भारतीय प्रौद्योगिकी संस्थान खड़गपुर
खड़गपुर – ७२१ ३०२, भारत
Indian Institute of Technology Kharagpur
Kharagpur - 721 302, India

Dr. Bhargab Maitra
Dean (Students' Affairs) &
Professor, Civil Engineering Department

May 21, 2024

To
Shri Shekhar Sen
Additional Secretary, P&RD & ACEO, WBSRDA
Joint Administrative Building (6th Floor)
Block-HC/7, Sector – III, Bidhannagar, Kolkata – 700106

Ref: Memo No. 1228/1(S)/PRD-37099/66/2023-ENGG SEC-Dept. of PRD, dated 16/04/2024

Sub: Proposal of Organizing Training Program on Road Safety for Engineers of WBSRDA and P&RD Department, Govt. of West Bengal, as per the guideline of the State Road Safety Council

Dear Sir,

With reference to your letter vide Memo No. 1228/1(S)/PRD-37099/66/2023-ENGG SEC-Dept. of PRD, dated 16/04/2024, and based on our discussion with Dr. Shantanu Ghosh (SE, P&RD), I am submitting a proposal for carrying out Road Safety Training for Engineers of WBSRDA and P&RD, Govt. of West Bengal. The engineers of WBSRDA and P&RD generally do not get significant support from the safety consultants and often, they have to work within a limited budget. Also, the rural roads form a vast road network covering large geographical regions. Therefore, capacity building of the engineers of WBSRDA and P&RD Department in the area of road safety requires special attention. Accordingly, it is proposed to have a 3-Day Road Safety Training course for these engineers. While preparing this proposal, it was felt necessary to organize the training program in five batches/phases to limit the number of participant to about 40 so that adequate interactions can take place with the participants during each training session. Also, 5 training sessions spread across different geographical regions will make the participation easier considering their work load and travel logistics. 3 rounds of the program may be conducted at the training centre at Kalyani (covering all the districts of Presidency, Medinipur and Bardhaman Circles) and 2 rounds at Siliguri (covering all the districts of Jalpaiguri and Malda Circles).

A brief course outline and the content of the training program for 3 days is mentioned in **Annexure-I,** which has been prepared keeping in mind the guidelines of SCCoRS, Rural Road Safety Manual published by NRRDA, rural road safety scenario in the State, and the requirements of engineers of WBSRDA and P&RD Department. The total estimated cost for training of about 200 engineers in 5 batches is INR. 13, 93, 750 (inclusive of 25% Institute Overhead). The GST, as applicable, should be paid separately as per rule. A tentative breakdown of this estimated budget and the payment terms are mentioned in **Annexure-II**. The tentative duration for completion of the 5 rounds of training may be considered as 6 months.

We shall request the host districts to provide us suitable venues and other logistic support for organizing the training sessions. Once the proposal is approved, we shall immediately schedule the dates for organizing various sessions based on discussion with you.

Submitted for your kind consideration and necessary approval.

(**Bhargab Maitra**)

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Annexure-I

"3-Day Training Programme on Road Safety for Engineers of WBSRDA and P&RD"

Organized by

Department of P&RD, Govt. of West Bengal

in Technical Collaboration with

Indian Institute of Technology Kharagpur

Course Outline

Session	Topic	Content	Duration
		DAY – 1	
		Inauguration and Opening Remarks	10:00 – 10:15
Session-I	Rural Roads in WB: Present Scenario, Issues and Challenges	• Road Safety Scenario: Global, India & West Bengal • Scenario of Rural Roads in India & West Bengal • Causes of road crashes & Risk Factors • Road Safety Challenges in Rural roads	10:20 – 11:00
		High Tea	*20 mins*
Session-II	Road Safety Engineering: Principles & Approaches	• Road Safety Engineering • Basic Principles and Approaches: ✓ Haddon Matrix ✓ Safe System Approach ✓ Countermeasures: Evidence Based Approach ✓ Proactive & Reactive Approaches	11:20 – 12:05
Session-III	Crash Data & Blackspots	• Importance of crash data • Data collection systems ✓ Traditional Methods & challenges ✓ Introduction to iRAD • Blackspot: Definition • Identification of Blackspots ✓ MoRTH guideline ✓ Scientific approaches	12:10 – 12:45
		Lunch Break	*1 hour*
Session-IV	Intersection Safety	• Safety scenario of intersections on rural roads • Hierarchy of intersection control • Conflict points & Methods to reduce them • Intersection Sight triangle • Safety issues at un-signalized intersections • Traffic control at intersections ✓ Channelization ✓ Speed calming ✓ Minor road treatments when merging with highways	13:45 – 14:25
Session-V	Safety of VRUs	• Who are Vulnerable Road Users (VRUs) & Why to focus on them? • Observed safety issues on Rural Roads related to VRUs ✓ Roadside schools & public buildings ✓ Roadside Market areas	14:30 – 15:10

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	Tea Break		*20 mins*
Session-VI	Road Geometry, Traffic Signs, Road Markings and Delineation	• Importance of geometric design • Safe Road Design elements ✓ Cross-section elements ✓ Sight Distance: SSD, OSD, horizontal & vertical curves, intersection ✓ Road markings & signs ✓ Delineation & crash barriers • Introduction to relevant IRC codes	15:30 – 16:10
Session-VII	Speed Management & Engineering Interventions	• Why focus on speeding? • Measures for speed management ✓ Speed Zoning ✓ Engineering Treatments • Setting of Safe Speed Limits	16:15 – 17:00
DAY – 2			
Session-VIII	Introduction to Road Safety Audit	• Background: Aims and scopes • What to look for in RSA? • Crash Investigation Vs. RSA • Stages of RSA • RSA checklists & IRC: SP:88-2019 • Commonly identified problems on Rural roads	09:30 – 10:10
Session-IX	Planning and Design Stage RSA	• Background & Need ✓ Planning/ Feasibility stage RSA ✓ Preliminary Design Stage RSA ✓ Detailed Design Stage RSA • Inputs of Design Stage RSA • Key parameters to assess: ✓ Cross-section ✓ Alignment (Horizontal & Vertical) ✓ Junctions, Interchanges & Flyovers ✓ Provisions for VRUs ✓ Road Signs, Markings and Lightings ✓ Provisions for roadside communities ✓ Roadside hazards	10:15 – 11:00
	Tea Break		*20 mins*
Session-X	Construction Stage RSA	• Key aspects & Overview of a construction zone • Work Zone Traffic Management Plan (WTMP) • Traffic control devices • Traffic Diversion Arrangements • Common Safety Issues related to: ✓ Barriers ✓ Inconsistency ✓ Construction Equipment ✓ Construction Worker	11:20 – 12:10

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Session-XI	RSA: Pre-opening Stage & Existing Roads (O&M Stage)	• General checklist • Elements to assess: ✓ Cross-section ✓ Alignment ✓ Intersections ✓ Bridges/ Bridge approaches ✓ Level difference/ Edge-drops ✓ Medians ✓ School zones & Built-up zones ✓ Facilities to VRUs ✓ Road Signs, Markings, Delineations, Crash barriers	12:15 – 13:10
	Lunch Break		*1 hour*
Session-XII	Site Visit for RSA	• Participants to be divided into 4-5 groups and to be taken to a nearby P&RD road for conducting O&M stage RSA • Each group is expected to cover around 1km of road length • Different consecutive stretches from a same road may be assigned to each of the groups	14:30 – 17:30
	DAY – 3		
Session-XIII	Preparation of PPT by the participants	• Preparation time for each group to make a PPT based on the RSA • Each member from all the groups must participate • Approx. 15 slides per group so that not to exceed 15-20 minutes per group while presenting	09:30 – 11:30
	Tea Break		*20 mins*
Session-XIV	Presentation by the Participants	• Presentation by the participants (group-wise) to highlight their observations and recommendations related to various safety issues they identified while conducting the RSA • Each member of all the groups must participate	11:50 – 13:50
	Lunch Break		*1 hour*
Session-XV	Evaluation & Interaction Session	• Evaluation of the performance of the participants • Open session: Interaction with the participants	14:50 – 15:40
	High Tea		*20 mins*
Closing Remarks			16:00 – 16:15

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Annexure-II

"3-Day Training Programme on Road Safety for Engineers of WBSRDA and P&RD"
Organized by
Department of P&RD, Govt. of West Bengal
in Technical Collaboration with
Indian Institute of Technology Kharagpur

Breakdown of the Estimated Budget & Payment Terms

Sl. No.	Item	Amount (INR)
1	Preparation Training Material	60, 000
2	Training Material Kit for **200 Participants** @ INR. 1,500 per participant • Hard Copy of all lecture materials in form of a Book: Coloured printing and soft-binding • Writing Notepad • Pen: 2 Nos. • Folder	3, 00, 000
3	Transportation for experts and support members (approx. 6 members in each phase) • Road: Travel for Kharagpur-Kalyani: INR. 60,000 (Total for 3 rounds) • Road & Air/Rail: Travel for Kharagpur-Siliguri via Kolkata: INR. 1,00,000 (Total for 2 rounds)	1, 60, 000
4	Honorarium • Experts: @ INR. 20,000 per expert per round for 4 experts and 5 rounds of training • Support Staffs: @ INR. 8,000 per staff per round for 2 staffs and 5 rounds of training	4, 80, 000
5	Miscellaneous Expenses	30, 000
	Sub-total	**10, 30, 000**
6	**Institute Overhead (@25%)**	**2, 57, 500**
	Gross Total	**12, 87, 500***

**** The GST should be paid separately as per rule***

Project Duration: 6 months

Payment Terms:

- 20% after first round of Training: i.e., INR. 2,57,500/- + GST
- 40% after completion of another two rounds of Training: i.e., INR. 5,15,000/-+ GST
- 40% after the last two rounds of Training: i.e., INR. 5,15,000/- + GST

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