Land Acquisition and Involuntary Resettlement Due Diligence Report

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BAN: Dhaka Environmentally Sustainable Water Supply Project – Primary Distribution Pipelines (Package 3.1)

Prepared by the Dhaka Water Supply and Sewerage Authority, Government of Bangladesh, for the Asian Development Bank.

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CURRENCY EQUIVALENTS
(As of 01 October 2019)
Currency Unit – Bangladeshi Taka (BDT)

USD 1.00 = BDT: 85

ABBREVIATIONS

ADB		Asian Development Bank
BR		Bangladesh Railways
BTCL		Bangladesh Telecommunications Company Limited
DCB		Dhaka Cantonment Board
DDR		Due Diligence Report
DESCO		Dhaka Electric Supply Company
DESWSP		Dhaka Environmentally Sustainable Water Supply Project
DN		Diameter Nominal
DNCC		Dhaka North City Corporation
DWASA		Dhaka Water Supply and Sewerage Authority
DTCA		Dhaka Transport Coordination Authority
OD		Outer Dia
PRV		Pressure Reducing Valve
RAJUK		Rajdhani Unnayan Kortripakkha
RHD		Roads & Highways Department

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I INTRODUCTION

A Background

1. The Dhaka Environmentally Sustainable Water Supply Project (DESWSP) will provide reliable and sustainable water supply for Dhaka City dwellers by developing a new surface water supply scheme for supply augmentation, which includes development of a water intake at Meghna River with capacity of 1000 MLD, one raw water transmission pipeline, a water treatment plant at Gandharbpur with capacity of 500 million liters per day (MLD), a treated water transmission pipeline to the existing water supply network, and distribution reinforcements. The project also includes distribution network improvements to reduce non-revenue water, and will promote household and community access to safe water, including support to low-income communities. Dhaka Water Supply and Sewerage Authority (DWASA) is the executing and implementing agency of the project.

2. The project will extract surface water from the Meghna River at Shomvupura Mouza of Arihazar Upazila where an Intake pumping station will be constructed. This surface water will be delivered through 22 km pipeline to the water treatment plant at Gandharbpur in Rupganj Upazila. The treated water will then be injected through 14 km pipeline to the distribution network of Dhaka city near Natun Bazar-Baridhara. From this injection point, water will be supplied to the surface water injection point by distribution network and feeder line. This project aims to reduce abstraction of ground water by 150 million liter per day (MLD).

3. DWASA is the Executing Agency (EA) for implementing the project. A Project Management Unit (PMU) has been established. For this project component, the PMU would be assisted by the Management, Design and Supervision Consultants (MDSC) in designing and supervision. An NGO will be appointed for assisting PMU in resettlement activities/social safeguard implementation under guidance of MDSC.

B Scope of this Project

4. The project is being implemented under 3 packages. Package 1 (P1) consists of water intake, 22 km. raw water pipeline and water treatment plant; Package 2 (P2) includes 14 km. treated water pipeline from water treatment plant to Natun Bazar at Vatara and Package 3 (P3) includes 65 km. distribution reinforcement pipeline in north Dhaka City. P3 has been divided into two parts; P3.1 and P3.2. For the whole route, pipelines will be installed through open trench excavations on public roads in north east Dhaka. Length of these pipeline routes are as follows:

Table 1: Length of Pipelines

Packages	Length	Components
P3.1	24 km.	Primary Distribution Pipelines
P3.2	42 km.	Feeder Pipelines

5. The start of the primary distribution network for P3.1 shall be at the interface with the Package 2 transmission mains. This is the injection point of the Phase 1 treated water (500 MLD) and shall be located at Notun Bazar in Vatara, at the junction of Madani Avenue and Progati Sharani. Large water pipelines (shown green in location map as Annexure 1) will be laid in open trench excavations, from 2m to 5 m wide and 4m deep, along the roads. Existing roads have been divided into seven sections (D, E, F, G, H, J and K)[1] to build pipeline network (see **Annexure 2**). This is being implemented under the contract package ICB-4/TWP/DESWSP/2018.

[1] PMU and MDSC have completed the road measurement survey. Based on this, MDSC has prepared Package 3.1 Route Optimization Report. This report suggested to divide existing road networks into seven sections for laying pipes. Parts of this report has been attached with this report as **Annexure 2, 3, 4** and **5.**

6. Pipeline route will have 7 culvert crossings, 2 lake crossings, 5 rail and storm drainage system crossings. Two-types of possible construction methods will be followed in these crossings; one is open-cut trenched crossing and the other is pipe diversion with underpass crossing. There will be a crossing on the busy Airport Road at Kuril. The pipeline will also cross under 5 foot-overbridges on the Airport Road. Pipelines will be laid below the existing railway crossings. There are no involuntary resettlement impacts identified at any of the 5 locations of rail crossings. Details have been given in **Annexure 3** and **4**.

7. There will be 25 junctions, 17 pressure reducing valves (PRVs), 15 road crossings and 20 isolation valves to connect with existing distribution at Rampura and Kakoli.

8. Some utility services belonging to agencies such as Bangladesh Telecommunications Company Limited (BTCL), Dhaka Electric Supply Company (DESCO), DWASA and Dhaka North City Corporation are expected to be crossed by the pipeline route.

9. The pipeline will be laid along roads/land which belong to different organizations such as Dhaka North City Corporation (DNCC), Roads & Highways Department (RHD), Dhaka Cantonment Board (DCB) and Bangladesh Railways (BR).

10. In line with Asian Development Bank's (ADB's) Safeguard Policy Statement, 2009, a due diligence process was conducted to examine land acquisition and resettlement issues in detail because the project is expected to cause major traffic disruption and may have limited impact on private property and businesses as the excavations will all be in large public roads. Contractor's working machineries, storage spaces, piles of excavated material and temporary fencing may cause disruption to people and businesses also alongside the roads. This report describes the findings and provides copies of available land documents of the pipeline locations and photographs. This land acquisition and resettlement due diligence report needs to be read along with the Resettlement Framework prepared for this project.

C Methodology

11. The methodology adopted for preparing this report included literature review, field visits, consultations and the verification of land information. Field visits have been made to all the proposed sections of roads selected for pipeline installation.

II SUBPROJECT DESCRIPTION

A Proposed Components

12. The major components of this package are treated water distribution pipelines. The network is split in the following seven sections:

- Section D: Natun Bazar to Badda
- Section E: Natun Bazar to Kakoli
- Section F: Natun Bazar to Kuril
- Section G: Kuril to Cantonment
- Section H: Kuril to Uttara
- Section J: Sonargaon Janapath Road
- Section K: Jasimuddin Avenue

Annexure 1 depicts the layout in the above-mentioned sections.

Different size of pipes will be used in different sections of primary distribution pipeline network. Table 1 below shows road location and width, trench width and sizes of pipes.

Table 2: Pipeline Route and Pipes to be Used

Name of Section	Location	Road Width	Trench Width	Length of Pipes in meter for										
				DN 1600	DN 1400	DN 1200	DN 1000	DN 900	DN 800	OD 800	OD 710	OD 630	OD 560	OD 450
Section D	Natun Bazar to Rampura Bridge	20m	1.8m ~ 2.2m			1916	412		261	681				
Section E	Natun Bazar to Kakoli	20m	1.6m									1420	978	
Section F	Natun Bazar to Kuril	20m	4.5m		5418									
Section G	Kuril to Cantonment	28m	1.7m ~ 1.8m							2363	192			

Section H	Kuril to Uttara	28m	1.45m ~ 2.6m	4838	792	764								556
Section J	Jasimuddin Road	20m	1.8m ~ 2.0m				985			1210				
Section K	Sonargaon Janapath	22m	1.9m					667						
Total				4838	6210	2680	1397	667	261	4254	192	1420	978	556

Detailed description of routes and pipes has been attached as **Annexure 2.** Google earth maps have been given for these sections in **Annexure 5.1, 5.2** and **5.3.**

III. LAND ACQUISITION AND PROJECT IMPACTS

13. There are no land acquisition and resettlement impacts identified under the proposed pipeline routes. Based on the field verification and surveys, the project is not anticipated to have any negative impact on the income of shops or any other businesses along the road side as the pipelines will be laid below the carriage way. Construction activities such as digging of trenches, excavated soil, and machineries will not hamper access for customers to the shops. Table 1 shows that roads are wide enough to install pipelines and facilitate public movement as well. No road closure is anticipated during construction.

14. Pipeline route will cross along the most important and traffic congested part of the Dhaka north city. Though there is no land acquisition and resettlement impact, there will be impact on traffic movement. DNCC has statutory traffic regulations and access control requirements. The contractor will ensure that access is maintained at all times. Significant restrictions will be in place to limit mobility of heavy construction plants and machinery, so that it does not hamper pedestrian and traffic movement. For example, no major construction activity and plant movement is normally permitted in the city roads between 6 am and 10 pm. All excavation and pipe laying work will therefore be programmed and executed avoiding the control hours in full compliance with the necessary requirements.

15. It is envisaged that in order to reduce congestion and adverse impact on residents, road cutting and trench excavation for pipe laying works at any point of time shall be restricted to reduced footprints e.g. 10m x 100m; fenced construction corridors shall be set up and sequentially progressed along the carriageway with adequate traffic management procedures in place. Construction method statements shall be reviewed and finalized to comply with similar requirements. Construction program shall be developed to account for similar work restrictions.

16. In addition, there is a possibility of interfacing the route with other infrastructure projects and with buried utilities of other service providers. In all cases, pipeline installation considers existing utility services and crossings along the alignment. In case of conflict with existing projects and utilities interventions, in case of interfacing, the project will realign pipeline route. For future projects, project proposed pipeline route at the site near the footpath in view of keeping space for others. If it is insufficient, the concerned implementing authority will plan further. Details are given in **Annexure 6**

17. As mentioned earlier, proposed pipeline route crosses through other public organizations (DNCC, RHD, DCB and BR) land. DWASA has applied to them for road cutting, trench excavation and crossing permissions. All of them have agreed to give permissions. The process is on-going. Memorandum of Understanding (MoU) has been drafted and agreed by both parties (DWASA and other owner organizations). These documents are given in **Annexure 6.1, 6.2, 6.3 a**nd **6.4.** Bangla copies have been attached here. No objection certificate (NOC) will be obtained from those organizations before construction starts.

IV CONSULTATION PARTICIPATION AND DISCLOSURE

18. Three public consultations were held in 3 different locations, covering representative area for all sections of the pipeline route. Information about the primary distribution pipelines network has been disseminated to the participants. The participants are well aware of the pipeline construction works. During the consultation meetings the participants expressed that the project will have no impact on community in terms of loss of livelihood or resettlement due to the project activities, rather it would be beneficial for them. However, they apprehended few minor impacts on roads and public movement. They suggested some mitigation measures to be taken during construction such as excavated materials like mud/soil should not be left around the pipeline after construction, water

supply should not be interrupted due to pipeline construction work, public or traffic movement should not be disrupted and barricade should be provided by contractors where there is risk for the construction work. DWASA representatives informed the participants that DWASA will be responsible for construction and refill work. The construction works will take two weeks to a month. Each installation in the community will take maximum 7 days and construction work will be carried out mostly at night. Open-cut/trench excavation method will be followed for pipeline installation. WASA representatives replied all the queries and reassured that the wastes mud/soil will be removed from the narrow roads immediately and from the wider road within 24 hours, 24-hour water supply with sufficient pressure will be ensured, water supply would not be interrupted due to construction, pipeline construction interruption would be minimal, construction will be carried out mostly at night and contractors will put enclosure covers on the trenches, barricades will be put up around the work site during construction work and planks will be used as bridge for entering houses. The Minutes of the Consultation Meetings, Photographs and Attendance Sheets is given in **Annexure 7.** In addition to these, individual interviews have been conducted among house owners, shop owners, vendors, passers-by, etc. to know the impact of the project on them.

19. Following ADB SPS 2009 requirements this Due Diligence Report will be posted on the official website of DWASA and the website of ADB after approval and endorsement of the report by DWASA and ADB.

V. CONCLUSION AND WAY FORWARD

A. Conclusion

20. No involuntary resettlement impacts are assessed in the routes for primary distribution network. This project component does not require any land acquisition. No non- titled affected persons have been identified in this route as well. DWASA needs to get permission from the DNCC, RHD, DCB and BR before construction starts. Due attention will be given by the project authority in terms of traffic management because this pipeline route crosses some of the most important and busiest parts of the city.

B. Next Steps

i. Copies of no objection certificates obtained from the DNCC, RHD, DCB, and BR will be updated in the DDR prior to construction.

Annexure 1: Location Map for P3.1

Annexure 2: Proposed Route Description

Proposed Route Description

The network is split in the following seven sections:

- Section D: Vatara to Badda
- Section E: Vatara to Kakoli
- Section F: Vatara to Kuril
- Section G: Kuril to Cantonment
- Section H: Kuril to Uttara
- Section J: Sonargaon Janapath Road
- Section K: Jasimuddin Avenue

Package P2 and P3 interface (Vatara Injection point)

The start of the primary distribution network for Package 3.1 shall be at the interface with the Package 2 transmission mains. This is the injection point of the Phase 1 treated water (500 MLD) and shall be located at Notun Bazar in the Vatara area, at the junction of Madani Avenue and Progati Sharani.

The incoming Package 2 pipeline consists of twin DN1600 DI pipes. The pipeline runs on the southern (westbound) carriageway of the six-lane Madani Avenue road. The pipeline will be two metres away from the median along the metaled road and will avoid busy shops and illegal occupants along the ROW of south side.

MDSC understands that a Notun Bazar station on the proposed MRT Line 5 will be located in the same vicinity as the proposed Package 2/ Package 3.1 interface (injection point). At this point the MRT Line 5 is proposed to be underground and the MRT station is proposed to be constructed by open cut excavation methods. To reduce the risk of conflict between the DESWSP pipelines and the proposed MRT, the pipeline has been located as far south as possible in Madani Avenue at this point.

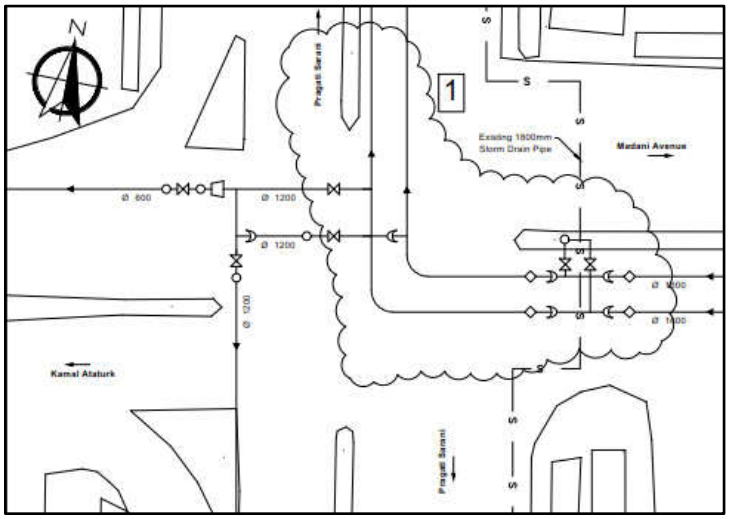
The P2/P3.1 package interface will be a fully valved inter-connection, with branches diverging as follows:

Section D branch: southwards along Progati Sharani (Bir Uttam Rafiqul Islam Avenue)

Section E branch: westwards along Kemal Ataturk Avenue

Section F branch: northwards along Progati Sharani

Figure 1: Schematic of pipework at Vatara Junction



Pipeline Route from Vatara to Rampura Bridge (Section D)

From the Injection Point at the junction of Madani Avenue and Progati Sharani, a single DN1200 DI pipe will run south from Vatara along Progati Sharani. The pipe will reduce to DN1000 DI where a branch diverges to feed DMA 804 (the branch is in Package 3.2 scope), then to DN800 DI at a further branch point feeding DMA 807, then to 800mm outside diameter (OD) PE at a final branch point feeding DMA 805. The 800mm OD PE pipe will continue as far as Rampura Bridge.

The Section D pipeline will be installed within the carriageway along the west side (northbound carriageway) of Progati Sharani road, as the majority of the utility services are known to be located in the east side of the road (including a 1800mm diameter RCC pipe storm drainage up to Shutikhola Khal). A DN450 DI existing water pipe line is known to be in the east side of the road.

Pipeline Route from Vatara to Kakoli along Kemal Ataturk Avenue (Section E)

From the Injection Point at the junction of Madani Avenue and Progati Sharani, a single 630mm OD PE pipe will be installed westwards along Madani Avenue and continuing into Kamal Ataturk Avenue after the junction with Gulshan Avenue/Gulshan North Avenue. The pipe will reduce to 450mm OD PE at the Gulshan Lake crossing after connections into DMAs 504 and 505, and will continue westwards to the junction between Kemal Ataturk Avenue and New Airport Road at Kakoli.

The pipeline will be installed within the carriageway along the north side of the road (eastbound carriageway), because the majority of the existing utility services are known to exist in the Southern side of the road (including a disused sewerage collection system). There are storm drains in both sides of the roadway.

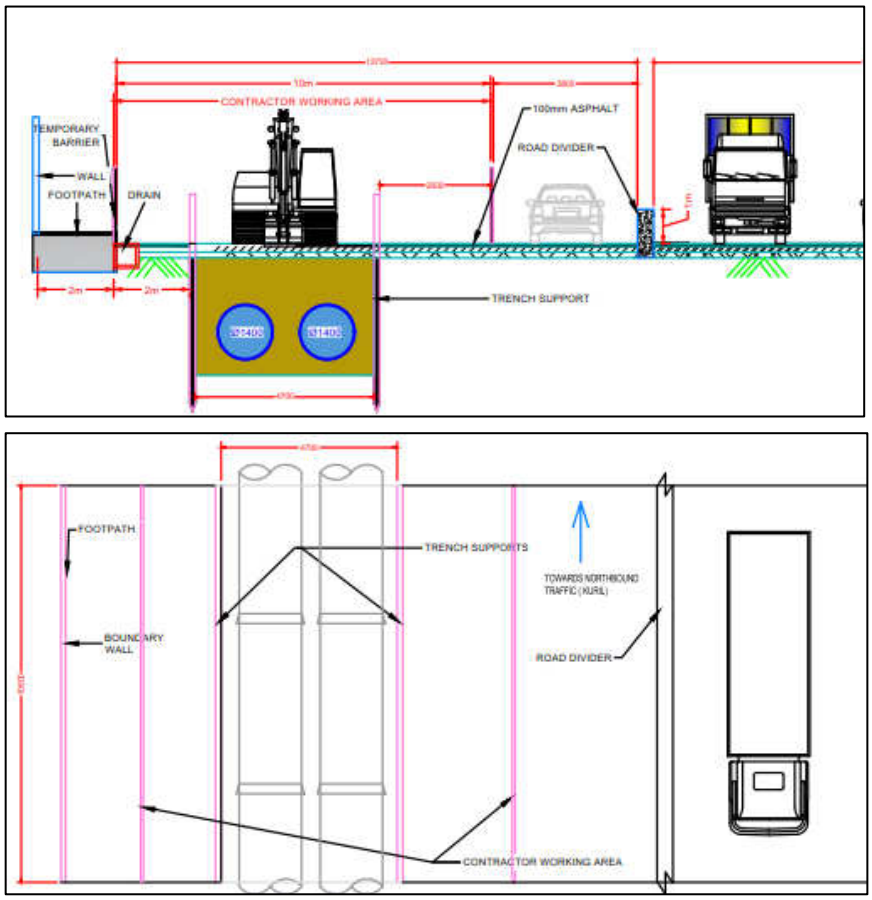
The pipeline will need to cross two lakes (Baridhara Lake and Gulshan Lake) which cross under the roadway on box culverts.

Pipeline Route from Vatara to Kuril (Section F)

Twin DN1400 DI pipes will run northwards from Vatara (injection point) along Progati Sharani up to Kuril Bishwa road. Twin pipelines have been selected because a single DI pipeline would be approximately of DN2000 size to provide equivalent hydraulic capacity and is likely to have limitations in commercial availability. Alternative pipe materials were not preferred in this location, as DI has advantages in terms of robustness for transportation/storage/installation in the highway in a busy urban location.

The twin DN1400 pipes will be installed on the west side of the Progati Sharani road, within the northbound carriageway, approximately 2m from the foot path/road kerb line. Selection of this carriageway is because the majority of the utility services are known to be located within in the east side of the road, including a 1800mm diameter RCC pipe storm drainage system up to Bashundara housing area and an existing DN450 DI water supply pipe. The west side (northbound carriageway) lane is therefore deemed more suitable.

Figure 2: Installation of pipeline in Progati Sharani (Vatara to Kuril)



Source: MDSC

At the north end of Progati Sharani, a valved junction shall be provided between the twin DN1400 diameter pipes; a DN1200 blank flanged connection shall also be provided at this location to receive future Phase 2 injection.

The railway track and busy Airport Road at Kuril would be crossed by use of a 2000mm microtunnel pipe-jack trenchless crossing; two approximately 10m deep shafts shall be provided either end of the crossing. Fully valved interconnection pipework shall be provided at the shaft locations to assist operation.

On the west side of the crossing an offtake 800mm OD HDPE pipe shall be provided to transfer flows towards Zia Colony (Section G branch) and a single DN1600 DI pipe northwards towards Uttara along the Airport road (Section H branch).

Figure 3: Kuril crossing – indicative schematic

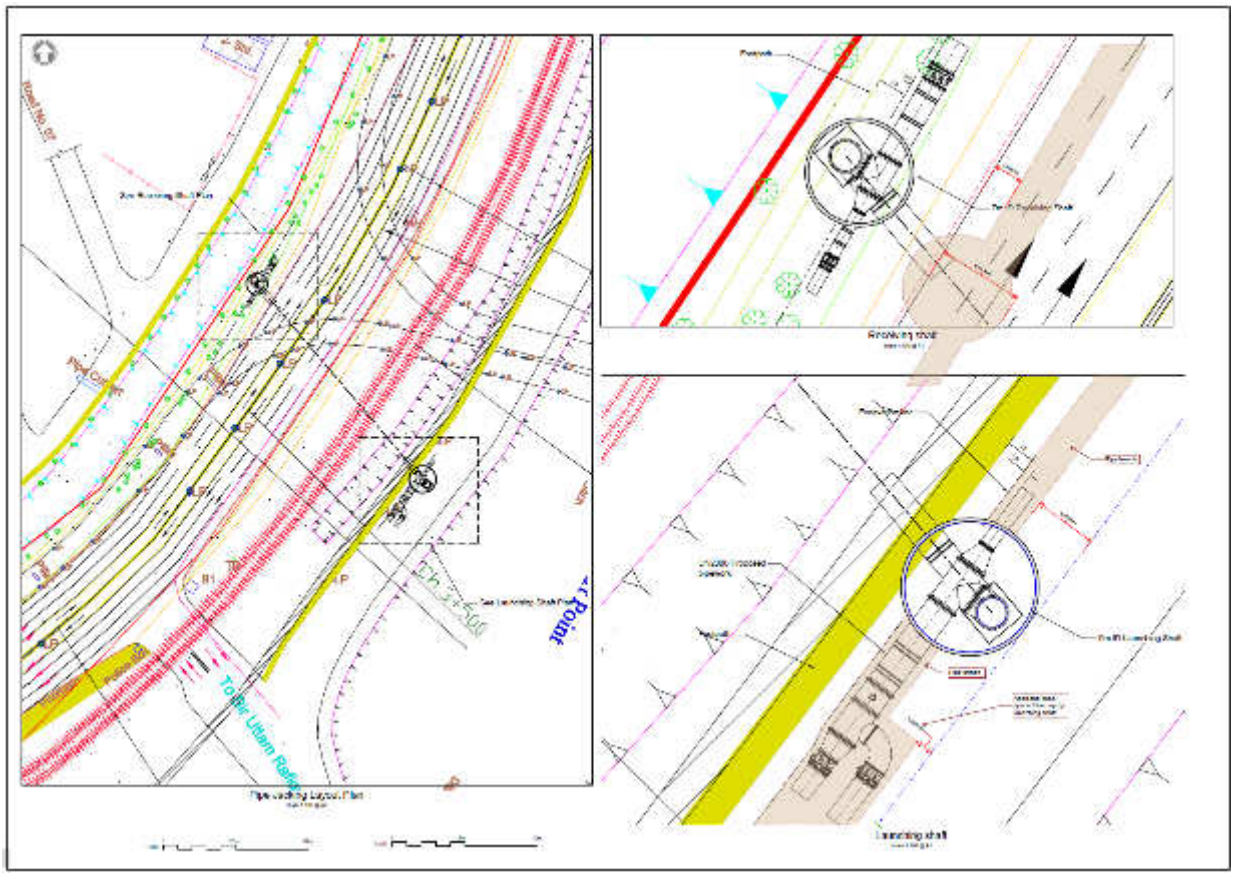
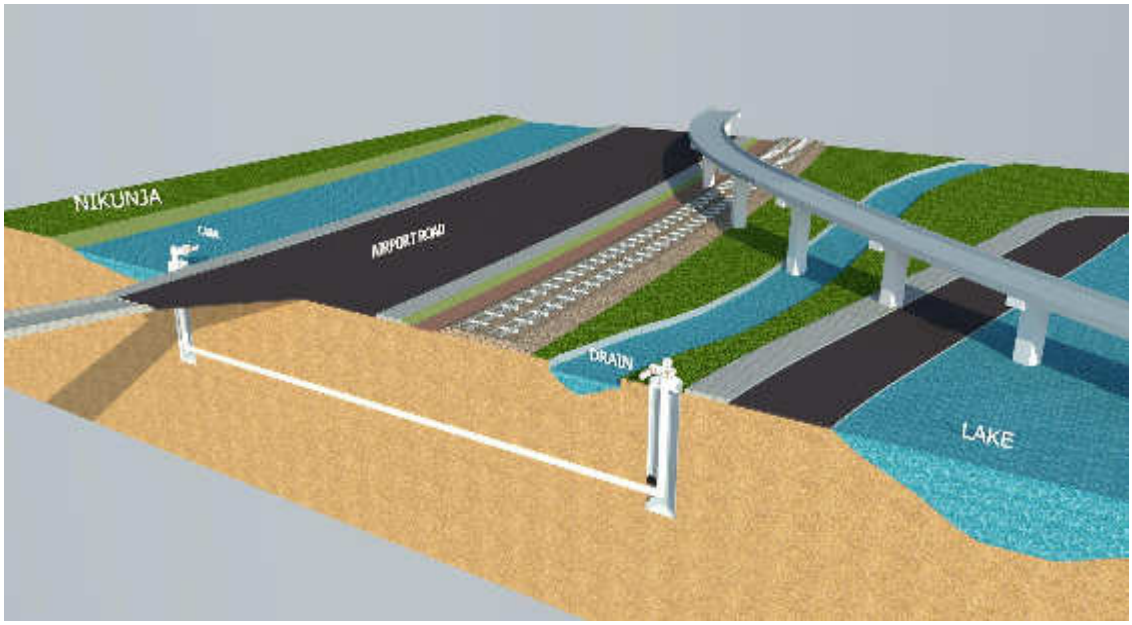


Figure 4: Kuril crossing – illustrative image of trenchless crossing



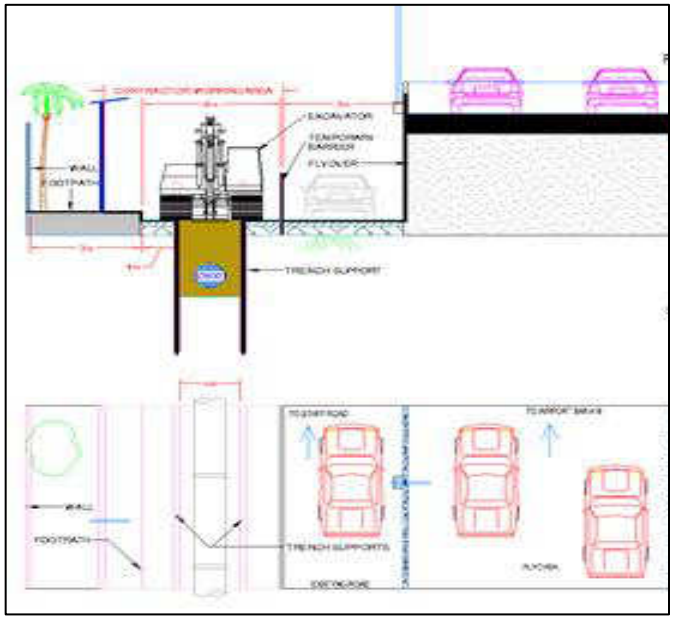
Source: MDSC

Pipeline Route from Kuril to Matikata through Zia Colony (Section G)

From the junction at Kuril, a single 800mm outside diameter PE pipe will run westwards to Zia Colony Road and Matikata Road. The pipe will reduce to 710mm outside diameter after the branch point feeding DMA 1002 (branch in P3.2 scope).

The pipe will be installed within the carriageway on the west side of Airport Road (eastbound/northbound carriageway) and in the north side (eastbound carriageway) of Zia Colony Road. The reasons for proposing this pipe alignment are because there are no known utility services in this alignment, and also from Kuril to Zia colony this alignment is more feasible due to fewer crossings of minor roads.

Figure 5: Installation of pipeline at Zia colony road (Dhaka Cantonment). *Actual contractor's working corridor likely to be wider than shown.*



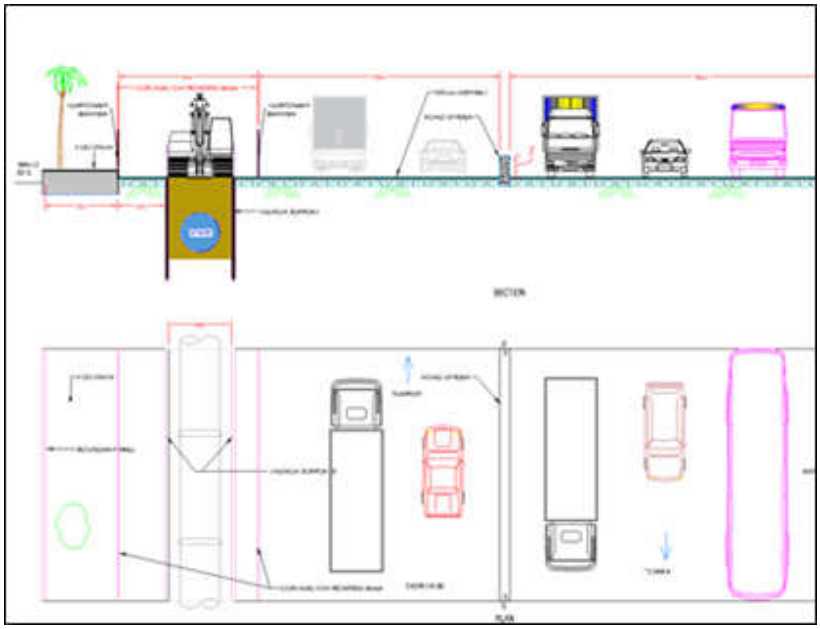
Source: MDSC

Pipeline Route from to Kuril to Uttara (Section H)

The route from Kuril crossing to Uttara comprises a single DN1600 diameter DI pipeline laid in the Airport Road (Dhaka-Mymensing highway); the pipeline would be installed in the northbound carriageway (west side) approximately 2m from the edge of footpath kerb line. This alignment is proposed to reduce impact on existing utilities.

Alternative routes via roads parallel and adjacent to the Airport Road were also evaluated. However, these were found to be less optimal that the original route, which was therefore retained. The reasons for discarding the alternative route included limited construction space, access obstructions for large commercial and residential properties (e.g. Front Road) and environmental impact (e.g. existing beautification works in Engineer Zobayer Hashan Street).

Figure 6: Installation of pipeline in Airport Road (Kuril to Uttara). *Actual contractor's working corridor likely to be wider than shown.*



Source: MDSC

The pipeline route will cross under 5 footbridges (overbridges) along Airport Road. The foundation of these overbridges is in the foot path and the proposed pipeline would cross under the bridges 2m from the foot path/kerb line.

Special consideration was given to reducing the disruption that would be caused during construction of the pipeline near to the Airport entrance. The following two options were considered:

trenchless

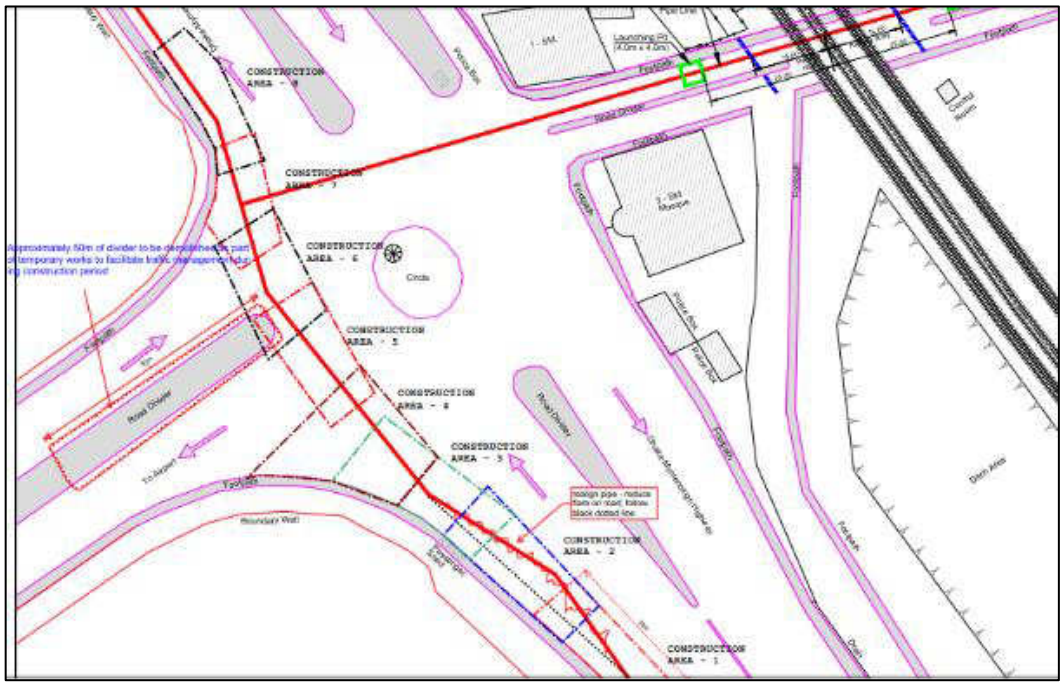
open cut

Trenchless methods, if practicable, would avoid the need to close lanes of the entrance road to the Airport for pipe installation. However trenchless installation for large diameter pipelines requires deep cover to the pipe to reduce impact on the road surface caused by to settlement and ground movement. It also brings concerns related to large space requirement for the jacking and receiving pits. It is envisaged that trenchless construction of a DN1600 DI pipe would require an approximately 2000mm ID concrete casing pipe with an outside diameter of approx. 2400mm. The depth to crown of the casing pipe is likely to be between 5 to 7m. The jacking pit foot print could be up to 8mx15m and the pit could be 10~12m deep. These dimensions are approaching the limit of temporary sheet piled open excavation and might require some form of permanent piling or shaft sinking which brings in further complexities and space requirements.

It was felt that it would be difficult to obtain this extent of construction space in the Airport Road and this would almost certainly require closing of a large section of the northbound carriageway causing very high public inconvenience. The trenchless option is therefore not considered advantageous.

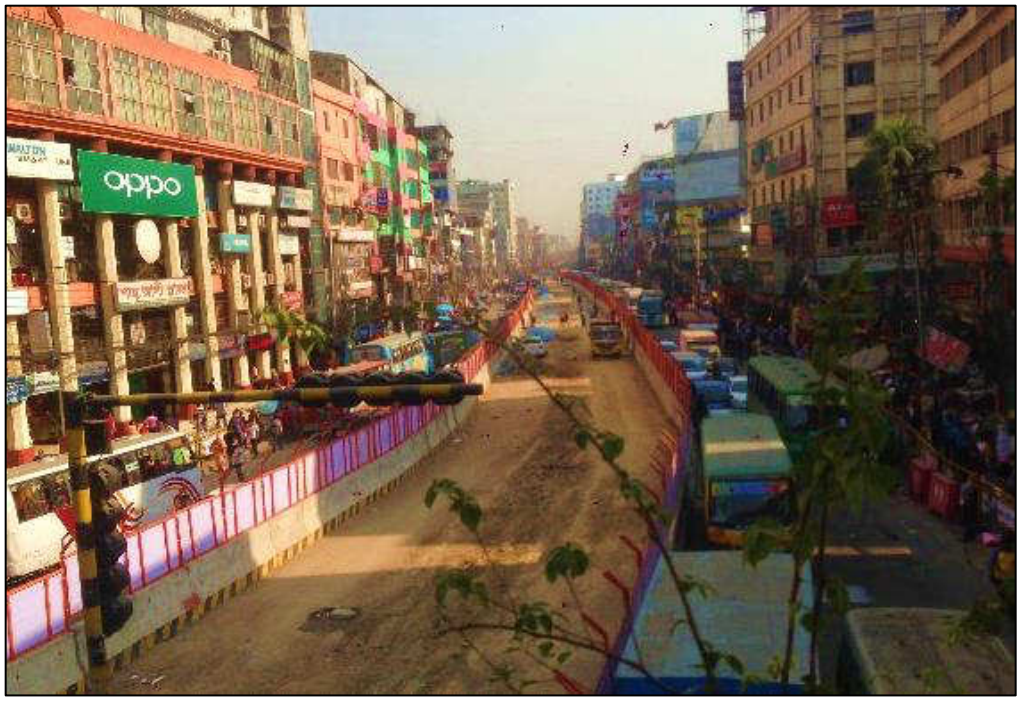
In comparison an open cut trench installation is much more feasible. Construction activity could be progressed in a sequential manner with the working corridor limited to a smaller footprint; see Figure 7**Error! Reference source not found.Error! Reference source not found.** for indicative construction corridor and Figure 8**Error! Reference source not found.** for typical fenced construction corridor in Mirpur Dhaka. Appropriate temporary works and traffic management would permit near regular traffic movement in the road. An open cut method is thus recommended.

Figure 7: Airport Entrance crossing of DN1600 pipeline



Source: MDSC

Figure 8: Typical fenced construction corridor for BRT-6 near Mirpur Dhaka



Source: MDSC

The pipeline would cross the “VIP entrance road” to the Airport premises. It is envisaged that during construction temporary access would be installed to provide clear vehicle access to the road. This could be a heavy-duty plate-over or a prefabricated Bailey bridge.

Pipeline Route along Sonargaon Janapath (Section J)

A single DN1400 DI pipe will be installed running northwards from the junction between Airport Road (Dhaka-Mymensing highway) and Jashimuddin Road. The pipe diameter will reduce to DN1200 DI after the branch heading down Shahjalal Avenue (branch in P3.2 scope).

At the junction between Airport Road (Dhaka-Mymensing highway) and Sonargaon Janapath there will be a connection to a branch feeding DMA 911 (branch in P3.2 scope). The P3.1 pipeline will run westwards along Sonargaon Janapath towards Uttara Phase 3 as DN1000 DI.

At the junction of Gareeb e Newaj Avenue and Sonargaon Janapath there will be a connection to a branch feeding DMA 902 (branch in P3.2 scope). The P3.1 pipe will reduce to 800mm outside diameter PE and will continue westwards to the end of Sonargaon Janapath.

The proposed P3.1 pipeline will be installed within the carriageway on the south side of the Sonargaon Janapath road (westbound carriageway), 2m from the foot path/kerb line. This is because:

TITAS Gas lines are believed to be installed in the North side of the road.

To the east of Gareeb E Newaz Road the storm drainage is believed to be installed in both sides of the road, but west from Gareeb E Newaz Road to the end of Sonargaon Janapath the drainage is in the northern side of the road.

Sonargaon Janapath crosses the Uttara Lake, with waterbodies on both sides of Sonargaon Janapath road (north side and south side) connected to the piped drains.

Pipeline Route along Jashimuddin Road (Section K)

A single DN900 DI pipe will be installed running westwards from the junction between Airport Road (Dhaka-Mymensing highway) and Jashimuddin Road past the northern side of the Airport to Bawnia Road.

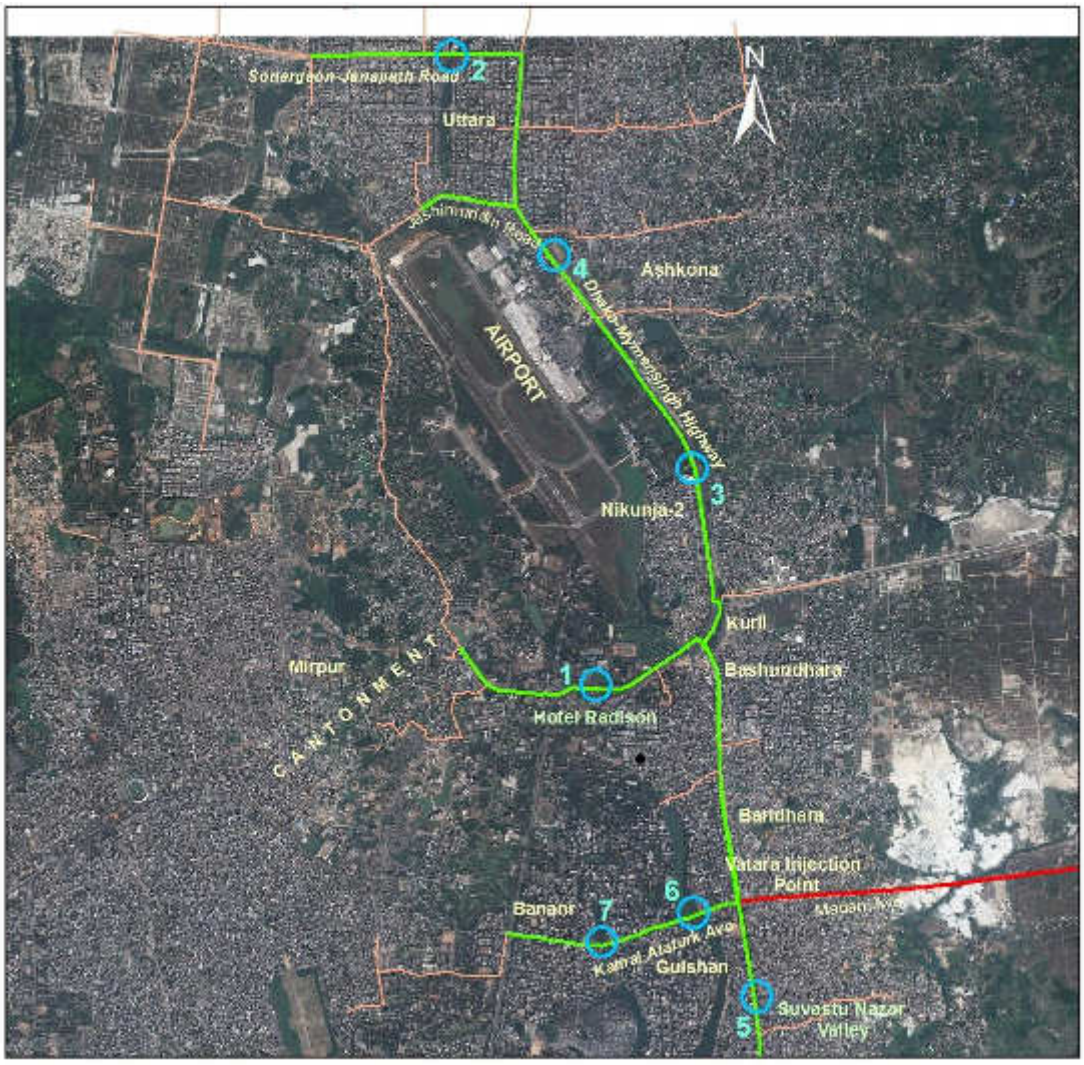
The proposed pipeline will be installed within the carriageway on the south side of the road (westbound carriageway), 2m from the central divider.

Annexure 3: Culvert Crossings

The pipe route of Package 3.1 requires 7 culvert crossings of varying sizes and depths.

The typical range of culvert cross section is 2.5~8.5m(width) x 2.0~5m (depth).

Figure 1: Location of Culvert Crossings



Source: MDSC

Table 1: List of Culvert Crossings

Culvert	Location	Chainage
1	Airport Road near Hotel Radisson	Ch: 1+ 225m
2	Sonargaon Janapath, in between sector 7 and 13	Ch: 0+650m
3	Airport Road at the end of Nikunja 2	TBC
4	Airport Road near Jasimuddin Road Uttara	Ch: 4+600m
5	Pragoti Sarani, Near Suvastu Najar Valley	Ch: 0+975m
6	Gulshan Lake	Ch: 0+500m
7	Banani Lake	Ch: 1+500m

Source: MDSC

These culverts are typically cast in place reinforced concrete structures with little movement flexibility.

Two possible crossing methods have been developed for design purposes and are listed below:

Type 1: Open-cut trenched crossing

Type 2: Pipe diversion with underpass crossing

Type 1 – in this method a heading would be established below the existing culvert followed by installation of the crossing pipe and concrete placement all around the pipe; this method would allow shallower depth of installation but would necessitate a structural review of the existing culvert stability to confirm feasibility of excavation below the base slab. Temporary works in the form of structural support would be required to enable excavation below the culvert base slab. Temporary bunding of the culvert with provision for flow bypass would be required.

Type 2 – this method considers a conventional lateral diversion of the pipe alignment followed by an underpass crossing of the culvert. The underpass crossing would be installed with adequate ballasting and scour protection.

Type 2 provides a generally simpler construction method but may require additional land for installation of the pipeline. Temporary bunding and flow bypass or over-pumping arrangements would be necessary during construction of this type of crossing.

Trenchless crossings in the form of auger bores or equivalent trenchless techniques below the culverts were also considered. Applicability of this method was weighed in respect of the crossing size, construction and plant/machinery access in vicinity of the culvert structure and risk of damage to the existing culvert structure during the pipe installation operation. In case of the bigger diameter pipes (e.g. DN1000, DN1600) this method would generally require deep excavations either side of the culvert with large excavation footprint, specialised trenchless machinery (auger boring, pipe jacking) and is expected to be comparatively more expensive than either Type 1 or Type 2 options. Trenchless techniques were therefore not progressed.

Table 1: Description of Culvert Crossings

Culvert no.	**Location or arrangement of culvert**	**Suggested crossing method**
Culvert 1: Opposite hotel Radisson Adjacent to Army Hospital Crossing pipe diameter: 800mm		Type 1

Culvert no.	Location or arrangement of culvert	Suggested crossing method
Culvert 2: Sonargaon Janapath, in between sector 7 and 13		Type 1
Culvert 3: Near Nikunja 2 Crossing pipe diameter: 1600mm		Type 1
Culvert 4: Near Jasimuddin Road at Uttara Crossing pipe diameter: 1600mm		Type 1

Culvert no.	Location or arrangement of culvert	Suggested crossing method
Culvert 5: Near Suvastu Najar Valley Crossing pipe diameter: 1000mm		Type 1
Culvert 6: Across Gulshan Lake on Madani Avenue Crossing pipe diameter: 600mm		Type 2

Culvert no.	Location or arrangement of culvert	Suggested crossing method
Culvert 7: Kemal Ataturk Avenue, Banani Lake Crossing pipe diameter: 600mm	 	Type 2

Annexure 4: Railway Crossings

Pipeline route will be crossed railway in 5 sections as mentioned below:

1. At Shainik Club (Section E)
2. At Joar Shahara (Section H)
3. At Ashkona (Section H)
4. At Koshaibari (Section H)
5. At Azampur (Section H)

Photos are given below:

Location of Railway Crossing at Shainik Club (Section E)

Location of Railway Crossing at Joar Shahara (Section H)

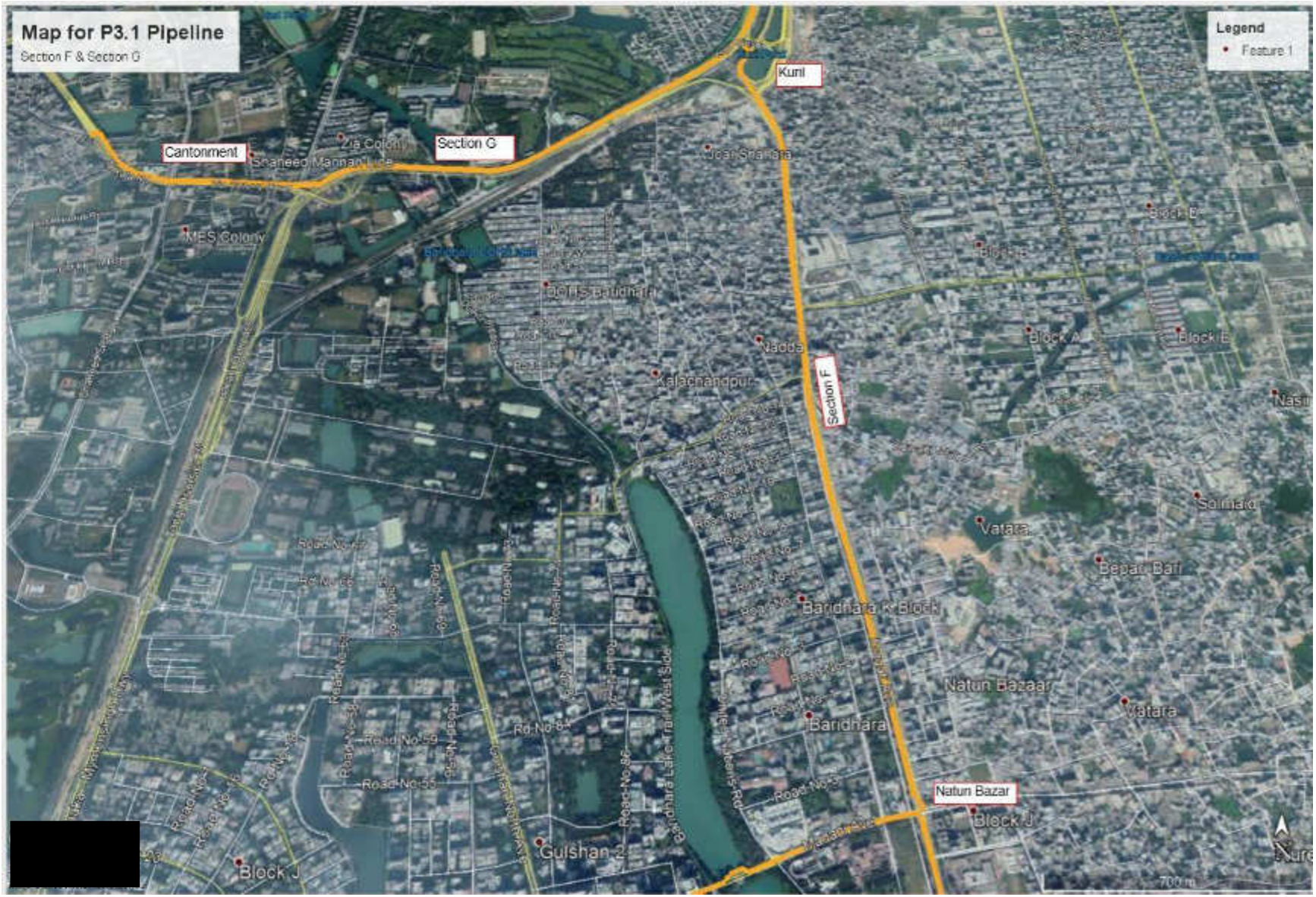
Location of Railway Crossing at Ashkona (Section H)

Location of Railway Crossing at Koshaibari (Section H)

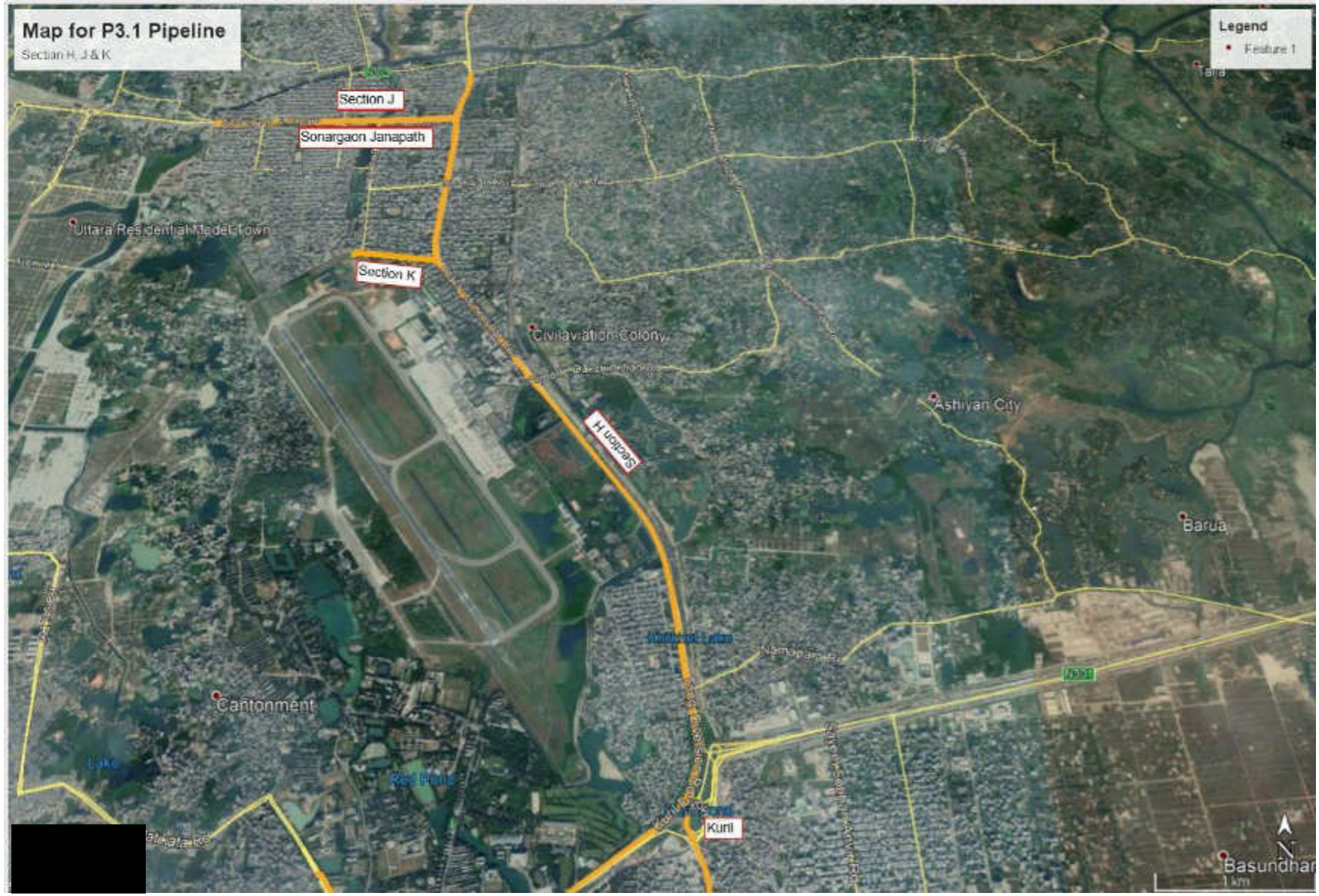
Location of Railway Crossing at Azampur (Section H)

Annexure 5.1: Pipeline Route Map for Section D & E

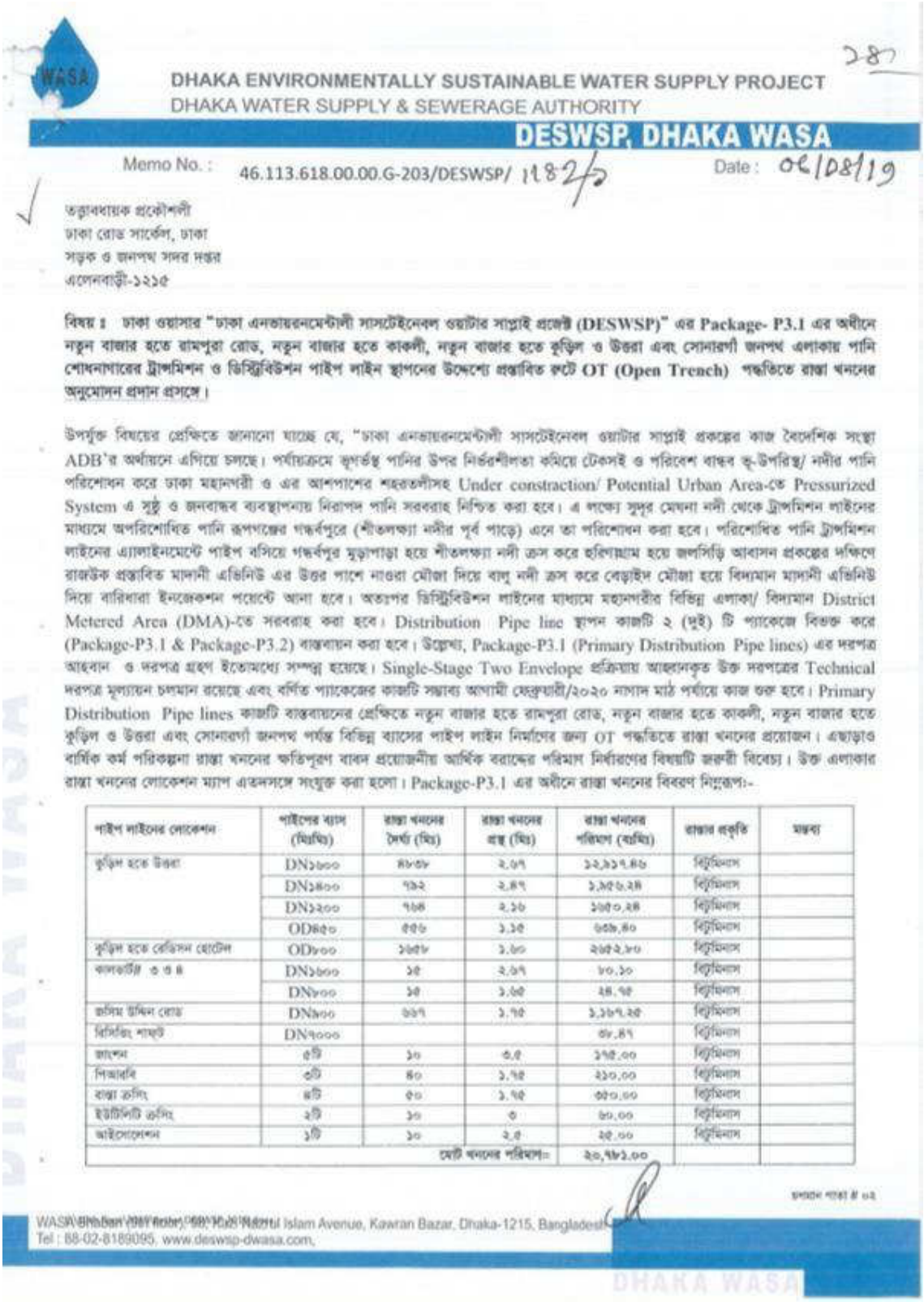
Annexure 5.2: Pipeline Route Map for Section F & G



Annexure 5.3: Pipeline Route Map for Section H, J & K



Annexure 6.1: Application to RHD for Road Cutting Permission



DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY
DESWSP, DHAKA WASA

Memo No. : 46.113.618.00.00.G-203/DESWSP/ 1182/2 Date : 02/08/19

তত্ত্বাবধায়ক প্রকৌশলী
ঢাকা রোড সার্কেল, ঢাকা
সড়ক ও জনপথ সদর দপ্তর
এলেনবাড়ী-১২১৫

বিষয় : ঢাকা ওয়াসার "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট (DESWSP)" এর Package- P3.1 এর অধীনে নতুন বাজার হতে রামপুরা রোড, নতুন বাজার হতে কাকলী, নতুন বাজার হতে কুড়িল ও উত্তরা এবং সোনারগাঁও জনপথ এলাকায় পানি শোধনাগারের ট্রান্সমিশন ও ডিস্ট্রিবিউশন পাইপ লাইন স্থাপনের উদ্দেশ্যে প্রস্তাবিত রুটে OT (Open Trench) পদ্ধতিতে রাস্তা খননের অনুমোদন প্রদান প্রসঙ্গে।

উপর্যুক্ত বিষয়ের প্রেক্ষিতে জানানো যাচ্ছে যে, "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রকল্পের কাজ বৈদেশিক সংস্থা ADB'র অর্থায়নে এগিয়ে চলছে। পর্যায়ক্রমে ভূগর্ভস্থ পানির উপর নির্ভরশীলতা কমিয়ে টেকসই ও পরিবেশ বান্ধব ভূ-উপরিস্থ/ নদীর পানি পরিশোধন করে ঢাকা মহানগরী ও এর আশপাশের শহরতলীসহ Under construction/ Potential Urban Area-তে Pressurized System এ সুষ্ঠু ও জনবান্ধব ব্যবস্থাপনায় নিরাপদ পানি সরবরাহ নিশ্চিত করা হবে। এ লক্ষ্যে সুদূর মেঘনা নদী থেকে ট্রান্সমিশন লাইনের মাধ্যমে অপরিশোধিত পানি রূপগঞ্জের গন্ধর্বপুরে (শীতলক্ষ্যা নদীর পূর্ব পাড়ে) এনে তা পরিশোধন করা হবে। পরিশোধিত পানি ট্রান্সমিশন লাইনের এ্যালাইনমেন্টে পাইপ বসিয়ে গন্ধর্বপুর মুড়াপাড়া হয়ে শীতলক্ষ্যা নদী ক্রস করে হরিণমারা হয়ে জলসিড়ি আবাসন প্রকল্পের দক্ষিণে রাজউক প্রস্তাবিত মাদানী এভিনিউ এর উত্তর পাশে নাওরা মৌজা দিয়ে বালু নদী ক্রস করে বেড়াইদ মৌজা হয়ে বিদ্যমান মাদানী এভিনিউ দিয়ে বারিধারা ইনজেকশন পয়েন্টে আনা হবে। অতঃপর ডিস্ট্রিবিউশন লাইনের মাধ্যমে মহানগরীর বিভিন্ন এলাকা/ বিদ্যমান District Metered Area (DMA)-তে সরবরাহ করা হবে। Distribution Pipe line স্থাপন কাজটি ২ (দুই) টি প্যাকেজে বিভক্ত করে (Package-P3.1 & Package-P3.2) বাস্তবায়ন করা হবে। উল্লেখ্য, Package-P3.1 (Primary Distribution Pipe lines) এর দরপত্র আহবান ও দরপত্র গ্রহণ ইতোমধ্যে সম্পন্ন হয়েছে। Single-Stage Two Envelope প্রক্রিয়ায় আহ্বানকৃত উক্ত দরপত্রের Technical দরপত্র মূল্যায়ন চলমান রয়েছে এবং বর্ণিত প্যাকেজের কাজটি সম্ভাব্য আগামী ফেব্রুয়ারী/২০২০ লাগাদ মাঠ পর্যায়ে কাজ শুরু হবে। Primary Distribution Pipe lines কাজটি বাস্তবায়নের প্রেক্ষিতে নতুন বাজার হতে রামপুরা রোড, নতুন বাজার হতে কাকলী, নতুন বাজার হতে কুড়িল ও উত্তরা এবং সোনারগাঁও জনপথ পর্যন্ত বিভিন্ন ব্যাসের পাইপ লাইন নির্মাণের জন্য OT পদ্ধতিতে রাস্তা খননের প্রয়োজন। এছাড়াও বার্ষিক কর্ম পরিকল্পনা রাস্তা খননের ক্ষতিপূরণ বাবদ প্রয়োজনীয় আর্থিক বরাদ্দের পরিমাণ নির্ধারণের বিষয়টি জরুরী বিবেচ্য। উক্ত এলাকার রাস্তা খননের লোকেশন ম্যাপ এতদসঙ্গে সংযুক্ত করা হলো। Package-P3.1 এর অধীনে রাস্তা খননের বিবরণ নিম্নরূপ:-

পাইপ লাইনের লোকেশন	পাইপের ব্যাস (মিঃমিঃ)	রাস্তা খননের দৈর্ঘ্য (মিঃ)	রাস্তা খননের প্রস্থ (মিঃ)	রাস্তা খননের পরিমাণ (বর্গমিঃ)	রাস্তার প্রকৃতি	মন্তব্য
কুড়িল হতে উত্তরা	DN১৬০০	৯৬৩৮	২.৩৭	১২,৯১৭.৪৬	বিটুমিনাস	
	DN১৪০০	৭৯২	২.৪৭	১,৯৫৬.২৪	বিটুমিনাস	
	DN১২০০	৭৬৪	২.১৬	১৬৫০.২৪	বিটুমিনাস	
	OD৪৫০	৫৫৬	১.১৫	৬৩৯.৪০	বিটুমিনাস	
কুড়িল হতে রেডিসন হোটেল	OD৮০০	১৬৫৮	১.৮০	২৬৫২.৮০	বিটুমিনাস	
কালকার্টিয়া ও ও ৪	DN১৮০০	১৫	২.৩৭	৮০.১০	বিটুমিনাস	
	DN৮০০	১৫	১.৬৫	২৪.৭৫	বিটুমিনাস	
জসিম উদ্দিন রোড	DN৯০০	৬৬৭	১.৭৫	১,১৮৭.২৫	বিটুমিনাস	
বিসিসিএ শাখা	DN৭০০০			৫৮.৪৭	বিটুমিনাস	
জাংশন	৫টি	১০	৩.৫	১৭৫.০০	বিটুমিনাস	
সিআরবি	৩টি	৪০	১.৭৫	২১০.০০	বিটুমিনাস	
রাস্তা ক্রসিং	৪টি	৫০	১.৭৫	৩৫০.০০	বিটুমিনাস	
ইউটিলিটি ক্রসিং	২টি	১০	৩	৬০.০০	বিটুমিনাস	
আইসোলেশন	১টি	১০	২.৫	২৫.০০	বিটুমিনাস	
			মোট খননের পরিমাণ=	২০,৭৮১.০০		

WASA Bhaban, 98 Kazi Nazrul Islam Avenue, Kawran Bazar, Dhaka-1215, Bangladesh
Tel : 88-02-8189095, www.deswsp-dwasa.com,

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY
DESWSP, DHAKA WASA

Memo No. : Date :

পৃষ্ঠা # ০২

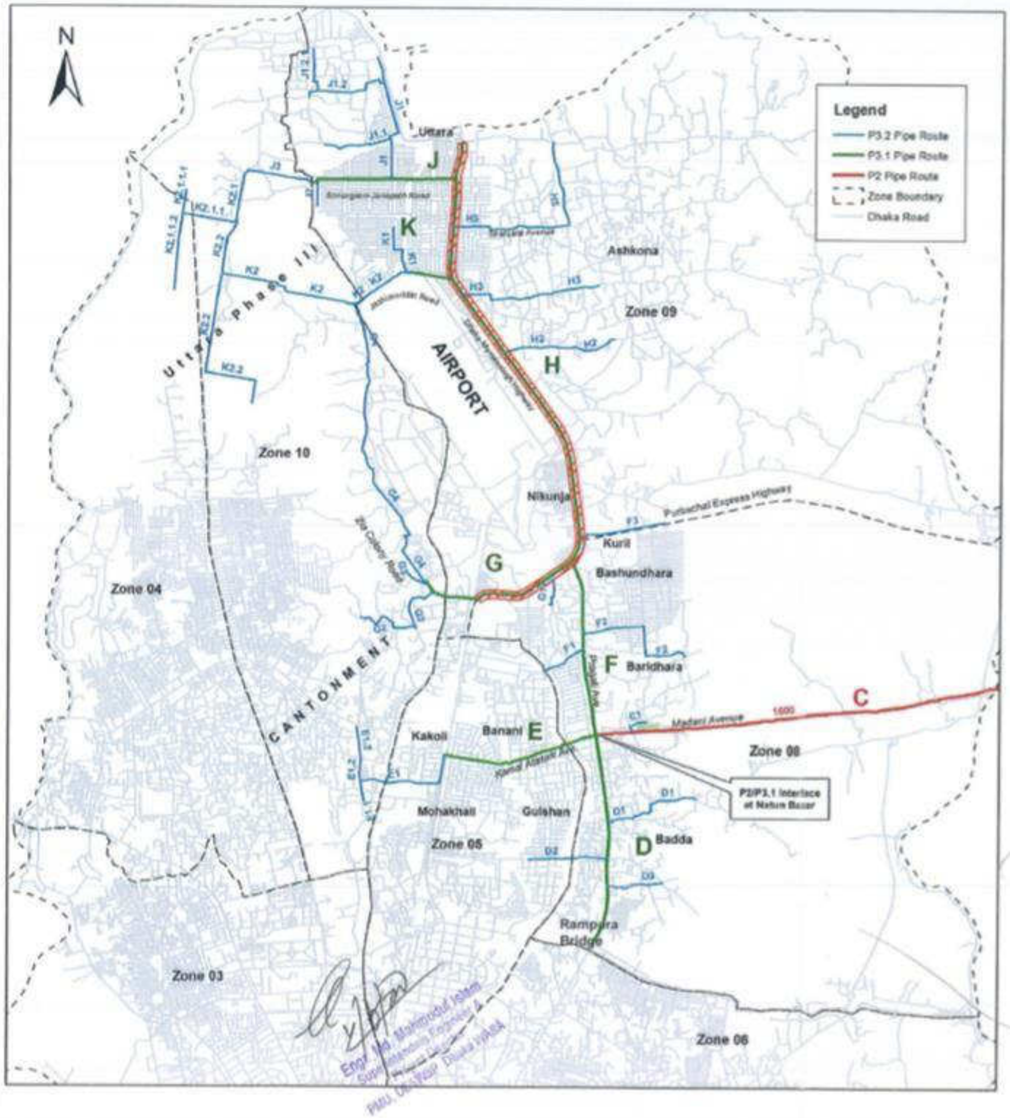
এমতাবস্থায়, ঢাকা ওয়াসার "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট (DESWSP)" এর Package- P3.1 এর অধীনে কুড়িল, উত্তরা ও এয়ারপোর্ট রোড এলাকায় পানি শোধনাগারের ট্রান্সমিশন ও ডিস্ট্রিবিউশন পাইপ লাইন স্থাপনের উদ্দেশ্যে প্রস্তাবিত রুটে OT (Open Trench) পদ্ধতিতে রাস্তা খনন কাজ সম্পন্ন করার লক্ষ্যে উপরোক্ত বর্ণনা ও সংযুক্ত পরিমাণ অনুযায়ী রাস্তা খননের ক্ষতিপূরণ বিলের ডিমান্ড নোট এবং রাস্তা খননের অনুমতি পত্র অত্র প্রকল্প বরাবর প্রেরণের জন্য বিশেষ ভাবে অনুরোধ করা হলো।

সংযুক্ত: *প্রস্তাবিত এ্যালাইনমেন্টের নকশা।*

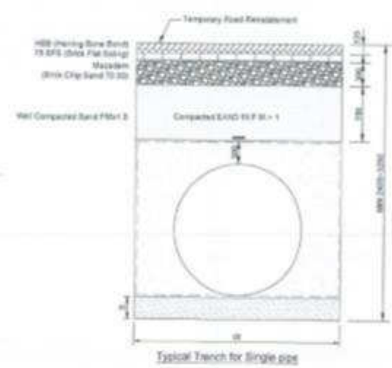
(মোঃ মাহমুদুল ইসলাম)
তত্ত্বাবধায়ক প্রকৌশলী ও প্রকল্প পরিচালক
(DESWSP), ঢাকা ওয়াসা।

অনুলিপি:
১. প্রধান প্রকৌশলী, সড়ক ও জনপথ সদর দপ্তর, ঢাকা।
২. উপ-প্রকল্প পরিচালক-১/২, DESWSP, ঢাকা ওয়াসা।
৩. নির্বাহী প্রকৌশলী-১/২/৩, DESWSP, ঢাকা ওয়াসা।
৪. Management Design & Supervision Consultant (MDSC).

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
ROAD CUTTING LAYOUT FOR RHD



Detail Road cutting Estimates for P3.1 in RHD road					
1) From Kuril to Uttara (Part H)					
Pipeline Location	Pipe dia	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road
From Kuril to Uttara	DN 1600	4838	2.67	12917.46	Bituminous
	DN 1400	792	2.47	1956.24	
	DN 1200	784	2.16	[illegible]	
	DN450	556	1.15	639.4	
Sub Total 1				17,166.80	
2) From Kuril to Radisson (Part G)					
Pipeline Location	Pipe dia	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road
From Kuril to Radisson	OD 820	1058	[illegible]	2452.8	Bituminous
Sub Total 2				[illegible]	
3) Culvert crossing					
Pipeline Location	Pipe dia	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road
Culvert # 3&4	DN 1600	15	2.67	80.1	Bituminous
Culvert # 1	DN 900	15	1.65	24.75	
Sub Total 3				105	
4) Shaft at Kuril Rail & High way crossing					
Pipeline Location	Pipe dia	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road
Launching Saft	Dia 9000			0	Bitumin (DNCC)
Receiving Shaft	Dia 7000			38.465	Bitumin (RHD)
Sub Total 4				39	
5) Junctions, PRV, Road crossing, Isolation valve(RHD)					
Pipeline Location	Numbers	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road
Junctions	5	35	3.5	175	Bituminous
PRV Conn.	3	40	1.75	210	
Road Cross	4	53	1.75	330	
Utility cross	2	20	3	60	
Isola. Valve	5	10	2.5	25	
Sub Total 5				820	
Total Bituminous Road Cutting in RHD Road =				20,783.86	m2



Translated Copy:

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY

DESWSP, DHAKA WASA

Memo No. : 46.113.618.00.00.G-203/DESWSP/1182 Date: 06/08/19

Superintending Engineer
Dhaka Road Circle, Dhaka
Roads & Transport Head Office
Elenbari-1215

Subject: In regard to the road cutting permission for installation of transmission and distribution of water treatment plant under the package 3.1 of "Dhaka Environmentally Sustainable Water Supply Project (DESWSP)" using OT (open Trench) method in the areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttora and Sonargao Jonopath.

This is to inform in respect of the above-mentioned subject that under the funding of foreign organization ADB the work of Dhaka Environmentally Sustainable Water Supply Project is in progress. Safe water supply in a sustainable and environmentally friendly manner will be ensured through treated surface/ river water to areas of Dhaka city and suburban areas under construction/ potential urban areas through pressurized water supply system managed in appropriate and people's friendly way. In this view, untreated water from a long-distanced River Meghna will be brought to the Treatment Plant at Gandharbpur, Rupgonj (Eastern bank of the River Shitalakhya) and will be treated. The treated water will be brought to the injection point at Baridhara through installation of pipes in the alignment of treated water transmission line from Gandharbpur crossing Shitalakhya at Murapara passing through Horinagram then crossing Balu river in the Naora mouza at the North of RAJUK proposed Madani avenue in the South of Jalshiri residential area then through the existing Madani avenue. Then (water) will be supplied to various areas of the city/ existing District Metered Area (DMA). The Installation of distribution pipe line will be completed through two packages (Package - P3.1 & Package - P3.2). This is to mention that the tender for Package – P3.1 (Primary Distribution Pipe line) has already been invited and received. The evaluation of the Technical Bids of the Single-Stage Two Envelope tender is ongoing, and the field work is expected to start in coming February/2020. The road cutting in areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttora and Sonargao Jonopath will be necessary for installation of the Primary Distribution Pipe lines using OT method. This is also important to determine the amount of money to be allocated for the road damage compensation in the Annual Performance Plan. The locations map for the road cutting in those areas is attached herewith. The following is the details of road cutting under Package 3.1.

Location of Pipeline	Diameter of Pipe (mm)	Length of Road Cutting (m)	Width of Road Cutting (m)	Amount of Road Cutting (Sq. m)	Type of Road	Comments
Kuril to Uttora	DN1600	4838	2.67	12,917.46	Bituminous	
	DN1400	792	2.47	1,956.24	Bituminous	
	DN1200	764	2.16	1,650.24	Bituminous	
	OD450	556	1.15	639.40	Bituminous	
Kuril to Radisson Hotel	OD800	1658	1.60	2,652.80	Bituminous	
Culvert # 3 & 4	DN1600	15	2.67	80.10	Bituminous	

Location of Pipeline	Diameter of Pipe (mm)	Length of Road Cutting (m)	Width of Road Cutting (m)	Amount of Road Cutting (Sq. m)	Type of Road	Comments
	DN800	15	1.65	24.75	Bituminous	
Jasim Uddin Road	DN900	667	1.75	1,167.25	Bituminous	
Receiving Shaft	DN7000	-	-	38.47	Bituminous	
Junction	5 No	10	3.5	175.00	Bituminous	
PRB	3 No	40	1.75	210.00	Bituminous	
Road Crossing	4 No	50	1.75	350.00	Bituminous	
Utility Crossing	2 No	10	3.00	60.00	Bituminous	
Isolation	1 No	10	2.50	25.00	Bituminous	
Total Amount of Road Cutting =				20,781.00		

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY

DESWSP, DHAKA WASA

Memo No. : Date:
Page # 02

Under the circumstances, this is to request earnestly to send to the project the demand note for road cutting compensation according to the measurement and the road cutting permission as described above for the installation of transmission and distribution of water treatment plant under the package 3.1 of “Dhaka Environmentally Sustainable Water Supply Project (DESWSP)” using OT (open Trench) method in the areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttora and Sonargao Jonopath.

Attachment: Map of the proposed alignment.

(Md. Mahmudul Islam)
Superintending Engineer and Project Director
(DESWSP), Dhaka WASA

Copy to:

1. Chief Engineer, Roads and Highways Department, Dhaka.
2. Deputy Project Director -1/2, DESWSP, Dhaka WASA.
3. Executive Engineer-1/2/3, DESWSP, Dhaka WASA.
4. Management Design & Supervision Consultant (MDSC).

Annexure 6.2: Application to DNCC for Road Cutting Permission

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY
DESWSP, DHAKA WASA

Memo No. : 46.113.618.00.00.G-203/DESWSP/১১৮২ Date : ৫.৬.২০

প্রধান নির্বাহী কর্মকর্তা
ঢাকা উত্তর সিটি কর্পোরেশন
ঢাকা।

বিষয়ঃ ঢাকা ওয়াসার "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট (DESWSP)" এর Package- P3.1 এর অধীনে নতুন বাজার হতে রামপুরা রোড, নতুন বাজার হতে কাকলী, নতুন বাজার হতে কুড়িল ও উত্তরা এবং সোনারগাঁও জনপথ এলাকায় পানি শোধনাগারের ট্রান্সমিশন ও ডিস্ট্রিবিউশন পাইপ লাইন স্থাপনের উদ্দেশ্যে প্রস্তাবিত রুটে OT (Open Trench) পদ্ধতিতে রাস্তা খননের অনুমোদন প্রদান প্রসঙ্গে।

উপর্যুক্ত বিষয়ের প্রেক্ষিতে জানানো যাচ্ছে যে, "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রকল্পের কাজ বৈদেশিক সংস্থা ADB'র অর্থায়নে এগিয়ে চলছে। পর্যায়ক্রমে ভূগর্ভস্থ পানির উপর নির্ভরশীলতা কমিয়ে টেকসই ও পরিবেশ বান্ধব ভূ-উপরিস্থ/ নদীর পানি পরিশোধন করে ঢাকা মহানগরী ও এর আশপাশের শহরতলীসহ Under construction/ Potential Urban Area-তে Pressurized System এ সুষ্ঠু ও জনবান্ধব ব্যবস্থাপনায় নিরাপদ পানি সরবরাহ নিশ্চিত করা হবে। এ লক্ষ্যে সুদূর মেঘনা নদী থেকে ট্রান্সমিশন লাইনের মাধ্যমে অপরিশোধিত পানি শুপগঞ্জের গন্ধর্বপুরে (শীতলক্ষ্যা নদীর পূর্ব পাড়ে) এনে তা পরিশোধন করা হবে। পরিশোধিত পানি ট্রান্সমিশন লাইনের এ্যালাইনমেন্টে পাইপ বসিয়ে গন্ধর্বপুর মুড়াপাড়া হয়ে শীতলক্ষ্যা নদী ক্রস করে হরিণাগ্রাম হয়ে জগসিড়ি আবাসন প্রকল্পের দক্ষিণে রাজউক প্রস্তাবিত মাদানী এভিনিউ এর উত্তর পাশে নাওরা মৌজা দিয়ে বালু নদী ক্রস করে বেড়াইদ মৌজা হয়ে বিদ্যমান মাদানী এভিনিউ দিয়ে বারিধারা ইনজেকশন পয়েন্টে আনা হবে। অতঃপর ডিস্ট্রিবিউশন লাইনের মাধ্যমে মহানগরীর বিভিন্ন এলাকা/ বিদ্যমান District Metered Area (DMA)-তে সরবরাহ করা হবে। Distribution Pipe line স্থাপন কাজটি ২ (দুই) টি প্যাকেজে বিভক্ত করে (Package-P3.1 & Package-P3.2) বাস্তবায়ন করা হবে। উল্লেখ্য, Package-P3.1 (Primary Distribution Pipe lines) এর দরপত্র আহবান ও দরপত্র গ্রহণ ইতোমধ্যে সম্পন্ন হয়েছে। Single-Stage Two Envelope প্রক্রিয়ায় আহ্বানকৃত উক্ত দরপত্রের Technical দরপত্র মূল্যায়ন চলমান রয়েছে এবং বর্ণিত প্যাকেজের কাজটি সম্ভাব্য আগামী ফেব্রুয়ারী/২০২০ নাগাদ মাঠ পর্যায়ে কাজ শুরু হবে। Primary Distribution Pipe lines কাজটি বাস্তবায়নের প্রেক্ষিতে নতুন বাজার হতে রামপুরা রোড, নতুন বাজার হতে কাকলী, নতুন বাজার হতে কুড়িল ও উত্তরা এবং সোনারগাঁও জনপথ পর্যন্ত বিভিন্ন ব্যাসের পাইপ লাইন নির্মাণের জন্য OT পদ্ধতিতে রাস্তা খননের প্রয়োজন। এছাড়াও বার্ষিক কর্ম পরিকল্পনা রাস্তা খননের ক্ষতিপূরণ বাবদ প্রয়োজনীয় আর্থিক বরাদ্দের পরিমাণ নির্ধারণের বিষয়টি জরুরী বিবেচ্য। উক্ত এলাকার রাস্তা খননের লোকেশন ম্যাপ এতদসঙ্গে সংযুক্ত করা হলো। Package-P3.1 এর অধীনে রাস্তা খননের বিবরণ নিম্নরূপঃ-

পাইপ লাইনের লোকেশন	পাইপের ব্যাস (মিঃমিঃ)	রাস্তা খননের দৈর্ঘ্য (কিঃ)	রাস্তা খননের গ্রন্থ (কিঃ)	রাস্তা খননের পরিমাণ (বর্গমিঃ)	রাস্তার প্রকৃতি	মন্তব্য
P3.1ইন্টারসেপ্টর নতুন বাজার	DN১৬০০	৬০	৩.০৪	৩০২.৪০	বিটুমিনাস	
	DN১২০০	২৫	৪.১১	১০২.৭৫	বিটুমিনাস	
নতুন বাজার হতে রামপুরা	DN১২০০	১৯১৩	২.১৬	৪১৩৮.৫৮	বিটুমিনাস	
	DN১০০০	৪১২	১.৯৫	৮০৩.৪০	বিটুমিনাস	
	DN৮০০	৯৪২	১.০৫	১৫৫৪.৩০	বিটুমিনাস	
নতুন বাজার হতে কাকলী	OD৯৩০	১৪১৮	১.৩৩	১৮৮৩.৯৪	বিটুমিনাস	
	OD৫৬০	৮৫৪	১.২৬	১০৭৬.০৪	বিটুমিনাস	
নতুন বাজার হতে কুড়িল	DN১৪০০	২৭০৯	৪.৬৩	১২৫৪২.৬৭	বিটুমিনাস	
সোনারগাঁও জনপথ	DN১০০০	৯৮৫	১.৯৫	১৯২০.৭৫	বিটুমিনাস	
	OD৯০০	১৪১০	১.৯	১৮৩৯.০০	বিটুমিনাস	
জসিম উদ্দিন রোড	DN৯০০	৬৩৭	১.৭৫	১১৬৭.২৫	বিটুমিনাস	
সুবাস্তু	DN১২০০	১৫	২.১৬	৩২.৪০	বিটুমিনাস	
সোনারগাঁও জনপথ-১	DN১০০০	১০	১.৯৫	১৯.৫০	বিটুমিনাস	
সোনারগাঁও জনপথ-২	DN৯০০	৫০	১.০৫	৬৯.৫০	বিটুমিনাস	
ওপাশের লেক	DN৯০০	২০	১.০৫	২৮.০০	বিটুমিনাস	
কমলী লেক	DN৫০০	১৫	১.২৬	১৮.৯০	বিটুমিনাস	
পশ্চিম পাশ্বর্তী	DN৯০০			৬৩.৫৮	বিটুমিনাস	

চলমান পাতা # ০২

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
DHAKA WATER SUPPLY & SEWERAGE AUTHORITY
DESWSP, DHAKA WASA

Memo No. : Date :

পাতা # ০২

পাইপ লাইনের লোকেশন	পাইপের ব্যাস (মিঃমিঃ)	রাস্তা খননের দৈর্ঘ্য (মিঃ)	রাস্তা খননের প্রস্থ (মিঃ)	রাস্তা খননের পরিমাণ (বর্গমিঃ)	রাস্তার প্রকৃতি	মন্তব্য
জ্যাংশন	২০টি	১০	৩.৫	৭০০.০০	বিটুমিনাস	
সিআরবি	১৪টি	৪০	১.৭৫	৯৮০.০০	বিটুমিনাস	
রাস্তা ক্রসিং	১১টি	৫০	১.৭৫	৯৬২.৫০	বিটুমিনাস	
ইউটিলিটি ক্রসিং	৮টি	১০	৩	২৪০.০০	বিটুমিনাস	
আইসোলেশন	১টি	১০	২.৫	২৫.০০	বিটুমিনাস	
মোট খননের পরিমাণ=				৩০,৫৬৮.০০		

এমতাবস্থায়, ঢাকা ওয়াসার "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট (DESWSP)" এর Package- P3.1 এর অধীনে নতুন বাজার হতে রামপুরা রোড, নতুন বাজার হতে কাকলী, নতুন বাজার হতে কুড়িল ও উত্তরা এবং সোনারগাঁও জনপথ এলাকায় পানি শোধনাগারের ট্রান্সমিশন ও ডিস্ট্রিবিউশন পাইপ লাইন স্থাপনের উদ্দেশ্যে প্রস্তাবিত রুটে OT (Open Trench) পদ্ধতিতে রাস্তা খনন কাজ সম্পন্ন করার লক্ষ্যে উপরোক্ত বর্ণনা ও সংযুক্ত পরিমাপ অনুযায়ী রাস্তা খননের ক্ষতিপূরণ বিলের ডিমান্ড নোট এবং রাস্তা খননের অনুমতি পত্র অত্র প্রকল্প বরাবর প্রেরণের জন্য বিশেষ ভাবে অনুরোধ করা হলো।

সংযুক্তঃ *প্রস্তাবিত এ্যালাইনমেন্টের নকশা।*

(মোঃ মাহমুদুল ইসলাম)
তত্ত্বাবধায়ক প্রকৌশলী ও প্রকল্প পরিচালক
(DESWSP), ঢাকা ওয়াসা।

অনুলিপিঃ

১. প্রধান প্রকৌশলী, ঢাকা উত্তর সিটি কর্পোরেশন, ঢাকা।
২. উপ-প্রকল্প পরিচালক-১/২, DESWSP, ঢাকা ওয়াসা।
৩. নির্বাহী প্রকৌশলী-১/২/৩, DESWSP, ঢাকা ওয়াসা।
৪. Management Design & Supervision Consultant (MDSC).

Management, Design & Supervision Consultant (MDSC)
Dhaka Environmentally Sustainable
Water Supply Project (DESWSP), DWASA

MOTT MACDONALD

Project Office: House-14 (3rd floor), Road-32, Gulshan-1, Dhaka-1212

Date: 24 June 2019

Subject: **Road Cutting Layouts of P2, P3.1 & P3.2.**

Ref: **346152-OG-LT-DRG-PX-IH-0277**

1045
24/06/19

To
The Superintending Engineer & Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority (Dhaka WASA)
Dhaka, Bangladesh

Dear Eng. Md. Mahmudul Islam, PD

Please find attached the road cutting layouts and estimates of P2, P3.1 & P3.2 for stakeholders as mentioned in the table below.

Sl. No.	Drawing Layout	Package	Stakeholder
1	Road Cutting Layout for DNCC	P3.1	DNCC
2	Road Cutting Layout for DNCC	P3.2	DNCC
3	Road Cutting Layout for RAJUK	P3.2	RAJUK
4	Road Cutting Layout for DNCC	P3.1	DNCC
5	Road Cutting Layout for RHD	P3.1	RHD
6	Road Cutting Layout for CANTONMENT BOARD	P3.1 & P3.2	CANTONMENT BOARD
7	Road Cutting Layout for RAJUK/DNCC	P2	RAJUK/DNCC

Please share these layouts with respective stakeholders for their information.

Thanking you,

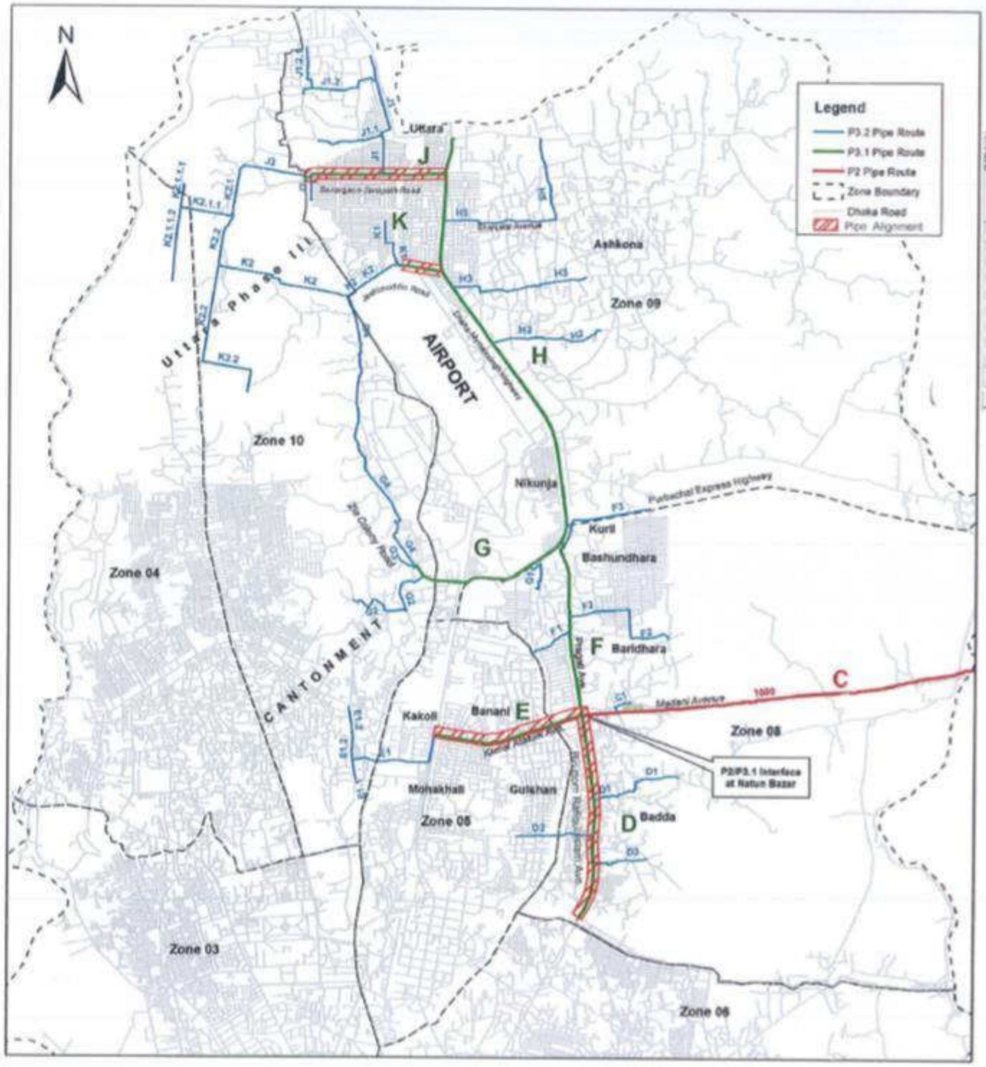
AYM Imtiazul Haque
Acting Deputy Team Leader,
MDSC, DESWSP

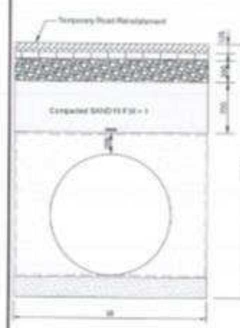
ATTACHMENTS:

1. *Two copies of 7 Layout Drawings of Road Cutting.*

(22)

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT
ROAD CUTTING LAYOUT FOR DNCC





Typical Trench for Single pipe

Total Road Cutting Estimates for DNCC under P3.1

Pipeline Location	Section ID (Pipe dia)	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road	Pipe alignment
1) P2/P3.1 Interface at Natun Bazar						
P2/P3.1 Interface at Natun Bazar	Sec 1-1 (DN1600)	60	5.04	302	Bituminous	East side of road
	Sec 2-2 (DN1200)	25	4.11	103		West side of road
Sub Total 1				405		
2) From Natun Bazar to Rampura (Part D)						
From Natun Bazar to Rampura	Sec D1-D1 (DN 1200)	1886	2.20	4139	Bituminous	West side of road
	Sec D2-D2 (DN 1000)	415	1.95	803		
	Sec D3-D3 (DN600)	942	1.65	1554		
Sub Total 2				6496		
3) From Natun Bazar to Kakoli (Part E)						
From Natun Bazar to Kakoli	Sec E1-E1 (DN1400)	1410	1.35	1886	Bituminous	North Side of Road
	Sec E2-E2 (DN1000)	454	1.26	1076		
Sub Total 3				2962		
5) Sonargaon Janapath (Part J)						
Sonargaon Janapath	Sec J1-J1 (DN 1000)	980	1.95	1911	Bituminous	South Side of Road
	Sec J2-J2 (DN 800)	1210	1.6	1936		
Sub Total 5				3857		
6) Jasimuddin Road (Part K)						
Jasimuddin Road	Sec K1-K1 (DN 900)	767	1.75	1342	Bituminous	North Side of Road
Sub Total 6				1342		
7) Culvert crossing						
Near Sonargaon	DN 1200	15	2.20	33	Bituminous	West Side
Sonargaon 1	DN 1000	22	1.95	39		South Side
Sonargaon 2	DN 650	50	1.35	67		South Side
Gulshan Lake	DN 600	20	1.30	27		North Side
Banani Lake	DN 500	15	1.28	19		North Side
Sub Total 7				195		
8) Shaft at Kuril						
Launching Shaft	Dia 9000			64	Bitumin (DNCC)	North Side of Road
Receiving Shaft	Dia 7000			5	Bitumin (RHD)	
Sub Total 8				69		
9) Junctions, PRV, Road crossing, Isolation valve						
Pipeline Location	Numbers	Length of road cutting (m)	Width of cutting "W" (m)	Area of road cutting (m2)	Type of Road	
Junctions	20	10	3.5	700	Bituminous	
PRV Conn.	14	40	1.75	980		
Road Cross	11	50	1.75	963		
Utility cross	8	10	3	240		
Isln. Valve	1	10	2.5	25		
Sub Total 9				2908		
Total Bituminous Road Cutting in DNCC Road under P3.1 =				[illegible]	m2	

Translated Copy:

DHAKA ENVIRONMENTALLY SUSTAINABLE WATER SUPPLY PROJECT

DHAKA WATER SUPPLY & SEWERAGE AUTHORITY

DESWSP, DHAKA WASA

Memo No. : 46.113.618.00.00.G-203/DESWSP/1182 Date: 6.8.19

Chief Executive Officer

Dhaka North City Corporation

Dhaka

Subject: In regard to the road cutting permission for installation of transmission and distribution of water treatment plant under the package 3.1 of "Dhaka Environmentally Sustainable Water Supply Project (DESWSP)" using OT (open Trench) method in the areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttora and Sonargao Jonopath.

This is to inform in respect of the above-mentioned subject that under the funding of foreign organization ADB the work of Dhaka Environmentally Sustainable Water Supply Project is in progress. Safe water supply in a sustainable and environmentally friendly manner will be ensured through treated surface/ river water to areas of Dhaka city and suburban areas under construction/ potential urban areas through pressurized water supply system managed in appropriate and people's friendly way. In this view, untreated water from a long distanced River Meghna will be brought to the Treatment Plant at Gandharbpur, Rupgonj (Eastern bank of the River Shitalakhya) and will be treated. The treated water will be brought to the injection point at Baridhara through installation of pipes in the alignment of treated water transmission line from Gandharbpur crossing Shitalakhya at Murapara passing through Horinagram then crossing Balu river in the Naora mouza at the North of RAJUK proposed Madani avenue in the South of Jalshiri residential area then through the existing Madani avenue. Then (water) will be supplied to various areas of the city/ existing District Metered Area (DMA). The Installation of distribution pipe line will be completed through two packages (Package - P3.1 & Package - P3.2). This is to mention that the tender for Package – P3.1 (Primary Distribution Pipe line) has already been invited and received. The evaluation of the Technical Bids of the Single-Stage Two Envelope tender is ongoing and the field work is expected to start in coming February/2020. The road cutting in areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttara and Sonargaon Jonopath will be necessary for installation of the Primary Distribution Pipe lines using OT method. This is also important to determine the amount of money to be allocated for the road damage compensation in the Annual Performance Plan. The locations map for the road cutting in those areas is attached herewith. The following is the details of road cutting under Package 3.1.

Location of Pipeline	Diameter of Pipe (mm)	Length of Road Cutting (m)	Width of Road Cutting (m)	Amount of Road Cutting (Sq. m)	Type of Road	Comments
P3.1 Interface: Natun Bazar	DN1600	60	5.04	302.40	Bituminous	
	DN1200	25	4.11	102.75	Bituminous	
Notun Bazar to Rampura	DN1200	1916	2.16	4138.56	Bituminous	
	DN1000	412	1.95	803.40	Bituminous	
	DN800	942	1.65	1554.30	Bituminous	

Location of Pipeline	Diameter of Pipe (mm)	Length of Road Cutting (m)	Width of Road Cutting (m)	Amount of Road Cutting (Sq. m)	Type of Road	Comments
Notun Bazar to Kakoli	OD630	1418	1.33	1885.94	Bituminous	
	OD560	854	1.26	1076.04	Bituminous	
Notun Bazar to Kuril	DN1400	2709	4.63	12542.67	Bituminous	
Sonargaon Janopath	DN1000	985	1.95	1920.75	Bituminous	
	OD800	1210	1.60	1936.00	Bituminous	
Jasim Uddin Road	DN900	667	1.75	1167.25	Bituminous	
Subastu	DN1200	15	2.16	32.40	Bituminous	
Sonargao Janopath-1	DN1000	10	1.95	19.50	Bituminous	
Sonargao Janopath-2	DN600	50	1.33	66.50	Bituminous	
Gulshan Lake	DN600	20	1.33	26.60	Bituminous	
Banani Lake	DN500	15	1.26	18.90	Bituminous	
Launching Shaft	DN900	-	-	63.58	Bituminous	
Junction	20 No	10	3.50	700.00	Bituminous	
PRB	14 No	40	1.75	980.00	Bituminous	
Road Crossing	11 No	50	1.75	962.50	Bituminous	
Utility Crossing	8 No	10	3.00	240.00	Bituminous	
Isolation	1 No	10	2.50	25.00	Bituminous	
Total Amount of Road Cutting =				30,569.00		

Under the circumstances, this is to request earnestly to send to the project the demand note for road cutting compensation according to the measurement and the road cutting permission as described above for the installation of transmission and distribution of water treatment plant under the package 3.1 of "Dhaka Environmentally Sustainable Water Supply Project (DESWSP)" using OT (open Trench) method in the areas of Notun Bazar to Rampura Road, Notun Bazar to Kakoli, Notun Bazar to Kuril and Uttara and Sonargaon Jonopath.

Attachment: Map of the proposed alignment.

SD/-

(Md. Mahmudul Islam)

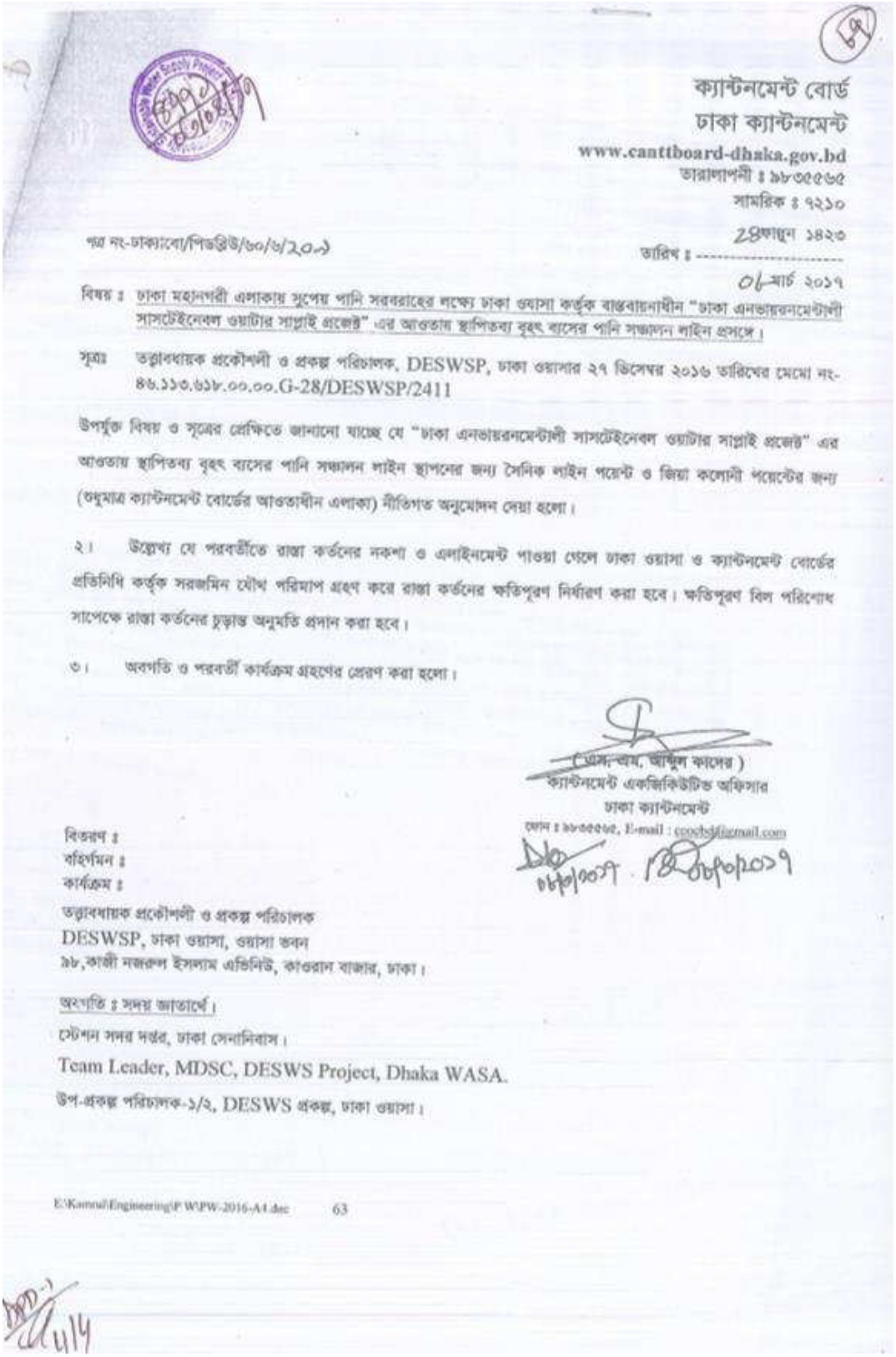
Superintending Engineer and Project Director

(DESWSP), Dhaka WASA

Copy to:

5. Chief Engineer, Dhaka North City Corporation, Dhaka.
6. Deputy Project Director -1/2, DESWSP, Dhaka WASA.
7. Executive Engineer-1/2/3, DESWSP, Dhaka WASA.
8. Management Design & Supervision Consultant (MDSC).

Annexure 6.3: Endorsement Letter from DCB for Road cutting



ক্যান্টনমেন্ট বোর্ড
ঢাকা ক্যান্টনমেন্ট
www.canttboard-dhaka.gov.bd
তারাপাশী ঃ ৯৮৩৫৫৬৫
সামরিক ঃ ৭২১০

পত্র নং-ঢাকাবো/পিডব্লিউ/৬০/৬/২০১৯ তারিখ ঃ 28ফাল্গুন ১৪২৩
06মার্চ ২০১৭

বিষয় ঃ ঢাকা মহানগরী এলাকায় সুপেয় পানি সরবরাহের লক্ষ্যে ঢাকা ওয়াসা কর্তৃক বাস্তবায়নাধীন "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট" এর আওতায় স্থাপিতব্য বৃহৎ ব্যাসের পানি সঞ্চালন লাইন প্রসঙ্গে।

সূত্রঃ তত্ত্বাবধায়ক প্রকৌশলী ও প্রকল্প পরিচালক, DESWSP, ঢাকা ওয়াসার ২৭ ডিসেম্বর ২০১৬ তারিখের মেমো নং-৪৬.১১৩.৬১৮.০০.০০.G-28/DESWSP/2411

উপর্যুক্ত বিষয় ও সূত্রের প্রেক্ষিতে জানানো যাচ্ছে যে "ঢাকা এনভায়রনমেন্টালী সাসটেইনেবল ওয়াটার সাপ্লাই প্রজেক্ট" এর আওতায় স্থাপিতব্য বৃহৎ ব্যাসের পানি সঞ্চালন লাইন স্থাপনের জন্য সৈনিক লাইন পয়েন্ট ও জিয়া কলোনী পয়েন্টের জন্য (শুধুমাত্র ক্যান্টনমেন্ট বোর্ডের আওতাধীন এলাকা) নীতিগত অনুমোদন দেয়া হলো।

২। উল্লেখ্য যে পরবর্তীতে রাস্তা কর্তনের নকশা ও এলাইনমেন্ট পাওয়া গেলে ঢাকা ওয়াসা ও ক্যান্টনমেন্ট বোর্ডের প্রতিনিধি কর্তৃক সরজমিন যৌথ পরিমাপ গ্রহণ করে রাস্তা কর্তনের ক্ষতিপূরণ নির্ধারণ করা হবে। ক্ষতিপূরণ বিল পরিশোধ সাপেক্ষে রাস্তা কর্তনের চূড়ান্ত অনুমতি প্রদান করা হবে।

৩। অবগতি ও পরবর্তী কার্যক্রম গ্রহণের প্রেরণ করা হলো।

(এস.এম. আবুল কাশেম)
ক্যান্টনমেন্ট একজিকিউটিভ অফিসার
ঢাকা ক্যান্টনমেন্ট
ফোন ঃ ৯৮৩৫৫৬৫, E-mail : cnoebd@gmail.com
০৮/০৩/২০১৭ 08/03/2017

বিতরণ ঃ
বহির্গমন ঃ
কার্যক্রম ঃ

তত্ত্বাবধায়ক প্রকৌশলী ও প্রকল্প পরিচালক
DESWSP, ঢাকা ওয়াসা, ওয়াসা ভবন
৯৮,কাজী নজরুল ইসলাম এভিনিউ, কাওরান বাজার, ঢাকা।

অবগতি ঃ সদয় জ্ঞাতার্থে।

স্টেশন সদর দপ্তর, ঢাকা সেনানিবাস।
Team Leader, MDSC, DESWS Project, Dhaka WASA.
উপ-প্রকল্প পরিচালক-১/২, DESWS প্রকল্প, ঢাকা ওয়াসা।

E:\Kamrul\Engineering\P W\PW-2016-A4.doc 63

Translated Copy:

Cantonment Board
Dhaka Cantonment
www.canttboard-dhaka.gov.bd
Phone: 9835565
Military: 7210
Date: 24 Falgun, 1423,
8th March 2017

Letter no-Dhakabo/pw/60/6/209

Subject: Installation/establishment of large diameter water transmission line to supply safe water in the Dhaka metropolitan area under "Dhaka Environmentally Sustainable Water Supply Project (DESWSP)" by Dhaka WASA.

Ref.: Superintending Engineer & Project Director, DESWSP, DWASA memo no 46.113.618.00.00.G-28/DESWSP/2411.

1. Reference to the above subject and memo, Cantonment Board is approved the installation of large diameter water transmission line at Sainik line point & Zia colony point (only area under cantonment board) under Dhaka Environmentally Sustainable Water Supply Project (DESWSP).

2. It is to be noted that road restoration cost will be determined through practical joint verification by the DWASA & cantonment board when road cutting design and alignment will be available. Final approval will be given subject to the payment of road restoration.

3. To be sent for information & next course of action.

S. M. Abdul kader
Cantonment Executive Officer
Dhaka Cantonment
Phone: 9835565, E-mail:ceocbd@gmail.com

Distribution:
Outgoing:
Program:
Superintending Engineer & Project Director
DESWSP, DWASA, WASA Bhaban
98, Kazi Nazrul Islam Avenue, Kaoran Bazar, Dhaka.

Kind Information:
Station Head Quater, Dhaka Cantonment.
Team Leader, MDSC, DESWS Project, Dhaka WASA.
Deputy Project Director -1/2, DESWSP, Dhaka WASA

Annexure 6.4: Permissions for Railway Crossing

গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
প্রধান প্রকৌশলী (পূর্ব) এর কার্যালয়
বাংলাদেশ রেলওয়ে, চট্টগ্রাম।

নং- ৫৪.০১.১৫০০.১০৯.০২.০১২.১৭ তারিখ ২৯.০৯.২০১৯।

প্রাপক ঃ
বিভাগীয় প্রকৌশলী-১
বাংলাদেশ রেলওয়ে
ঢাকা।

বিষয় ঃ 1. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/14 (wireless gate) at km 317/5-6 under Dhaka environmintally sustainable water supply (DESWSP) project in between DA-TJN Section as per plan no-22509/DA.

2. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/21-A (Sainik club) at km 311/8-9 under Dhaka environmintally sustainable water supply (DESWSP) project in between DA-DACT Section as per plan no-22510/DA.

3. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/22-A (Joarshahara) at km 308/1-2 under Dhaka environmintally sustainable water supply (DESWSP) project in between DABB-DA Section as per plan no-22511/DA.

4. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-A (kuril) at km 307/4-5 under Dhaka environmintally sustainable water supply (DESWSP) project in between DABB-DA Section as per plan no-22512/DA.

5. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-C (Aahkona) at km 301/8-9 under Dhaka environmintally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22513/DA.

6. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-T/23-D (Koshaibari) at km 302/9-303/0 under Dhaka environmintally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22514/DA.

7. Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-E (Azampur) at km 301/8-9 under Dhaka environmintally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22515/DA কাজের নকশাসমূহ এবং ফিজাইবিলিটির আবেদনে স্বাক্ষর প্রসঙ্গে।

সূত্র ঃ আপনার পত্র নং- ১৪০/ওয়ুডি/ঢাকা, তারিখ ১৮.০৭.২০১৯।

উপর্যুক্ত বিষয়ে সূত্রস্থ পত্রের মাধ্যমে প্রাপ্ত বিষয়োক্ত কাজের নকশাগুলো পরীক্ষান্তে পরিলক্ষিত পর্যবেক্ষণ/ত্রুটিসমূহ নিম্নে প্রদত্ত হলোঃ

১। ঢাকা ওয়াসা কর্তৃক প্রস্তাবিত ভূ-গর্ভস্থ পানির পাইপলাইন অতিক্রমের কাজ চলাকালীন কার্যস্থলে সার্বক্ষণিক পাহারা দেয়ার নিমিত্ত নিরাপত্তা বিধানকল্পে নিরাপত্তা চৌকি স্থাপনের প্রস্তাবনা এবং আলোচ্য পাইপলাইন নির্মাণকালে সকল ইউটিলিটি সংযোগ সেবা (যেমন ঃ গ্যাস, বিদ্যুৎ, টেলিফোন এবং অন্যান্য) প্রদানে কোনরূপ বিঘ্নতা কিংবা প্রতিবন্ধকতা সৃষ্টি হবে না মর্মে সংশ্লিষ্ট সংস্থা/প্রতিষ্ঠান কর্তৃক প্রদত্ত অনাপত্তি পত্র সংযুক্ত করা হয়নি।

২। প্রস্তাবিত পানির পাইপলাইনের কেসিং পাইপের পুরুত্ব নকশায় প্রদর্শনসহ ২৫ মেট্রিক টন (MBGML) এক্সেল লোড বহনে সক্ষম হবে মর্মে নকশায় স্বীকৃত কারিগরী সংস্থা (BUET) হতে প্রত্যয়ন সংযুক্ত করতে হবে।

চলমান পাতা-২

এমতাবস্থায়, উপরোক্ত বর্ণনার আলোকে সূত্রস্থ পত্রের মাধ্যমে পাঠানো নকশাগুলো স্বীকৃত কারিগরী সংস্থা (BUET) কর্তৃক পরীক্ষা-নিরীক্ষাপূর্বক প্রস্তাবিত পানির লাইনের কেসিং পাইপের পুরুত্ব নকশায় প্রদর্শনসহ ২৫ মেঃ টঃ (MBGML) এক্সেল লোড বহনে সক্ষম হবে মর্মে এবং প্রত্যাশী সংস্থা কর্তৃক নিরাপত্তা চৌকি স্থাপনের প্রত্যয়নপত্র এবং সকল ইউটিলিটি সংযোগ সেবা (যেমন ঃ গ্যাস, বিদ্যুৎ, টেলিফোন এবং অন্যান্য) প্রতিষ্ঠানের অনাপত্তি পত্র সংযুক্ত করে পুনরায় নকশা দাখিলের নিমিত্ত এতদসংযোগে ফেরত প্রদান করা হলো।

সংযুক্তি ঃ বর্ণনামত নকশা ০৭ (সাত) টি মূলকপি
এবং
জিআইবিআর আবেদন ০৫ (পাঁচ) সেট।

(বীরবল মন্ডল)
নির্বাহী প্রকৌশলী (পঃ ও উঃ) (পূর্ব)
পক্ষে প্রধান প্রকৌশলী (পূর্ব)
বাংলাদেশ রেলওয়ে, চট্টগ্রাম।

অনুলিপি ঃ **Superintending Engineer**
&
Project Director
PMU, DESWSP, DHAKA WASA.

আপনা'কে বিষয়ে বর্ণিত কাজসমূহের নকশা সংক্রান্ত যাবতীয় তথ্যাদি প্রদানের নিমিত্ত বিভাগীয় প্রকৌশলী/১, বাংলাদেশ রেলওয়ে, ঢাকা'র সাথে যোগাযোগ পূর্বক কার্যাদী সম্পন্নের জন্য বিশেষ ভাবে অনুরোধ জানানো হলো।

(বীরবল মন্ডল)
নির্বাহী প্রকৌশলী (পঃ ও উঃ) (পূর্ব)
পক্ষে প্রধান প্রকৌশলী (পূর্ব)
বাংলাদেশ রেলওয়ে, চট্টগ্রাম।

841
27.5.19

Government of the People's Republic of Bangladesh
Ministry of Road Transport and Bridges
Bridges Division
Bangladesh Bridge Authority
Dhaka Elevated Expressway PPP Project
Setu Bhaban, New Airport Road, Banani
Dhaka-1212

20

Memo No: 50.00.0000.301.084.2014 (V-34)- 575 Date: May 21, 2019

Md. Mahmudul Islam
Superintendent Engineer &
Project Director
DESWSP, Dhaka WASA

Subject: Permission for crossing water pipeline under Bangladesh Railway Track.
Dhaka Elevated Expressway PPP Project

Ref: 1. DWASA letter no, 46.113.618.00.00.G-198(V-1)/DWASASP/704 dated 21/03/2019
2. FDEE's letter No. FDEE/BBA/1291/2019; dated: 20 May 2019

Dear Sir

Pursuant to FDEE's letter of dated May 20, 2019, Bangladesh Bridge Authority is pleased to approve the proposal for crossing water pipeline under Bangladesh Railway Track upon fullfilling the condition as mentioned by the Concessionaire of Dhaka Elevated Expressway PPP Project

A copy of the FDEE's letter is attached herewith for ready reference.

Your good office is requested to concurrence the same at an early date.

Thanking you.

Enclo: As Stated.

21.05.2019
(A H M S Aktar)
Project Director
Ph: **55040401**
E-mail: pddee2019@gmail.com

Copy to :

1. PS to Senior Secretary/Executive Director, Setu Bhaban, Banani, Dhaka.
2. Team Leader, IE of DEE,Plot #77, Block M, Road 11,Banani, Dhaka-12
3. Team Leader, Safety Audit Consultant, DEE Project, ICT, House-1/B, Road-35, Gulshan-2, Dhaka
4. Mr. Montchai Musicabud, Managing Director, First Dhaka Elevated Expressway (FDEE) Company Ltd, Project Site Office, Kawla, Dhaka.

HD-2

27.5.19

FIRST DHAKA ELEVATED EXPRESSWAY (FDEE) COMPANY LIMITED
FDEE Complex, New Airport Road, Kawla, Dhaka-1229, Bangladesh
BIDA - Registration No.: F-452011121525-H, dated December 20th, 2011

Ref. No. FDEE/BBA/1291/2019

May 20th, 2019

Attention: **Mr. A H M S Aktar**
Project Director, Support to Dhaka Elevated Expressway PPP Project
Bangladesh Bridge Authority
Bridge Division, Ministry of Road Transport and Bridges,
Setu Bhaban, New Airport Road, Banani, Dhaka – 1212

Subject: Dhaka Elevated Expressway PPP Project
RE: Permission for Crossing Water Pipeline under Bangladesh Railway Tracks

References: 1. BBA Memo: 50.00.0000.301.084.2014(V-33)-428, dated April 16th, 2019

Dear Sir,

Reference is made to your memo, reference No. 1 above mentioned, we received the Original Drawings on Trace Papers and would response as following:

Dhaka Division Plan No.	FDEE's responses
22509/DA 22510/DA	The proposed pipeline located in between DEEP Pier No. 441 and No. 442 (in Tranche 3) and in between DEEP Pier No. 246 and No. 247 (in Tranche 2), respectively. In principle, we have no objection to the proposed pipeline route in conjunction with the DEEP Detailed Design Drawings submitted to BBA and BR which yet receiving No Objection / Approval from BBA/BR. Please find the Original Drawings on Trace paper return with our authorized signatures. Please note, in case of the discrepancies while BBA / BR review the DEEP Detailed Design Drawings may affect to the Piers arrangement and eventually affect to the route line of the already been built pipeline, it is relevant Authority's responsibilities to shift or relocate the pipeline at his own cost and efforts.
22511/DA 22512/DA	The proposed pipeline located in between DEEP Pier No. 99 and No. 100 and between DEEP Pier No. 121 and No. 122 (in Tranche 1). We have no objection to the proposed route. Please find the Original Drawings on Trace paper return with our authorized signatures.
22513/DA 22514/DA 22515/DA	The proposed pipeline has no relevant to DEEP Project. Therefore, they are not applicable for us to endorse.

This is for your kind acknowledgement and provide your concurrent approval. Your kind return the Original Drawings back to relevant authority after your endorsement is highly appreciated.

FIRST DHAKA ELEVATED EXPRESSWAY (FDEE) COMPANY LIMITED
FDEE Complex, New Airport Road, Kawla, Dhaka-1229, Bangladesh
BIDA - Registration No.: F-452011121525-K, dated December 20th, 2011

Very truly yours,

Montchai Musicabud
Managing Director

Enclosed: 1. Returned a set of drawings, with our endorsement, the Plan showing underground pipeline crossing railway track with the following Dhaka Division Plan:
   a. 22509/DA
   b. 22510/DA
   c. 22511/DA
   d. 22512/DA
   e. 22513/DA
   f. 22514/DA
   g. 22515/DA

CC:
1. PS to Senior Secretary / Executive Director, BBA, Setu Bhaban, Banani, Dhaka
2. Mr. Imad I Ahmed, Team Leader, IE of DEE Project, Banani, Dhaka
3. Mr. Francisco Perez, Team Leader, CSC, FDEE Complex, Kawla, Dhaka

বাংলাদেশ রেলওয়ে

নং:- ২৫০/জি

তারিখ: .০৭.২০১৮ ইং।

প্রেরক : বিভাগীয় প্রকৌশলী/১
বাংলাদেশ রেলওয়ে
ঢাকা।

প্রাপক : সরকারী রেল পরিদর্শক
রেলপথ পরিদর্শন অধিদপ্তর
রেলপথ মন্ত্রণালয়
পুরাতন রেল ভবন, ঢাকা।

মাধ্যমে : প্রধান প্রকৌশলী/পূর্ব/চট্টগ্রাম।

বিষয়:- ঝিগাইবিথার অনুমোদন/মঞ্জুরীর জন্য আবেদন প্রসঙ্গে।

জনাব,

আমি পাশে বর্ণিত কাজের বিষয়ে আপনার অনুমোদন/মঞ্জুরীর জন্য আবেদন জানাচ্ছি।

নিম্নেবর্ণিত তথ্যাদি, নকশা ও ডকুমেন্ট মোতাবেক কাজটি আরম্ভ করা হবে এবং কাজ সমাপনান্তে সংশ্লিষ্ট স্থাপনা ব্যবহার করে গাড়ীগাড়ী ট্রেন চালু করা হবে।

:

১। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/14 (wireless gate) at km 317/5-6 under Dhaka environmentally sustainable water supply (DESWSP) project in between DA-TJN Section as per plan no-22509/DA

২। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/21-A(Sainik club) at km 311/8-9 under Dhaka environmentally sustainable water supply (DESWSP) project in between TJN-DACT Section as per plan no-22510/DA.

৩। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/22-A(Joarshahara) at km 308/1-2 under Dhaka environmentally sustainable water supply (DESWSP) project in between DABB-DA Section as per plan no-22511/DA

৪। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-A(Kuril) at km 307/4-5 under Dhaka environmentally sustainable water supply (DESWSP) project in between DABB-DA Section as per plan no-22512/DA.

৫। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-C (Ashkona) at km 301/8-9 under Dhaka environmentally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22513/DA.

৬। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-T/23-D (Kothaibari) at km 302/9-303/0 under Dhaka environmentally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22514/DA.

৭। Plan showing the under ground pipe line crossing of Railway track at level crossing gate no-E/23-E (Azampur) at km 301/8-9 under Dhaka environmentally sustainable water supply (DESWSP) project in between DABB-TGI Section as per plan no-22515/DA.

১। এমতাবস্থায় রেলওয়ে এ্যাক্টের ধারা-৫ এর আলোকে কাজ সমাপনান্তে যাত্রীবাহী ট্রেন চালু করার পূর্বে আপনি সংশ্লিষ্ট স্থাপনা পরিদর্শন করতে ইচ্ছুক কি না ?

(ক) পরিদর্শন করতে ইচ্ছুক হলে কাজ সমাপ্তি পূর্বক যাত্রীবাহী ট্রেন চালু করার প্রস্তাবিত তারিখে টেলিফোনে এবং লিখিতভাবে জানানো হবে। : প্রযোজ্য নহে।

(খ) পরিদর্শন করতে ইচ্ছুক না হলে সাউথমাস্টার প্রকৌশলী কর্তৃক নিরাপত্তা সনদ ই-১৬১০/১ ইস্যু পূর্বক উক্ত স্থাপনা ব্যবহার করে যাত্রীবাহী ট্রেন চালু করা হবে এবং তা আপনাকে তারবার্তার মাধ্যমে জানানো হবে। : প্রযোজ্য নহে।

২। রেলওয়ে এ্যাক্ট,১৮৯০ এর ধারা ১৬(১) অনুযায়ী সংশ্লিষ্ট স্থাপনায় ইঞ্জিন ও রোলিংষ্টক পরিবহন সংক্রান্ত আবেদন বা অন্যান্য তথ্যাদি। : প্রযোজ্য নহে।

৩। নিরাপত্তা সম্পর্কিত অন্যান্য তথ্যাদি ও ডকুমেন্টসমূহ : প্রযোজ্য নহে।

(ক) **অস্থায়ী কাজঃ-**

(১) অস্থায়ী কাজের নকসা (প্লান, সেকশন, এলিভেশন ইত্যাদি) : প্রযোজ্য নহে।

(২) ডাইমেনশন সার্টিফিট মোতাবেক ইনস্ট্রুমেন্টের তালিকা : ডিইএন/১/ঢাকার নকসা নং-২২৫০৯, ২২৫১০,২২৫১১,২২৫১২, ২২৫১৩, ২২৫১৪, ২২৫১৫/ঢাকা।

(৩) সিগন্যালিং ও ইন্টারলকিং এর ম্যানুয়েল (১ম ও ৬ষ্ঠ খন্ড) মোতাবেক বিস্তারিত তালিকা। : প্রযোজ্য নহে।

(৪) জিএস রুল হতে বিস্তারিত তালিকা : প্রযোজ্য নহে।

(৫) অন্যান্য বিধি নিষেধ : স্লেভ টপ এবং এলএম কর্তৃক ট্রেকিনার বহিতে স্বাক্ষরান্তে ১০ কি.মি: গতিতে ট্রেন চলবে।

(৬) ট্রাফিক কার্যবিধি : প্রযোজ্য নহে।

(খ) স্থায়ী কাজ সম্পর্কিত :-

(১) প্রস্তাবিত কাজের বিবরণ : অপর পৃষ্ঠার বর্ণানুযায়ী

(২) নকসা (প্লান, সেকশন, এলিভেশন ইত্যাদি) : ডিইএন/১/ঢাকার নকসা নং-২২৫০৯, ২২৫১০, ২২৫১১, ২২৫১২, ২২৫১৩, ২২৫১৪, ২২৫১৫/ঢাকা।

(৩) স্ট্যান্ডার্ড ডাইমেনশন মোতাবেক ইনস্ট্রুমেন্টের তালিকা মোতাবেক বিস্তারিত তালিকা। : প্রযোজ্য নহে।

(৪) সিগন্যাল ও ইন্টারলকিং ম্যানুয়েল (১ম ও ৬ষ্ঠ খন্ড) মোতাবেক বিস্তারিত তালিকা। : প্রযোজ্য নহে।

(৫) জিএস রুল হতে বিস্তারিত তালিকা : প্রযোজ্য নহে।

(৬) অন্যান্য বিধি নিষেধ : প্রযোজ্য নহে।

(৭) ট্রাফিক কার্যবিধি:- : প্রযোজ্য নহে।

পাতা-৩

৪। ক) প্রত্যয়ন করা যাইতেছে যে, অনুচ্ছেদ-৩(ক) তে বর্ণিত অস্থায়ী কাজে ব্যবহারকৃত মালামালের ডিজাইন ও নকশা যথাযথভাবে প্রণীত এবং সেতুসমূহ Load Bearing capacity পর্যাপ্ত।

(খ) প্রত্যয়ন করা যাইতেছে যে, অনুচ্ছেদ-৩ (খ) তে বর্ণিত স্থায়ী কাজের জন্য পৃষ্ঠীত ব্যবস্থা যাত্রীবাহী ট্রেন চলাচলের জন্য সম্পূর্ণভাবে নিরাপদ।

(মোঃ আরিফুজ্জামান)
প্রধান প্রকৌশলী/পূর্ব
বাংলাদেশ রেলওয়ে, চট্টগ্রাম।

(মোহাম্মদ মাহবুবুর রহমান)
বিভাগীয় রেলওয়ে ব্যবস্থাপক (অপাঃ)
বাংলাদেশ রেলওয়ে, ঢাকা।

(মোঃ আব্দুস সালাম)
বিভাগীয় প্রকৌশলী/১
বাংলাদেশ রেলওয়ে, ঢাকা।

নং:..... তারিখ:.....।

প্রেরক:- সরকারী রেল পরিদর্শক
রেলপথ পরিদর্শন অধিদপ্তর
রেলপথ মন্ত্রণালয়
পুরাতন রেল ভবন, ঢাকা।

গ্রাপকঃ

জনাব,

আপনার পত্র নং..... তারিখ ..... এর প্রেক্ষিতে নিম্নেবর্ণিত শর্তে বর্ণিত কাজ করার অনুমতি প্রদান করা হলো।

(ক) অনুচ্ছেদ ১ (ক) মোতাবেক বর্ণিত কাজ সমাপনান্তে সংশ্লিষ্ট স্থাপনা ব্যবহার করে যাত্রীবাহী ট্রেন চালু করার পূর্বে নিম্নস্বাক্ষরকারী পরিদর্শন করতে ইচ্ছুক। এক্ষেত্রে, যাত্রীবাহী ট্রেন চালু করার প্রস্তাবিত তারিখ হতে ন্যূনতম ১৪(চৌদ্দ) দিন পূর্বে পরিদর্শনের তারিখ নির্ধারন করে নিম্নস্বাক্ষরকারীকে টেলিফোন এবং লিখিতভাবে জানাতে হবে।

(খ) অনুচ্ছেদ ১(ক) মোতাবেক বর্ণিত কাজ সমাপনান্তে সংশ্লিষ্ট স্থাপনা ব্যবহার করে যাত্রীবাহী ট্রেন চালু করার পূর্বে নিম্নস্বাক্ষরকারী পরিদর্শন করতে ইচ্ছুক নন। এক্ষেত্রে, দায়িত্বপ্রাপ্ত প্রকৌশলী কর্তৃক নিরাপত্তা সনদ ই-১৬১০/১ জারী পূর্বক যাত্রীবাহী ট্রেন চালু করা যেতে পারে। তবে অনতিবিলম্বে নিরাপত্তা সনদটি নিম্নস্বাক্ষরকারীর দপ্তরে পৌছানো নিশ্চিত করতে হবে।

(গ) অন্যান্য শর্তাদি ঃ

সরকারী রেল পরিদর্শক
রেলপথ পরিদর্শন অধিদপ্তর
রেলপথ মন্ত্রণালয়
পুরাতন রেল ভবন, ঢাকা।

Translated Copy:

Government of the people's Republic of Bangladesh
Office of the Chief Engineer (East)
Bangladesh Railway, Chittagong

No- 54.01.1500.109.02.012.17 Date: 29.09.2019

To : Divisional Engineer-1
Bangladesh Railway
Dhaka

Subject: Designs of following work and signature of GIBR application.

1. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/14 (wireless gate) at km 317/5-6 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DA-TJN Section as per plan no-22509/DA.

2. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/21-A (Sainik club) at km 311/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DA-DACT Section as per plan no-22510/DA.

3. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/22-A (Joarshahara) at km 308/1-2 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-DA Section as per plan no-22511/DA.

4. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/23-A (Kuril) at km 307/4-5 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-DA Section as per plan no-22512/DA.

5. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/23-C (Aahkona) at km 301/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22513/DA.

6. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-T/23-D (Koshaibari) at km 302/9-303/0 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22514/DA.

7. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-T/23-E (Azampur) at km 301/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22515/DA.

Reference: Letter no-140/W/Dhaka, dated 18.07.2019

Reference to the above memo & subject, observations/errors are as follows:

Continue page-2

1. Letter from DWASA to ensure full time security guarding with installation and no objection letter for uninterrupted utility services (i.e gas, electricity, telephone & others) from related organization/institution during underground pipe line crossing under Railway track has not been attached with the design drawing.

2. Letter from recognized technical institution (BUET) which shows casing pipe thickness in the design to bear 25 metric ton (MBGML) axle load is not attached with this document.

Therefore, the submitted documents are returned with a request to re-submit attaching letter from recognized technical institution (BUET) which shows casing pipe thickness in the design can bear 25 metric ton (MBGML) axle load and letter from DWASA to ensure full time security guarding with installation and no objection letter for uninterrupted utility services (i.e gas, electricity, telephone & others) from related organization/institution.

Attachment: Original copy of mentioned design (7 copy) and
GIBR application (5 set)

(Beerbol Mondol)
Executive Engineer (P&D) (East)
On behalf of Chief Engineer (East)
Bangladesh Railway, Chittagong

Copy: Superintending Engineer
&
Project Director
PMU, DESWSP, Dhaka WASA
Requested to communicate with Divisional Engineer/1, Bangladesh Railway, Dhaka to complete the design related work.

(Beerbol Mondol)
Executive Engineer (P&D) (East)
On behalf of Chief Engineer (East)
Bangladesh Railway, Chittagong

Bangladesh Railway

N; 250/G

Date: 30. 07. 2018

No: Divisional Engineer/1
Bangladesh Railway
Dhaka

To: Assistant Rail Inspector
Department of rail track inspection
Ministry of Railway
Old Rail Bhaban, Dhaka

Through: Chief Engineer/ East/Chattogram

Subject: GIBR approval application

Dear Sir,
Requesting you to approve the following works and the work will be started according to design and drawing and after completion passenger train will start running:

1. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/14 (wireless gate) at km 317/5-6 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DA-TJN Section as per plan no-22509/DA.

2. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/21-A (Sainik club) at km 311/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DA-DACT Section as per plan no-22510/DA.

3. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/22-A (Joarshahara) at km 308/1-2 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-DA Section as per plan no-22511/DA.

4. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/23-A (Kuril) at km 307/4-5 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-DA Section as per plan no-22512/DA.

5. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-E/23-C (Aahkona) at km 301/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22513/DA.

6. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-T/23-D (Koshaibari) at km 302/9-303/0 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22514/DA.

7. Plan showing the underground pipe line crossing of Railway track at level crossing gate no-T/23-E (Azampur) at km 301/8-9 under Dhaka Environmentally Sustainable Water Supply Project (DESWSP) in between DABB-TGI Section as per plan no-22515/DA.

Page2

1. According to Railway Act sec-5 after completion of the work before starting of passenger train run are you interested to inspect the site? N/A
    a. If interested after completion of the work proposed date to run the train will be informed over telephone and by written: N/A
    b. If not interested responsible engineer will issue security certificate e-1610/1 to start running the train and will be informed by telecommunications: N/A
2. According to Railway Act 1890 sec 16(1) engine and rail stocking related any application or information: N/A
3. Security related information and documents: N/A

a. 1. Temporary works drawings (plan, section, elevation etc): N/A

2. Infringement list as per dimension schedule: DEN/1/Drawing 22509, 22510, 22511, 22512, 22513, 22514,22515/Dhaka

3. Manual of signaling and interlocking (1st and 6th vol) failure list: N/A
4. G S Rule deviation list: N/A
5. Other rules and regulations: 10km speed will be allowed after signing by dead stop and LM
6. Traffic activities: N/A

b. Permanent works

1. Description of proposed works: according to next page description
2. Drawings(plan, section, elevation etc):DEN/1/Drawing 22509, 22510, 22511, 22512, 22513, 22514,22515/Dhaka
3. Infringement list as per dimension schedule and deviation: N/A
4. Manual of signaling and interlocking (1st and 6th vol) deviation list: N/A
5. G S Rule deviation list: N/A
6. Other rules and regulations: N/A
7. Traffic activities: N/A

4. a. It is certified that as per sec 3(a) temporary materials are design and drawing and load bearing capacity is enough.

b. Certified that as per section (b) permanent works are good for train movement and secured.

(Md. Arifuzzaman)	(Mohammad Mahbubur Rahman)	(Md. Abdus Salam)
Chief Engineer/ East	Divisional Railway Director (Aa: Da)	Divisional Engineer/1
Bangladesh Railway, Chottogram	Bangladesh Railway, Dhaka	Bangladesh Railway Dhaka

No:……. Date: …….

Assistant Rail Inspector
Department of rail track inspection
Ministry of Railway
Old Rail Bhaban, Dhaka

To
Sir,
Your ref: No: ……. Dated…… permission to perform the work has been given as per following condition:

a. According to Sec 1(a), after completion of the installation and before the train run undersigned are willing to inspect the installation. Therefore, 14 days earlier undersigned is to be informed by telephone or by written before train run.

b. According to Sec1(a), after completion of the installation and before the train run undersigned are not willing to inspect the installation responsible engineer will issue security certificate e-1610/1 to start running the train and will be informed by telecommunications

c. Other conditions:

Assistant Rail Inspector
Department of rail track inspection
Ministry of Railway
Old Rail Bhaban, Dhaka

Annexure 7: Minutes of P3.1 Public Consultation Meeting

SL No.	Date and Venue	Participants Discussion	No. of Participants	Project Response
01	13/11/2018; Azampur Government Primary School, Uttara, Dhaka-1230.	People from different segments of the community like teachers, guardians, businessmen, house owners, housewives, civil society representatives, PMU personnel and Management Design and Supervision Consultants (MDSC) were present in the in the meeting. At first, PMU and MDSC stated the objective of the project, construction method and repairing roads and possible time period for project implementation. The participants stated that the project will not have any resettlement impact and there will be no impact on the income of the community due to project implementation rather it would be beneficial for them. They want continuous water supply after construction of pipelines. However, they apprehended minor impacts on roads and public movement. They suggested some measures to take during construction. 1. Excavated materials of the constructions like mud/soil should not be left around the pipeline after construction. 2. Water supply should not be interrupted due to pipeline construction work. 3. Public or traffic movement should not be in problem. 4. Where there is a risk for the construction work fence should be provided by contractors.	29 (M= 24 F=5)	DWASA representatives informed the participants that DWASA will ensure 24-hour water supply with sufficient pressure after pipeline installation. They will also be responsible for construction and refill works. The construction works in one route will take two weeks to a month. Each installation in the community will take maximum 7 days and construction work will be carried out mostly at night. Open-cut/trench excavation method will be followed for pipeline installation. WASA representatives replied one by one and reassured that: 1. The wastes mud/soil will be removed from the narrow roads immediately and from the wider road within 24 hours. 2. Water supply would not be interrupted due to construction. 3. Pipeline construction interruption in traffic movement would be minimal. Construction will be carried out mostly at night. 4. They will enclose the area near the trenches. Barricades will be put up around the work site during construction. Planks will be used for access for entering houses.


ADB
Meeting on
Social Safeguards & Environmental Awarness Program
For the Construction of Pipe Route (Package-ICB-3.1 & 3.2)

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspgwtp@gmail.com

Attendance Sheet

Date : 13-11-2018

Name of Work:

SL	Name	ORG & Designation	Signature
1.	মোঃ মাসুদ রহিম [illegible]	সহকারী প্রকৌশলী [illegible]	
2.	Md. Shahidul Islam Procurement Officer PMU, DESWSP, DWASA.	PMU. DWASA	
3.	মোঃ আনিক মিয়া	ব্যবসা	
4.	মোঃ মারহাব হাসান রাহুল	ব্যবসা	
5.	মোঃ কবির হোসেন	ব্যবসা	
6.	মোঃ মিজানুর রহমান	ব্যবসা	
7.	মোহাম্মদ মাহবুবুল ইসলাম (খোকন)	ব্যবসা	
8.	এ এ এম আবির	[illegible]	
9.	মোঃ জাহিদুল ইসলাম খান	শিক্ষকতা	

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, Kazi Nazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspdwasa@gmail.com

Attendance Sheet

Name of Work:

SL	Name	ORG & Designation	Signature
10	মো: সোহেল	চাকুরী	MD. Sohel
11	[illegible]	চাকরি	
12	মো: রবিউল / [illegible]	চাকরি	Rabiul
13	মো: মানু / [illegible]	চাকরি	
14	মো: রাকিব / [illegible]	চাকরি	Rakib
15	মো: [illegible] / [illegible]	চাকরি	
16	মো: [illegible] / [illegible]	চাকরি	
17	মো: [illegible] / [illegible]	চাকরি	Manik
18	[illegible]	[illegible]	[illegible]

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswsppetp@gmail.com

Attendance Sheet

Name of Work:

SL	Name	ORG & Designation	Signature
19	Ayesha Siddiqua	পরিচালক	
20.	Anima Sarker	পরিচালক	Anima
21	Parvin Akhter	[illegible]	
22	Rina	[illegible]	Rina
23.	Md Syedul Islam	[illegible]	
24	Md: Azizul	[illegible]	
25	Md. Soidur Rahman	Safeguard Officer (Env) DESWSP DWASA	
26	F.M. Manour Ali	Design Engr. MDSC/DWASA	
27.	Md. Saiful Islam	Asstt. Engineer Dhaka WASA	13/11/18

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspgwtp@gmail.com

Attendance Sheet

Name of Work:

SL	Name	ORG & Designation	Signature
28.	MIZAN	MDE	
29.	Tofazzal Hossen	DESWSP, DWASA. Safeguard Officer	
30.			

SL No.	Date and Venue	Participants Discussion	No. of Participants	Project Response
02	11/12/2018; Oxford Noble International School, Merul Badda, Dhaka	Teachers, guardians, businessmen, house owner, housewives, civil society representatives, project personnel, DWASA representatives and Management Design and Supervision Consultants (MDSCs) were the participants. All of the participants have the impression that this pipeline construction will be beneficial for them. They will get non-stop water supply. Public should get uninterrupted water supply regularly what they did not get before pipeline installation. Local participants wanted to know that which organization will implement this project and who is responsible for repairing the roads after construction. How many days will need for completion of works? In which method construction will be done? The participants opined that the project will not have any resettlement impact and there will be no impact on the income of the community due to project implementation rather it would be beneficial for them. However, they apprehended a few minor impacts, on roads and peoples' movement. They suggested some measures to take during construction. 1. Excavated materials of the constructions like mud/soil should not be left around the pipeline after construction. 2. public movements/transport should not be hampered. 3. Where there is a risk for the construction work fence should be provided by contractors. 4. Water supply should not be interrupted due to pipeline construction work.	26 (M= 21 F=5)	DWASA representatives informed the participants that DWASA will be responsible for construction and refill work. The constructions works in each route will take two weeks to one month. Each installation in the community will take maximum 7 days and construction work will be carried out mostly at night. Open-cut/trench excavation method will be followed for pipeline installation. Connection from transmission line to reservoir will be established by project cost. They informed the local people that 24-hour water supply with sufficient pressure will be ensured. WASA representatives replied people one by one and reassured that: 1. The waste soil will be removed from the narrow roads immediately and from the wider road within 24 hours. 2. Pipeline construction interruption would be minimal. Construction will be carried out mostly at night. 3. They will enclose the area near the trenches. Barricades will be put up around the work site during construction. Planks will be used for access for entering houses. 4. Water supply should not be interrupted due to pipeline construction work.


ADB
Meeting on

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspgwtp@gmail.com

Attendance Sheet

Date : 11-12-2018

Name of Work:
Venue: Oxford Nobel International School, Mercul Badda, Dha

SL	Name	ORG & Designation	Signature
1	Nargis Akter Lipi	Oxford Nobel School-Teacher	11.12.18
2	Jamatul Ferdous Mumu	" "	Ferdous 11.12.18
3	Joytun Ara Begum	" "	11.12.18
4	Most. Mukta Akter	" "	11.12.18
5	Shamema Islam	" "	11.12.18
6	SRISTE BANIK	" "	11.12.18
7	[illegible]	[illegible]	[illegible]
8	[illegible]	"	[illegible]
9	[illegible]	"	[illegible]

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspgwtp@gmail.com

Attendance Sheet

Date : 11-12-2018

Name of Work:

Venue: Oxford Nobel International School. Merul Badda, Dha

SL	Name	ORG & Designation	Signature
10	[illegible]	[illegible]	[illegible]
11	[illegible]	[illegible]	[illegible]
12	Tofazzal Hossen	DESWSP, DWASA. Safe guard offica	[signature]
13	MIZAN SARKAR	Deven	[signature]
14	Mohammed Shahidul Islam	PMU, DESWSP Dhaka, WASA	[signature]
15	Md. Zakir Hossain	Moltrancda MDSC	[signature]
16	K.M Riyaz Uddin	Oxford Noble School Headmaster	[signature]
17	Md: Faridul Islam	PMU, DESWSP DhakaWASA. Office Assistance	[signature]
18.	MD. SOBUJ Hossain	—	[signature]

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspdwasa@gmail.com

Attendance Sheet

Name of Work:

SL	Name	ORG & Designation	Signature
19.	Md. Abdur Rahman	House owner	
20.	Md. Sakil Mahmud	"	
21.	Sagor Shikder	"	
22.	Md. Shamsun Ahmed	House owner	
23.	Md. Atah Bhuiya	"	
24	Mohammad Nishan		
25.	Md. Saiful Islam	Asstt. Engineer Dhaka WASA.	
26.	Md. Saidur Rahman	Safeguard Officer (Env) DESWSP, DWASA	

SL No.	Date and Venue	Participants Discussion	No. of Participants	Project Response
3	13/12/2018; Sherebangla Ideal High School, Kuril, Vatara, Dhaka.	People from different segments of the community like teachers, guardians, businessmen, house owners, housewives, civil society representatives, PMU personnel and Management Design and Supervision Consultants (MDSC) were present in the in the meeting. At first, PMU and MDSC stated the objective of the project, construction method and repairing roads and possible time period for project implementation. The participants opined that the project will not have any resettlement impact and there will be no impact on the income of the community due to project implementation rather it would be beneficial for them.. They want uninterrupted water supply regularly what they did not get before pipeline installation. However, they apprehended few minor impacts, on roads and public movement. They suggested some measures to take during construction. 1. Excavated materials of the constructions like mud/soil should not be left around the pipeline after construction. 2. Water supply should not be interrupted due to pipeline construction work. 3. Public or traffic movement should not be hampered. 4. Where there is a risk for the construction work fence should be provided by contractors.	24 (M= 13 F=11)	DWASA representatives informed the participants that DWASA will be responsible for construction and refill work. 24-hour water supply with sufficient pressure will be ensured for locality. The construction works will take two weeks to one month. Each installation in the community will take maximum 7 days and construction work will be carried out mostly at night. Open-cut/trench excavation method will be followed for pipeline installation. WASA representatives replied one by one and reassured that: 1. The wastes mud/soil will be removed from the narrow roads immediately and from the wider road within 24 hours. 2. Water supply would not be interrupted due to construction. 3. Pipeline construction interruption would be minimal. Construction will be carried out mostly at night. 4. They will put an enclosure around the trenches. Barricades will be put up around the work site during construction work. Planks will be used as bridges for entering houses.


ADB
Meeting on
Social Safeguards & Environmental Awarness Program
For the Construction of Pip ute (Package- CB-3.1 & 3.2)
Organized by: Dhaka Environmen ble Water Supply Project (DESWSP)
D sa

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspgwtp@gmail.com

Attendance Sheet

Date: 13.12.2018

Name of Work:

Venue: SHEREBANGLA IDEA HIGH SCHOOL, KUKIL, VATARA, DHAKA.

SL	Name	ORG & Designation	Signature
1	Dr. Rafeza Akter	National Resettlement Expert, DESWSP, MDSC MM	Rafeza
2.	Md. Shahidul Islam	PMU, DESWSP DWASA	
3.	DEEN MOHAMMAD	Director, S Teacher Shere Bangla Ideal High School.	
4	MD. HANIF KHAN	Senior teacher Do	
5.	MD. Khairul Islam	Senior teacher Shere Bangla Ideal School	
6	MD. RAFIQUL ISLAM	Assistant teacher Shere Bangla Ideal Sch	
7.	MD. Jahirul Islam	Assistant teacher Shere Bangla Ideal High School.	
8.	MD RINKU SHAHRIAR	Assistant teacher Shere Bangla Ideal High School	
9.	MD. Nurul Haque.	Senior teacher Shere Bangala Ideal high school	

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspowtp@gmail.com

Attendance Sheet

Date: 13.12.2018

Name of Work:
VENUE: SHEREBAGLA IDEA HIGH SCHOOL.
KURIL, VATARA, DHAKA.

SL	Name	ORG & Designation	Signature
10.	MD. ARMIA AL-MAMUN	SHERA BANGLA HIGH SCHOOL	
11	Mahbuba Sultana Jery	11	
12	Rubina yasmin	11	
13	Farjana Boby	11	
14	Nadira sultana	11	
15	HABIBA	11	
16	Sheuly Akter Khanam	11	
17	Rubina yesmin,	11	
18	Rehana Akter	Headmistress Shera Bangla Ideal High	

Office of the Project Director
Dhaka Environmentally Sustainable Water Supply Project (DESWSP)
Dhaka Water Supply and Sewerage Authority
WASA Bhaban, 98, KaziNazrul Islam Avenue (9th Floor)
Kawran Bazar, Dhaka-1215
Email: pddeswspowp@gmail.com

Attendance Sheet

Date: 13.12.2018

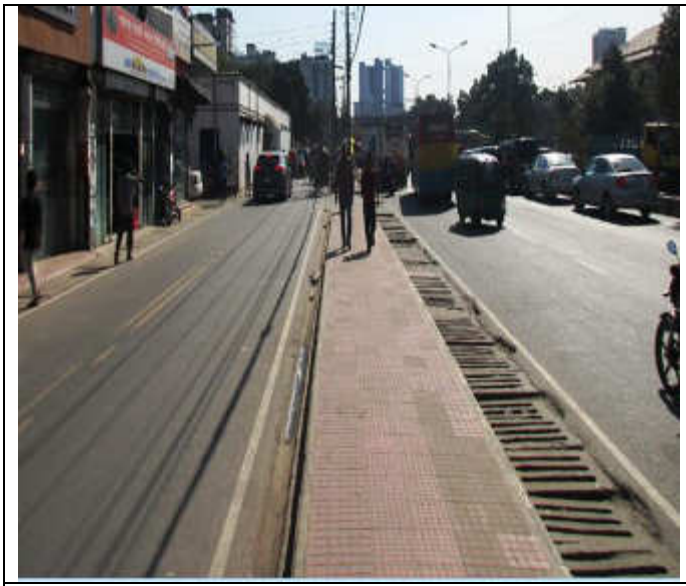
Name of Work:
Venue: SHEREBANGLA IDEAL HIGH SCHOOL, KURIL, VATARA, DHAKA.

SL	Name	ORG & Designation	Signature
19.	Mahmuda parvin	Shere Bang Laiful Highschool	13.12.18
20	Laila Gul Raihan	"	19.12.18
21	Md. Zakir Hossain	civil Engineering	
22.	Tofazzel Hossen	PMU, DESWSP DWASA. Safeguardofficer	
23.	Md. Saiful Islam	Asst. Engineer Dhaka WASA	
24.	Md. Saidur Rahman	Safeguard Officer (Env) DESWSP, DWASA	

Annexure 8: Photos of Road Reconnaissance Survey

Road Reconnaissance Survey Progoti Sarani, Badda to Natun Bazar (Section-D)

Road Reconnaissance Survey, Kakoli to Natun Bazar (Section-E)



Road Reconnaissance Survey Progoti Sarani, Badda to Natun Bazar (Section-F)

Road Reconnaissance Survey Kuril to Bishwa Road (Section-G)

Road Reconnaissance Survey Dhaka Mymenshingh Road, Kuril to Uttara (Section-H)

Road Reconnaissance Survey Jasimuddin Road (Section-K)

Road Reconnaissance Survey Sonargoan Janapath Road (Section-J)