DE
COND MWT 19500 H/W 1565
GW MWT 3500 H/W 2504

DE
COND H/W 4093
GW H/W 10776

FIBER
MWT 6300 H/W 8155
DE SPAN

DE
COND H/W 3001
GW MWT 6500 H/W 6545

FIBER
MWT 4200 H/W 4535
DE SPAN

DE
COND MWT 31500 H/W 1965
GW MWT 4500 H/W 3727

FIBER
MWT 3200 H/W 2296
DE SPAN

DE
COND H/W 4209
GW H/W 9871

FIBER
MWT 5800 H/W 4145
DE SPAN

900' RS
COND H/W 3368
GW MWT 7500 H/W 8222

FIBER
MWT 4600 H/W 3379
DE SPAN

Line #1: SC = Single Circuit,148D = Tower Type, 73' Body = Length of Body extension on tower (ft)
Line #2: Leg Extension Lengths (ft), 4 legs per tower.
Line #3: Footing Type
Line #4: Soil Condition

Note: Triangle Denotes a turn in the line using Degrees, Minutes as the angle turned. This one is approximately 33 degrees to the left.

500 KV SSDE BAY 6E

SC TYPE 148D 73' BODY
30'-27.5'-25'-30' EXT
GRILLAGE FOOTINGS
EARTH

SC TYPE 148D 93' BODY
45'-45'-42.5'-42.5' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 139D 73' BODY
37.5'-37.5'-27.5'-30' EXT
GRILLAGE FOOTINGS
EARTH & ROCK
HRVL-BIGE NO I TIE-IN

DC TYPE 139D 73' BODY
47.5'-42.5'-32.5'-35' EXT
GRILLAGE FOOTINGS
EARTH
BIRD FLIGHT DIVERTERS AHEAD
(SEE DWG 290782)

DC TYPE 139D 73' BODY
30'-27.5'-40'-42.5' EXT
GRILLAGE FOOTINGS
EARTH
BIRD FLIGHT DIVERTERS BACK
(SEE DWG 290782)

563.8'

SPLICE BOX (2-VAULTS, AZE IBV & AZE IBVA)

EQUATION 53+00.2 BK =

58+64.0

58+64 BK

2000+00.0 AH

Δ 2°14' Rt

1281.5'

FIBER OPTIC CABLES

High Side Profile 32'

Rt

1/1
AZE 1

2012+81.5

Δ 33°27' Lt

EL 657'

EL 630'

765.6'

1/2
AZE 2

2020+47.1

Δ 6°01' Lt

542.9'

FIBER OPTIC CABLES

1/3
AZE 3

2022+72
PRIVATE ROAD

2025+90

2014+28 RELOCATED BPA HRVL-BIGE NO I TRANS LN (5W)

2025+90

EL 387'

1400'

2029+16 CO HWY 82/15 MILE CREEK ROAD
2029+26 BURIED TLP LN
2029+38 NORTHERN WASCO PUD
125 KV PWR LN (5W)

2035+18 15 MILE CREEK

2039+90

1/5
AZE 5

2048+30

FIBER OPTIC CABLES

840'

High Side Profile 32'

2/1

2047+16

1/4
AZE 4

1/1 denotes the First Tower in Mile One.

AZE 1 is BPA's Tower Serial Number

Profile is shown as if you were to walk down the center of the line.

SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1-1-5

0
58+64 BK

1100 1000 900 800 700 600 500 400 300

800 700 600 500 400 300

55 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050

TRIM LINE

BIG EDDY-KNIGHT FIBER SYSTEM

PRELIMINARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F.G.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at: Framed below cond 1/2" ice, 0lb wind, 32°F, F; Framed between cond 0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-1
REFERENCE DWG'S
FILE NAME :295077-1-0.DGN

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

RIGHT OF WAY | DESIGN

Design		HDR/JAG Design	
Drawn		HDR/BLA Drawn	
Checked	Sec Head	Checked	Engineer

PROJECT MANAGER

Date: - -

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/287KV TRANSMISSION LINE

MILE 1 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	1	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 1 BIG EDDY-KNIGHT NO 1
RT CKT OPER AS MILE 23 HARVALUM-BIG EDDY NO 1 STA AH 2020+47.1

\295077-1-0.dgn 5/6/2011 1:07:36 PM Plotted By: brsander

1050' RS
COND H/W 3695
GW MWT 7000 H/W 6205

FIBER
MWT 5500 H/W 4121
1100' RS

FIBER
MWT 5400 H/W 4090
DE SPAN

600' RS
COND MWT 34500 H/W 2226
GW MWT 5000 H/W 4454

FIBER
MWT 3600 H/W 2642
DE SPAN

FIBER
MWT 2500
H/W 1763
DE SPAN

3900' RS
CONDUCTOR: TRIPLE 1.752" SPECIAL AACSR
COND MWT 120000/PHASE @ 1/2" ICE, 8 LB WIND, 0°F IN H/W 8216
DE
OPGW: 0.811" SPECIAL OPGW
OPGW MWT 20000 @ 1/2" ICE, 8 LB WIND, 0°F IN H/W 12175

DC TYPE 39MI 80' BODY
10'-20'-20'-15' EXT
GRILLAGE FOOTINGS
EARTH & ROCK

DC TYPE 39MI 80' BODY
25'-30'-30'-25' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 09G 53' BODY
15'-15'-25'-20' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39BI 60' BODY
30'-30'-35'-35' EXT
GRILLAGE FOOTINGS
EARTH & ROCK

DC TYPE SI59D 40' BODY
42.5'-42.5'-40'-42.5' EXT
CONCRETE PIER FOOTINGS
ROCK

2309+12
917'
Lt
High Side Profile 32'
2318+29
1141'
2329+70
997.1'
FIBER OPTIC CABLES
2339+67
Δ 8°51' Lt
631.9'
FIBER OPTIC CABLES
2345+99
426'
Rt
2350+25
2350-25
1650.0'
2358+25 CENTURYLINK BURIED TLP LN
2358+35 MOODY ROAD
High Side Profile 32'
Rt
2360+25 CENTURYLINK BURIED TLP LN
Lt
2363+96

6/4
7/1 AZE 27
7/2 AZE 28
7/3 AZE 29
7/4 AZE 30
7/5 AZE 31
6 2311+16
7

2341+82 COLUMBIA RIVER GORGE NATIONAL SCENIC AREA BOUNDARY

SPLICE BOX (2-V AULTS, AZE 31BV & AZE 31BVA)

1700 1600 1500 1400 1300 1200 1100 1000 900
1200 1100 1000 900 800 700 600
2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360 2365

TRIM LINE

BIG EDDY-KNIGHT FIBER SYSTEM

SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1-7-5

PRELIMINARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F.C.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at: Framed below cond-1/2" ice, 0lb wind, 30°F, F Framed between cond-0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES (EXCEPT AS NOTED)
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-7
REFERENCE DWG'S
FILE NAME :295077-7-0.DGN

RIGHT OF WAY | DESIGN
Design | HDR/JAG Design
Drawn | HDR/BLA Drawn
Checked | Sec Head | Checked | Engineer
PROJECT MANAGER
Date: - -
State Seal & Signature

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/287KV TRANSMISSION LINE

MILE 7 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	7	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 7 BIG EDDY-KNIGHT NO 1
RT CKT OPER AS MILE 17 HARVALUM-BIG EDDY NO 1

\295077-7-0.dgn 4/14/2011 2:20:47 PM Plotted By: briander

TRIM LINE

TRIM LINE

3900' RS
CONDUCTOR: TRIPLE 1.752" SPECIAL AACSR
COND MWT 120000/PHASE @ 1/2" ICE, 8 LB WIND, 0°F IN
H/W 8216

DE
OPGW: 0.811" SPECIAL OPGW
OPGW MWT 20000 @ 1/2" ICE,
8 LB WIND, 0°F IN
H/W 12175

DE
OPGW: 0.811" SPECIAL OPGW
OPGW MWT 24300 (W/ MARKER BALLS)
@ 1/2" ICE, 8 LB WIND, 0°F IN
H/W 10031 (W/O MARKER BALLS)

DC TYPE SJ59B2 42.5' BODY
42.5'-42.5'-42.5' EXT
CONCRETE PIER FOOTINGS
ROCK
OBSTRUCTION LIGHTING

1650.0'

MARKER BALLS

OPGW CABLES

4552.0'

1050' RS
COND H/W 3695
GW MWT 8500 H/W 9777
FIBER
MWT 5500 H/W 4344
900' RS

DC TYPE SJ59D 60' BODY
37.5'-37.5'-37.5'-37.5' EXT
CONCRETE PIER FOOTINGS
ROCK
OBSTRUCTION LIGHTING

901.0'
FIBER OPTIC CABLES

EL 346'
2412+27.0
Δ 44°14' Rt
High Side Profile 32'
SPLICE BOX (2 VAULTS, AZE 33BV & AZE 33BVA)
Lt
8
2
AZE 33

2407+43 BNSF (SOUTH TRACK)
2407+71 BNSF (NORTH TRACK)
2407+94 KLICKITAT PUD
125 KV PWR LN (NW)

EL 196'

2412+53 KLICKITAT PUD PWR LN (NW)

8
2416+76

EL 687'
Lt
2366+75
High Side Profile 32'
8
1
AZE 32
Rt

2365+19 NORTHERN WASCO PUD 125 KV PWR LN (4W)

2360+25 CENTURYLINK BURIED TLP LN

2374+35 I-84 EASTBOUND
2376+02 UPRR (TRUNK LINE)
2376+13 UPRR (SOUTH TRACK)
2376+27 UPRR (NORTH TRACK)
2376+63 RR TLP & TLG LN (26W)
2377+16 NORTHERN WASCO PUD 480V (W)
2377+39 I-84 WEST BOUND

EL 192'
EL 193'
Rt
Lt

7
2363+96

SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1-8-2

2390+91 OREGON/WASHINGTON ST LINE

COLUMBIA RIVER

2405

700 1200
600 1100
500 1000
400 900
300 800
200 700
100 600
500
400
300
200
100
950
750
450
350
250
2365 2370 2375 2380 2385 2390 2395 2400
2410 2415 2420

BIG EDDY-KNIGHT FIBER SYSTEM

PRELIMINARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, C.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at: Framed below cond-1/2" ice, 0lb wind, 30°F, F; Framed between cond-0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES (EXCEPT AS NOTED)
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-8
REFERENCE DWG'S
FILE NAME : 295077-7-0.DGN
RIGHT OF WAY DESIGN

Design		HDR/JAG Design	
Drawn		HDR/BLA Drawn	
Checked	Sec Head	Checked	Engineer

PROJECT MANAGER
Date: - -
State Seal & Signature

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/287KV TRANSMISSION LINE

MILE 8 FROM BIG EDDY

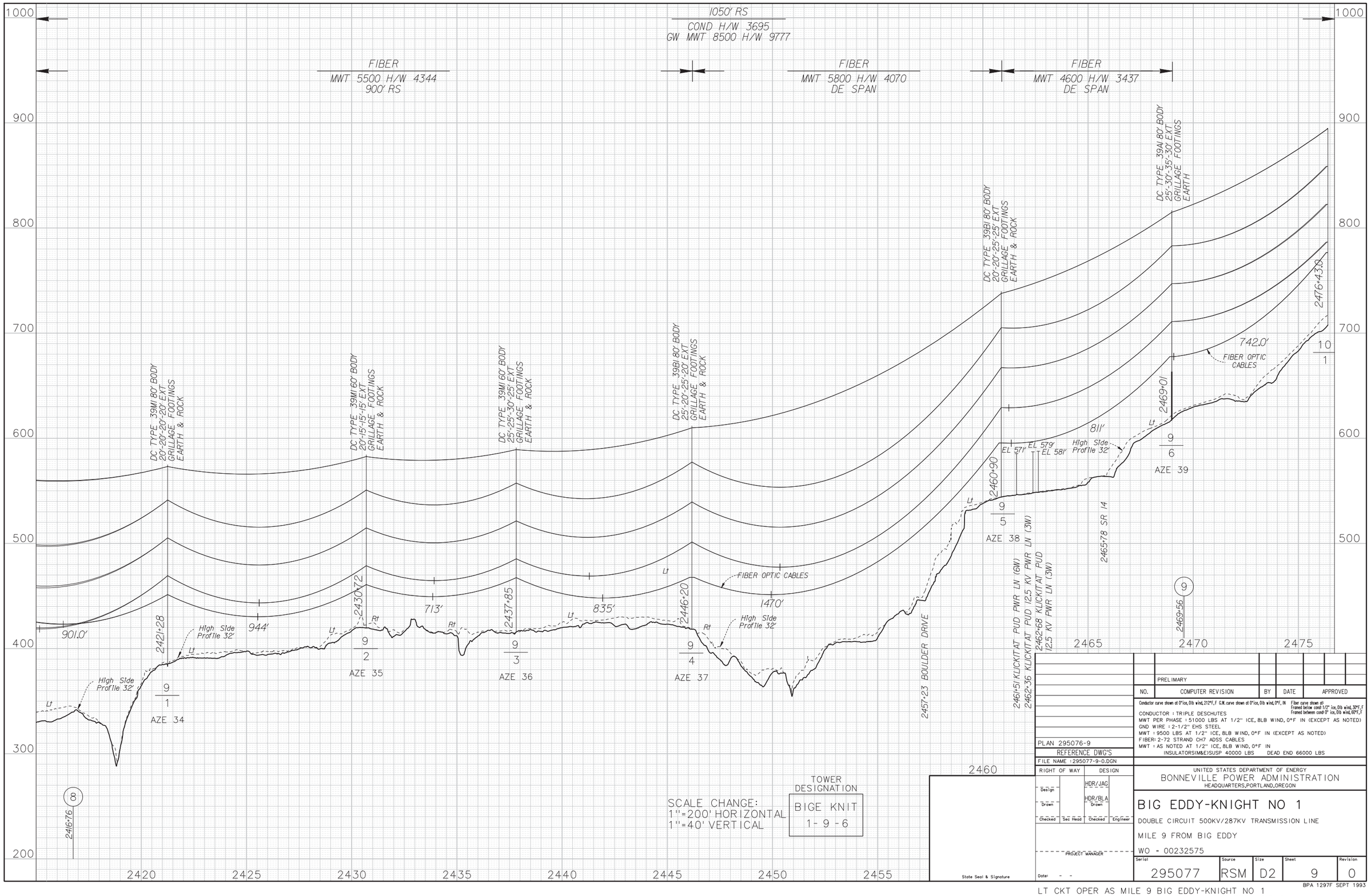
WO = 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	8	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 8 BIG EDDY-KNIGHT NO 1
RT CKT OPER AS MILE 16 HARVALUM-BIG EDDY NO 1

295077-8-0.dgn 4/14/2013 5:06:44 PM Plotted By: bnsander



SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1 - 9 - 6

PRELIMINARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at:
Framed below cond-1/2" ice, 0lb wind, 30°F, F
Framed between cond-0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-9
REFERENCE DWG'S
FILE NAME :295077-9-0.DGN
RIGHT OF WAY DESIGN

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/287KV TRANSMISSION LINE

MILE 9 FROM BIG EDDY

WO - 00232575

Design		HDR/JAG	
Drawn		HDR/BLA Drawn	
Checked	Sec Head	Checked	Engineer

PROJECT MANAGER

State Seal & Signature

Date: - -

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	9	0

BPA 1297F SEPT 1993

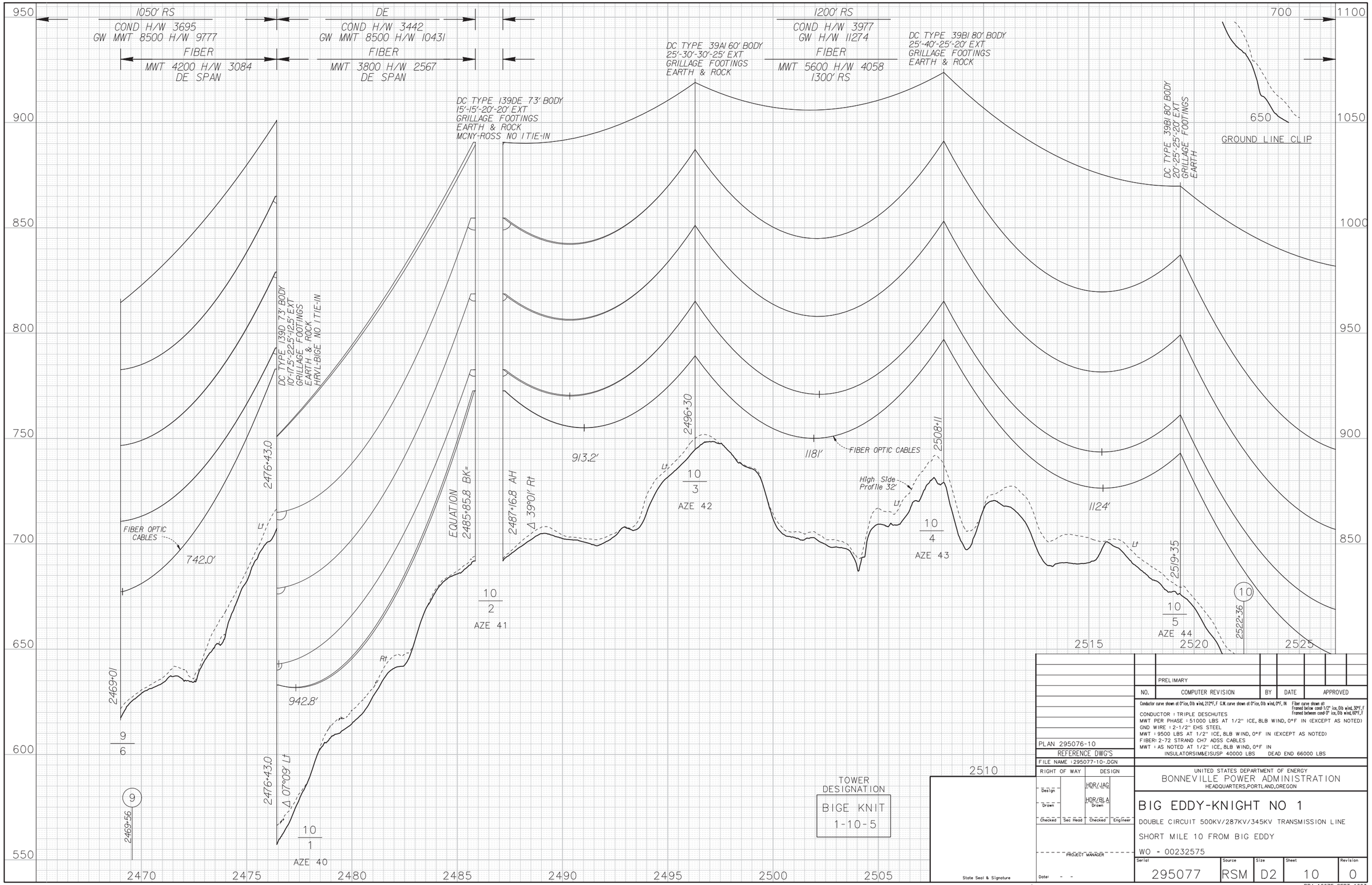
LT CKT OPER AS MILE 9 BIG EDDY-KNIGHT NO 1
RT CKT OPER AS MILE 15 HARVALUM-BIG EDDY NO 1

BIG EDDY-KNIGHT FIBER SYSTEM

TRIM LINE

TRIM LINE

\295077-9-0.dgn 4/14/2011 2:21:29 PM Plotted By: brsander



TRIM LINE

TRIM LINE

BIG EDDY-KNIGHT FIBER SYSTEM

TOWER DESIGNATION

BIGE KNIT
1-10-5

PRELIMARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, C.W. curve shown at 0°ice, 0lb wind, 0°F, IN. Fiber curve shown at: Framed below cond 1/2" ice, 0lb wind, 30°F, F; Framed between cond 0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-10

REFERENCE DWG'S

FILE NAME :295077-10-.DGN

RIGHT OF WAY | DESIGN

Design		HDR/JAG	
Drawn		HDR/BLA Drawn	
Checked	Sec Head	Checked	Engineer

PROJECT MANAGER

State Seal & Signature

Date: - -

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/287KV/345KV TRANSMISSION LINE

SHORT MILE 10 FROM BIG EDDY

WO = 00232575

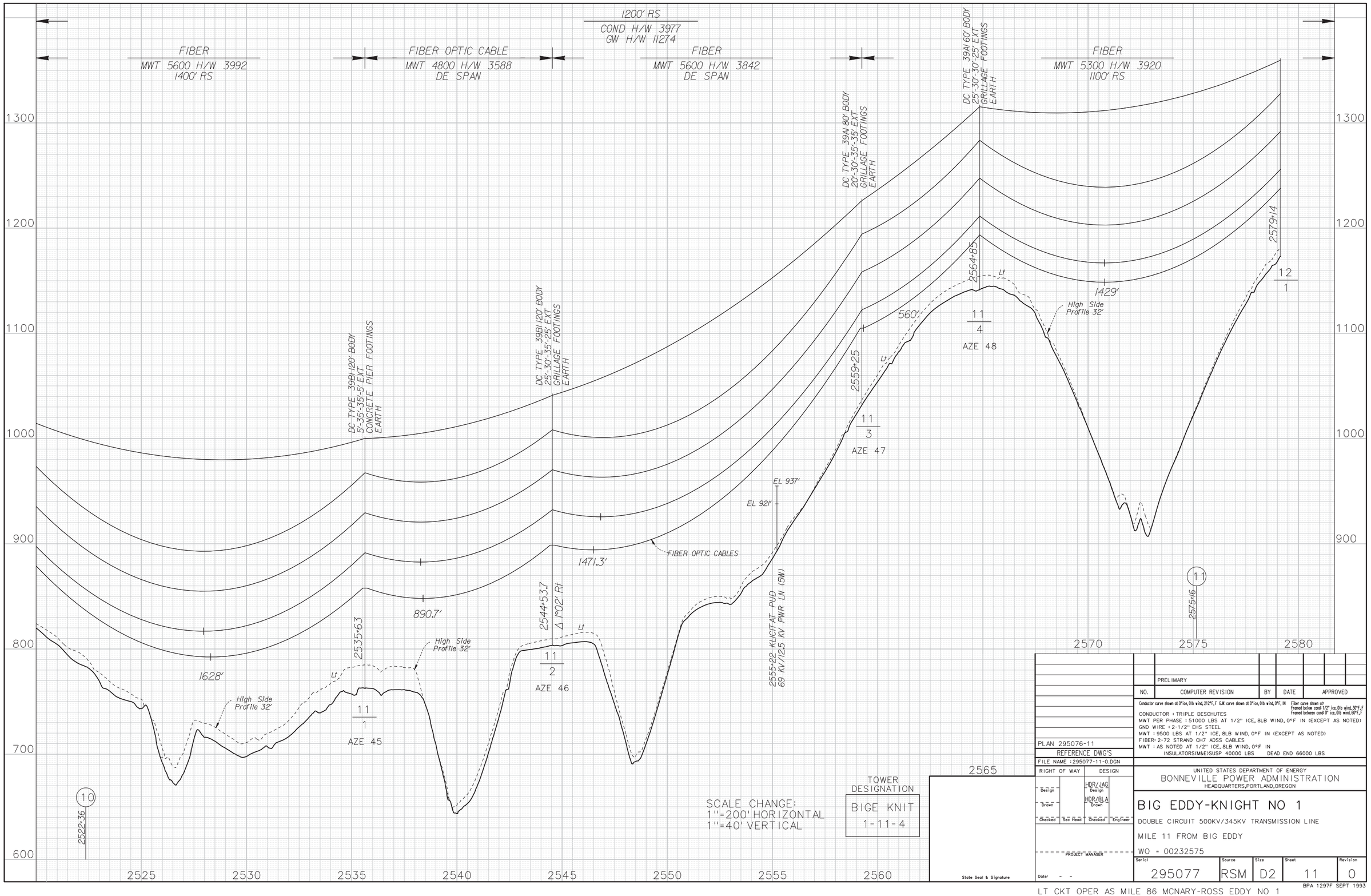
Serial	Source	Size	Sheet	Revision
295077	RSM	D2	10	0

BPA 1297F SEPT 1993

RT CKT OPER AS MILE 14 HARVALUM-BIG EDDY NO 1 STA BK 2476+43.0

LT CKT OPER AS MILE 87 MCNARY-ROSS NO 1 STA AH 2487+16.8
RT CKT OPER AS MILE 10 BIG EDDY-KNIGHT NO 1 STA AH 2487+16.8

295077-10-0.dgn 4/14/2011 5:07:00 PM Plotted By: braende



SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1-11-4

PRELIMARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F G.W. curve shown at 0°ice, 0lb wind, 0°F, IN — Fiber curve shown at: Framed below cond-1/2" ice, 0lb wind, 30°F, F; Framed between cond-0° ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-11
REFERENCE DWG'S
FILE NAME :295077-11-0.DGN

RIGHT OF WAY: Design, Drawn, Checked, Sec Head
DESIGN: HDR/JAG Design, HDR/BLA Drawn, Checked, Engineer
PROJECT MANAGER
Date: - -
State Seal & Signature

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/345KV TRANSMISSION LINE

MILE 11 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	11	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 86 MCNARY-ROSS EDDY NO 1
RT CKT OPER AS MILE 11 BIG EDDY-KNIGHT NO 1

\295077-11-0.dgn 4/14/2011 2:22:00 PM Plotted By: bsaunder

1200' RS
COND H/W 3977
GW H/W 11274

FIBER
MWT 5300 H/W 3920
1100' RS

FIBER
MWT 4100 H/W 3027
DE SPAN

FIBER
MWT 5500 H/W 4121
1100' RS

GROUND LINE CLIP

DC TYPE 39MI 80' BODY
15'-25'-30'-25' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 60' BODY
30'-35'-35'-25' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 60' BODY
15'-15'-20'-15' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 80' BODY
15'-20'-20'-15' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39AI 80' BODY
15'-20'-15'-15' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 139D 53' BODY
20'-25'-22.5'-20' EXT
GRILLAGE FOOTINGS
EARTH

FIBER OPTIC CABLES

High Side Profile 32'

2579+14
783'
12/1
AZE 49

2586+97
717'
12/2
AZE 50

2594+14
1079'
12/3
AZE 51

2604+93
714'
12/4
AZE 52

2612+07
1224.6'
12/5
AZE 53

2624+316
Δ 17°57' Lt
709.4'
12/6
AZE 54

2631+41
13/1

2627+96
12

2575+16
11

SCALE CHANGE:
1"=200' HORIZONTAL
1"=40' VERTICAL

TOWER DESIGNATION
BIGE KNIT
1-12-6

PRELIMARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F.S.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at:
Framed below cond-1/2" ice, 0lb wind, 32°F, F
Framed between cond-0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-12
REFERENCE DWG'S
FILE NAME :295077-12-0.DGN

RIGHT OF WAY | DESIGN
Design | HDR/JAG Design
Drawn | HDR/BLA Drawn
Checked | Sec Head | Checked | Engineer
PROJECT MANAGER
Date: - -
State Seal & Signature

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/345KV TRANSMISSION LINE

MILE 12 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	12	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 85 MCNARY-ROSS NO 1
RT CKT OPER AS MILE 12 BIG EDDY-KNIGHT NO 1

TRIM LINE
BIG EDDY-KNIGHT FIBER SYSTEM
TRIM LINE

295077-12-0.dgn 4/14/2011 2:22:22 PM Plotted By: brsander

TRIM LINE

1050' RS
COND H/W 3695
GW MWT 8500 H/W 9777

FIBER
MWT 5400 H/W 4118
1000' RS

FIBER
MWT 5400 H/W 4020
1100' RS

GROUND LINE CLIP

1200

1150

DC TYPE 39MI 60' BODY
30'-35'-30'-30' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 60' BODY
10'-15'-15'-10' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 60' BODY
35'-40'-40'-35' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39BI 80' BODY
20'-25'-25'-20' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 39MI 80' BODY
20'-25'-30'-25' EXT
GRILLAGE FOOTINGS
EARTH

1600
1550
1500
1450
1400
1350
1300
1250

1450
1400
1350
1300
1250

709.4'
2631+41
Lt
FIBER OPTIC CABLES
High Side Profile 32'
810'
2639+51
635'
2645+86
1333'
2659+19
957'
FIBER OPTIC CABLES
2668+76
1244'
High Side Profile 32'
2681+20
2680+76

13/1 AZE 55
13/2 AZE 56
13/3 AZE 57
13/4 AZE 58
13/5 AZE 59
14/1

12
2627+96

2630 2635 2640 2645 2650 2655 2660 2665 2670 2675 2680 2685

TOWER DESIGNATION
BIGE KNIT
1-13-5

PRELIMARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F G.W. curve shown at 0°ice, 0lb wind, 0°F, IN
Fiber curve shown at:
Framed below cond-1/2" ice, 0lb wind, 30°F, F
Framed between cond-0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-13
REFERENCE DWG'S
FILE NAME :295077-13-.DGN

RIGHT OF WAY: Design, Drawn, Checked, Sec Head
DESIGN: HDR/JAG Drawn, HDR/BLA Checked, Engineer
PROJECT MANAGER
State Seal & Signature
Date: - -

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/345KV TRANSMISSION LINE

MILE 13 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	13	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 84 MCNARY-ROSS NO 1
RT CKT OPER AS MILE 13 BIG EDDY-KNIGHT NO 1

BIG EDDY-KNIGHT FIBER SYSTEM

TRIM LINE

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TRIM LINE

DC TYPE 39AI 60' BODY
35'-40'-35'-35' EXT
GRILLAGE FOOTINGS
EARTH

FIBER
MWT 5400 H/W 4020
1100' RS

DC TYPE 39BI 60' BODY
35'-40'-35'-30' EXT
GRILLAGE FOOTINGS
EARTH

1050' RS
COND H/W 3695
GW MWT 8500 H/W 9777

FIBER
MWT 5200 H/W 4018
900' RS

DC TYPE 39MI 60' BODY
25'-30'-30'-25' EXT
GRILLAGE FOOTINGS
EARTH

DC TYPE 139DE 93' BODY
17.5'-27.5'-25'-12.5' EXT
GRILLAGE FOOTINGS
EARTH
MCNY-ROSS NO 1 TIE-IN

DE
COND H/W 3843
GW MWT 8500 H/W 8111

FIBER
MWT 4600 H/W 3143
DE SPAN

GROUND LINE CLIP

DC TYPE 148D 93' BODY
45'-32.5'-37.5'-50' EXT
GRILLAGE FOOTINGS
EARTH & ROCK

DE
COND H/W 3554
GW MWT 9000 H/W 10476

FIBER
MWT 5800 H/W 4371
DE SPAN

FIBER OPTIC CABLES

1127.7'

EQUATION
2734+05.7 BK =
2734+05.7 AH
Δ 26°25' Lt

EL 1198'

High Side
Profile 32'

Lt

Rt

15
1

2722+78.0 AH
Δ 42°13' Lt

SPLICE BOX
(2-VAULTS,
AZE 64BV &
AZE 64BVA)

2724+24
RELOCATED
BPA MCNY-ROSS
NO 1 TRANS LN (3W)

14
2733+56

2730

2735

2725

14
5
AZE 64

2681+20

High Side
Profile 32'

1027.6'

Lt

14
1
AZE 60

2691+47.6
Δ 7°19' Lt

14
2
AZE 61

966.4'

2701+14

Lt

FIBER OPTIC
CABLES

871'

14
3
AZE 62

2709+85

1302.2'

EQUATION
2722+87.2 BK =

High Side
Profile 32'

Lt

14
4
AZE 63

TOWER
DESIGNATION
BIGE KNIT
1-14-5

13
2680+76

1400
1350
1300
1250
1200
1150
1100
1050
1000

2685
2690
2695
2700
2705
2710
2715
2720

1400
1350
1300
1250
1200
1150

PRELIMARY

NO.	COMPUTER REVISION	BY	DATE	APPROVED

Conductor curve shown at 0°ice, 0lb wind, 212°F, F.G.W. curve shown at 0°ice, 0lb wind, 0°F, IN. Fiber curve shown at: Framed below cond 1/2" ice, 0lb wind, 30°F, F. Framed between cond 0" ice, 0lb wind, 60°F, F

CONDUCTOR : TRIPLE DESCHUTES
MWT PER PHASE : 51000 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
GND WIRE : 2-1/2" EHS STEEL
MWT : 9500 LBS AT 1/2" ICE, 8LB WIND, 0°F IN (EXCEPT AS NOTED)
FIBER: 2-72 STRAND CH7 ADSS CABLES
MWT : AS NOTED AT 1/2" ICE, 8LB WIND, 0°F IN
INSULATORS(M&E)SUSP 40000 LBS DEAD END 66000 LBS

PLAN 295076-14
REFERENCE DWG'S
FILE NAME :295077-14-0.DGN
RIGHT OF WAY | DESIGN

Design		HDR/JAG Design		
Drawn		HDR/BLA Drawn		
Checked	Sec Head	Checked	Engineer	

PROJECT MANAGER
Date: - -
State Seal & Signature

UNITED STATES DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS,PORTLAND,OREGON

BIG EDDY-KNIGHT NO 1

DOUBLE CIRCUIT 500KV/345KV TRANSMISSION LINE

LONG MILE 14 FROM BIG EDDY

WO - 00232575

Serial	Source	Size	Sheet	Revision
295077	RSM	D2	14	0

BPA 1297F SEPT 1993

LT CKT OPER AS MILE 83 MCNARY-ROSS NO 1 STA BK 2709+85.0
RT CKT OPER AS MILE 14 BIG EDDY-KNIGHT NO 1 STA BK 2709+85.0

BIG EDDY-KNIGHT FIBER SYSTEM

TRIM LINE

295077-14-0.dgn 4/14/2011 5:07:22 PM Plotted By: bsandel