

Bangladesh Water Development Board



Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M
Division-2, BWDB, Satkhira

Re-excavation of Boro khal From km.0.000 to Km. 2.400 = 2.400 Km , Soto Khal From Km.0.000 to km.
4.800 = 4.800 Km, Dangi Khal From km.0.000 to km. 2.000 = 2.000 Km & Dapua Khal From Km. 0.000 To
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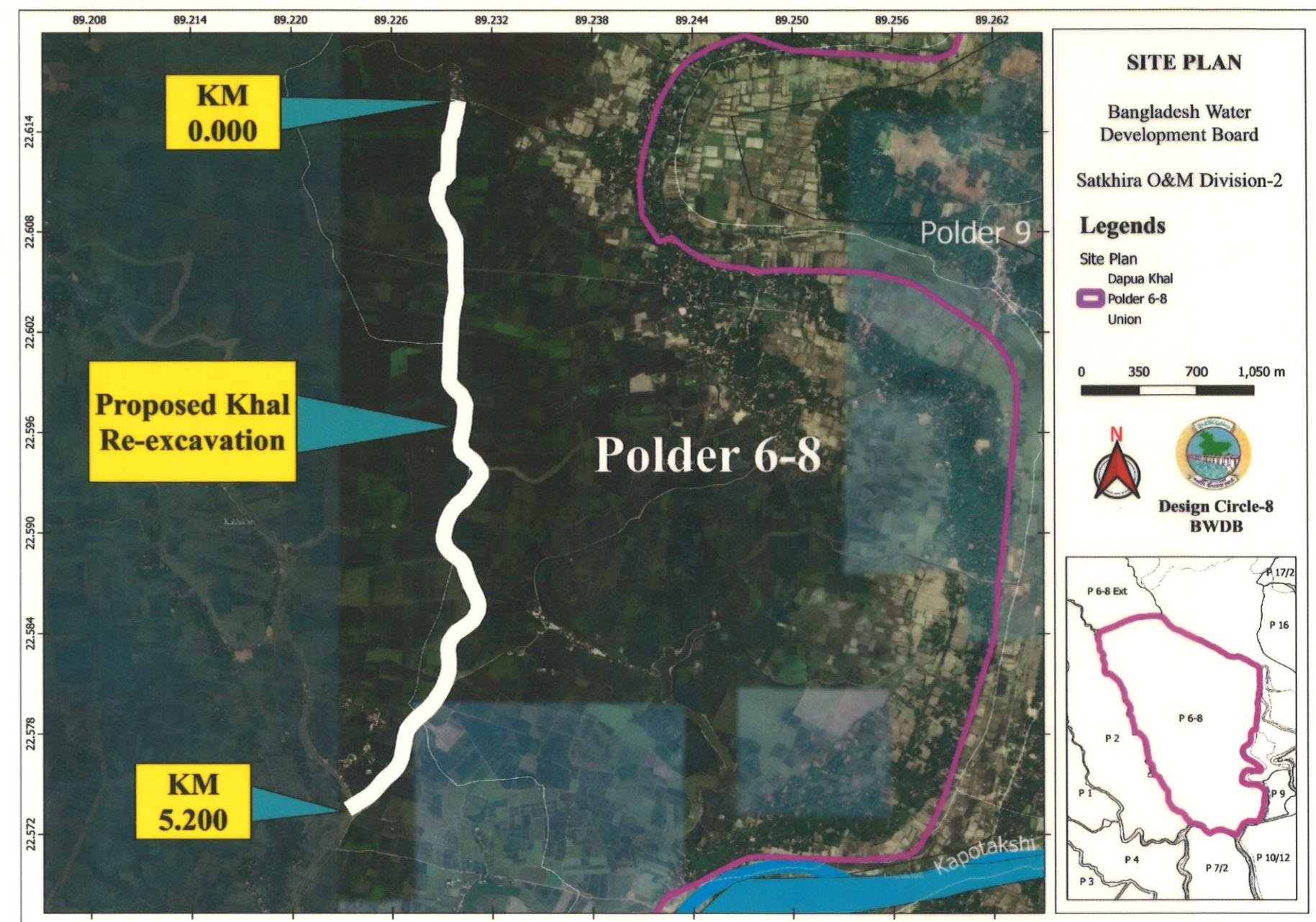
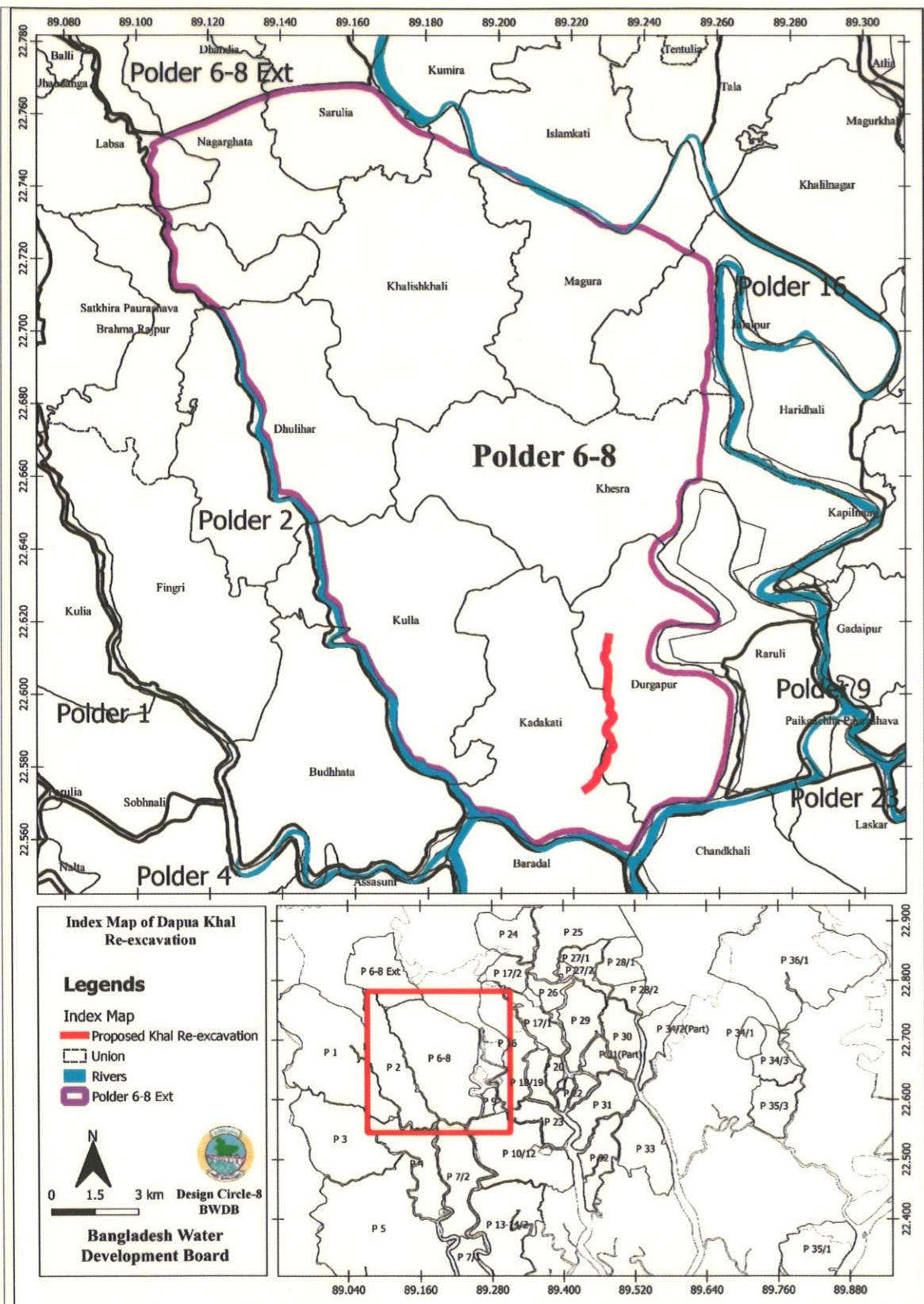
“ Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M
Division-2, BWDB, Satkhira.

(Design of Dapua Khal)

Satkhira O&M Division-2

Designed by:Design Circle-8,BWDB,Dhaka

February,2022



Bangladesh Water Development Board	
Office of The Superintending Engineer, Design Circle-8	
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INDEX MAP & SITE MAP FOR DAPUA KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0219-01/08

Administrative Notes. :

1. ALL MATERIALS AND WORK MUST CONFIRM WITH TECHNICAL SPECIFICATION OF BWDB.
2. WORK SHALL BE EXECUTED WITH PRIOR ADMINISTRATIVE AND FINANCIAL APPROVAL AND WITHIN DPP/ BUDGET PROVISION.
3. FOR ANY ERROR, OMISSION FIELD OFFICE IS HIGHLY RECOMMENDED TO INFORM IT TO CONCERN DESIGN CIRCLE OF BWDB.
4. NECESSARY LAND SHALL BE ARRANGED FOR EXCAVATION WORK.

Technical Notes. :

1. ALL DIMENSIONS ARE METRE & ALL ELEVATIONS ARE IN METRE (PWD) UNLESS OTHERWISE MENTIONED IN THE DRAWING.
2. RE-EXCAVATION WORK SHALL BE STARTED FROM D/S OF CHANNEL.
3. TYPICAL DESIGN SECTIONS ARE PROVIDED IN THIS DESIGN FOR RE-EXCAVATION. X-SECTIONS AT AN INTERVAL NOT MORE THAN 150.00m TO BE TAKEN BY THE FIELD OFFICE FOR THE ESTIMATION OF ACTUAL VOLUME OF EARTH CUTTING.
4. EXCAVATED EARTH SHALL NOT BE DEPOSITED WITHIN THE EXISTING SECTION OF THE RIVER / KHAL. EXCAVATED EARTH SHALL BE DEPOSITED AT A DISTANCE OF AT LEAST 3.00 METER AWAY FROM THE BANK LINE OF THE RIVER / KHAL (IN A DISCONTINUOUS MANNER TO PROVIDE SPACE FOR OVERLAND FLOW TOWARDS KHAL) FROM WHERE NO FLOW BACK OF THE EXCAVATED EARTH IN THE RIVER IS POSSIBLE. UNDER NO CIRCUMSTANCES FLOW BACK OF THE EXCAVATED EARTH INTO THE RIVER SHALL BE ALLOWED. DEPOSITION OF EARTH NOT BE MORE THAN 30M OF CONTINUOUS LENGTH AND MINIMUM 5M INTERVAL TO BE PROVIDED.
5. EXCAVATED EARTH MAY BE USED FOR CONSTRUCTION / RE-SECTIONING OF DYKE / ROAD/ EMBANKMENT (WHERE APPLICABLE). EXCAVATED EARTH MAY BE ALSO USED FOR FILLING OF DITCH, POND, LOW LAND ETC.
6. EXCAVATED EARTH SHALL NOT BE DEPOSITED ON ANY OPEN CHANNEL AND AT THE FLOOD PLANE OF RIVER.
7. DEPOSITED EARTH TO BE DRESSED IN A REGULAR SHAPE & CLOSED TURFING WITH PLANTATION TO BE PROVIDED OVER DEPOSITED EARTH. PLANTATION OF VETIVER (BINNA GRASS) MAY BE PROVIDED ON SLOPE OF DEPOSITED EARTH.
8. NO FILLING SHALL BE DONE WHERE THE EXISTING BED LEVEL OF KHAL IS LOWER THAN THE DESIGN BED LEVEL (IF EXIST).
9. A SMOOTH TRANSITION (1:100) SHOULD BE PROVIDED BETWEEN TWO DIFFERENT BED WIDTH AND BED LEVEL AND ALSO AT THE OUTER END OF EXISTING CULVERT/BIDGE (IF REQUIRED).
10. THE PROPOSED WORK SHALL BE EXECUTED PREFERABLY IN DRY SEASON.
11. EXCAVATION MUST BE DONE VERY CAREFULLY SO THAT BASE SLAB/ FOUNDATION OF THE EXISTING REGULATOR/CULVERT/BIDGE ETC (IF ANY) DO NOT BE DISTURBED .
12. IF THERE EXISTS ANY STRUCTURE OTHER THAN BRIDGE WITHIN THE PROPOSED LENGTH OF THE RIVER, RE-EXCAVATION WORK IS PROHIBITED THROUGHOUT THE LENGTH OF THAT STRUCTURE.
13. DESIGN BED LEVEL SHALL NOT BE BELOW THE FOUNDATION TOP LEVEL OF THE EXISTING STRUCTURES (IF ANY) IN THE RIVER. IF THE DESIGN BED LEVEL IS BELOW THE FOUNDATION TOP LEVEL THEN THE DIFFERENCE BETWEEN THESE LEVELS SHALL BE MATCHED IN A SLOPE 1:100, OR AT A DISTANCE OF 100 M, WHICHEVER IS HIGHER (U/S AND D/S OF THE STRUCTURE) AS SHOWN IN THE DRAWING.
14. RE-EXCAVATION OF KHAL/ RIVER WILL FACILITATE QUICK DRAINAGE, FLUSHING & STORAGE OF WATER. BUT COMPLETE DRAIN OUT OF BEEL AREA SHALL NOT BE ALLOWED FOR MAINTAINING ECOLOGICAL BALANCE.
15. IF THE BED LEVEL OF OUTFALL KHAL/RIVER IS HIGHER THAN THE DESIGN BED LEVEL OF PROPOSED KHAL, THEN RE-EXCAVATION OF PROPOSED KHAL TO BE IMPLEMENTED AFTER IMPLEMENTATION OF RE-EXCAVATION OF OUTFALL KHAL/RIVER.
16. RE-EXCAVATION OF KHAL SHALL BE STARTED FROM D/S.
17. THIS DRAWING HAS BEEN PREPARED AS PER PROPOSAL SUBMITTED BY SE, KHULNA O & M CIRCLE, BWDB, KHULNA VIDE HIS OFFICE MEMO NO-812, DATE: 02/02/2022

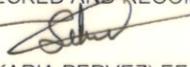
Bangladesh Water Development Board

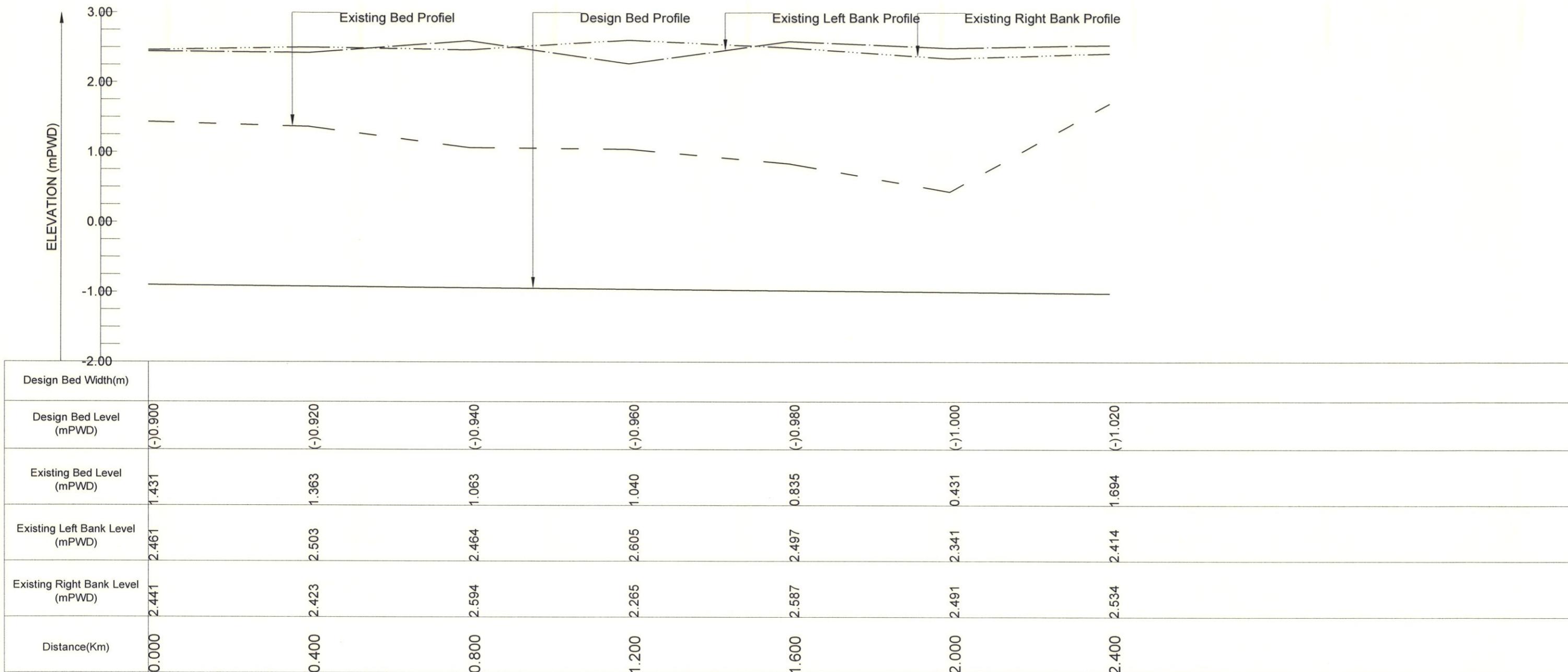
Office of The Superintending Engineer, Design Circle-8

Drainage Improvement of Polder No. 1, 2, 6-8 & 6-8 (Ext) in Satkhira District, Under Satkhira O&M Division-2, BWDB, Satkhira

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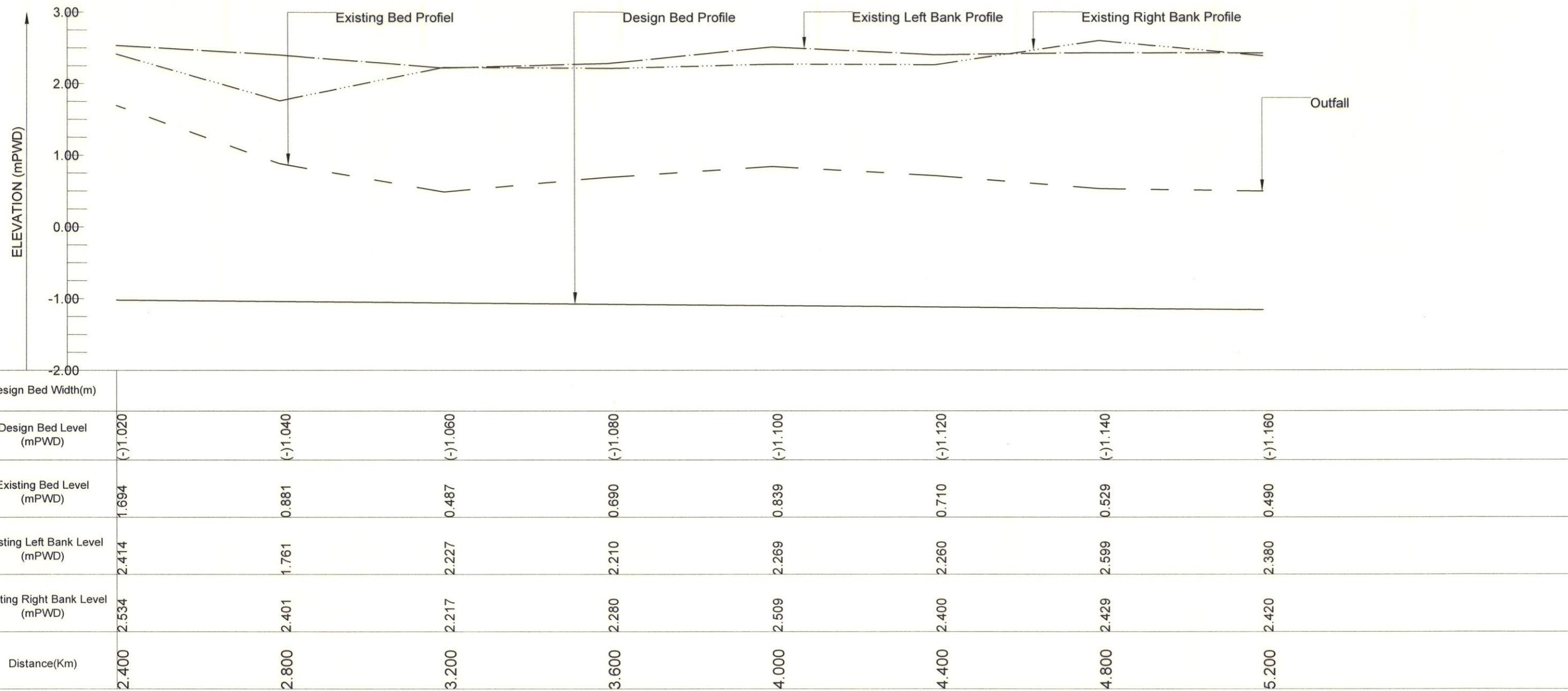
NOTES FOR DAPUA KHAL

DESIGNED BY:  (SAKIB BIN RAFI),AE	APPROVED BY:  (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY:  (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0219-02/08

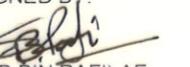


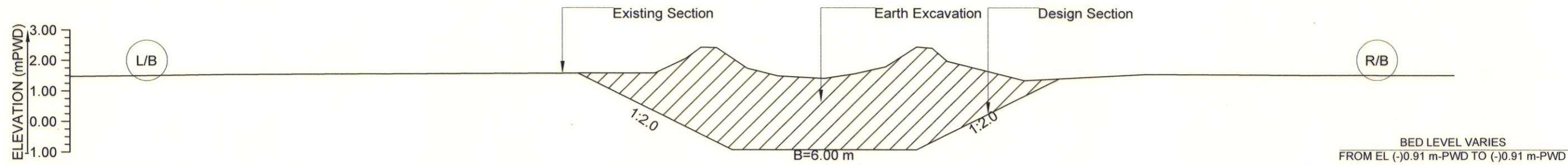
LONG SECTION OF DAPUA KHAL APPLICABLE FROM KM 0.000 TO KM 2.400

Bangladesh Water Development Board	
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LONG SECTION OF DAPUA KHAL	
DESIGNED BY: (SAKIB BIN RAFI),AE	APPROVED BY: (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0219-03/08

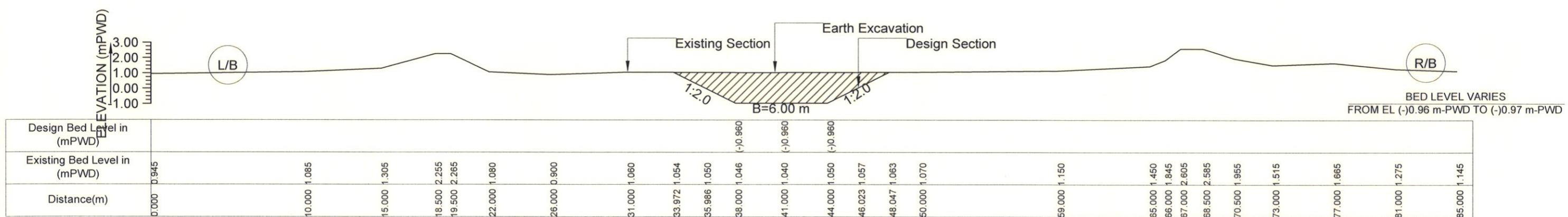


LONG SECTION OF DAPUA KHAL APPLICABLE FROM KM 2.400 TO KM 5.200

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DESIGNED BY:	APPROVED BY:
 (SAKIB BIN RAFI),AE	 (MOHAMMAD SAIF UDDIN),SE
CHECKED AND RECOMMENDED BY:	
 (JAKARIA PERVEZ),EE	
Date:2022-02-16	Drawing No:DC8-0219-04/08



TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 0.000



TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 1.200

Bangladesh Water Development Board

Office of The Superintending Engineer, Design Circle-8

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TYPICAL CROSS SECTION OF DAPUA KHAL

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

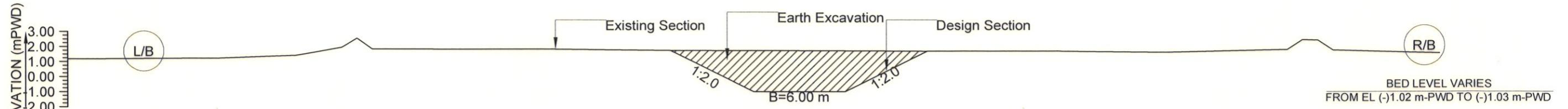
(MOHAMMAD SAIF UDDIN),SE

CHECKED AND RECOMMENDED BY:

(JAKARIA PERVEZ),EE

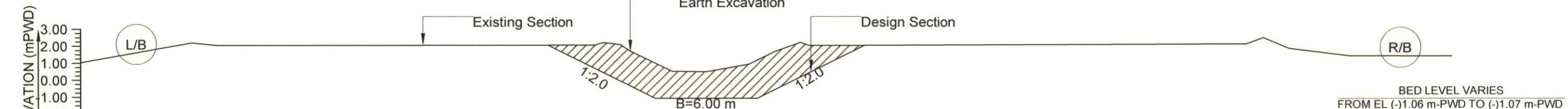
Date:2022-02-16

Drawing No:DC8-0219-05/08



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	
Distance(m)	0.000 1.164
10.000 1.214	
15.000 1.384	
18.000 1.924	
19.000 2.534	
20.000 1.824	
24.000 1.804	
32.000 1.794	
39.500 1.714	
42.261 1.708	
45.000 1.702	(-)1.020
48.000 1.694	(-)1.020
51.000 1.679	(-)1.020
53.674 1.666	
56.000 1.654	
64.000 1.664	
72.000 1.584	
80.000 1.764	
81.000 2.414	
82.000 2.384	
83.000 1.724	
88.000 1.574	
90.000 1.524	

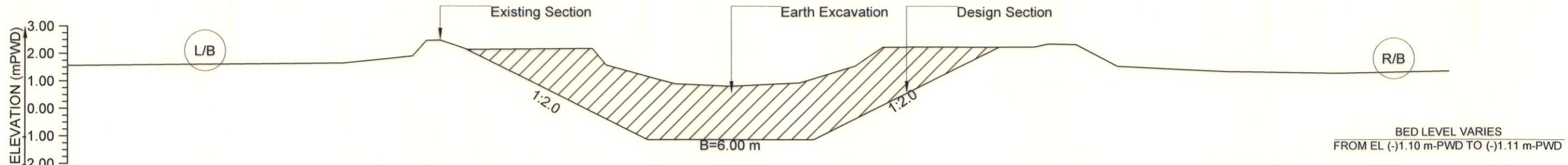
TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 2.400



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	
Distance(m)	0.000 1.027
6.500 2.187	
8.000 2.037	
20.000 2.047	
27.257 2.062	
30.000 2.067	
30.500 2.217	
31.500 2.087	
32.000 1.737	
33.500 1.005	(-)1.060
34.500 0.517	
36.500 0.487	(-)1.060
39.000 0.937	
39.500 1.187	
40.500 1.687	
42.000 2.227	
42.500 2.037	
45.720 2.050	
55.000	
68.000 2.137	
69.000 2.507	
70.500 1.867	
74.000 1.437	
80.000 1.417	

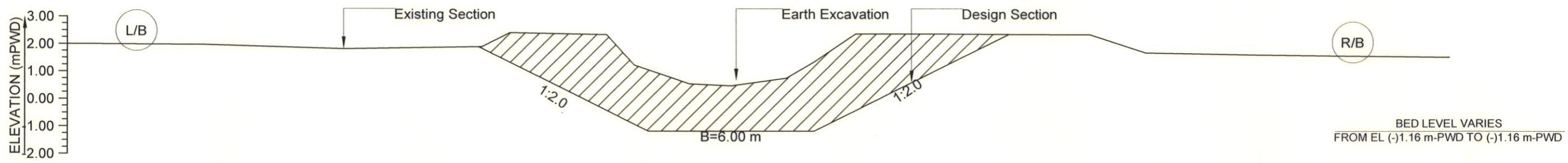
TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 3.200

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Office of The Superintending Engineer, Design Circle-8	
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TYPICAL CROSS SECTION OF DAPUA KHAL	
DESIGNED BY: (SAKIB BIN RAFI), AE	APPROVED BY: (MOHAMMAD SAIF UDDIN), SE
CHECKED AND RECOMMENDED BY: (JAKARIA PERVEZ), EE	Date: 2022-02-16 Drawing No: DC8-0219-06/08



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	1.559
Distance(m)	0.000 1.559
	10.000 1.669
	12.500 1.929
	13.000 2.499
	13.500 2.509
	14.381 2.209
	17.691 2.197
	19.000 2.209
	19.500 1.609
	21.000 1.201 (-1.100)
	22.000 0.929
	24.000 0.839 (-1.100)
	26.500 0.969
	27.000 1.119 (-1.100)
	28.500 1.569
	29.500 2.259
	30.367 2.261
	33.733 2.267
	35.000 2.269
	35.500 2.379
	36.500 2.359
	38.000
	42.000 1.369
	46.000 1.309
	50.000 1.389

TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 4.000



Design Bed Level in (mPWD)	
Existing Bed Level in (mPWD)	2.000
Distance(m)	0.000 2.000
	5.000 1.970
	10.000 1.830
	14.864 1.908
	16.000 2.420
	17.932 2.381
	19.500 2.350
	20.500 1.240
	21.000 1.070 (-1.160)
	22.500 0.560
	24.000 0.490 (-1.160)
	26.000 0.770
	27.000 1.360 (-1.160)
	28.500 2.380
	30.525
	31.000
	34.050 2.365
	37.000
	39.000 1.690
	43.000 1.610
	50.000 1.530

TYPICAL CROSS SECTION OF DAPUA KHAL AT KM 5.200

Bangladesh Water Development Board

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TYPICAL CROSS SECTION OF DAPUA KHAL

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

(MOHAMMAD SAIF UDDIN),SE

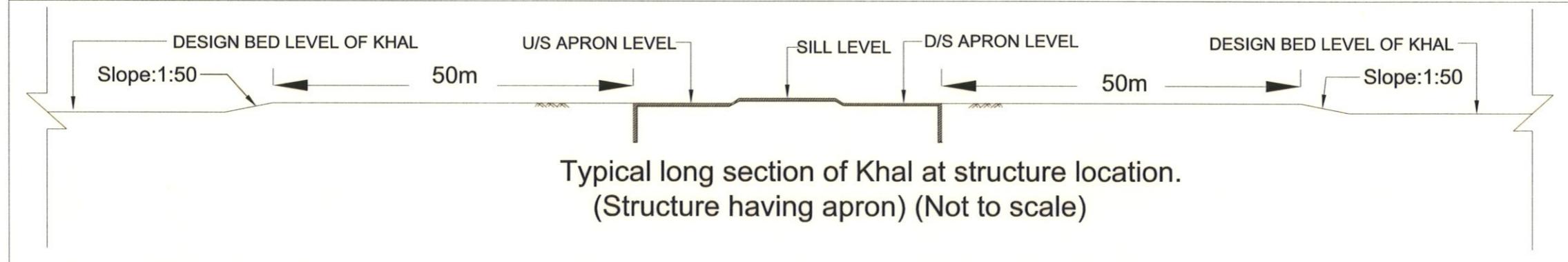
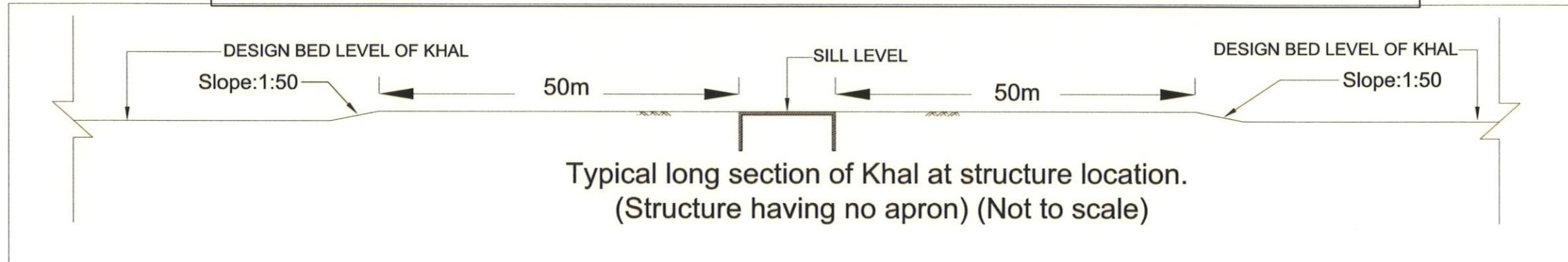
CHECKED AND RECOMMENDED BY:

(JAKARIA PERVEZ),EE

Date:2022-02-16

Drawing No:DC8-0219-07/08

Guideline for matching the excavated level of khal to the existing foundation level of structure (where foundation level of structure is above the design bed level of khal)



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DETAILS

DESIGNED BY:

(SAKIB BIN RAFI),AE

APPROVED BY:

(MOHAMMAD SAIF UDDIN),SE
11/2/22

CHECKED AND RECOMMENDED BY:

(JAKARIA PERVEZ),EE

Date:2022-02-16

Drawing No:DC8-0219-08/08