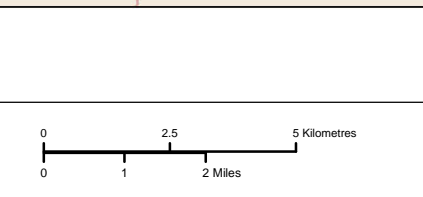


**Legend**

- Existing Granular Sources
- ROAD - GENERAL
- RAIL LINE

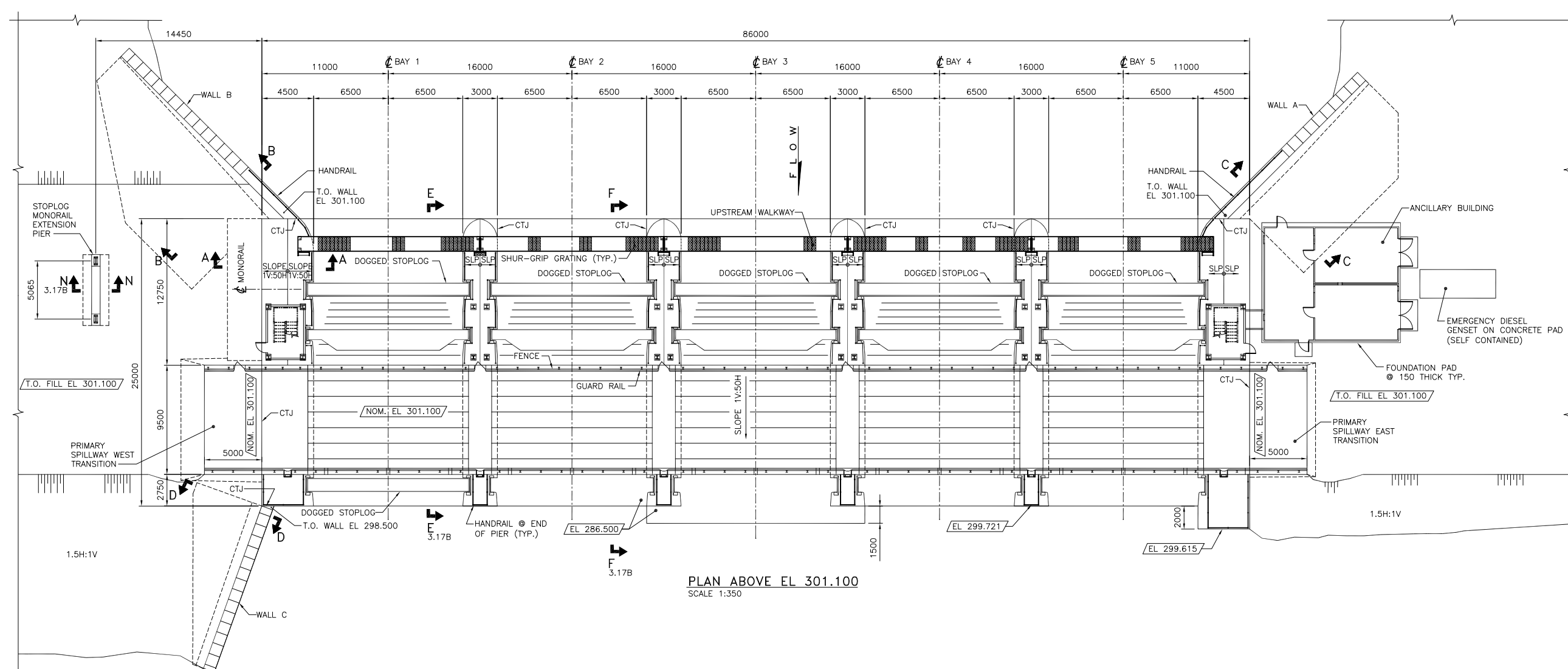
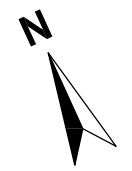


DATA SOURCE: Manitoba Hydro, KGS Acres, Province of Manitoba		
DATE CREATED: 19 JAN 2011	CREATED BY: HPP - GIS & Special Studies	
REVISION NO: VERSION: 1.0	REVISION DATE: 25 MAY 2011	QA/QC: RHP, MWZ, BMP

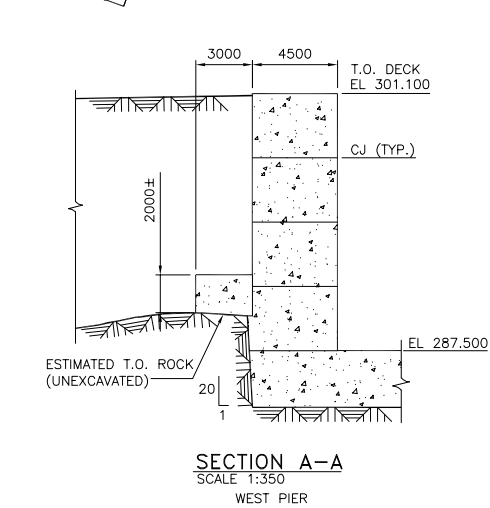
**Pointe du Bois  
Spillway Replacement Project**

**Existing Granular Sources**

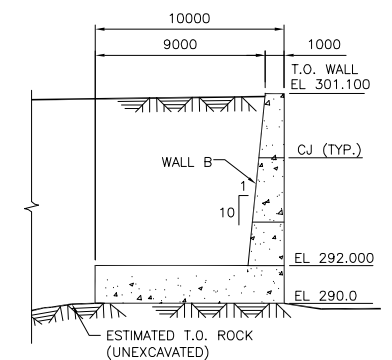
**Figure:  
3.16**



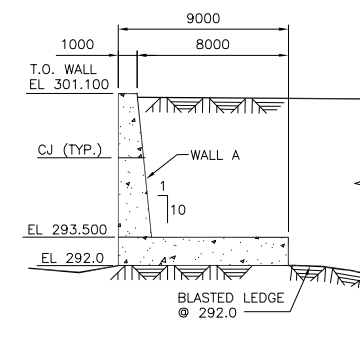
PLAN ABOVE EL 301.100  
SCALE 1:350



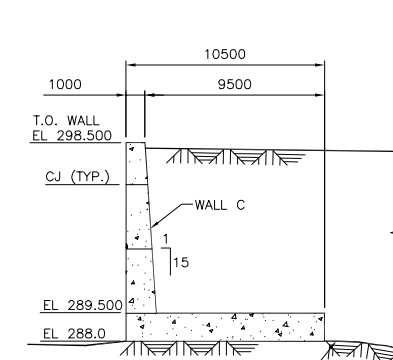
SECTION A-A  
SCALE 1:350  
WEST PIER



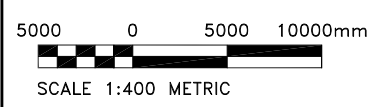
SECTION B-B  
SCALE 1:350  
WALL B



SECTION C-C  
SCALE 1:350  
WALL A



SECTION D-D  
SCALE 1:350  
WALL C

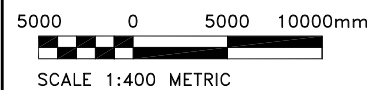
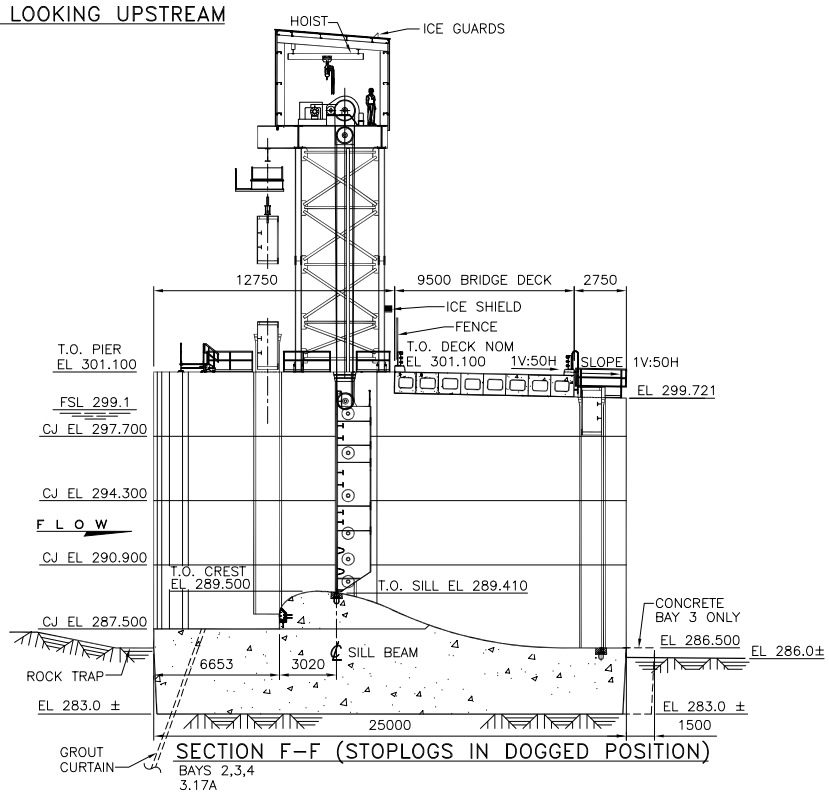
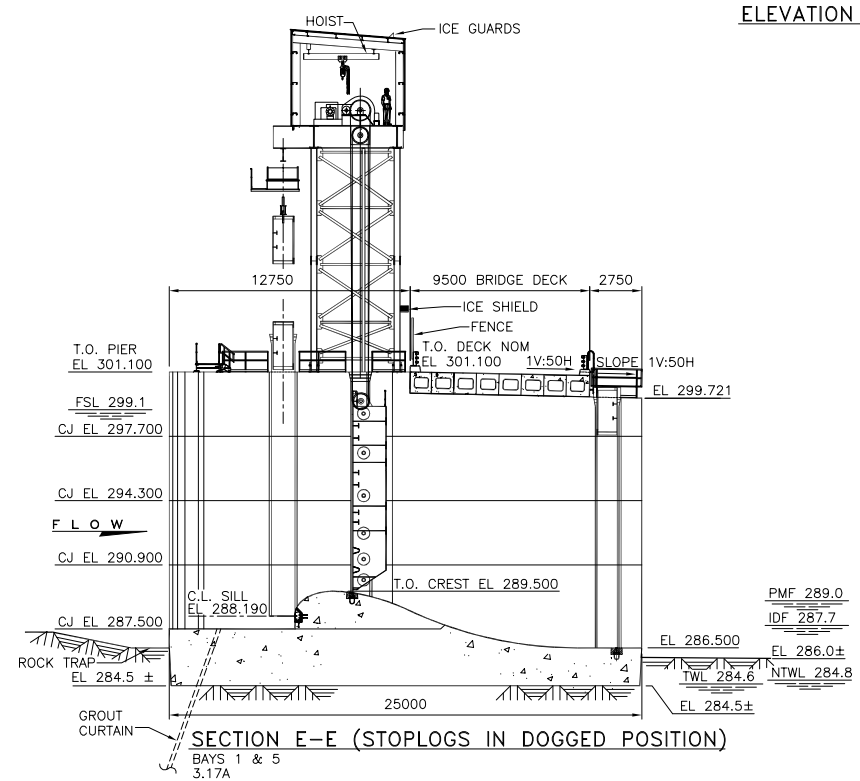
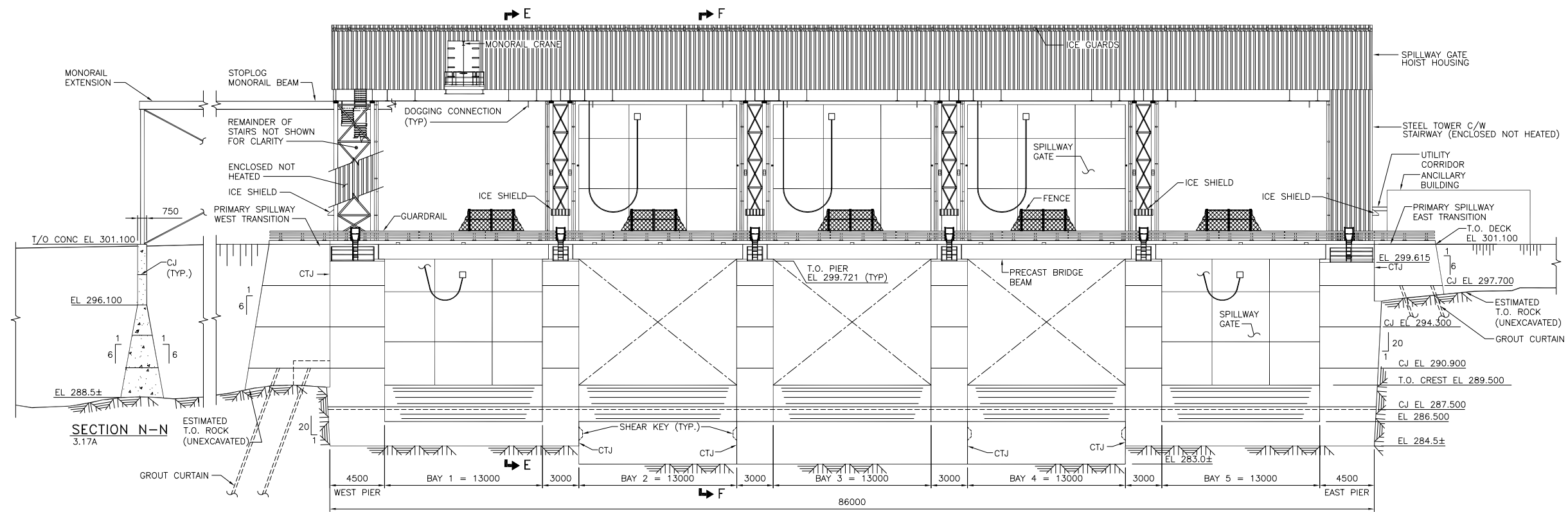


DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

## Pointe du Bois Spillway Replacement Project

**New Primary Spillway  
Plan and Sections**

Figure:  
3.17A

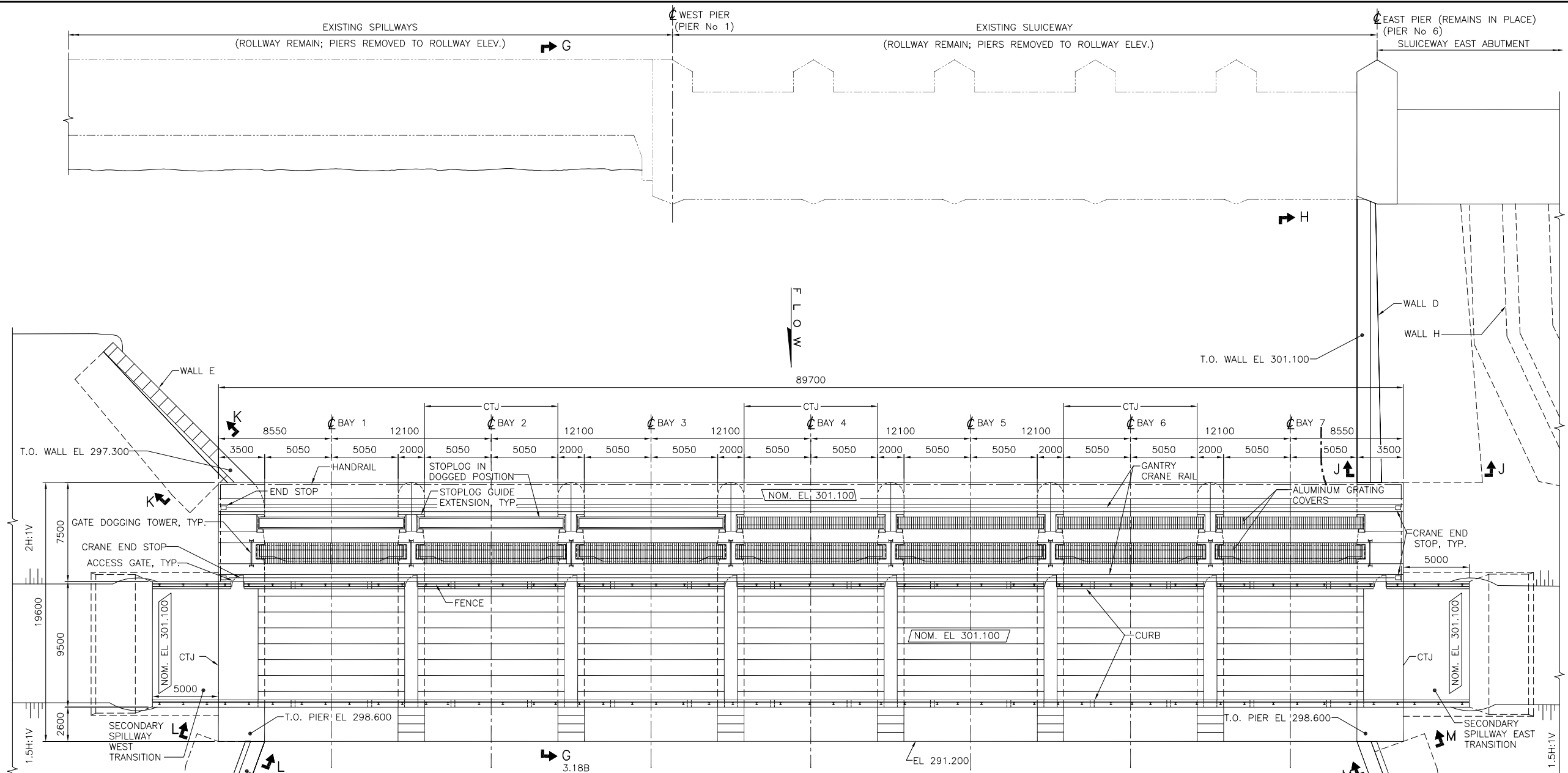


DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

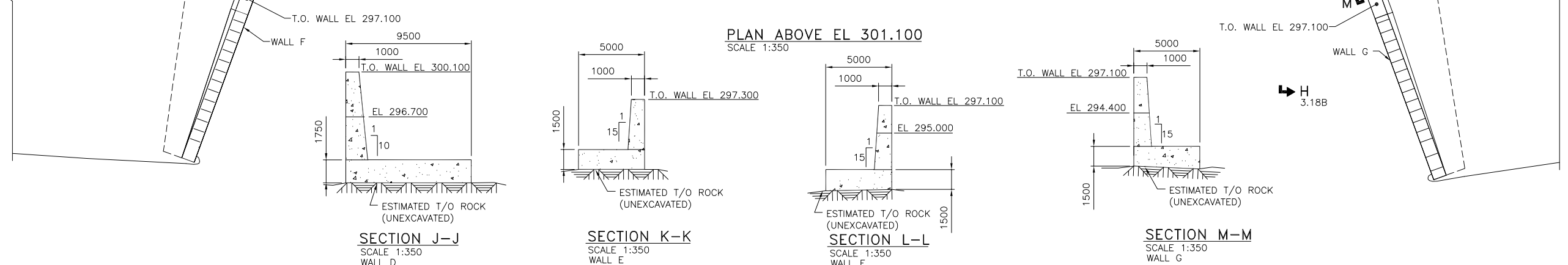
## Pointe du Bois Spillway Replacement Project

New Primary Spillway  
Elevation and Sections

Figure:  
3.17B



PLAN ABOVE EL 301.100  
SCALE 1:350

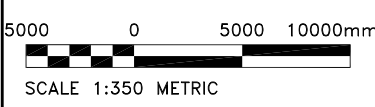


SECTION J-J  
SCALE 1:350  
WALL D

SECTION K-K  
SCALE 1:350  
WALL E

SECTION L-L  
SCALE 1:350  
WALL F

SECTION M-M  
SCALE 1:350  
WALL G

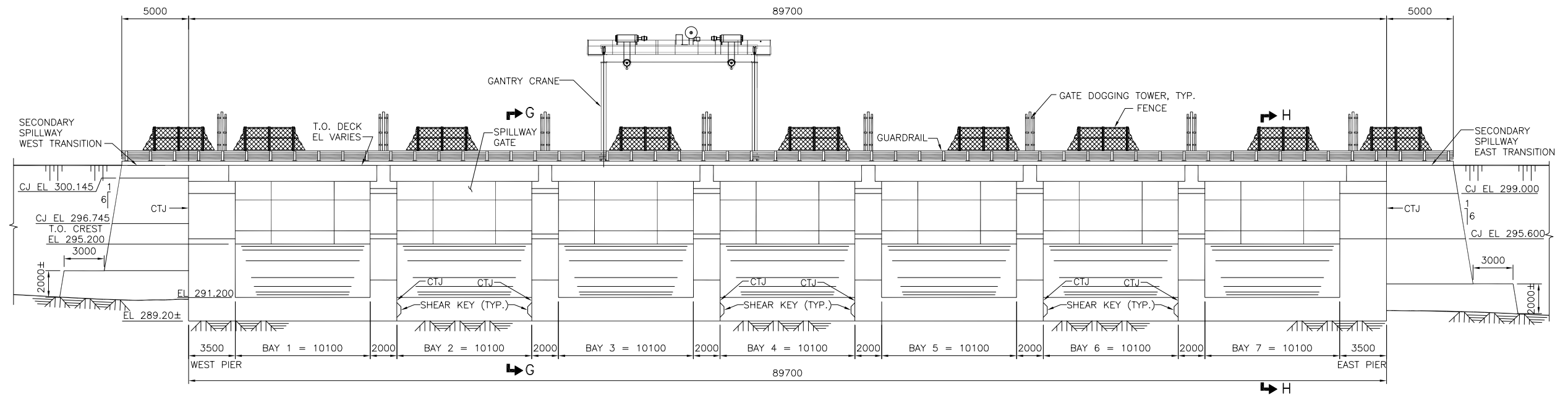


DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

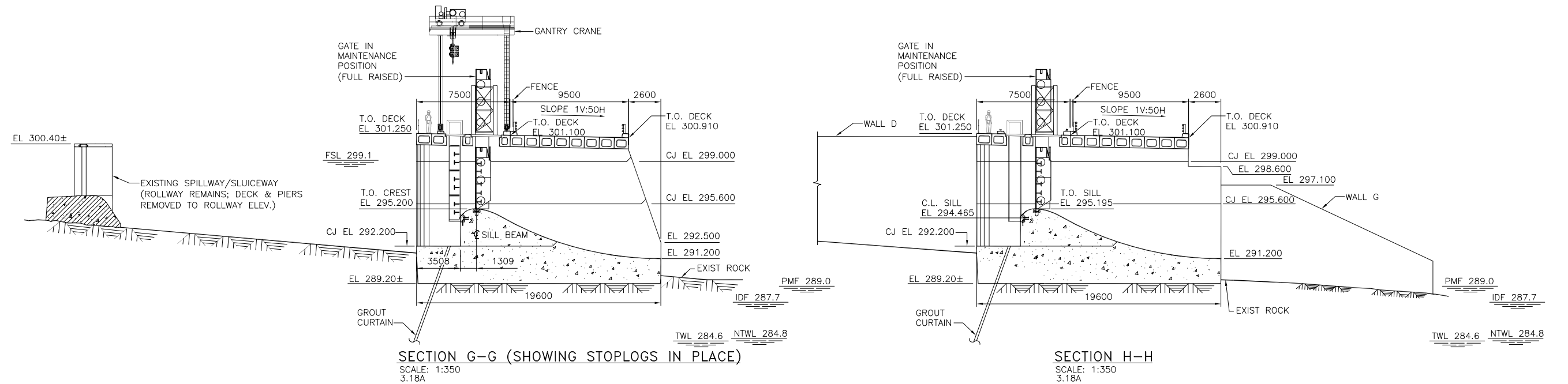
## Pointe du Bois Spillway Replacement Project

### New Secondary Spillway Plan and Sections

Figure:  
3.18A

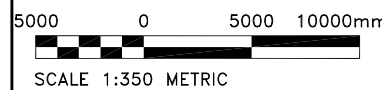


**ELEVATION LOOKING UPSTREAM**  
SCALE: 1:350



**SECTION G-G (SHOWING STOPLOGS IN PLACE)**  
SCALE: 1:350  
3.18A

**SECTION H-H**  
SCALE: 1:350  
3.18A

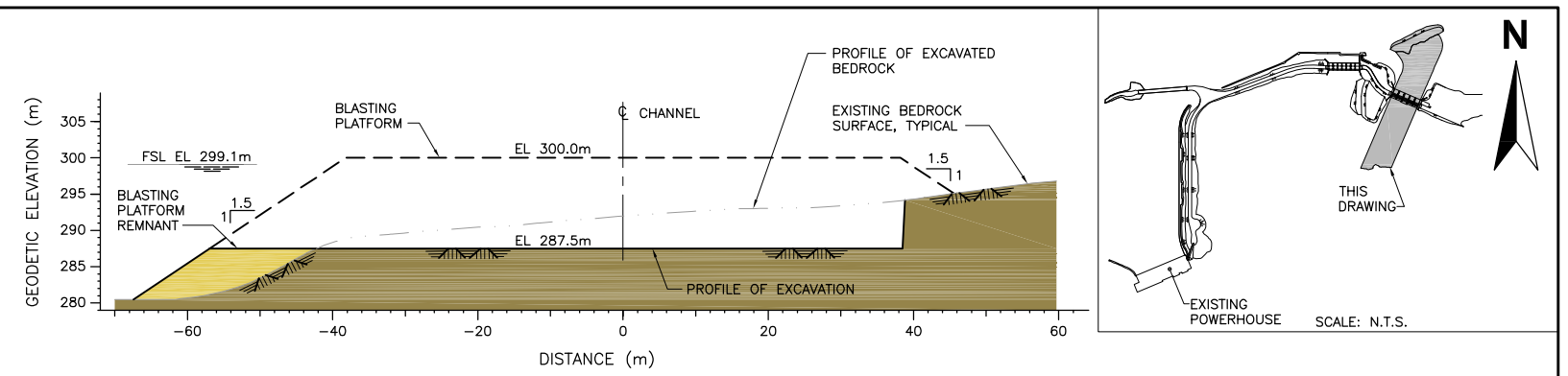
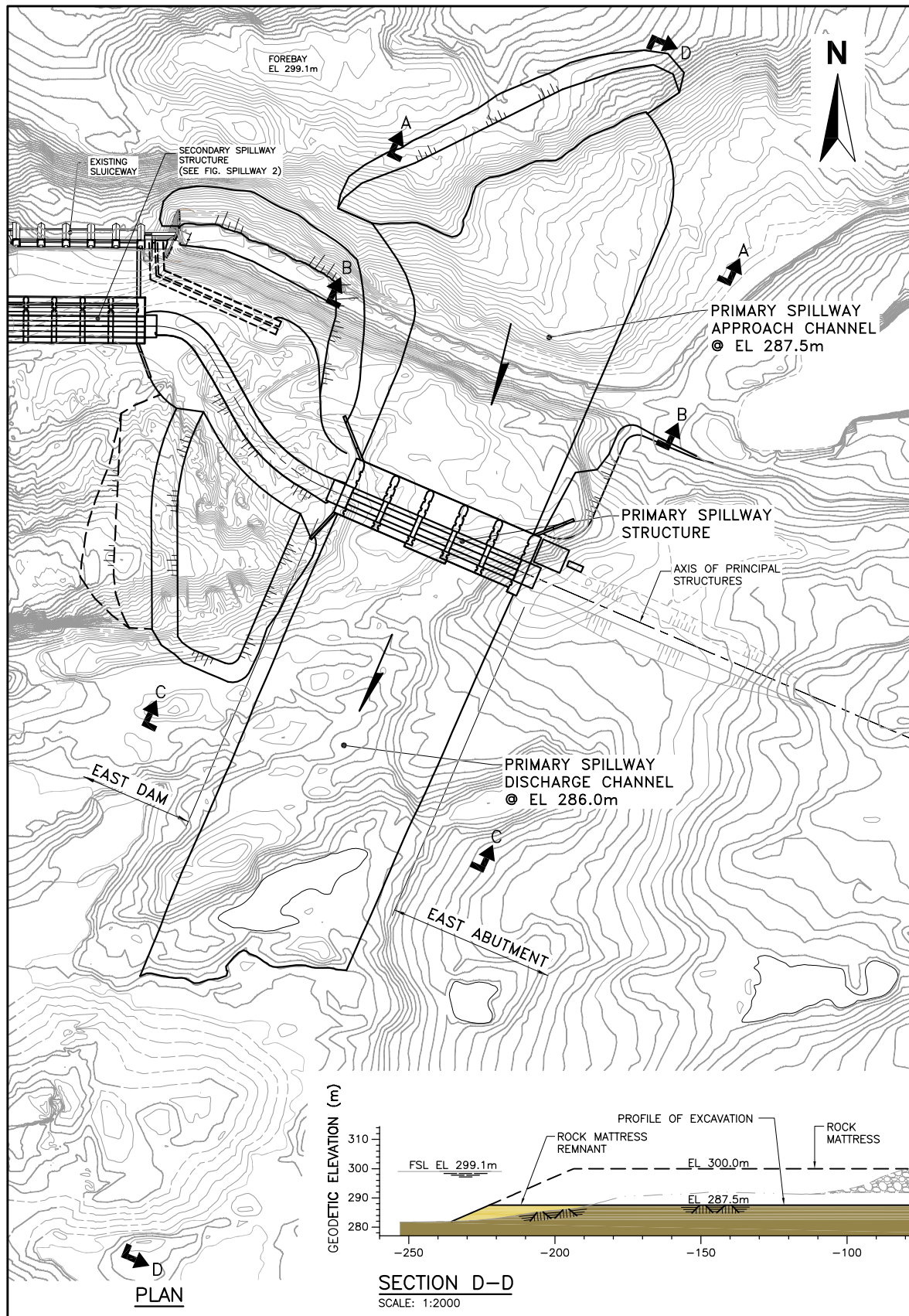


DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

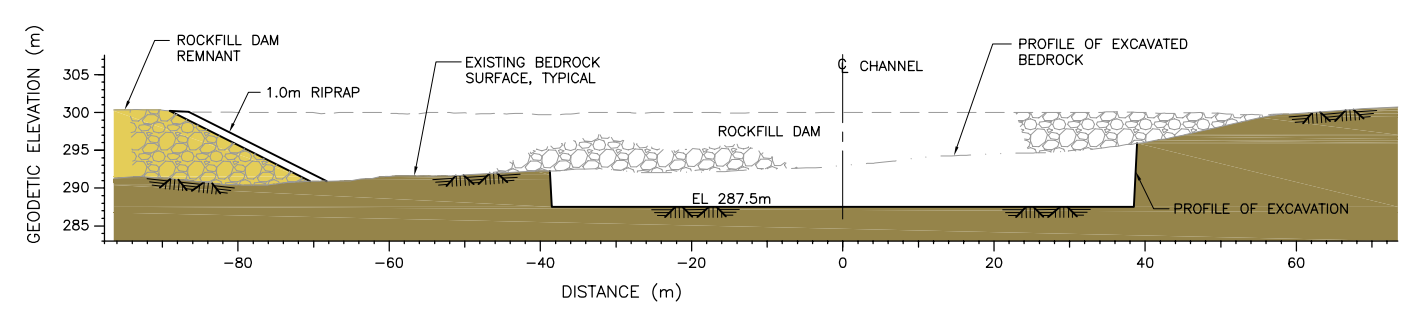
**Pointe du Bois  
Spillway Replacement Project**

**New Secondary Spillway  
Elevation and Sections**

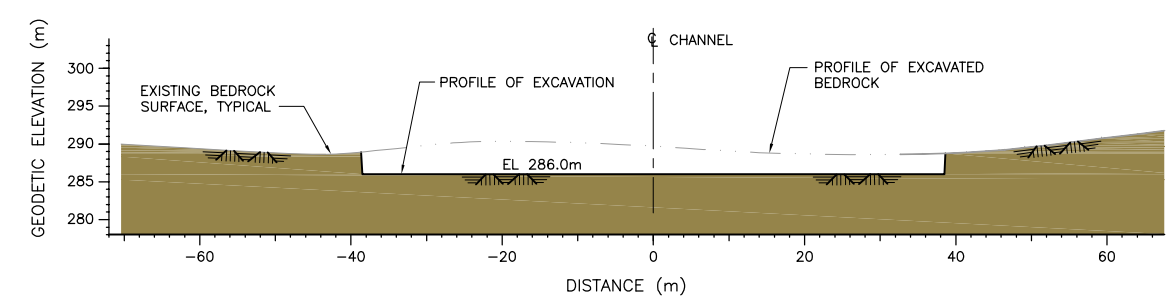
Figure:  
3.18B



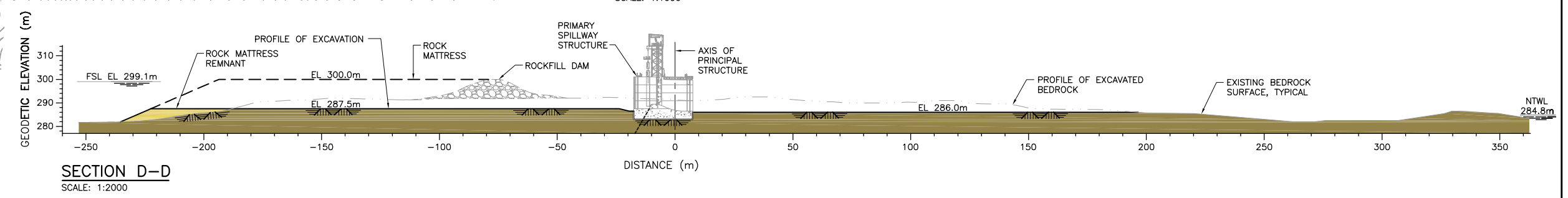
**SECTION A-A**  
SCALE: 1:1000



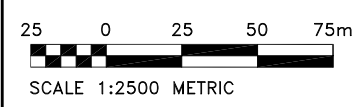
**SECTION B-B**  
SCALE: 1:1000



**SECTION C-C**  
SCALE: 1:1000



**SECTION D-D**  
SCALE: 1:2000

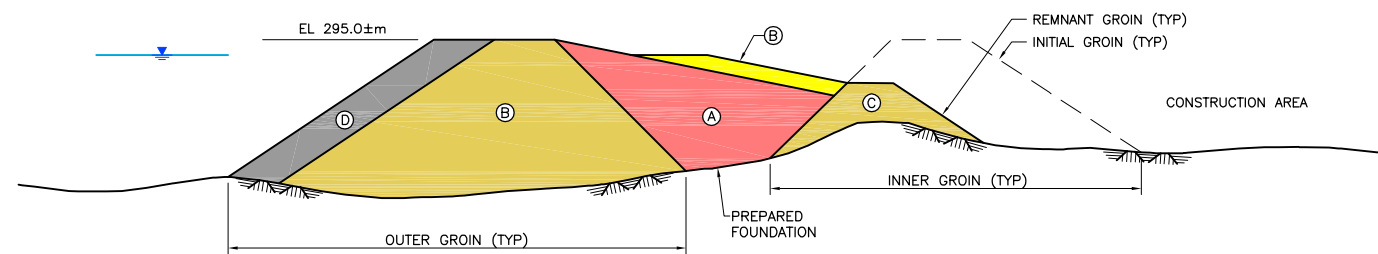


DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

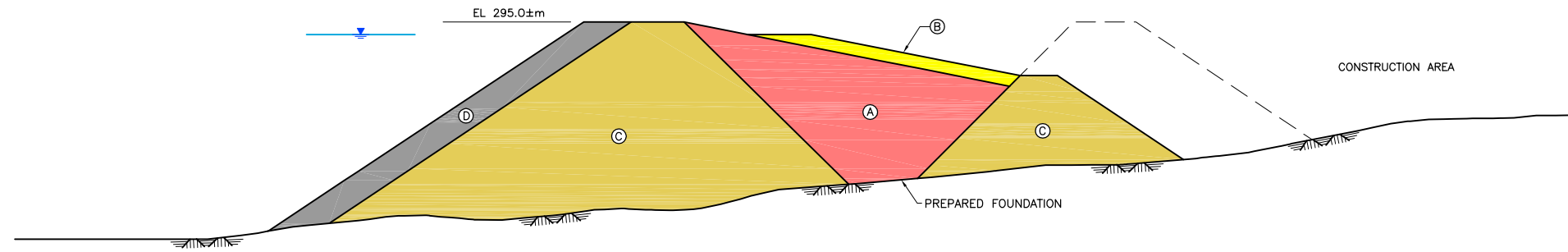
**Pointe du Bois  
Spillway Replacement Project**

**Primary Spillway  
Approach and Discharge Channels**

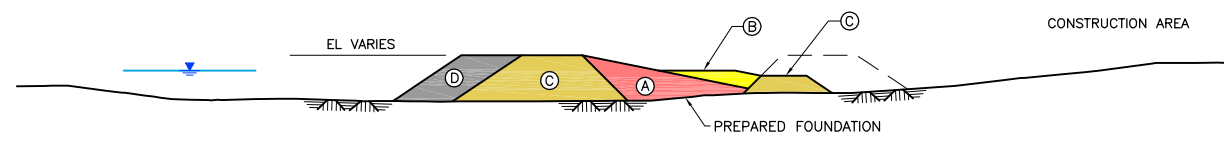
Figure:  
3.19



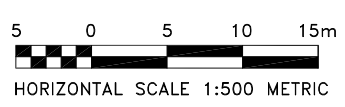
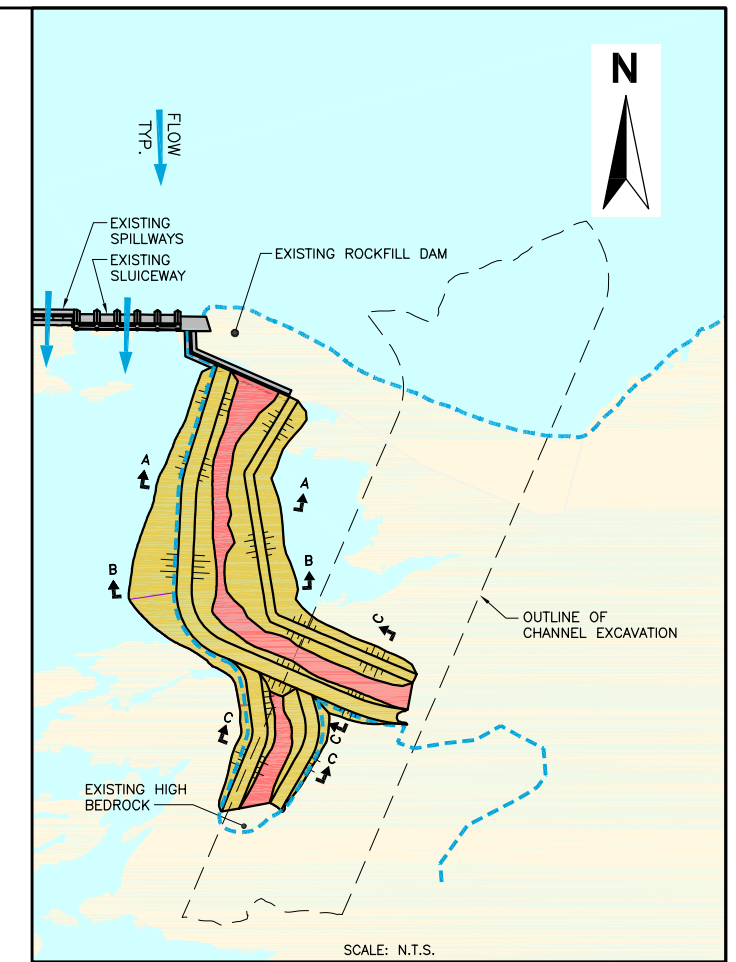
**COFFERDAM SECTION A-A**



**COFFERDAM SECTION B-B**



**COFFERDAM SECTION C-C**



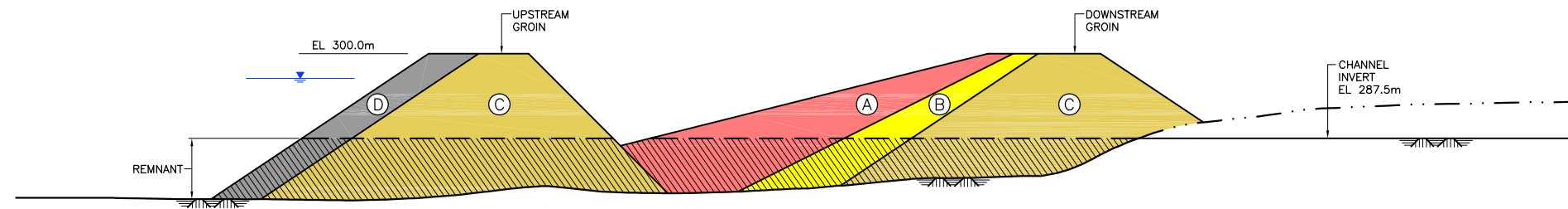
DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

Legend	
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<span style="display:inline-block; width:15px; height:15px; background-color: #ffff00; border: 1px solid black;"></span> (B)	WELL GRADED TRANSITION
<span style="display:inline-block; width:15px; height:15px; background-color: #d4af37; border: 1px solid black;"></span> (C)	ROCKFILL
<span style="display:inline-block; width:15px; height:15px; background-color: #808080; border: 1px solid black;"></span> (D)	LARGE DIAMETER RIPRAP
	WATER LEVEL
	BEDROCK SURFACE

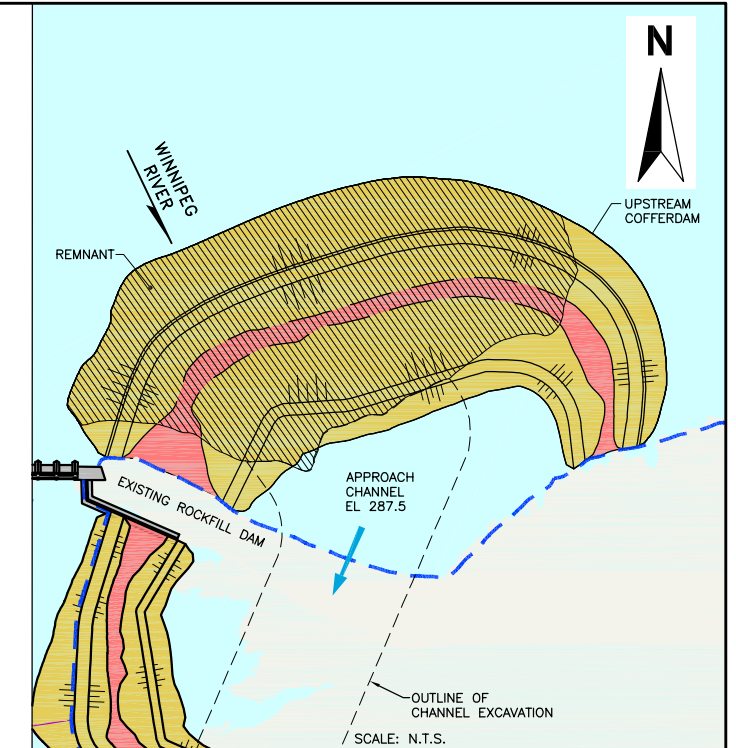
**Pointe du Bois  
Spillway Replacement Project**

**Cofferdam Downstream of the  
Primary Spillway Discharge Channel**

Figure:  
3.20



**UPSTREAM COFFERDAM**  
SCALE 1:1000



DATA SOURCE:  
Manitoba Hydro, KGS Acres

DATE CREATED:  
13 MAY 2011

CREATED BY:  
KGSA

REVISION No.  
VERSION 1.0

REVISION DATE:  
17 MAY 2011

QA/QC:  
RHP, MWZ,  
BMP

Legend

- (A) IMPERVIOUS FILL
- (B) WELL GRADED TRANSITION
- (C) ROCKFILL
- (D) LARGE DIAMETER RIPRAP

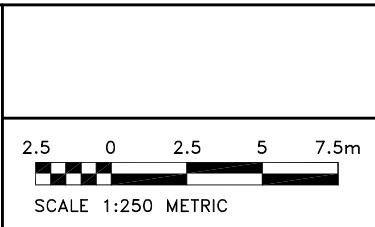
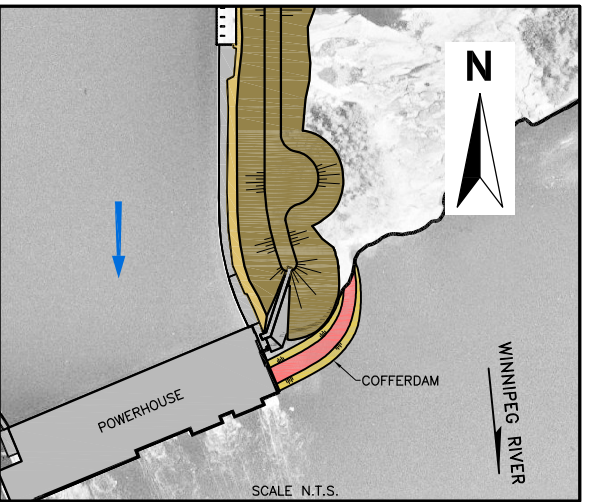
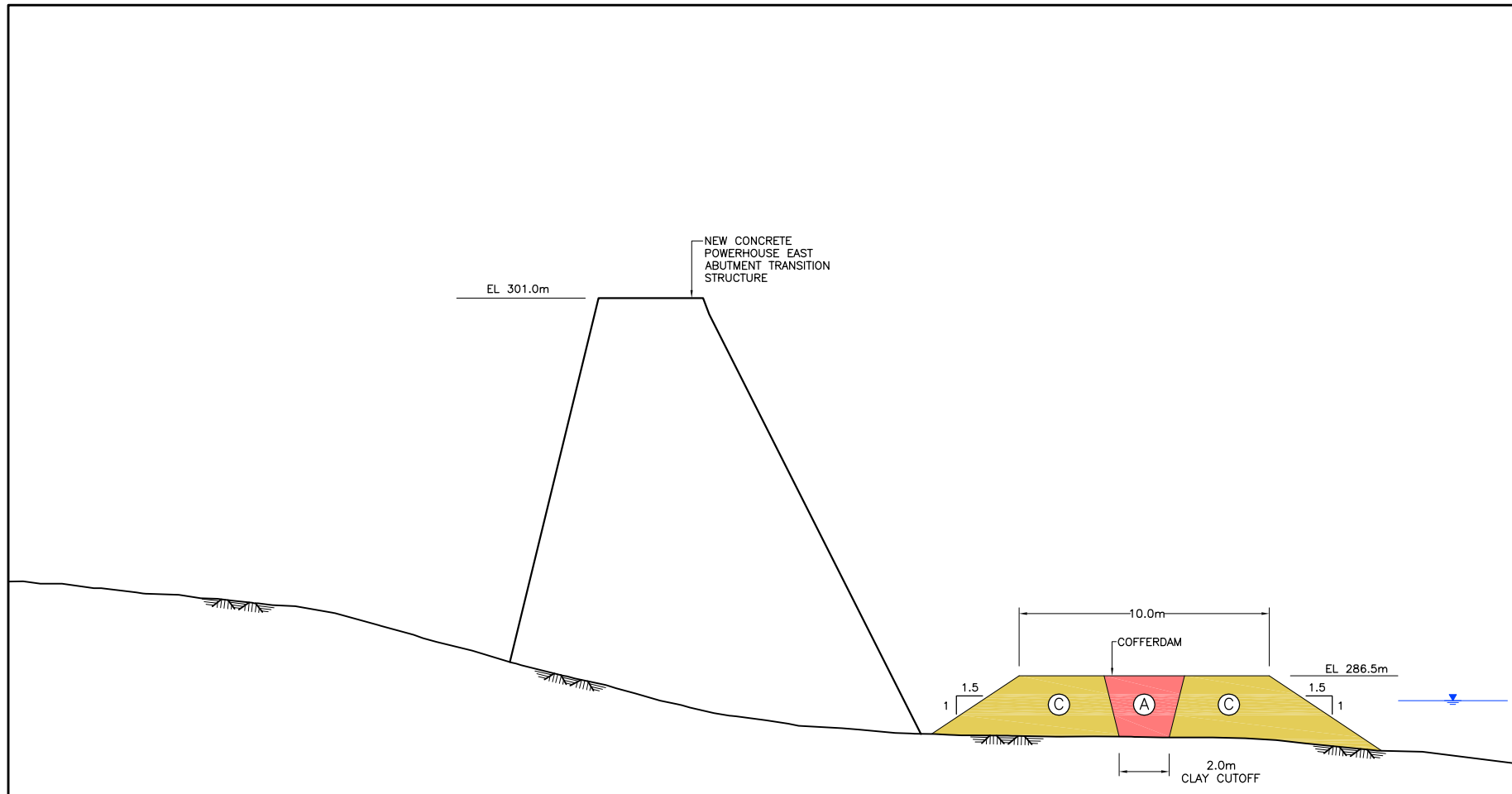
- WATER LEVEL
- BEDROCK SURFACE

**Pointe du Bois  
Spillway Replacement Project**

**Cofferdam Upstream of the Primary  
Intake Channel**

Figure:  
3.21





DATA SOURCE: Manitoba Hydro, KGS Acres		
DATE CREATED: 13 MAY 2011	CREATED BY: KGSA	
REVISION No. VERSION 1.0	REVISION DATE: 17 MAY 2011	QA/QC: RHP, MWZ, BMP

Legend

	(A) IMPERVIOUS FILL		WATER LEVEL
	(C) ROCKFILL		BEDROCK SURFACE

<b>Pointe du Bois Spillway Replacement Project</b>	
<b>Cofferdam Construction of the Powerhouse East Abutment Transition</b>	Figure: 3.22