

- REFERENCE DRAWINGS :
- AFC.4529.05.021 HEADRACE TUNNEL, ADIT-2, SETTING OUT DETAILS, LAYOUT PLAN
 - AFC.4529.05.022 HEADRACE TUNNEL, ADIT-2, SETTING OUT, DETAILS, L-SECTION & SECTIONS
 - AFC.4529.05.070 HEADRACE TUNNEL, SALUN NALA, GENERAL ARRANGEMENT, LAYOUT PLAN
 - AFC.4529.05.071 HEADRACE TUNNEL, SALUN NALA, GENERAL ARRANGEMENT, SECTIONS

- LEGEND :
- EXISTING ROAD
 - CULTIVATED LAND
- GENERAL NOTES :-
- 1.1 THIS DRAWING SHOWS ONLY PLAN AND SETTING OUT DETAILS
 - 1.2 ALL DIMENSIONS AND LEVELS ARE IN METRES, UNLESS OTHERWISE SPECIFIED.
 - 1.3 300mm THK. INVERT CONCRETE LINING (M-20) IN STRETCHES WHERE Q<1.
 - 1.4 NO DIMENSION SHALL BE MEASURED FROM THE DRAWING.
 - 1.5 THIS DRAWING IS BASED ON SURVEY DETAIL SUPPLIED BY JSWEKL.
 - 1.6 NEW ALIGNMENT OF SALUN NALA AS PROVIDED BY JSWEKL.
 - 1.7 THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DRAWING NOS. AFC.4529.05.070 & 071.

REV. No.	REVISION DESCRIPTION	DRAWN	CHECKED	APP'D	DATE
1	PREFEASIBILITY STUDY				
2	FEASIBILITY STUDY				
3	INCEPT. & BASIC DESIGN				
4	TENDER DESIGN				
5	CONSTRUCTION DESIGN				
6	AS-BUILT DRAWINGS				

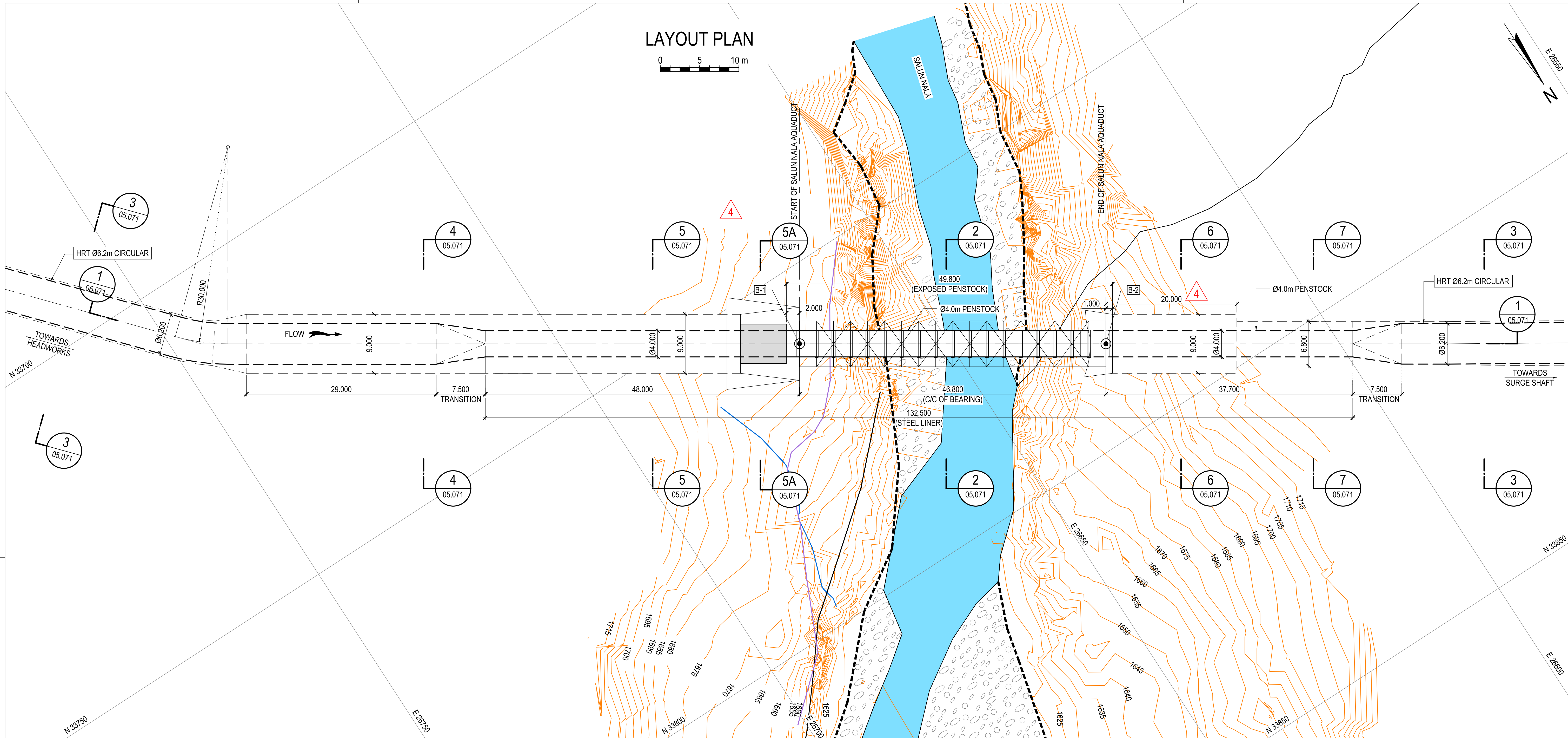
SALUN STREAM CROSSING
PLAN TO ROAD TO ADIT 02
SETTING OUT DETAILS

DESIGNED:
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CHECKED:
APPROVED:
DATE:

SCALE:
DRAWING No.

FORMAT:
REV. No.

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IMPORTANT NOTES :-
FOR THE STEEL PIPE

- 2.1 THE STEEL PIPES SHALL BE DESIGNED FOR A HYDRAULIC HEAD OF 65.00 m (INCLUSIVE OF UP-SURGE).
- 2.2 MATERIAL FOR THE STEEL PIPE SHALL CONFORM TO ASTM – A 537 CLASS II OR EQUIVALENT.
- 2.3 DESIGN OF THE STEEL PIPE SHALL BE CARRIED OUT IN ACCORDANCE WITH IS 11639 (PART 1).
- 2.4 NO EXPANSION JOINT SHALL BE PROVIDED IN THE EXPOSED REACH OF THE STEEL PIPE. HENCE, ALL THE THERMAL STRESSES SHALL BE ACCOUNTED FOR IN THE STRUCTURAL DESIGN OF THE PIPE. MEAN DAILY MINIMUM AND MAXIMUM TEMPERATURES ARE 5.2°C AND 32.5°C RESPECTIVELY. SEISMIC LOADS AS PER IRC SP:114-2018, FOLLOWING PARAMETERS SHALL BE ADOPTED:
- 2.5 ZONE FACTOR (Z) = 0.36
SPECTRAL ACCELERATION (SA/G) = 2.5
IMPORTANCE FACTOR (I) = 1.5 FOR SUPERSTRUCTURE
RESPONSE REDUCTION FACTOR (R) = 3 FOR SUPERSTRUCTURE & 1 FOR SUBSTRUCTURE.
- 2.6 WIND LOAD SHALL BE TAKEN IN ACCORDANCE WITH IS 875 (PART 3). BASIC WIND VELOCITY SHALL BE TAKEN AS 39 m/s.
- 2.7 FOR OTHER REQUIREMENTS, REFER TECHNICAL SPECIFICATION.
- FOR THE STEEL BRIDGE
- 2.8 DELETED.
- 2.9 SECTION FOR THE STEEL BRIDGE SHALL BE EITHER STANDARD OR BUILT-UP SECTION. MATERIAL SHALL CONFORM TO GRADE E 250 QUALITY C OF IS 2062 : 2011.
- 2.10 THE STEEL BRIDGE SHALL BE DESIGNED FOR ALL THE POSSIBLE FOLLOWING LOADS:
- LC-1 : LAUNCHING CONDITION
 - LC-2 : DURING ERECTION OF THE STEEL PIPES
 - LC-3 : NORMAL OPERATING CONDITION (STEEL PIPE WITH WATER AND FULL WIDTH OF THE SIDE WALK WAYS LOADED WITH 5 kN/m² OVER A LENGTH OF 4 m)
 - LC-4 : NORMAL OPERATING CONDITION (STEEL PIPE WITH WATER AND FULL WIDTH & FULL LENGTH OF THE SIDE WALK WAYS LOADED WITH 0.9m THICK SNOW OF DENSITY 4 kN/m³)
 - LC-5 : MAINTENANCE CONDITION (STEEL PIPE EMPTY AND FULL WIDTH OF THE SIDE WALK WAYS LOADED WITH 5 kN/m² OVER A LENGTH OF 4 m)
 - LC-6 : 40R LOADING AS PER IRC 6 (WITHOUT THE STEEL PIPE)
 - VARIOUS LOAD COMBINATIONS OF THE PRIMARY LOAD CASES WITH EARTHQUAKE AND WIND LOADS.
- 2.11 THE STEEL BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH IRC 24 (SECTION V).
- 2.12 FOR THERMAL, SEISMIC AND WIND LOADS REFER NOTE NO. 2.5 TO 2.7 ABOVE.
- 2.13 FOR OTHER REQUIREMENTS, REFER TECHNICAL SPECIFICATION.

REFERENCE DRAWINGS :

- AFC.4529.05.001 HEAD RACE TUNNEL
GENERAL ARRANGEMENT
LAYOUT PLAN & DETAILS
- AFC.4529.05.002 HEAD RACE TUNNEL
GENERAL ARRANGEMENT
LONGITUDINAL SECTION & SECTION 1-1
- AFC.4529.05.003 HEAD RACE TUNNEL
GENERAL ARRANGEMENT
LAYOUT PLAN & DETAILS
- AFC.4529.05.004 HEAD RACE TUNNEL
GENERAL ARRANGEMENT
LONGITUDINAL SECTION & SECTION 1-1
- AFC.4529.05.071 HEAD RACE TUNNEL
SALUN NALA
GENERAL ARRANGEMENT
SECTIONS

GENERAL NOTES :-

- 1.1. ALL DIMENSIONS ARE IN METRES AND ELEVATIONS, NORTHING AND EASTING ARE IN METRES, UNLESS OTHERWISE SPECIFIED.
- 1.2. THIS DRAWING IS BASED ON SURVEY DETAIL OBTAINED FROM SITE ON 12.12.2020.
- 1.3. THE EXCAVATION PROFILE AT PORTALS IS INDICATIVE AND MAY VARY DEPENDING UPON THE ENCOUNTERED CLASS OF ROCK.
- 1.4. FOR DETAILS OF INDIVIDUAL STRUCTURES, REFER SEPARATE DRAWINGS.

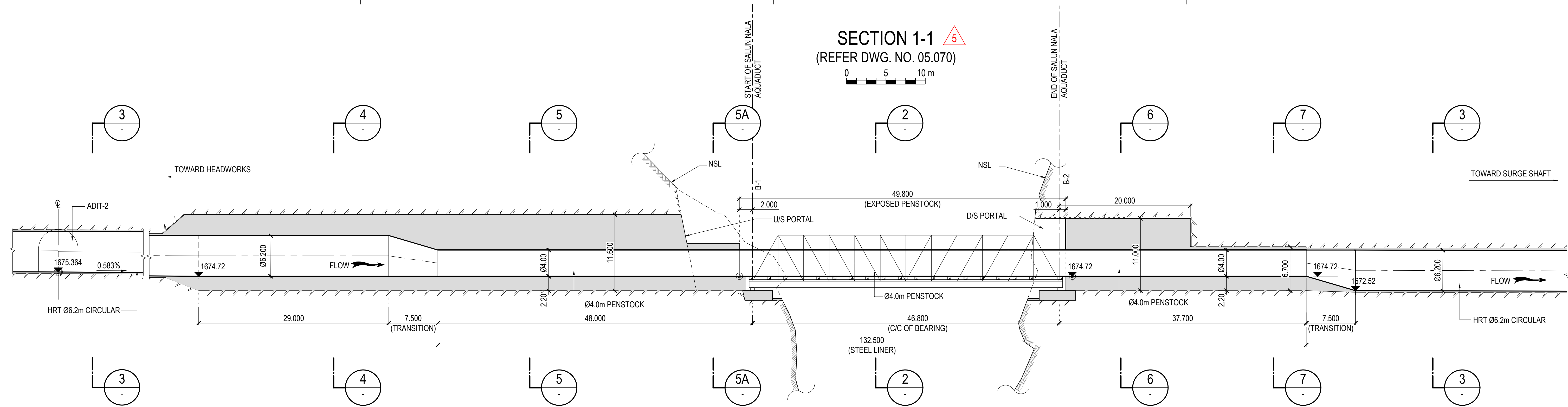
4	REVISED AS MARKED	KSB	TSK	SSE 27.01.2021
REV.No	REVISION DESCRIPTION	DRAWN	CHECKED	APPD

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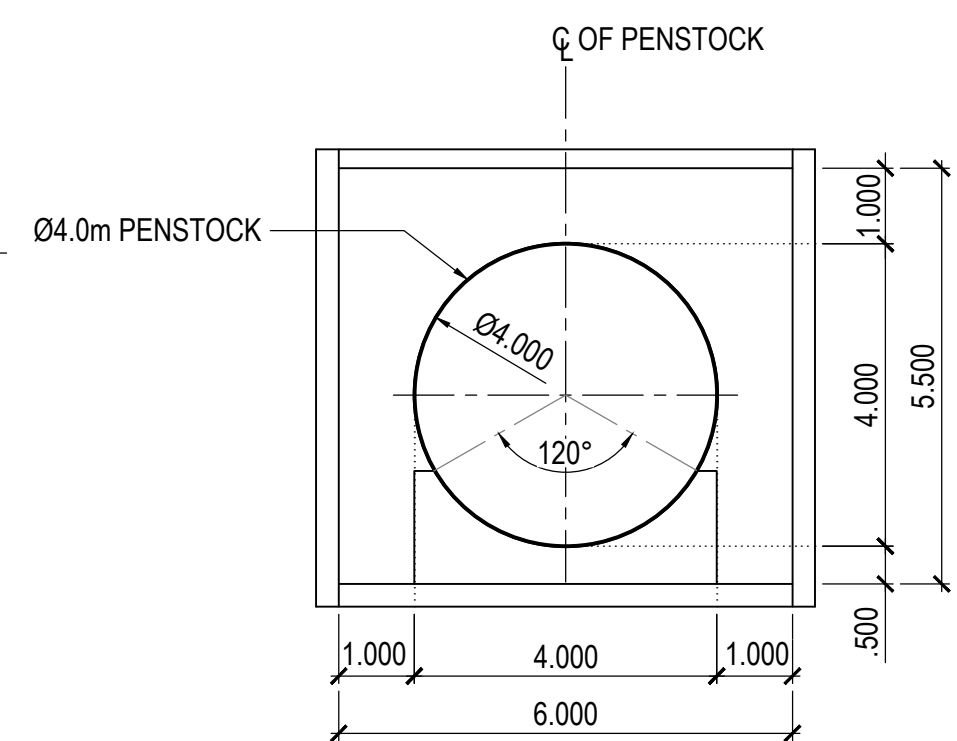
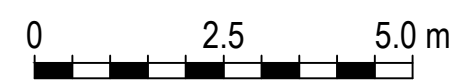
SALUN STREAM
GENERAL LAYOUT
PLAN

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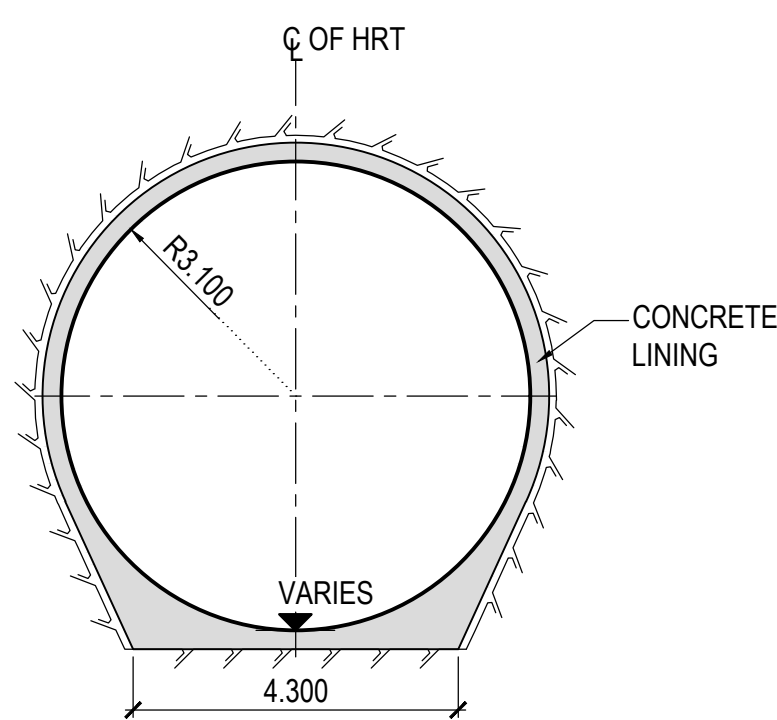
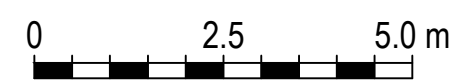
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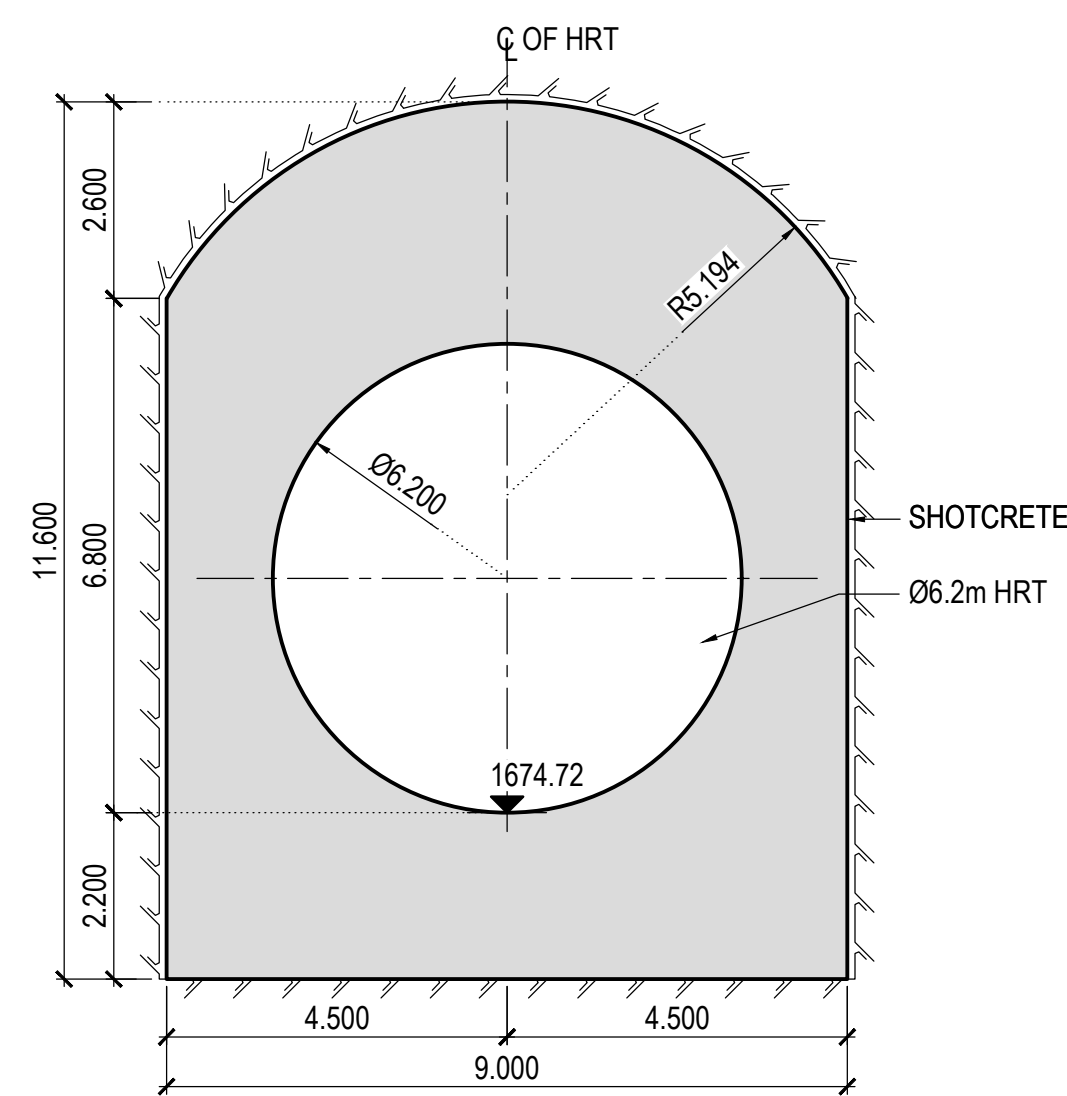
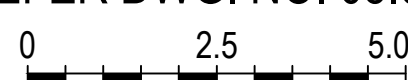
SECTION 2-2
(REFER DWG. NO. 05.070)



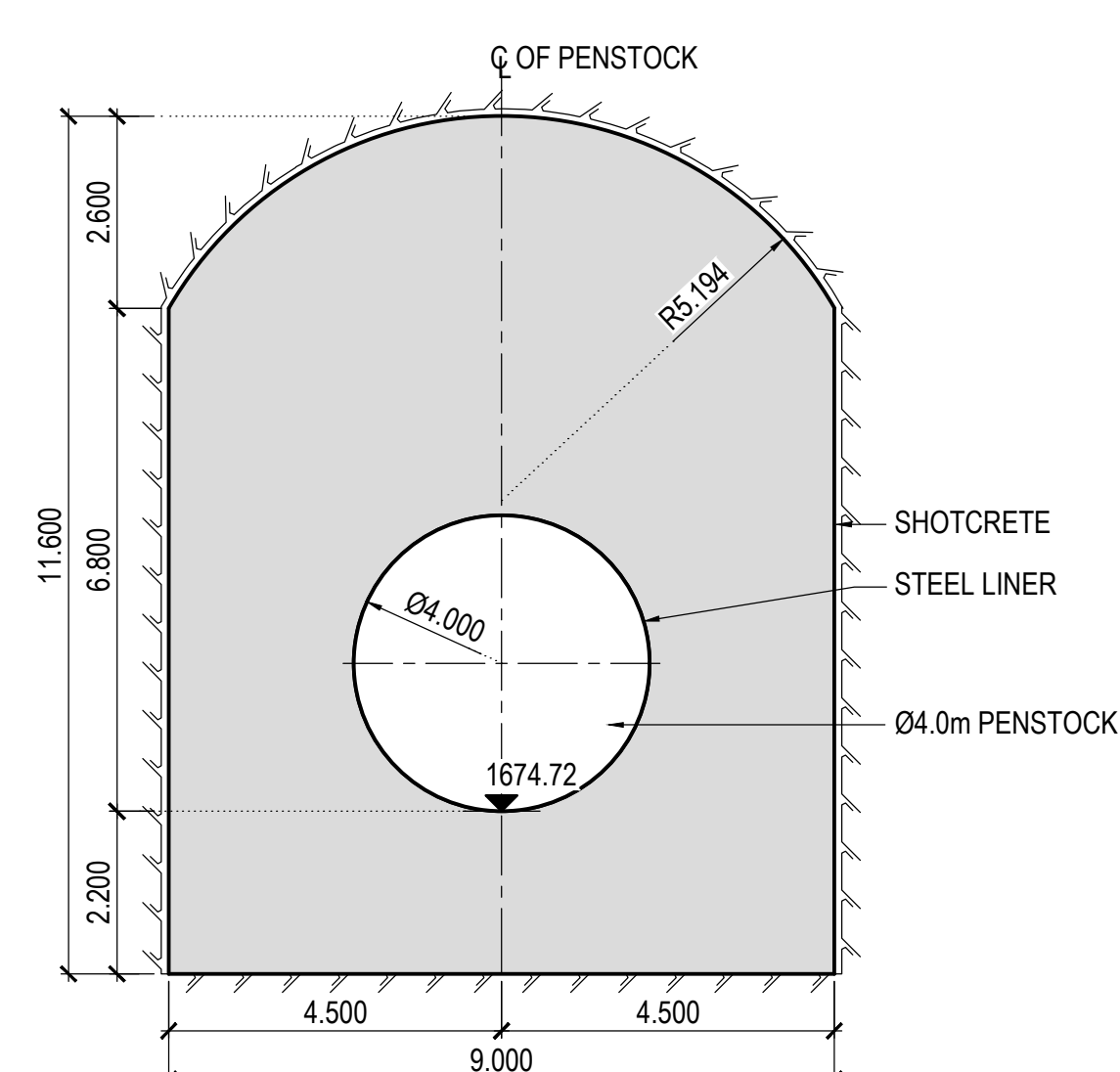
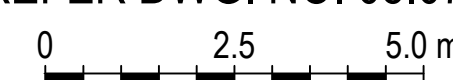
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(REFER DWG. NO. 05.070)



SECTION 4-4
(REFER DWG. NO. 05.070)



SECTION 5-5
(REFER DWG. NO. 05.070)



REFERENCE DRAWINGS :

- AFC.4529.05.001 HEAD RACE TUNNEL GENERAL ARRANGEMENT LAYOUT PLAN & DETAILS
AFC.4529.05.002 HEAD RACE TUNNEL GENERAL ARRANGEMENT LONGITUDINAL SECTION & SECTION 1-1
AFC.4529.05.070 HEAD RACE TUNNEL SALUN NALA GENERAL ARRANGEMENT LAYOUT PLAN

LEGEND:

- CONCRETE
ROCK LINE
SOIL/NSL

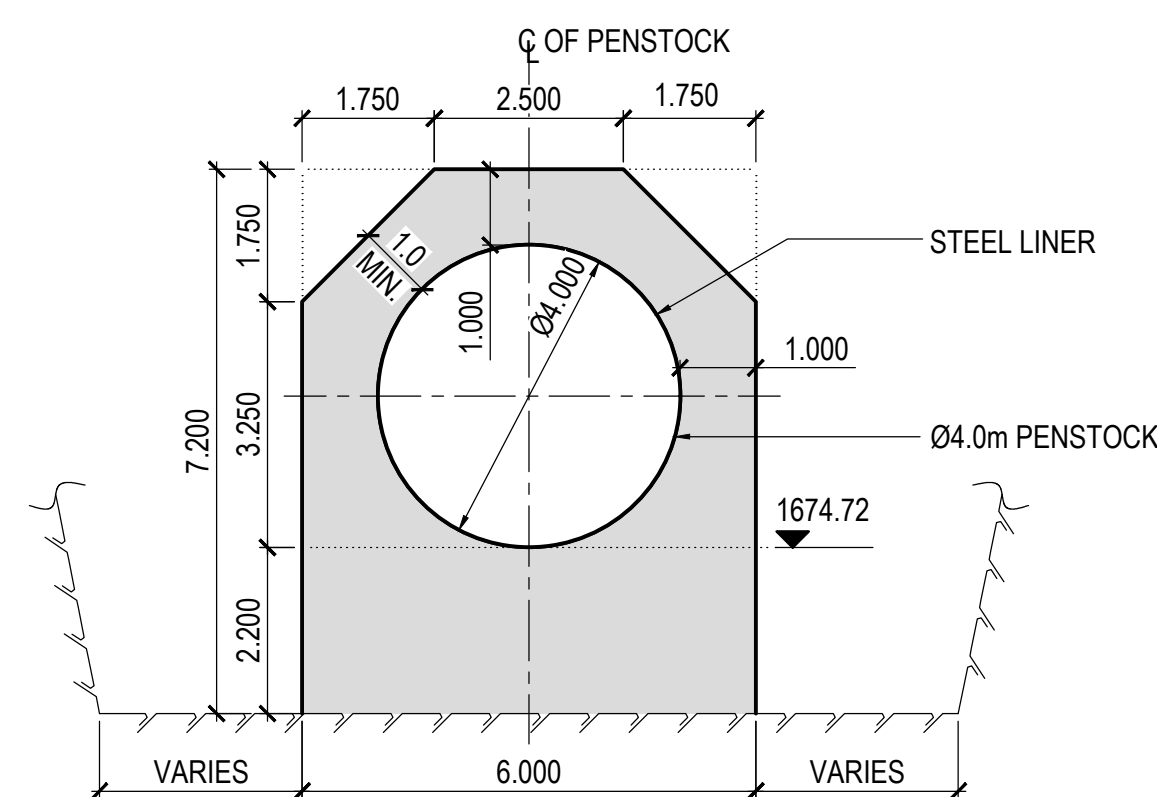
GENERAL NOTES :-

- 1.1. ALL DIMENSIONS AND ELEVATIONS, ARE IN METRES, UNLESS OTHERWISE SPECIFIED.
1.2. CROSS SECTION PROFILE IS OBTAINED FROM SITE ON 12.12.2020.
1.3. THE EXCAVATION PROFILE OF PORTALS IS INDICATIVE AND MAY VARY DEPENDING UPON THE ENCOUNTERED CLASS OF ROCK.
1.4. FOR DETAILS OF INDIVIDUAL STRUCTURES, REFER SEPARATE DRAWINGS.
1.5. FOR OTHER NOTES REFER DRAWING NO. AFC.4529.05.070

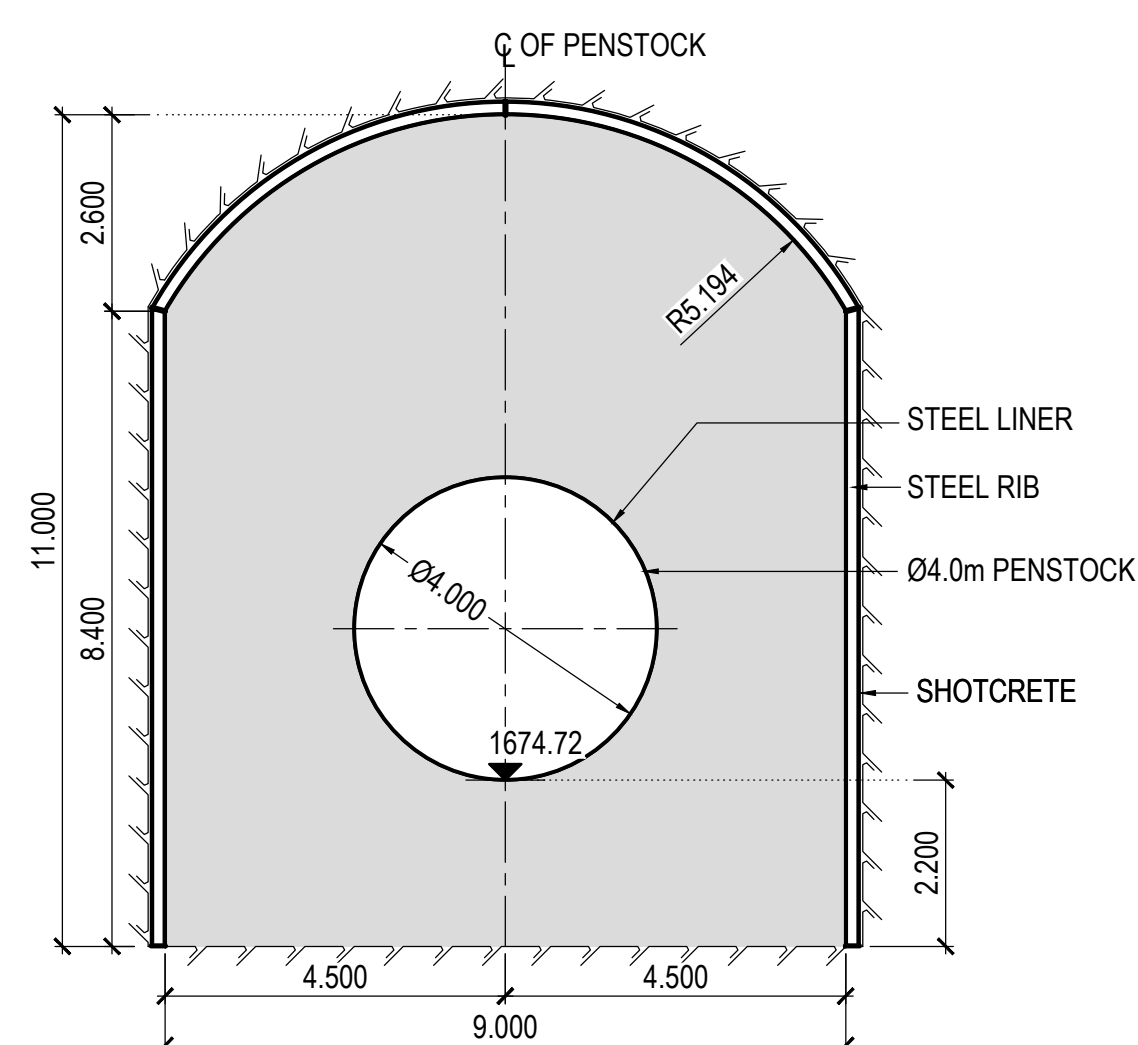
IMPORTANT NOTES :-

- 2.1 DELETED.
2.2 DELETED.

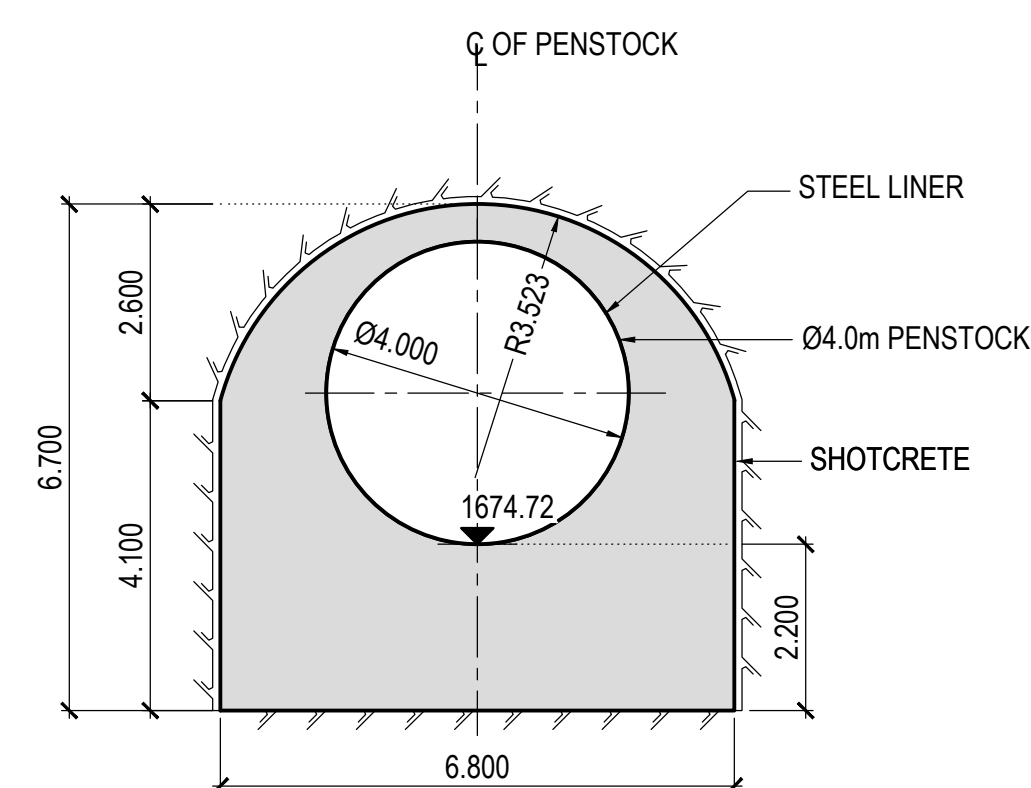
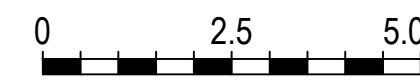
SECTION 5A-5A
(REFER DWG. NO. 05.070)



SECTION 6-6
(REFER DWG. NO. 05.070)



SECTION 7-7
(REFER DWG. NO. 05.070)



ISSUED FOR INFORMATION

5	GENERAL REVISION	KSB	TSK	SSE	25.01.2021
4	LENGTH OF STEEL LINER INCREASED	SOR	TSK	SSE	11.01.2021
REV.No	REVISION DESCRIPTION	DRAWN	CHECKED	APPD	DATE
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<input type="checkbox"/>	FEASIBILITY STUDY	<input type="checkbox"/>	TENDER DESIGN	<input type="checkbox"/>	AS-BUILT DRAWINGS

SALUN STREAM
GENERAL LAYOUT
L -SECTION

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