Appendix D-2 – Preliminary Engineering Drawings

NOTES:

1. ALL COORDINATES ARE REFERENCED TO UTM 18N NAD83 METERS

2. THESE DRAWINGS ARE PRELIMINARY AND NOT FOR CONSTRUCTION. DATA IS BASED ON VIBRA–CORE INVESTIGATION.

3. DRAWINGS 0007, 0008 & 0009 ARE RESERVED AS SPARE DRAWINGS

4. WITH REFERENCE TO ONSHORE HDD DRILLING RIGS, PIT I IS NOT USED

5. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS NOTED OTHERWISE

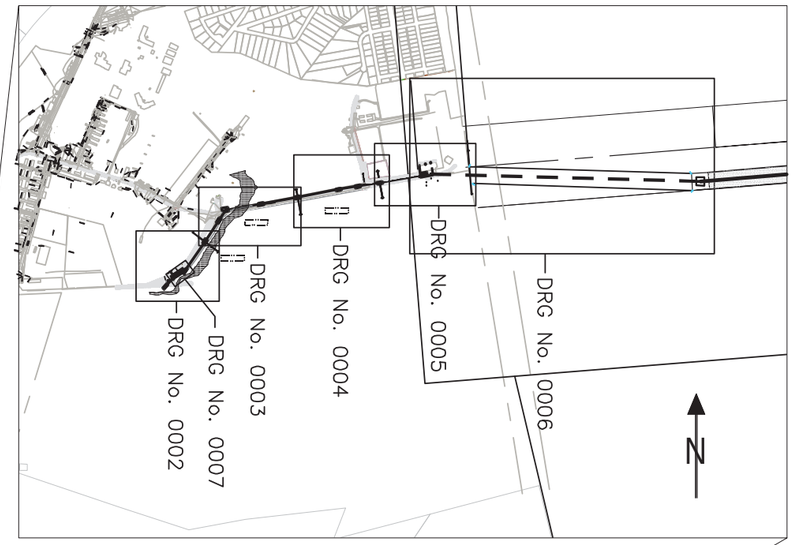
6. THESE DRAWINGS HAVE BEEN PREPARED BASED ON PRELIMINARY ENGINEERING FOR THE VOWTAP PROJECT. THE USE OF ANY INFORMATION CONTAINED WITHIN THESE DRAWINGS IS PROHIBITED UNLESS WRITTEN PERMISSION IS OBTAINED FROM BOTH DOMINION AND KBR.

7. OFFSHORE EXPORT CABLE WILL BE INSTALLED TO A DEPTH OF 2M TO 4.5M.

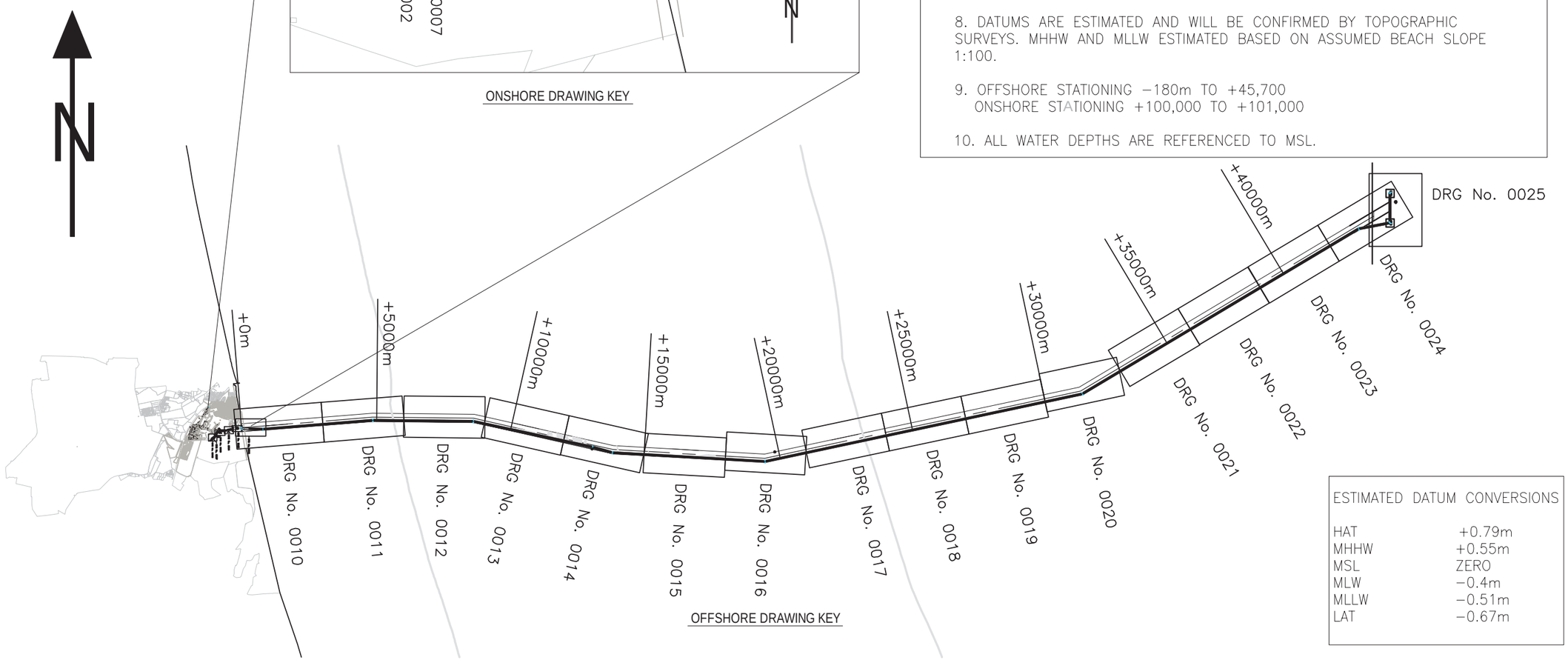
8. DATUMS ARE ESTIMATED AND WILL BE CONFIRMED BY TOPOGRAPHIC SURVEYS. MHHW AND MLLW ESTIMATED BASED ON ASSUMED BEACH SLOPE 1:100.

9. OFFSHORE STATIONING –180m TO +45,700
ONSHORE STATIONING +100,000 TO +101,000

10. ALL WATER DEPTHS ARE REFERENCED TO MSL.



ONSHORE DRAWING KEY



OFFSHORE DRAWING KEY

ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	–0.4m
MLLW	–0.51m
LAT	–0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:150000
FOR 420mm x 270mm DWG ONLY

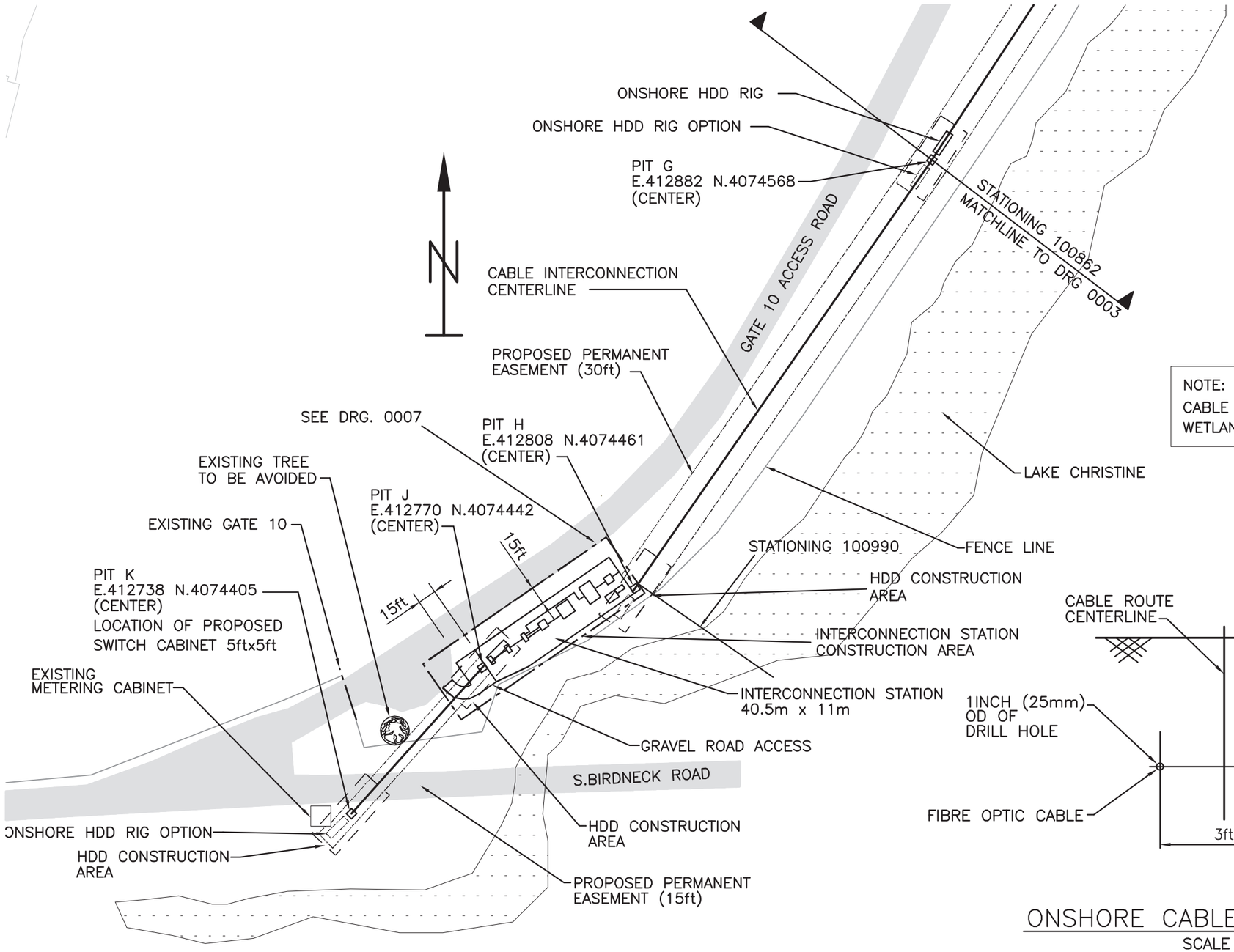
Dominion

PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

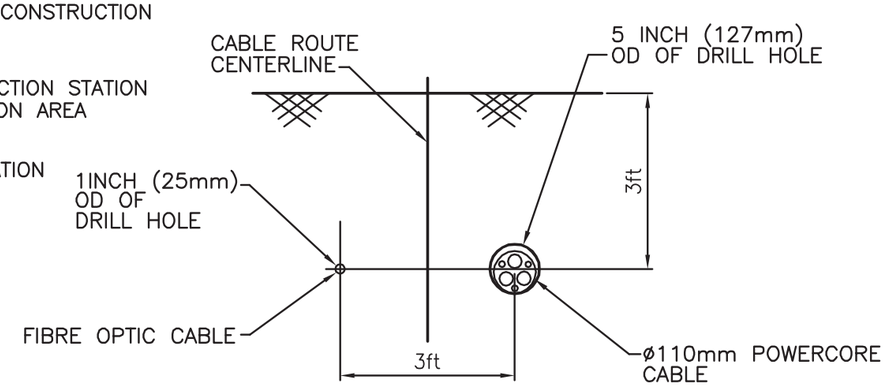
REV
03

DRAWING TITLE
CABLE ROUTE DRAWING KEY

DRAWING No.
DVP-KBR-WT3.6-DWG-0001



NOTE:
CABLE ROUTE DOES NOT EXTEND INTO WETLANDS AREA



ONSHORE CABLE ROUTE SECTION

SCALE N.T.S.

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:1000
FOR 420mm x 270mm DWG ONLY

Dominion

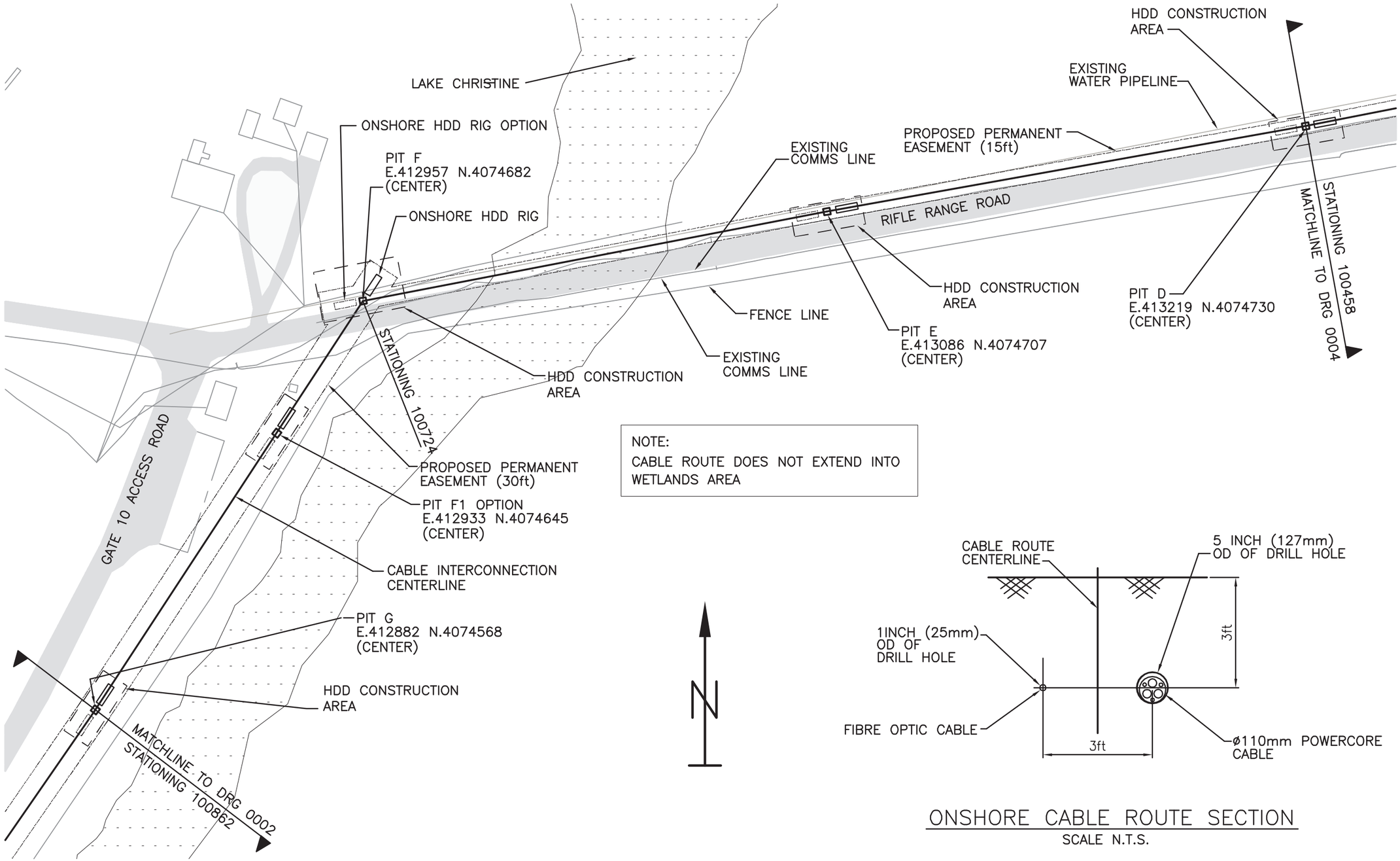
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
ONSHORE INTERCONNECTION CABLE ROUTE PLAN

DRAWING No.
DVP-KBR-WT3.6-DWG- 0002

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



NOTE:
CABLE ROUTE DOES NOT EXTEND INTO WETLANDS AREA

ONSHORE CABLE ROUTE SECTION

SCALE N.T.S.

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-DEC-13	DOS	HAC	GO

SCALE U.N.O
1:1000
FOR 420mm x 270mm DWG ONLY

Dominion

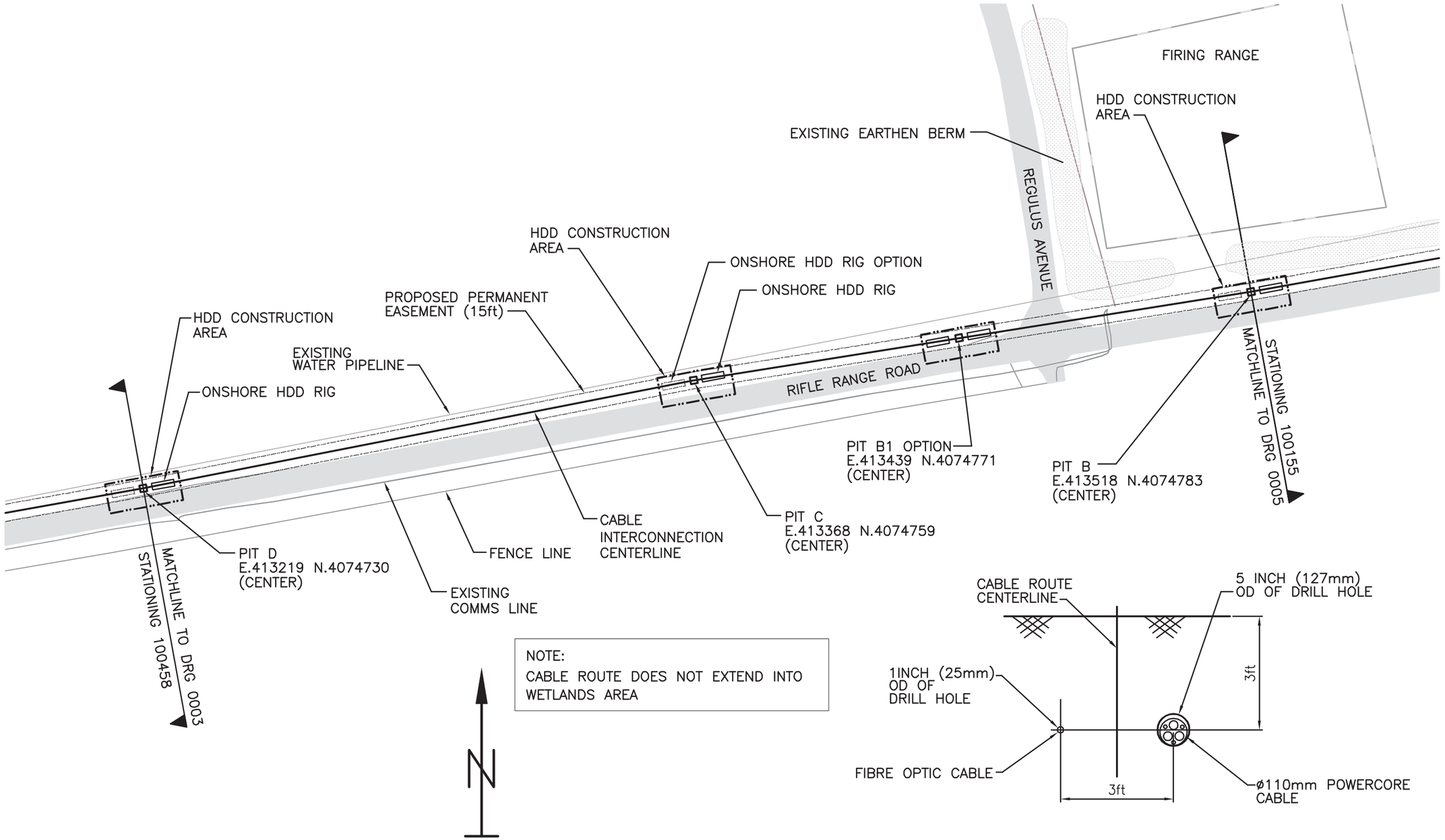
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
ONSHORE INTERCONNECTION CABLE ROUTE PLAN

DRAWING No.
DVP-KBR-WT3.6-DWG- 0003

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



ONSHORE CABLE ROUTE SECTION

SCALE N.T.S.

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:1000
FOR 420mm x 270mm DWG ONLY

Dominion

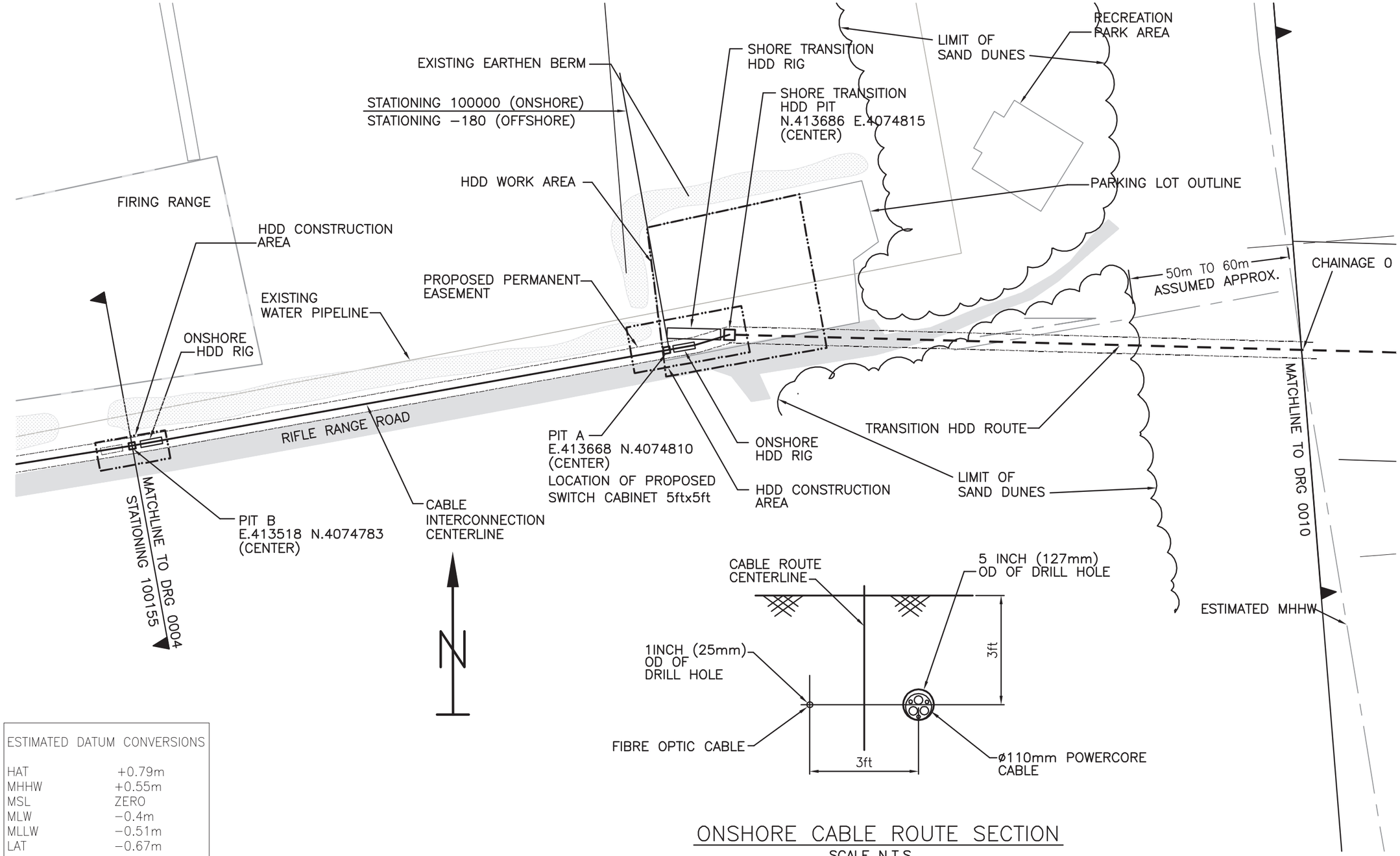
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
ONSHORE INTERCONNECTION CABLE ROUTE PLAN

DRAWING No.
DVP-KBR-WT3.6-DWG- 0004

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



ONSHORE CABLE ROUTE SECTION

SCALE N.T.S.

ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:1000
FOR 420mm x 270mm DWG ONLY

Dominion

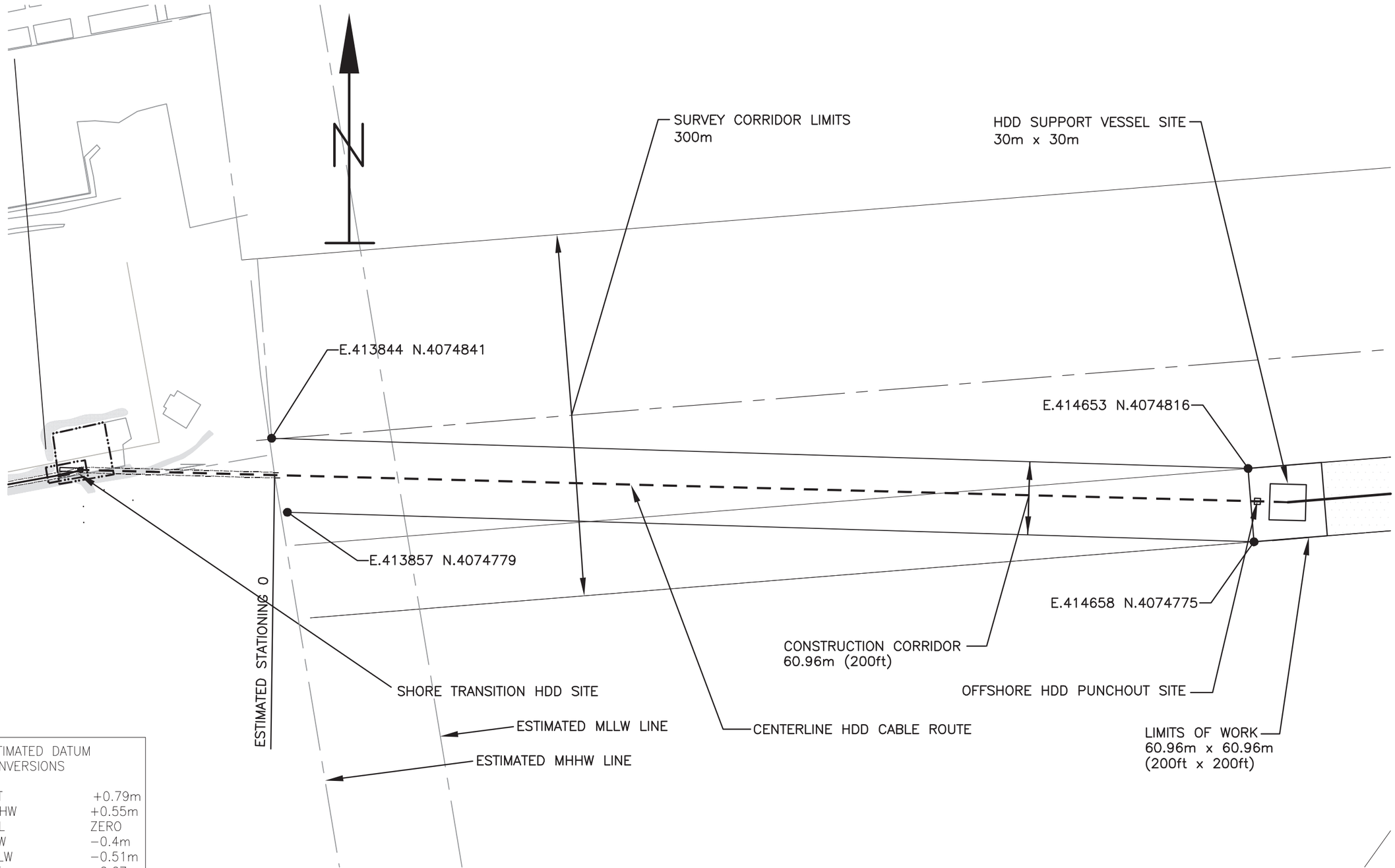
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
ONSHORE INTERCONNECTION CABLE ROUTE PLAN

DRAWING No.
DVP-KBR-WT3.6-DWG- 0005

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:3000
FOR 420mm x 270mm DWG ONLY

Dominion

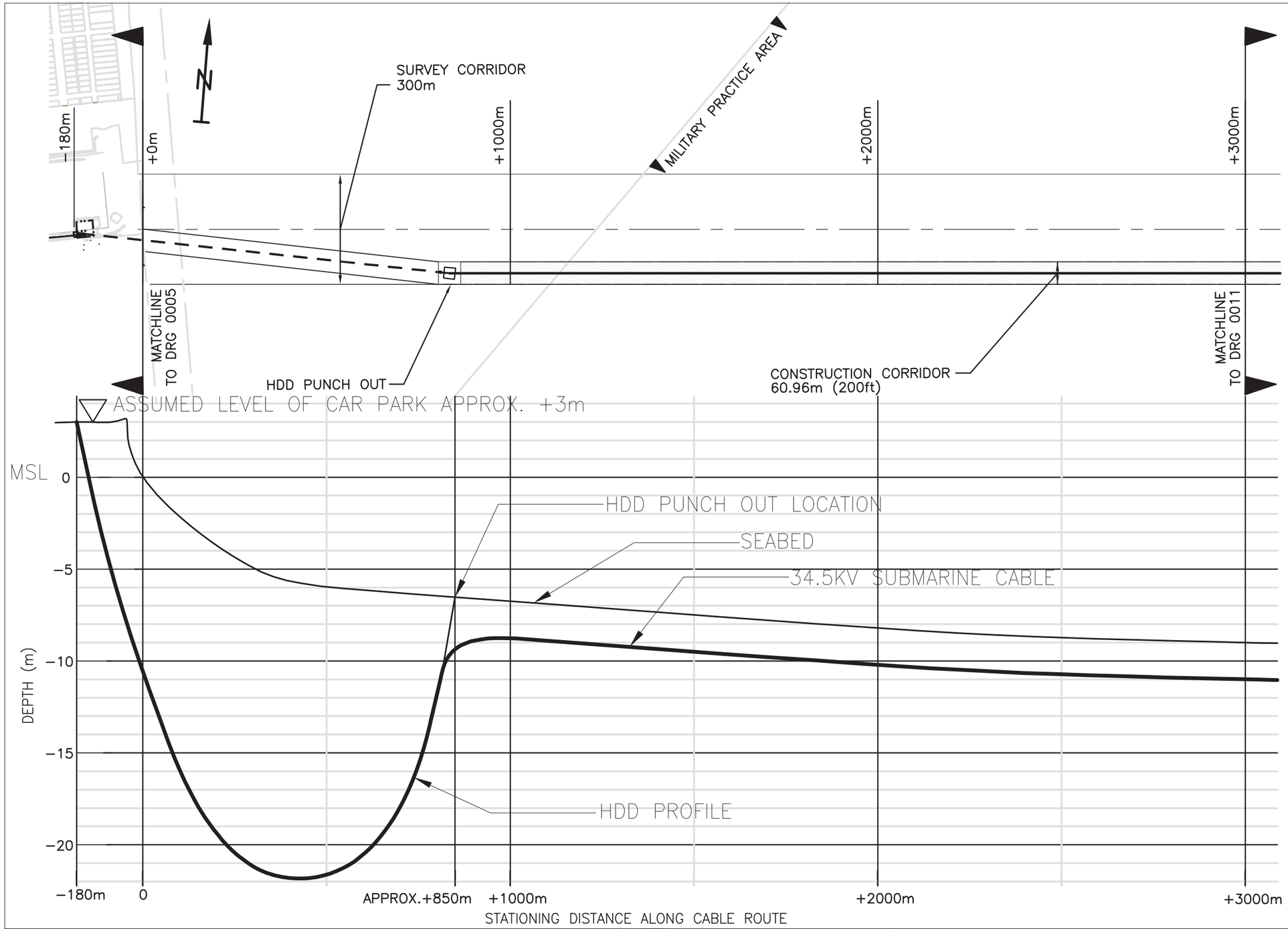
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
ONSHORE INTERCONNECTION CABLE ROUTE PLAN

DRAWING No.
DVP-KBR-WT3.6-DWG- 0006

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR CLIENT REVIEW	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

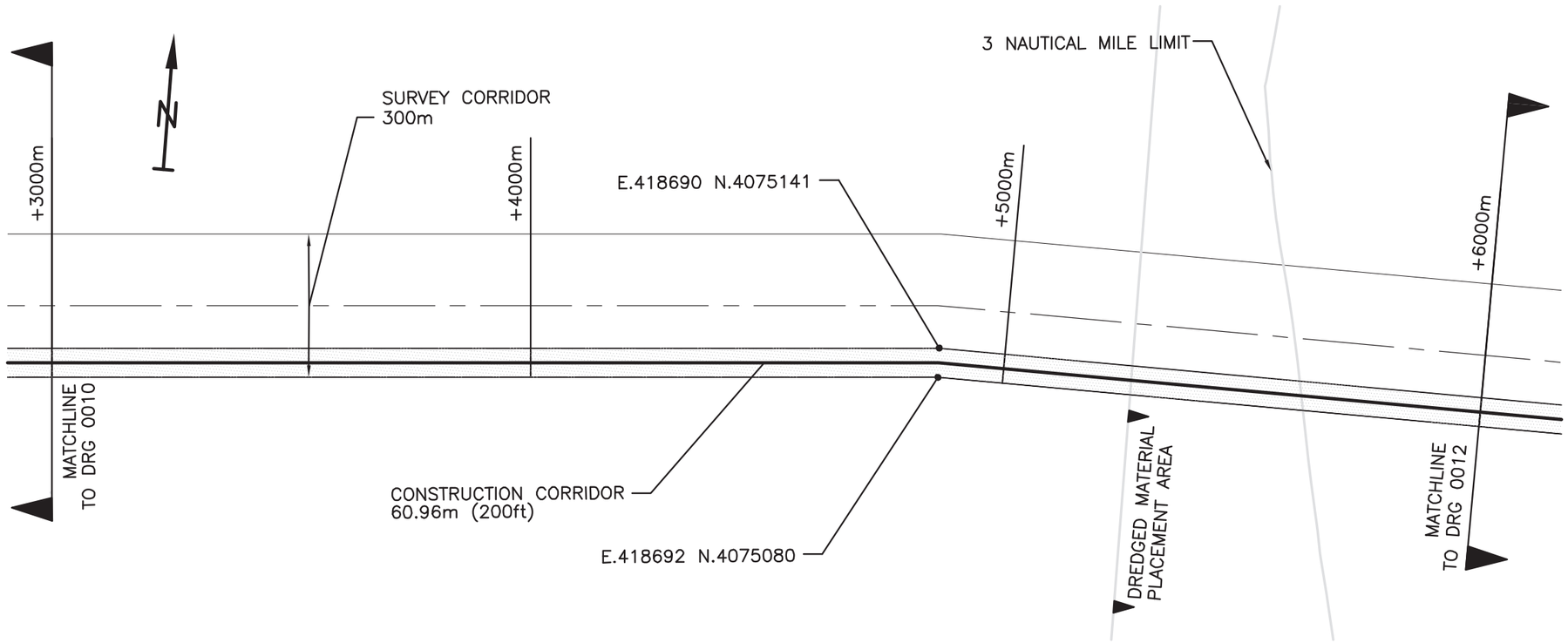
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

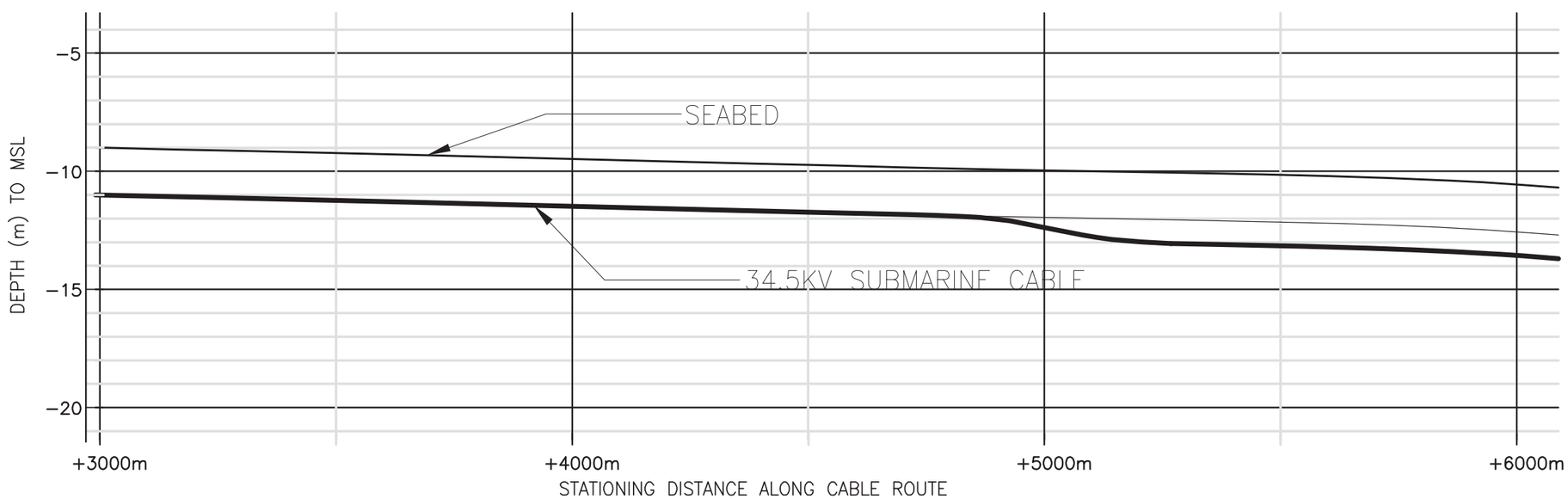
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG- 0010

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

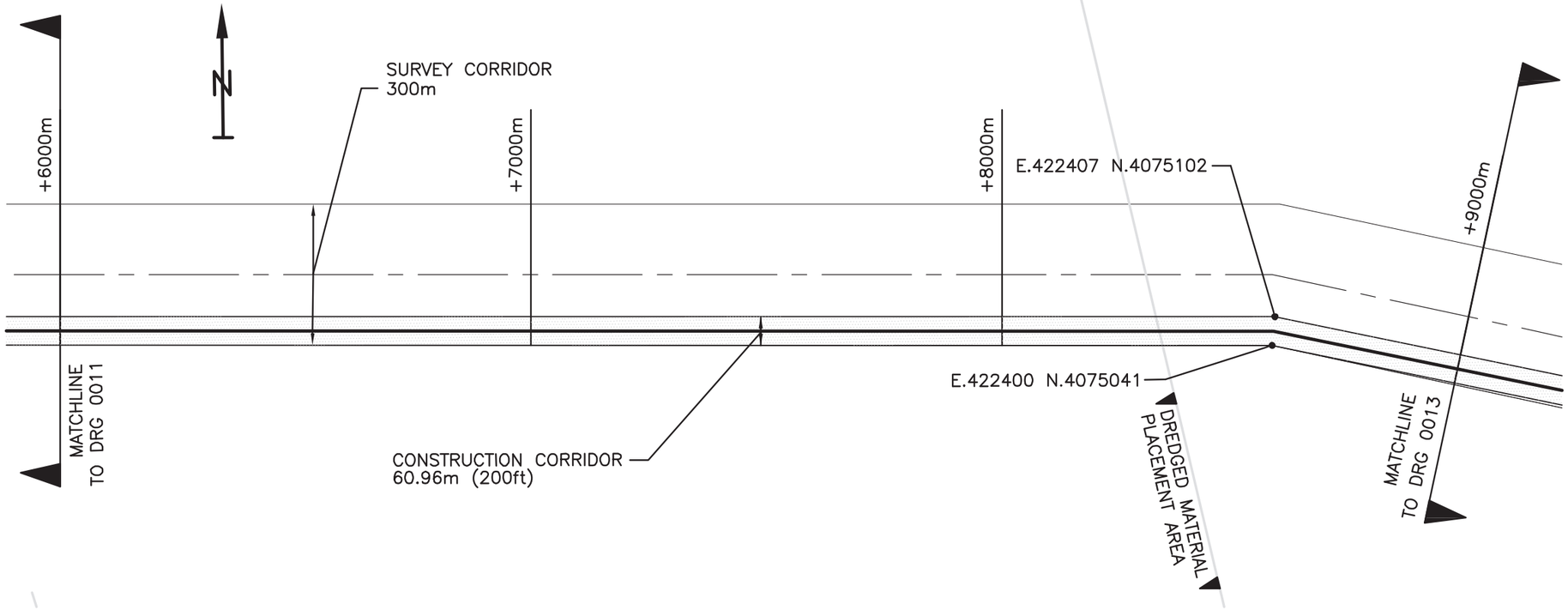
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

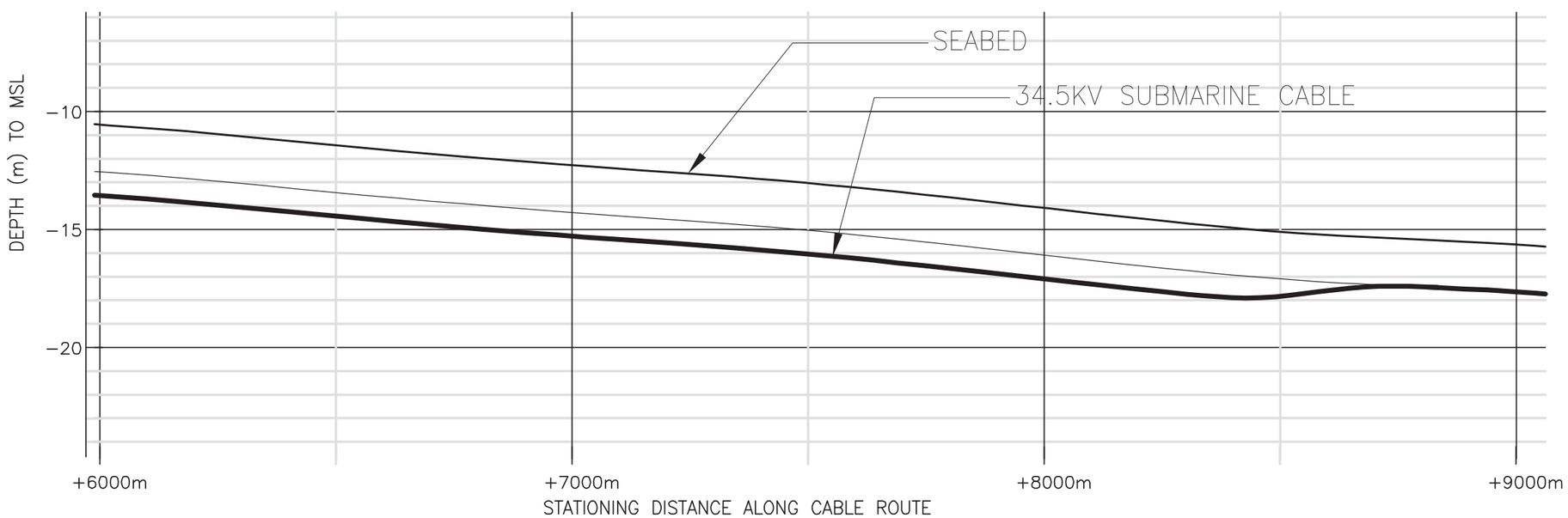
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0011

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

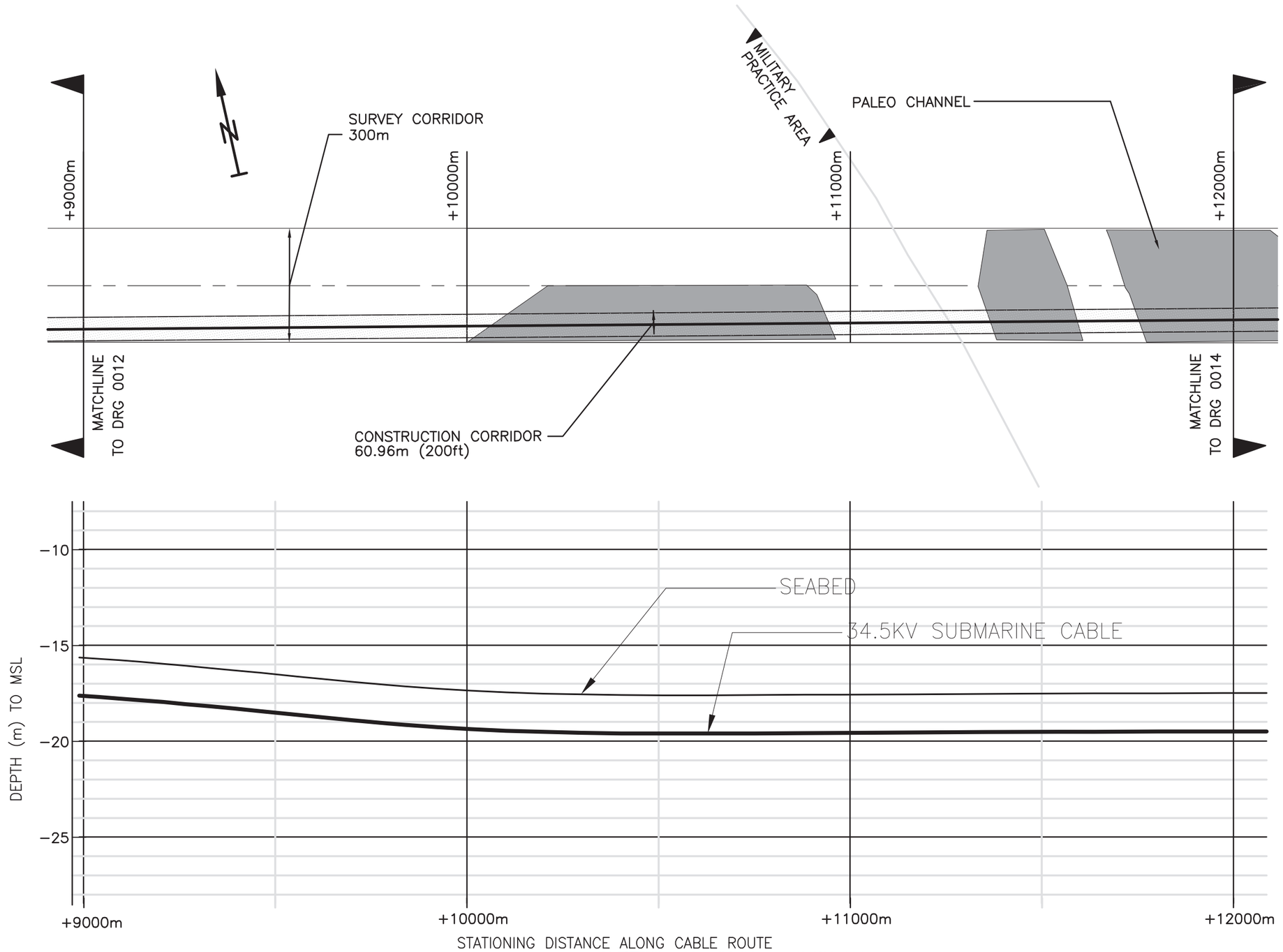
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0012

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

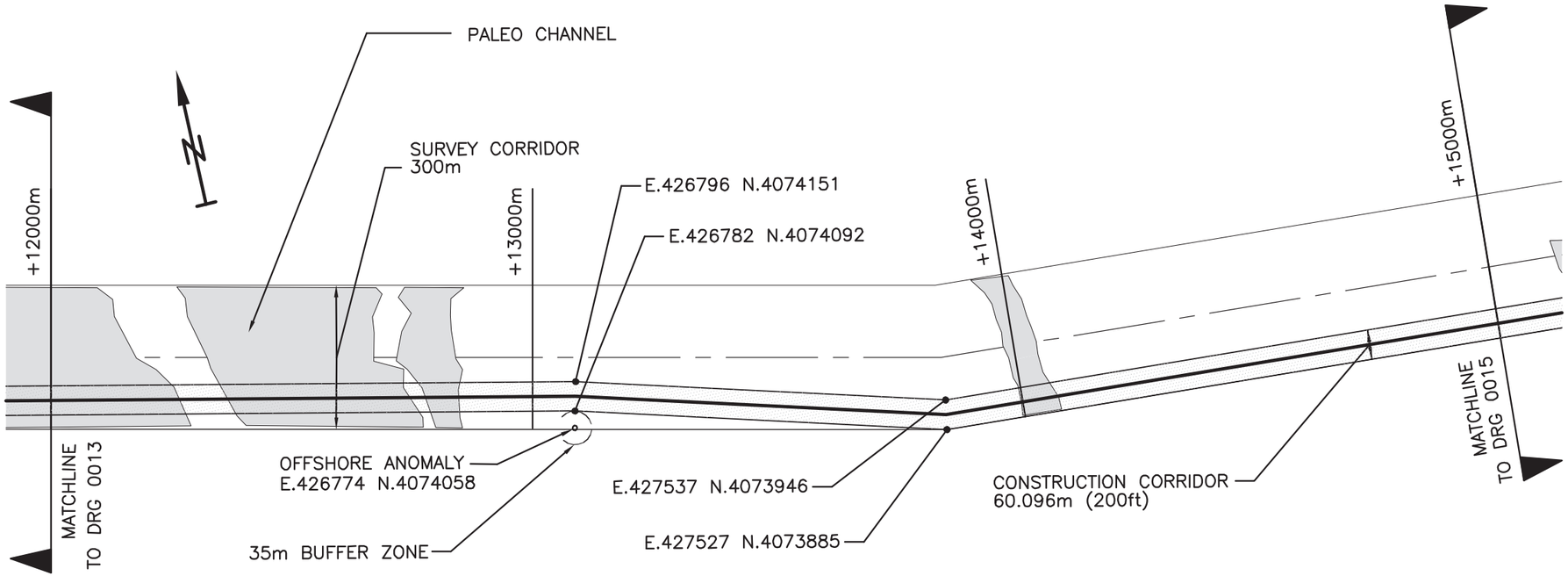
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

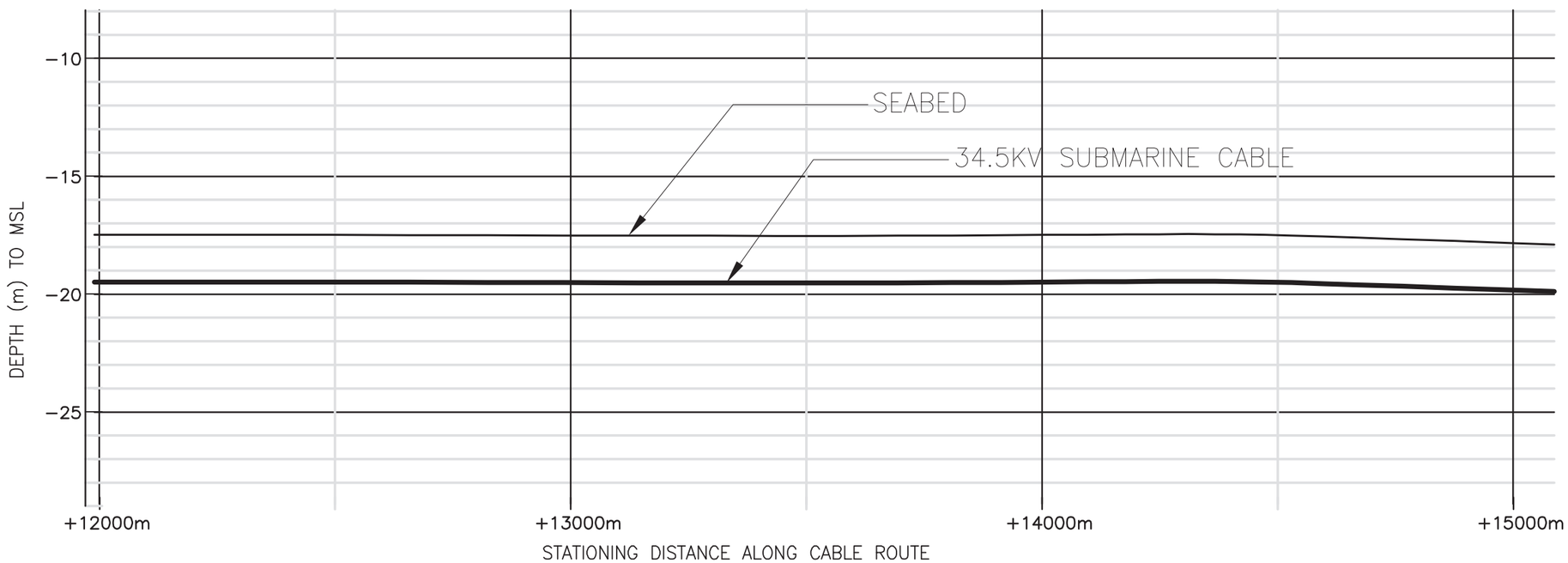
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0013

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

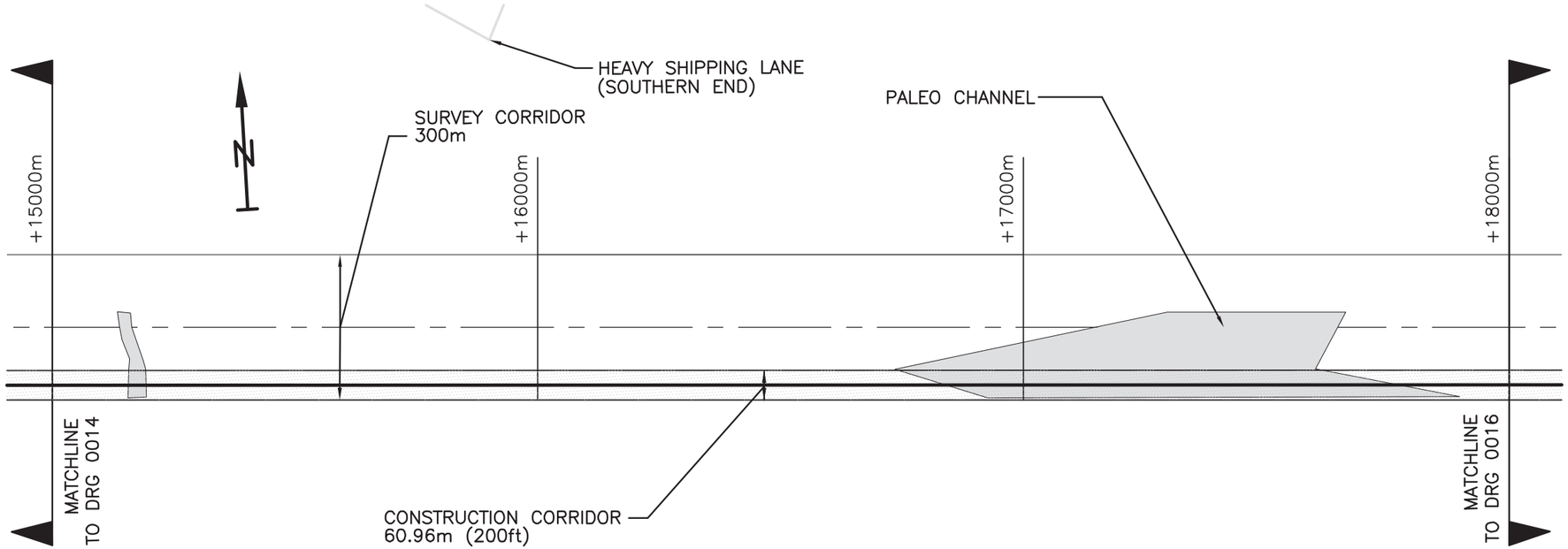
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

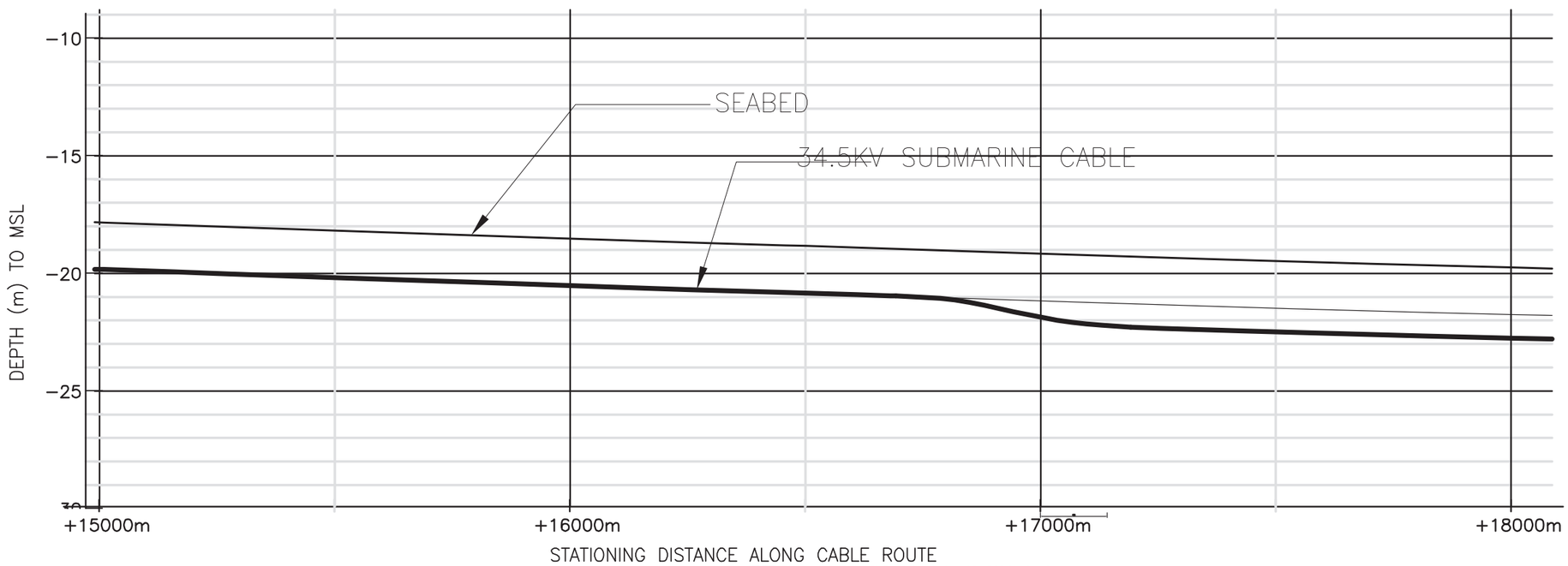
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG- 0014

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS	
HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:10000
FOR 420mm x 270mm DWG ONLY

Dominion

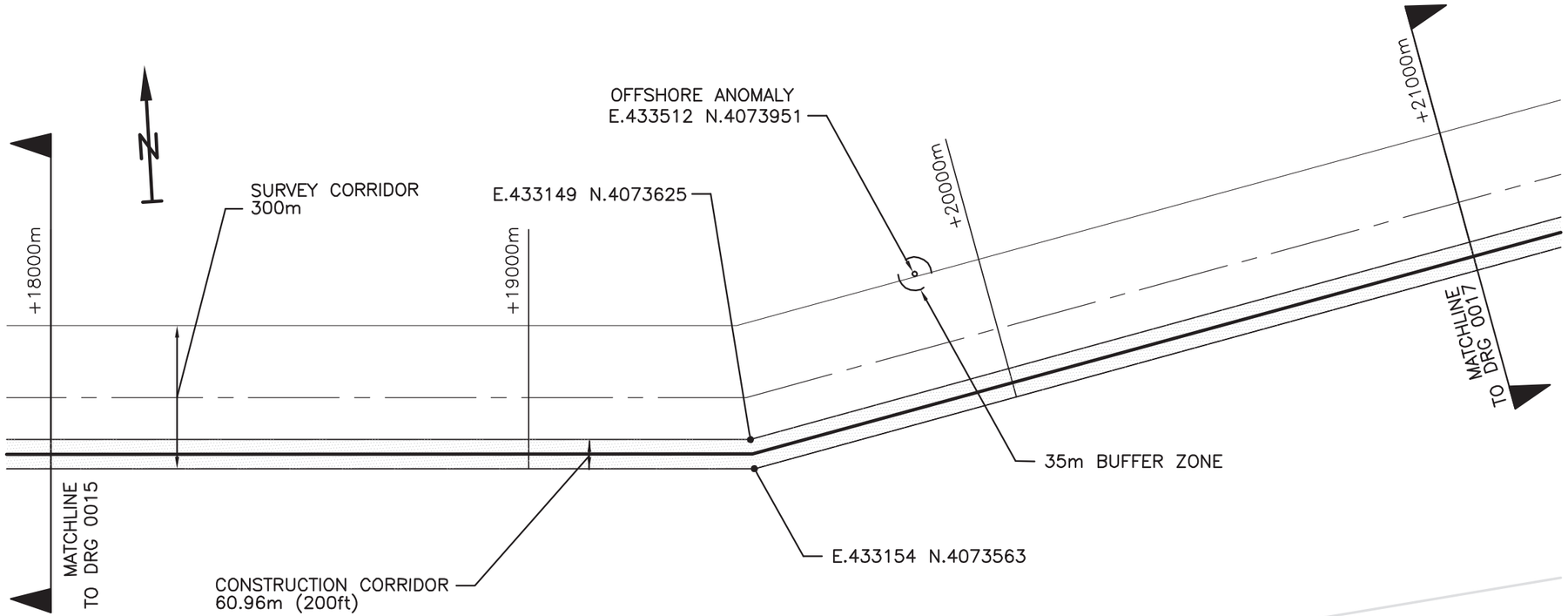
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

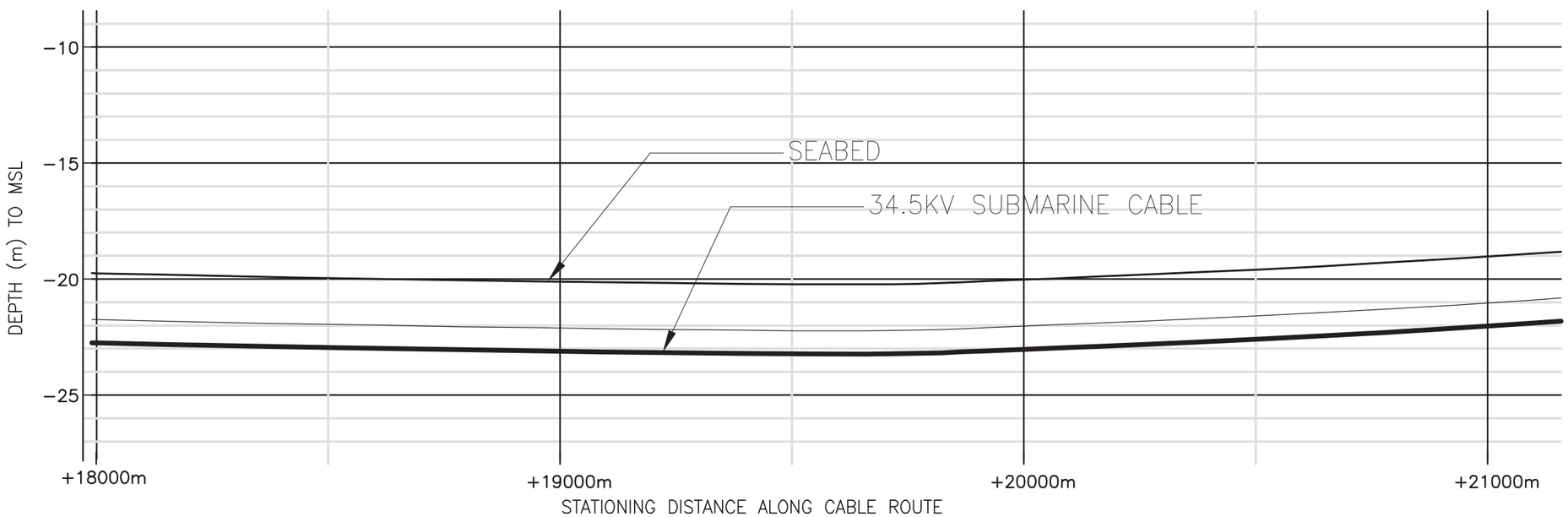
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV
03

DRAWING No.
DVP-KBR-WT3.6-DWG-0015

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

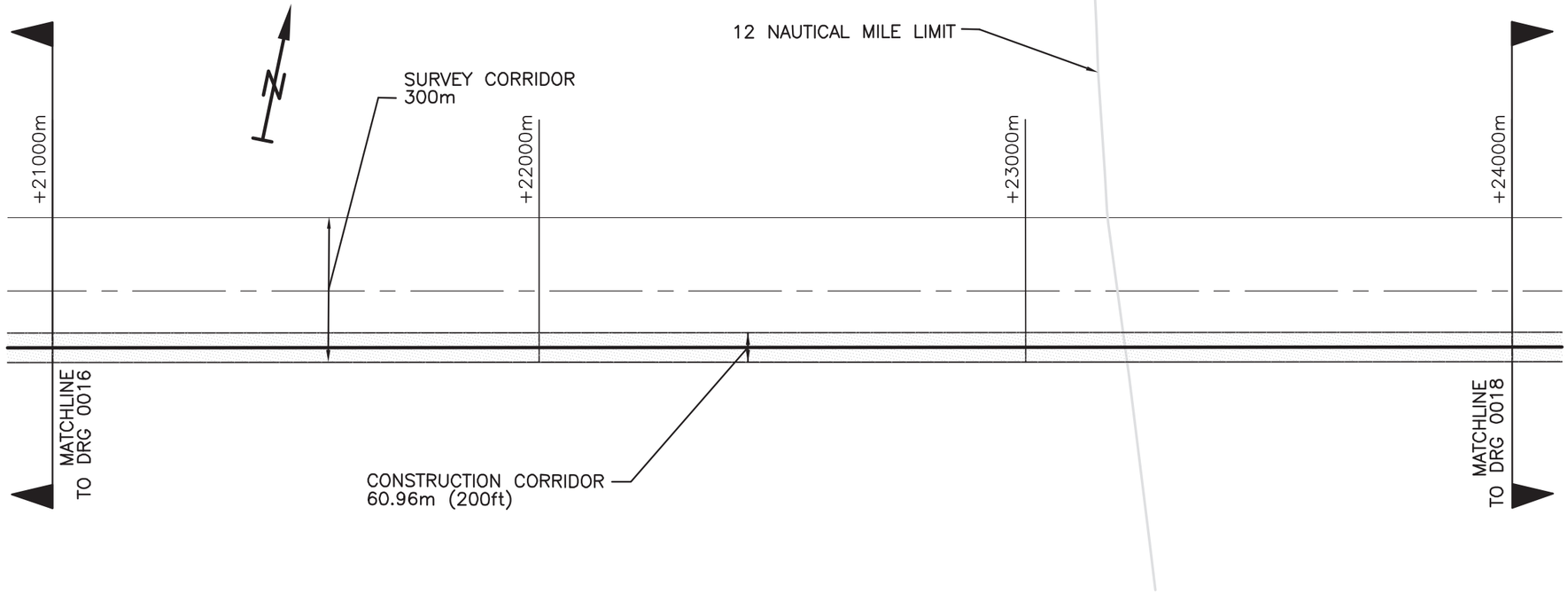
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

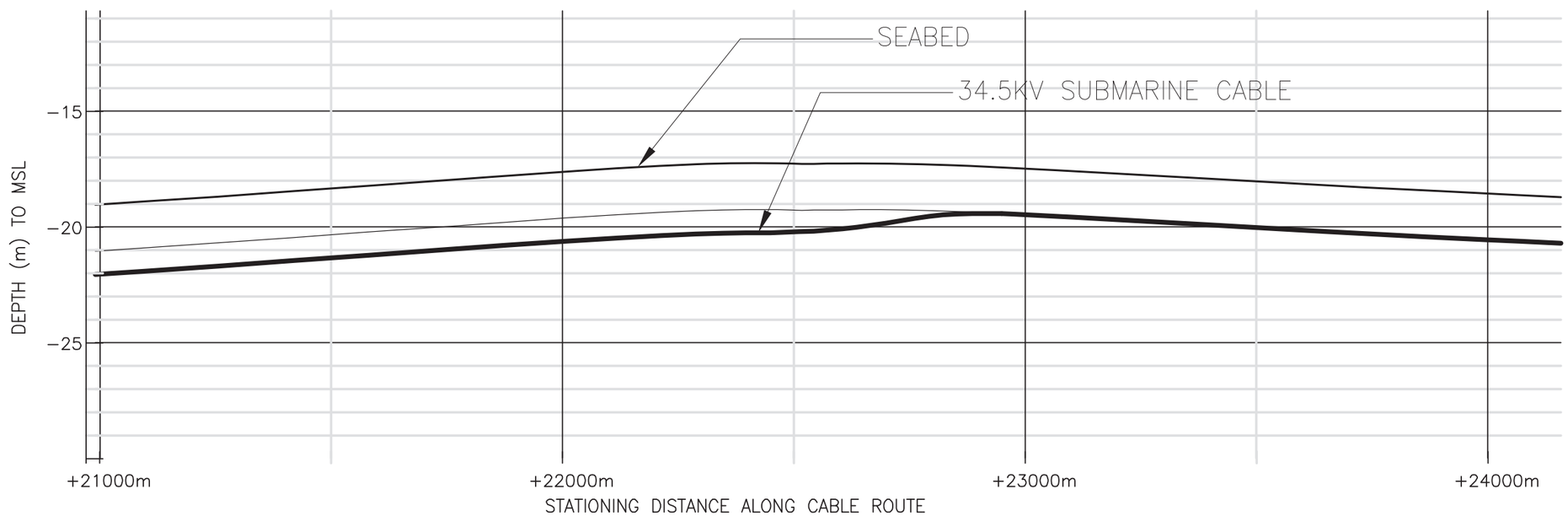
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0016

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:10000
FOR 420mm x 270mm DWG ONLY

Dominion

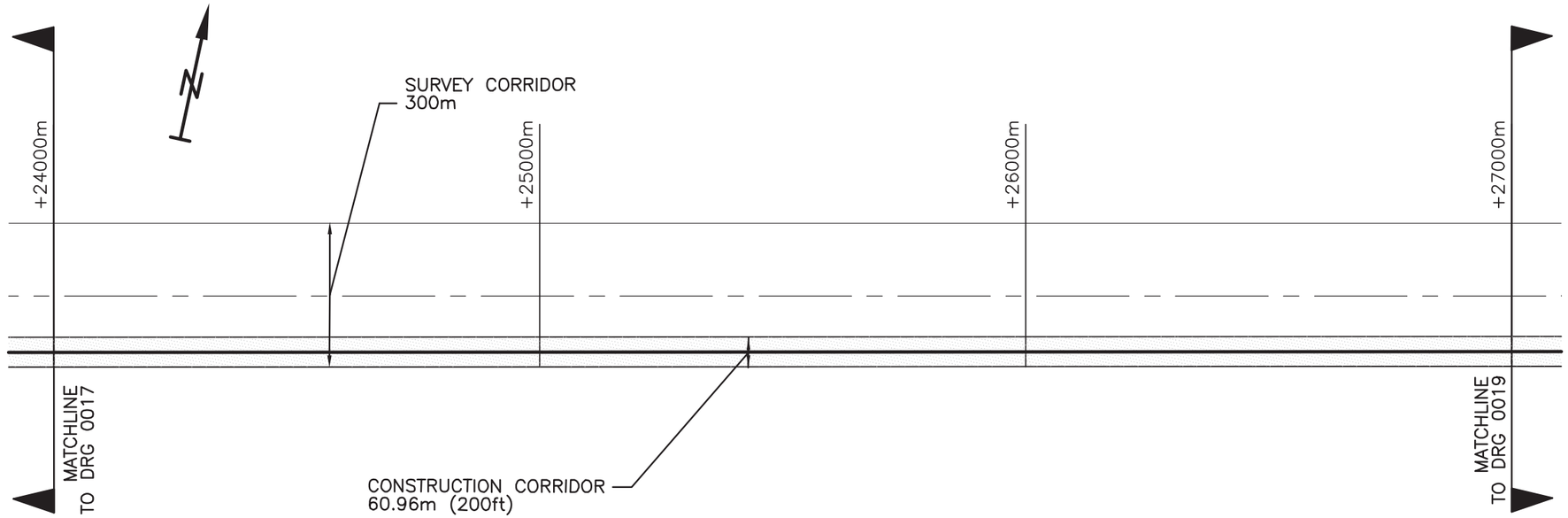
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

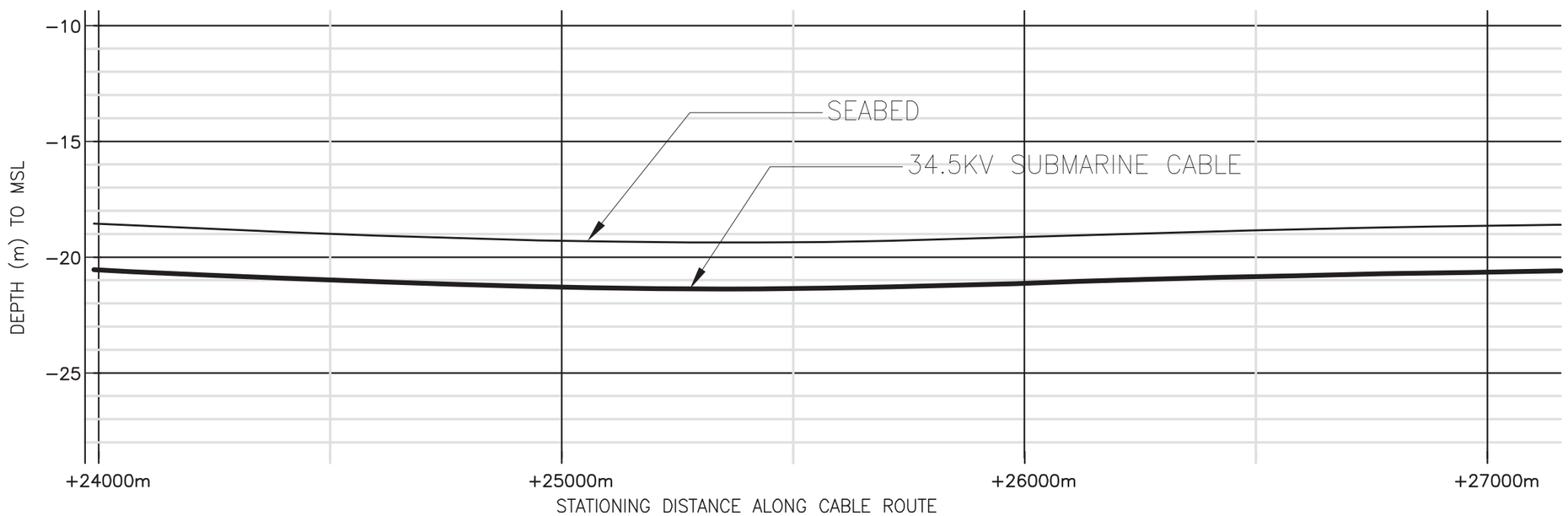
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV
03

DRAWING No.
DVP-KBR-WT3.6-DWG-0017

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

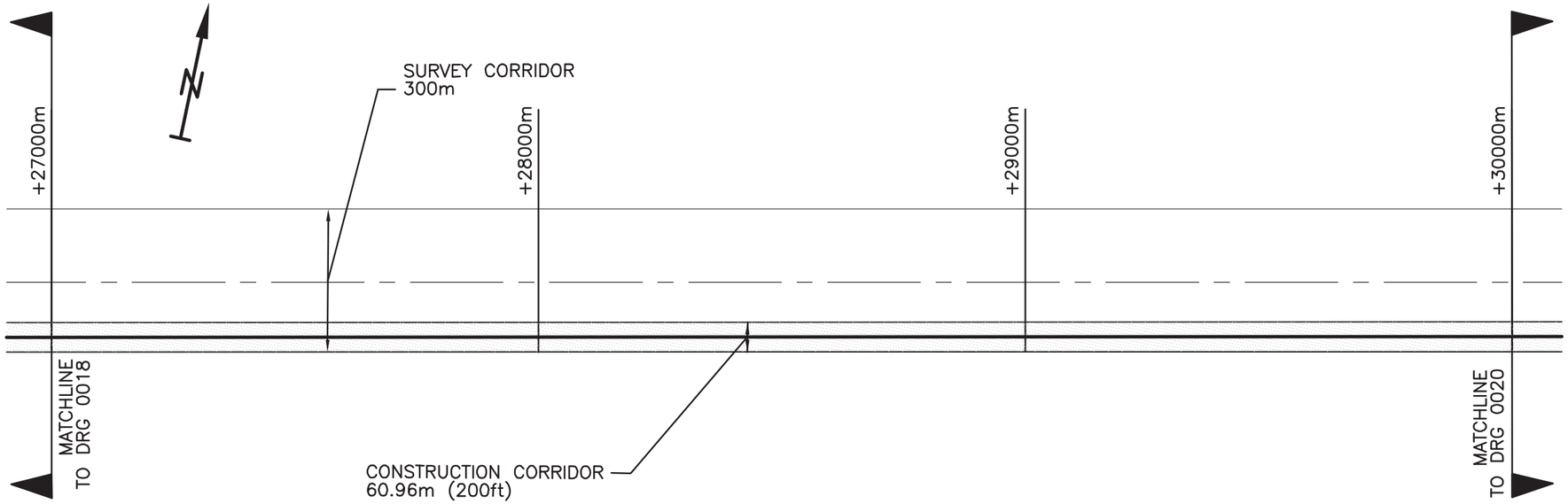
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

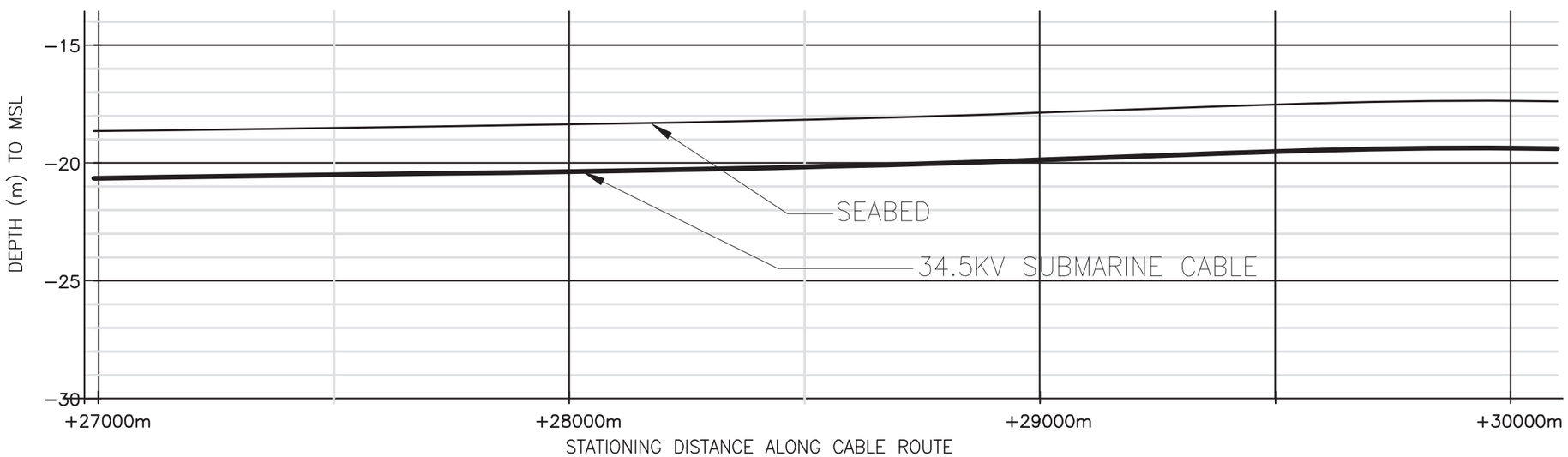
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0018

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

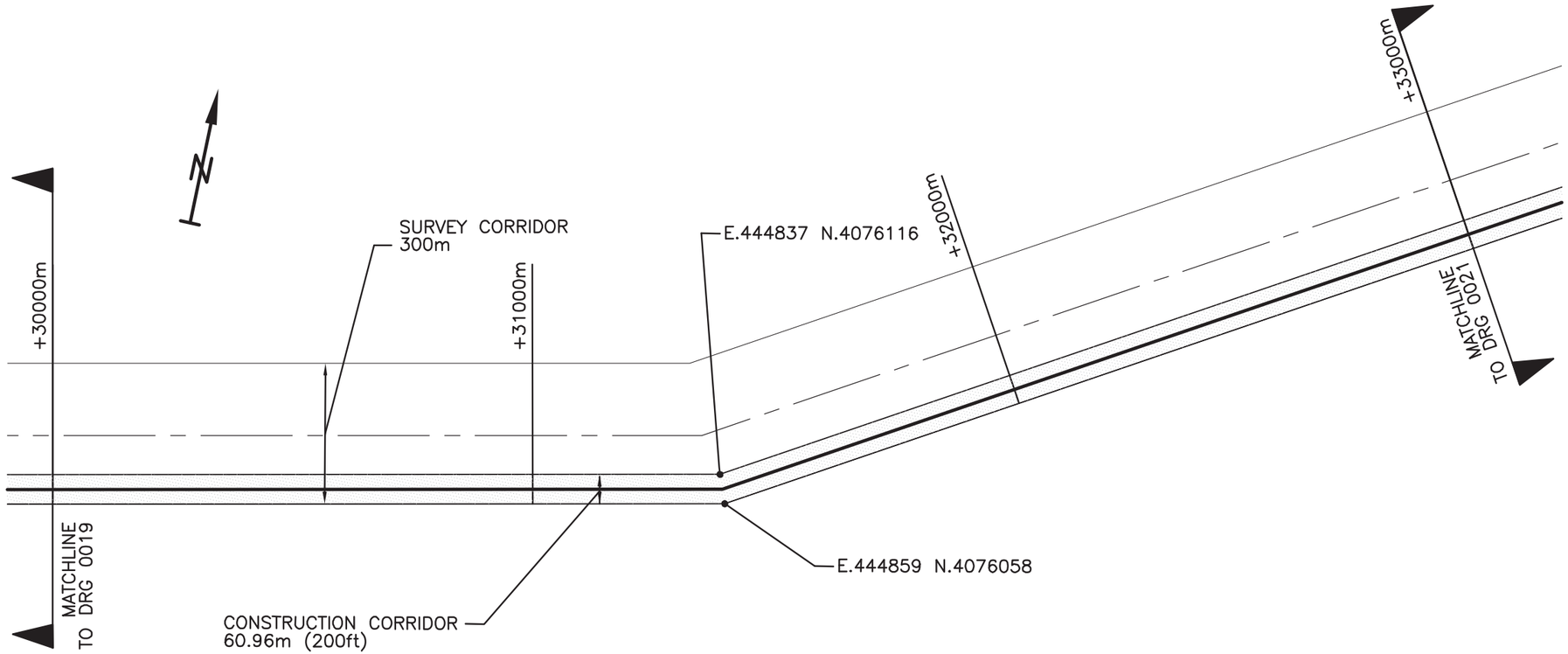
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

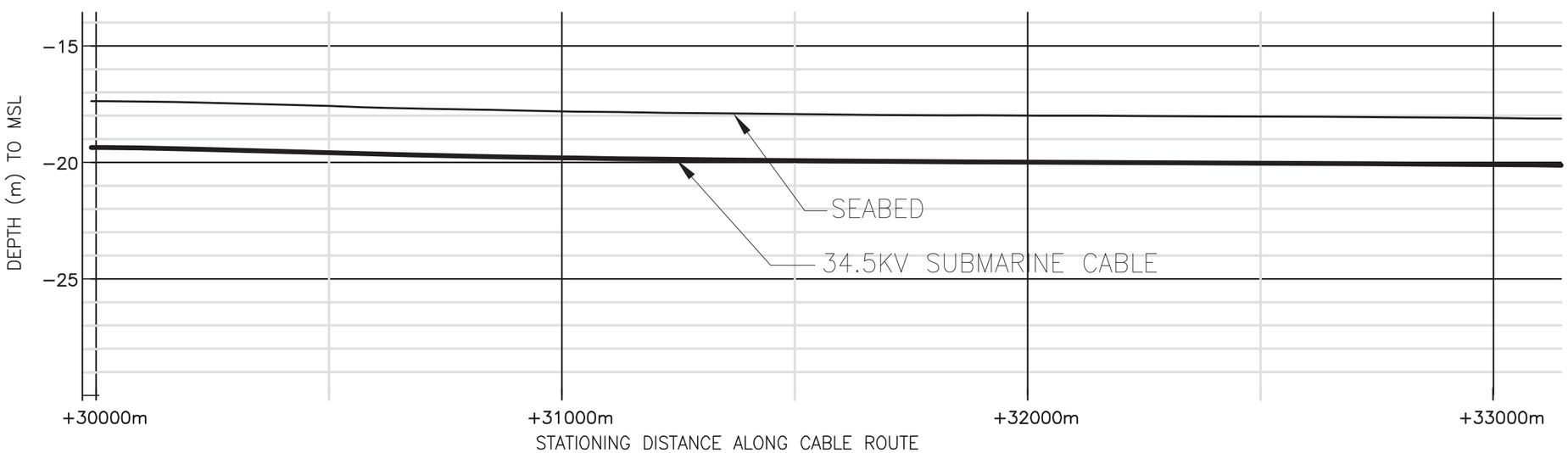
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0019

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	04-NOV-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

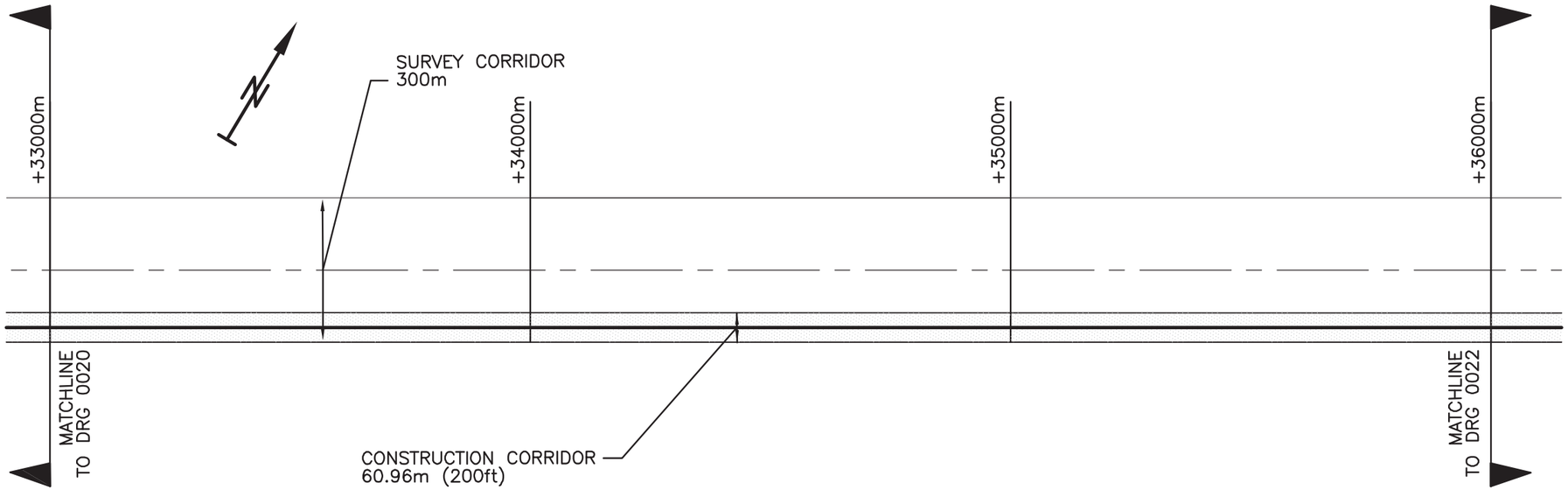
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

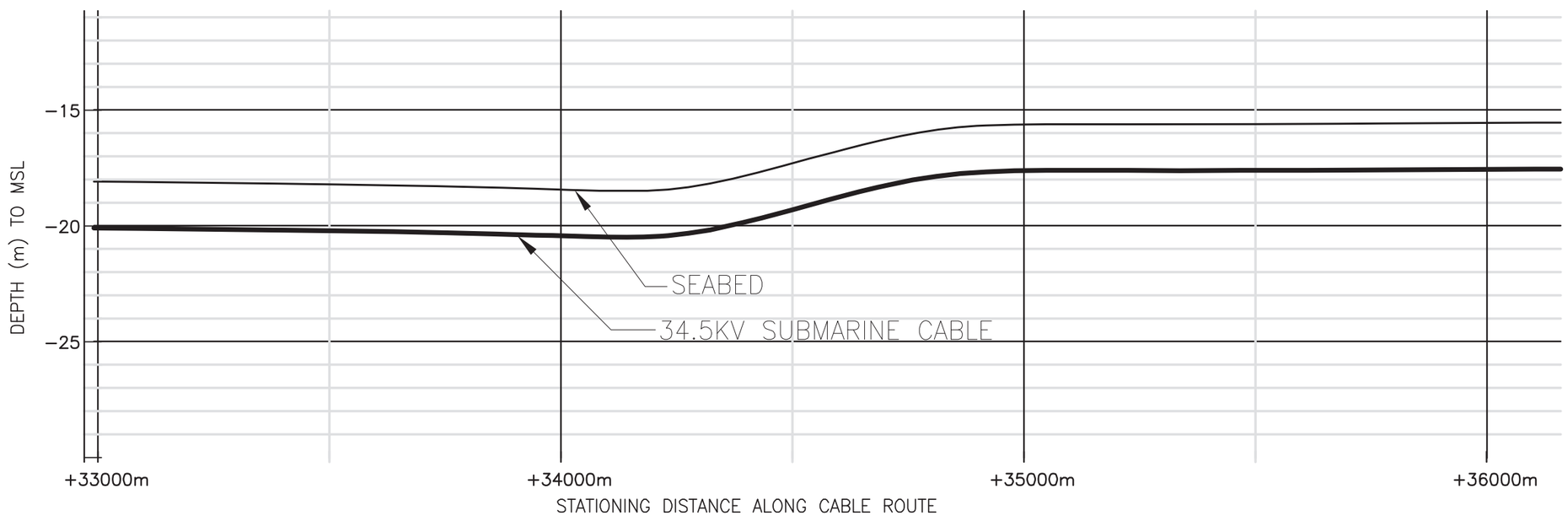
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0020

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

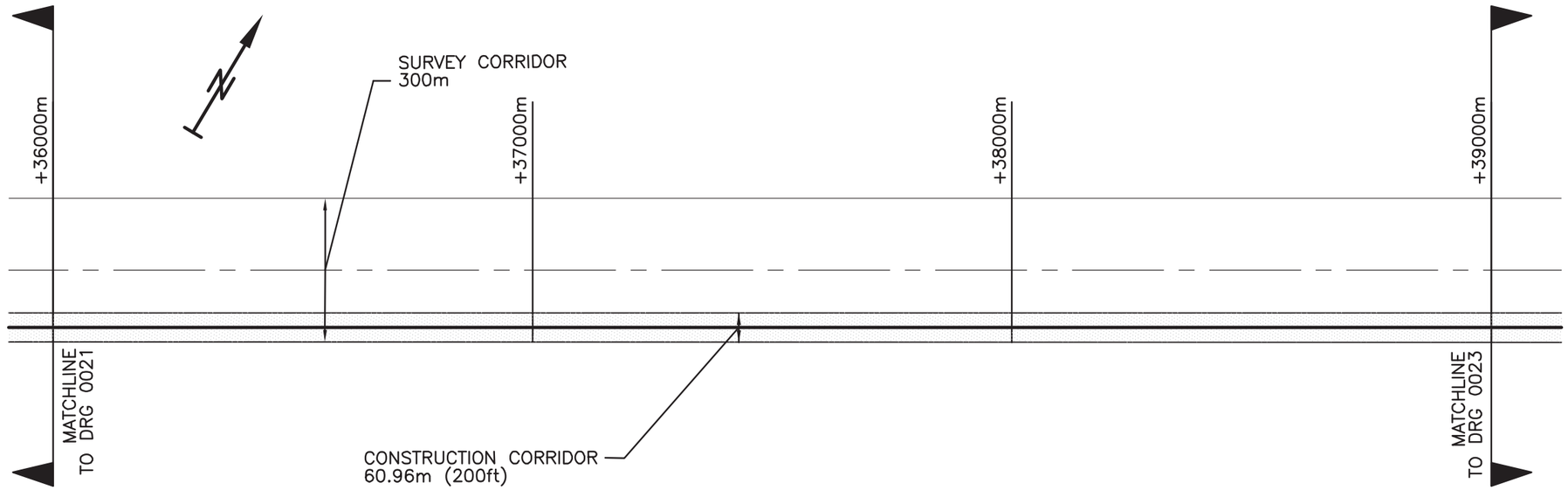
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

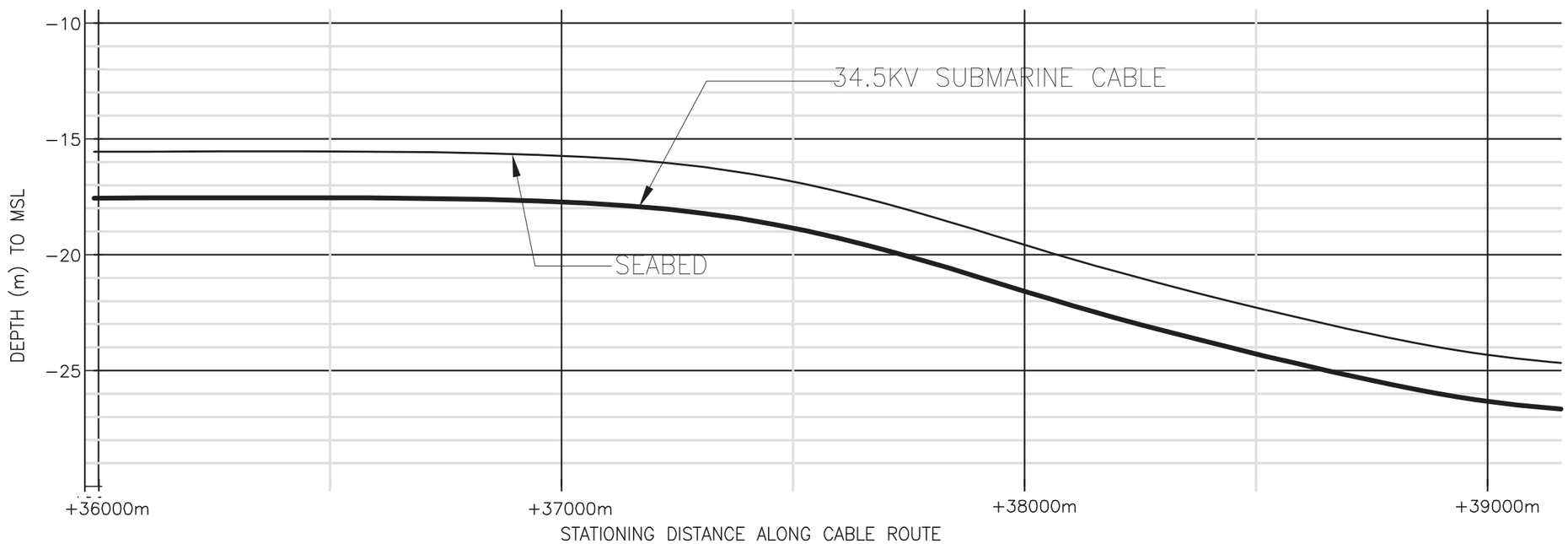
DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

REV 03

DRAWING No. DVP-KBR-WT3.6-DWG-0021

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS

HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE 1:10000 U.N.O
FOR 420mm x 270mm DWG ONLY

Dominion

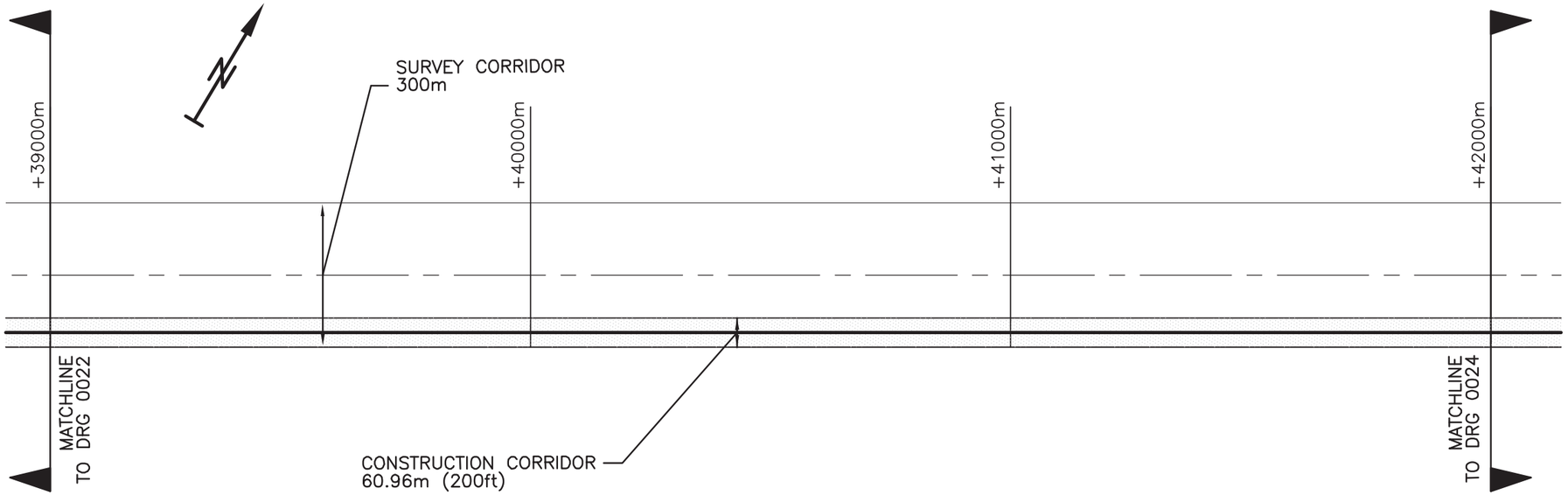
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

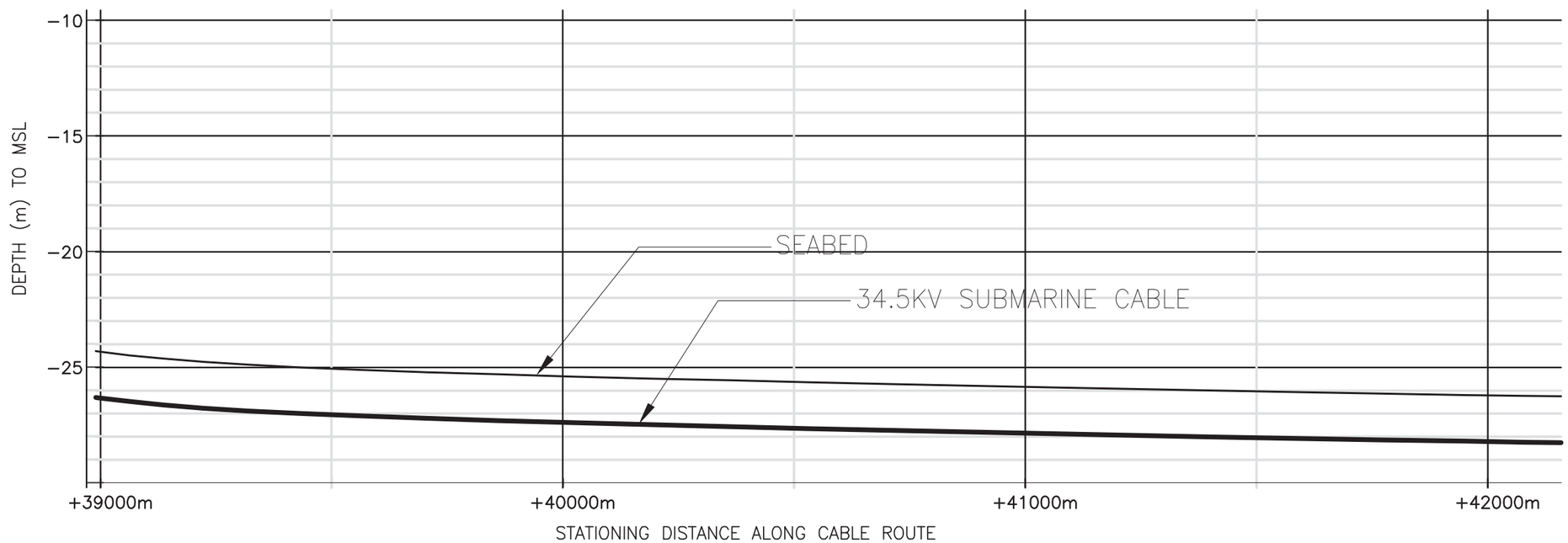
REV 03

DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

DRAWING No.
DVP-KBR-WT3.6-DWG-0022

PRELIMINARY DRAWING NOT FOR CONSTRUCTION





ESTIMATED DATUM CONVERSIONS	
HAT	+0.79m
MHHW	+0.55m
MSL	ZERO
MLW	−0.4m
MLLW	−0.51m
LAT	−0.67m

REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:10000
FOR 420mm x 270mm DWG ONLY

Dominion

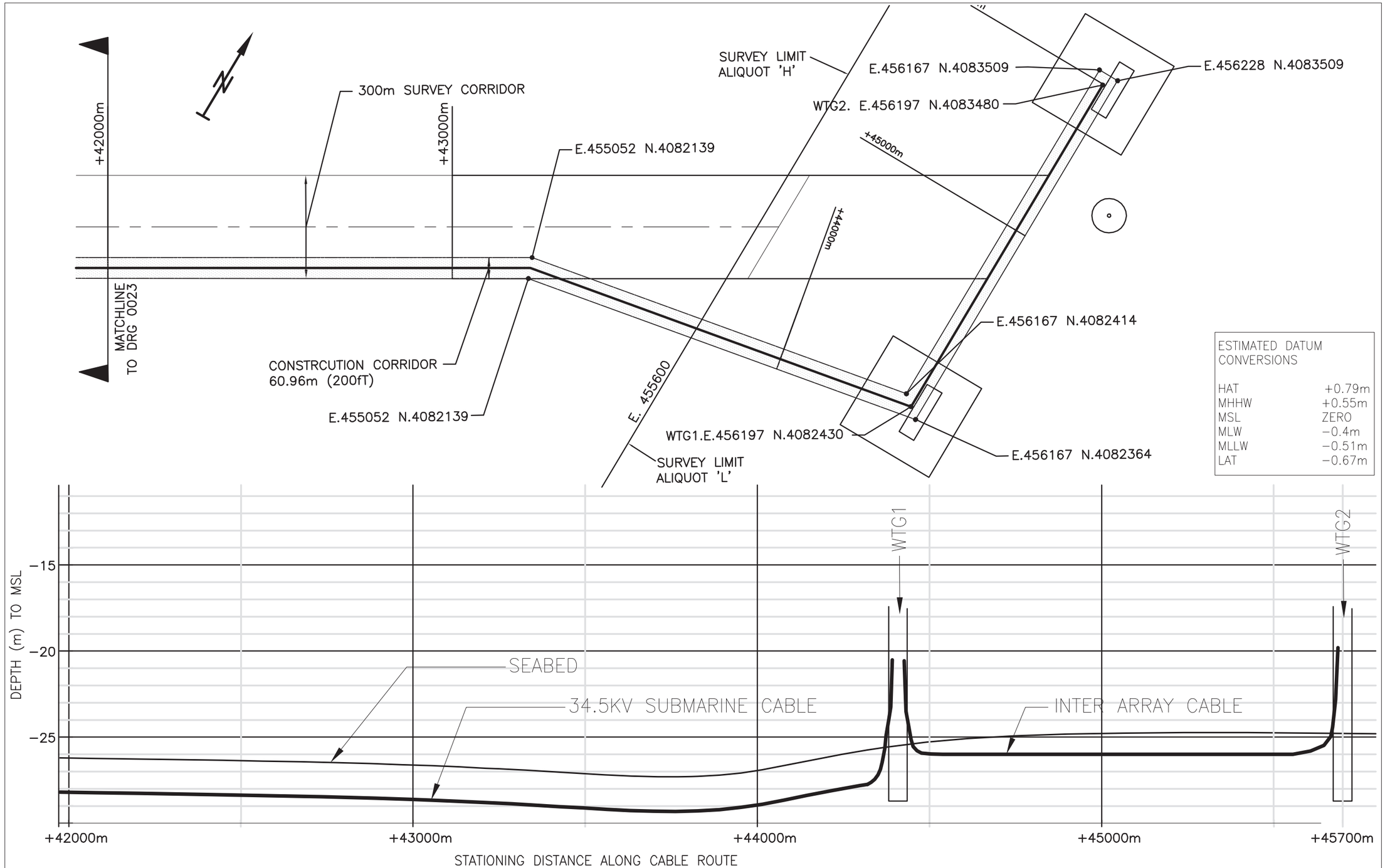
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

DRAWING No.
DVP-KBR-WT3.6-DWG-0023

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:10000
FOR 420mm x 270mm DWG ONLY

Dominion

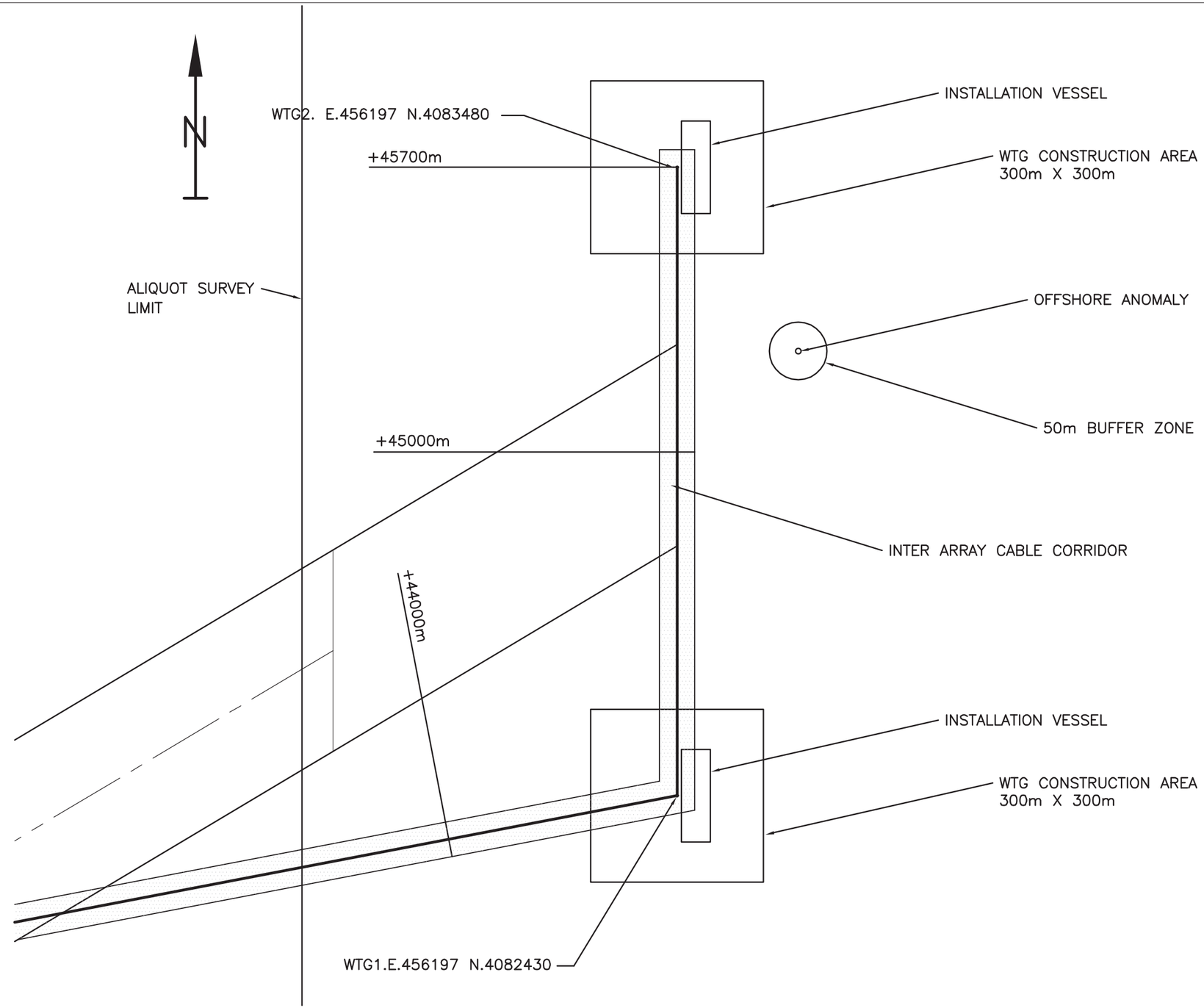
PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

DRAWING No.
DVP-KBR-WT3.6-DWG-0024

PRELIMINARY DRAWING NOT FOR CONSTRUCTION



REV	REVISIONS	DATE	DRN	CKD	APPD
03	BOEM COMMENTS INCLUDED	17-FEB-14	JP	GL	GO
02	ISSUED FOR INFORMATION	4-DEC-13	DOS	HAC	GO
01	ISSUED FOR CLIENT REVIEW	29-NOV-13	DOS	HAC	GO

SCALE U.N.O
1:10000
FOR 420mm x 270mm DWG ONLY

Dominion

PROJECT NAME
VIRGINIA OFFSHORE TECHNOLOGY ADVANCEMENT PROJECT (VOWTAP)

REV
03

DRAWING TITLE
OFFSHORE EXPORT CABLE ROUTE PLAN AND PROFILES

DRAWING No.
DVP-KBR-WT3.6-DWG-0025

PRELIMINARY DRAWING NOT FOR CONSTRUCTION