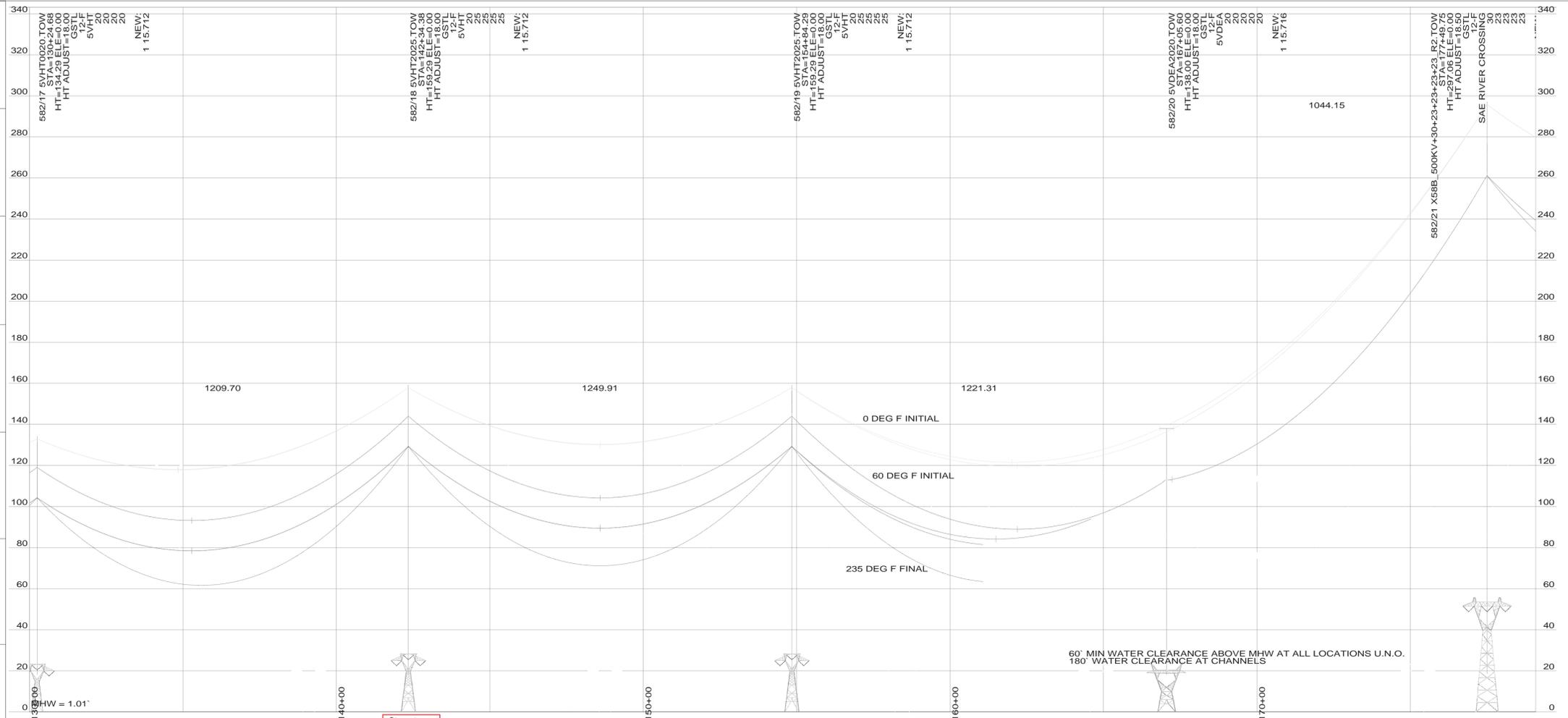
500 KV TRANSMISSION LINE 582
SURRY - SKIFFES CREEK
582/13 - 582/17

DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	3 OF 16	
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H	DRAWING NO.		
INSPECTED		PROJECT NO.					DRAWING NO.	
APPROVED		W.O. NO.					1-582-1-46	
		B/M NO.					CAD NO.	
		99-2245					2611	

NO.	DATE	CHECKED BY	DESCRIPTION

DOMINION GROUND CLEARANCE IS CONTROLLED BY 5MA ELECTROSTATIC INDUCTION TO LARGEST VEHICLE ON THE R/W UNDER THE 120 F. FINAL CURVE. THIS IS CONTROLLED BY WIRE SIZE, TOWER DATA, PHASING CONFIGURATION, ETC. NAD 83/88 VA NORTH

(N.E.S.C.) 2007 EDITION DESIGN SPECIFICATIONS	LOADING			N.E.S.C. CLEARANCES				RULING SPAN	CONDUCTOR	SHIELD WIRE	INSTALLED SIZE SEE TABLE	STRINGING TENSION @60°F SEE TABLE	MAXIMUM TENSION SEE TABLE	ELECTRONIC PLS CADD DATA	K:\WORK\TRANS\05\058201\058201.XYZ
	ICE	WIND	Å F	WATER	GROUND	ROAD	RAILROAD	SEE TABLE							
1/2"	4 LBS.	0Å	29.9 FT	27.9 FT	27.9 FT	35.9 FT	SEE TABLE								



SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)	
582/15 - 582/20	1113	DNO 9809	60°F INITIAL	3578
			MAXIMUM	8500
582/15 - 582/20	1124	DNO 9809	60°F INITIAL	3560
			MAXIMUM	8500
582/15 - 582/20	1118	1351 ACSR 45/7 "DIPPER"	60°F INITIAL	7523
			MAXIMUM	14500
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	1351 ACSR 45/7 "DIPPER"	60°F INITIAL	7184
			MAXIMUM	14500

'X' - S = NUMBER OF STATIC DAMPERS
'X' - C = NUMBER OF CONDUCTOR DAMPERS

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PROFILE IS ALONG SURVEY LINE
20' RIGHT -----
20' LEFT -----



US Army Corps of Engineers
Norfolk District Regulatory Office
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Date: July 30, 2015

Dominion
701 E. Cary Street
Richmond, VA 23219

500 KV TRANSMISSION LINE 582
SURRY - SKIFFES CREEK
582/17 - 582/21

DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	4 OF 16
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H		
INSPECTED						DRAWING NO.	
APPROVED							
PROJECT NO.	W.O. NO.	B/M NO.			1-582-1-47		
99-2245		2611			CAD NO.		

DOMINION GROUND CLEARANCE IS CONTROLLED BY 5MA ELECTROSTATIC INDUCTION TO LARGEST VEHICLE ON THE R/W UNDER THE 120 F. FINAL CURVE. THIS IS CONTROLLED BY WIRE SIZE, TOWER DATA, PHASING CONFIGURATION, ETC. NAD 83/88 VA NORTH

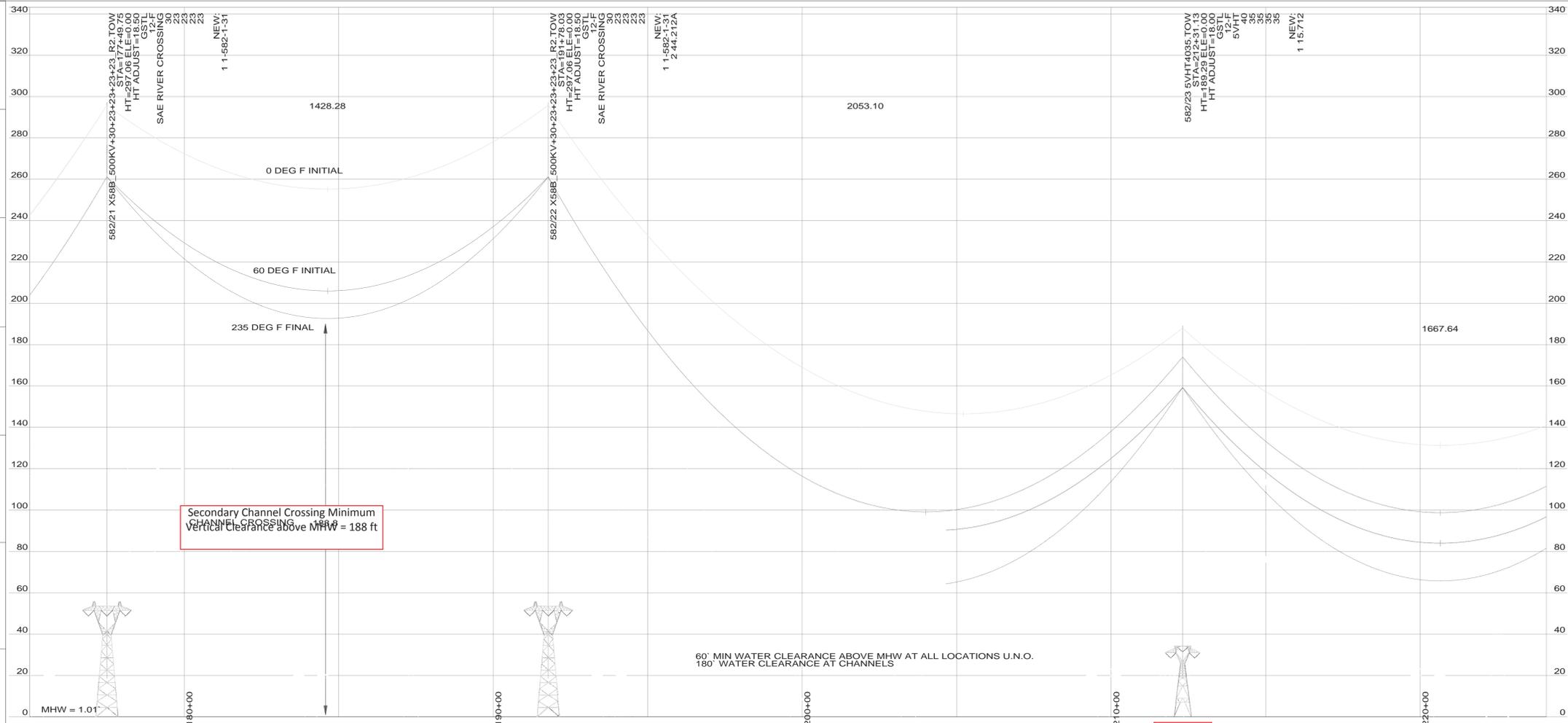
NO.	DATE	CHECKED BY	DESCRIPTION

(N.E.S.C.) 2007 EDITION DESIGN SPECIFICATIONS	LOADING			N.E.S.C. CLEARANCES				RULING SPAN
	ICE	WIND	A°F	WATER	GROUND	ROAD	RAILROAD	SEE TABLE
	1/2"	4 LBS.	0A°	29.9 FT	27.9 FT	27.9 FT	35.9 FT	

CONDUCTOR	INSTALLED SIZE	STRINGING TENSION @60°F	MAXIMUM TENSION
	SEE TABLE	SEE TABLE	SEE TABLE

SHIELD WIRE	INSTALLED SIZE	STRINGING TENSION @60°F	MAXIMUM TENSION
	SEE TABLE	SEE TABLE	SEE TABLE

ELECTRONIC PLS CADD DATA	PROJECT NO.	W.O. NO.	B/M NO.
		K:\WORK\TRANS\05\058201\058201.XYZ	



SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)	
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	1351 ACSR 45/7 "DIPPER"	60°F INITIAL	7184
			MAXIMUM	14500

'X' - S = NUMBER OF STATIC DAMPERS
'X' - C = NUMBER OF CONDUCTOR DAMPERS

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PROFILE IS ALONG SURVEY LINE
20' RIGHT -----
20' LEFT -----



NO.	DATE	CHECKED BY	APPROVED	DESCRIPTION

(N.E.S.C.) 2007 EDITION DESIGN SPECIFICATIONS		LOADING			N.E.S.C. CLEARANCES				RULING SPAN	CONDUCTOR	SHIELD WIRE
ICE	WIND	Å F	WATER	GROUND	ROAD	RAILROAD	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	
1/2"	4 LBS.	0Å	29.9 FT	27.9 FT	27.9 FT	35.9 FT					

DOMINION GROUND CLEARANCE IS CONTROLLED BY 5MA ELECTROSTATIC INDUCTION TO LARGEST VEHICLE ON THE R/W UNDER THE 120 F. FINAL CURVE. THIS IS CONTROLLED BY WIRE SIZE, TOWER DATA, PHASING CONFIGURATION, ETC. NAD 83/88 VA NORTH

US Army Corps of Engineers
Norfolk District Regulatory Office
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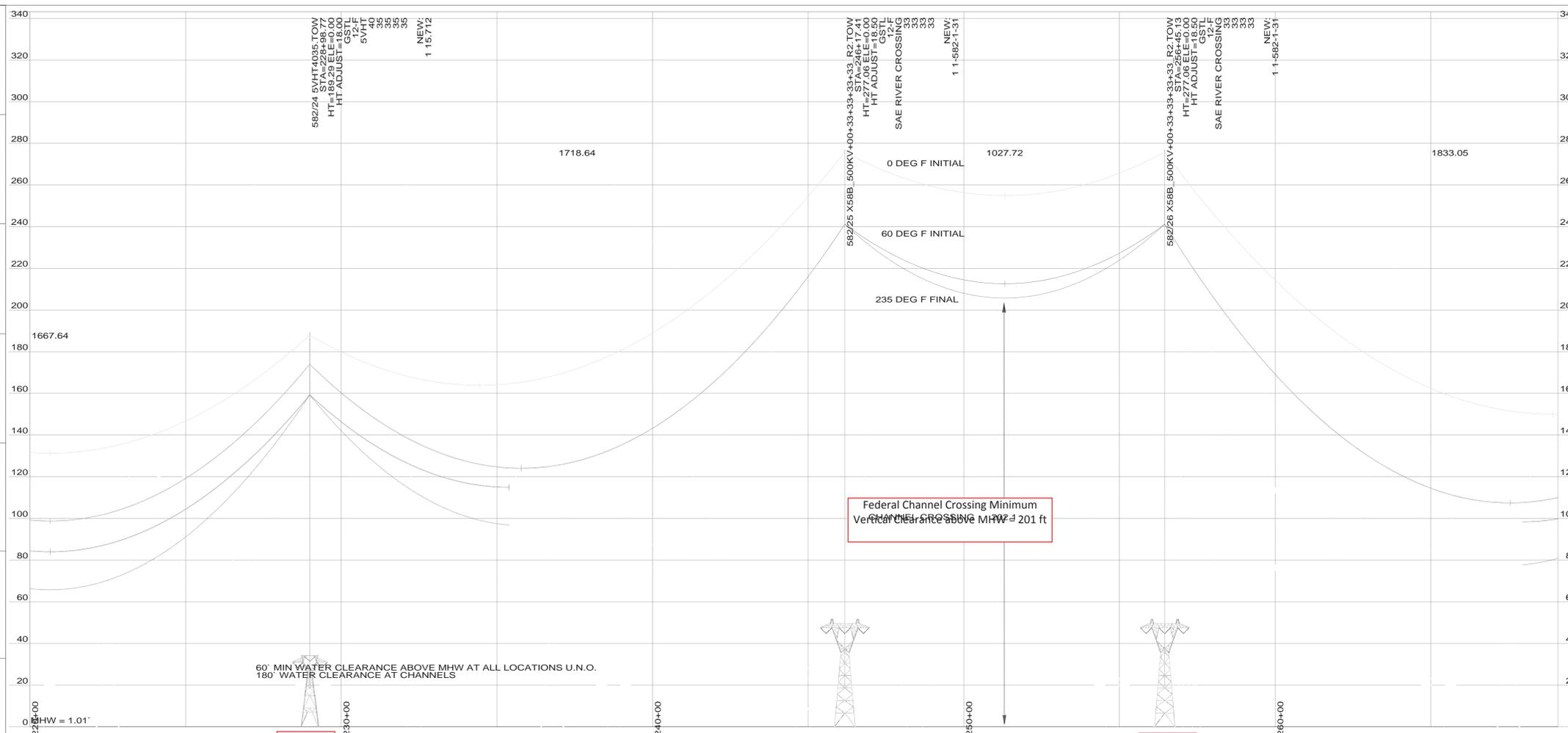
Dominion
701 E. Cary Street
Richmond, VA 23219

500 KV TRANSMISSION LINE 582 SURRY - SKIFFES CREEK 582/21 - 582/23

DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	5 OF 16
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H	DRAWING NO.	
INSPECTED						PROJECT NO.	
APPROVED						W.O. NO.	
						B/M NO.	1-582-1-48
						CAD NO.	

FILE NO. 01-582-01

SDGNSPEC582TIMES

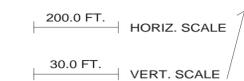


SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)	
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	ACSR 45/7 "DIPPER"	60°F INITIAL	7184
			MAXIMUM	14500

'X' - S = NUMBER OF STATIC DAMPERS
'X' - C = NUMBER OF CONDUCTOR DAMPERS

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PROFILE IS ALONG SURVEY LINE
20' RIGHT -----
20' LEFT -----



NO.	DATE	BY	DESCRIPTION
		CHECKED	
		APPROVED	

US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015

Dominion
701 E. Cary Street
Richmond, VA 23219

500 KV TRANSMISSION LINE 582
SURRY - SKIFFES CREEK
582/24 - 582/26

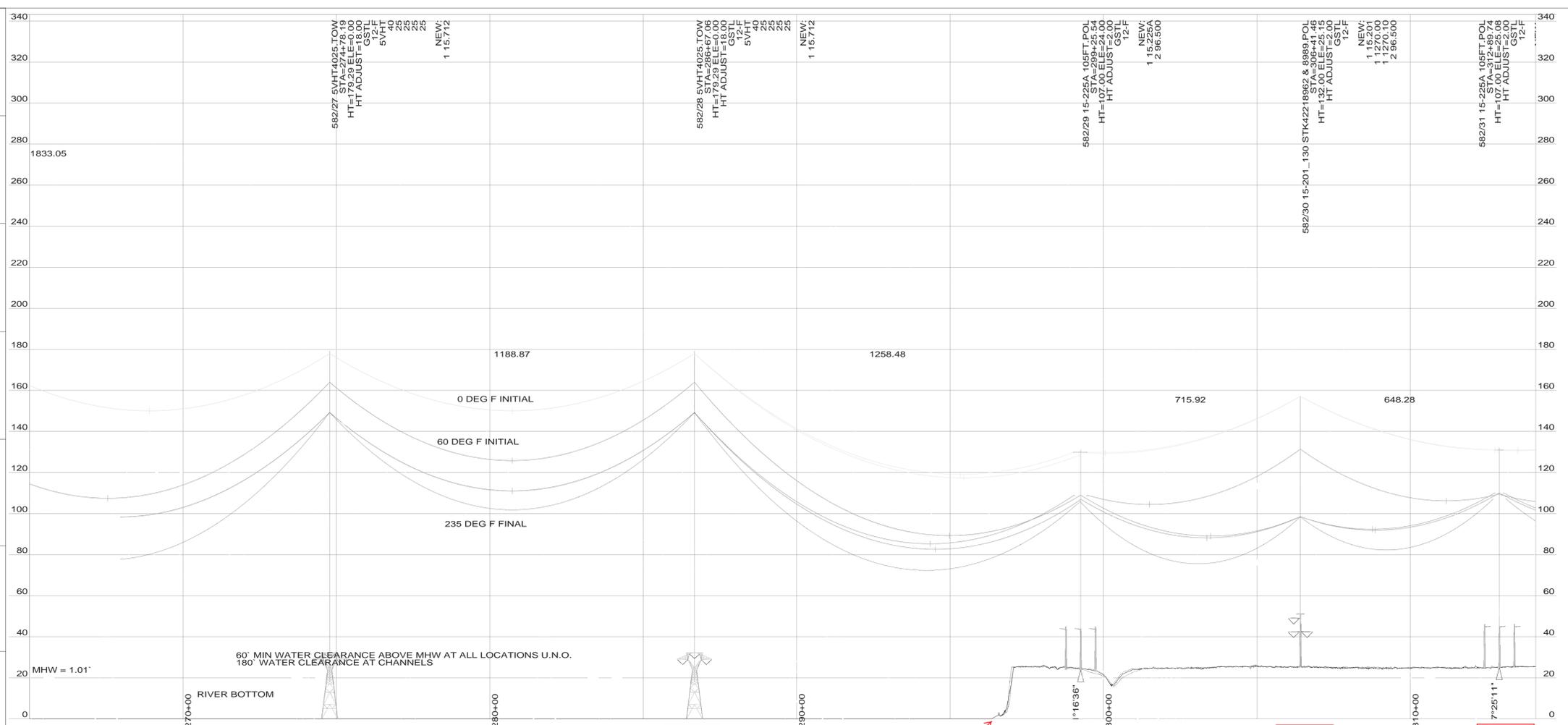
DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	6
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H		
INSPECTED						DRAWING NO.	
APPROVED							
PROJECT NO.	W.O. NO.	B/M NO.			1-582-1-49		
99-2245		2611			CAD NO.		

DOMINION GROUND CLEARANCE IS CONTROLLED BY 5MA ELECTROSTATIC INDUCTION TO LARGEST VEHICLE ON THE R/W UNDER THE 120 F. FINAL CURVE. THIS IS CONTROLLED BY WIRE SIZE, TOWER DATA, PHASING CONFIGURATION, ETC. NAD 83/88 VA NORTH

(N.E.S.C.) 2007 EDITION DESIGN SPECIFICATIONS	LOADING			N.E.S.C. CLEARANCES				RULING SPAN	CONDUCTOR	SHIELD WIRE	INSTALLED SIZE SEE TABLE	STRINGING TENSION @60°F SEE TABLE	MAXIMUM TENSION SEE TABLE	INSTALLED SIZE SEE TABLE	STRINGING TENSION @60°F SEE TABLE	MAXIMUM TENSION SEE TABLE	ELECTRONIC PLS CADD DATA	K:\WORK\TRANS\05\058201\058201.XYZ
	ICE	WIND	ÅF	WATER	GROUND	ROAD	RAILROAD	SEE TABLE										
	1/2"	4 LBS.	0Å	29.9 FT	27.9 FT	27.9 FT	35.9 FT											

FILE NO. 01-582-01

SDGNSPEC\$
58XTIMES



SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)	
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	DNO 9809	60°F INITIAL	3402
			MAXIMUM	9000
582/20 - 582/29	1586	1351 ACSR 45/7 'DIPPER'	60°F INITIAL	7184
			MAXIMUM	14500
582/29 - 582/31	839	DNO 9809	60°F INITIAL	3431
			MAXIMUM	7750
582/29 - 582/31	850	DNO 9809	60°F INITIAL	3408
			MAXIMUM	7750
582/29 - 582/31	844	1351 ACSR 45/7 'DIPPER'	60°F INITIAL	7847
			MAXIMUM	14500

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PROFILE IS ALONG SURVEY LINE
20' RIGHT - - - - -
20' LEFT - - - - -



NO.	DATE	BY	CHECKED	APPROVED	DESCRIPTION

(N.E.S.C.)	LOADING		N.E.S.C. CLEARANCES				RULING SPAN	CONDUCTOR	SHIELD WIRE	ELECTRONIC PLS CADD DATA
	ICE	WIND	WATER	GROUND	ROAD	RAILROAD	SEE TABLE			
2007 EDITION DESIGN SPECIFICATIONS	1/2"	4 LBS.	29.9 FT	27.9 FT	27.9 FT	35.9 FT	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE

US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015

Dominion
701 E. Cary Street
Richmond, VA 23219

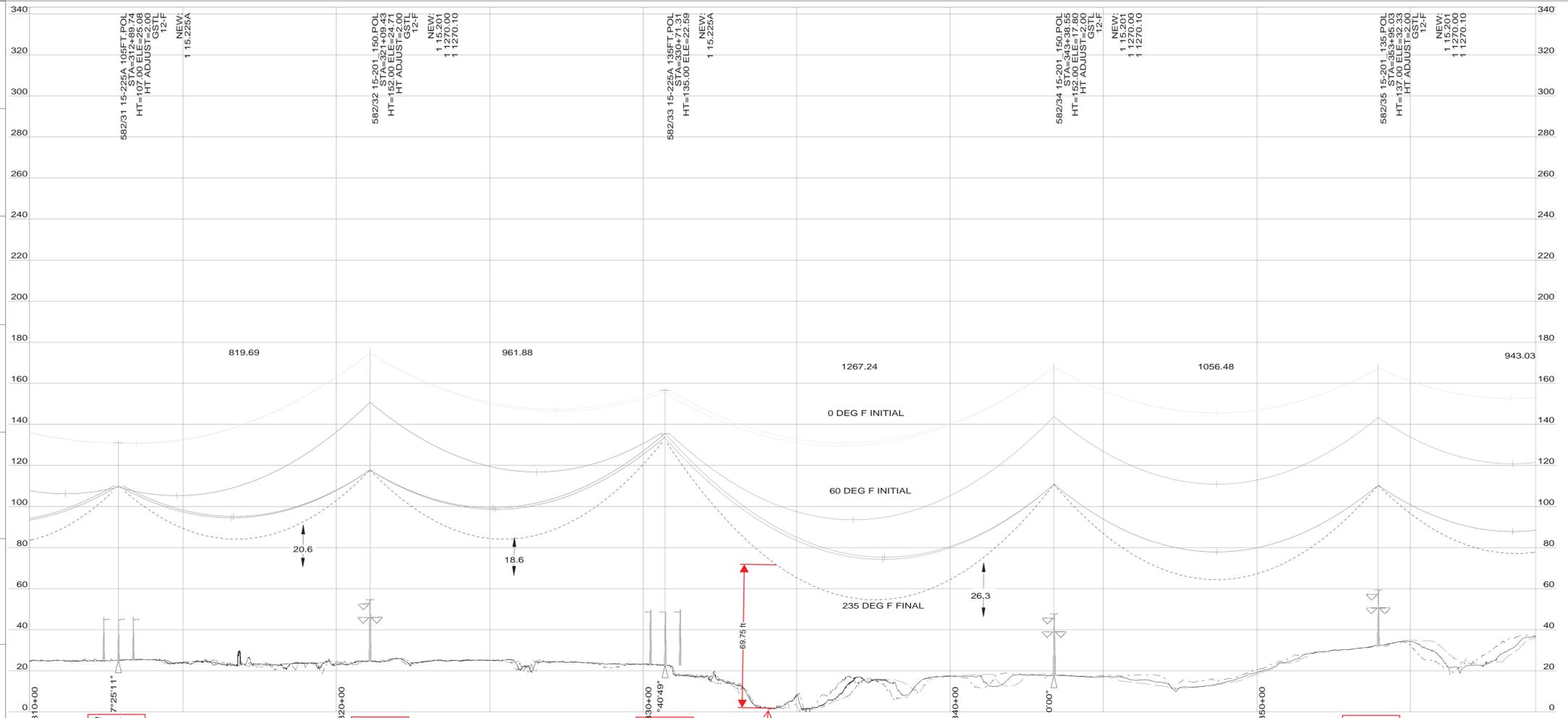
500 KV TRANSMISSION LINE 582
SURRY - SKIFFES CREEK
582/27 - 582/31

DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	7 of 16
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H	DRAWING NO.	1-582-1-50
INSPECTED							
APPROVED							
PROJECT NO.	99-2245	W.O. NO.	2611	B/M NO.		CAD NO.	

FILE NO. 01-582-01

SDGNSPEC
582TIMES

Wood Creek Crossing Profile



SPAN	RULING SPAN (FEET)	CONDUCTOR	TENSION (LBS)
582/29 - 582/31	839	DNO 9809	60°F INITIAL 3431 MAXIMUM 7750
582/29 - 582/31	850	DNO 9809	60°F INITIAL 3408 MAXIMUM 7750
582/29 - 582/31	844	1351 ACSR 45/7 'DIPPER'	60°F INITIAL 7847 MAXIMUM 14500
582/31 - 582/33	969	DNO 9809	60°F INITIAL 3215 MAXIMUM 7750
582/31 - 582/33	970	DNO 9809	60°F INITIAL 3215 MAXIMUM 7750
582/31 - 582/33	970	1351 ACSR 45/7 'DIPPER'	60°F INITIAL 7664 MAXIMUM 14500

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'X' - C = NUMBER OF CONDUCTOR DAMPERS

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PROFILE IS ALONG SURVEY LINE
20' RIGHT -----
20' LEFT -----



US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015

Dominion
701 E. Cary Street
Richmond, VA 23219

500 KV TRANSMISSION LINE 582
SURRY - SKIFFES CREEK
582/31 - 582/35

DRAWN	KAK	DATE	4/1/14	SCALE	1" = 30' V	SHEET NO.	8 OF 16
CHECKED	EK	DATE	4/1/14	SCALE	1" = 200' H		
INSPECTED						DRAWING NO.	
APPROVED							
PROJECT NO.	W.O. NO.	B/M NO.				1-582-1-51	
99-2245		2611				CAD NO.	

NO.	DATE	CHECKED BY	APPROVED	DESCRIPTION

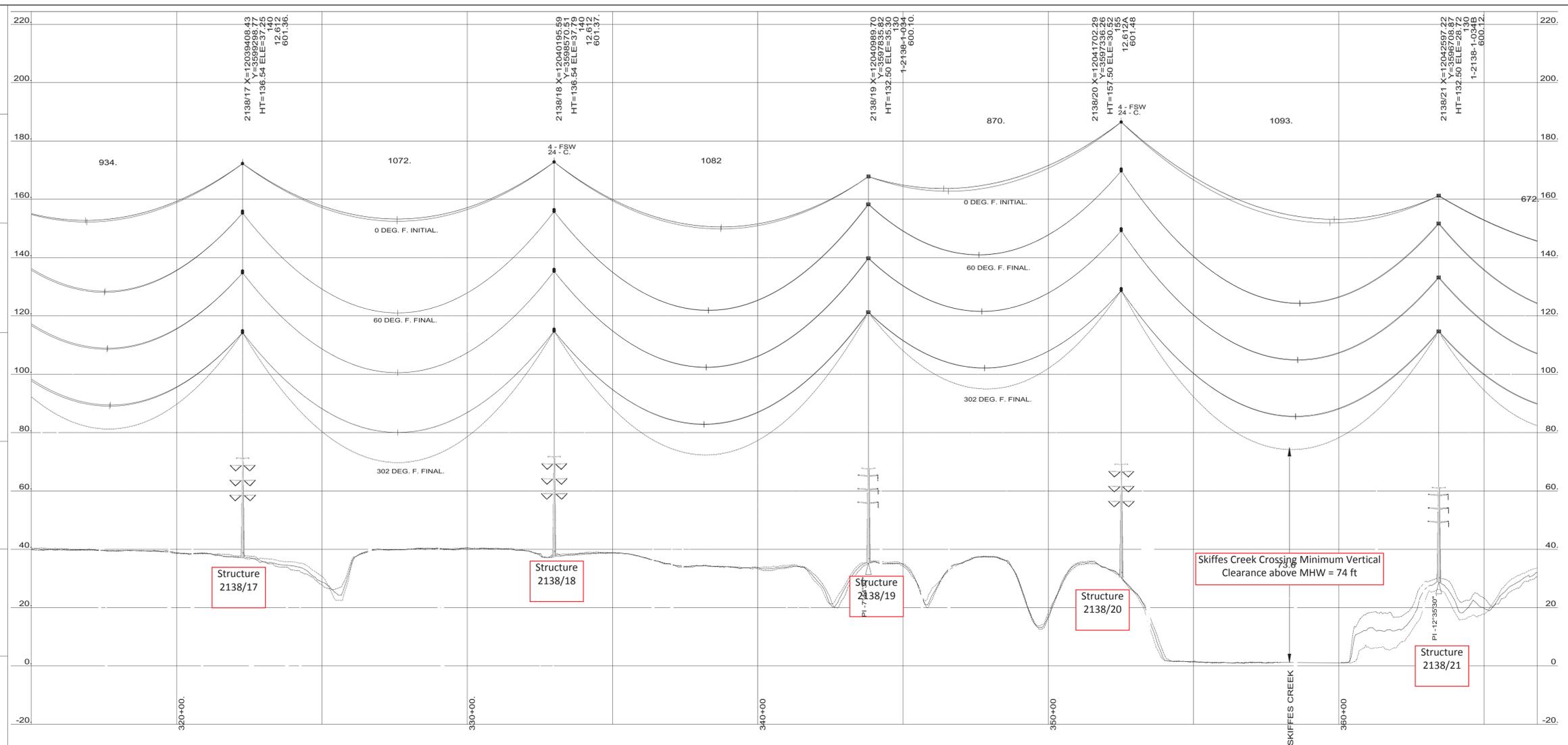
(N.E.S.C.) 2007 EDITION DESIGN SPECIFICATIONS	LOADING		N.E.S.C. CLEARANCES				RULING SPAN	CONDUCTOR	INSTALLED SIZE	STRINGING TENSION @60°F	MAXIMUM TENSION	SHIELD WIRE	INSTALLED SIZE	STRINGING TENSION @60°F	MAXIMUM TENSION	ELECTRONIC PLS CADD DATA
	ICE	WIND	WATER	GROUND	ROAD	RAILROAD										
1/2"	4 LBS.	0A°	29.9 FT	27.9 FT	27.9 FT	35.9 FT	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	SEE TABLE	

DOMINION GROUND CLEARANCE IS CONTROLLED BY 5MA ELECTROSTATIC INDUCTION TO LARGEST VEHICLE ON THE R/W UNDER THE 120 F. FINAL CURVE. THIS IS CONTROLLED BY WIRE SIZE, TOWER DATA, PHASING CONFIGURATION, ETC. NAD 83/88 VA NORTH

FILE NO. 01-582-01

SDGNSPEC 582TIMES

Skiffes Creek Crossing Profile

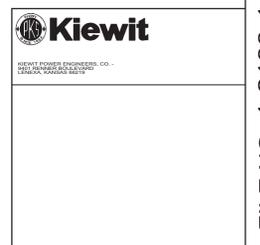
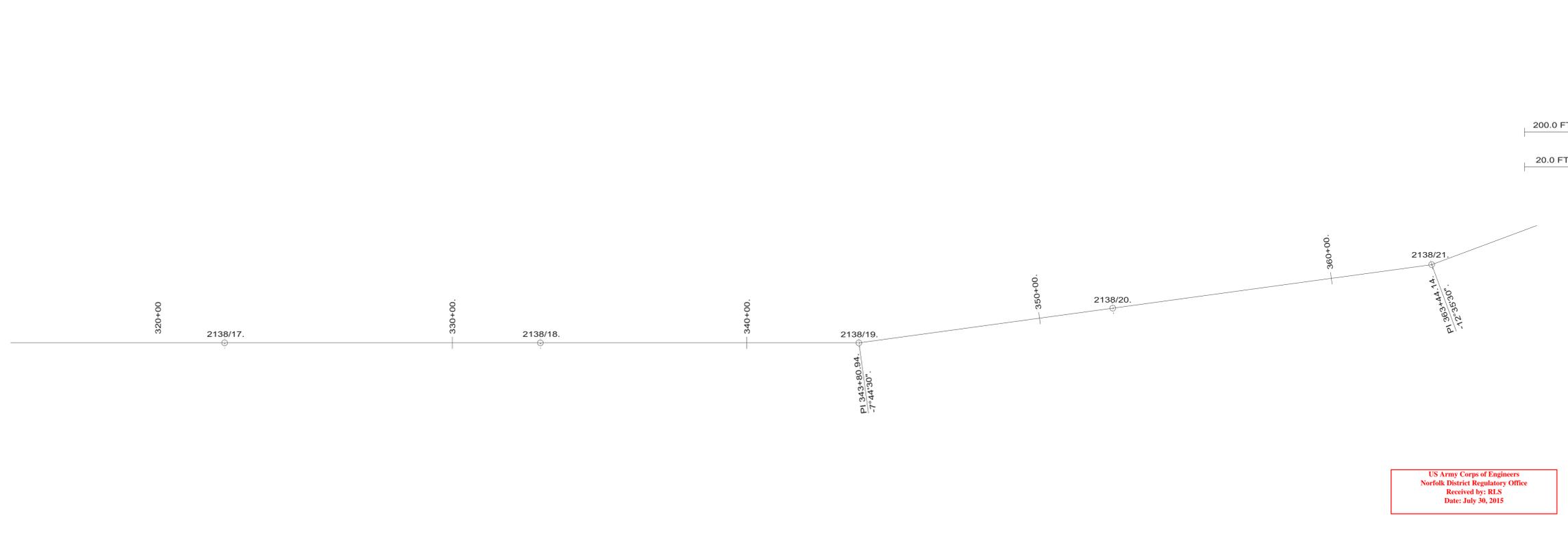


SPAN-	LING SPAN (FT)	CONDUCTOR-	TENSION (LBS)
2138/16 - 2138/19	1035.	DNO 9700.	60°F INITIAL- 1969. MAXIMUM- 5899.
2138/16 - 2138/19	1037.	OPGW	60°F INITIAL- 1962. MAXIMUM- 5744.
2138/16 - 2138/19	1037.	636 ACSR	60°F INITIAL- 3835. MAXIMUM- 9040.
2138/19 - 2138/21	999	DNO 9700	60°F INITIAL- 2023 MAXIMUM- 5900.
2138/19 - 2138/21	1001.	OPGW	60°F INITIAL- 2097. MAXIMUM- 5845.
2138/19 - 2138/21	1002	636 ACSR	60°F INITIAL- 3862. MAXIMUM- 9039.
2138/21 - 2138/23	705.	DNO 9700	60°F INITIAL- 3052. MAXIMUM- 5899.
2138/21 - 2138/23	709.	OPGW	60°F INITIAL- 2904. MAXIMUM- 5661.
2138/21 - 2138/23	709.	636 ACSR	60°F INITIAL- 4283. MAXIMUM- 9039.

'X' - S = NUMBER OF STATIC DAMPERS-
'X' - FSW = NUMBER OF FIBER DAMPERS-
'X' - C = NUMBER OF CONDUCTOR DAMPERS

- EROSION & SEDIMENTATION NOTES:-
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200.0 FT. HORIZ. SCALE.
20.0 FT. VERT. SCALE.



Dominion
701 E. Cary Street
Richmond, VA 23219

230 KV TRANSMISSION LINE 2138.
HEALTON/SKIFFES CREEK

DATE:	SCALE:	SHEET NO
12/12/13	HORIZ. 1"=200'	3 OF 31
12/12/13	VERT. 1"=20'	

DRAWING NO. 1-2138-1-003

DATE:	SCALE:	SHEET NO
12/12/13	HORIZ. 1"=200'	3 OF 31
12/12/13	VERT. 1"=20'	

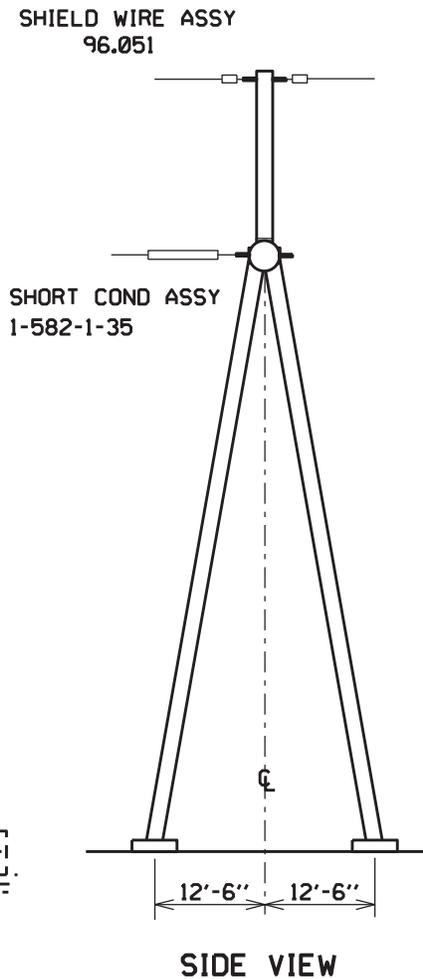
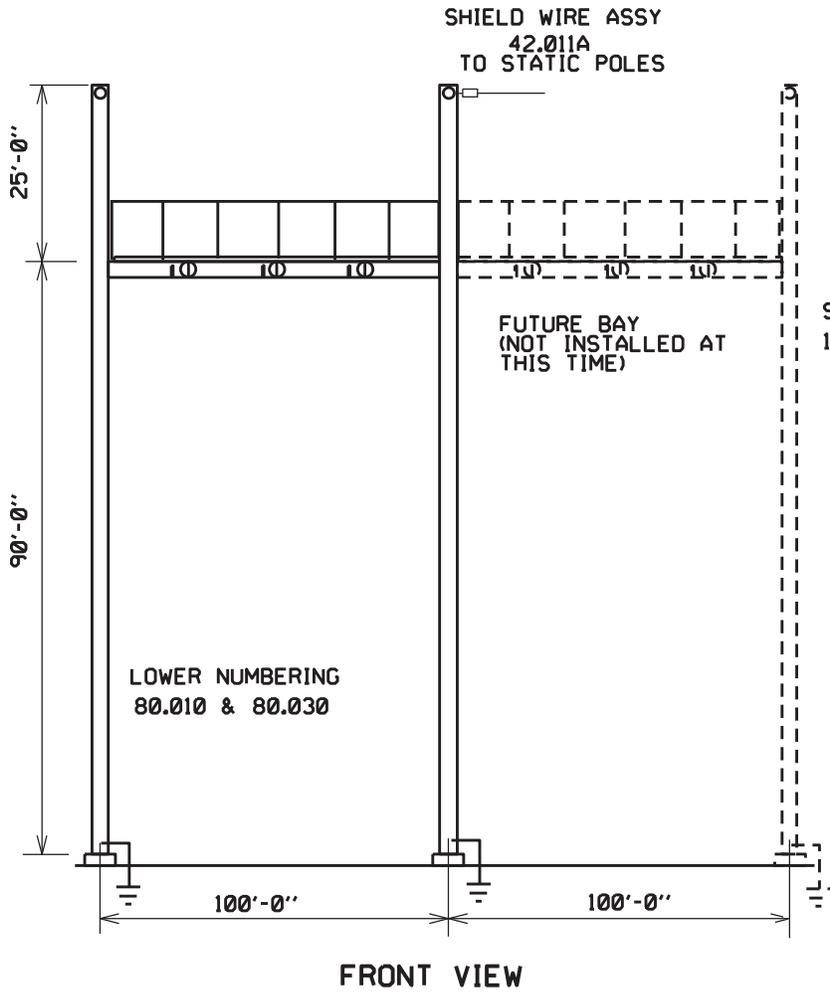
DRAWING NO. 1-2138-1-003

PROJECT NO	B/M NO	CAD NO
99-2245.	O. NO	2614

(N.E.S.C.) 2012 EDITION DESIGN SPECIFICATIONS	LOADING		N.E.S.C. CLEARANCES				LING SPAN- SEE TABLE-	CONDUCTOR	INSTALLED- SIZE-	STRINGING TENSION 60°F - SEE TABLE-	MAXIMUM TENSION- SEE TABLE-	SHIELD WIRE	INSTALLED SIZE-	STRINGING TENSION 60°F SEE TABLE	MAXIMUM TENSION SEE TABLE	ELECTRONIC- PLS CADD DATA	K:\WORK\TRANS\21213801\213801.XYZ
	CE	WIND-	WATER-	OUND-	OAD	LOAD											
1/2"	4 LBS-	0°	22.5 FT-	OUND- 22.5 FT-	22.5 FT	LOAD											

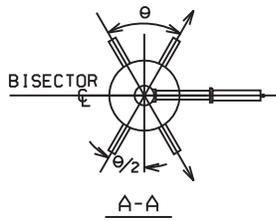
REVISIONS.	DATE	BY	DESCRIPTION
CHECKED			
APPROVED			

Surry - Skiffes Creek Structures

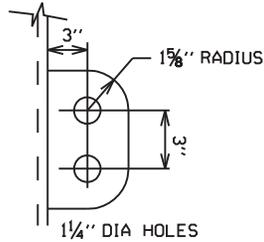


582/1 and 582/44
Terrestrial Crossing
Sheet 1

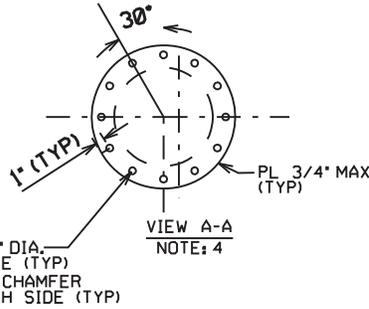
US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015



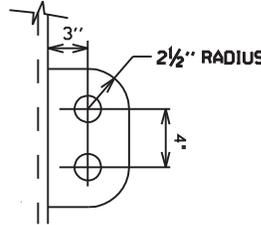
theta = LINE ANGLE
SEE VIEW A-A FOR POLE CAP



SW VANG DETAIL

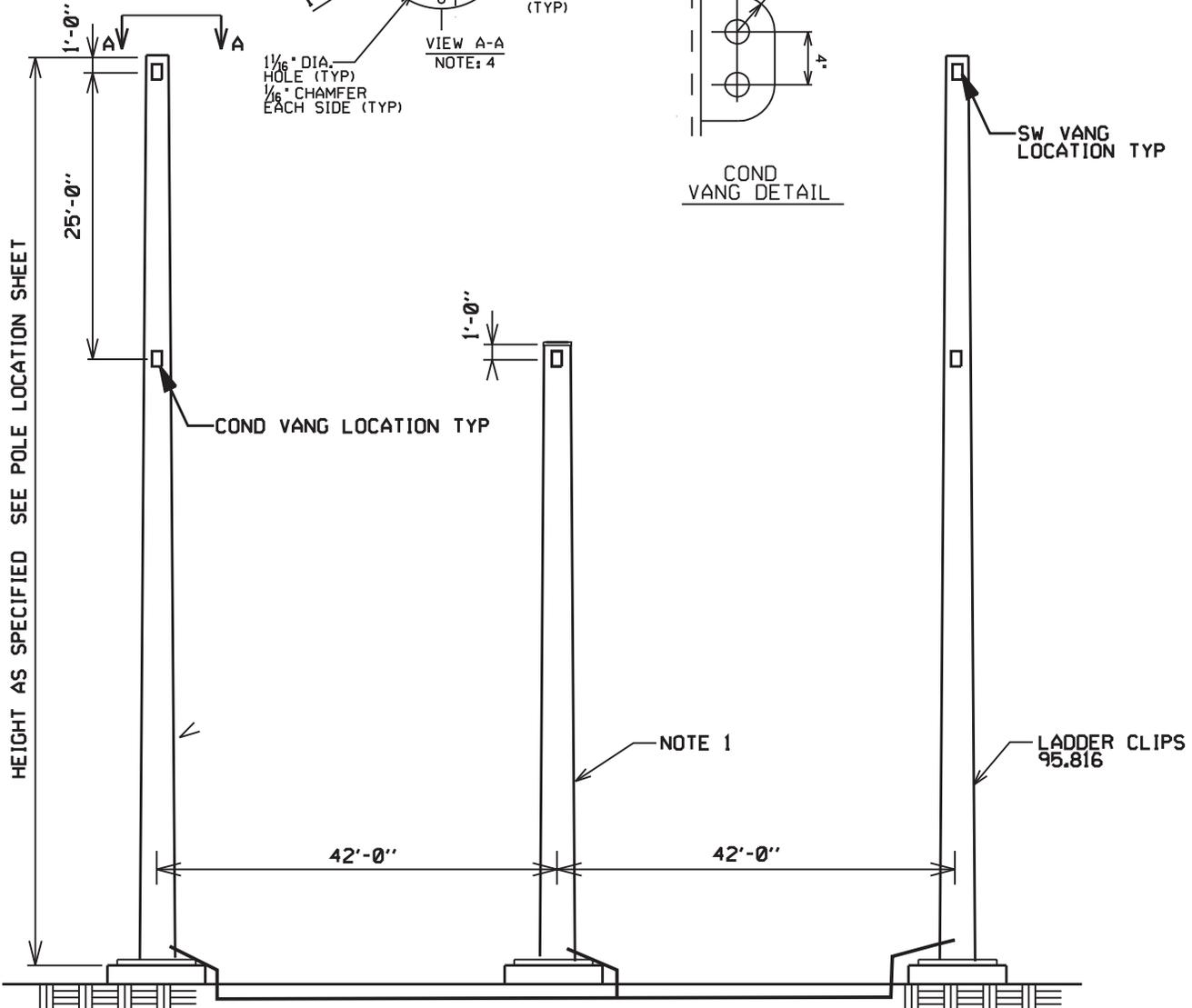


VIEW A-A
NOTE: 4



COND VANG DETAIL

582 LINE



HEIGHT AS SPECIFIED SEE POLE LOCATION SHEET

Proposed Tower Structure

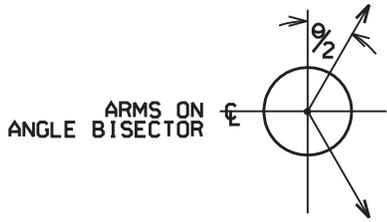
582/2

Terrestrial Crossing

Sheet 2

US Army Corps of Engineers
Norfolk District Regulatory Office
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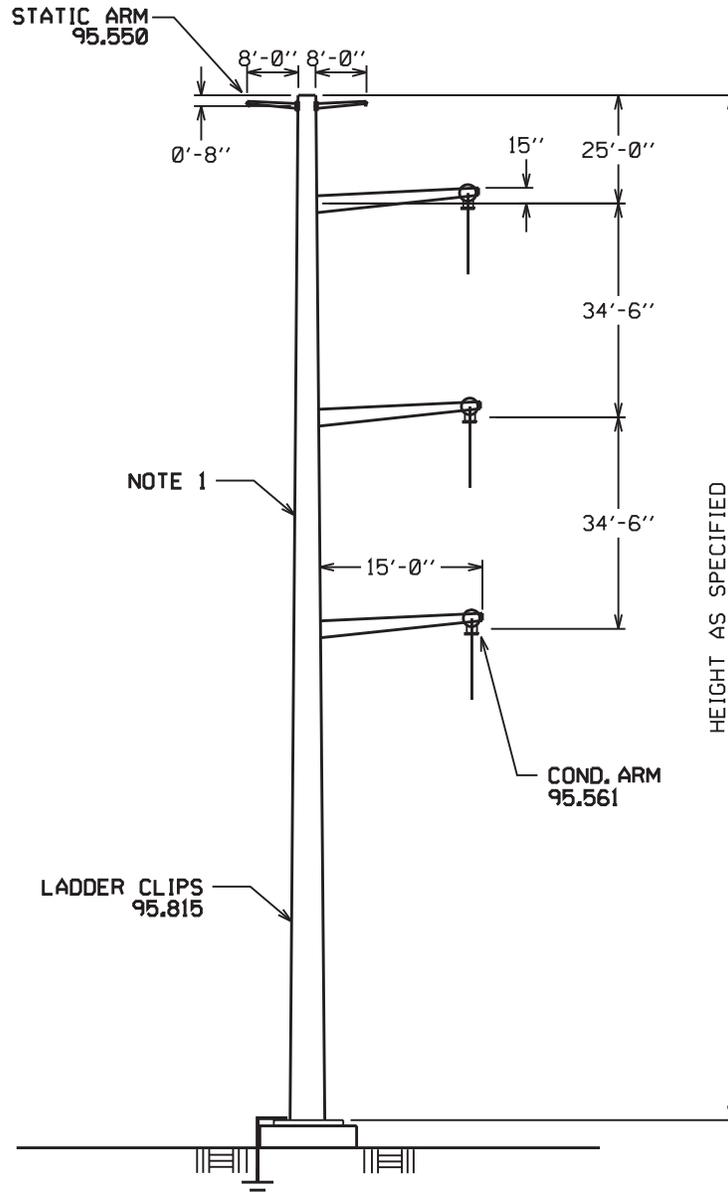
\$SYTIME\$



PLAN

θ = LINE ANGLE

582 LINE



Proposed Tower Structure

582/3

Terrestrial Crossing

Sheet 3

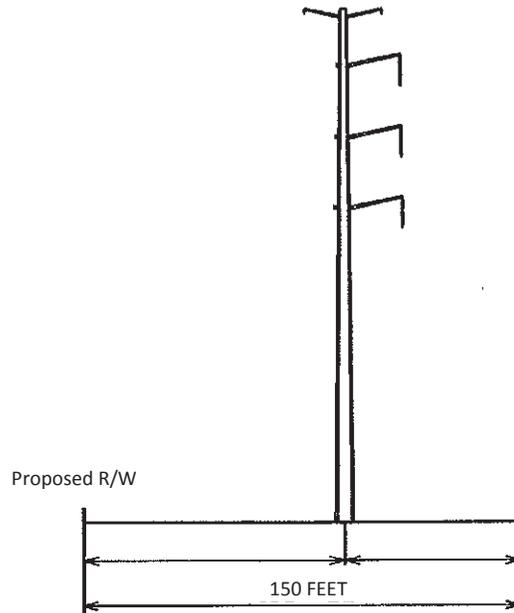
US Army Corps of Engineers
 Norfolk District Regulatory Office
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\$DCNSPEC\$

TESBORD1

95.510

582 LINE

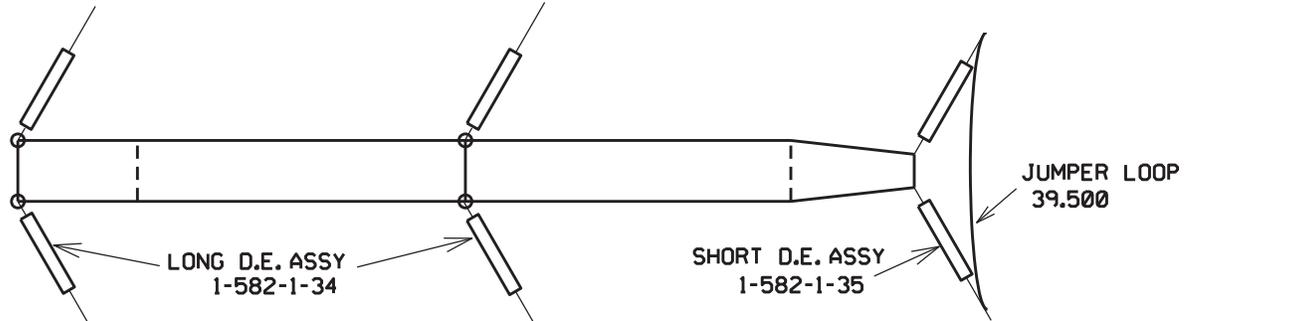


Proposed Tower Structures

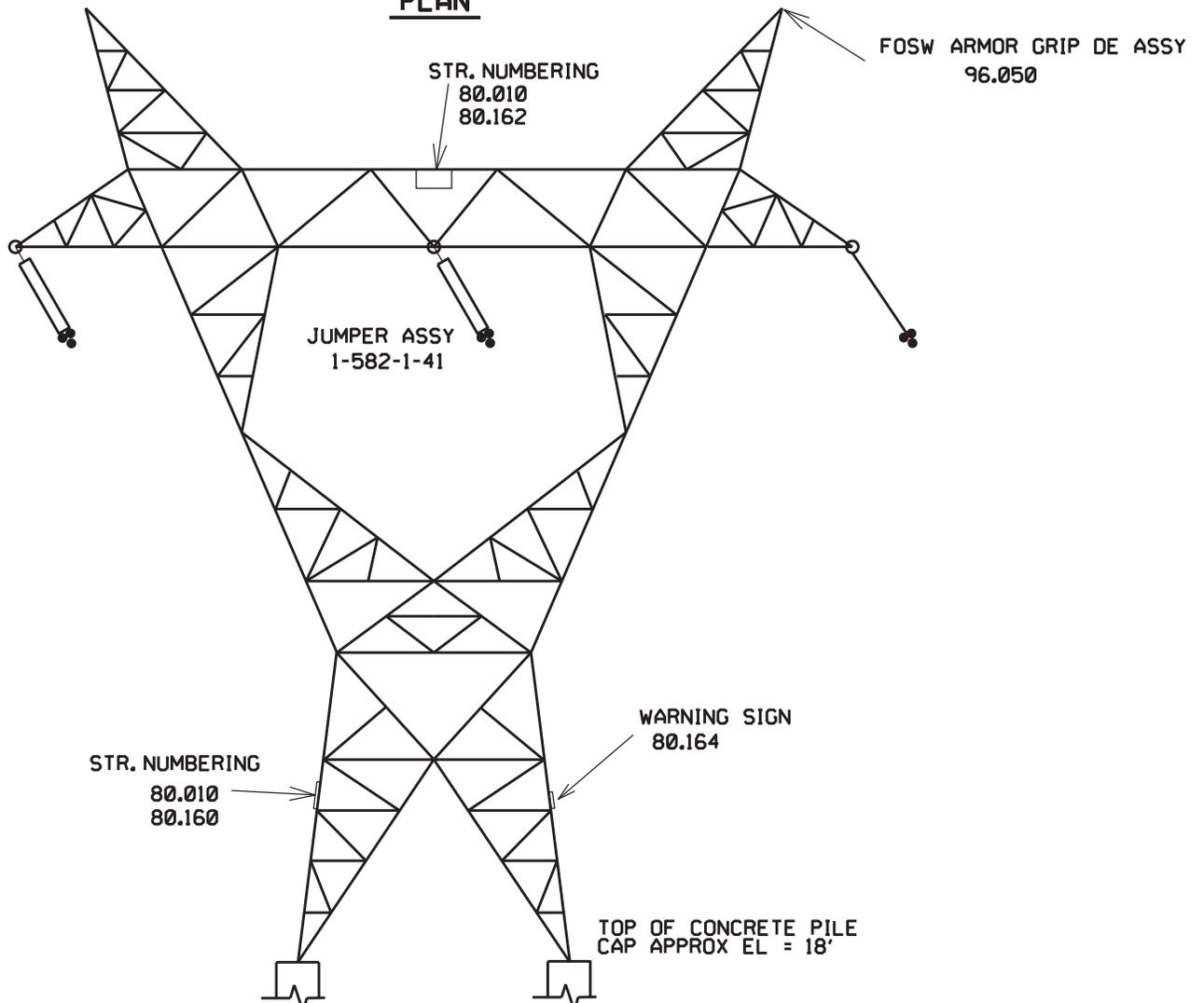
582/4 thru 582/11

Terrestrial Crossing

US Army Corps of Engineers
Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015



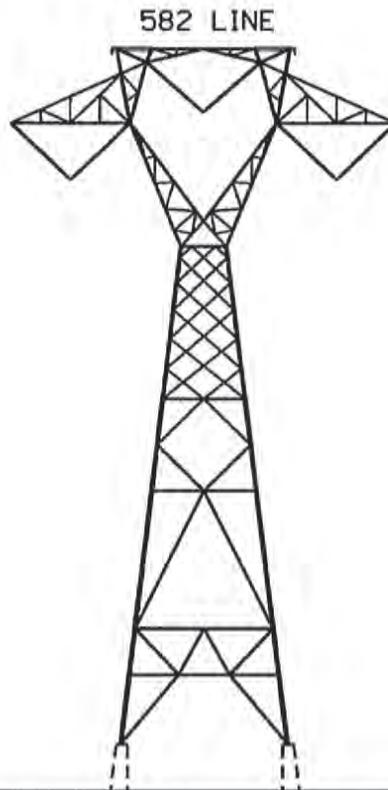
PLAN



Proposed Tower Structures

582/12, 582/15 & 582 20
River Crossing
Sheet 5

US Army Corps of Engineers
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Proposed Tower Structures

582/13 thru 582/14

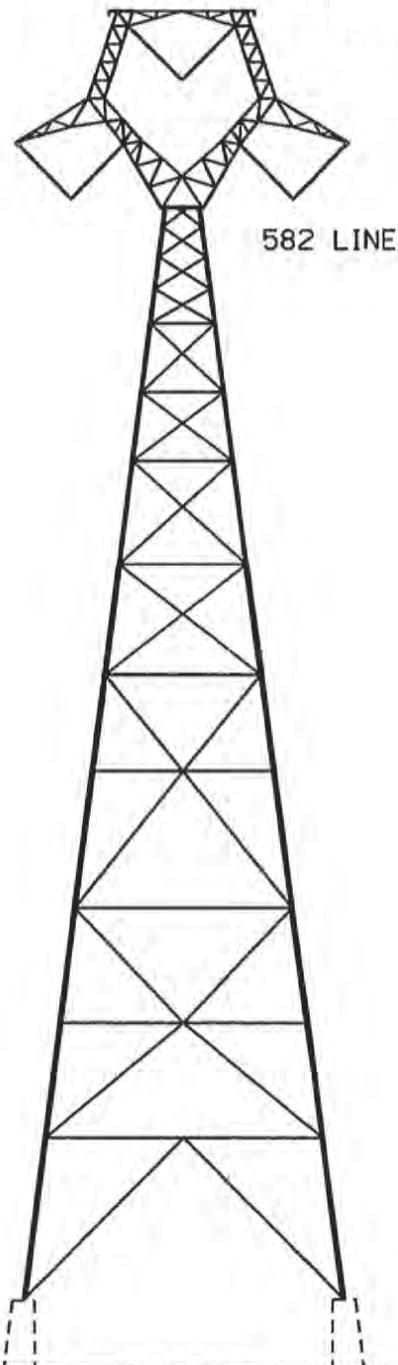
582/16 thru 582/19

582/23 thru 582/24

582/27 thru 528/28

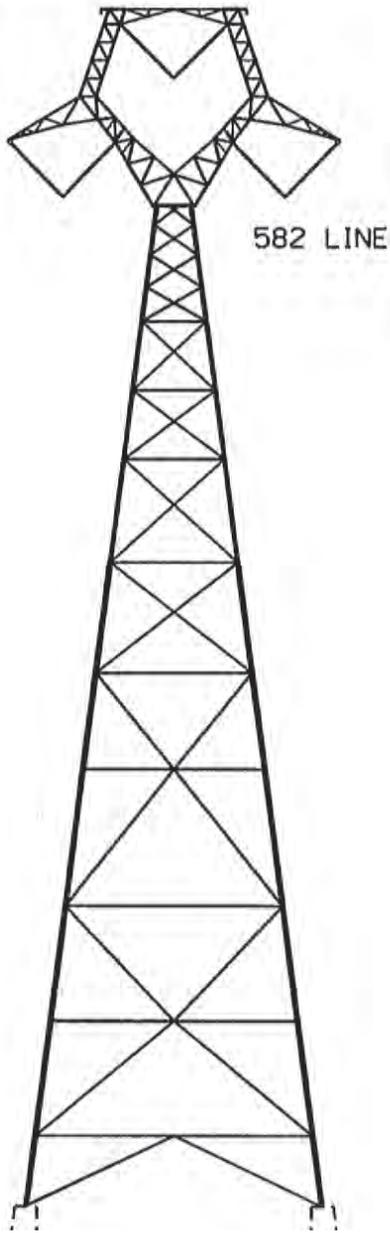
River Crossing

US Army Corps of Engineers
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Proposed Tower Structures
582/21 thru 582/22
Secondary Navigational Channel Crossing
Sheet 7

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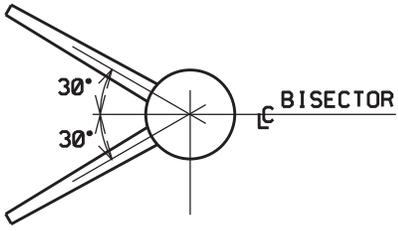


Proposed Tower Structures
582/25 thru 582/26
Federal Navigational Channel Crossing
Sheet 8

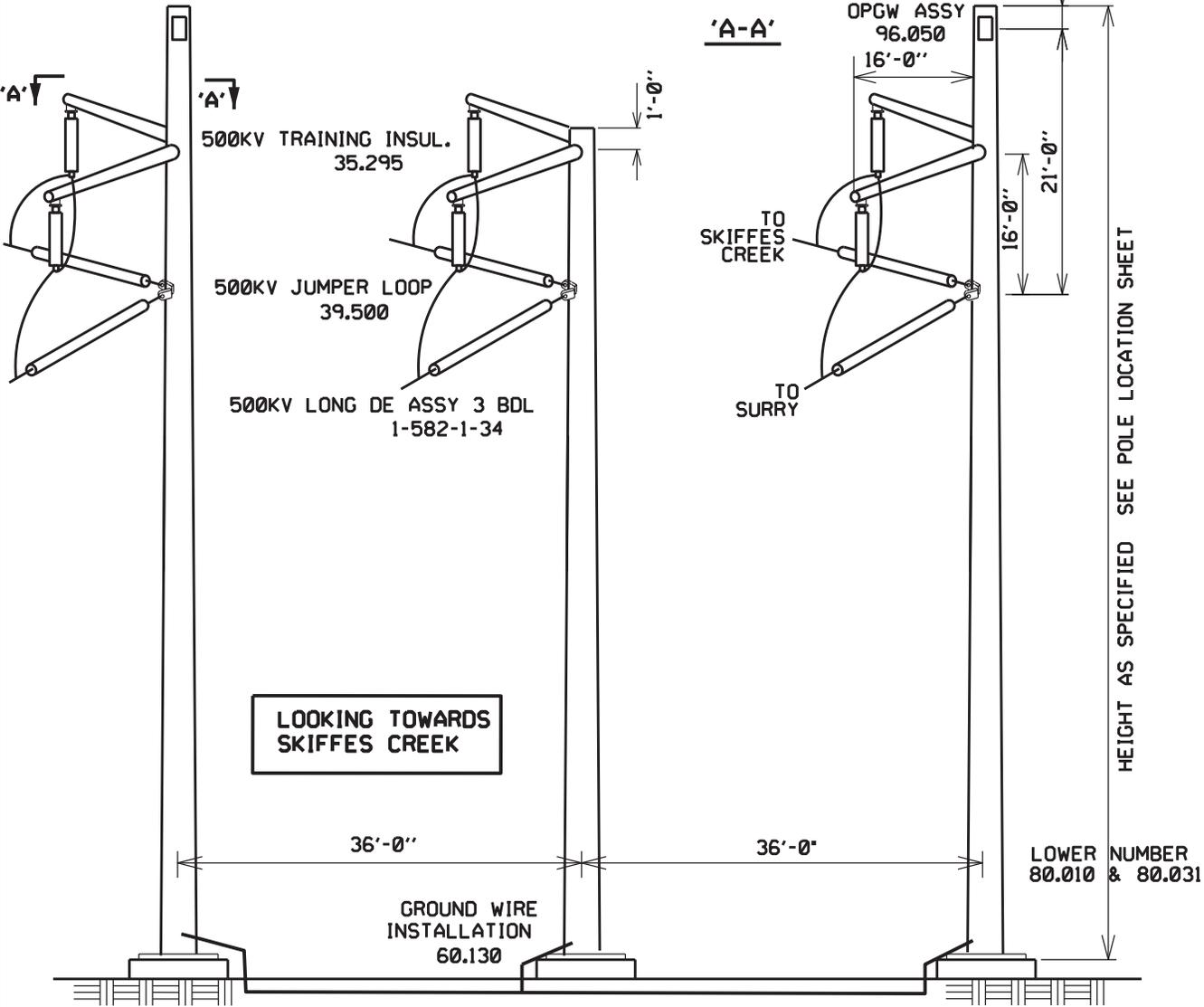
US Army Corps of Engineers
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Date: July 30, 2015

\$SYTIME\$

•REMOVE CHAIN LINK (ITEM 3 IN ASSEMBLY)
FOR THIS STRUCTURE ONLY BECAUSE OF
VERTICAL VANG.



AERIAL NUMBER
80.032



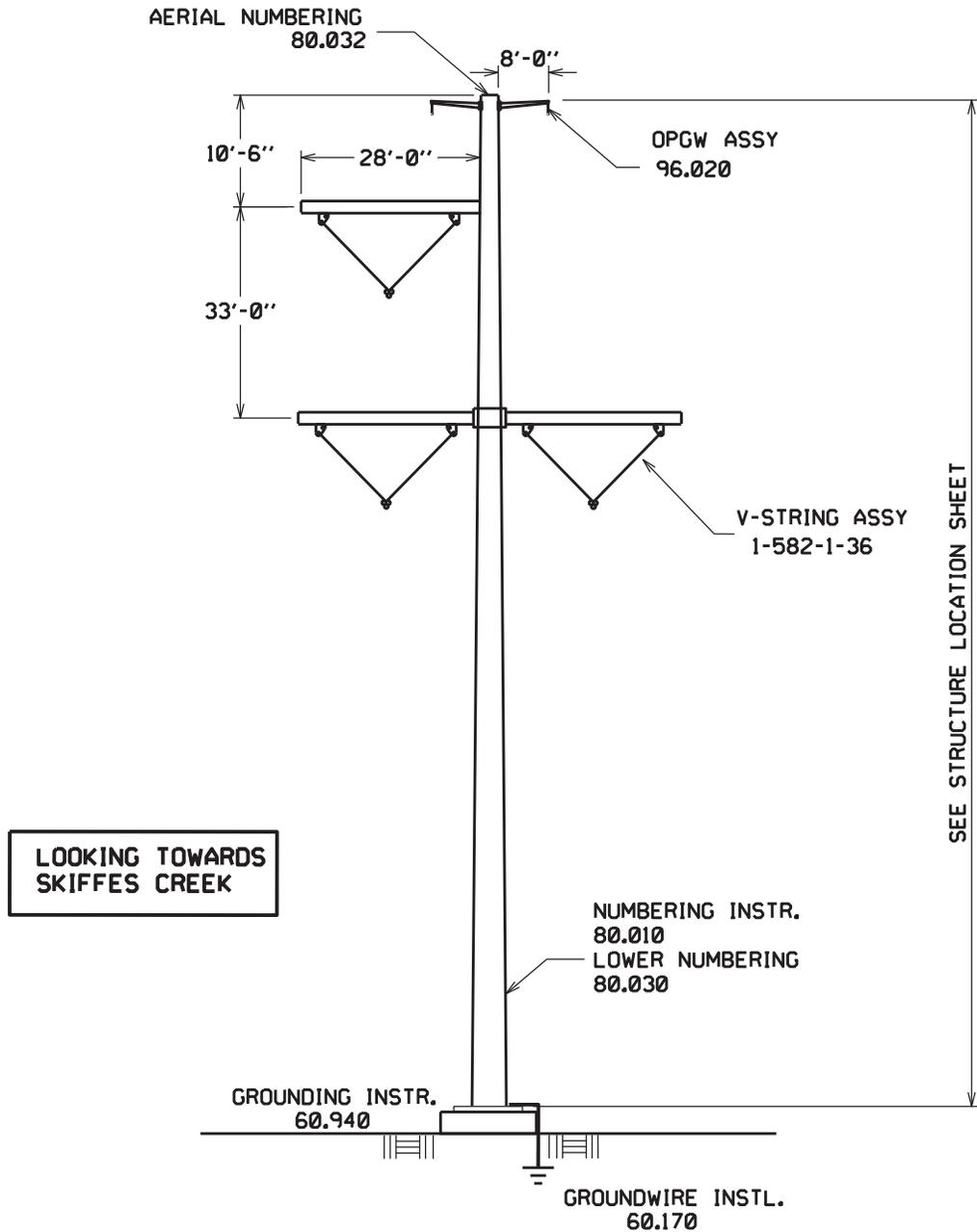
Proposed Tower Structure

582/29, 582/31 & 582/33
Terrestrial Crossing
Sheet 9

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Date: July 30, 2015

\$DCNSPEC\$

TESBORDI



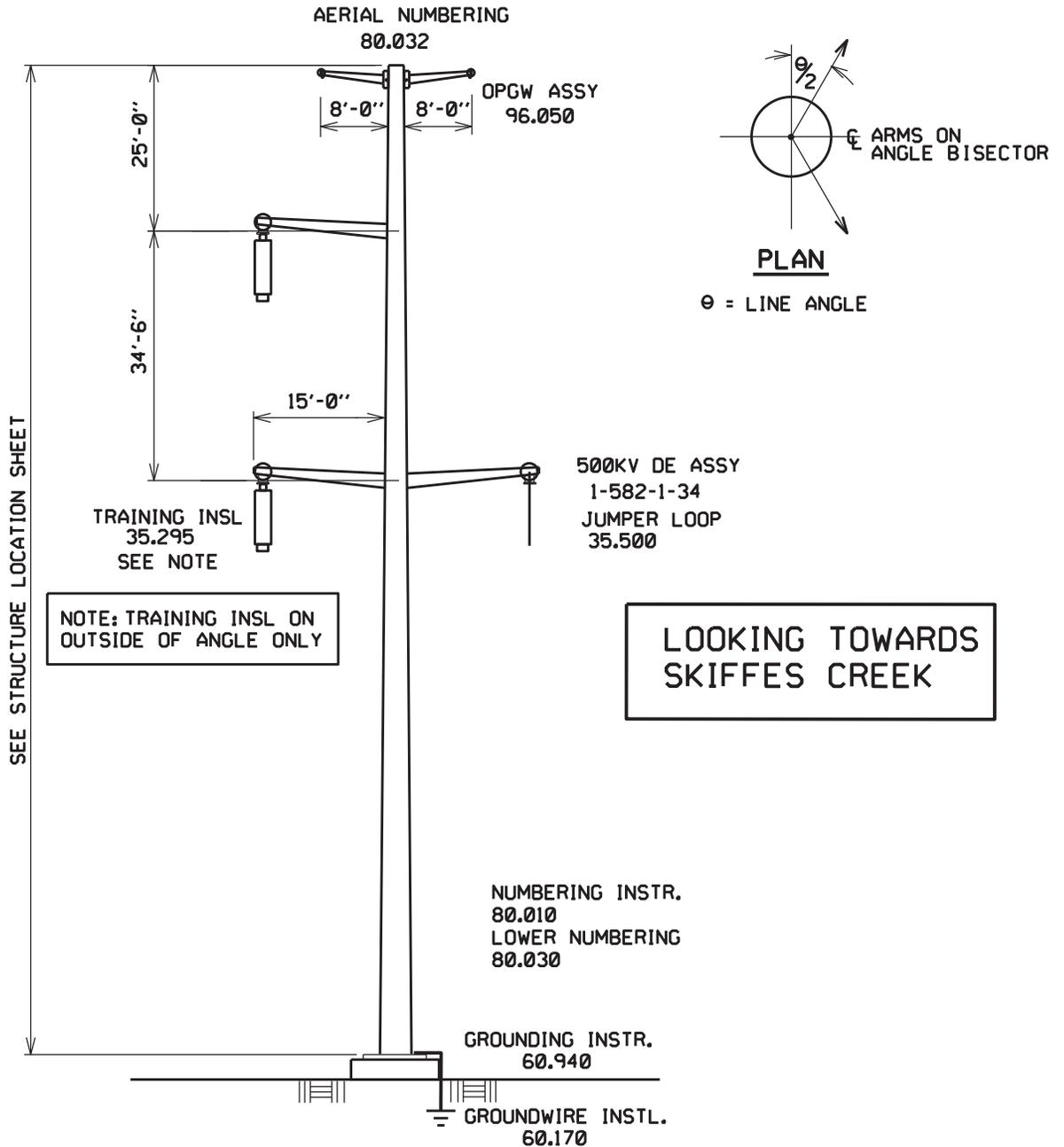
Proposed Tower Structures

582/30, 582/32, 582/34-37 & 582/40

Terrestrial Crossing

Sheet 10

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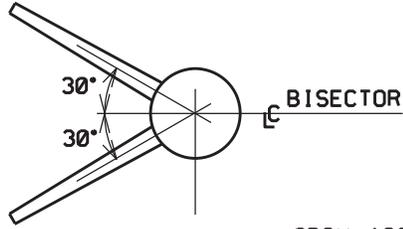
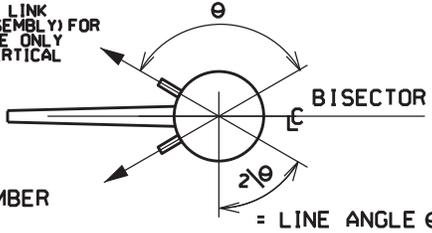
Proposed Tower Structures

582/38-39 & 582/41
Terrestrial Crossing
Sheet 11

US Army Corps of Engineers
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\$SYTIME\$

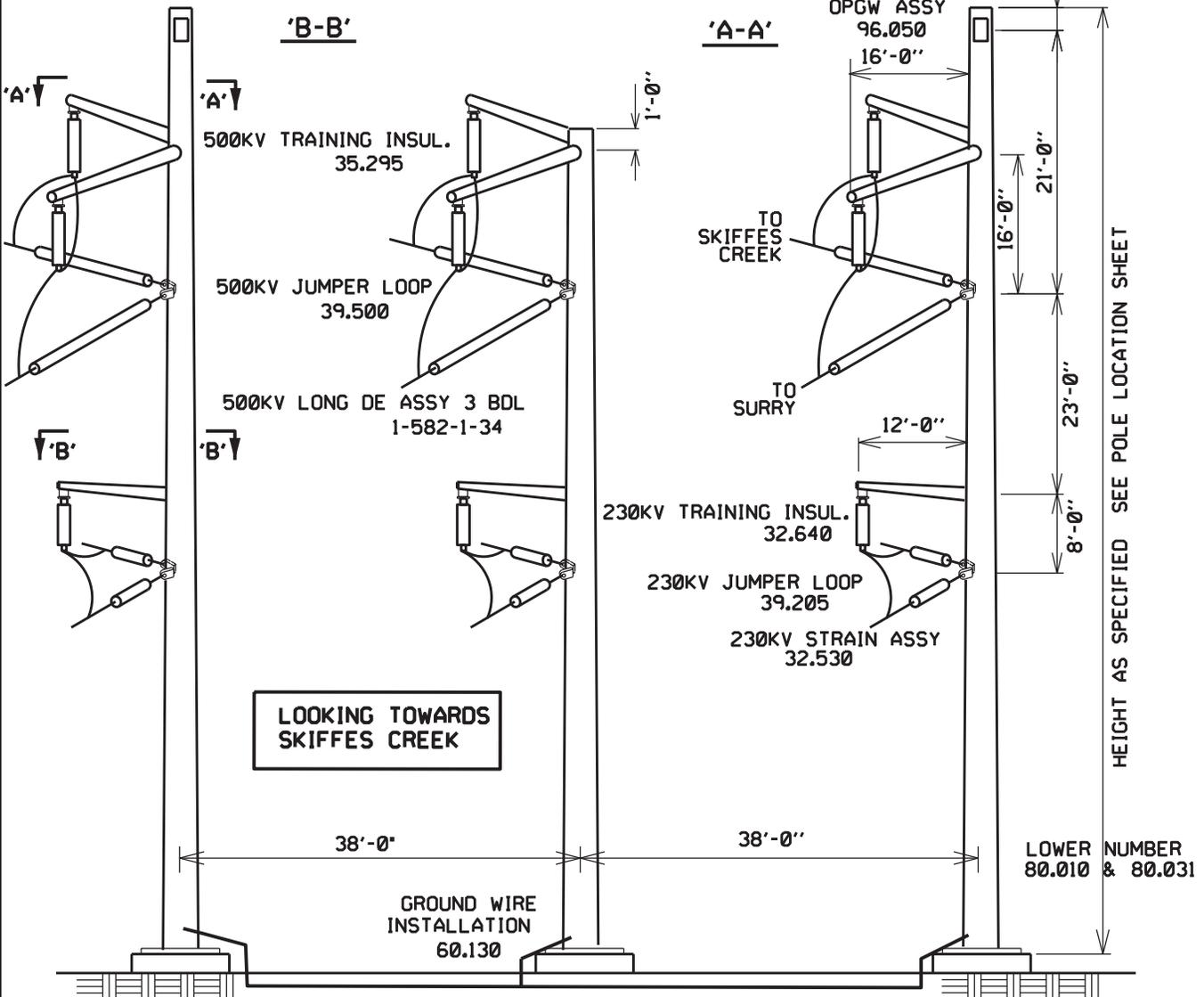
*REMOVE CHAIN LINK (ITEM 3 IN ASSEMBLY) FOR THIS STRUCTURE ONLY BECAUSE OF VERTICAL VANG.



AERIAL NUMBER
80.032

'B-B'

'A-A'



Proposed Tower Structure

US Army Corps of Engineers
 Norfolk District Regulatory Office
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 Date: July 30, 2015

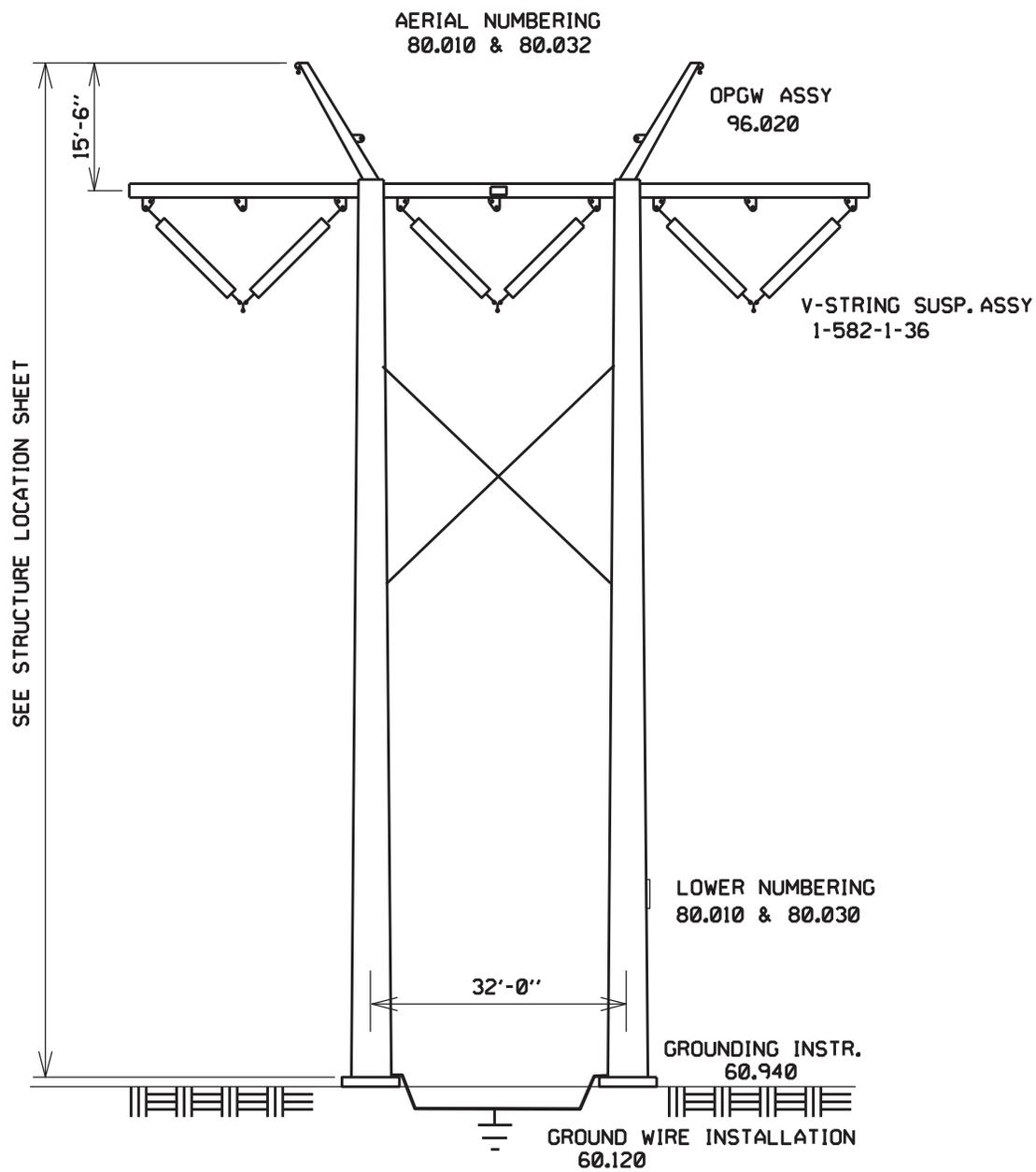
\$DCNSPEC\$

TESBORDI

\$SYTIME\$

\$DGNSPEC\$

TESBORD1



Proposed Tower Structure

582/43
Terrestrial Crossing
Sheet 13

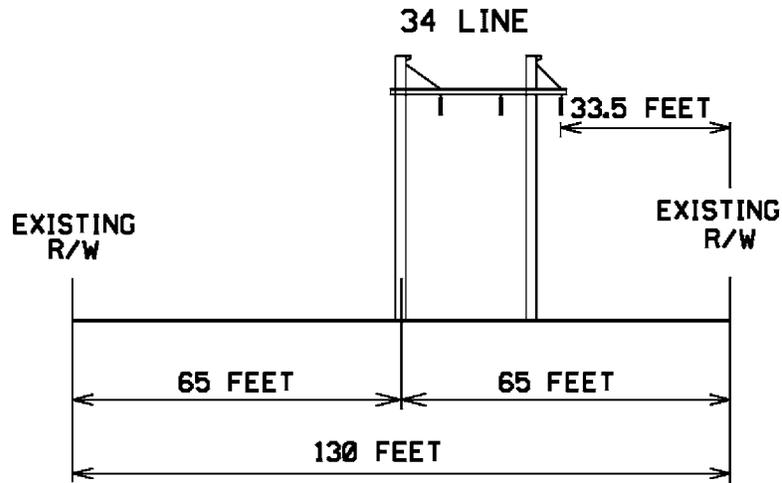
<p>US Army Corps of Engineers Norfolk District Regulatory Office Received by: RLS Date: July 30, 2015</p>

FAB DWG 95.530

(S) MP 5.73 to 6.70

Line 34 will be rebuilt & renumbered to Line 7

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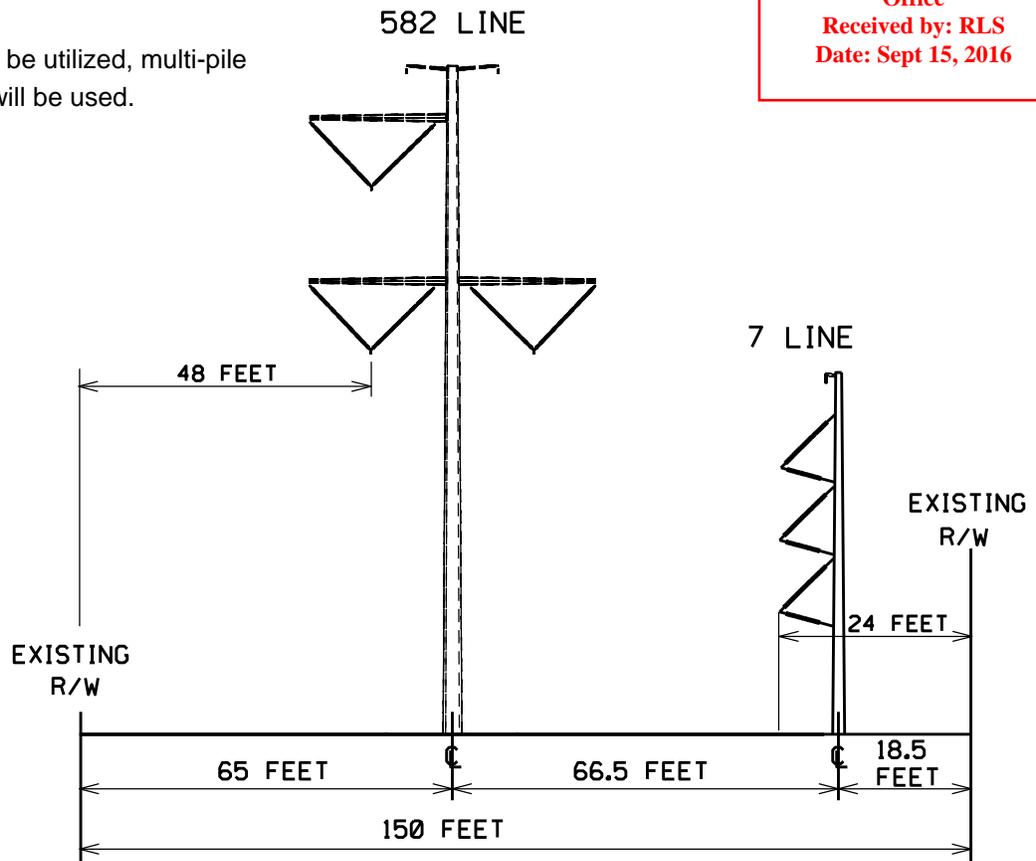
**EXISTING CONFIGURATION****TYPICAL RIGHT OF WAY LOOKING TOWARD SKIFFES CREEK**

TYPE OF STRUCTURE:	WOOD H-FRAME
FOUNDATION :	DIRECT BURIED
APPROXIMATE HEIGHT:	52 FEET
WIDTH AT CROSSARM:	34 FEET
WIDTH AT BASE:	26 FEET
AVERAGE SPAN LENGTH:	550 FEET
CONDUCTOR TYPE:	ALUMINUM
RIGHT OF WAY WIDTH:	130 FEET
APPROXIMATE LENGTH:	0.97 MILES

Line 7 was previously numbered Line 34
and was rebuilt to accommodate Line 582 in the corridor

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Date: Sept 15, 2016

*Where pipe pile cannot be utilized, multi-pile
fnds with concrete cap will be used.



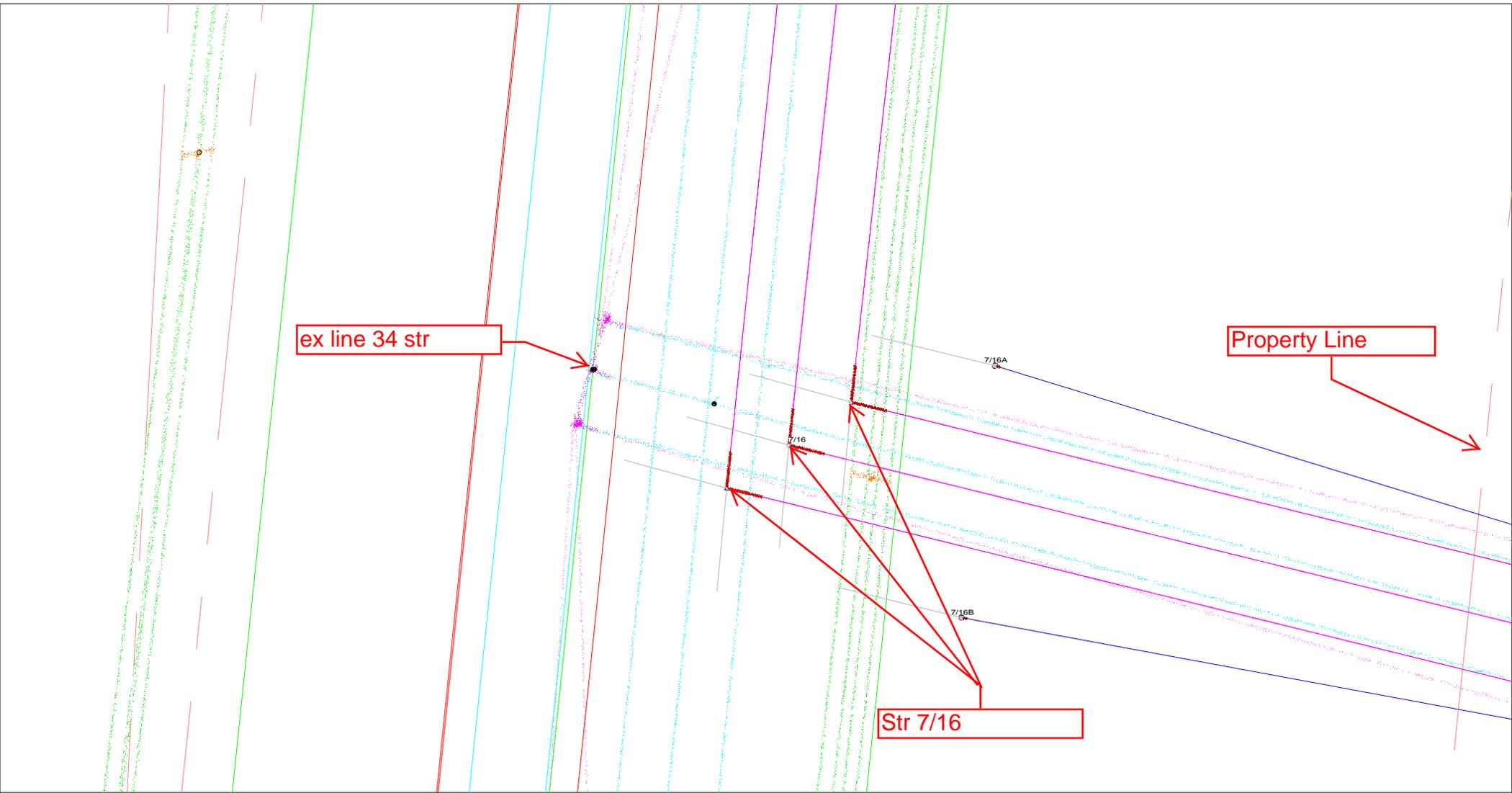
Typical Proposed Structures 582/36-41 & 7/5-16

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD SKIFFES CREEK

TYPE OF STRUCTURE :	GALVANIZED POLE	WEATHERING STEEL POLE
FOUNDATION :	PILES/CONCRETE *	PILES/DIRECT BURIED
APPROX. AVERAGE HEIGHT :	135 FEET	70 FEET
WIDTH AT CROSSARM :	60 FEET	N/A
WIDTH AT BASE :	7 FEET	3 FEET
AVERAGE SPAN LENGTH :	900 FEET	330 FEET
CONDUCTOR TYPE :	ALUMINUM	ALUMINUM
RIGHT-OF-WAY WIDTH :	150 FEET	150 FEET
APPROXIMATE LENGTH:	0.76 MILES	0.76 MILES

Existing Line 34 conductor = aqua dots
Existing Line 34 Shield wire = magenta dots
New 7 line conductor = magenta line
New 7 line shield wire = blue line
(Green is distribution lines)



ex line 34 str

Property Line

Str 7/16

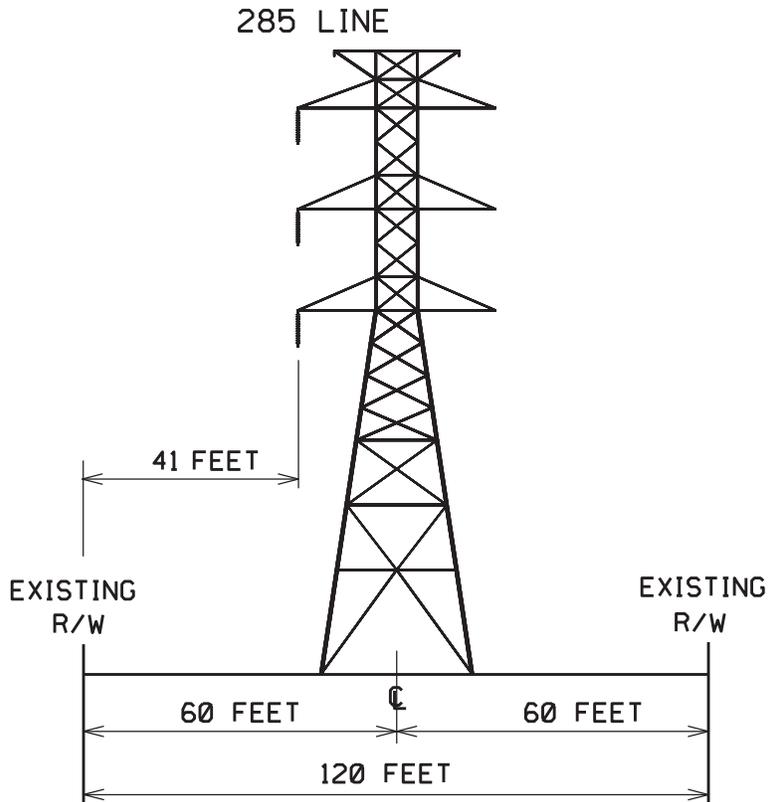
7/16A

7/16B

7/16

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Skiffes Creek – Whealton Structures



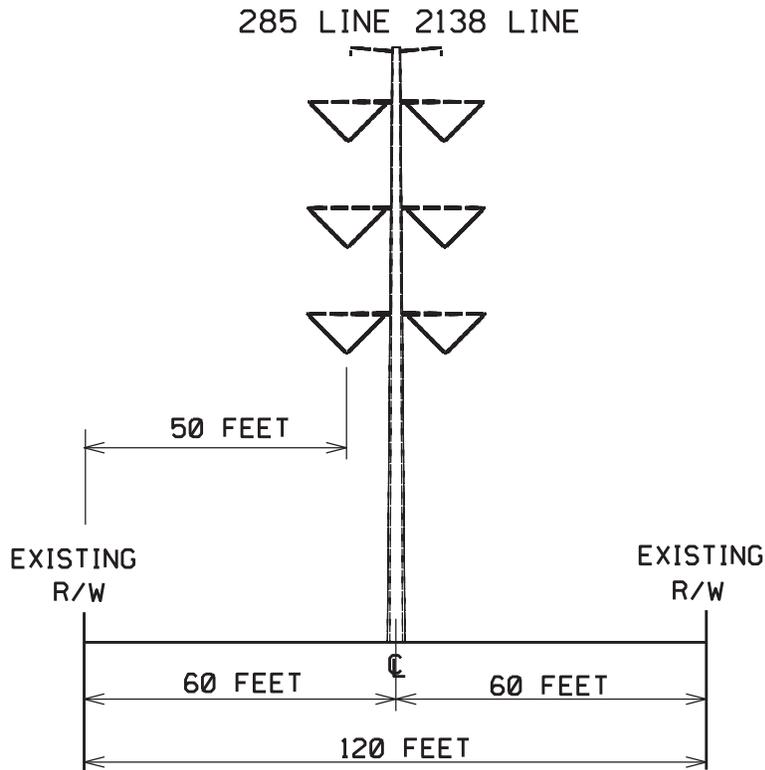
Existing Structures
285/421 thru 285/426

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING TOWER
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	120 FEET
WIDTH AT CROSSARM :	39 FEET
WIDTH AT BASE :	30 FEET
AVERAGE SPAN LENGTH :	824 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	.99 MILES

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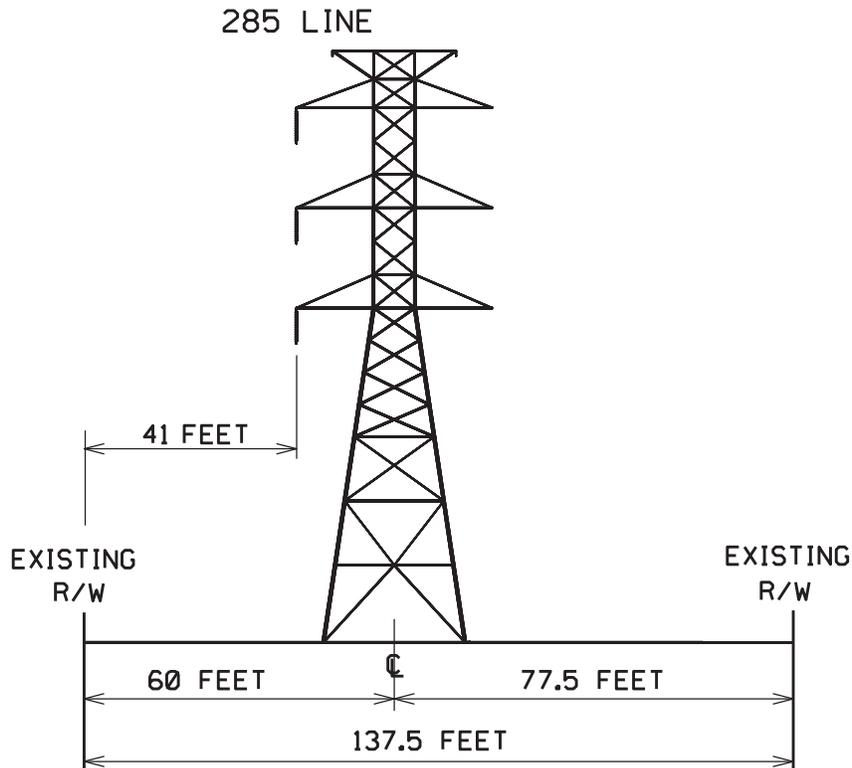
Proposed Structures
2138/6 thru 2138/11

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROX. AVERAGE HEIGHT :	125 FEET
WIDTH AT CROSSARM :	35 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	850 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	1.18 MILES

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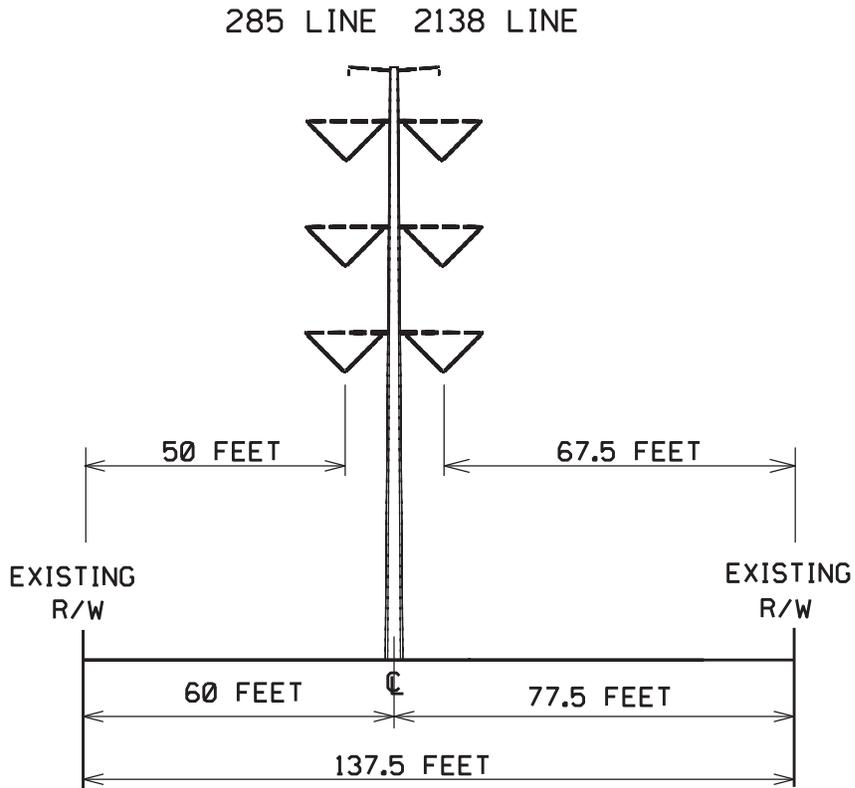
Existing Structures
285/427 thru 285/431

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING TOWER
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	115 FEET
WIDTH AT CROSSARM :	39 FEET
WIDTH AT BASE :	28 FEET
AVERAGE SPAN LENGTH :	857 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	137.5 FEET
APPROXIMATE LENGTH:	0.82 MILES

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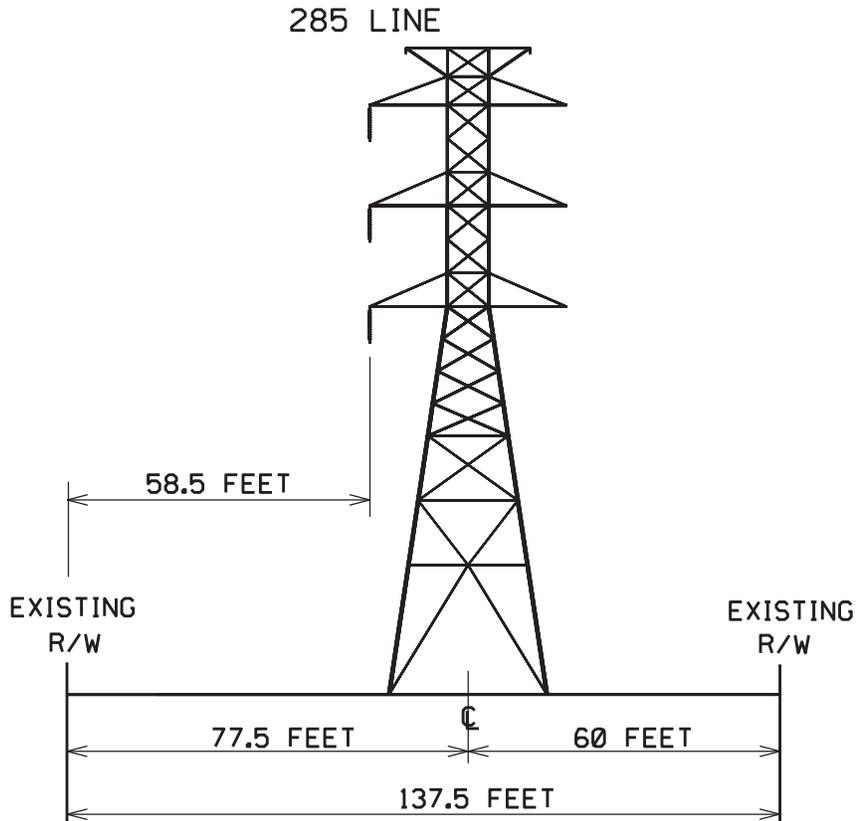
Proposed Structures
2138/12 thru 2138/16

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROX. AVERAGE HEIGHT :	122 FEET
WIDTH AT CROSSARM :	35 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	850 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	137.5 FEET
APPROXIMATE LENGTH:	0.82 MILES

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Existing Structures
285/432 thru 285/434

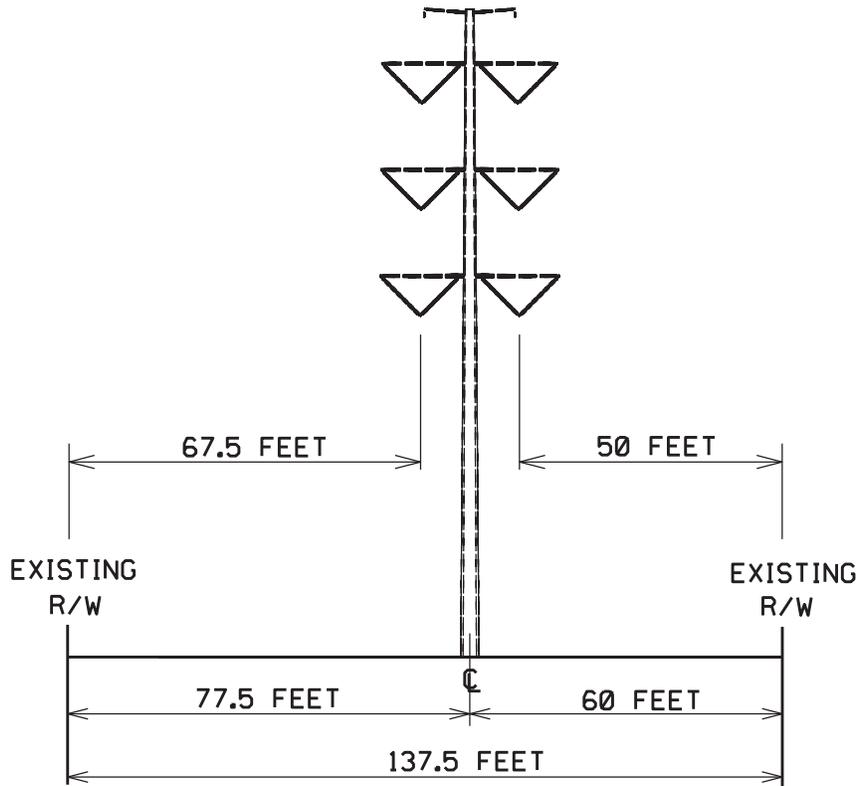
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING TOWER
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	125 FEET
WIDTH AT CROSSARM :	39 FEET
WIDTH AT BASE :	31 FEET
AVERAGE SPAN LENGTH :	1030 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	137.5 FEET
APPROXIMATE LENGTH:	0.60 MILES

US Army Corps of Engineers
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 Date: July 30, 2015

285 LINE 2138 LINE



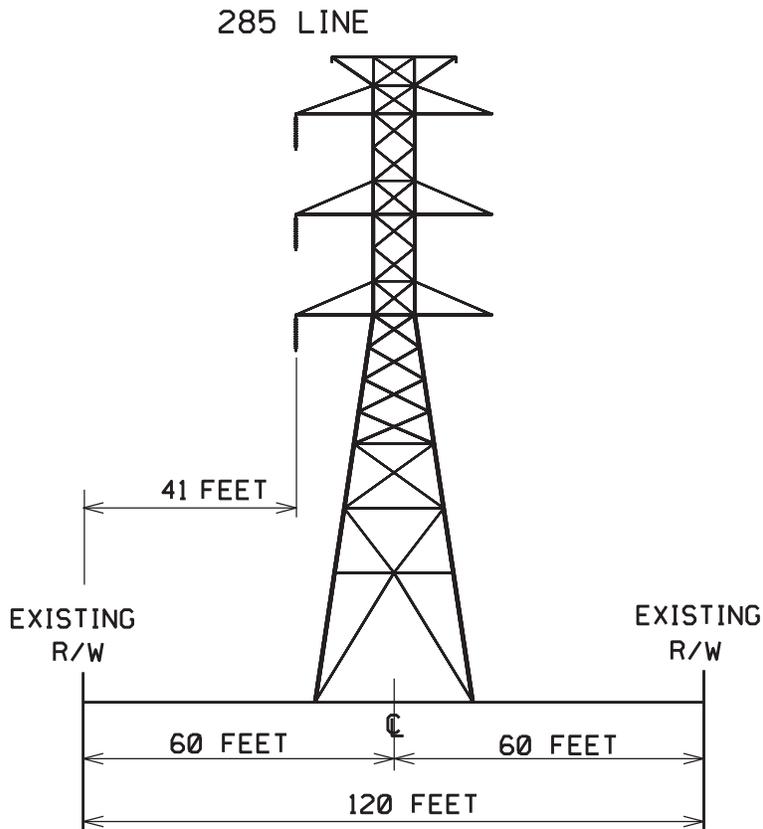
Proposed Structures
2138/17 thru 2138/19

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROX. AVERAGE HEIGHT :	135 FEET
WIDTH AT CROSSARM :	35 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	1000 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	137.5 FEET
APPROXIMATE LENGTH:	0.60 MILES

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Norfolk District Regulatory Office
Received by: RLS
Date: July 30, 2015



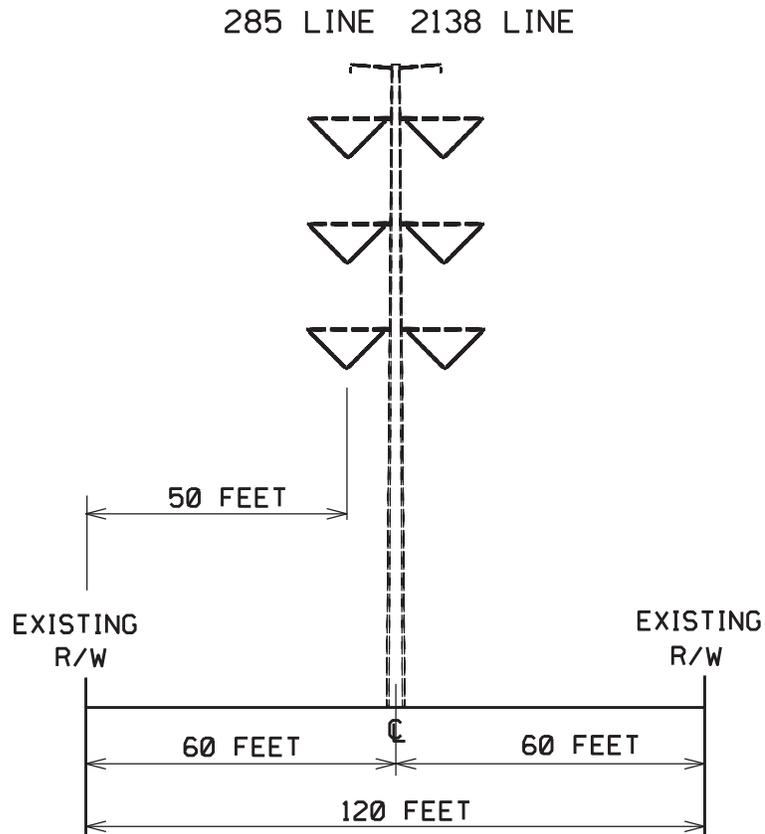
Existing Structures
 285/435 thru 285/436

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING TOWER
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	125 FEET
WIDTH AT CROSSARM :	39 FEET
WIDTH AT BASE :	31 FEET
AVERAGE SPAN LENGTH :	982 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	0.35 MILES

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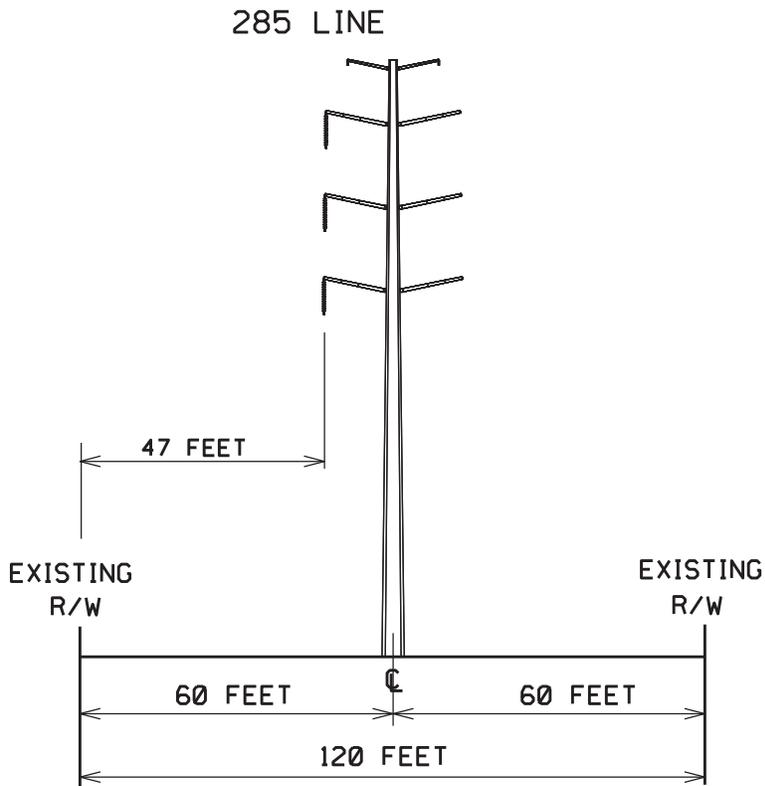
Proposed Structures
2138/20 thru 2138/21

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROX. AVERAGE HEIGHT :	145 FEET
WIDTH AT CROSSARM :	35 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	1000 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	0.35 MILES

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Existing Structures
285/437 thru 285/458

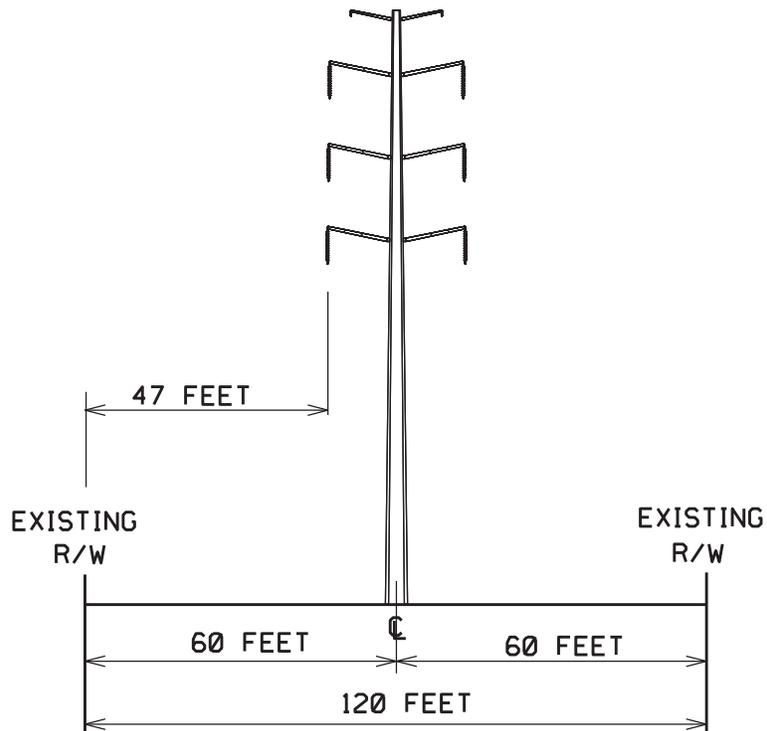
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	PAINTED POLE
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	120 FEET
WIDTH AT CROSSARM :	27 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	1015 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	3.65 MILES

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285 LINE 2138 LINE



Reconductored Structures
2138/22 thru 2138/42

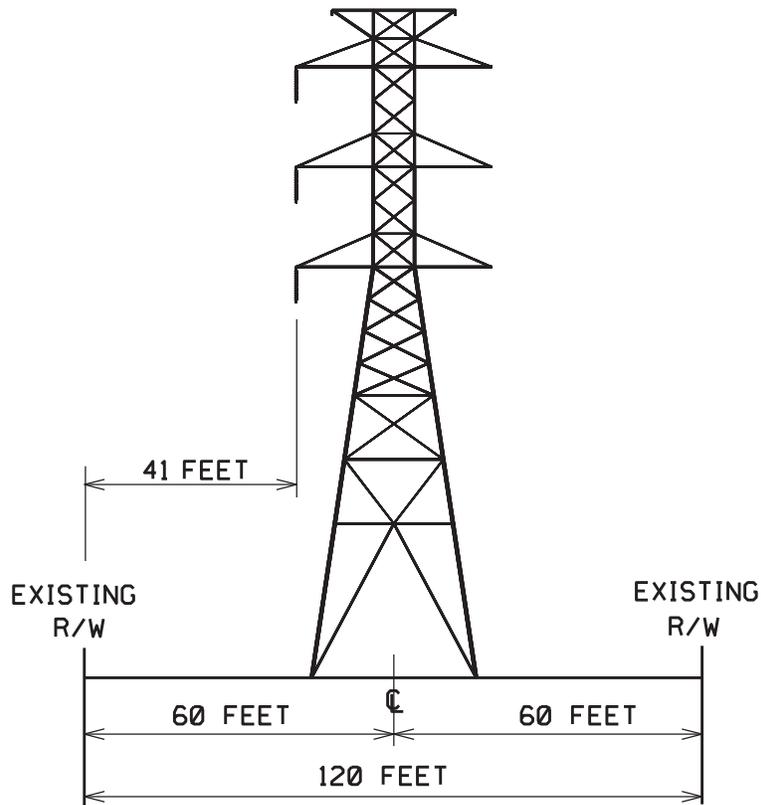
PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	PAINTED POLE
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	120 FEET
WIDTH AT CROSSARM :	27 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	1015 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	3.65 MILES

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285 LINE



Existing Structures
285/459 thru 285/463 and 209/548

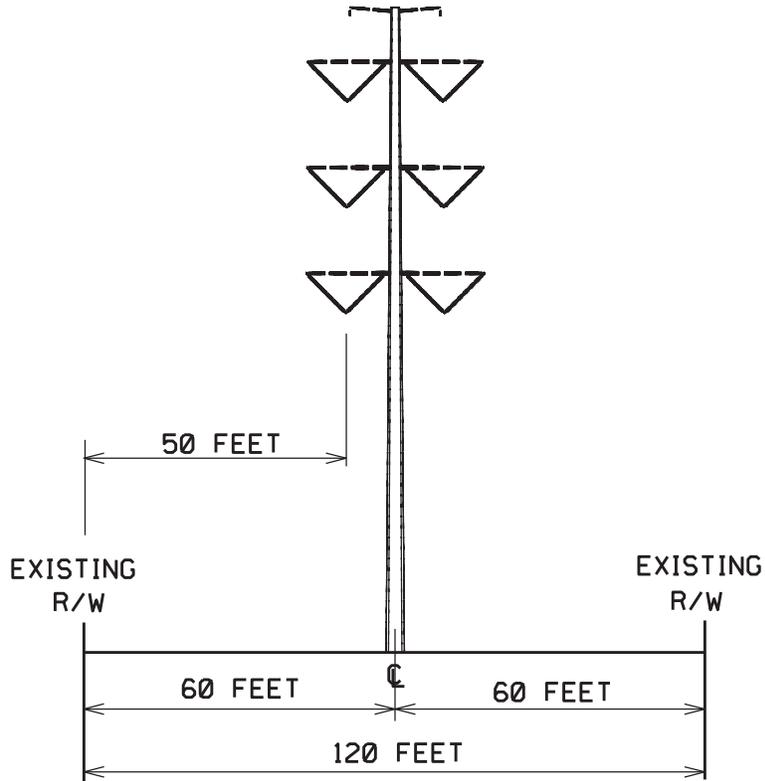
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING TOWER
FOUNDATION :	EXISTING
APPROX. AVERAGE HEIGHT :	130 FEET
WIDTH AT CROSSARM :	39 FEET
WIDTH AT BASE :	33 FEET
AVERAGE SPAN LENGTH :	1006 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	0.95 MILES

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285 LINE 2138 LINE



Proposed Structures
2138/43 thru 2138/48

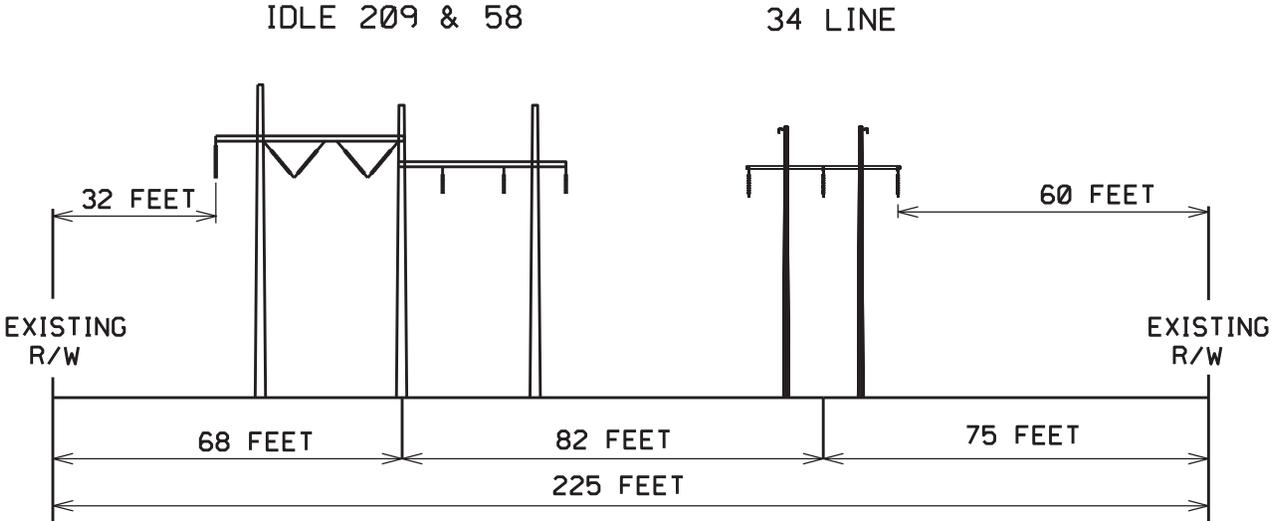
PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE :	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROX. AVERAGE HEIGHT :	138 FEET
WIDTH AT CROSSARM :	35 FEET
WIDTH AT BASE :	5 FEET
AVERAGE SPAN LENGTH :	1000 FEET
CONDUCTOR TYPE :	ALUMINUM
RIGHT-OF-WAY WIDTH :	120 FEET
APPROXIMATE LENGTH:	0.95 MILES

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Existing Structure
 58/275 thru 58/282

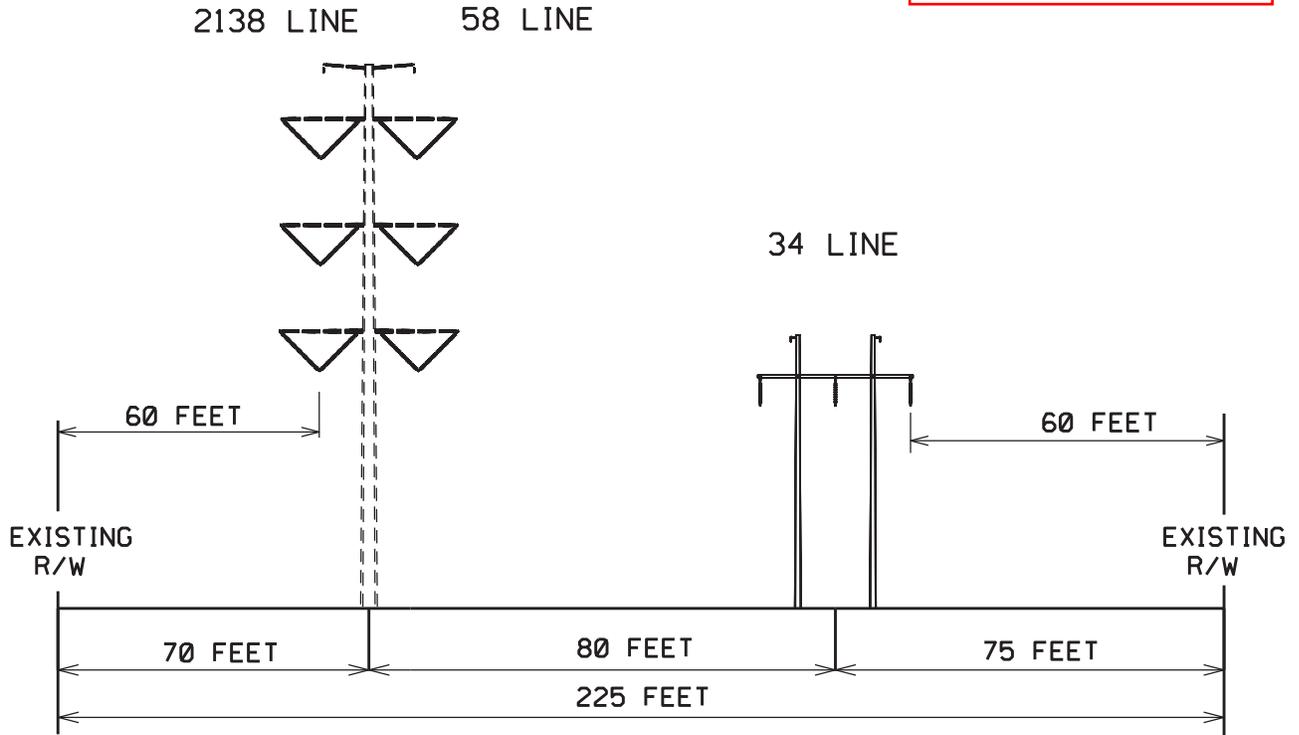
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	3 POLE WOOD	H FRAME WOOD
FOUNDATION :	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	61 FEET	52 FEET
WIDTH AT CROSSARM:	68 FEET	30 FEET
WIDTH AT BASE:	53 FEET	14 FEET
AVERAGE SPAN LENGTH:	568 FEET	535 FEET
CONDUCTOR TYPE:	ALUMINUM	COPPER
RIGHT OF WAY WIDTH:	225 FEET	225 FEET
APPROXIMATE LENGTH:	0.81 MILES	0.81 MILES

\$DCNSPEC\$

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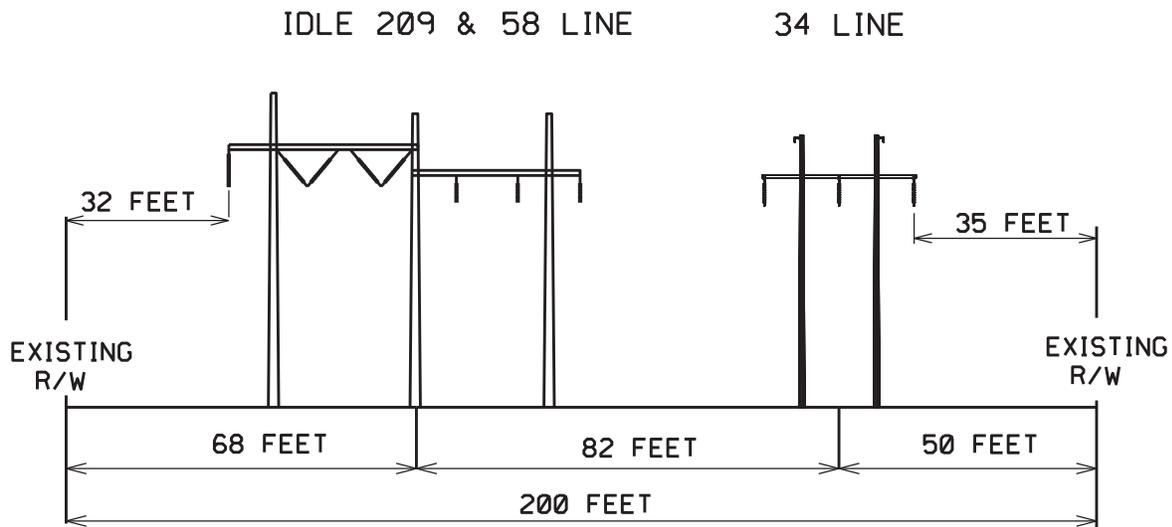
Proposed Structures
2138/49 thru 2138/55

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE	H FRAME WOOD
FOUNDATION :	PILES/CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	110 FEET	52 FEET
WIDTH AT CROSSARM:	35 FEET	30 FEET
WIDTH AT BASE:	5 FEET	14 FEET
AVERAGE SPAN LENGTH:	600 FEET	535 FEET
CONDUCTOR TYPE:	ALUMINUM	COPPER
RIGHT OF WAY WIDTH:	225 FEET	225 FEET
APPROXIMATE LENGTH:	0.81 MILES	0.81 MILES

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Existing Structures
58/283 thru 58/289

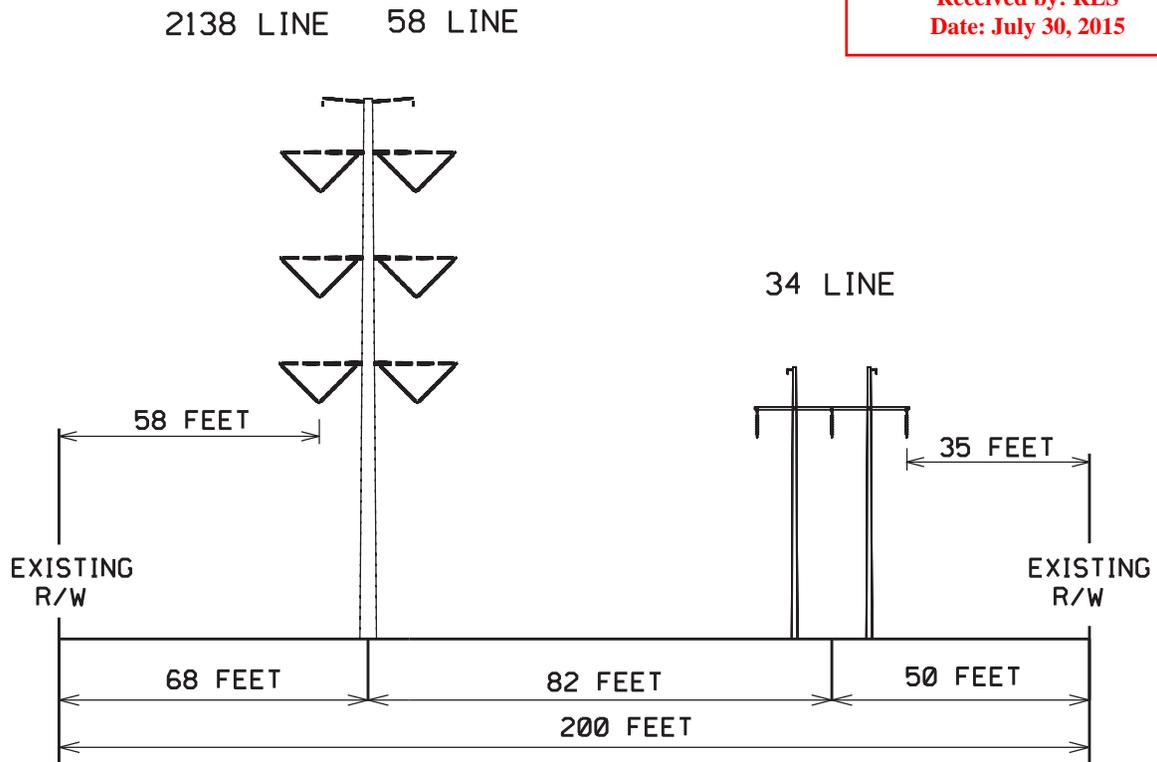
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	3 POLE WOOD	H FRAME WOOD
FOUNDATION :	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	61 FEET	52 FEET
WIDTH AT CROSSARM:	68 FEET	30 FEET
WIDTH AT BASE:	53 FEET	14 FEET
AVERAGE SPAN LENGTH:	589 FEET	505 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.56 MILES	0.56 MILES

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Proposed Structures
2138/56 thru 2138/62

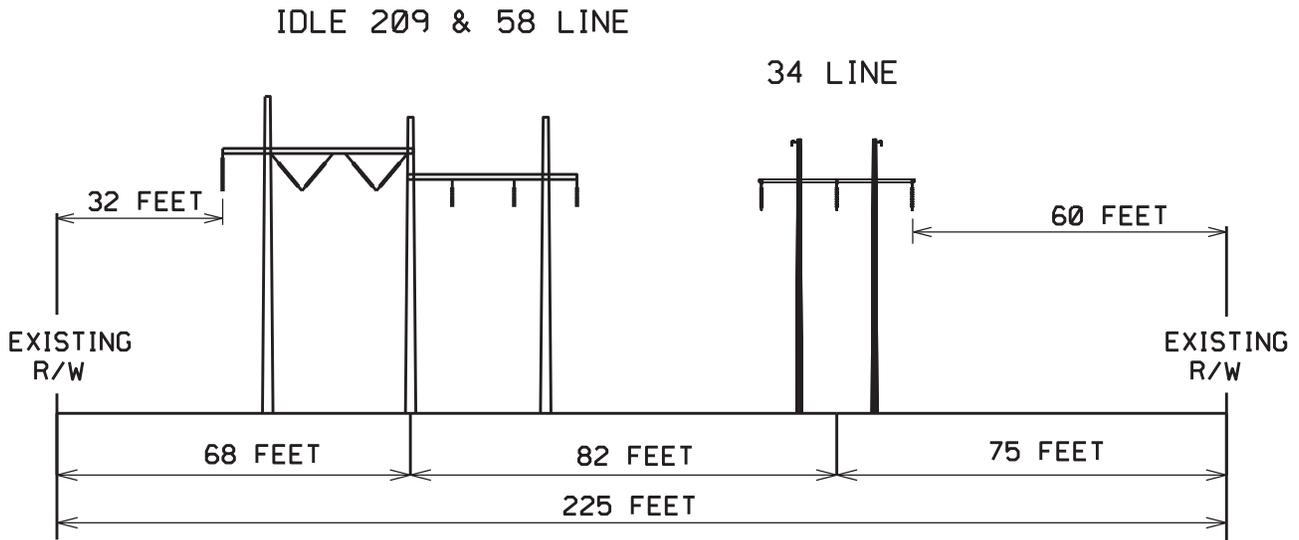
PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE	H FRAME WOOD
FOUNDATION :	PILES CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	110 FEET	52 FEET
WIDTH AT CROSSARM:	35 FEET	30 FEET
WIDTH AT BASE:	5 FEET	14 FEET
AVERAGE SPAN LENGTH:	625 FEET	505 FEET
CONDUCTOR TYPE:	ALUMINUM	COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.56 MILES	0.56 MILES

\$DGNSPEC\$

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Existing Structures
58/290 thru 58/291
(209/563)

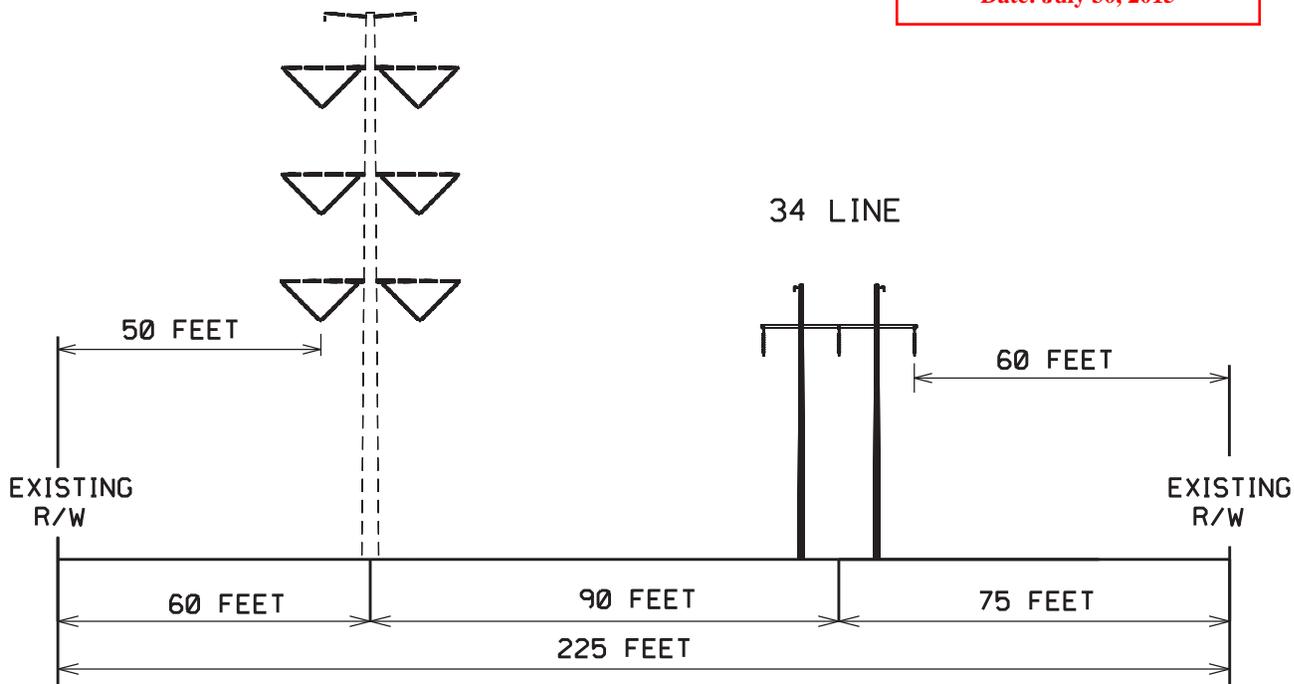
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	3 POLE WOOD	H FRAME WOOD
FOUNDATION :	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	61 FEET	52 FEET
WIDTH AT CROSSARM:	68 FEET	30 FEET
WIDTH AT BASE:	53 FEET	14 FEET
AVERAGE SPAN LENGTH:	519 FEET	792 FEET
CONDUCTOR TYPE:	ALUMINUM	COPPER
RIGHT OF WAY WIDTH:	225 FEET	225 FEET
APPROXIMATE LENGTH:	0.32 MILES	0.32 MILES

2138 LINE 58 LINE

US Army Corps of Engineers
 Norfolk District Regulatory Office
 Received by: RLS
 Date: July 30, 2015



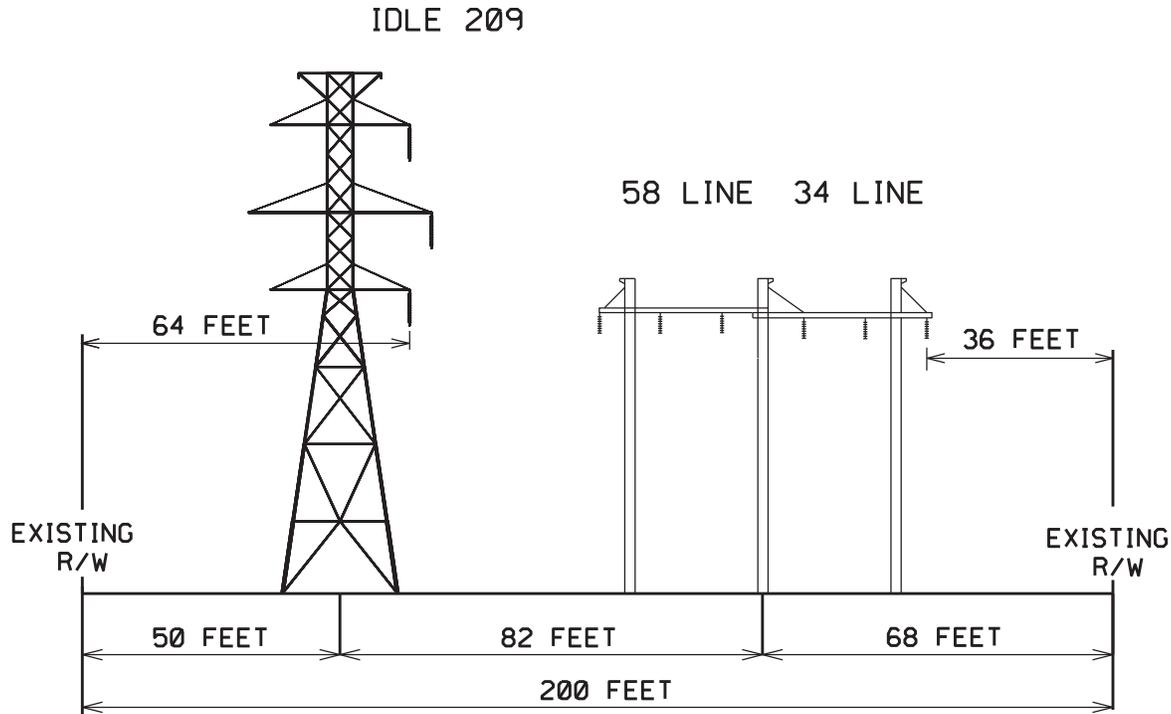
Proposed Structures
2138/63 thru 2138/64

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE	H FRAME WOOD
FOUNDATION :	PILES/CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	110 FEET	52 FEET
WIDTH AT CROSSARM:	35 FEET	30 FEET
WIDTH AT BASE:	5 FEET	14 FEET
AVERAGE SPAN LENGTH:	625 FEET	792 FEET
CONDUCTOR TYPE:	ALUMINUM	COPPER
RIGHT OF WAY WIDTH:	225 FEET	225 FEET
APPROXIMATE LENGTH:	0.32 MILES	0.32 MILES

US Army Corps of Engineers
 Norfolk District Regulatory Office
 Received by: RLS
 Date: July 30, 2015

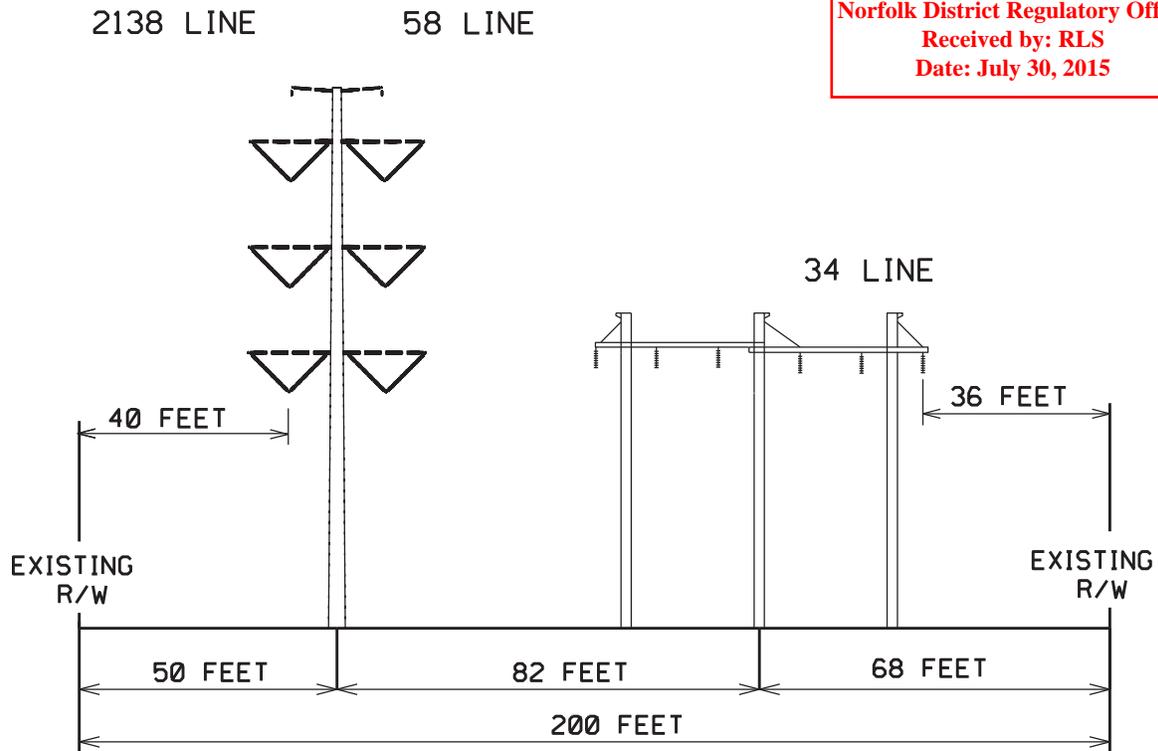


Existing Structures
58/292 thru 58/293 &
209/564 thru 209/565
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING TOWER	3 POLE WOOD
FOUNDATION :	EXISTING	DIRECT BURIED
APPROXIMATE HEIGHT:	100 FEET	61 FEET
WIDTH AT CROSSARM:	36 FEET	65 FEET
WIDTH AT BASE:	24 FEET	52 FEET
AVERAGE SPAN LENGTH:	653 FEET	572 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.25 MILES	0.25 MILES

US Army Corps of Engineers
 Norfolk District Regulatory Office
 Received by: RLS
 Date: July 30, 2015



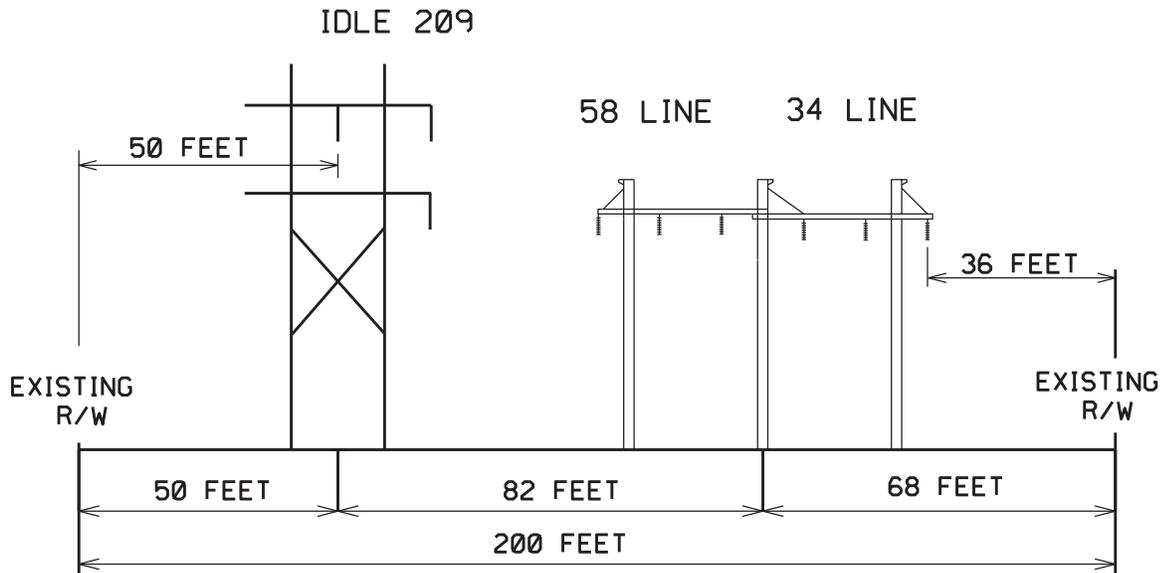
Proposed Structures
2138/65 thru 2138/66

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE	3 POLE WOOD
FOUNDATION :	PILES/CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	115 FEET	61 FEET
WIDTH AT CROSSARM:	35 FEET	65 FEET
WIDTH AT BASE:	5 FEET	52 FEET
AVERAGE SPAN LENGTH:	625 FEET	572 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.25 MILES	0.25 MILES

\$DGN\$SPEC\$



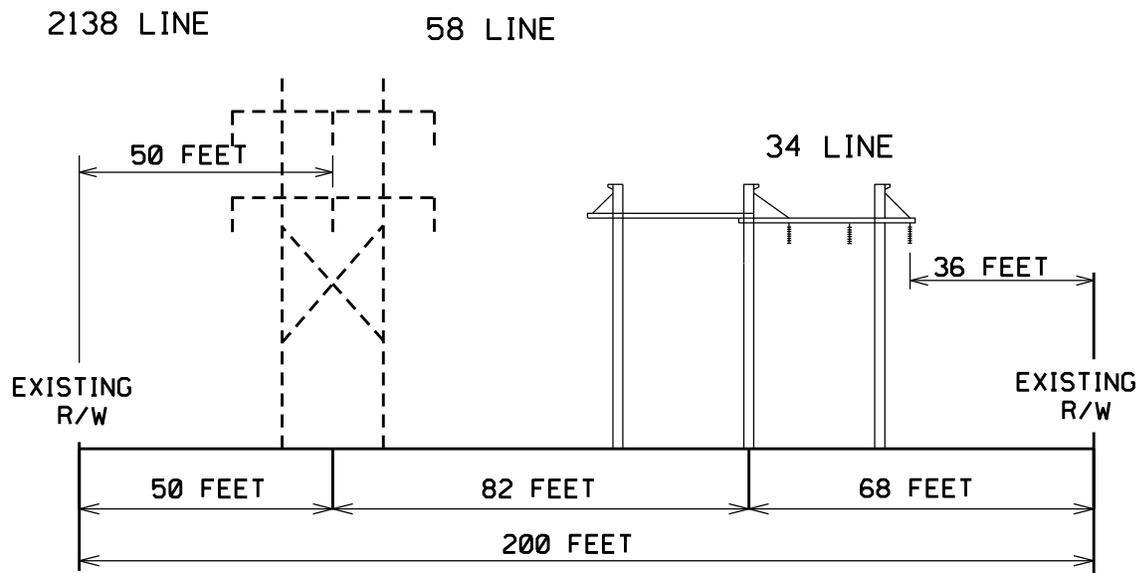
Existing Structures
209/566 thru 209/569
(58/294 thru 58/297)

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME	3 POLE WOOD
FOUNDATION :	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	75 FEET	52 FEET
WIDTH AT CROSSARM:	38 FEET	65 FEET
WIDTH AT BASE:	18 FEET	52 FEET
AVERAGE SPAN LENGTH:	547 FEET	581 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.51 MILES	0.51 MILES

US Army Corps of
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 Norfolk District
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 Received by: RLS
 Date: June 28, 2017



Proposed Structures
 2138/67 thru 2138/70

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

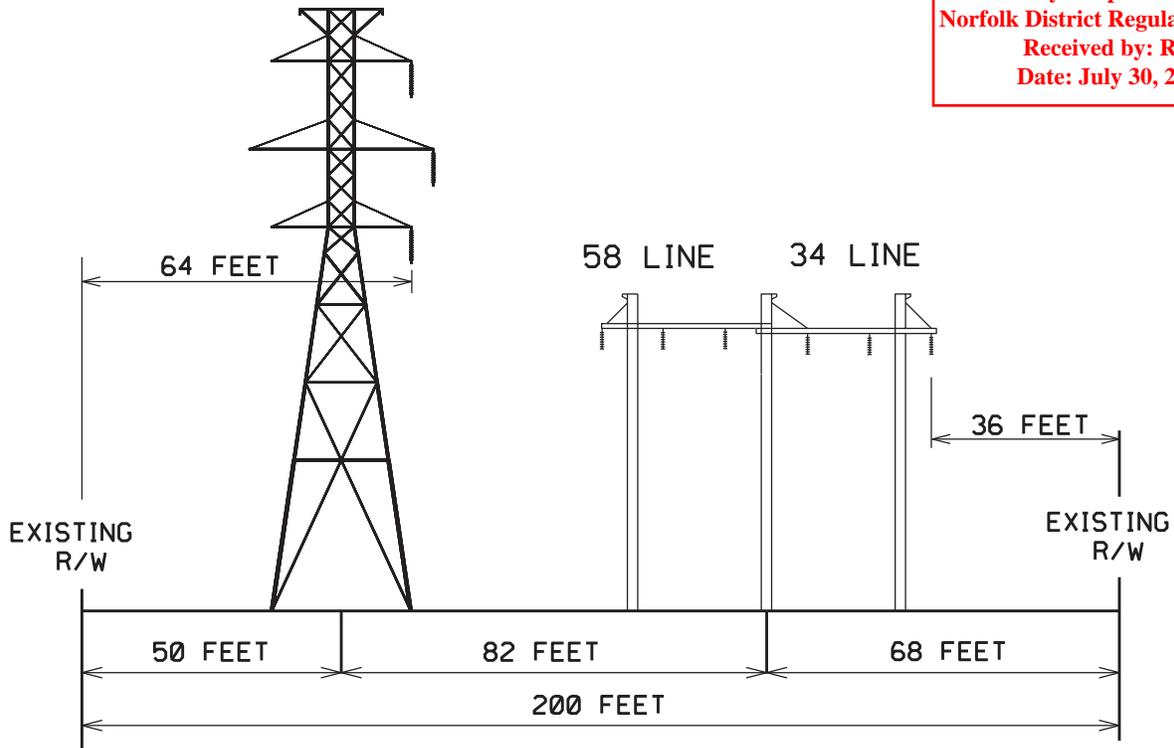
TYPE OF STRUCTURE:	WEATHERING H-FRAME	3 POLE WOOD
FOUNDATION :	PILES/CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	88 FEET	52 FEET
WIDTH AT CROSSARM:	40 FEET	65 FEET
WIDTH AT BASE:	20 FEET	52 FEET
AVERAGE SPAN LENGTH:	550 FEET	581 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.51 MILES	0.51 MILES

\$DGN\$SPEC\$

Existing Structures
209/570 thru 209/574 and 292/574
(58/298 thru 59/301)

IDLE 209

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 Norfolk District Regulatory Office
 Received by: RLS
 Date: July 30, 2015

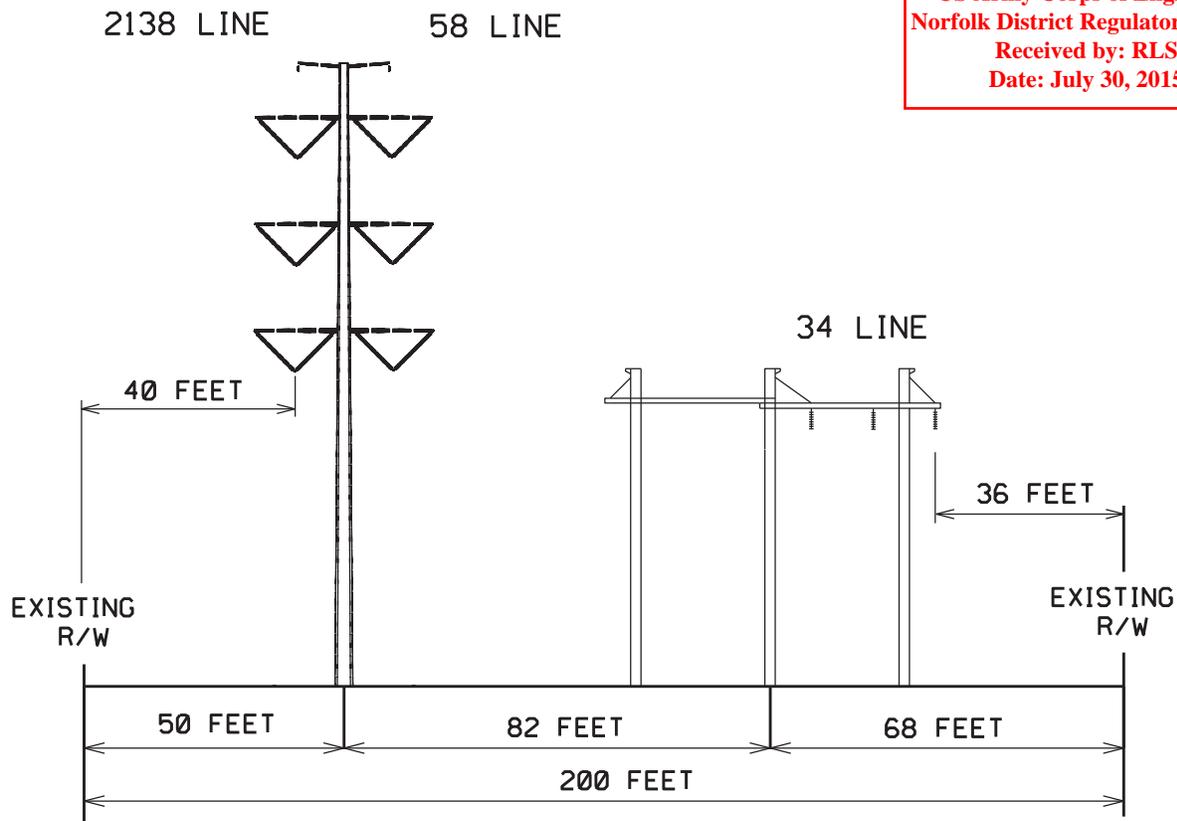


EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING TOWER	3 POLE WOOD
FOUNDATION :	EXISTING	DIRECT BURIED
APPROXIMATE HEIGHT:	115 FEET	61 FEET
WIDTH AT CROSSARM:	36 FEET	65 FEET
WIDTH AT BASE:	27 FEET	52 FEET
AVERAGE SPAN LENGTH:	906 FEET	596 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.70 MILES	0.70 MILES

US Army Corps of Engineers
 Norfolk District Regulatory Office
 Received by: RLS
 Date: July 30, 2015



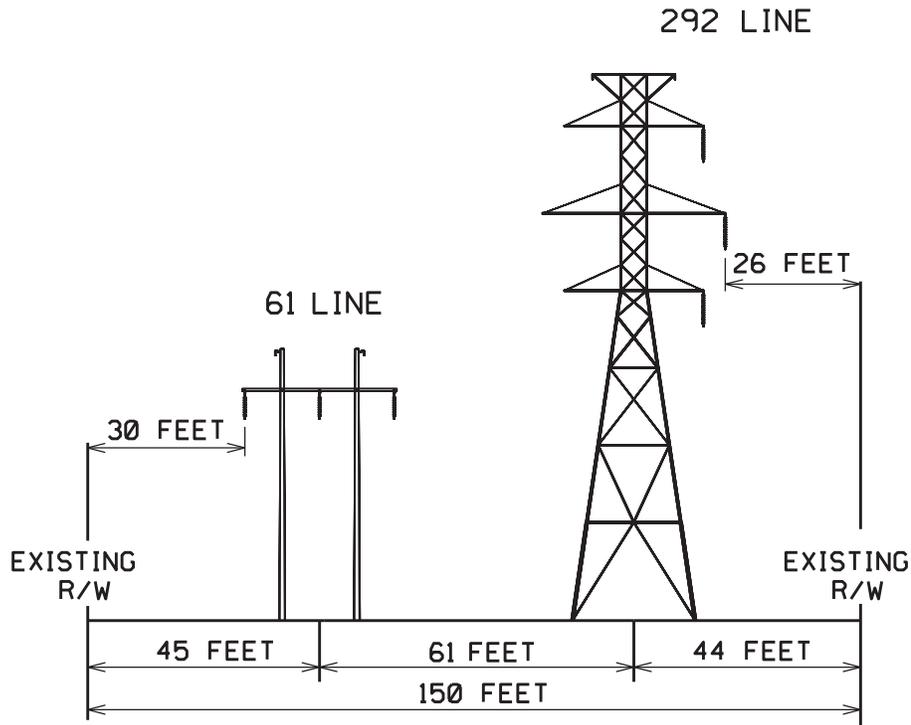
Proposed Structures
2138/71 thru 2138/75

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE	3 POLE WOOD
FOUNDATION :	PILES/CONCRETE	DIRECT BURIED
APPROXIMATE HEIGHT:	135 FEET	61 FEET
WIDTH AT CROSSARM:	35 FEET	65 FEET
WIDTH AT BASE:	5 FEET	52 FEET
AVERAGE SPAN LENGTH:	900 FEET	596 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM COPPER
RIGHT OF WAY WIDTH:	200 FEET	200 FEET
APPROXIMATE LENGTH:	0.70 MILES	0.70 MILES

Existing Structures
292/575 thru 292/578

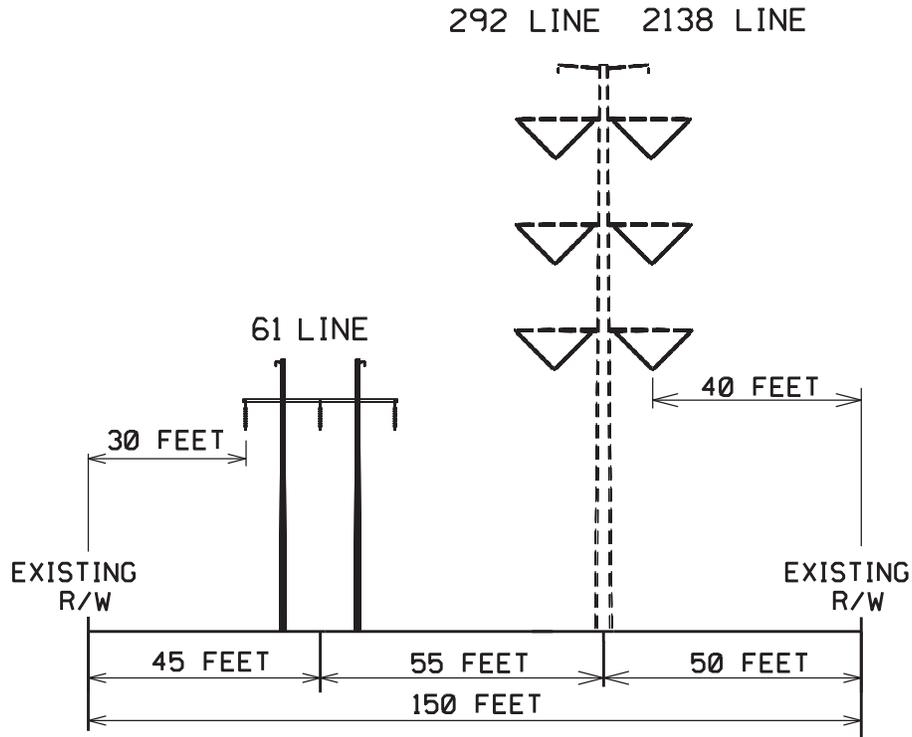


EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME WOOD	STEEL TOWER
FOUNDATION :	DIRECT BURIED	EXISTING
APPROXIMATE HEIGHT:	52 FEET	106 FEET
WIDTH AT CROSSARM:	30 FEET	36 FEET
WIDTH AT BASE:	14 FEET	25 FEET
AVERAGE SPAN LENGTH:	533 FEET	515 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH:	0.29 MILES	0.29 MILES

US Army Corps of Engineers
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 Date: July 30, 2015



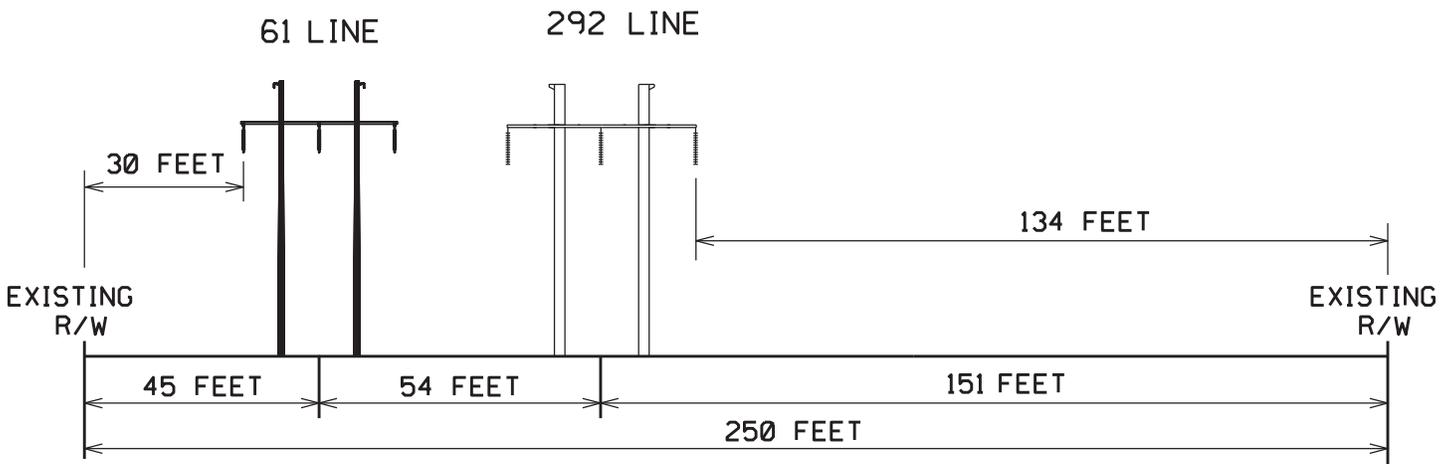
Proposed Structures
2138/76 thru 2138/79

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME WOOD	WEATHERING POLE
FOUNDATION :	DIRECT BURIED	PILES/CONCRETE
APPROXIMATE HEIGHT:	52 FEET	115 FEET
WIDTH AT CROSSARM:	30 FEET	35 FEET
WIDTH AT BASE:	14 FEET	5 FEET
AVERAGE SPAN LENGTH:	533 FEET	515 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH:	0.29 MILES	0.29 MILES

US Army Corps of Engineers
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 Date: July 30, 2015



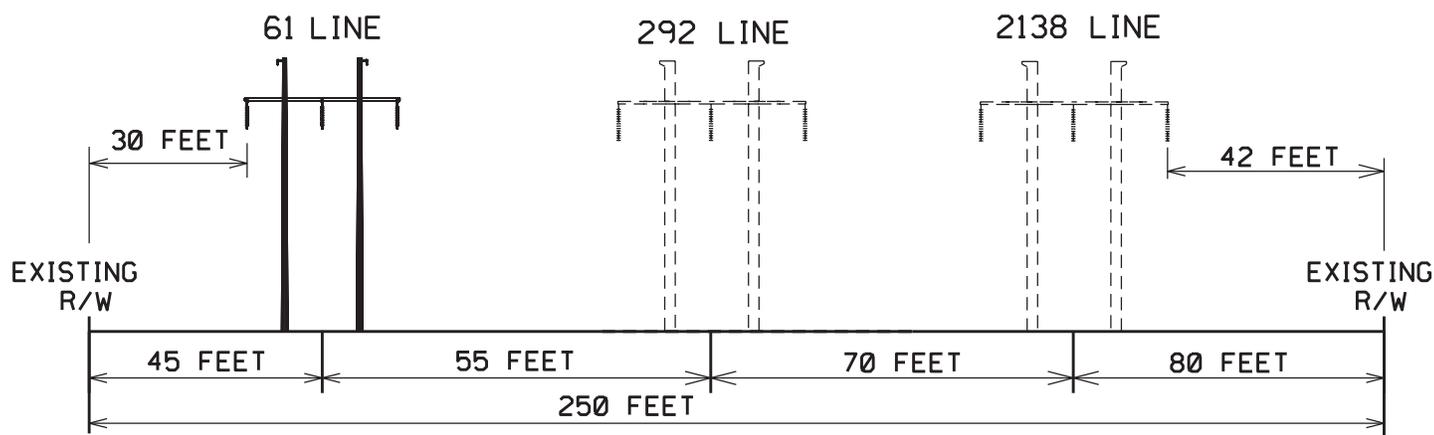
Existing Structures
292/579 thru 292/586

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME WOOD	H FRAME WOOD
FOUNDATION :	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	52 FEET	52 FEET
WIDTH AT CROSSARM:	30 FEET	36 FEET
WIDTH AT BASE:	14 FEET	18 FEET
AVERAGE SPAN LENGTH:	690 FEET	500 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	250 FEET	250 FEET
APPROXIMATE LENGTH:	0.93 MILES	0.93 MILES

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Proposed Structures
292/579 thru 282/586
2138/80 thru 2138/87

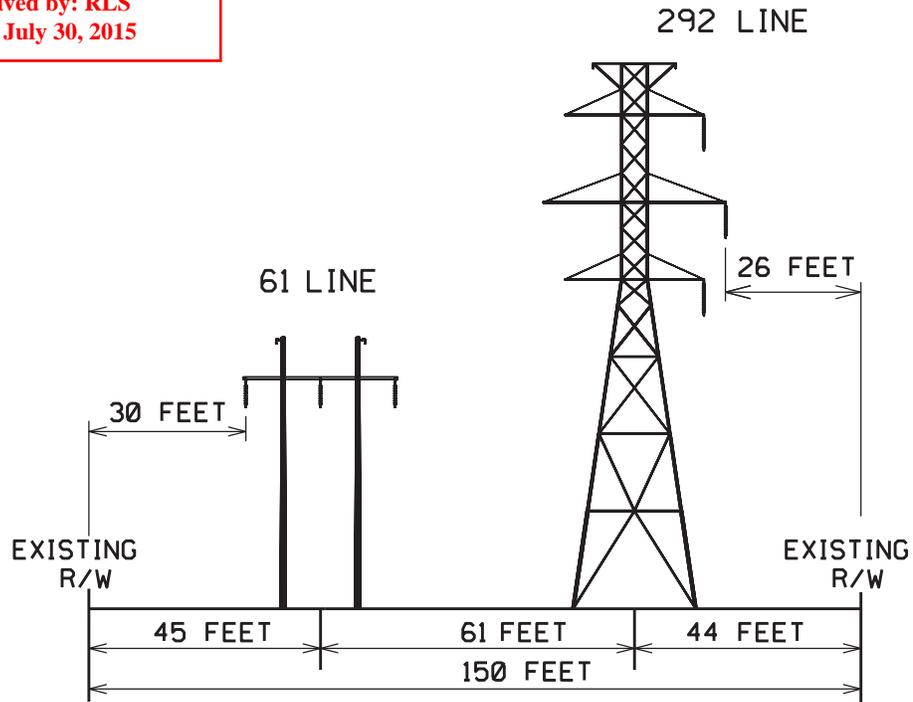
PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FR. ^{Sheet 27}	H FRAME	H FRAME
FOUNDATION :	DIRECT BURIED	DIRECT BURIED	DIRECT BURIED
APPROXIMATE HEIGHT:	52 FEET	55 FEET	55 FEET
WIDTH AT CROSSARM:	30 FEET	38 FEET	38 FEET
WIDTH AT BASE:	14 FEET	19 FEET	19 FEET
AVERAGE SPAN LENGTH:	690 FEET	500 FEET	500 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	250 FEET	250 FEET	250 FEET
APPROXIMATE LENGTH:	0.93 MILES	0.40 MILES	0.40 MILES

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US Army Corps of Engineers
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 Date: July 30, 2015



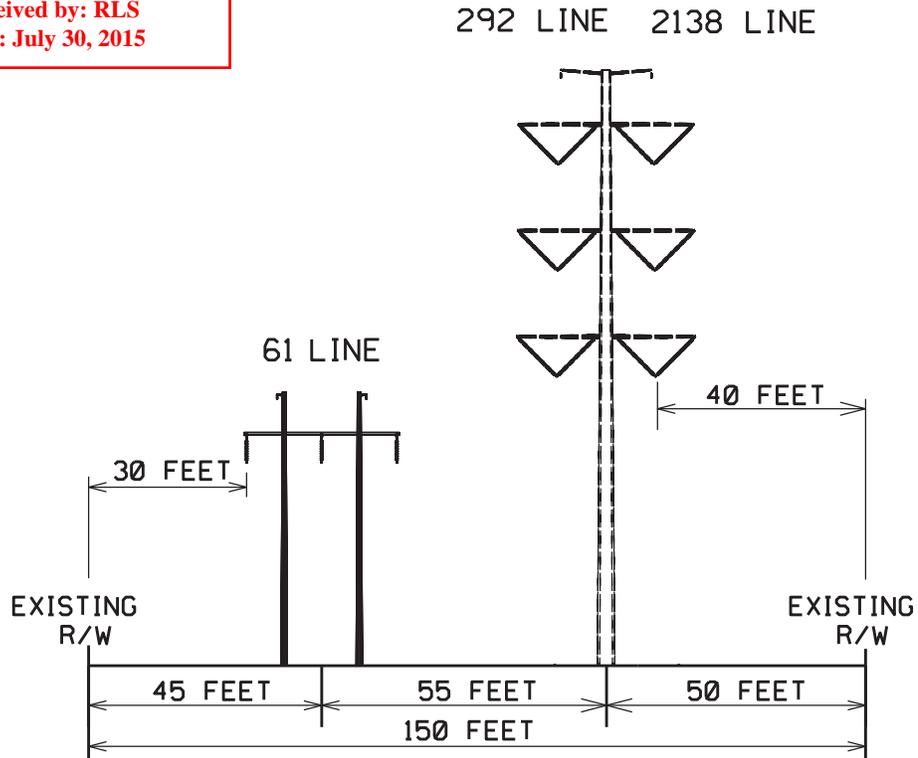
Existing Structures
292/590 thru 292/613 &
292/616 thru 292/622

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME WOOD	WEATHERING TOWER
FOUNDATION :	DIRECT BURIED	EXISTING
APPROXIMATE HEIGHT:	52 FEET	106 FEET
WIDTH AT CROSSARM:	30 FEET	36 FEET
WIDTH AT BASE:	14 FEET	25 FEET
AVERAGE SPAN LENGTH:	614 FEET	762 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH:	4.90 MILES	4.90 MILES

US Army Corps of Engineers
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 Received by: RLS
 Date: July 30, 2015

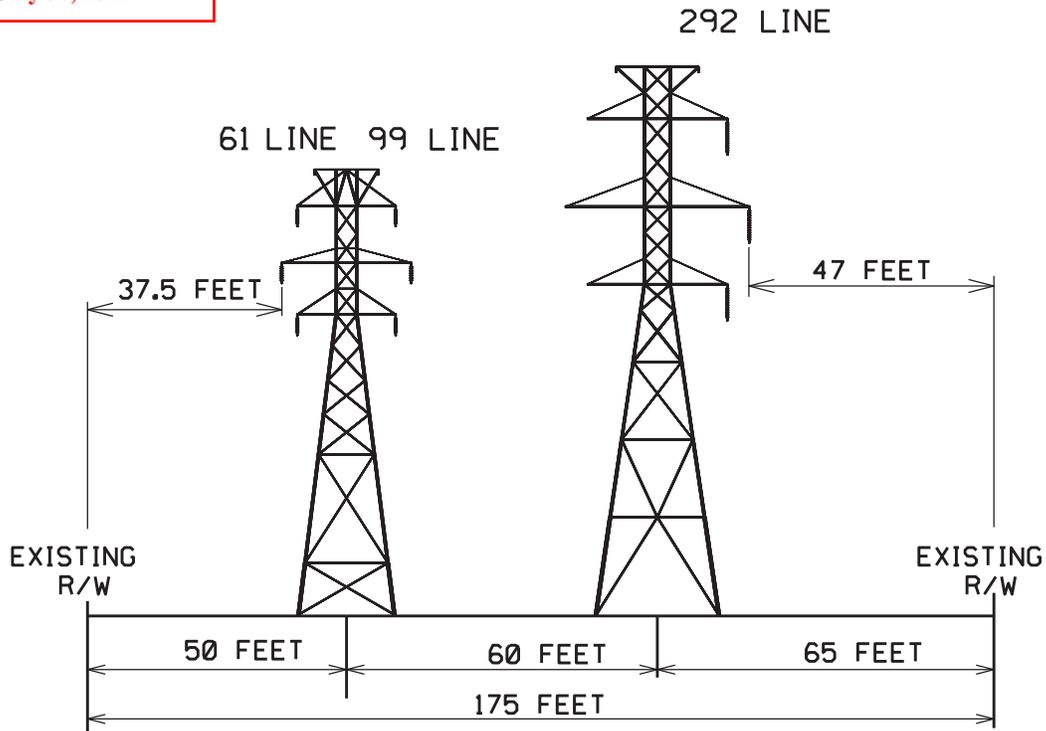


Proposed Structures
2138/90 thru 2138/115 &
2138/119 thru 2138/122 &
2138/128 thru 2138/130
PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	H FRAME	WEATHERING POLE
FOUNDATION :	DIRECT BURIED	PILES/CONCRETE
APPROXIMATE HEIGHT:	52 FEET	123 FEET
WIDTH AT CROSSARM:	30 FEET	35 FEET
WIDTH AT BASE:	14 FEET	5 FEET
AVERAGE SPAN LENGTH:	614 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH:	4.90 MILES	4.90 MILES

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Existing Structures
292/623 thru 292/637

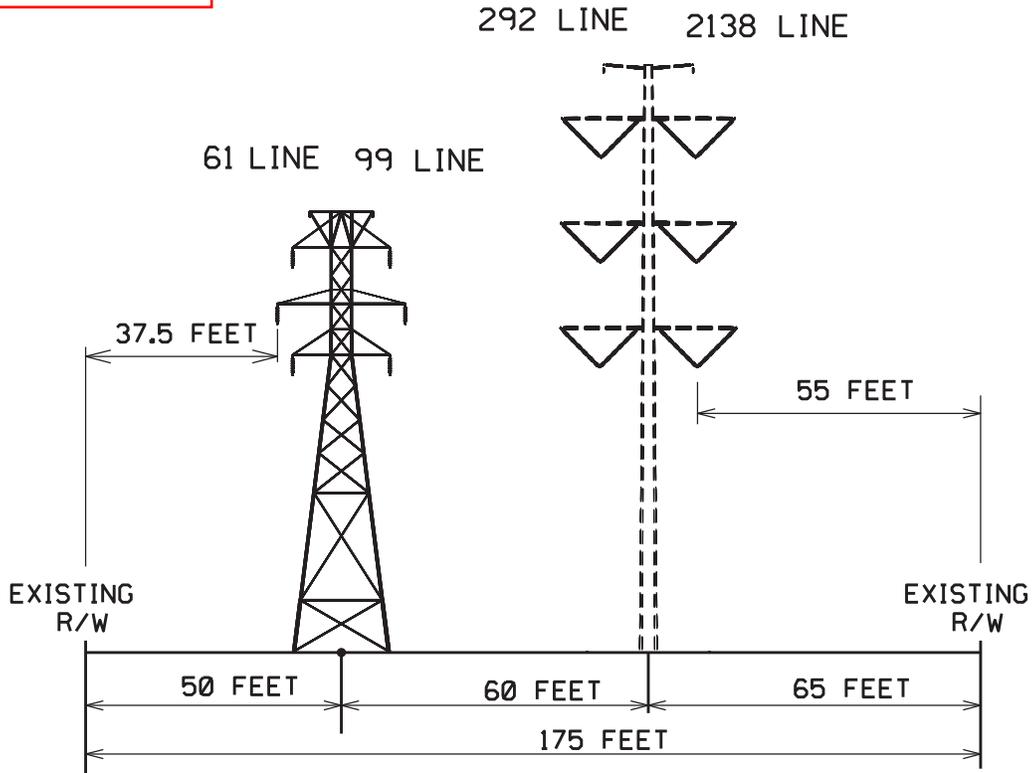
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING TOWER
FOUNDATION :	EXISTING	EXISTING
APPROXIMATE HEIGHT:	85 FEET	106 FEET
WIDTH AT CROSSARM:	26 FEET	36 FEET
WIDTH AT BASE:	20 FEET	25 FEET
AVERAGE SPAN LENGTH:	633 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	175 FEET	175 FEET
APPROXIMATE LENGTH:	2.28 MILES	2.28 MILES

\$DCNSPEC\$

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 Date: July 30, 2015



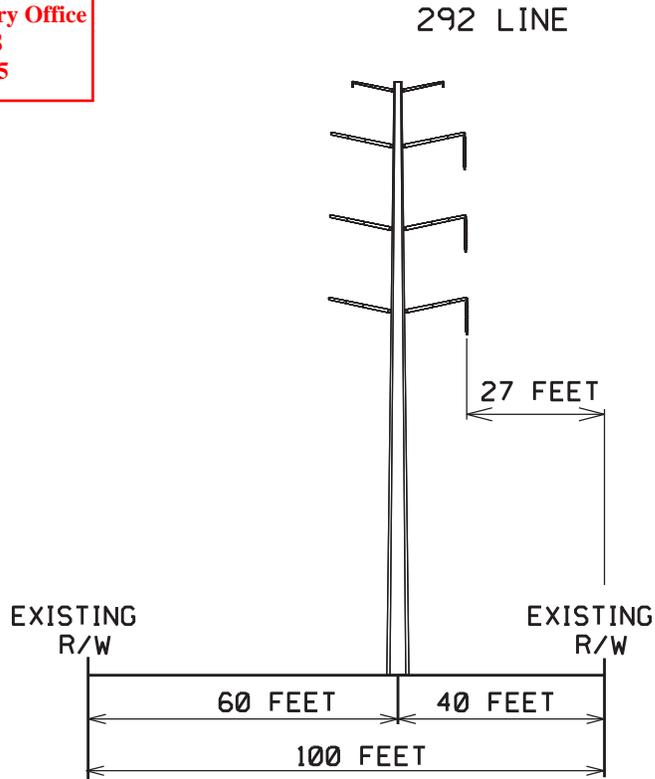
Proposed Structures
2138/131 thru 2138/145

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING POLE
FOUNDATION :	EXISTING	PILES/CONCRETE
APPROXIMATE HEIGHT:	85 FEET	120 FEET
WIDTH AT CROSSARM:	26 FEET	35 FEET
WIDTH AT BASE:	20 FEET	5 FEET
AVERAGE SPAN LENGTH:	633 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	175 FEET	175 FEET
APPROXIMATE LENGTH:	2.28 MILES	2.28 MILES

US Army Corps of Engineers
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Existing Structures
292/638 thru 292/640

EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	PAINTED POLE
FOUNDATION :	EXISTING
APPROXIMATE HEIGHT:	115 FEET
WIDTH AT CROSSARM:	26 FEET
WIDTH AT BASE:	5 FEET
AVERAGE SPAN LENGTH:	850 FEET
CONDUCTOR TYPE:	ALUMINUM
RIGHT OF WAY WIDTH:	100 FEET
APPROXIMATE LENGTH OF LINE :	0.38 MILES

Sheet 34

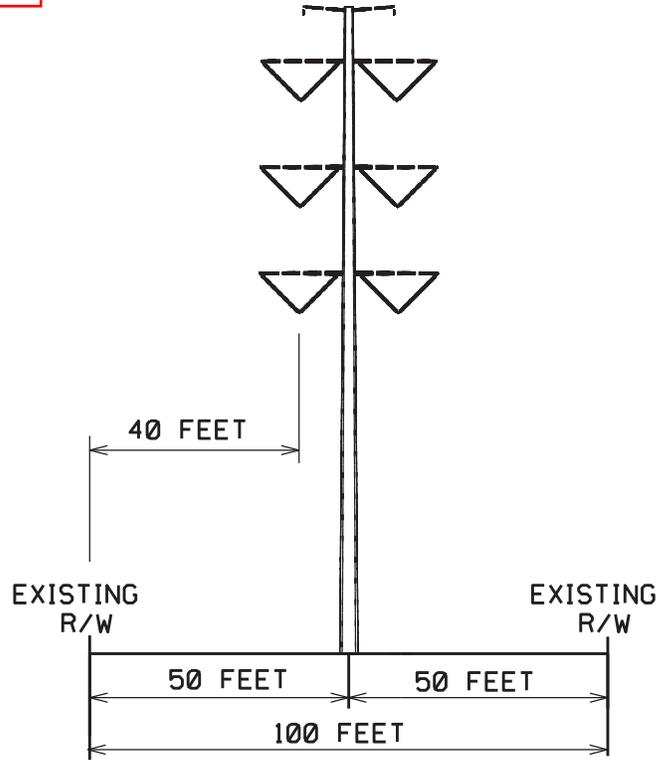
Sheet 33

\$DCNSPEC\$

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Proposed Structures
2138/146 thru 2138/148

292 LINE 2138 LINE



PROPOSED CONFIGURATION

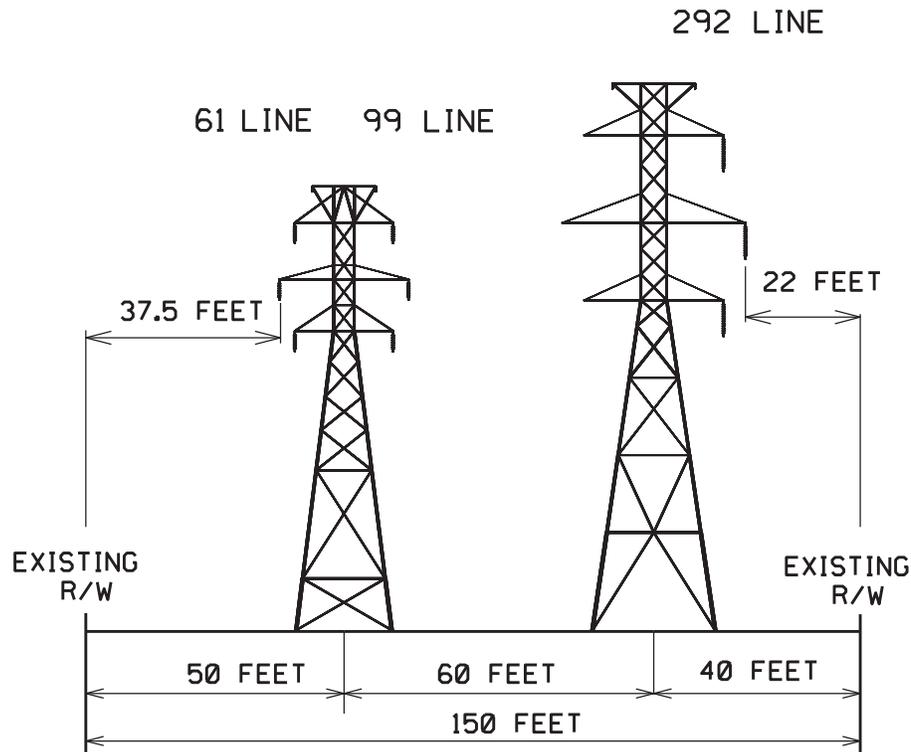
TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	WEATHERING POLE
FOUNDATION :	PILES/CONCRETE
APPROXIMATE HEIGHT:	133 FEET
WIDTH AT CROSSARM:	35 FEET
WIDTH AT BASE:	5 FEET
AVERAGE SPAN LENGTH:	850 FEET
CONDUCTOR TYPE:	ALUMINUM
RIGHT OF WAY WIDTH:	100 FEET
APPROXIMATE LENGTH OF LINE :	0.38 MILES

\$DUGNSPEL\$

US Army Corps of Engineers
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Existing Structures
292/641 thru 292/644

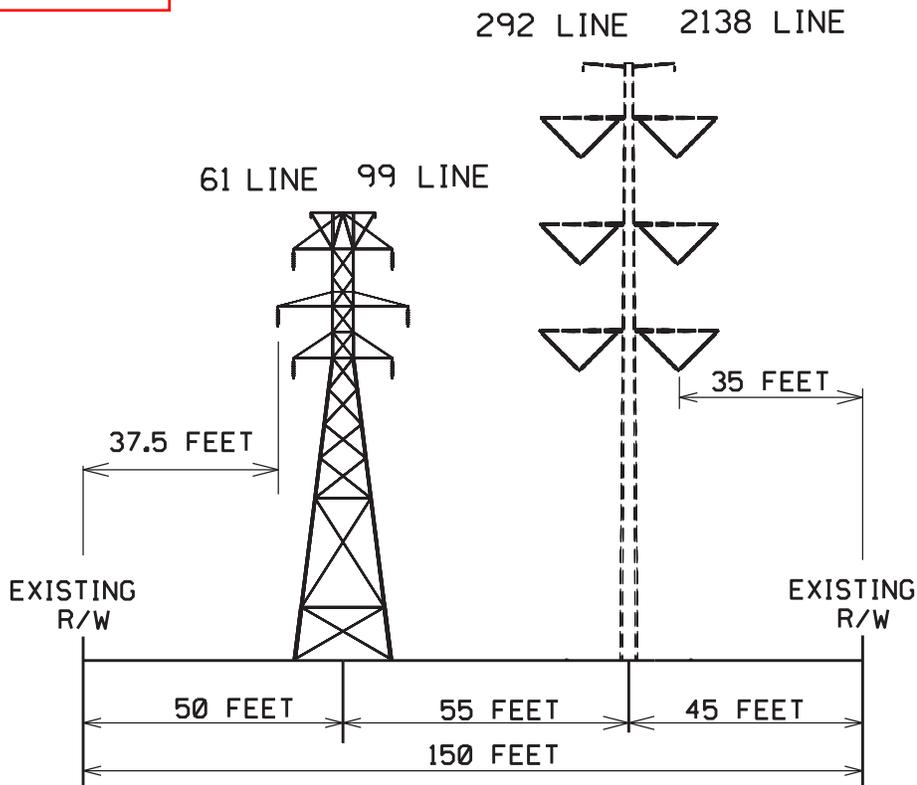


EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING TOWER
FOUNDATION :	EXISTING	EXISTING
APPROXIMATE HEIGHT:	85 FEET	106 FEET
WIDTH AT CROSSARM:	26 FEET	36 FEET
WIDTH AT BASE:	20 FEET	25 FEET
AVERAGE SPAN LENGTH:	664 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH OF LINE :	0.37 MILES	0.37 MILES

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 Date: July 30, 2015



Proposed Structures
2138/149 thru 2138/152

PROPOSED CONFIGURATION

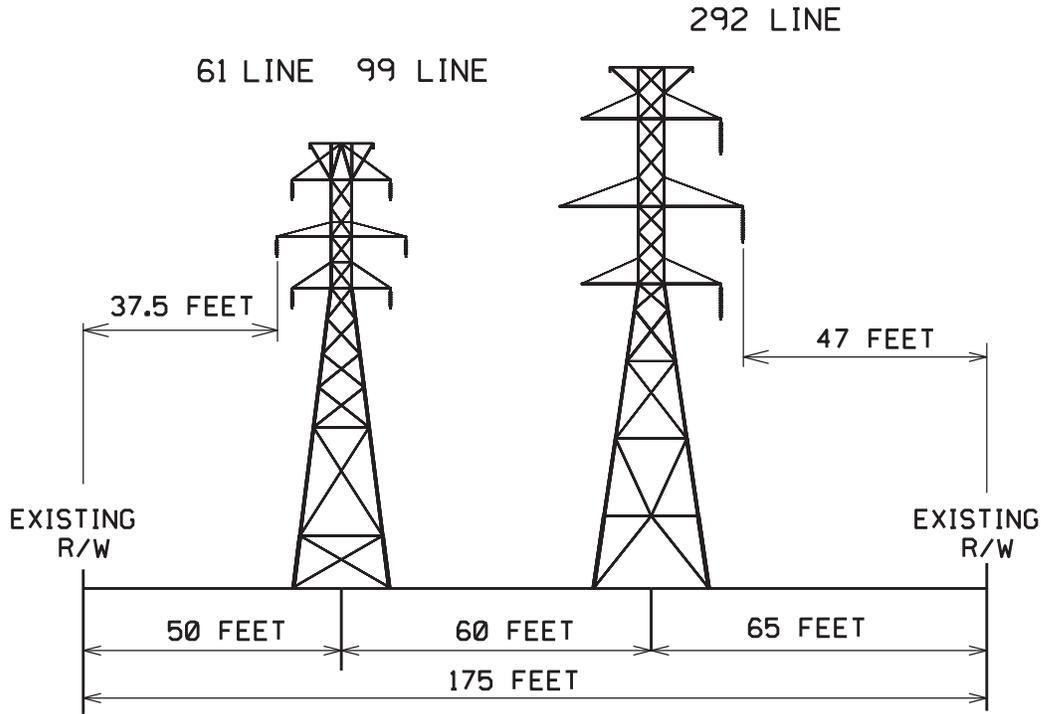
TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING POLE
FOUNDATION :	EXISTING	PILES/CONCRETE
APPROXIMATE HEIGHT:	85 FEET	128 FEET
WIDTH AT CROSSARM:	26 FEET	35 FEET
WIDTH AT BASE:	20 FEET	5 FEET
AVERAGE SPAN LENGTH:	664 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	150 FEET	150 FEET
APPROXIMATE LENGTH OF LINE :	0.37 MILES	0.58 MILES

\$UJGNSPFLU\$

US Army Corps of Engineers
 Norfolk District Regulatory Office
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 Date: July 30, 2015

Existing Structure
292/645



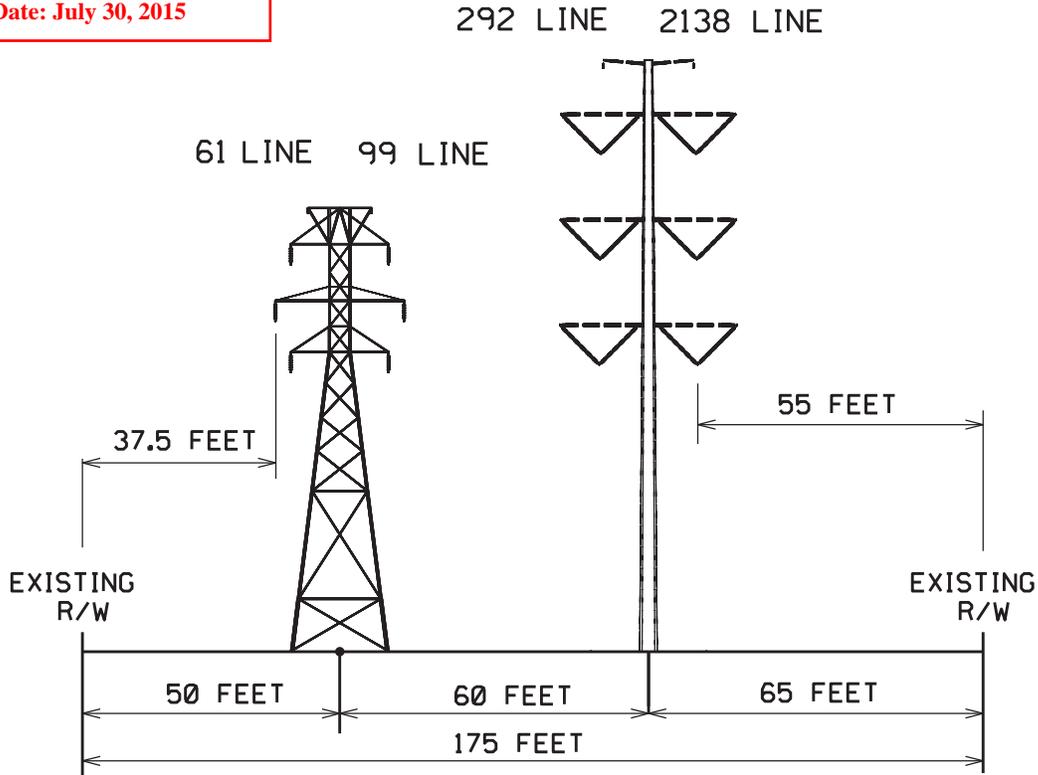
EXISTING CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING TOWER
FOUNDATION :	EXISTING	EXISTING
APPROXIMATE HEIGHT:	85 FEET	101 FEET
WIDTH AT CROSSARM:	26 FEET	36 FEET
WIDTH AT BASE:	20 FEET	22 FEET
AVERAGE SPAN LENGTH:	285 FEET	750 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	175 FEET	175 FEET
APPROXIMATE LENGTH OF LINE :	0.37 MILES	0.37 MILES

\$DGN\$PEC\$

US Army Corps of Engineers
 Norfolk District Regulatory Office
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 Date: July 30, 2015



Proposed Structure
2138/153

PROPOSED CONFIGURATION

TYPICAL RIGHT OF WAY LOOKING TOWARD WHEALTON

TYPE OF STRUCTURE:	GALVANIZED TOWER	WEATHERING POLE
FOUNDATION :	EXISTING	PILES/CONCRETE
APPROXIMATE HEIGHT:	85 FEET	110 FEET
WIDTH AT CROSSARM:	26 FEET	35 FEET
WIDTH AT BASE:	20 FEET	5 FEET
AVERAGE SPAN LENGTH:	285 FEET	800 FEET
CONDUCTOR TYPE:	ALUMINUM	ALUMINUM
RIGHT OF WAY WIDTH:	175 FEET	175 FEET
APPROXIMATE LENGTH OF LINE :	0.37 MILES	0.37 MILES

\$DCNSPEC\$