

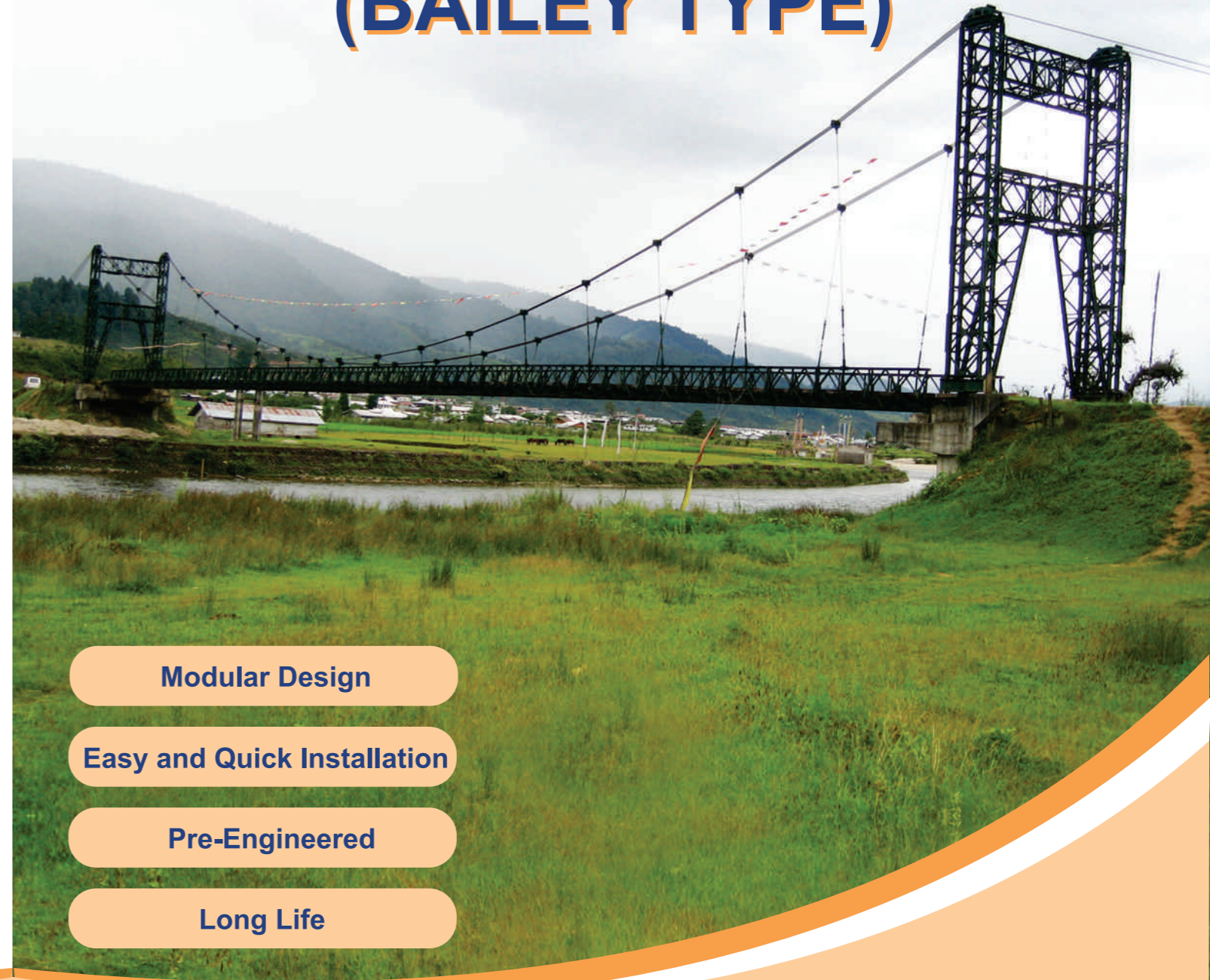
GRSE

SERVICES WE PROVIDE

- Manufacturing and Supply
- Transportation to Bridge Site
- Launching and Erection
- Technical Advice and Capacity Up-gradation
- Pre-order Site Survey and Feasibility Study
- Periodic Inspections on request
- Assures and Ensures prompt action in case of an Exigency and Disaster Management



PORTABLE STEEL BRIDGES (BAILEY TYPE)



Modular Design

Easy and Quick Installation

Pre-Engineered

Long Life



For any business or technical enquiry, please contact:
Garden Reach Shipbuilders & Engineers Ltd.
(A Government of India Undertaking, Under the Ministry of Defence)
Bailey Bridge Unit (Engineering Division)
61, Garden Reach Road, Kolkata-700024
Tel: 033-2469 7169, Mobile: 9163331768, 9679650208, 7605055731
Email: Partheepan.Natarajan@grse.co.in, grsebbbsalesmarketing@gmail.com
Website: www.grse.in



गार्डन रीच शिपबिल्डर्स एण्ड इंजीनियर्स लिमिटेड
Garden Reach Shipbuilders & Engineers Ltd.



ABOUT GRSE PORTABLE BRIDGE UNIT

- Garden Reach Shipbuilders & Engineers Limited (GRSE) is a Premier Govt. Company of India and is the largest manufacturer of Portable Steel Bridges (Bailey type) in India, besides being the leading manufacturer of Warships, Deck Machinery Equipment & Marine Diesel Engines for ships.
- GRSE Portable steel bridge unit was set up in 1975 on the advice of the Defence Ministry and enjoys more than four decades of excellent track record in design, manufacturing, supply and erection of Bailey type Portable Steel Bridges.
- Customer Profile for GRSE Portable Steel Bridges (Bailey type) includes Indian Army, Border Roads Organisation (BRO), National Rural Roads Development Agency (NRRDA), various State PWDs, Hydel projects and other private organisations, besides exporting to foreign countries (Bangladesh, Bhutan, Nepal, Myanmar and Sri Lanka).
- GRSE has won the prestigious Raksha Mantri's Award of Excellence for Innovation in "Design of Double Lane Bridge for a vehicular load up to IRC-6, Load Class 70R".
- Distinction of achieving a Guinness World record for "bridge at highest altitude (5602m)", erected at Khordung-Lo (Karakoram) in Leh, India.
- The Quality Management System of the unit is certified for ISO 9001: 2015 and is well established in GRSE for design & manufacturing of Bailey type bridges. GRSE has been nominated as supplier to Indian Army, BRO and many state PWDs which speaks about the high quality & performance of GRSE Bailey type bridges.
- Only Shipyard to receive Green Channel Certification by DGQA for supply of Bailey type Portable steel Bridges to Indian Army.



GRSE DOUBLE LANE MODULAR STEEL BRIDGES

MODEL: GBB-8000



DOUBLE LANE 140 Ft (42.67 M), 70R MODULAR STEEL BRIDGE ERECTION



- Superior Design
- Stronger Primary Load Element (Panel)
- Superior Assembly of Bridge Components



- Superior Components Design
- Longer Service Life
- Cantilever Launching



DOUBLE LANE 140 Ft (42.67 M) 70R MODULAR STEEL BRIDGE ERECTED, TESTED & IN USE AT FLAGE HILL, DOKLAM UNDER BRO PROJECT SWASTIK, SIKKIM

DOUBLE LANE MODULAR STEEL BRIDGE ERECTED AT SITE & IN USE

IRCLASS
SYSTEMS AND SOLUTIONS PRIVATE LIMITED

CERTIFICATE OF APPROVAL
Issued by Indian Register Quality Systems
(A Division of IRCLASS Systems and Solutions Private Limited)

This is to certify that the Quality Management Systems of

Organisation: Garden Reach Shipbuilders & Engineers Ltd.
Bailey Bridge Division

Address: 61, Garden Reach Road,
Kolkata - 700 024

has been assessed and found conforming to the following requirement

Standard: ISO 9001:2015

Scope: Design, Manufacture and Supply of
Portable Steel Bridges

Certificate No.: IRQS/210100792

Original Certification Date: 24/06/1997

Current Date of Granting: 22/06/2021

Expiry Date: 21/06/2024

Shashi Nath Mishra
Head IRQS

This approval is subject to continued satisfactory maintenance of the Quality Management Systems of the organization to the above standard which will be monitored by IRQS. The use of the Accreditation Mark indicates accreditation with respect to activities covered by the certificate with accreditation no. QM 006. Condition Overleaf
Head Office: 52A, Adi Shankaracharya Marg, Opp. Powai Lake, Powai, Mumbai - 400 072, India.

GOVERNMENT OF INDIA
MINISTRY OF DEFENCE

DIRECTORATE GENERAL OF QUALITY ASSURANCE
CERTIFICATE FOR GREEN CHANNEL STATUS

1. Having examined the Quality Systems, Quality Control Practices and Quality of Product of **M/s Garden Reach Shipbuilders & Engineers Limited, 61, Garden Reach Road, Kolkata-700 024** and having found their performance as per laid down criteria, hereby award "Green Channel Status" to the said firm for supply of the following products:

Srl No.	Product Nomenclature	DS Cat Part No.	Specification No./Drawing No.	MPC Per Shift
a.	Standard width Bailey Bridge from 30 ft to 200 ft span for various load classes and its spares.	-	Annexure 'A' (As per CQA/EE Drawing & specifications)	04 Sets
b.	Extra wide Bailey Bridge from 30 ft to 200 ft span for various load classes and its spares.	-	-	04 Sets
c.	Launching Nose & Erection Gear for Launching Bridges up to 200 ft.	-	-	04 Sets
d.	Bailey suspension Bridge from 240 ft up to 400 ft (Suitable for Single Vehicle Max. Load up to 40 MT).	-	Annexure 'B' (As per CQA/EE Drawing & specifications)	01 Set

No of Items for which Green Channel Status Granted: 04 (Four only)
Note: MPC recommended as 'any one item at a time'.

2. The award of certificate shall be governed by the conditions overleaf and shall be applicable for a maximum period of five years, from the date of issue of this certificate.

3. **Other Details**

(a) Monetary limit : Rs 1320.18 Crore per Annum
(b) Category of GCS Registration : Design Development Production
(c) Number of Shifts : Single
(d) Valid upto : 23 Aug 2027.

GCS Certificate No. 4001/GCS-GRSEL/DGQA/EE-2/23 Dated 24 Aug 2022

(Suresh K)
Brig
Offg ADGQA (EE)
Chairman GCC

(R K Malhotra)
Lt Gen
DG QA



GRSE SINGLE LANE MODULAR STEEL BRIDGES

MODEL GBB-7000



SINGLE LANE 190 Ft (58 M), 70R MODULAR STEEL BRIDGE ERECTED, TESTED & IN USE AT BRO PROJECT SHIVALIK, UTTARKASHI



- Superior Design
- Stronger Primary Load Element (Panel)
- Superior Assembly of Bridge Components



SINGLE LANE 110Ft (34M) 70R MODULAR STEEL BRIDGE WITH WALKWAY ATTACHMENT AT BOTH END ERECTED & IN USE AT KHAGERHAT, NBDD SILIGURI, WEST BENGAL



- Superior Components Design
- Longer Service Life
- Cantilever Launching

SINGLE LANE MODULAR STEEL BRIDGE ERECTED AT SITE & IN USE



GRSE PORTABLE STEEL BRIDGES (BAILEY TYPE)

SPECIFICATION

MODEL - GBB

SL. NO.	TYPE OF BRIDGE	ROAD WIDTH (m)	MAX SPAN (Ft.)	IRC-6* LOAD CLASS	WEIGHT OF EQUIVALENT WHEELED VEHICLE
1.	Single Lane Bailey type Bridge (Steel Deck)	3.32 / 4.25	200 / 200	30R	38 MT
			190 / 180	40R	55 MT
			140 / 140	70R	100 MT

* Indian Road Congress : 6

MODEL - GBSB

SL. NO.	TYPE OF BRIDGE	ROAD WIDTH (m)	MAX SPAN (Ft.)	BMLC** LOAD CLASS
1.	Suspension Bridge (Wooden / Steel Deck)	3.277	400	Class 18
			360 ft & below	Class 24

** British Military Load Classification

SALIENT FEATURES

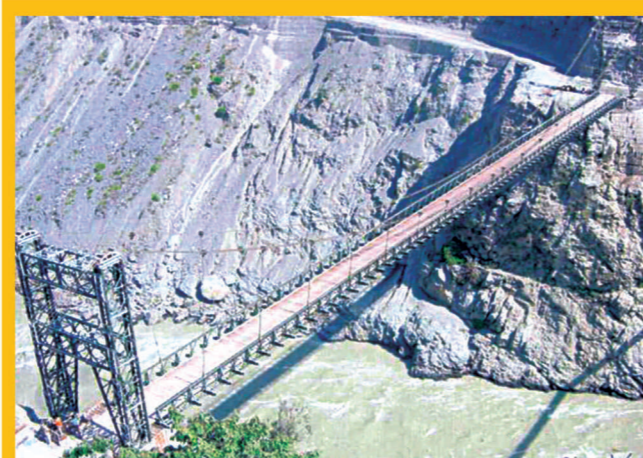
- GRSE Bailey type bridges are fully tested, pre-engineered & pre-fabricated and having high strength & versatility. They are easy to handle, re-usable, portable and upgradable.
- GRSE manufacturing capability ranging from 30Ft (9m) to 400Ft (122m) span and load capacity of 9MT to 100MT.
- The Modular design of GRSE Bailey type bridges enables the installation to be a simple and quick process without the necessity of the mechanized material handling equipment . The design provides ready solution for emergency I disaster recovery situation.
- Modular design of GRSE bridges are Innovative and unique designs conforming to IRC (India)/AASHTO standards (International) .
- Expected Life span of the GRSE Bailey type bridges is 25 years approximately and can be extended, subject to proper maintenance. Modular bridges of GRSE ensure longer service life of 40-45 years or more (depending on maintenance).
- GRSE Single lane suspension type bridges are especially suitable for hilly terrains where intermediate pier is not possible. Low Erection Time (45 to 60 days), ease of assembly and Reusability make it ideal for hilly regions.
- Delivery Period : Normal lead time for supply of Bridges is 2 to 3 months. However, we can supply some limited quantity ex-stock to meet emergency requirement. The rated capacity of GRSE as per CQA(EE) certification is 13 bridges per month and we are now in the process of upgrading this to 30 bridges per month.
- Bridge launching is simple and quick assembled using a small crew working with Light Mobile crane and standard tools



GRSE PORTABLE STEEL BRIDGES (BAILEY TYPE)



360 Ft Suspension type Bridge on Siyom River at Paksing, Arunachal Pradesh, India



360 Ft Suspension type Bridge on River Chenab, Jammu & Kashmir, India



130 Ft Bridge at Himachal Pradesh, India



Multi-span Bridge (120 Ft & 130 Ft) on river Teesta in West Bengal, India

SUPPLY UNDER DISASTER MANAGEMENT

- GRSE has supplied bridges for Disaster management as emergency assistance :
 - 12 bridges to Tsunami affected areas of Andaman, India in year 2005
 - 05 bridges to Tsunami affected areas of Sri Lanka in year 2005
 - 06 bridges to PWD, Leh, India for landslide affected areas in year 2010
 - 36 bridges to PWD, Uttarakhand, India for flash flood affected areas in year 2013
 - 17 bridges to Jammu & Kashmir, India in November' 2014
 - 02 bridges to PWD, Kolkata, WB, India in October 2018



80 Ft. TWO NOS. BAILEY BRIDGES AT MAJERHAT, KOLKATA, WEST BENGAL



GRSE MODULAR STEEL BRIDGES

SPECIFICATION

MODEL - GBB 7000

SL. NO.	TYPE OF BRIDGE	ROAD WIDTH (m)	MAX SPAN (Ft.)	IRC-6* LOAD CLASS	WEIGHT OF EQUIVALENT WHEELED VEHICLE
1.	Single Lane Modular Bridge (Steel Deck)	4.25	230	30R	38 MT
			230	40R	55 MT
			200	70R	100 MT

MODEL - GBB 8000

SL. NO.	TYPE OF BRIDGE	ROAD WIDTH (m)	MAX SPAN (Ft.)	IRC-6* LOAD CLASS	WEIGHT OF EQUIVALENT WHEELED VEHICLE
1.	Double Lane Modular Bridge (Steel Deck)	7.50	140	70R / CL-A	100 MT / 55.4 MT (DOUBLE)

* Indian Roads Congress : 6

SALIENT FEATURES

- Manufactured and designed & developed with heavy axle loading
- Designed for longer Span & higher Loads using 7 Ft High Panel as against 5 Ft used in earlier design
- Pre-engineered & Pre-fabricated 10 Ft x 7 Ft Main Girder I Panel
- Modular design for easy & quick installation and an ideal solution to bridging problems
- Combination of Strength & Versatility
- Modular design of GRSE bridges are Innovative and unique designs conforming to IRC (India)/AASHTO standards (International).
- Robust construction for permanent application of 40-45 years with high durability and reliability
- Re-usable and Portable which makes it ideal for semi-permanent & permanent applications and emergency situations
- Walkway attachment 1.0 m at both side on single lane bridge Manufactured with 100% indigenous material
- Ideally suited for providing quick access to remote, inaccessible areas & faster socio-economic development
- Bridge launching is simple and quick assembled using a small crew working with Light Mobile crane and standard tools
- Design verified and validated (i.e. Live Load Testing of Sample Bridge) by CSIR-SERC Chennai