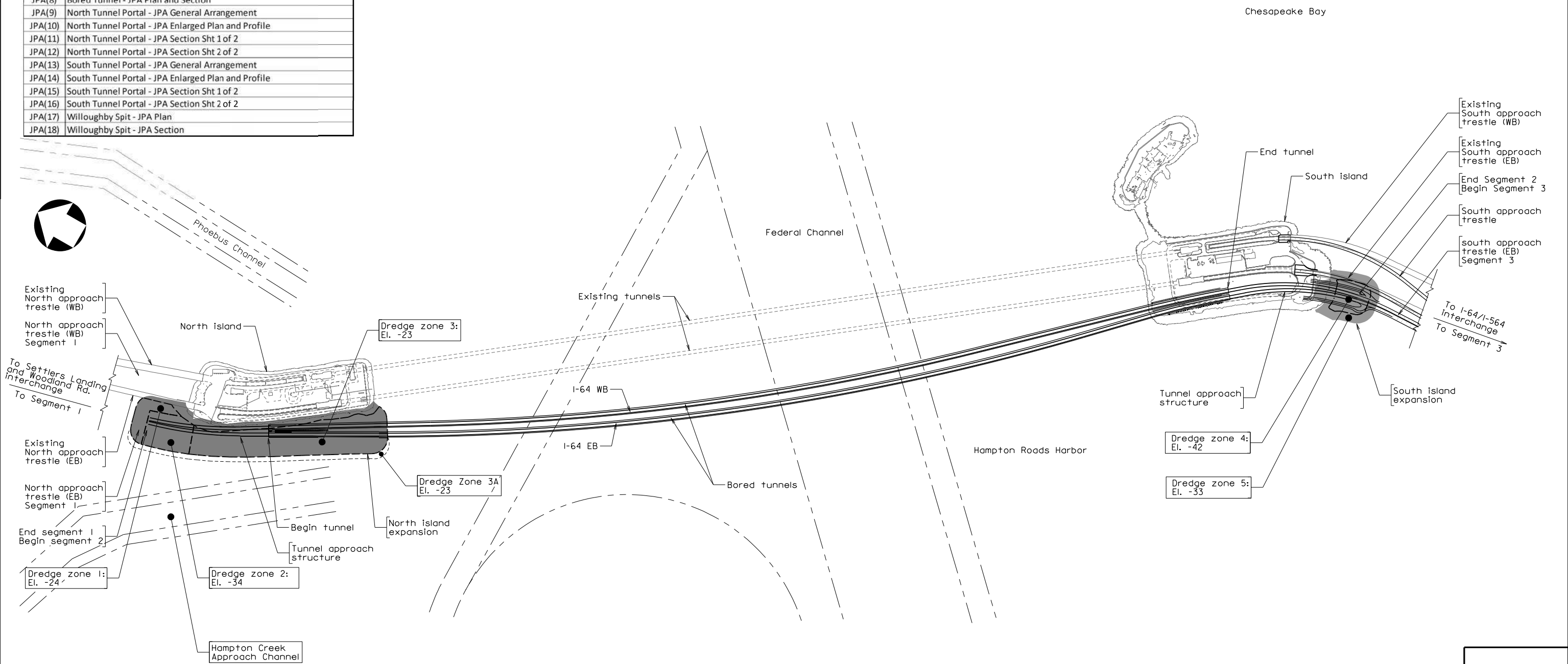


STATE	FEDERAL AID	STATE	SHEET NO.
VA.	NHPP-5A03(992)	64	0064-M06-032-501,B631
ROUTE	PROJECT	ROUTE	PROJECT

Tunnel and Islands	
JPA Sheet List	
Sheet No.	Sheet Title
JPA(0)	Tunnel JPA Sheet List, Overall Plan and Island Expansion Dredge Plan
JPA(1)	North Island Expansion - JPA Plan & Profile Sht 1 of 2
JPA(2)	North Island Expansion - JPA Plan & Profile Sht 2 of 2
JPA(3)	North Island Expansion - JPA Cross Sections Sht 1 of 2
JPA(4)	North Island Expansion - JPA Cross Sections Sht 2 of 2
JPA(5)	South Island Expansion - JPA Plan & Profile
JPA(6)	South Island Expansion - JPA Section
JPA(7)	South Island - JPA Temporary Site Plan
JPA(8)	Bored Tunnel - JPA Plan and Section
JPA(9)	North Tunnel Portal - JPA General Arrangement
JPA(10)	North Tunnel Portal - JPA Enlarged Plan and Profile
JPA(11)	North Tunnel Portal - JPA Section Sht 1 of 2
JPA(12)	North Tunnel Portal - JPA Section Sht 2 of 2
JPA(13)	South Tunnel Portal - JPA General Arrangement
JPA(14)	South Tunnel Portal - JPA Enlarged Plan and Profile
JPA(15)	South Tunnel Portal - JPA Section Sht 1 of 2
JPA(16)	South Tunnel Portal - JPA Section Sht 2 of 2
JPA(17)	Willoughby Spit - JPA Plan
JPA(18)	Willoughby Spit - JPA Section

PentTablesFull.tbl
Plot Driver : Bridge Local PDF File Generator.plt:cfj



**TUNNEL OVERALL PLAN
AND ISLAND EXPANSION DREDGE PLAN**
Scale: 1" = 800'-0"

PRELIMINARY PLANS
THESE PLANS NOT TO BE USED
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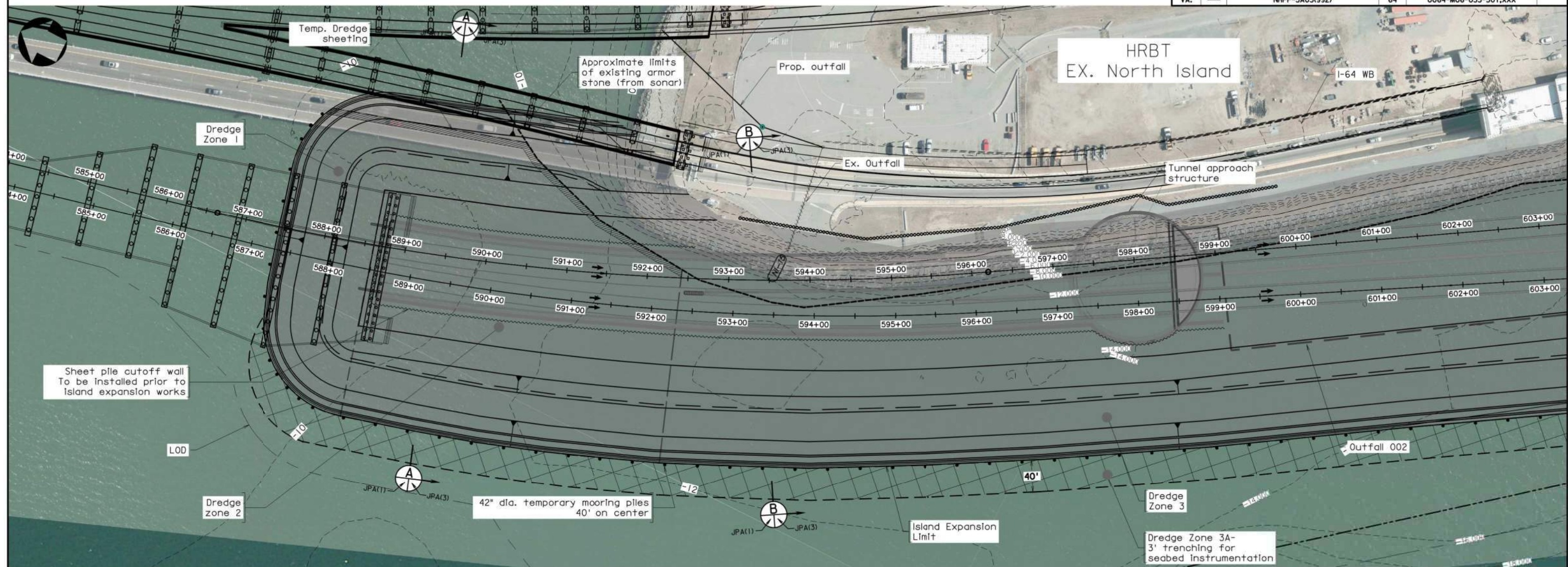
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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



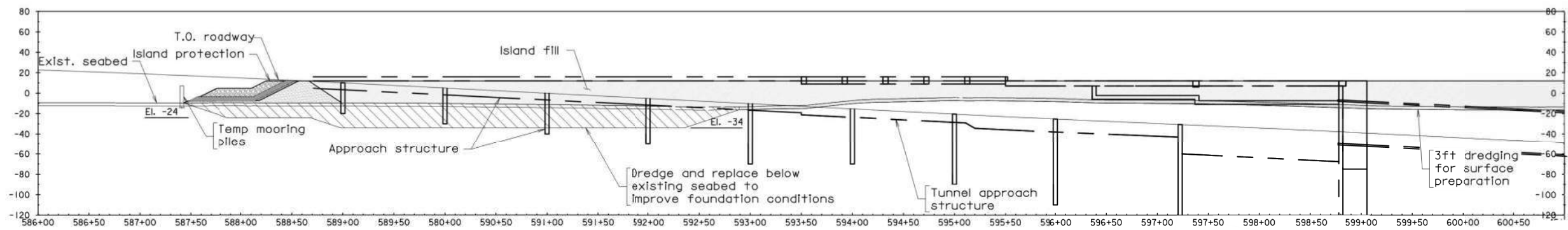
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Drawn:SW.....	
Checked: ..LP.....	

**TUNNEL AND ISLANDS
JPA SHEET LIST, OVERALL PLAN
and DREDGE PLAN**

Plan No.	Sheet No.
	JPA(0)



NORTH PORTAL - PLAN
Scale: 1" = 120'



NORTH PORTAL - PROFILE
Scale: 1" = 120'

- Notes:
1. See JPA(0) for key plan of dredge zones.
 2. Bathymetric contours obtained from NOAA Chesapeake Bay M130 DEM data (2017).

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



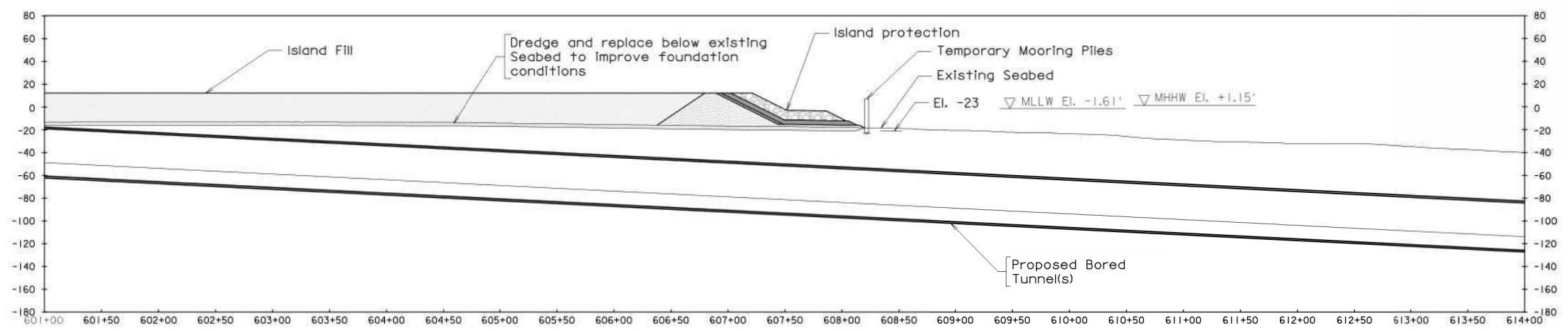
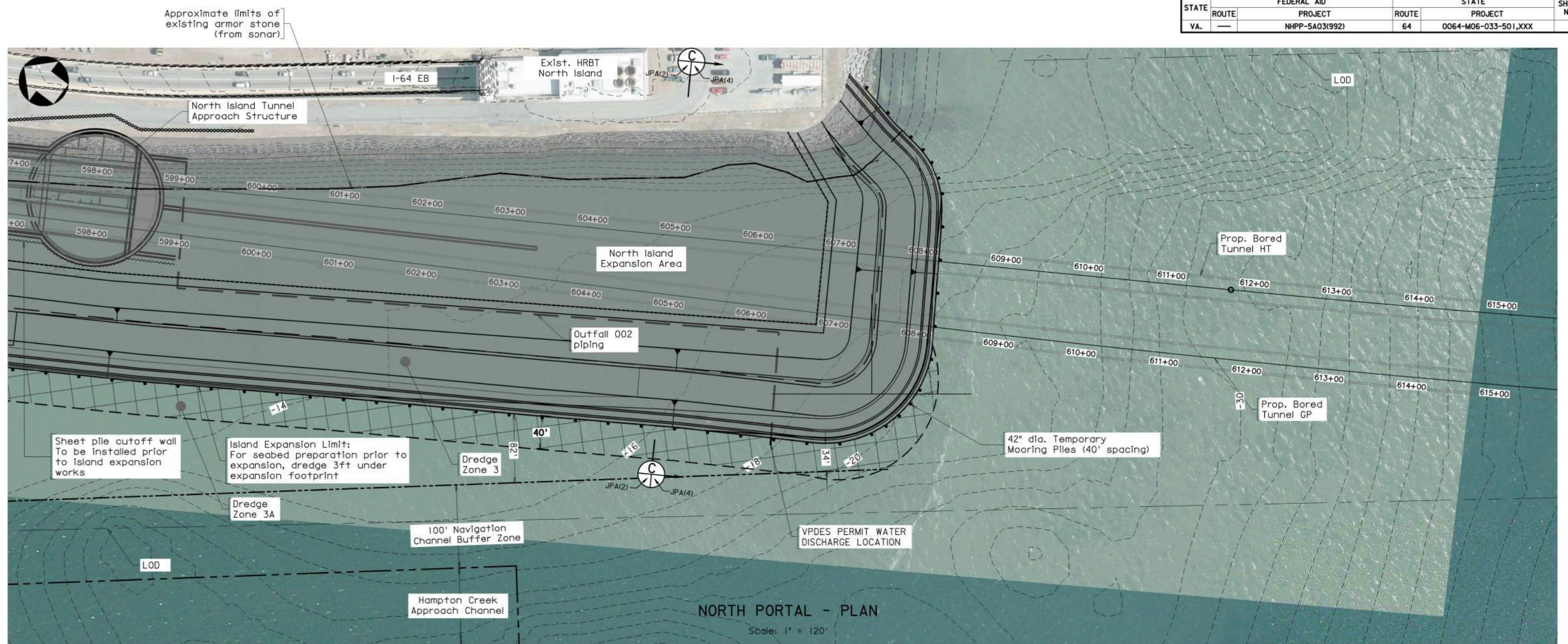
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 Checked: DG
 DATE: August 15, 2019

NORTH ISLAND EXPANSION
JPA PLAN & PROFILE SHT 1 of 2

Plan No. _____
 Sheet No. _____
 JPA(1)

TNI10577_JPA (0)1.dwg

STATE	ROUTE	FEDERAL AID	PROJECT	ROUTE	STATE	PROJECT	SHEET NO.
VA.	—	NHPP-5A03(992)		64	0064-M06-033-501,XXX		



- Notes:
- See JPA(0) for key plan of dredge zones.
 - Bathymetric contours obtained from NOAA Chesapeake Bay M130 DEM data (2017).

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FINAL PLAN REVISIONS SUBMITTAL DATE:							
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/19	DG	GENERAL UPDATE				



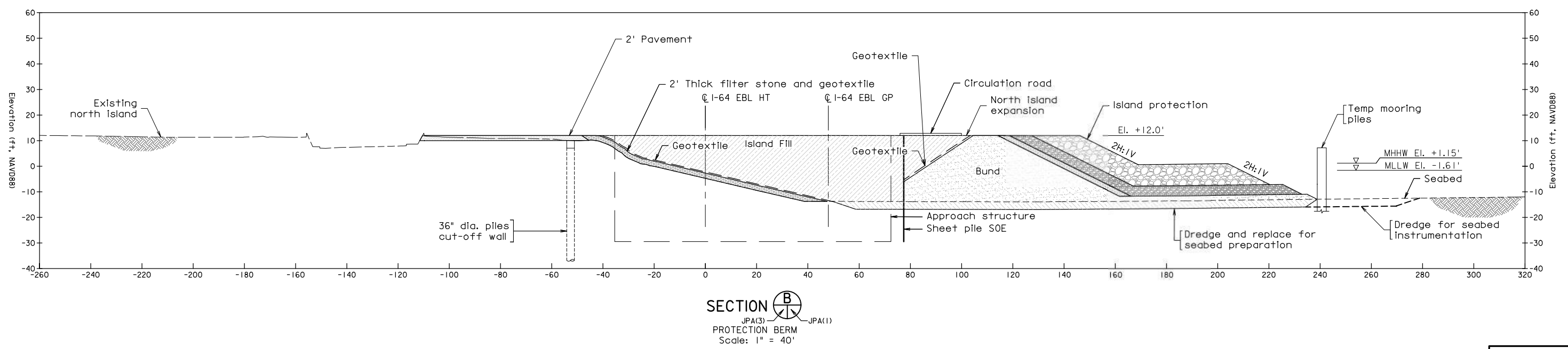
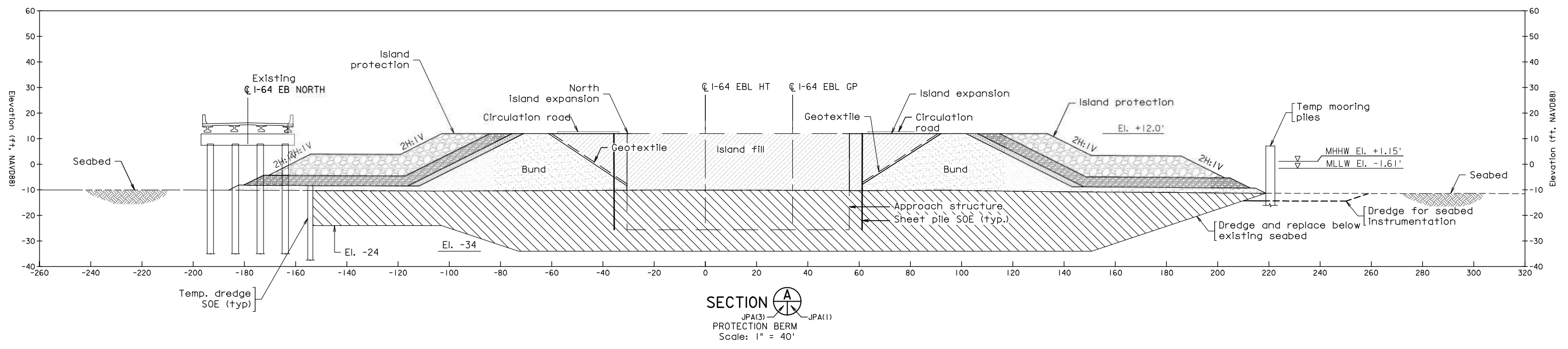
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NORTH ISLAND EXPANSION
 JPA PLAN & PROFILE SHT 2 of 2

Plan No.	Sheet No.
	JPA(2)

TNI10577-JPA (02).dwg

STATE	FEDERAL AID	STATE	SHEET NO.
VA.	PROJECT	ROUTE	PROJECT
	NHPP-5A03(992)	64	0064-M06-033-501,XXX



LEGEND:

	Armor layer		Concrete fill
	Underlayer type 2		Concrete ballast
	Underlayer type 3		Reinforced concrete
	Gravel		Scour protection rock
	Island fill		Bund

Scale: 1" = 20'

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

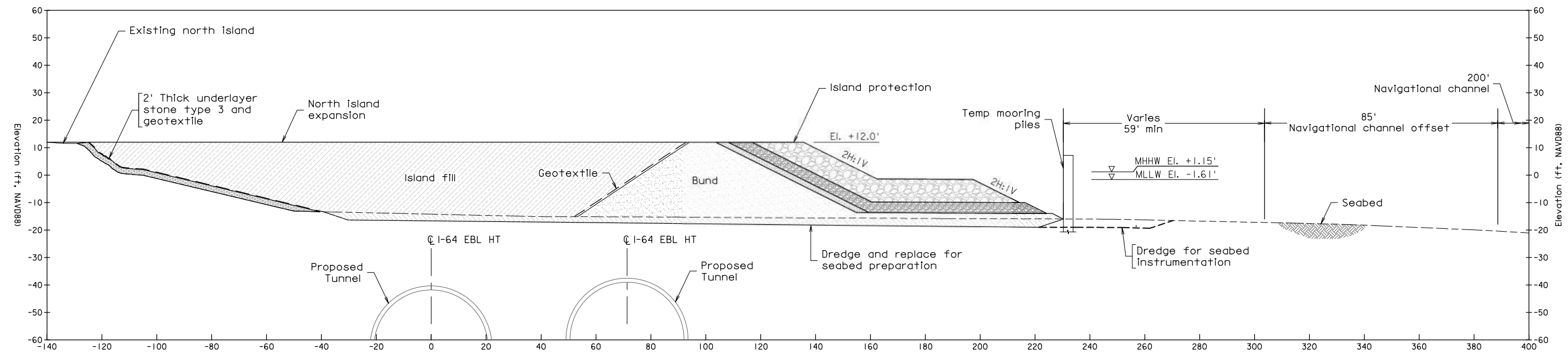
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 Checked: DG
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NORTH ISLAND EXPANSION
 JPA CROSS SECTIONS SHT 1 of 2

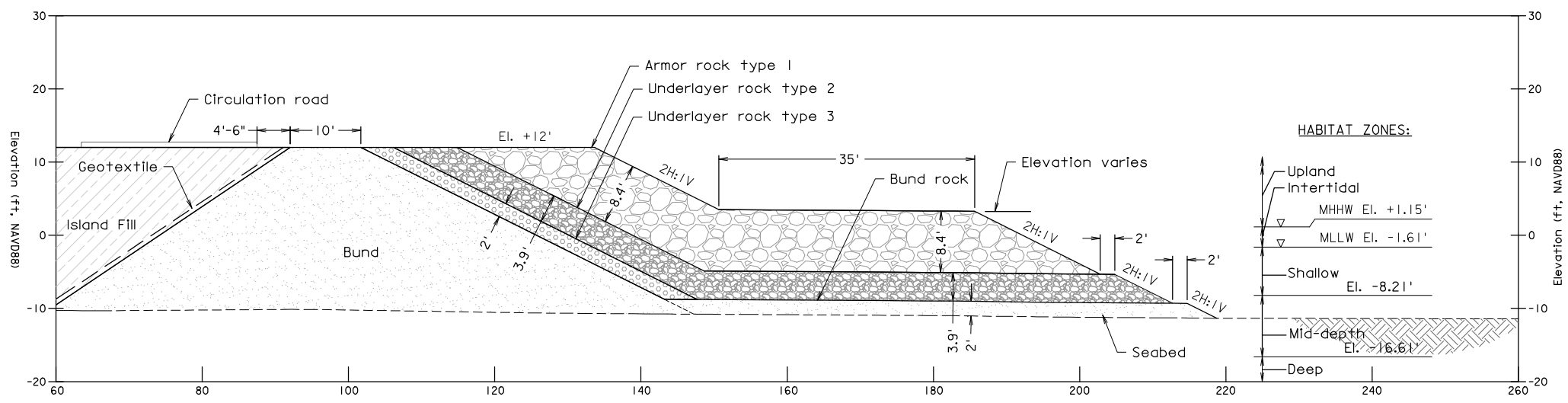
Plan No.	Sheet No.
	JPA(3)

TNI10577_JPA (3).dwg

STATE	FEDERAL AID		STATE	SHEET
VA.	ROUTE	PROJECT	ROUTE	NO.
		NHPP-5A03(992)	64	0064-M06-033-501,XXX



SECTION C
 JPA(2) — JPA(4)
 PROTECTION BERM
 Scale: 1" = 40'



SECTION
 TYPICAL SHORE PROTECTION DETAIL
 Scale: 1" = 40'

LEGEND:

	Armor layer		Concrete fill
	Underlayer type 2		Concrete ballast
	Underlayer type 3		Reinforced concrete
	Gravel		Scour protection rock
	Island fill		Bund

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NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE



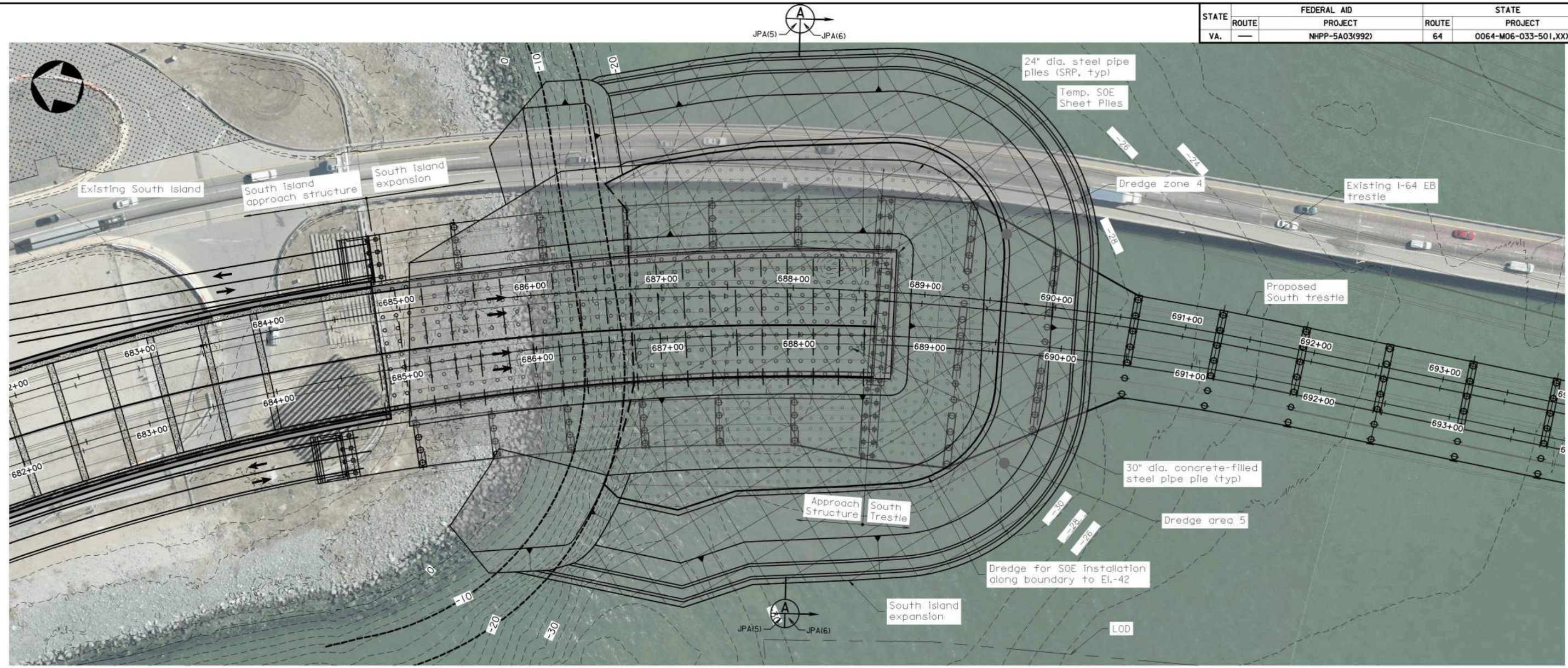
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NORTH ISLAND EXPANSION
 JPA CROSS SECTIONS SHT 2 of 2

Plan No.	Sheet No.
	JPA(4)

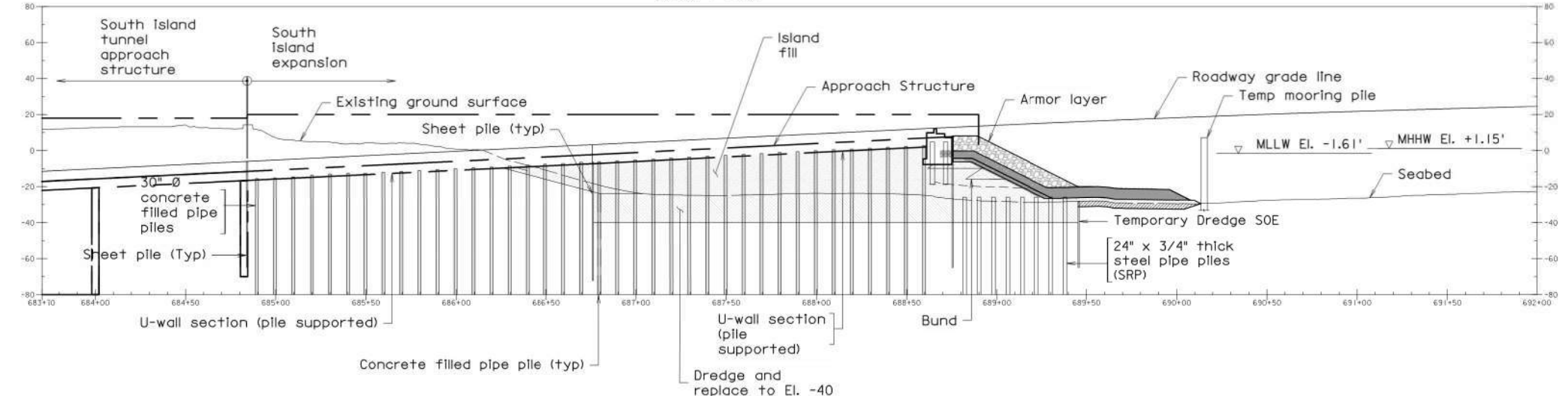
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STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(992)	64	0064-M06-033-501,XXX



SOUTH PORTAL - PLAN

Scale: 1" = 80'



SOUTH PORTAL - PROFILE

Scale: 1" = 80'

LEGEND:

	Armor layer
	Underlayer type 2
	Underlayer type 3
	Gravel
	Island fill
	Concrete fill
	Concrete ballast
	Reinforced concrete
	Bund

Notes:
 1. See JPA(0) for key plan of dredge zones.
 2. Bathymetric contours obtained from NOAA Chesapeake Bay M130 DEM data (2017).

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



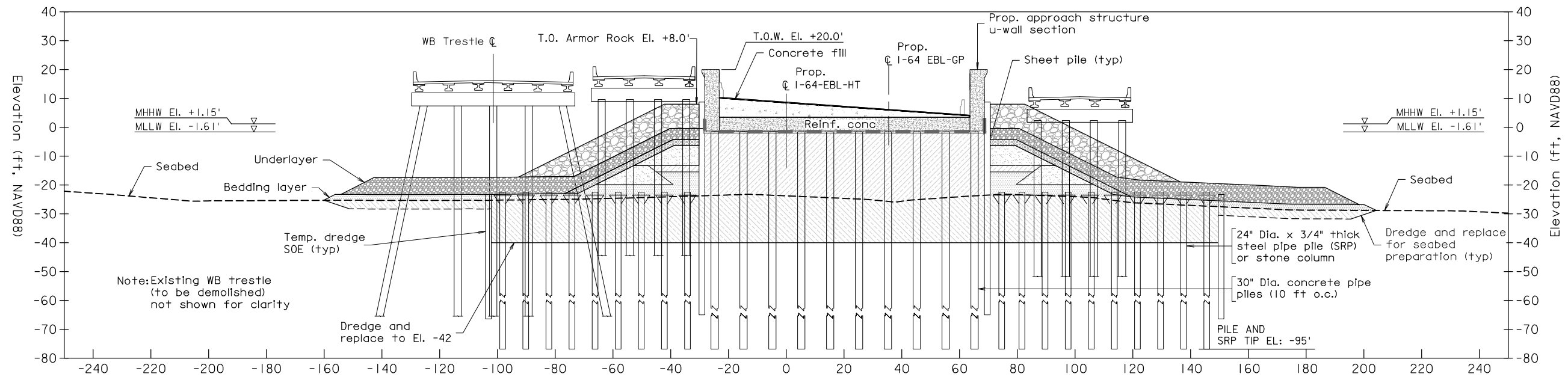
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 DATE: August 15, 2019

SOUTH ISLAND EXPANSION
 JPA PLAN & PROFILE

Plan No.	Sheet No.
	JPA(5)

TNI1105177_JPA_05-06.dwg

STATE	FEDERAL AID		STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT	
VA.	NHPP-5A03(992)	64	0064-M06-033-501,XXX	



SECTION A
 JPA(5) JPA(6)
 Foundation and SRP Zone Piles
 Scale: 1" = 40'

- LEGEND:
- Armor layer
 - Underlayer type 2
 - Underlayer type 3
 - Gravel
 - Island fill
 - Concrete fill
 - Concrete ballast
 - Reinforced concrete
 - Bund

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



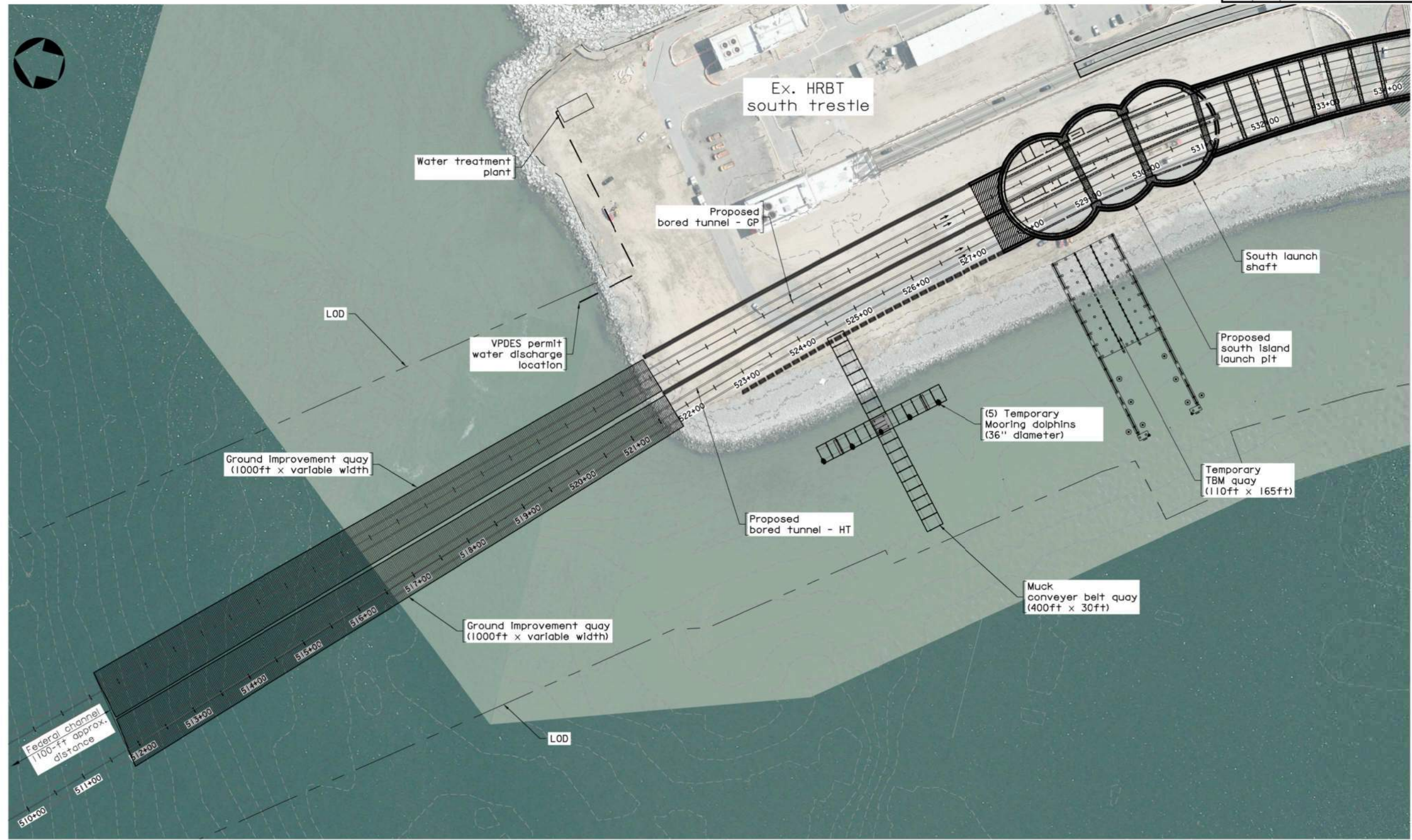
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 Checked: DG...

SOUTH ISLAND EXPANSION
 JPA SECTION

Plan No.	Sheet No.
	JPA(6)

TN110577_JPA_05-06.dwg

STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	NO.
VA.	NHPP-5A03(992)	64	0064-M06-033-501,XXX



SOUTH ISLAND - TEMPORARY QUAYS
Scale: 1" = 160'

PRELIMINARY PLANS
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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



Designed: LP	DATE: August 15, 2019
Drawn: SW	
Checked: DG	

**SOUTH ISLAND
JPA TEMPORARY SITE PLAN**

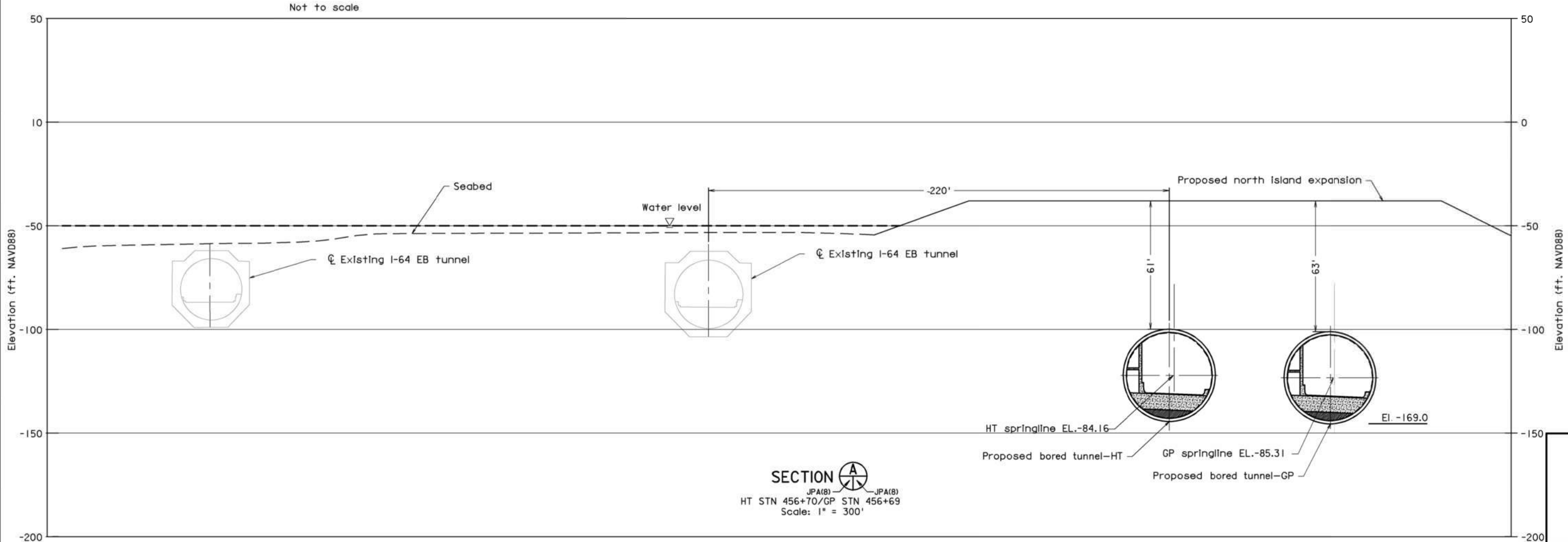
Plan No.	Sheet No.
	JPA(7)

TNI10577-JPA (07).dwg

STATE	ROUTE	FEDERAL AID	PROJECT	ROUTE	PROJECT	SHEET NO.
VA.	—	NHPP-5A03(992)		64	0064-M06-033-501,XXX	



EDGE OF NORTH ISLAND PLAN



SECTION A
HT STN 456+70/GP STN 456+69
Scale: 1" = 300'

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

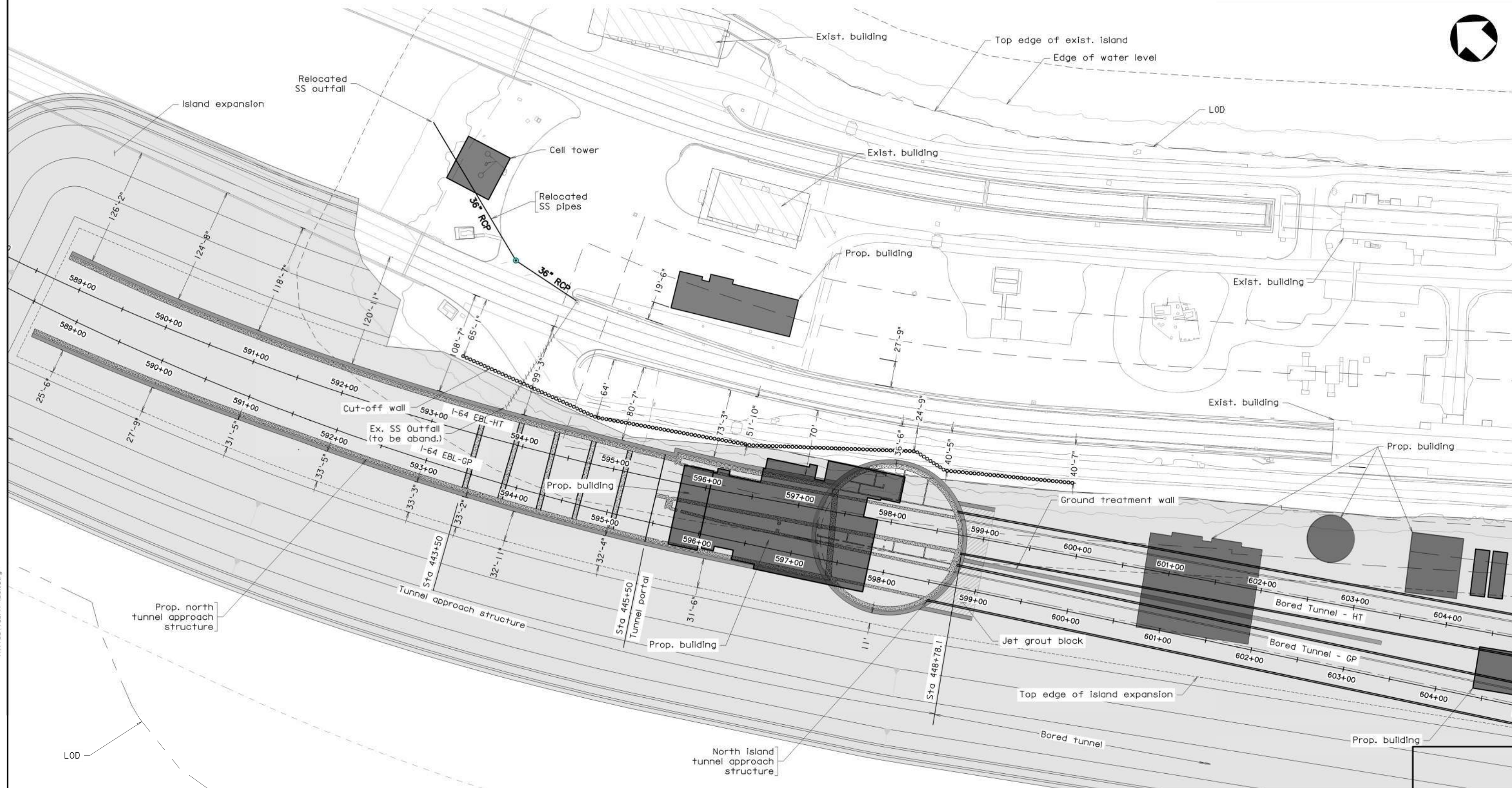


Designed: L.J.	STRUCTURE AND BRIDGE DIVISION
Drawn: RGR	DATE: August 15, 2019
Checked: BB	

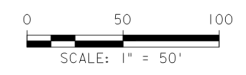
BORED TUNNEL
JPA PLAN & SECTION

Plan No.	Sheet No.
	JPA(8)

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(1992)	64	0064-M06-033-501.XXX



NORTH ISLAND PLAN
Scale: 1" = 50'



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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

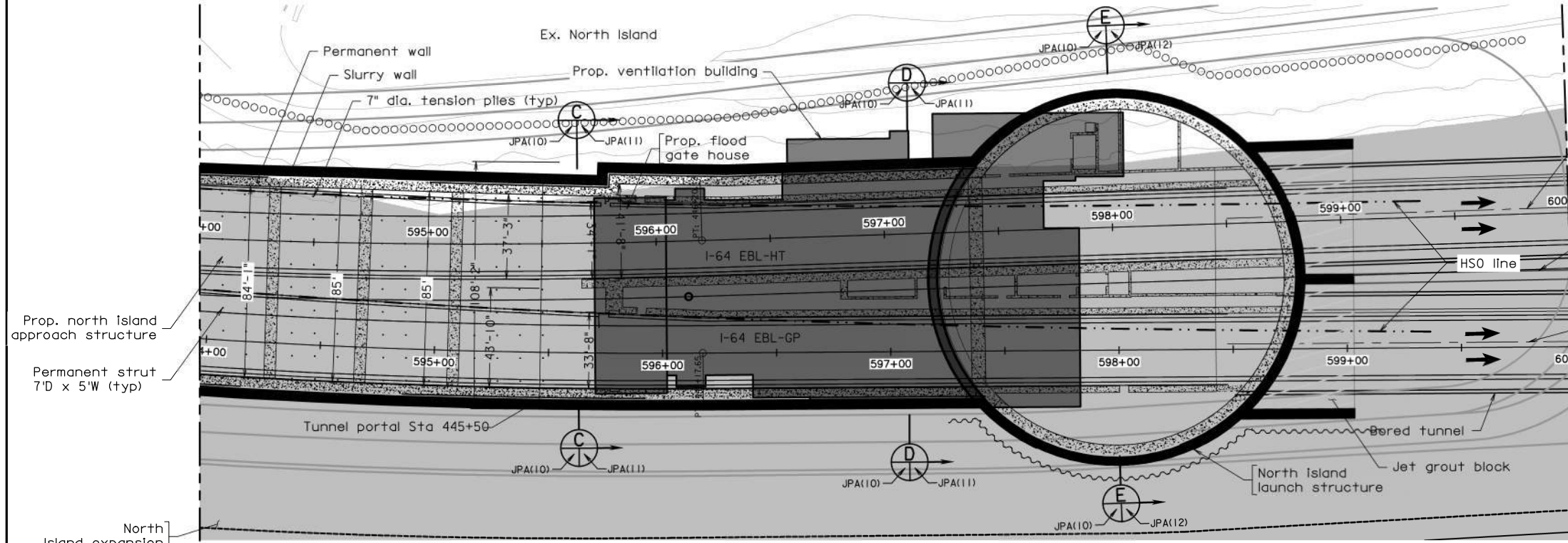


Designed: EGG	DATE: August 15, 2019
Drawn: DJ	
Checked: KF	

NORTH TUNNEL PORTAL
JPA GENERAL ARRANGEMENT

Plan No.	Sheet No.
	JPA(9)

STATE	ROUTE	FEDERAL AID PROJECT	STATE ROUTE	PROJECT	SHEET NO.
VA.		NHPP-5A03(1992)	64	0064-M06-033-501,XXX	

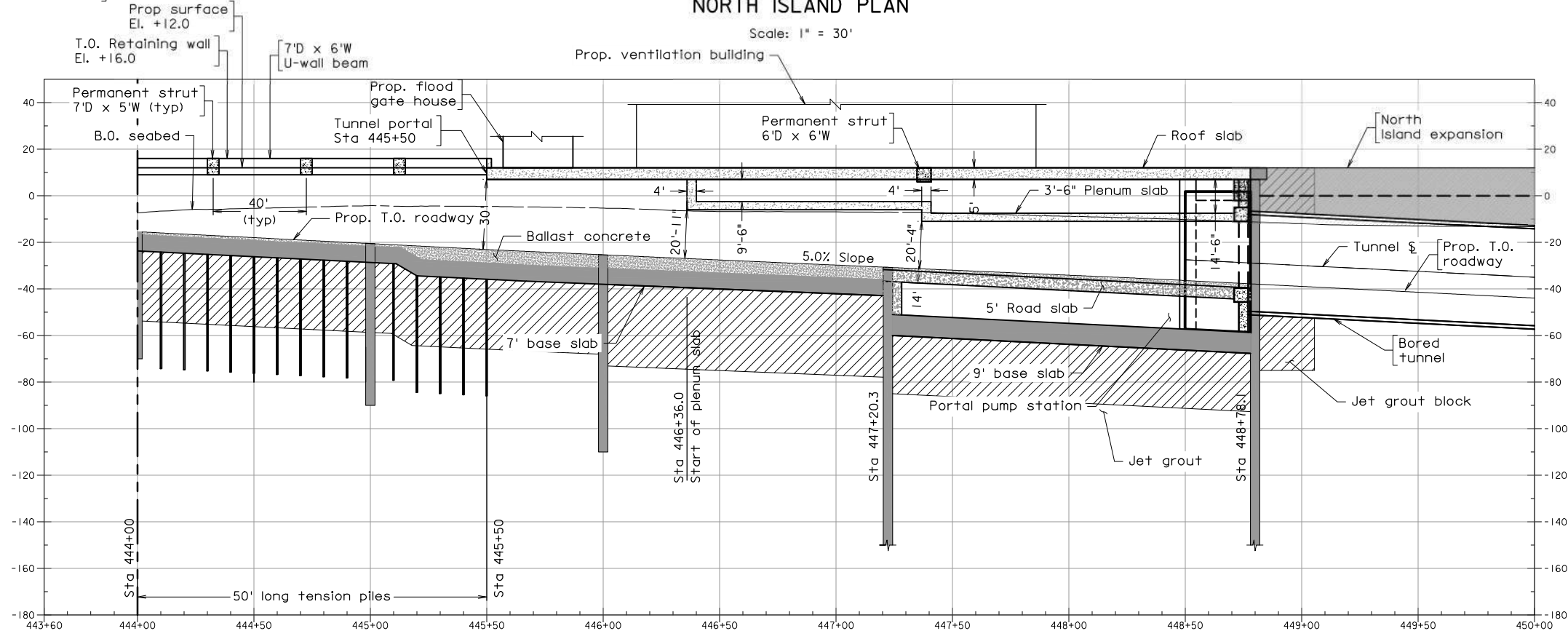


Prop. bored tunnel - HT
 Ground treatment wall
 HSO line
 Prop. bored tunnel - GP

Prop. north island approach structure
 Permanent strut 7'D x 5'W (typ)

NORTH ISLAND PLAN

Scale: 1" = 30'

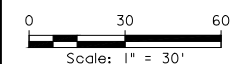


NORTH ISLAND PROFILE

Scale: 1" = 30'

NOTES:

1. Tunnel profile is cut along the centerline of the east roadway lane (I-64 EBL-HT). Obstructions are shown on the profile whenever any part of the bored tunnel approach structure encounters an obstruction.
2. Groundwater flow is controlled and prevented through the impermeable jet grout plug. Trapped water is removed during the excavation and the base of excavation secured by ground treatment keeping the trapped water at least 5 ft below the base.



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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

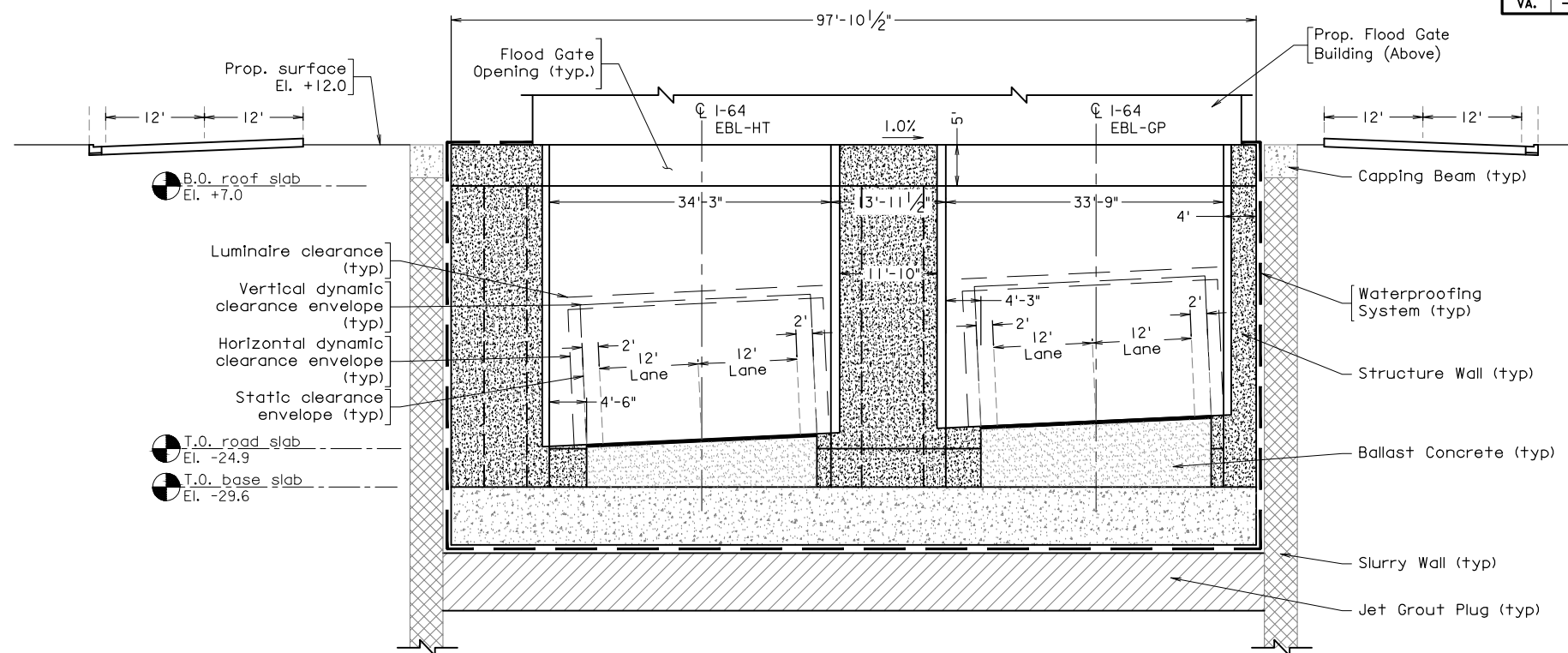


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Drawn: RGR	DATE: August 15, 2019
Checked: KF	

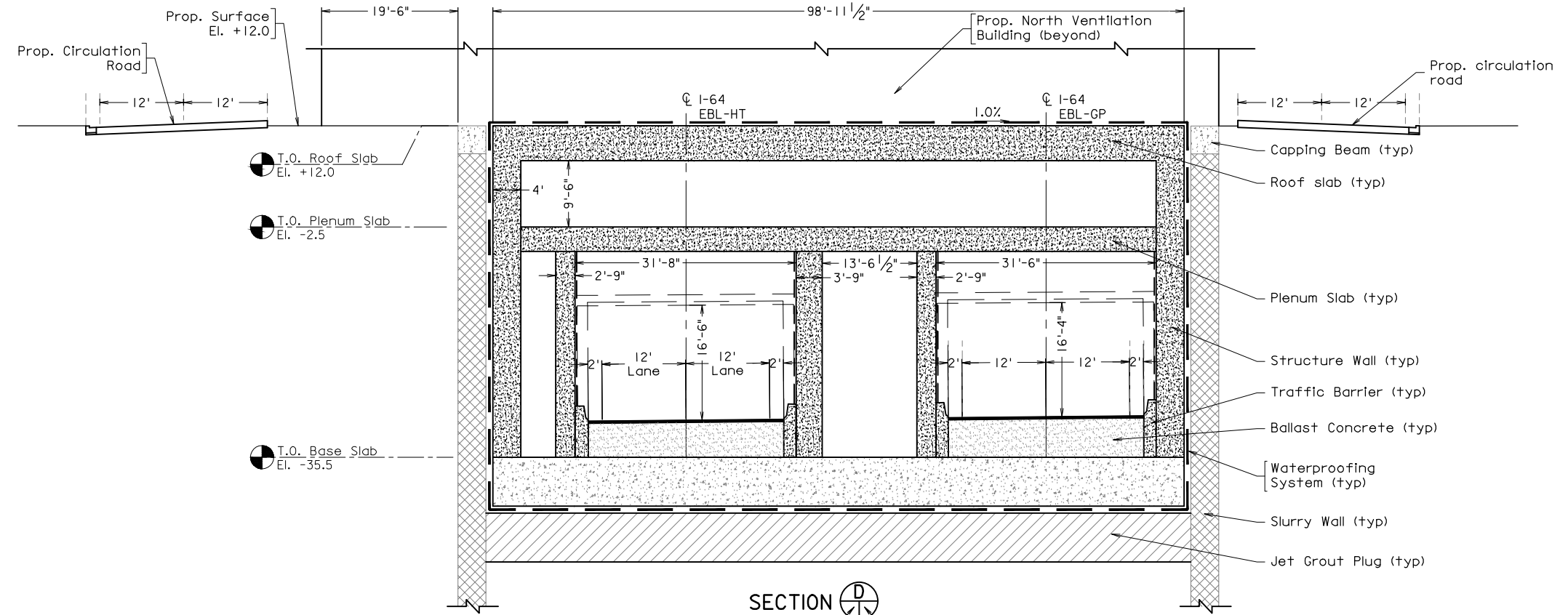
NORTH TUNNEL PORTAL
 JPA ENLARGED PLAN AND PROFILE

Plan No.	Sheet No.
	JPA(10)

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(992)	64	0064-M06-033-501,XXX



SECTION C
 JPA(10) — JPA(11)
 Section Sta. 445+65.58
 Scale: 1" = 10'



SECTION D
 JPA(10) — JPA(11)
 Section Sta. 447+22
 Scale: 1" = 10'
 Scale: 1" = 50'

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



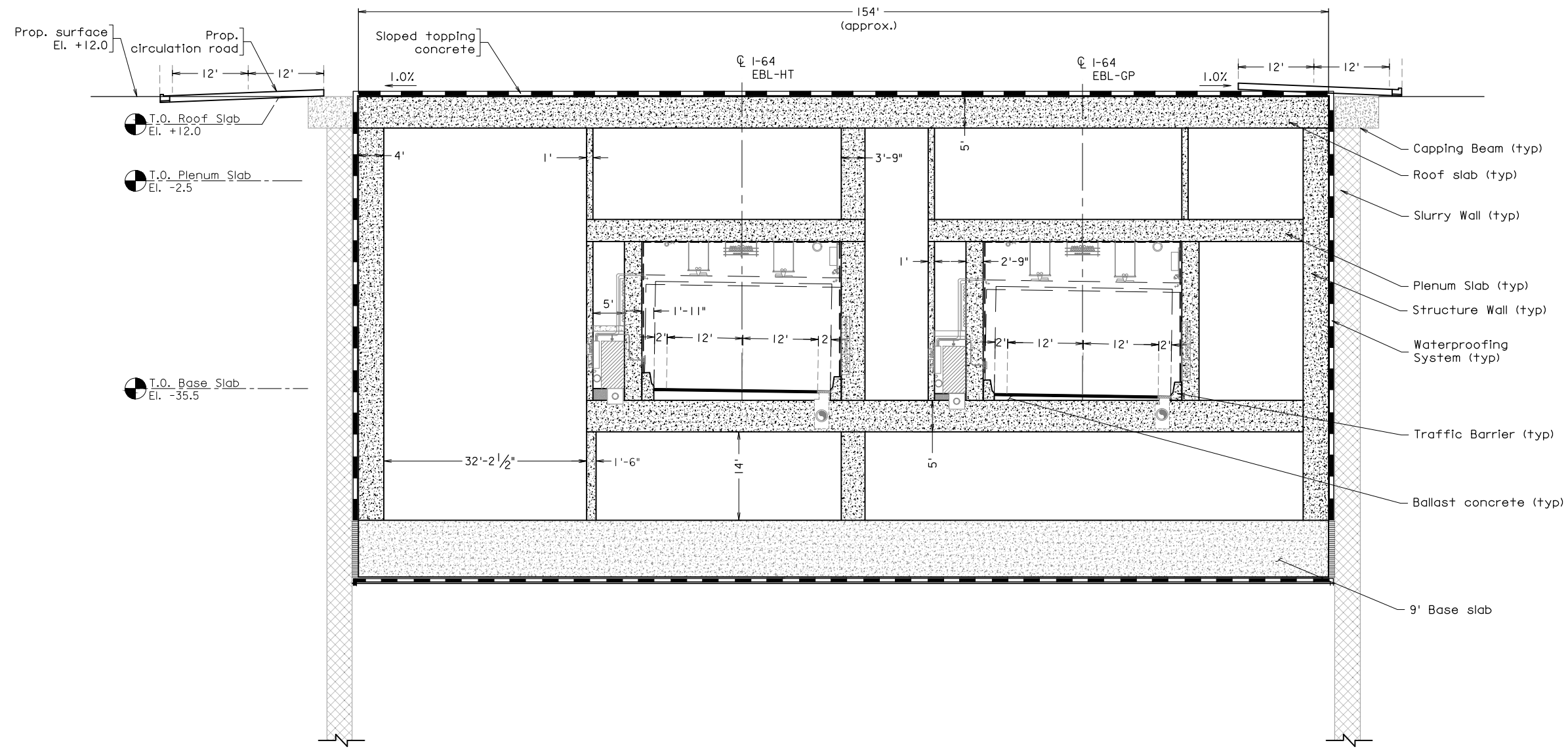
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NORTH TUNNEL PORTAL
JPA SECTION SHEET 1 OF 2

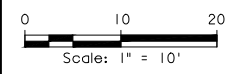
Plan No.	Sheet No.
	JPA(11)

TNI10577_JPA (11).dwg

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(1992)	64	0064-M06-033-501,XXX



SECTION $\frac{E}{\circ}$
 JPA(10) — JPA(12)
 Section Sta. 448+10
 Scale: 1" = 10'



Scale: 1" = 10'

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DC	GENERAL UPDATE				



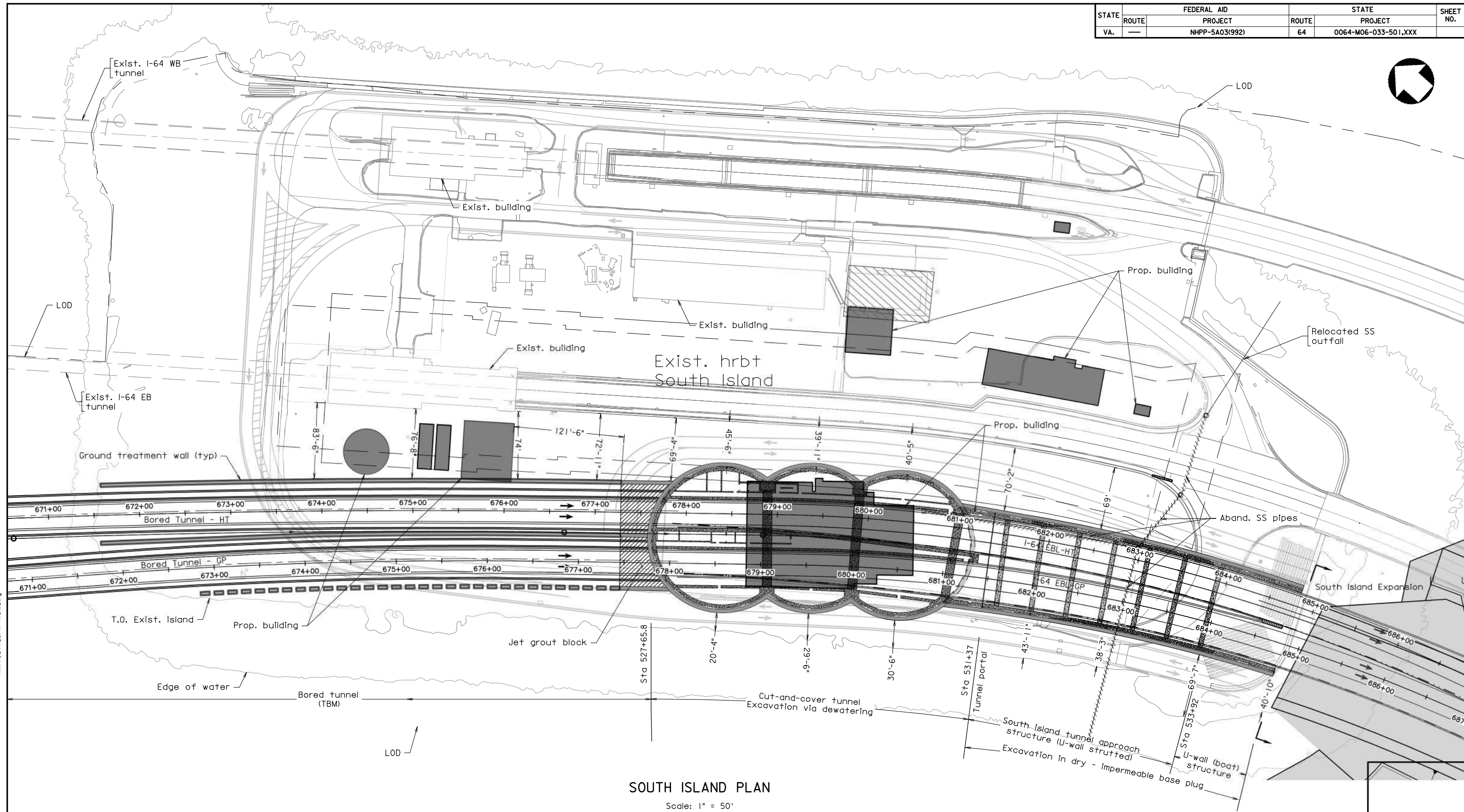
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NORTH TUNNEL PORTAL
 JPA SECTION SHEET 2 OF 2

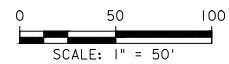
Plan No.	Sheet No.
	JPA(12)

TNI10577_JPA (12).dwg

STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	NO.
VA.	NHPP-5A03(1992)	64	0064-M06-033-501,XXX



SOUTH ISLAND PLAN
Scale: 1" = 50'



Scale: 1" = 50'

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FINAL PLAN REVISIONS SUBMITTAL DATE:							
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

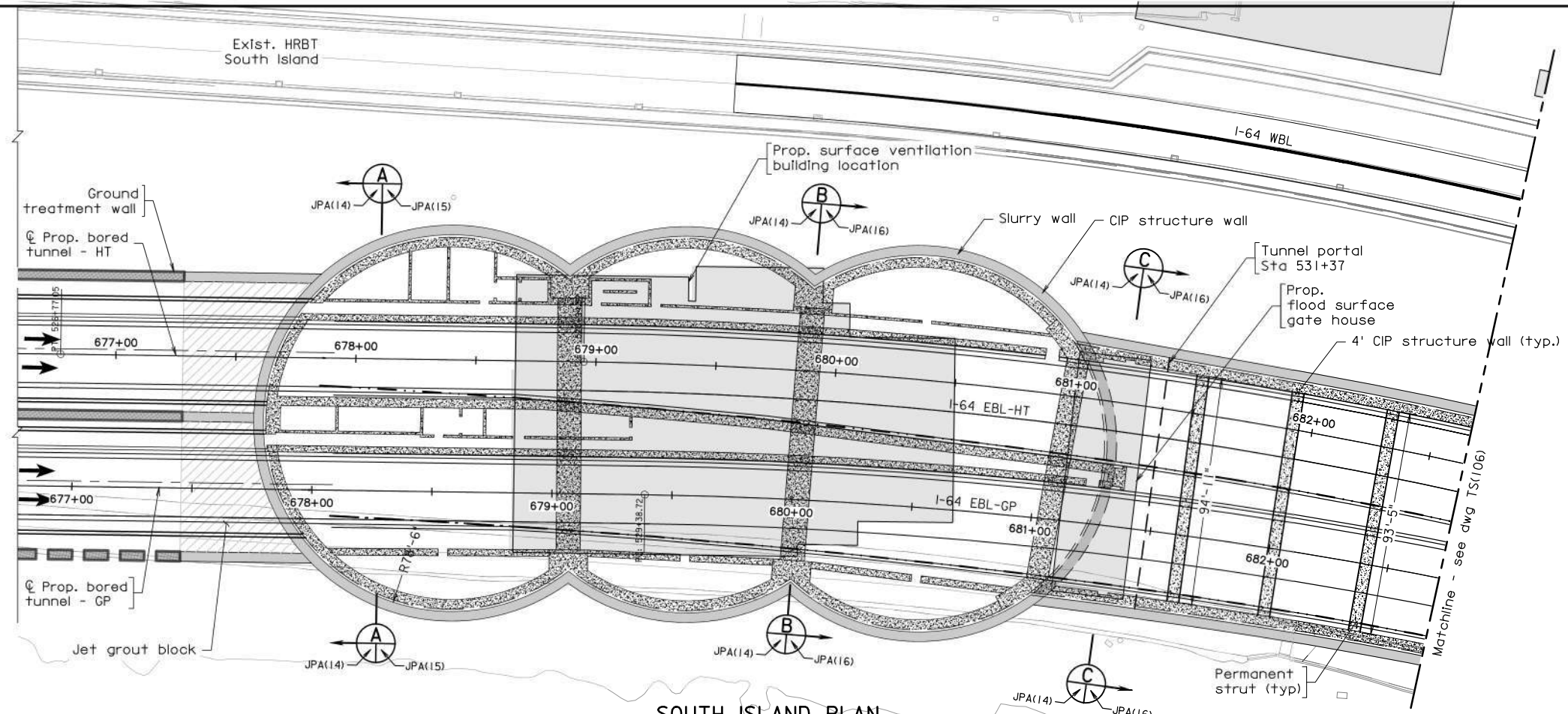


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Drawn: DJ	
Checked: KF	

**SOUTH TUNNEL PORTAL
JPA PLAN
GENERAL ARRANGEMENT**

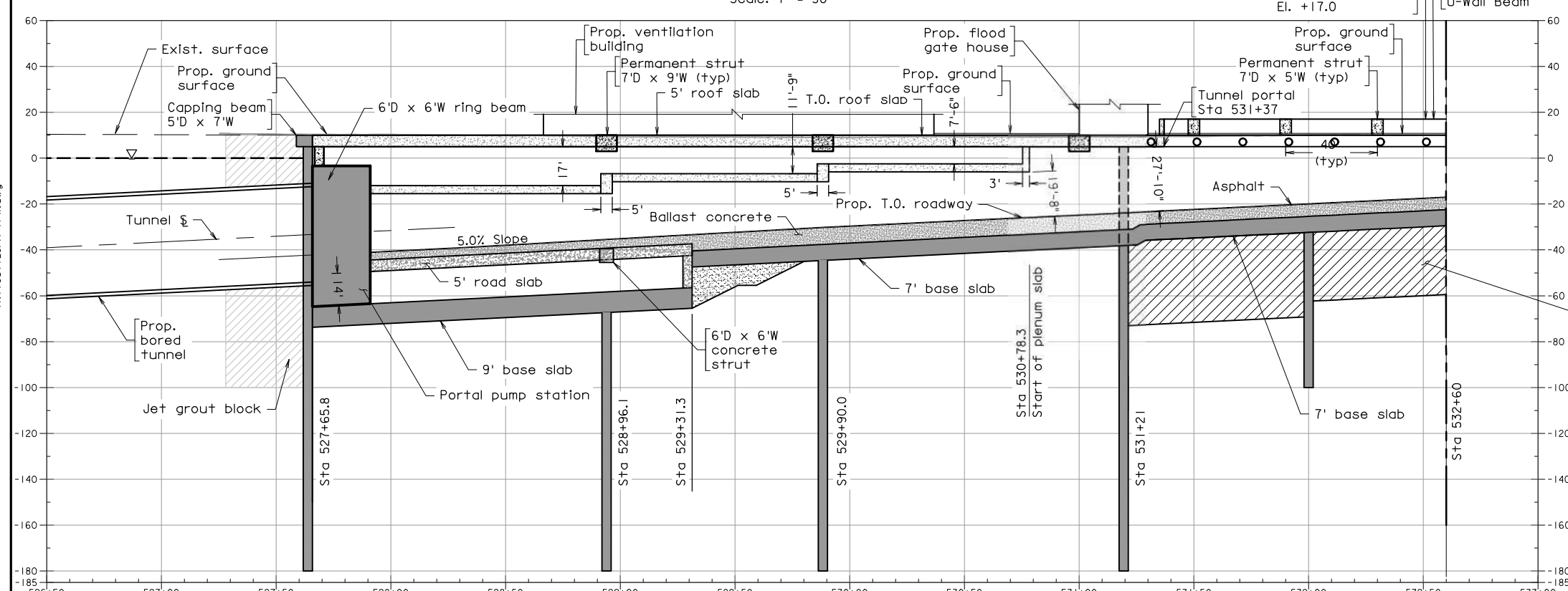
Plan No.	Sheet No.
	JPA(13)

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(1992)	64	0064-M06-033-501,XXX



SOUTH ISLAND PLAN

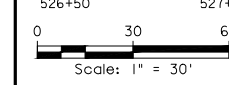
Scale: 1" = 30'



SOUTH ISLAND PROFILE

Scale: 1" = 30'

Scale: 1" = 30'



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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				

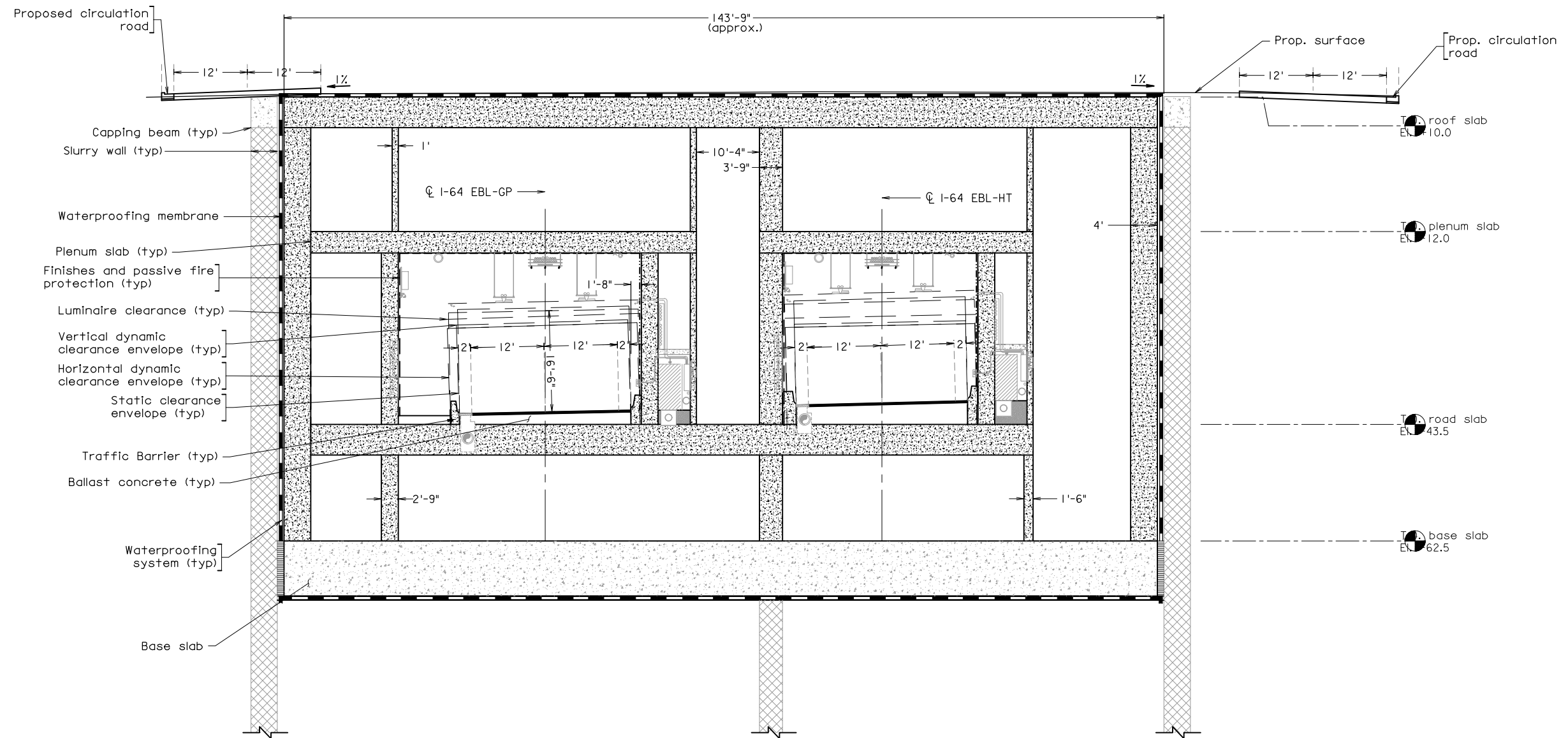


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Drawn: D.J.	
Checked: K.F.	

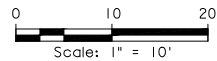
SOUTH TUNNEL PORTAL
JPA ENLARGED PLAN & PROFILE

Plan No.	Sheet No.
	JPA(14)

STATE	FEDERAL AID	STATE	SHEET NO.
ROUTE	PROJECT	ROUTE	PROJECT
VA.	NHPP-5A03(992)	64	0064-M06-033-501,XXX



SECTION **A**
 JPA(14) — JPA(15)
 Section Sta. 528+10
 Scale: 1" = 10'



Scale: 1" = 10'

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NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DC	GENERAL UPDATE				



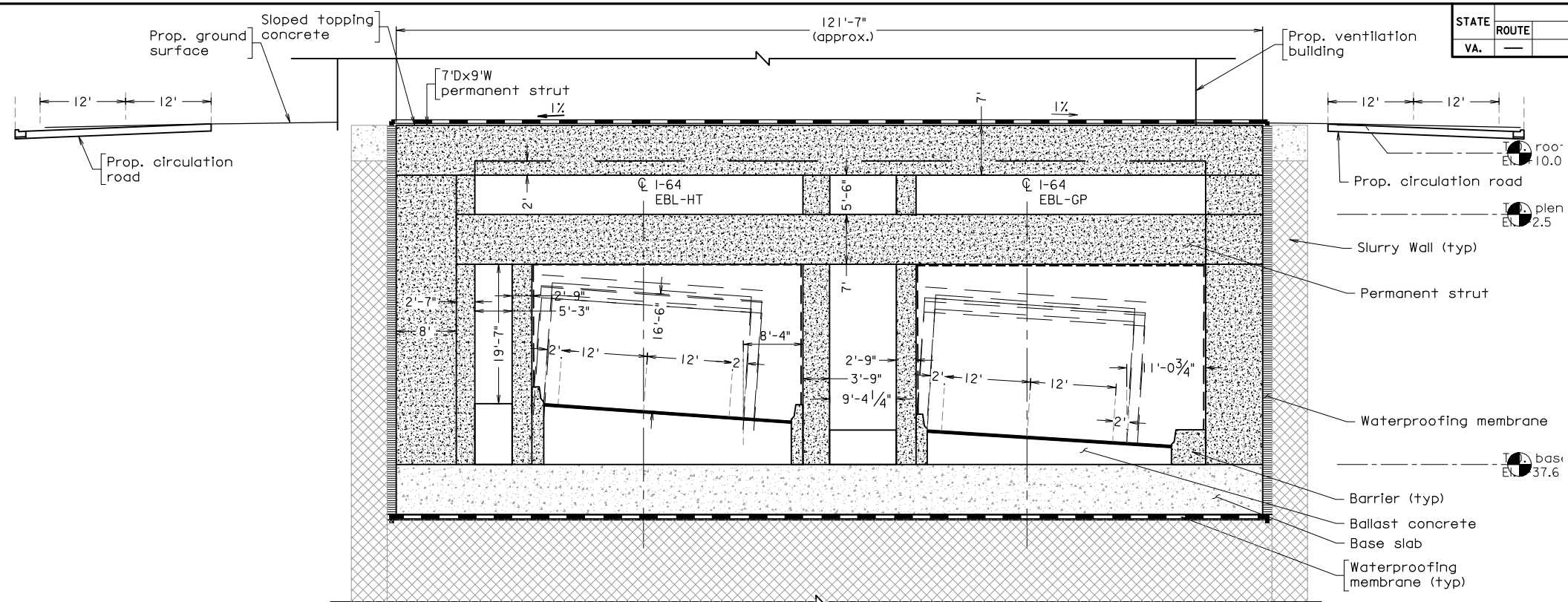
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Drawn: JPA.....	
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SOUTH TUNNEL PORTAL
 JPA SECTION SHEET 1 OF 2

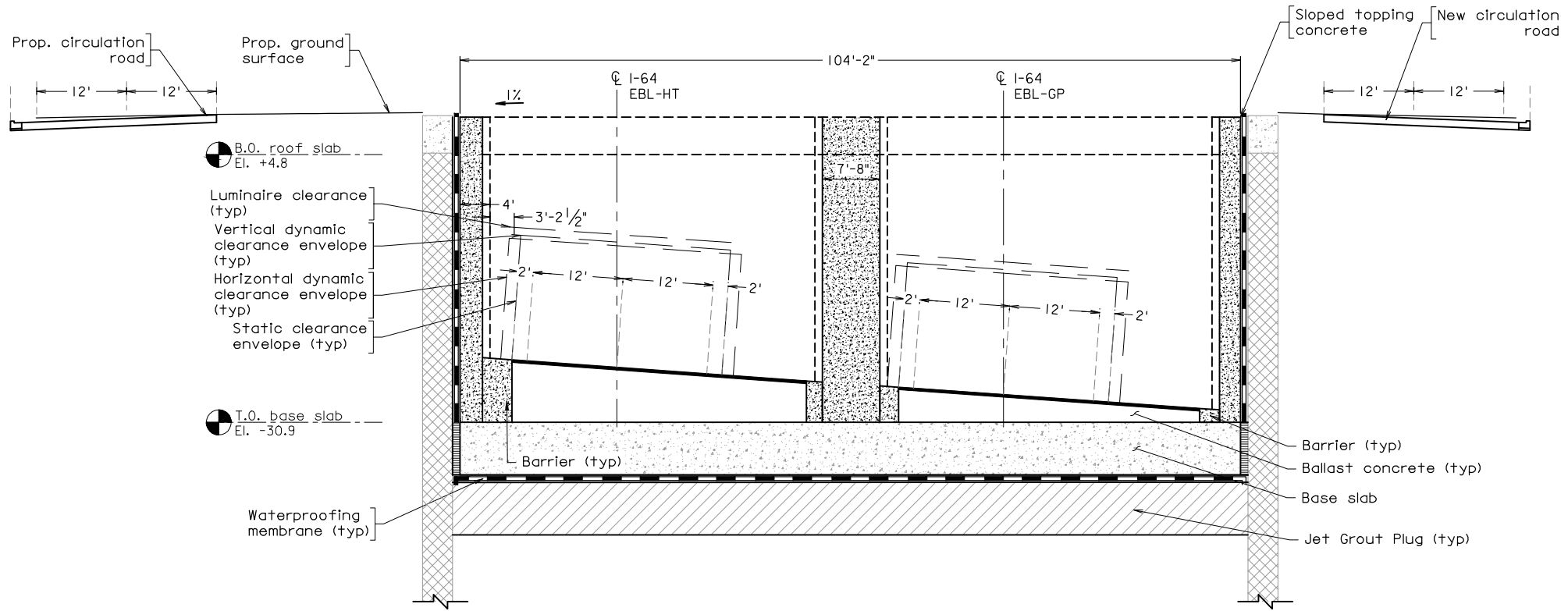
Plan No.	Sheet No.
	JPA(15)

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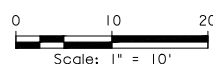
STATE	FEDERAL AID	STATE	SHEET
ROUTE	PROJECT	ROUTE	NO.
VA.	NHPP-5A03(1992)	64	0064-M06-033-501,XXX



SECTION B
 JPA(14) JPA(16)
 Section Sta. 529+88
 Scale: 1" = 10'



SECTION C
 JPA(14) JPA(16)
 Section Sta. 531+21.42
 Scale: 1" = 10'



PRELIMINARY PLANS
 THESE PLANS NOT TO BE USED
 FOR CONSTRUCTION OR THE
 ACQUISITION OF RIGHT OF WAY

MOTT MACDONALD
 ARLINGTON, VA
 STRUCTURAL ENGINEER

FINAL PLAN REVISIONS SUBMITTAL DATE:							
NO.	DATE	AUTH.	DESCRIPTION	NO.	DATE	AUTH.	DESCRIPTION
1	12/19/2019	DG	GENERAL UPDATE				



Designed: CL	DATE: AUGUST 15, 2019
Drawn: JP	
Checked: EGG	

SOUTH TUNNEL PORTAL
 JPA SECTION SHEET 2 OF 2

Plan No.	Sheet No.
	JPA(16)

TNI10577_JPA (16).dwg