



GOVERNMENT OF PEOPLE'S REPUBLIC OF BANGLADESH  
MINISTRY OF ROAD TRANSPORT AND BRIDGES  
ROADS AND HIGHWAYS DEPARTMENT

**RAJUK PURBACHAL 300 FEET EXPRESSWAY TO MADANI AVENUE -  
SYLHET HIGHWAY LINK ROAD PROJECT**

FINAL DESIGN

23 July 2025

CLIENT:



24 ENGINEER CONSTRUCTION BRIGADE,  
ZIA COLONY, DHAKA CANTONMENT,  
DHAKA-1206.

CONSULTANT:

**GEOSTR<sup>GS</sup>**

**GEOSTRUCT CONSULTANTS LIMITED**  
UNIT: 6A, HOUSE: 47, ROAD: 15  
(RABINDRA SARANI)  
SECTOR: 03, UTTARA, DHAKA-1230.

GEOMETRIC DESIGN

## LIST OF DRAWINGS

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3	108-LR-GD-002	GENERAL NOTES	0
4	108-LR-GD-003	GEOMETRIC DESIGN	0
5	108-LR-GD-004	GEOMETRIC DESIGN (SINGLE U-TURN & ISLAND)	0
6	108-LR-GD-005	GEOMETRIC DESIGN (NEW JERSEY BARRIER & KERB STONE)	0
7	108-LR-GD-006	GEOMETRIC DESIGN (ISLAND)	0
8	108-LR-GD-007	GEOMETRIC DESIGN (ISLAND)	0
9	108-LR-GD-008	GEOMETRIC DESIGN (BACK TO BACK U TARN)	0
10	108-LR-GD-009	GEOMETRIC DESIGN (ISLAND & CRASH BARRIER)	0
11	108-LR-GD-010	GEOMETRIC DESIGN (ISLAND)	0
12	108-LR-GD-011	GEOMETRIC DESIGN (ISLAND & CRASH BARRIER)	0
13	108-LR-GD-012	GEOMETRIC DESIGN (ISLAND)	0
14	108-LR-GD-013	GEOMETRIC DESIGN (ISLAND)	0
15	108-LR-GD-014	GEOMETRIC DESIGN (ISLAND & CRASH BARRIER)	0
16	108-LR-GD-015	GEOMETRIC DESIGN (ISLAND)	0
17	108-LR-GD-016	CO-ORDINATES OF PEDESTRIAN CROSSING C.C. LAYER	0
18	108-LR-GD-017	GEOMETRIC DESIGN (CRASH BARRIER)	0
19	108-LR-GD-018	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 1 & 2)	0
20	108-LR-GD-019	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 3 TO 5)	0
21	108-LR-GD-020	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 6 & 7)	0
22	108-LR-GD-021	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 8 & 9)	0
23	<b>LANE MARKING DESIGN</b>		
24	108-LR-MD-022	LAYOUT PLAN OF LANE MARKING	0
25	108-LR-MD-023	LAYOUT PLAN OF LANE MARKING	0
26	108-LR-MD-024	LAYOUT PLAN OF LANE MARKING	0
27	108-LR-MD-025	LAYOUT PLAN OF LANE MARKING	0
28	108-LR-MD-026	LAYOUT PLAN OF LANE MARKING	0
29	108-LR-MD-027	LAYOUT PLAN OF LANE MARKING	0
30	108-LR-MD-028	LAYOUT PLAN OF LANE MARKING	0
31	108-LR-MD-029	LAYOUT PLAN OF LANE MARKING	0
32	108-LR-MD-030	LAYOUT PLAN OF LANE MARKING	0
33	108-LR-MD-031	LAYOUT PLAN OF LANE MARKING	0
34	108-LR-MD-032	LAYOUT PLAN OF LANE MARKING	0
35	108-LR-MD-033	LAYOUT PLAN OF LANE MARKING	0
36	108-LR-MD-034	LAYOUT PLAN OF LANE MARKING	0
37	108-LR-MD-035	DETAILS OF F1, F2, F3 & F4	0
38	108-LR-MD-036	DETAILS OF F5, F7 & F9	0
39	108-LR-MD-037	DETAILS OF F12, F13, F14, F18	0
40	108-LR-MD-038	DETAILS OF RUMBLE STRIP & NEW JERSEY	0
41	108-LR-MD-039	DETAILS OF CHEVRON MARKING	0
42	108-LR-MD-040	DETAILS OF YELLOW BOX	0

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43	SIGNAGE DESIGN		
44	108-LR-SD-041	LAYOUT PLAN OF SIGNAGE	0
45	108-LR-SD-042	LAYOUT PLAN OF SIGNAGE	0
46	108-LR-SD-043	LAYOUT PLAN OF SIGNAGE	0
47	108-LR-SD-044	LAYOUT PLAN OF SIGNAGE	0
48	108-LR-SD-045	LAYOUT PLAN OF SIGNAGE	0
49	108-LR-SD-046	LAYOUT PLAN OF SIGNAGE	0
50	108-LR-SD-047	LAYOUT PLAN OF SIGNAGE	0
51	108-LR-SD-048	LAYOUT PLAN OF SIGNAGE	0
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60	108-LR-SD-057	DETAIL OF SIGNAGE	0
61	108-LR-SD-058	DETAIL OF SIGNAGE	0
62	108-LR-SD-059	DETAILS OF OVERHEAD MOUNTED SIGNAGE	0
63	108-LR-SD-060	CROSS SECTION DETAILS OF OVERHEAD MOUNTED SIGNAGE	0
64	108-LR-SD-061	CROSS SECTION DETAILS OF SIGNAGE	0

## 1.0 GENERAL:

- 1.1 THIS SPECIFICATION SHALL READ IN CONJUNCTION WITH THE RELEVANT DRAWINGS AND NOTES.
- 1.2 THE CONTRACTOR SHALL SUPPLY, FABRICATE AND ERECT ALL STEELWORKS SHOWN ON THE DRAWINGS.
- 1.3 THE CONTRACTOR SHALL ALLOW FOR ALL NECESSARY OPERATIONS, INCLUDING HOISTING AND FIXING IN POSITION; AND SHALL SUPPLY ALL TOOLS, MACHINERY AND APPLIANCES, INCLUDING DRIFT PINS AND FITTING-UP BOLTS, NECESSARY FOR THE EXPEDITIOUS HANDLING OF THE WORK. THE SUITABILITY AND CAPACITY OF ALL PLANT AND EQUIPMENT USED FOR ERECTION.

## 2.0 MATERIALS:

### 2.1 STRUCTURAL STEEL:

- 2.1.1 ALL STRUCTURAL STEEL SHALL BE GRADE S355 J0/J2 AND CONFORM TO BS EN 10025, BS EN 10210, BS EN 10113M BS EN 10149, BS EN 10056 OR RELEVANT ASTM CODES AND STANDARDS UNLESS SPECIFICALLY MENTIONED OTHERWISE.

- 2.1.1.1 THE STEEL SHALL BE NEW AND WELL AND CLEANLY ROLLED TO THE DIMENSIONS AND SECTIONS.

### 3.0 BOLTS:

- 3.1 HIGH STRENGTH FRICTION GRIP BOLTS SHALL CONFORM TO BS 4395: PART 1 GENERAL GRADE OR RELEVANT ASTM STANDARDS. ALL HIGH STRENGTH FRICTION GRIP BOLTS SHALL BE FITTED WITH LOAD INDICATING WASHERS.
- 3.2 BLACK BOLTS SHALL CONFORM TO BS 4190 GRADE 4.6 OR RELEVANT ASTM STANDARDS

## 4.0 ELECTRODES

- 4.1 WELDING ELECTRODES FOR MANUAL SHIELDED METAL-ARC WELDING SHALL CONFORM TO BS EN 499 OR RELEVANT ASTM CODES AND STANDARDS TYPE OF ELECTRODE USED SHALL BE COMPATIBLE WITH THE GRADE OF STEEL TO BE WELDED.

- 4.2 DRYING PROCEDURE SHALL BE COMPLIED AS FOLLOWS:

TYPE OF ELECTRODE	DRYING TEMPERATURE	DRYING PERIOD
E 35	100° C MINIMUM	1 HOUR MINIMUM
E 42	350° C MINIMUM	1 HOUR MINIMUM

### 4.3 SHEER STUD:

- 4.3.1 PROPOSED STUD SHALL CONFORM WITH BS EN ISO13918 OR RELEVANT ASTM CODES AND STANDARDS. THE STUD SHALL BE FIXED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

- 4.3.2 SHEER STUDS INSTALLED ARE SUBJECT TO BEND TEST.

## 5.0 JOINTS AND CONNECTIONS:

- 5.1 THE CONTRACTOR SHALL SUBMIT THE DETAIL SHOP DRAWINGS AND CALCULATIONS TO THE ENGINEER

## 6.0 FABRICATION

- 6.1 FABRICATION SHALL BE IN ACCORDANCE WITH BS EN 1090-2 AND BS 5950 OR RELEVANT ASTM CODES AND STANDARDS.
- 6.2 CUTTING OF STEEL MEMBERS MAY BE DONE BY SHEARING, CROPPING, SAWING OR MACHINE FLAME CUTTING.
- 6.3 FLAME CUT EDGES SHALL BE RELATIVELY FREE FROM GOUGES AND NOTCHES. GOUGES GREATER THAN 5 MM SHALL BE REMOVED BY GRINDING.

## 7.0 BOLTS, NUTS, WASHERS AND HOLES:

- 7.1 ALL CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH FRICTION GRIP (HSFG) BOLTS UNLESS OTHERWISE APPROVED OR UNLESS WELDING IS SPECIFIED ON THE DRAWINGS. HSFG BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF BS 4604 OR RELEVANT ASTM STANDARD. LOAD INDICATING WASHERS OF APPROVED TYPE SHALL BE USED TO DETERMINE THE REQUIRED TENSION IN THE BOLT AFTER TIGHTENING.
- 7.2 ALL HOLES SHALL BE DRILLED AND DISTS SHALL BE REMOVED. WHERE THE NUMBER OF PILES IN THE GRIP DOES NOT EXCEED THREE. THE DIAMETERS OF THE HOLES MUST BE 2 MM LARGER THAN THOSE OF THE BOLTS FOR DIAMETER UPTO 24 MM. ALL HOLES SHALL BE ACCURATELY MARKED OFF FROM A TEMPLATE OR CORRESPONDING PLATE. NO HOLE SHALL BE MADE BY FLAME CUTTING.
- 7.3 THE LENGTH OF BOLT SHALL BE CALCULATED BY ADDING TO THE GRIP, THE ALLOWANCE AS SPECIFIED IN BS 4604 OR RELEVANT ASTM CODES AND STANDARDS
- 7.4 AT THE TIME OF ASSEMBLY, SURFACES IN CONTACT SHALL BE FREE OF PAINT OR ANY OTHER APPLIED FINISH, OIL, DIRT, RUST, LOOSE SCALE, BURRS AND ANY OTHER DEFECTS WHICH WOULD PREVENT SOLID SEATING OF THE PARTS OR WOULD INTERFERE WITH THE DEVELOPMENT OF FRICTION BETWEEN THEM.
- 7.5 ALL BOLTS SHALL BE TIGHTENED TO GIVE A BOLT TENSION NOT LESS THAN THAT SPECIFIED IN BS 4604 RELEVANT ASTM CODES AND STANDARDS

## 8.0 WELDING:

- 8.1 ALL WELDING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF BS 5135 AND AWS D1.1
- 8.2 SURFACE TO BE WELDED SHALL BE FREE FROM LOOSE SCALE, SLAG, RUST, GREASE, PAINT AND ANY FOREIGN MATERIAL.
- 8.3 PREPARATION OF EDGES BY GAS CUTTING SHALL, WHEREVER PRACTICABLE, BE DONE WITH A MECHANICALLY GUIDED TORCH.
- 8.4 PARTS TO BE FILLET WELDED SHALL BE BROUGHT IN AS CLOSE CONTACT AS PRACTICABLE AND IN NO EVENT SHALL BE SEPARATED MORE THAN 4.5 MM. IF THE SEPARATION IS 1.5 MM OR GREATER, THE SIZE OF THE FILLET WELDS SHALL BE INCREASED BY THE AMOUNT OF THE SEPARATION.
- 8.5 ABUTTING PARTS TO BE BUTT WELDED SHALL BE CAREFULLY ALIGNED. MISALIGNMENTS GREATER THAN 3.0 MM SHALL BE CORRECTED AND, IN MAKING THE CORRECTION, THE PARTS SHALL NOT BE DRAWN INTO A SHARPER SLOPE THAN TWO DEGREES.
- 8.6 THE WORK SHALL BE POSITIONED FOR FLAT WELDING WHENEVER PRACTICABLE.
- 8.7 IN ASSEMBLING AND JOINTING PARTS OF A STRUCTURE OR OF BUILDUP MEMBERS, THE PROCEDURE AND SEQUENCE OF WELDING SHALL BE SUCH AS WILL AVOID NEEDLESS DISTORTION AND MINIMIZE SHRINKAGE STRESSES.
- 8.8 ALL FULL PENETRATION BUTT WELDS SHALL HAVE THE ROOT OF THE INITIAL LAYER GOUGED OR CHIPPED OUT ON THE BACK SIDE BEFORE WELDING IS STARTED FROM THAT SIDE, AND SHALL BE SO WELDED AS TO SECURE SOUND METAL AND COMPLETE FUSION THROUGHOUT THE ENTIRE INTENDED CROSS-SECTION.
- 8.9 BUTT WELDS MADE WITH THE USE OF A BACKING OF THE SAME MATERIALS AS THE BASE METAL SHALL HAVE THE WELD METAL THOROUGHLY FUSED WITH THE BACKING MATERIAL. BACKING STRIPS MAY BE REMOVED BY MEANS OF GAS CUTTING AFTER WELDING IS COMPLETED, PROVIDED NO INJURY IS DONE TO THE BASE AND WELD METAL AND THE WELD SURFACE IS LEFT FLUSH OR SLIGHTLY CONVEX WITH FULL THROAT THICKNESS.

- 8.10 IN ASSEMBLING AND JOINTING PARTS OF A STRUCTURE OR OF BUILDUP MEMBERS, THE PROCEDURE AND SEQUENCE OF WELDING SHALL BE SUCH AS WILL AVOID NEEDLESS DISTORTION AND MINIMIZE SHRINKAGE STRESSES.

- 8.11 ALL FULL PENETRATION BUTT WELDS SHALL HAVE THE ROOT OF THE INITIAL LAYER GOUGED OR CHIPPED OUT ON THE BACK SIDE BEFORE WELDING IS STARTED FROM THAT SIDE, AND SHALL BE SO WELDED AS TO SECURE SOUND METAL AND COMPLETE FUSION THROUGHOUT THE ENTIRE INTENDED CROSS-SECTION.

- 8.12 BUTT WELDS MADE WITH THE USE OF A BACKING OF THE SAME MATERIALS AS THE BASE METAL SHALL HAVE THE WELD METAL THOROUGHLY FUSED WITH THE BACKING MATERIAL. BACKING STRIPS MAY BE REMOVED BY MEANS OF GAS CUTTING AFTER WELDING IS COMPLETED, PROVIDED NO INJURY IS DONE TO THE BASE AND WELD METAL AND THE WELD SURFACE IS LEFT FLUSH OR SLIGHTLY CONVEX WITH FULL THROAT THICKNESS.

## 9.0 ERECTION

- 9.1 ERECTION SHALL BE CARRIED OUT GENERALLY AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION.
- 9.2 PRIOR TO ERECTION THE CONTRACTOR SHALL SUBMIT DRAWINGS, SHOWING THE PROPOSED ERECTION SCHEME.
- 9.3 THE SUITABILITY OF ALL PLANT AND EQUIPMENT USED FOR ERECTION SHALL BE SUBJECT TO THE APPROVAL.
- 9.4 THE ERECTION OF STEELWORK SHALL BE IN ACCORDANCE WITH BS 5950 OR RELEVANT ASTM STANDARD.
- 9.5 BEFORE ERECTION, ANCHOR BOLTS SHALL BE CHECKED TO ENSURE THAT THEY ARE PROPERLY INSTALLED.

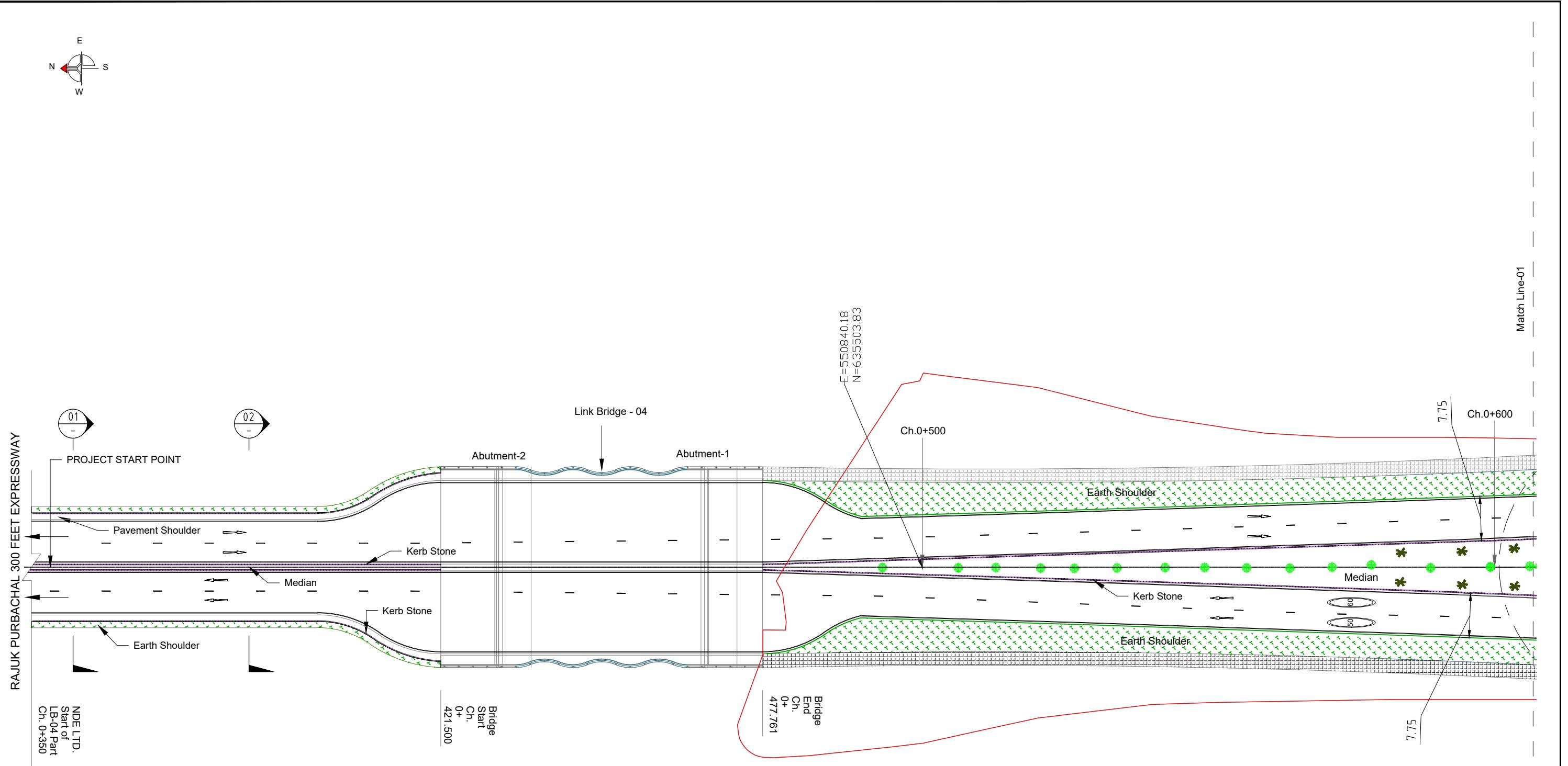
## 10.0 GEOMETRIC DESIGN

- 10.1 THE PEDESTRIAN WALKING (CC LAYER) ON ISLAND SHALL BE 0.25 % GRADIENT TOWARDS THE SLOPE TO FACILITATE DRAINAGE.
- 10.2 THE CARRIAGE WAY SHALL BE CONSTRUCTED WITH A 2% GRADIENT TO FACILITATE DRAINAGE.
- 10.3 THE EMBEDDED SURFACE OF THE KERB STONE SHALL BE ROUGHENED USING CONCRETE SCABBLER TO ENSURE PROPER BONDING WITH THE SURROUNDING CONCRETE.
- 11.0 TRAFFIC SIGNAGE
- 11.1 ALL DIMENSIONS OF TRAFFIC SIGNAGE ARE IN MM.
- 11.2 DIMENSIONS OF SIGNAGE HAVE BEEN TAKEN TO CONSIDER THE DESIGN SPEED OF 60KM/H.
- 11.3 ALL REGULATORY, WARNING, INFORMATIVE SIGNAGES AND ROAD MARKING HAVE BEEN DRAWN FOLLOWING BANGLADESH ROAD SIGN MANUAL, VOLUME 1 AND 2, MARCH 2000.
- 11.4 CLEAR HEIGHT OF OVERHEAD MOUNTED SIGNAGE SHALL BE 5100 MM FROM THE SURFACE OF CARRIAGEWAY. THE DESIGN OF OVERHEAD SIGNAGE AND IT'S STRUCTURAL ELEMENTS ARE BASED ON BANGLADESH NATIONAL BUILDING CODE (BNBC 2020) AND OTHER RELEVANT CODES AND GUIDELINES.
- 11.5 THE MAXIMUM LIMIT OF GROSS WEIGHT OF VEHICLE IS 22 TONNES.
- 11.6 FOUNDATION OF ALL SIGNAGE POST SHALL BE RESTED ON COMPETENT GROUND. IN CASE OF ANY LOOSE OR SOFT MATERIAL, FOUNDATION SOIL SHALL BE COMPAKTED AND SHALL BE ENSURED THE MINIMUM BEARING CAPACITY OF 100KPA.

## 12.0 ROAD MARKING

- 12.1 THE PAINTING OF ROAD MARKING SHALL BE 5MM THICK THERMOPLASTIC MATERIAL,
- 12.2 THE AVERAGE THICKNESS OF PAINTING FOR KERB STONE AND NEW JERSEY BARRIER SHALL BE IN ACCORDANCE TO RHD STANDARD.

DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME					DRAWING TITLE	GENERAL NOTES	
					PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD							
23 July 2025	CONSTRUCTION DRAWING	AA		 24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206.	NAME	MM	AA	SH	SMF	DRAWN BY	DESIGNED BY	ADVISED BY
					SIGNATURE							
					DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FIRST DESIGN	108-LR-GD-002	REV. 0

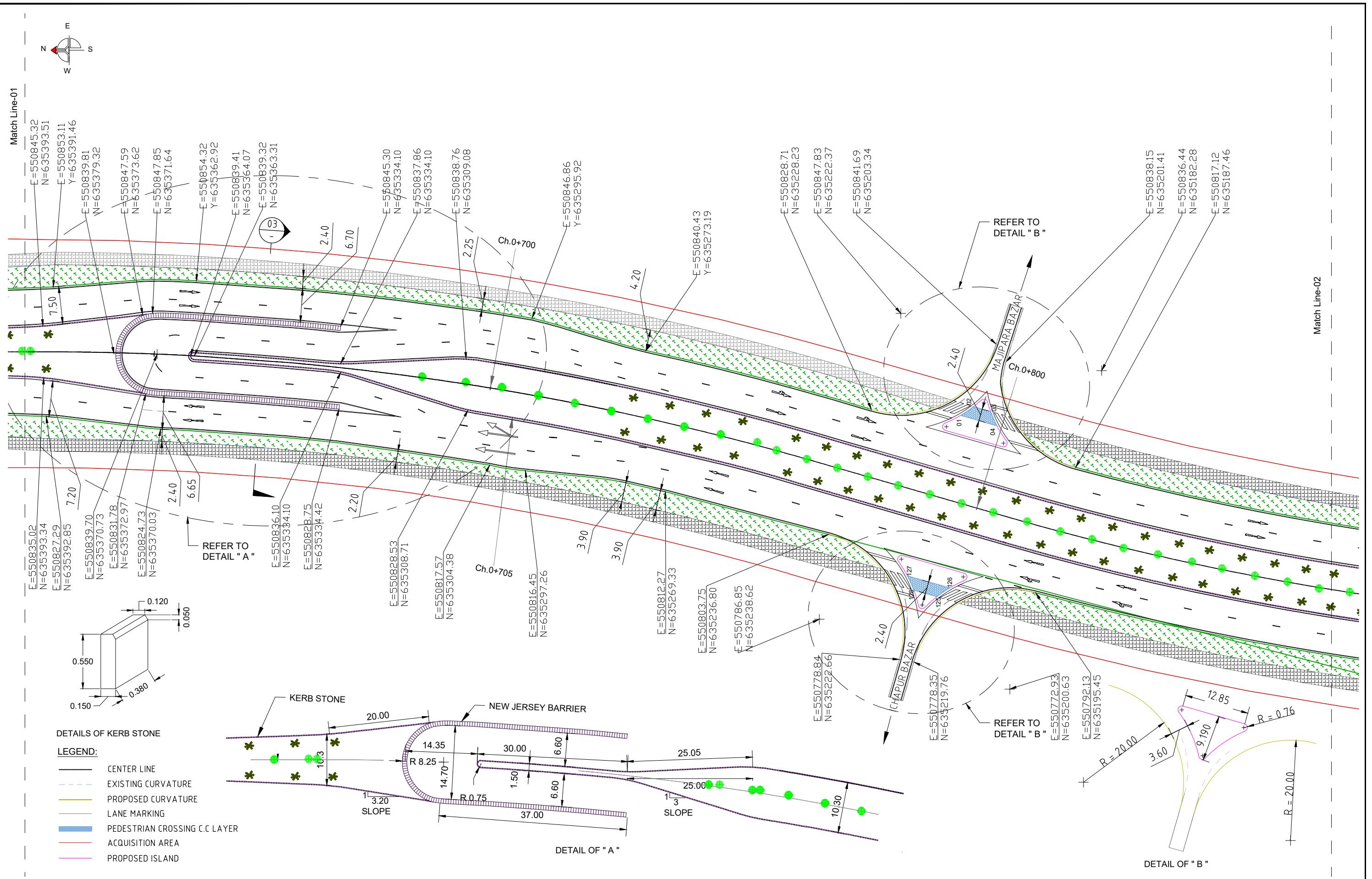


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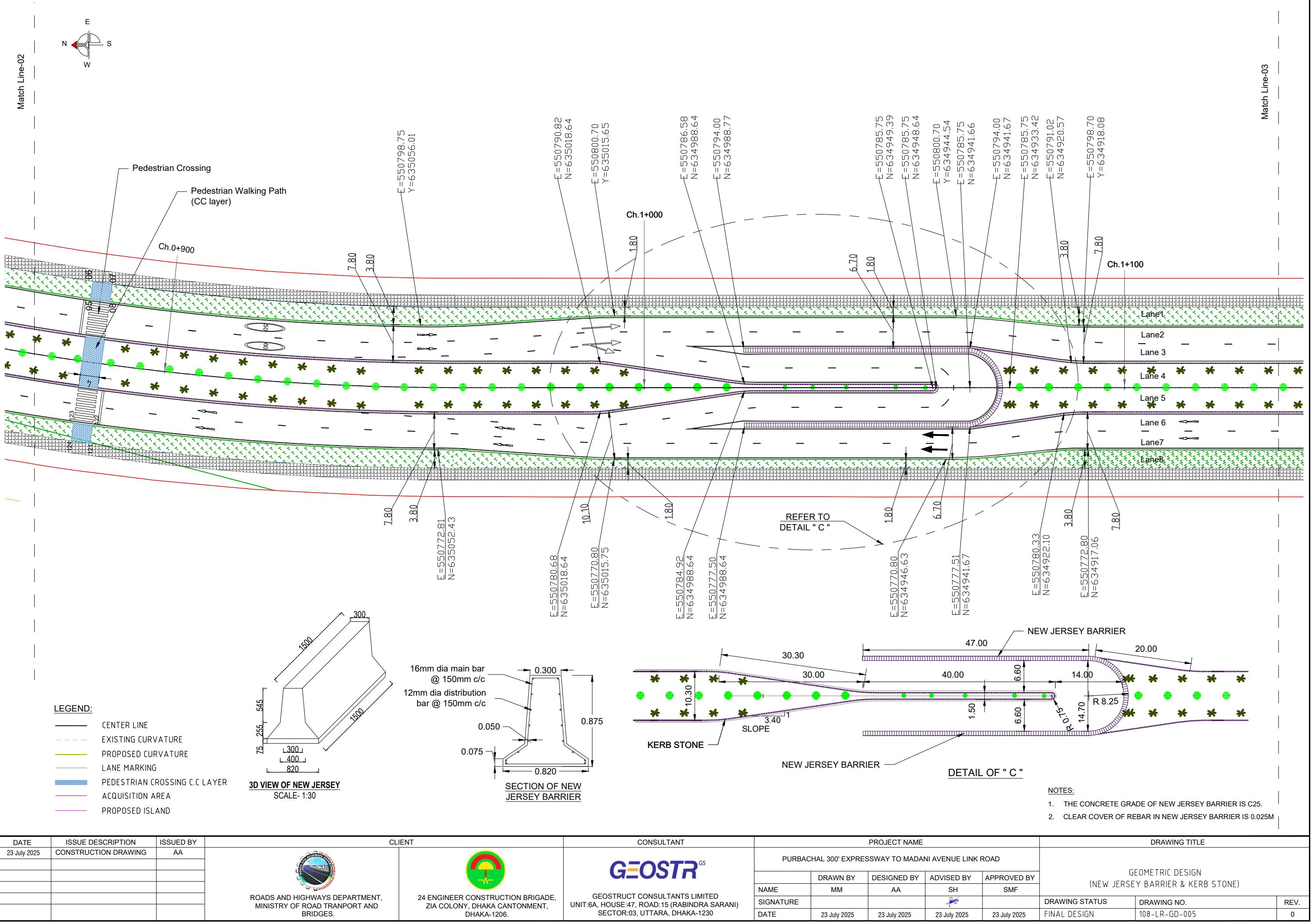
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  - - - EXISTING CURVATURE
  - PROPOSED CURVATURE
  - LANE MARKING
  - PEDESTRIAN CROSSING C.C LAYER
  - ACQUISITION AREA
  - PROPOSED ISLAND

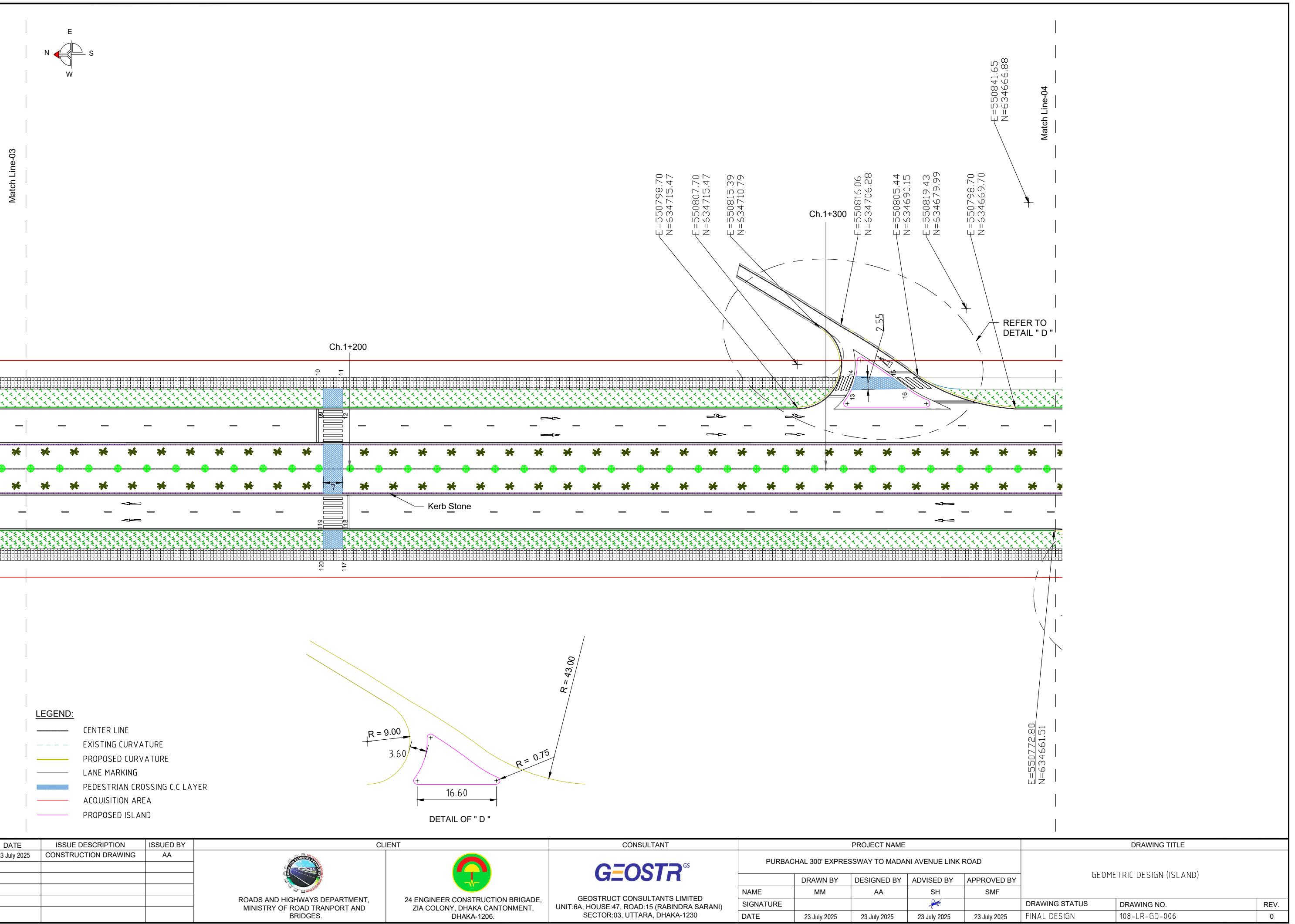
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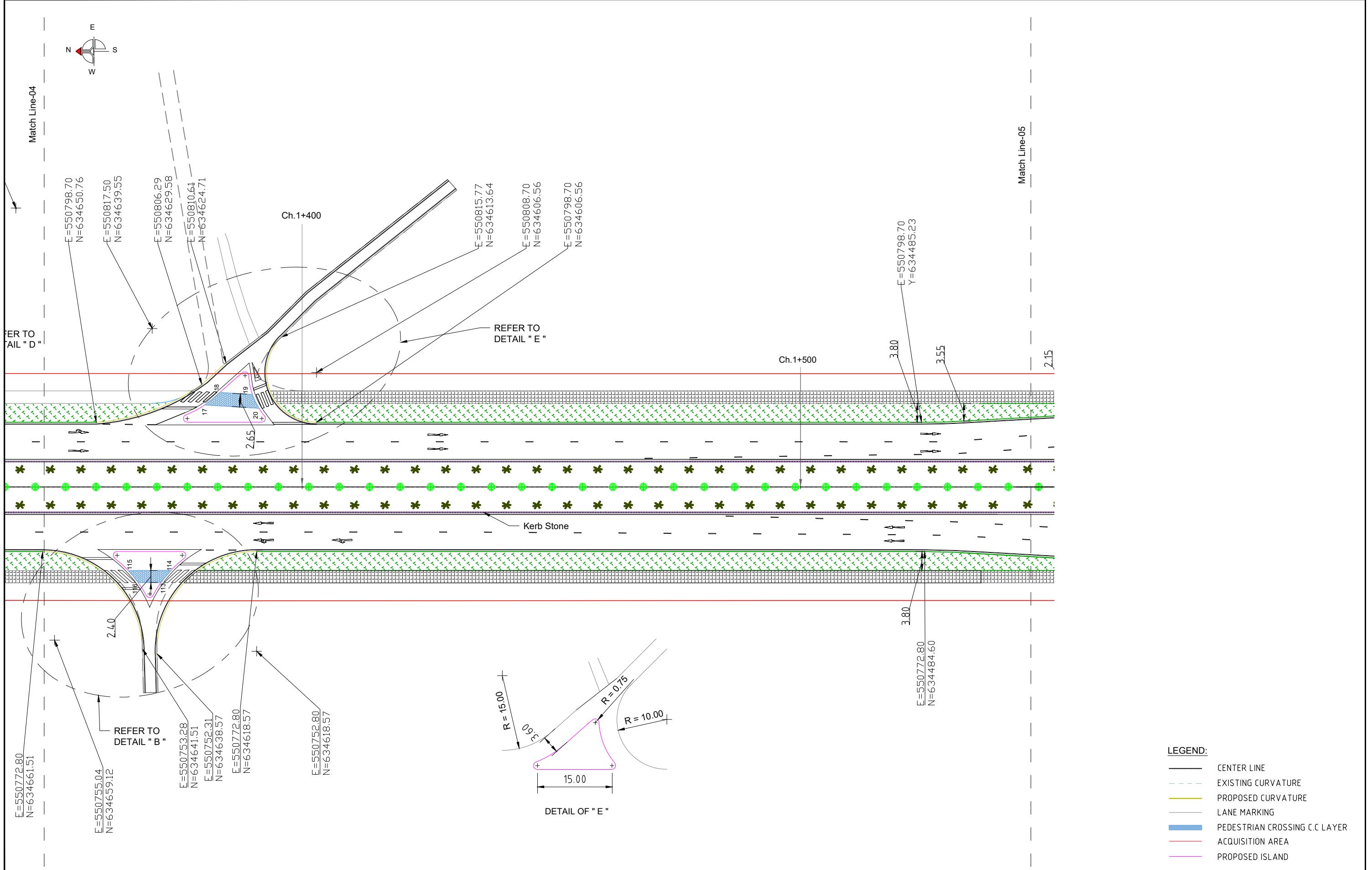
1. THE DESIGN HAS BEEN DEVELOPED BEASED ON THE AS-FOUND DRAWING AND EXISTING SITE SITUATION.
  2. DRAWING COMPRISSES THE GEOMETRIC DESIGN OF U-TURN, RADIUS OF CURVATURE OF BRANCH ROAD, RUMBLE STRIP, CRASH BARRIER ON BRIDGE AND ISLAND AT THE BRANCH ROAD/INTERSECTION
  3. ONLY PASSENGER CAR, BUS, HAULAGE TRUCK AND VEHICLES LESS THAN OR EQUAL TO 12M ARE ALLOWED FOR U-TURN.
  4. THE LANE AND ROAD MARKING IN GEOMATIC DESIGN ARE INDICATIVE ONLY. THE APPROPRIATE DETAIL OF LANE AND ROAD MARKING ARE PROVIDED IN THE RELEVANT DRAWING OF LANE MARKING.
  5. ALL DIMENSIONS ARE IN METER.



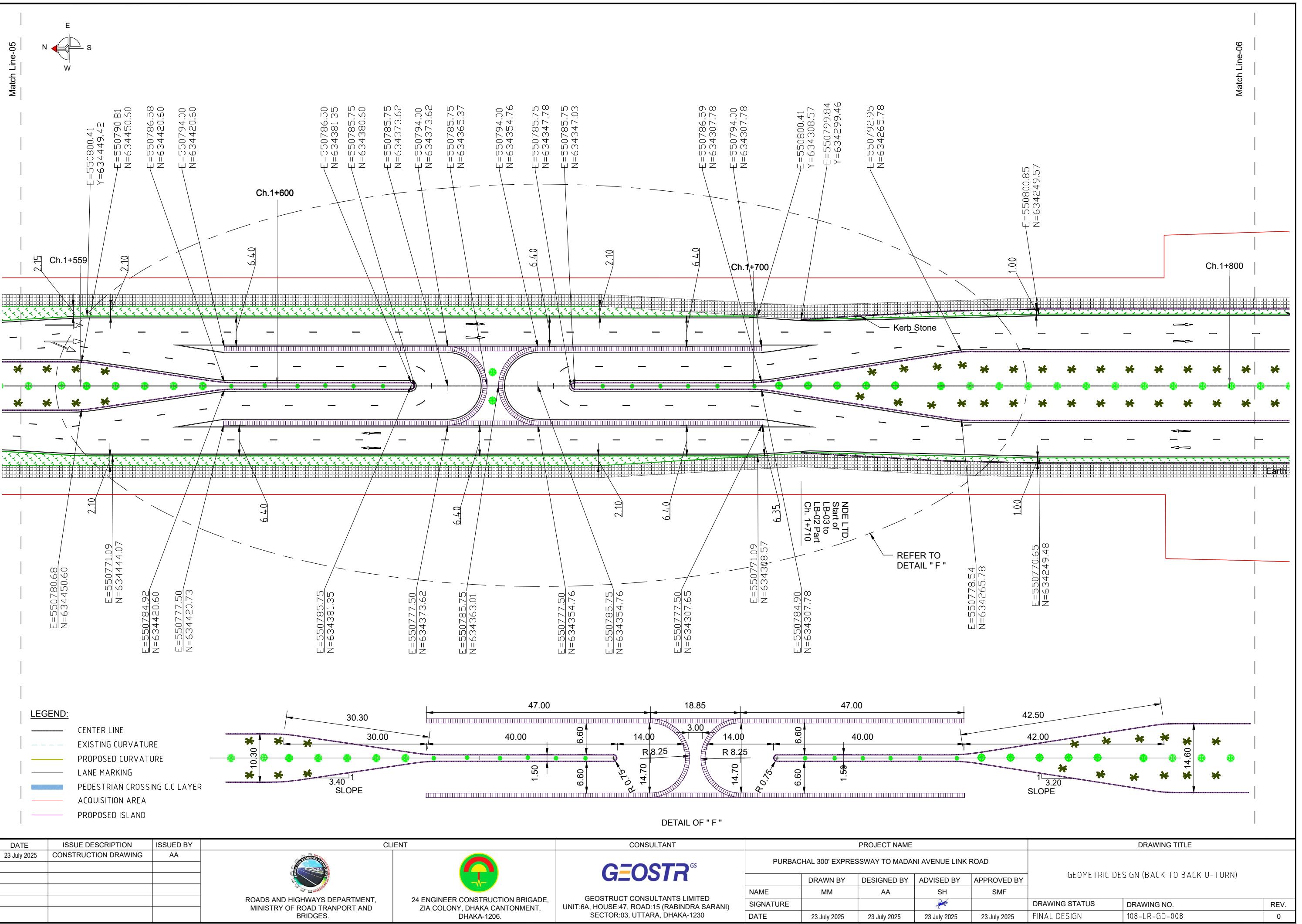
DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE
23 July 2025	CONSTRUCTION DRAWING	AA			PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	GEOMETRIC DESIGN (SINGLE U-TURN & ISLAND)
					NAME      MM      AA      SH      SMF	
					SIGNATURE	
					DATE	23 July 2025
						FINAL DESIGN
						REV.
						108-LR-GD-004
						0







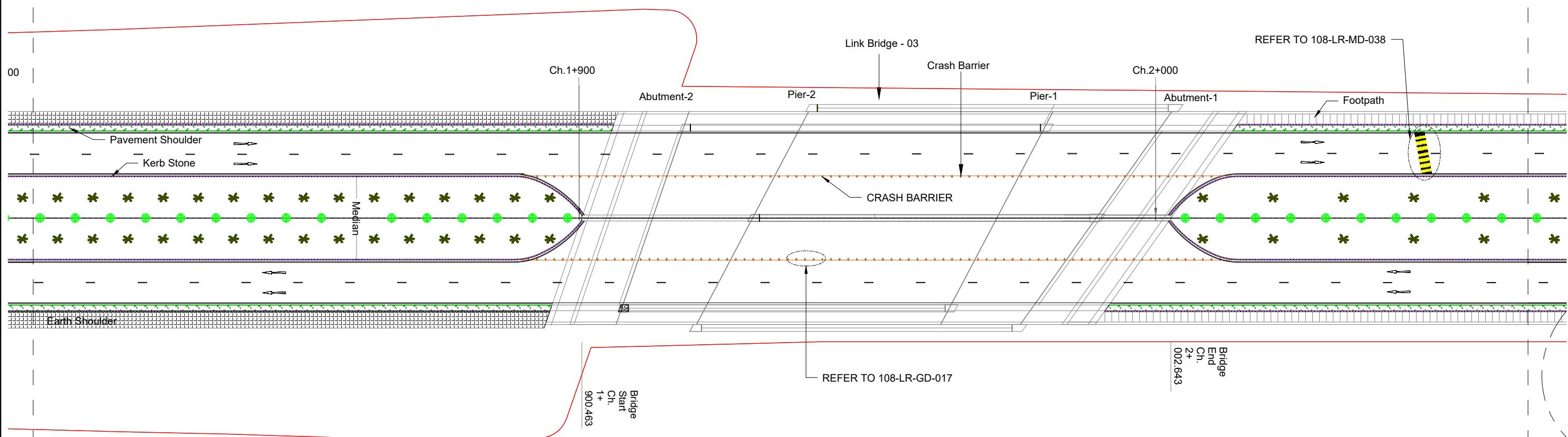
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23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206. GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	GEOMETRIC DESIGN (ISLAND)
NAME	MM	AA	SH	SMF	DRAWING STATUS	DRAWING NO.
SIGNATURE						
DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FINAL DESIGN	108-LR-GD-007
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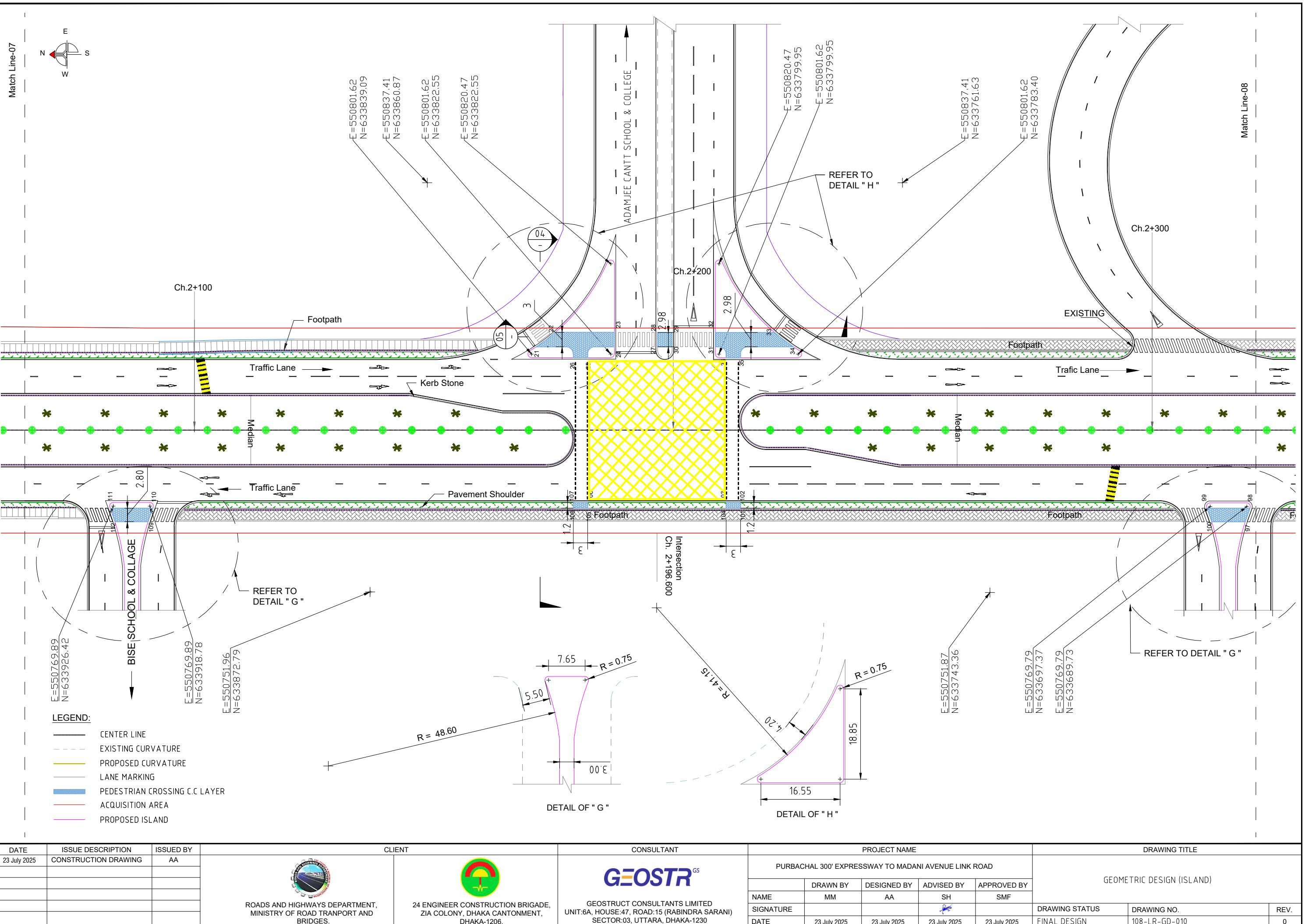
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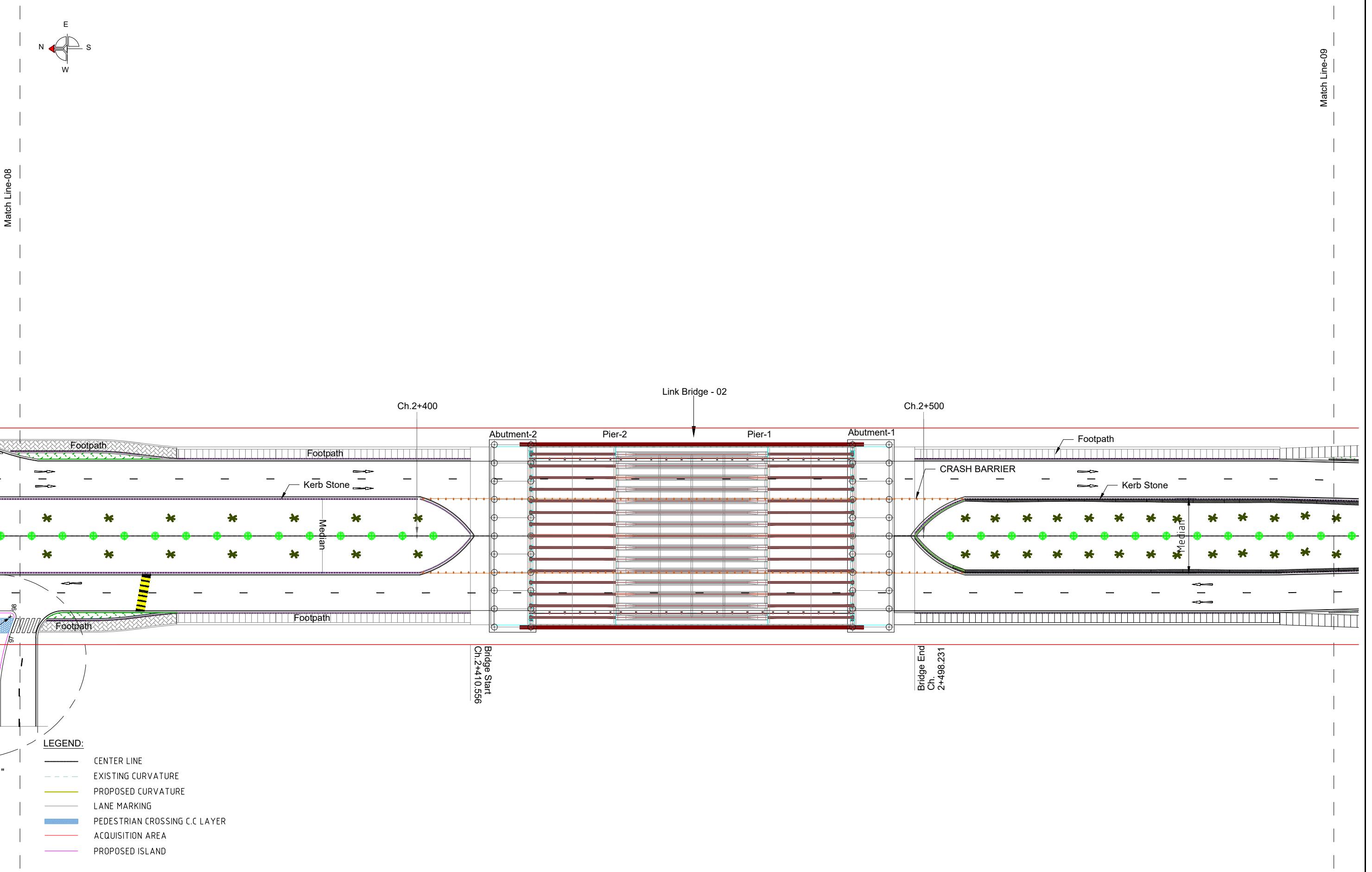
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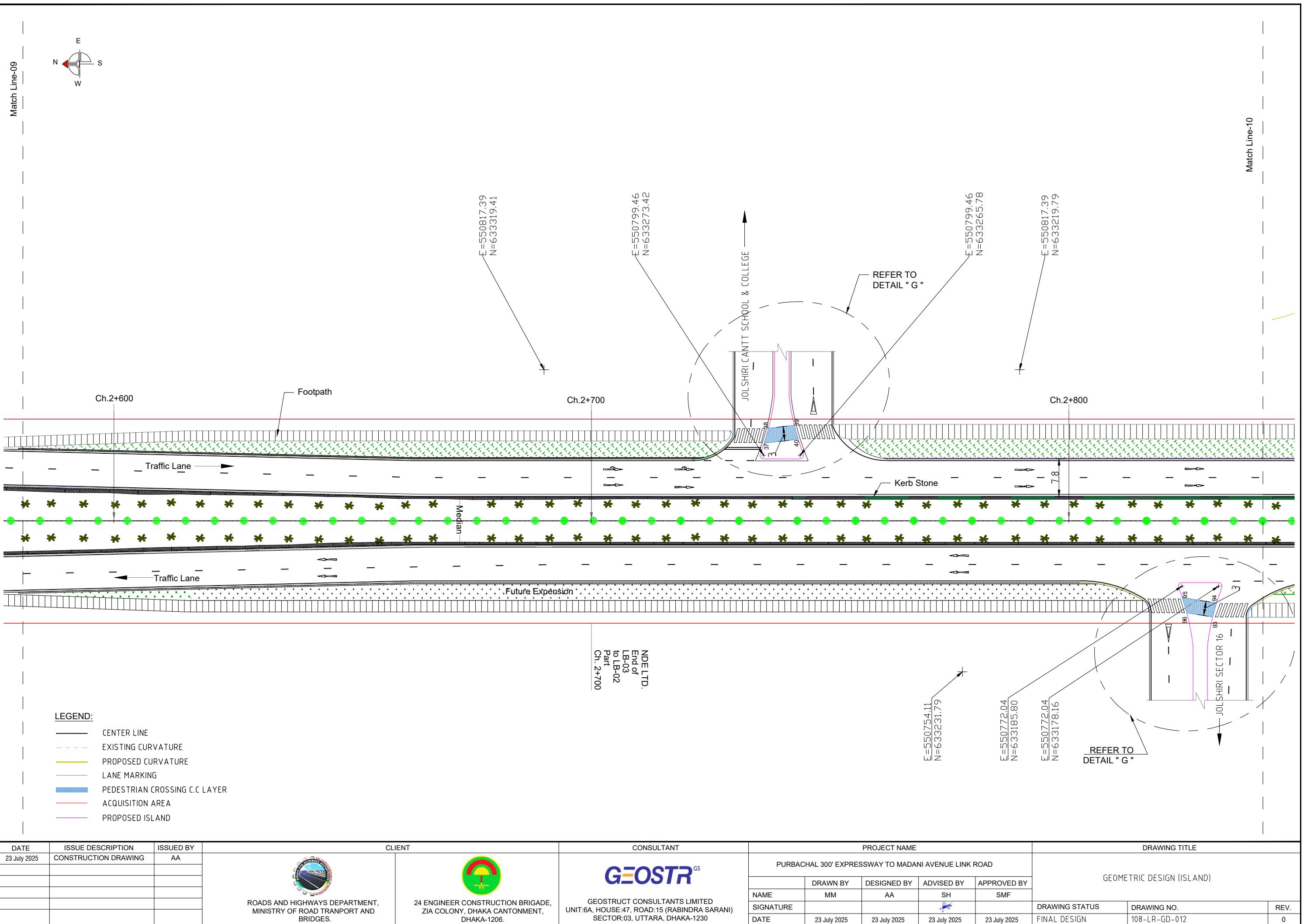
- LEGEND:
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  - LANE MARKING
  - PEDESTRIAN CROSSING C.C LAYER
  - ACQUISITION AREA
  - PROPOSED ISLAND

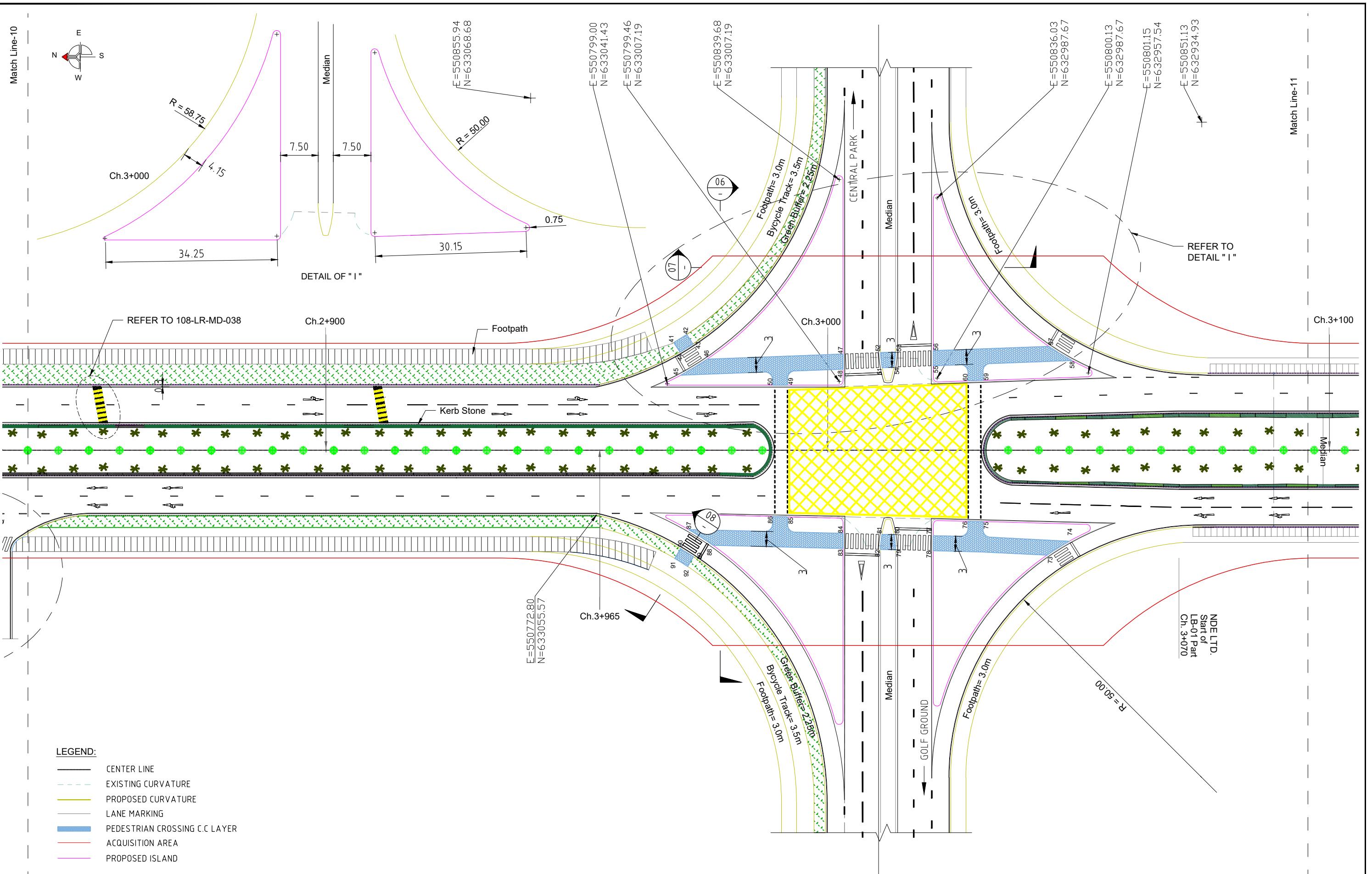
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23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206.	GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD
					GEOMETRIC DESIGN (ISLAND & CRASH BARRIER)	
NAME	MM	AA	SH	SMF		
SIGNATURE					DRAWING STATUS	DRAWING NO.
DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FINAL DESIGN	108-LR-GD-009
					REV.	0





DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE
23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206. <small>GEOSTRUCT CONSULTANTS LIMITED            UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI)            SECTOR:03, UTTARA, DHAKA-1230</small>	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	GEOMETRIC DESIGN (ISLAND & CRASH BARRIER)
					DRAWN BY <input type="text"/> MM DESIGNED BY <input type="text"/> AA ADVISED BY <input type="text"/> SH APPROVED BY <input type="text"/> SMF	
					NAME <input type="text"/> MM SIGNATURE  DATE <input type="text"/> 23 July 2025	DRAWING STATUS <input type="text"/> FINAL DESIGN DRAWING NO. <input type="text"/> 108-LR-GD-011 REV. <input type="text"/> 0



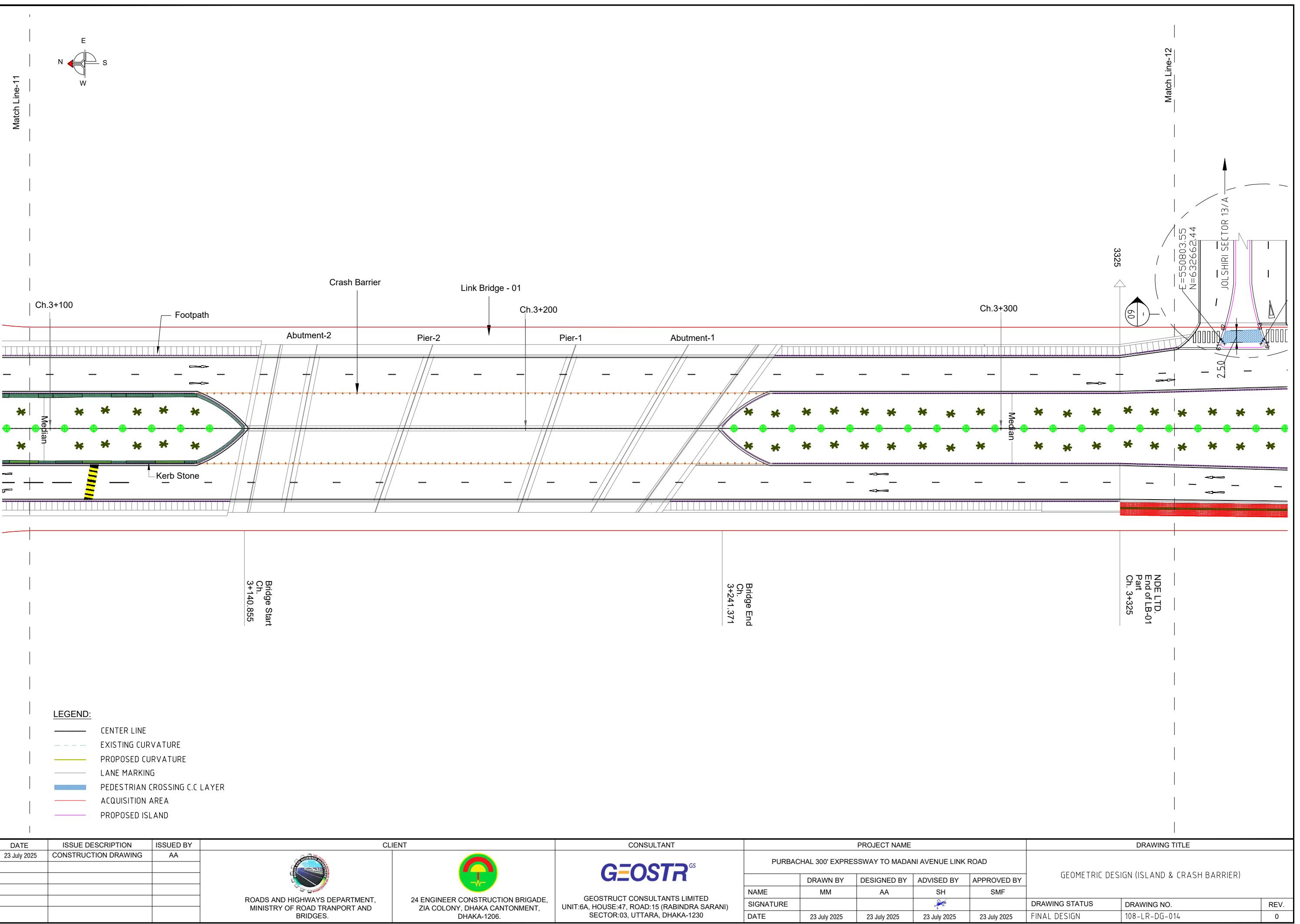


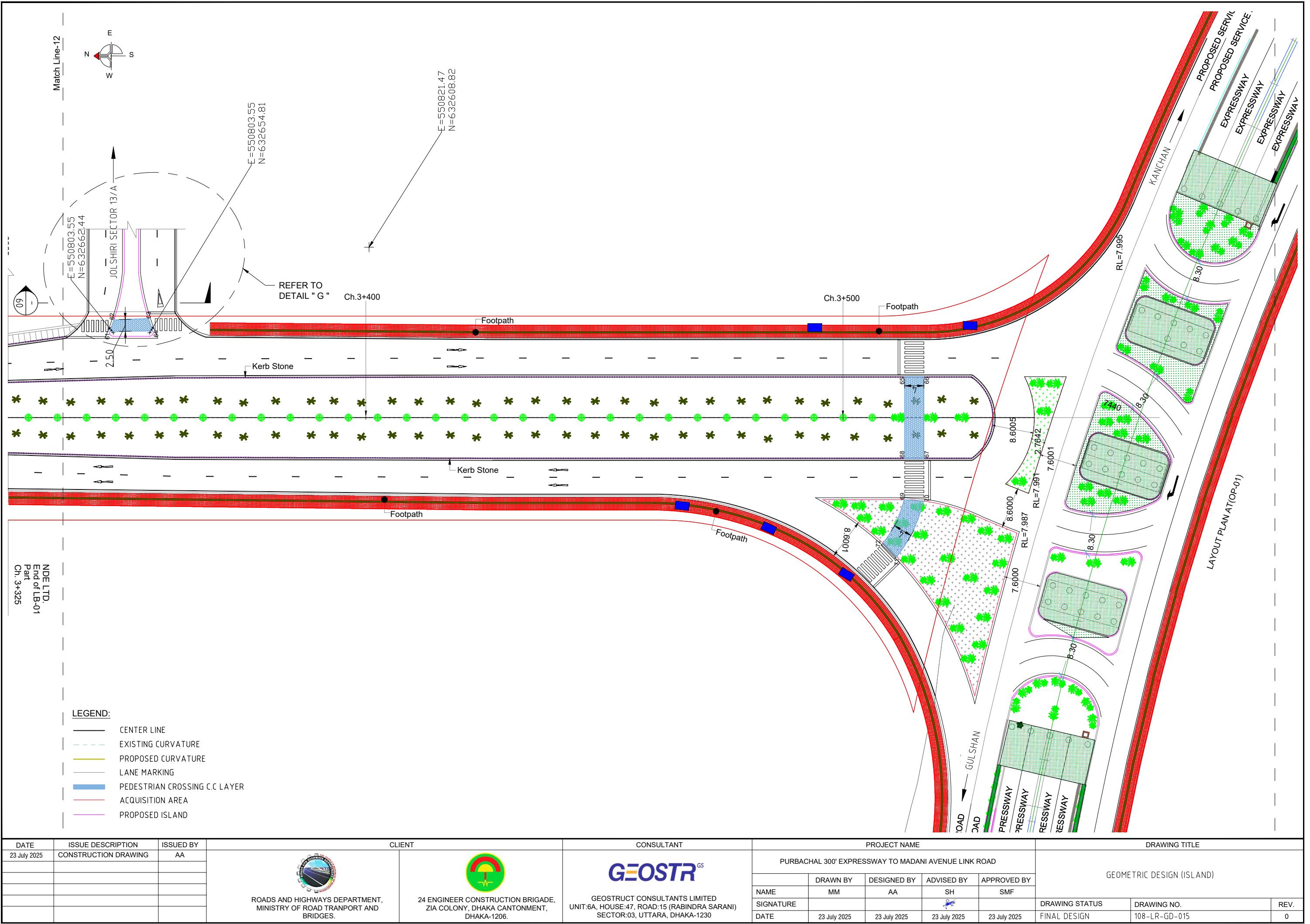
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23 July 2025	CONSTRUCTION DRAWING	AA			PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	GEOMETRIC DESIGN (ISLAND)
					NAME MM AA SH SMF	
					SIGNATURE	
					DATE	23 July 2025
						23 July 2025
						23 July 2025
						23 July 2025
						FINAL DESIGN
						DRAWING NO.
						108-LR-GD-013
						REV.
						0

ROADS AND HIGHWAYS DEPARTMENT,  
MINISTRY OF ROAD TRANSPORT AND  
BRIDGES.

24 ENGINEER CONSTRUCTION BRIGADE,  
ZIA COLONY, DHAKA CANTONMENT,  
DHAKA-1206.

GEOSTRUCT CONSULTANTS LIMITED  
UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI)  
SECTOR:03, UTTARA, DHAKA-1230

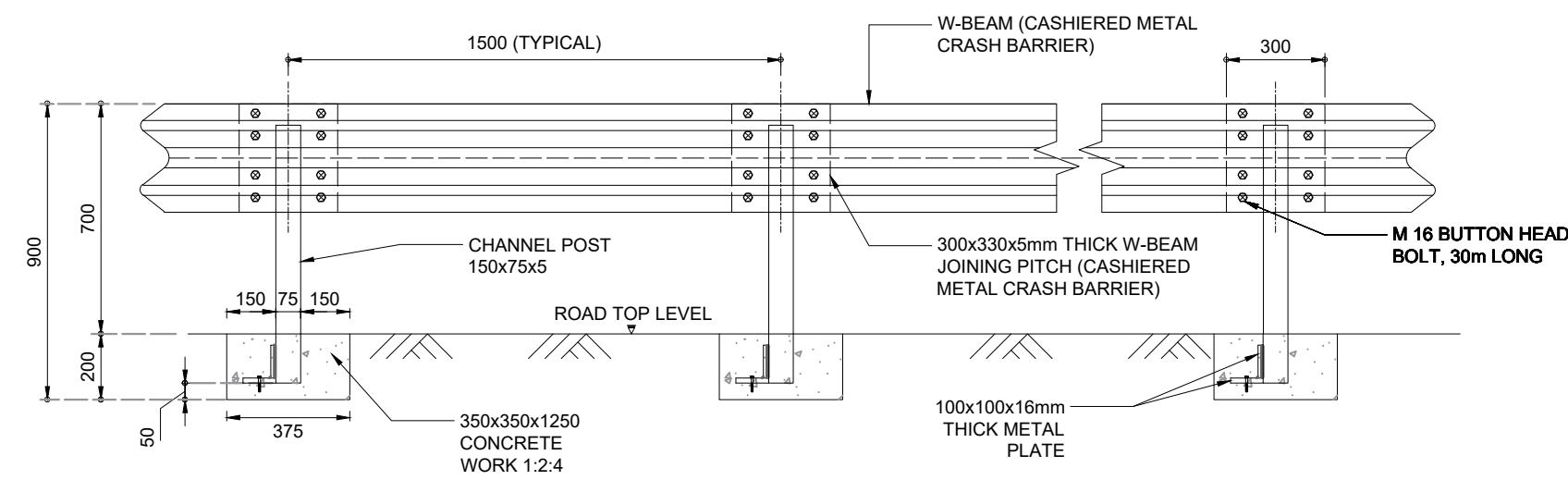




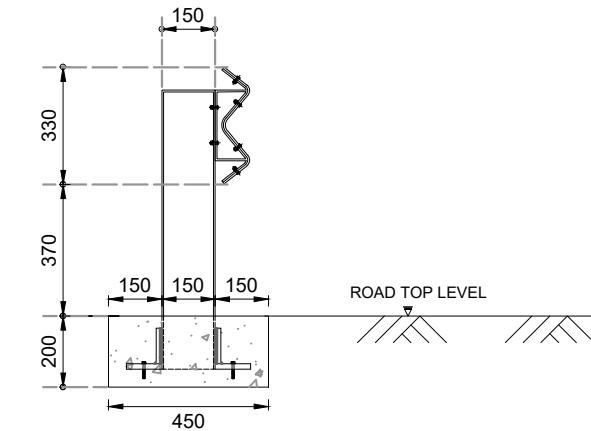
### Co-ordinates of Pedestrian Crossing C.C Layer

Point Number	Easting	Northing	Point Number	Easting	Northing	Point Number	Easting	Northing	Point Number	Easting	Northing	Remarks
1	550827.508	635210.371	33	550806.132	633788.346	65	550794.343	632496.518	97	550766.626	633690.047	
2	550829.237	635207.836	34	550803.152	633784.401	66	550794.343	632492.518	98	550769.444	633689.052	
3	550828.261	635204.421	35	550800.857	633795.434	67	550777.142	632492.518	99	550769.444	633698.045	
4	550825.406	635203.145	36	550800.857	633798.433	68	550777.143	632496.518	100	550766.625	633697.051	
5	550804.177	635124.710	37	550802.217	633273.233	69	550768.542	632496.632	101	550769.449	633795.434	
6	550807.861	635124.203	38	550805.128	633272.376	70	550768.274	632492.661	102	550770.649	633795.434	
7	550807.310	635120.239	39	550805.744	633266.975	71	550756.614	632498.213	103	550770.649	633798.433	
8	550803.613	635120.750	40	550802.869	633266.172	72	550759.398	632501.065	104	550769.449	633798.433	
9	550798.699	634814.990	41	550807.211	633040.130	73	550764.823	632965.755	105	550769.449	633827.364	
10	550802.499	634814.990	42	550808.796	633037.582	74	550767.602	632961.300	106	550770.649	633827.364	
11	550802.499	634810.990	43	550806.917	633036.343	75	550771.503	632978.516	107	550770.649	633830.363	
12	550798.699	634810.990	44	550805.330	633038.890	76	550771.573	632981.516	108	550769.449	633830.363	
13	550802.371	634704.052	45	550800.704	633038.746	77	550768.714	632988.426	109	550766.630	633919.124	
14	550805.132	634703.134	46	550803.903	633033.474	78	550765.713	632988.426	110	550769.448	633918.136	
15	550804.924	634695.510	47	550804.915	633006.426	79	550765.900	632995.931	111	550769.447	633927.059	
16	550802.674	634692.462	48	550801.913	633006.426	80	550768.908	632996.212	112	550766.630	633926.071	
17	550802.191	634628.981	49	550798.699	633017.456	81	550768.968	632998.631	113	550766.589	634637.726	
18	550804.681	634625.970	50	550798.699	633020.456	82	550765.974	632998.920	114	550769.007	634635.728	
19	550804.284	634619.425	51	550802.206	632998.573	83	550766.161	633006.426	115	550768.980	634644.328	
20	550801.532	634618.120	52	550805.196	632998.909	84	550769.162	633006.426	116	550766.577	634642.347	
21	550803.152	633838.092	53	550805.307	632995.939	85	550772.462	633017.456	117	550768.999	634810.990	
22	550806.152	633834.123	54	550802.293	632996.264	86	550772.538	633020.456	118	550772.799	634810.990	
23	550806.152	633821.787	55	550802.586	632988.426	87	550769.929	633037.199	119	550772.799	634814.990	
24	550803.152	633821.787	56	550805.588	632988.426	88	550766.807	633032.334	120	550768.999	634814.990	
25	550800.857	633830.363	57	550806.448	632965.424	89	550764.519	633036.248	121	550774.123	635124.840	
26	550800.857	633827.364	58	550803.619	632960.797	90	550766.111	633038.792	122	550777.838	635124.326	
27	550803.152	633812.741	59	550799.677	632978.516	91	550764.173	633039.937	123	550778.390	635128.290	
28	550806.132	633812.741	60	550799.576	632981.516	92	550762.579	633037.394	124	550774.675	635128.802	
29	550806.132	633809.747	61	550803.823	632663.1525	93	550765.6078	633179.3961	125	550791.3604	635215.116	
30	550803.152	633809.747	62	550806.2097	632662.2934	94	550768.4532	633178.6113	126	550793.1115	635212.5543	
31	550803.152	633800.707	63	550806.5	632655.0555	95	550769.3461	633185.6387	127	550795.4874	635221.0378	
32	550806.132	633800.707	64	550803.9447	632654.1485	96	550766.4706	633184.7871	128	550792.662	635219.7644	

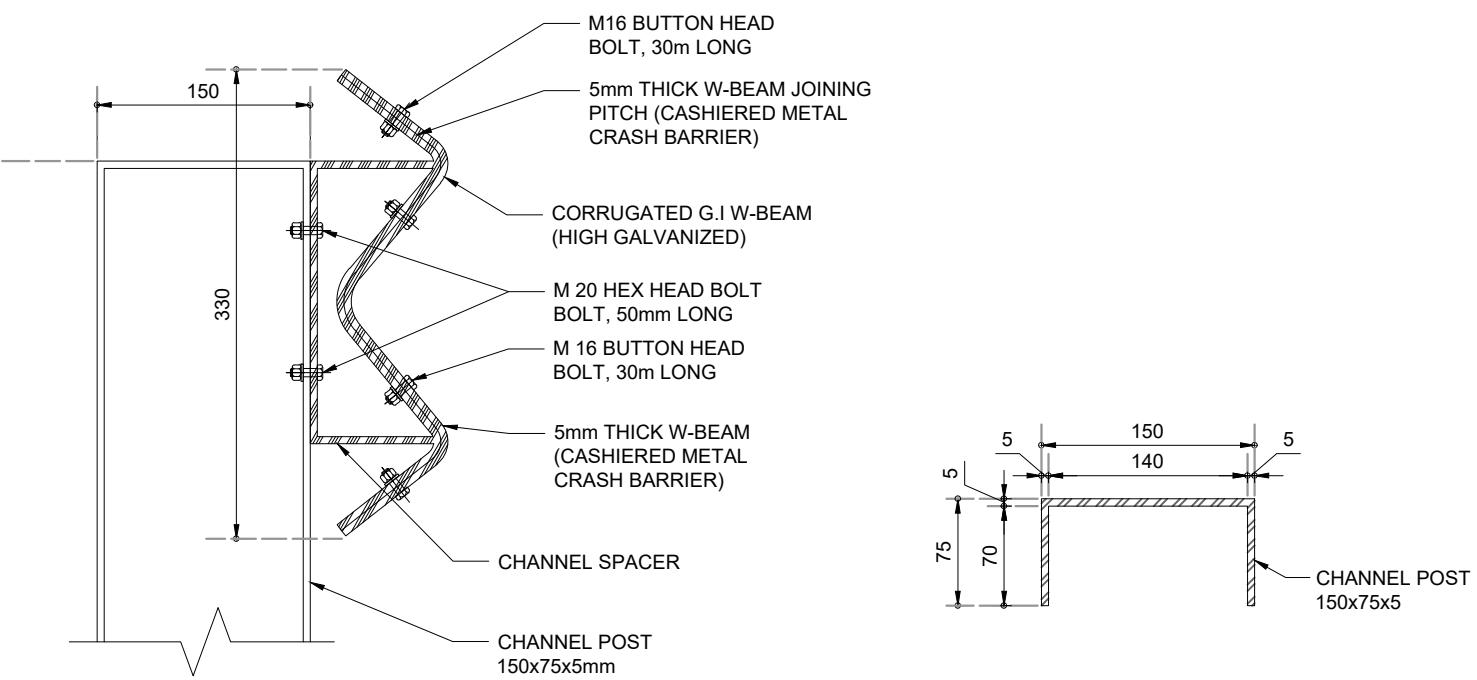
DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT		CONSULTANT		PROJECT NAME					DRAWING TITLE			
23 July 2025	CONSTRUCTION DRAWING	AA	 <b>ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.</b>		 <b>GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230</b>		PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD					<b>CO-ORDINATES OF PEDESTRIAN CROSSING C.C. LAYER</b>			
							DRAWN BY	DESIGNED BY	ADVISED BY	APPROVED BY					
							NAME	MM	AA	SH	SMF				
							SIGNATURE								
							DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FINAL DESIGN	DRAWING NO.	108-LR-GD-016	REV. 0



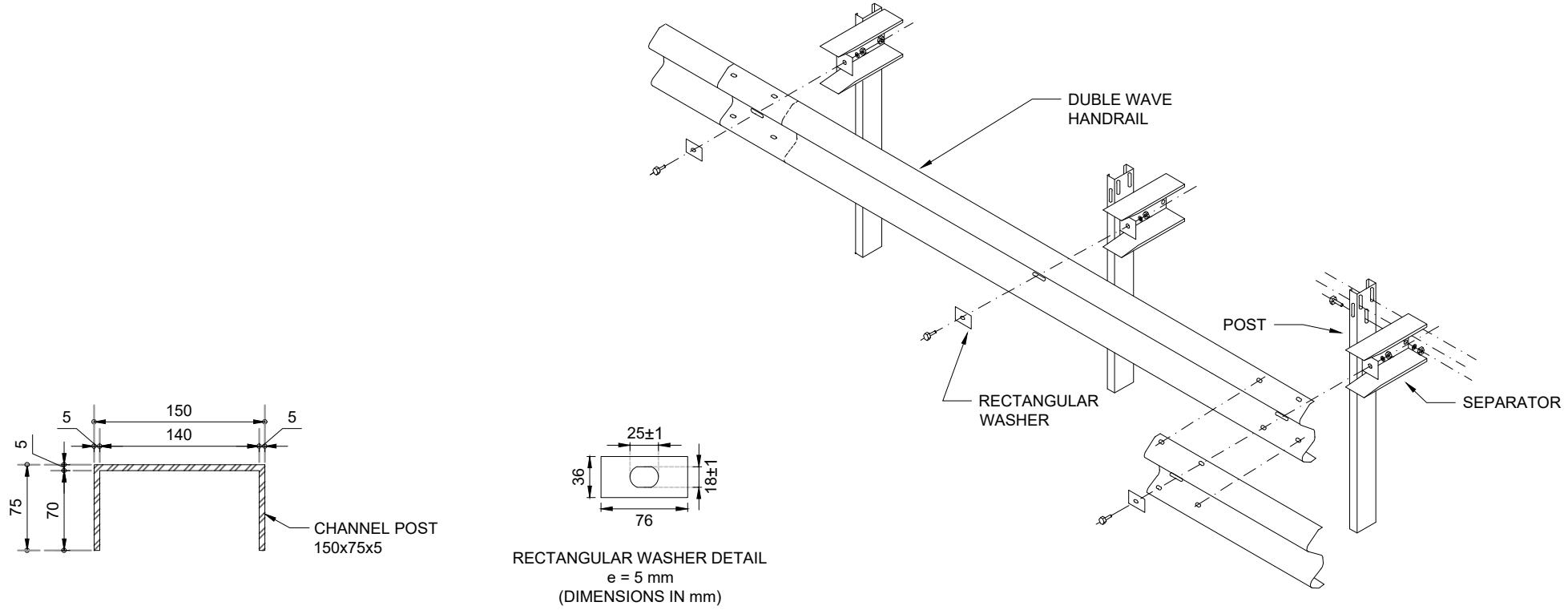
ELEVATION OF CRASH BARRIER  
SCALE 1 : 20



SIDE ELEVATION OF CRASH BARRIER  
SCALE 1 : 20



DETAIL OF CRASH BARRIER  
SCALE 1 : 5



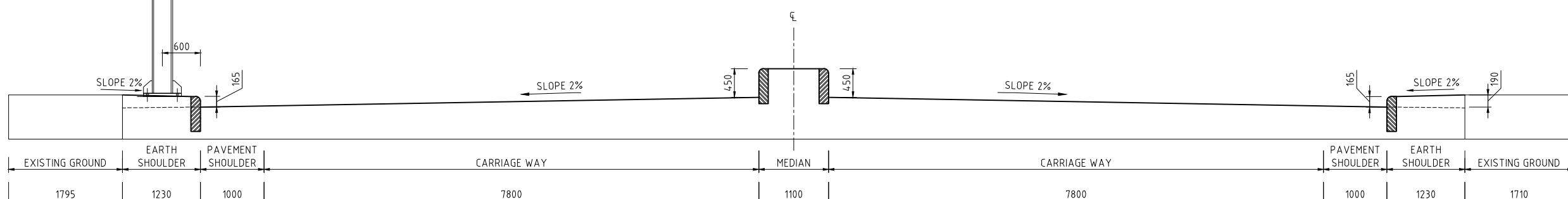
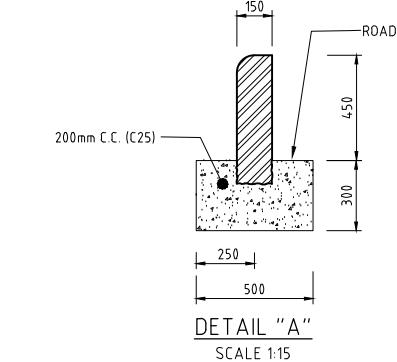
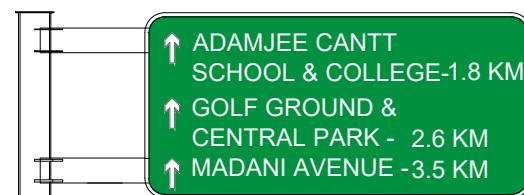
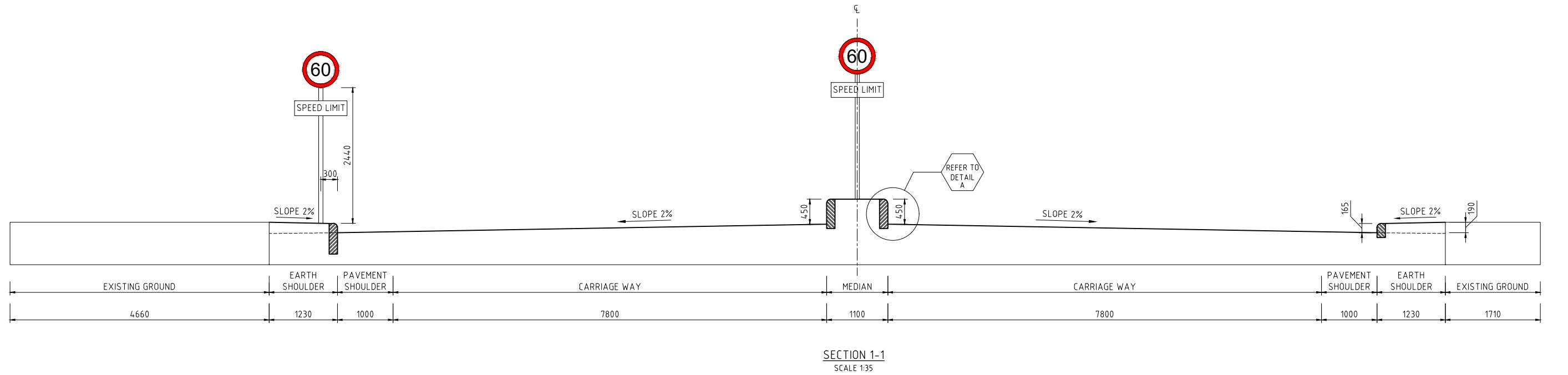
CROSS SECTION CHANNEL POST  
SCALE 1 : 5

METAL CRASH BARRIER WITH DOUBLE WAVE RAILING  
SCALE 1 : 5

NOTES:

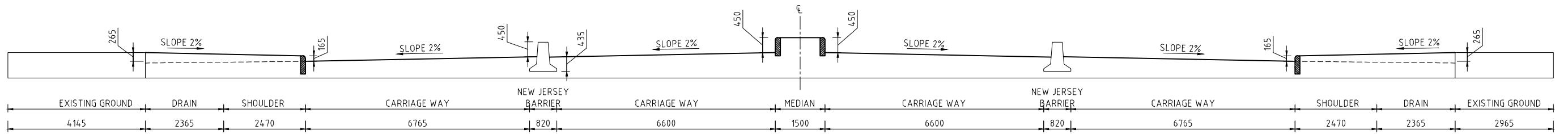
1. All dimensions are in millimeter.

DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE
23 July 2025	CONSTRUCTION DRAWING	AA			PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	GEOMETRIC DESIGN (CRASH BARRIER)
				24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206.	NAME MM AA SH SMF	
				GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	SIGNATURE	
					DATE 23 July 2025	FINAL DESIGN
					23 July 2025	108-LR-GD-017
					23 July 2025	0



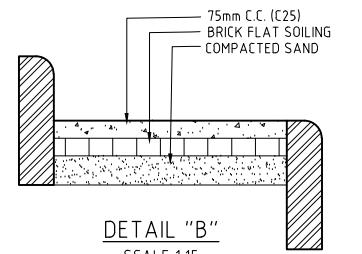
- NOTES:**
1. THE OVERHEAD MOUNTING FOUNDATION IS NOT SHOWN IN THE CROSS-SECTION FOR SIMPLICITY.
  2. THE HEIGHT OF THE POST SHALL BE 2440mm ABOVE THE INNER SIDE OF THE KERB STONE.
  3. IN CASE OF MEDIAN, THE HEIGHT OF THE POST SHALL BE 2160mm ABOVE THE MEDIAN SURFACE.
  4. IN CASE OF GREEN AREA, THE POST HEIGHT SHALL BE 2440mm FROM THE EXISTING GREEN SURFACE.
  5. ALL DIMENSION ARE IN MILLIMETER

DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE		
23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	<b>CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 1 &amp; 2)</b>		
DATE	DRAWN BY	DESIGNED BY	ADVISED BY	APPROVED BY	DRAWING STATUS	DRAWING NO.		
	MM	AA	SH	SMF		REV.		
SIGNATURE								
DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FINAL DESIGN	108-LR-GD-018		
						0		



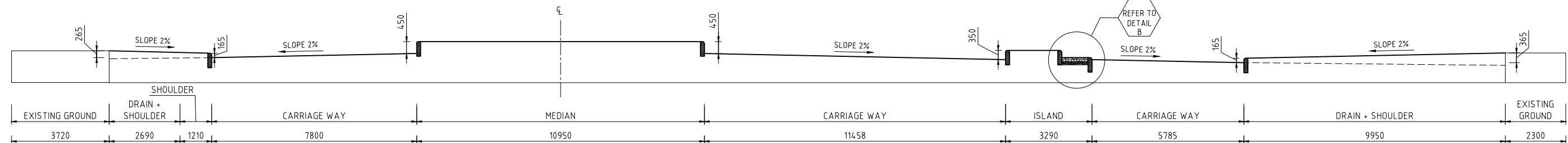
SECTION 3-3

SCALE 1:60



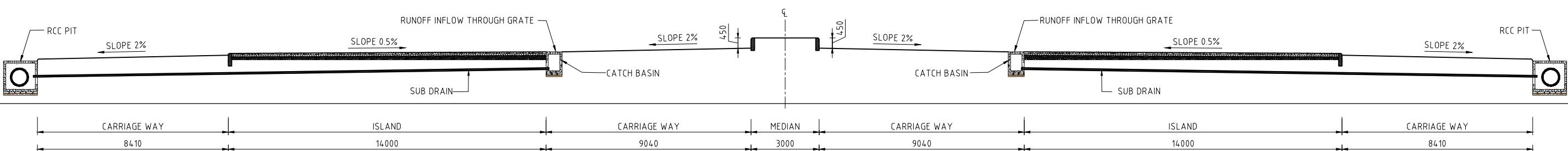
DETAIL "B"

SCALE 1:15



SECTION 4-4

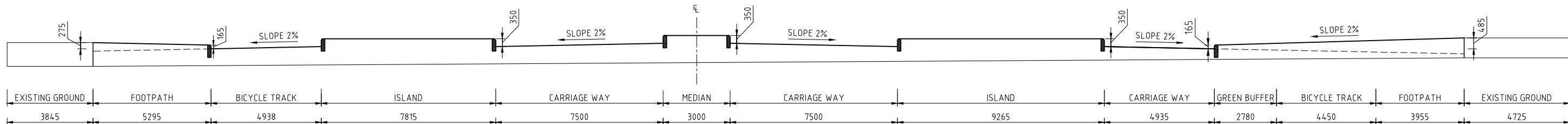
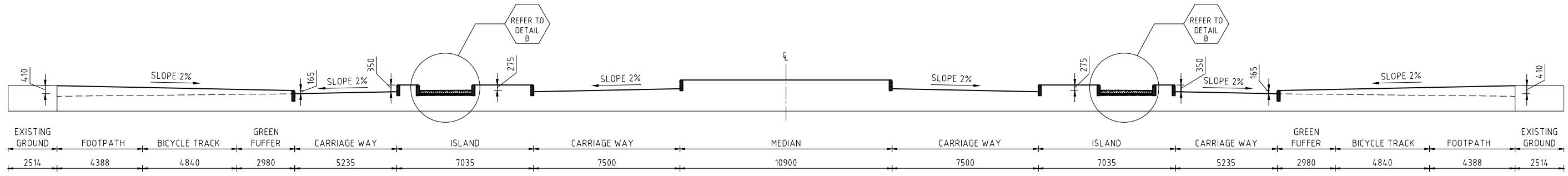
SCALE 1:75



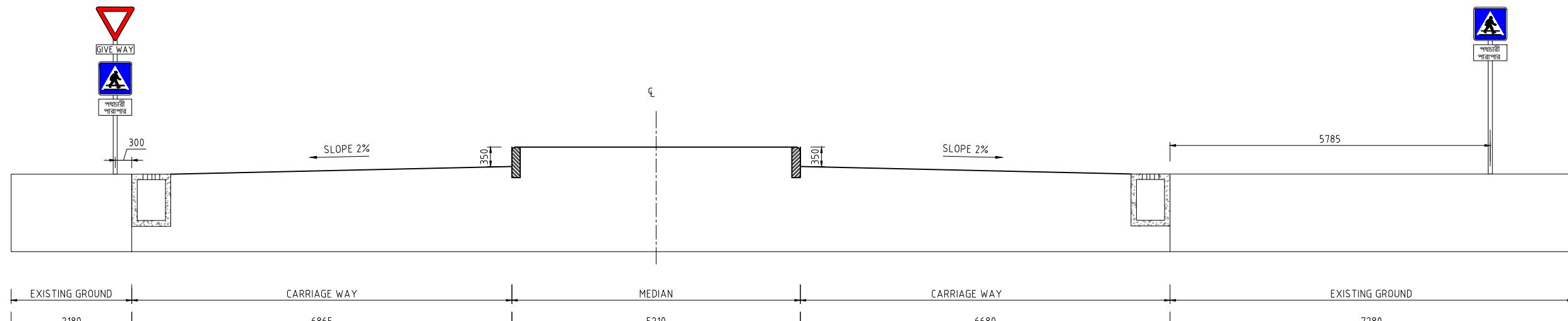
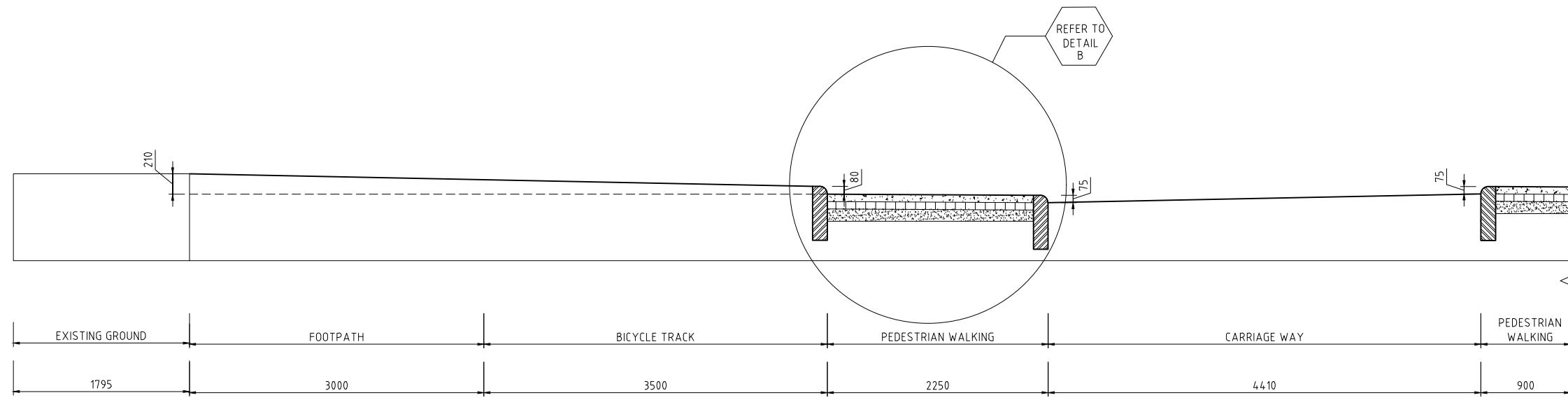
SECTION 5-5

SCALE 1:85

DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE		
23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	<b>CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 3 TO 5)</b>		
DATE	DRAWN BY	DESIGNED BY	ADVISED BY	APPROVED BY	DRAWING STATUS	DRAWING NO.		
	MM	AA	SH	SMF		REV.		
SIGNATURE								
DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	FINAL DESIGN	108-LR-GD-019		
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DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE		
23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 6 & 7)		
			NAME	DRAWN BY	DESIGNED BY	ADVISED BY	APPROVED BY	
			SIGNATURE	MM	AA	SH	SMF	
			DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025	
			DRAWING STATUS	DRAWING NO.	REV.			
			FINAL DESIGN	108-LR-GD-020	0			



DATE	ISSUE DESCRIPTION	ISSUED BY	CLIENT	CONSULTANT	PROJECT NAME	DRAWING TITLE			
23 July 2025	CONSTRUCTION DRAWING	AA	 ROADS AND HIGHWAYS DEPARTMENT, MINISTRY OF ROAD TRANSPORT AND BRIDGES.	 24 ENGINEER CONSTRUCTION BRIGADE, ZIA COLONY, DHAKA CANTONMENT, DHAKA-1206.	<b>GEOSTR</b> <small>GS</small> GEOSTRUCT CONSULTANTS LIMITED UNIT:6A, HOUSE:47, ROAD:15 (RABINDRA SARANI) SECTOR:03, UTTARA, DHAKA-1230	PURBACHAL 300' EXPRESSWAY TO MADANI AVENUE LINK ROAD	CROSS SECTIONS OF GEOMETRIC DESIGN (SECTION 8 TO 9)		
									DRAWN BY
									DESIGNED BY
									ADVISED BY
									APPROVED BY
									NAME
					SIGNATURE				
					DATE	23 July 2025	23 July 2025	23 July 2025	23 July 2025
					DRAWING STATUS	FINAL DESIGN	DRAWING NO.		REV.
							108-LR-GD-021		0