



BUREAU OF INDIAN STANDARDS

Minutes

Name of the Committee	Number of meeting	Date	Day	Time	Venue
Preconstruction Services Sectional Committee (SSD 06)	Eleventh Meeting	12 September 2024	Thursday	3:30 PM	Webex Meeting

Chairperson: Shri Manoj Mittal, Past President, Indian Association of Structural Engineers, New Delhi

Member Secretary: Shri Udham Singh, Scientist C/Deputy Director, BIS

Participants: The list of participants who have attended the meeting is given in **Annex - A**.

Item 0 WELCOME

0.1 Opening Remarks by Member Secretary

At the outset, the Member Secretary welcomed the Chairperson and the members present in the 11th meeting of Pre Construction Services Sectional Committee, SSD 06. He provided a brief of the discussions points of the agenda of the meeting. He then requested the Chairperson to give his opening remarks.

0.2 Opening Remarks by the Chairperson

Shri Manoj Mittal, Chairperson, opened the 11th meeting of the Pre-Construction Services Sectional Committee, SSD 06, by welcoming the members present. He acknowledged the valuable contributions made by all members to the committee's work. He informed the members that the primary objective of the meeting was to discuss the comments received on the P Draft of the Geotechnical Engineering Services document. He then requested the Member Secretary to proceed with the agenda items.

Item 1 CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING

As there were no comments received on the minutes of the 10th meeting of Preconstruction Services Sectional Committee, SSD 06 which was held on 13 August 2024. The committee formally confirmed the minutes of the 10th meeting of SSD 06.

Item 2 SCOPE AND COMPOSITION OF PRECONSTRUCTION SERVICES SECTIONAL COMMITTEE SSD 06

2.1 The Committee noted the present scope of SSD 06 as given under Item 2.1 of the agenda.

2.2 The Committee reviewed the composition of SSD 06 as outlined in Item 2.2 and Annex-A of the agenda and no change to the composition was suggested by the Committee.

Item 3 PROGRAMME OF WORK

3.1 Standards Published

The Committee noted Item 3.1 of the agenda.

3.2 Drafts under Preparation

3.2.1 Geotechnical Engineering Services

The Committee discussed the comments received on the P draft of ‘**Geotechnical Engineering Services – Requirements**’ and the decisions taken on the comments are given in **Annex B**.

3.2.2 Architectural Design Services

The Committee noted Item 3.2.2 of the agenda.

Item 4 DATE AND TIME FOR NEXT MEETING

The next meeting date will be decided in consultation with the Chairperson of the Committee.

Item 5 ANY OTHER BUSINESS

As there was no any other business to be discussed in the meeting, the meeting ended with vote of thanks to the Chairperson and the members.

ANNEX- A

Attendance for the 11th Meeting of Pre Construction Services Sectional Committee,
SSD 06

Sl.No	Name of Organization	Name of Representative
1.	Indian Association of Structural Engineers, New Delhi	Shri Manoj K. Mittal (Chairperson)
2.	B&S Engineering Consultants Private Limited, Noida	Shri Alok Bhowmick
3.	CEPT University, Ahmedabad	Shri Mihir Vora
4.	Cengrs Geotechnica Private Limited, Noida	Shri Ravi Sundaram Shri Sanjay Gupta
5.	Central Public Works Department, New Delhi	Shri Pradeep Garg
6.	Consulting Engineers Association of India, Noida	Shri C. J Ragunathan
7.	Creative Design Consultants and Engineers Private Limited, Ghaziabad	Shri Aman Deep
8.	Housing and Urban Development Company Construction Corporation, New Delhi	Shri Deepak Bansal
9.	Strata Geosystems India Private Limited, Mumbai	Shri Suraj Vedpathak
10.	IN PERSONAL CAPACITY	Shri Jose Kurian
11.	IN PERSONAL CAPACITY	Shri N N Bandhu
12.	IN PERSONAL CAPACITY	DR K M SONI
BIS DIRECTORATE		
13.	Bureau of Indian Standards	Shri Udham Singh (Member Secretary)

Annex B

Decision taken by SSD 06 on Comments

Sl. No	Name of Member	Clause/Sub Clause No.	Type of Comment	Comments/Suggestions	Proposed Change/Modified Wordings
1.	Shri Manoj K. Mittal	2.1	General	Term 'Consultant' has not been defined anywhere. Do we mean by CDC/PDC? Define Consultant	same as comments Accepted
		2.9	Editorial	'Geotechnical Report ' may be substituted with 'Geotechnical services report ' as we are also using 'Geotechnical investigation report'	as mentioned in comment no change
		2.10	General	Revisit the definition of Owner	same as comments covered under 2.22 note 1 no change
		2.11 note 1	Editorial	Please add " However all responsibilities lies with the owner only"	same as comments no change
		2.14	General	Term " Team Supervisor " has not been used in the document and hence may be deleted .	same as comments no change
		3	Technical	Add following additional point " Providing all relevant comprehensive engineering data regarding soil including water table and soil liquefaction potential for further detailed design by other consultants of the project"	same as comments rephrase clause 3(d)
		4.2 note 1	General	Word Consultant may be reviewed	same as comments add CDC with the word Consultant everywhere in doc
		5.1	General	c & d should be reviewed and redrafted as AA may also be non technical owner and hence they can not responsible for reliable services. Further even if AA reviews the report they can not be responsible for accuracy of the report.	same as comments c and d need to be rephrased
6	General	Note may not be required. Just mention missing points in main text only. There is lot of repetition at present.	same as comments NOTE needs to be deleted considering the clause 6		

		7 Table 1	General	In table 1 point iii in Geotechnical consultant column last two experience requirements are for both Btech as well as Mtech . So it must be written clearly. Qualifications of Team members has not been specified. It should be at least B Tech/BE Civil. Experience may ne be mandatory.	same as comments to be reviewed and correct
2.	DR K M SONI	2.2	Technical	Part of the structure which is in direct contact with and transmits loads to the subsurface stratum at a suitable depth.	Lower part of the structure transmitting load to the subsurface stratum on which it rests. To be checked with NBC
		2.4	Editorial	Geotechnical Design	Geotechnical Engineering Design No change
		2.5	Editorial	Collection and evaluation of geotechnical information through site inspection, document search, site sampling and onsite and/or laboratory testing.	Collection, examination and evaluation of geotechnical information through site inspection, document search, site sampling and onsite and/or laboratory testing. Accepted
		2.10	General	An individual or organization that owns the project and engages the Constructor, Consultants, Geotechnical Consultants and/or Geotechnical Investigation Agency.	An individual or organization that owns the project or his authorized representative engaging the Constructor, Consultants, Geotechnical Consultants and/or Geotechnical Investigation Agency. As Discussed
		2.12	Technical	Static and Dynamic testing of pile for assessing the load carrying capacity and integrity of piles.	Static and Dynamic testing of pile for assessing the load carrying capacity, integrity or any other test required. To be checked
		3	General	...the Geotechnical Consultant (GC) and Geotechnical Investigation Agency (GIA)...	...the Geotechnical Consultant (GC) and/or Geotechnical Investigation Agency (GIA)... Accepted
		5.1 & 5.2	General	(f) and (g):7	(f) and (g): Clause 7 No change
		5.3e	Technical	ensure safe handling, transportation and delivery of geotechnical samples...	ensure safe handling, transportation and delivery of geotechnical samples as per

					prescribed codal provisions and guidelines and good engineering practice. No change
		7.1	General	The AA shall ensure that the team leader of the GC and GIA, as applicable, engaged for the project have the requisite minimum qualification and relevant experience as given in Table 1. a & c.by the All-India Council for Technical Education/University Grants Commission.	The AA/GC, as applicable shall ensure that the team leader, engaged for the project have the requisite minimum qualification and relevant experience as given in Table 1. a & c. ...by the All-India Council for Technical Education/University Grants Commission/Government of India/ State Governments. Accepted with word ‘Government’ Table 1: Note 4: The AA may relax the experience by recording reasons of doing so.
		7.1 Table	General	-	Notes: 4. The AA may relax the experience by recording reasons of doing so. No change
3.	Shri N N Bandhu	2.3 (2 nd line)	Technical	Original wording- services include all stages of geotechnical investigations, testing, analysis, design, drawings ---- As without recommendations, services are incomplete.	Add word “with recommendations” between “analysis” and “design”. New word group: - services include all stages of geotechnical investigations, testing, analysis with recommendations, design, drawings--- No change
		2.4 (3 rd line)		Original wording- --- parameters & actions, stability of structures and analysis of soil structure ---	Add word “and durability” between “stability” and “of structures” New word group - “---parameters & actions, stability and durability of structures and analysis of soil structures--- Covered under 2.3 No change
		2.9 (3 rd line)		Original wording- --- the analysis, conclusions,	Add word “interpretations” between

			and recommendations ---	“conclusion” & “and recommendations” New word group - “--- the analysis, conclusions, interpretation and recommendations - -- Accepted
	2.10 (1 st line)		Original wording- Owner	Add word “Client”. New word group- “Owner/ Client ” Already Discussed
	2.12 (1st line)		Original wording- pile for assessing the load carrying capacity	Add words “---vertical and horizontal” New wordings- “pile for assessing the vertical and horizontal load carrying capacity---” Already Discussed
	2.13 (1st line)		Original wording coordinating the work--	Add words “day-to-day” New wording-coordinating the day to-day work---- NO change
	2.14 (2nd line)		Original wording equipment and other resources --	Add words “day-to-day” New wording-equipment and other required resources ---- NO change
	4.1 (MODEL 1)		GC to prepare draft Geotechnical Report and submit to AA	In 4th block “GIA to submit draft Geotechnical Investigation Report to GC”. In block 5th, GC will review the report and forward to AA for approval. Block 6th is not required, as GC is not supposed to prepare draft Geotechnical Investigation Report and submit to AA. GC will recommend for approval by AA NO change
	4.2 (MODEL 2)		7 th block- word “GIA report	GIA report shall be replaced with “GI” report NO change
	4.2 (MODEL 2)		8 th block	8 th block is not required as GC is not supposed to prepare draft Geotechnical Investigation Report and submit to AA. NO change
	5.1(b) 1 st 2 nd & 4 th line		Appointed by the constructor/consultant	“Appointed by the constructor” Word “Consultant” is not required here, hence,

				shall be removed. As Discussed
	5.1 (c) &(e)		Para 5.1 (c) &(e) shall be merged	AA shall be primarily responsible and accountable to provide complete scope of geotechnical engineering services for GC and GIA including expected deliverables and time schedules. As Discussed
	5.1		One more para shall be added	Process and approve variation order if required. No change
	5.2 (b)		Topographical survey drawings	Topographical survey sheets No change
	5.2 (g)		Conduct an in-house geotechnical investigation (i.e. Model- 2),	It cannot be named as in-house GI. In both the model, GI will be done by GIA. So, para (g) is not required. No change
	5.2 (j)		Physically and/or digitally	Digital signature shall not be appreciated No change
	5.3 (b)		ensure methodology	Add word “approved” before methodology. Accepted
	5.3 (c)		Witness	Add one para “If desired, GIA shall arrange for the witness of test by AA/GC whether it is in-house or external testing lab. Covered under 5.3b
	5.3		statutory approvals	Add para “n” as “GIA shall be responsible for getting the statutory approvals from the various concerned authorities. However, owner/client will assist the GIA by way of issuing the letters to concern authorities.” NO change

		Table 1 (i) (3)		Qualification and experience of TL of GC	Instead of 10 GIA work, 5 is sufficient. Add – “out of which, minimum 2 similar work”. Table 1 experience needs to be reviewed
		Table 1 (i) (4)		Qualification and experience of TL of GIA	Instead of 5 GIA work, 2 is sufficient. Add – out of which, minimum 1 similar work.
		Table 1 (ii) (3)		Qualification and experience of TL of GC	Instead of 15 GIA work, 10 is sufficient. Add – “out of which, minimum 3 similar work”.
		Table 1 (ii) (4)		Qualification and experience of TL of GIA	Instead of 10 GIA work, 5 is sufficient. Add – “out of which, minimum 2 similar work”.
		Table 1 (iii) (3)		Qualification and experience of TL of GC	Instead of 20 GIA work, 15 is sufficient. Add – “out of which, minimum 4 similar work”.
		Table 1 (iii) (4)		Qualification and experience of TL of GIA	Instead of 10 GIA work, 5 is sufficient. Add – “out of which, minimum 3 similar work”.
		Table 1 Note- 2		Team leader – Academic faculty	Academic faculty should not be appreciated to work other than teaching and research.
4.	Shri Deepak Bansal	7 Table 1	Technical	For Team leader of Geo technical Investigating agency, following may be explained/added: 1 There should be some relaxation for ME/M Tech, PhD candidate. 2 Who will certify experience ? 3 What is difference between Practice and Investigation assignment?	ME/ M Tech and PhD may also be mentioned for TL of Investigation agency along with definition of experience and investigation assignments along with quality of experience and investigation assignments. No change except remove word ‘Practice’
5.	Shri Sayantan Chakraborty	FOREWORD 3 para	General	The intent of this standard is to...point d Appointing Authority (AA) should be mentioned as abbreviations for Geotechnical consultants and Geotechnical Investigation Agencies are provided. Appointing Authority owner/consultant/constructor is any way	elaborate the scope of services, deliverables, and associated responsibilities for the Appointing Authority (AA), Geotechnical Consultant (GC) and Geotechnical Investigation agencies (GIA) so that all stakeholders can take informed decisions while procuring and/or delivering such services

			mentioned in 2.1	Accepted, needful corrections shall be done.
		2.3	Technical Services include, but is not limited to all stages of geotechnical investigations..... Including "but not limited to" might be better to make it broader	Services include, but is not limited to all stages of geotechnical investigations, testing, analysis, design, drawings, and reports related to the behaviour of engineering structures influenced by soil, rock, groundwater, other earth materials and natural landforms considering but not limited to stability, serviceability, constructability, durability, sustainability and maintainability to ensure that the structure performs the functions specified over its intended design service life as per applicable standards. Accepted with word SUCH AS
		2.4	Editorial soil structure interaction should be hyphanated	soil-structure interaction Accepted
		4 Fig 1 and 2	Editorial The flowchart quality needs to be improved	The flowchart quality needs to be improved. The arrows are not originating and ending properly. Accepted
		5.1 5.2 5.3	Editorial wrong alphabetical order	please fix the issue with wrong alphabetical order NO change
		7.1a	Editorial has instead of have	Team leader of geotechnical consultant (GC) shall be an engineer who is engaged in the practice of geotechnical engineering and has experience in comparable geotechnical assignments in terms of nature, size and complexity of assignment to those under consideration. Accepted

6.	Shri Mihir Vora	2.4	Technical	Generally stability of structures and analysis of soil structure interaction between structure and soil is the responsibility of structural consultant.	Relates to the design of works for effects of geotechnical conditions which include subsurface conditions, effects of geotechnical parameters and actions; stability of structures analysis of soil structure interaction between the structure and soil, geotechnical design calculations and foundation design recommendations to enable structural design of proposed structures.. Rephrase 2.4
		2.8	Technical	Reference to relevant IS code for in-situ tests and laboratory test and ground water table information to be included	It covers the details of site conditions observed including photographs and documents examined, location and detailed data sheet of site samples collected from site of investigations for the purpose of geotechnical studies, data sheet and results of onsite test with reference to relevant codes and laboratory test performed on samples collected from site of investigation with reference to relevant codes , detailed calculation for test results, depth to ground water tavle and probsble seasonal fluctuation etc. Accepted
		2.9	General	The report will be interpretative report and may be considered as Geotechnical Design Report	Geotechnical Design Report As discussed
		5.2 (c)	Technical	Design of geotechnical structures and good for construction drawings should not be in geotechnical consultant scope. The geotechnical consultant shall carry out geotechnical analysis and calculations share geotechnical inputs e.g. SBC for open foundations, pile capacities and fixity depth for deep foundation, modulus of subgrade reaction for raft foundations, earth pressure diagrams for retention system etc. to enable structural consultants to carry out	recommend the scope for required geotechnical site investigations and onsite/laboratory testing of geotechnical samples/parameters and shall be responsible for analysis of investigation field and laboratory testing data, design of geotechnical structures geotechnical analysis and calculations, preparation of geotechnical reports, geotechnical design and drawings , pile testing data/analysis

				structural designs and issue good for construction drawings.	and/or perform specialized geotechnical assignments as required; Add new term Geotechnical Structure under Terminology
7.	Shri C. J Rangunathan	2.2	General	The ending of the clause 2.2 ," at a suitable depth" seems to be an indefinite statement.	- Modified, also check with NBC
		2.3	Technical	In the third line " by soil ,rock, " shall be changed as both represent a type of soil strata	influenced " by the nature of the soil strata" Modified
		5.1	General	The points given as notes 1 is relevant to get added as additional clause under 5.1 a	5.1a The design brief..... construction of the project Note 1 modified
		5.1	General	The point given as notes 2, shall be part of 5,1 as additional clause	5.1 k) The AA should issue a completion..... ..after completion of services Accepted as clause 5.1 (k)!
		Foreword (page 1)		Geotechnicalthe project lifestyle. The proactive approach ensures the decision on right type of foundation design and thus ensure safety and durability of the structures. It also minimizes the likelihood of delays, redesigns and structural failures during construction, which will lead to cost implications. Geotechnical engineering.....safe execution of construction work.	Modifications suggested are shown in RED Accepted
		Clause 2.2, Page 3		Foundation- Part.....stratum at the depth as per the recommendation of the Geotechnical Report.	Modifications suggested are shown in RED As discussed above
		Clause 2.3, Page 3		Geotechnical Engineering.....influenced by the nature of the soil, ground water, other..... applicable standards.	Modifications suggested are shown in RED As discussed above
		-		Page 8, Notes given at the bottom shall be made as a clause under 5.1	As discussed above

8.	Shri Jose Kurian	2.3	Editorial	In the first sentence also add ‘ Site and Laboratory test ’ reports.	Make Changes According to Comments. Accepted
		2.3 Note	Editorial	Convert it to a terminology for ‘ Geotechnical Engineering ’. Avoid using the word etc. in a code.	Make Changes According to Comments. Accepted
		2.4	Editorial	Change design of ‘works’ to ‘ Structures ’.	Make Changes According to Comments. Accepted
		2.8	Editorial	at the end drop the word etc.	Make Changes According to Comments. Accepted
		2.9	Editorial	Drop etc.	Make Changes According to Comments. Accepted
		2.11	Editorial	The notes should be appropriately put in Terminology.	Make Changes According to Comments. As discussed above add AA / employer
		2.13	Editorial	Change the last portion ‘on behalf of the team, to ‘ for and on behalf of the Geotechnical Consultant or Geotechnical Investigation Agency ’.	Make Changes According to Comments. Accepted
		4 Note 1	Editorial	shall be made part of Terminology 2.1	Make Changes According to Comments. Accepted
		4 Note 2	Editorial	Indicate the Fig nos. with 4.1 & 4.2	Make Changes According to Comments. Accepted, NOTES to relocate
		Flow Chart - Model 1	Editorial	where the GIA is appointed by the AA the report should go to AA who in turn will pass it on to GC. Similarly, after approval of final report AA need not submit the same to AA itself.	Make Changes According to Comments Needs to be reviewed in WG
		Flow Chart - Model 2	Editorial	similarly after approval of final report AA need not submit the same to AA itself.	Make Changes According to Comments. Needs to be reviewed in WG
		5.1 c	Editorial	Why AA is made responsible here.	Make Changes According to Comments Modify 5.1c
		5.1 Notes	Editorial	Should be converted to clauses.	Make Changes According to Comments. NOTE 1 to be added with 5.1e with suitable corrections.
5.2	Editorial	Add: GC shall be responsible for oversight on	Make Changes According to Comments.		

				the operations of the GIA in terms of QA in field operations as well as in laboratory Testing and Timelines.	Include with 5.2d
		5.3	Editorial	GIA shall prepare the QA system for field operations and laboratory procedures and got approved from GC.	Make Changes According to Comments. Include in 5.3b
		6 Notes	Editorial	Convert the notes to Clause on requirements.	Make Changes According to Comments. Discussed above
		7.1 Note	Editorial	Make it a clause as part of 7.1	Make Changes According to Comments. Continue NOTE with 7.1
		5.3 c	Editorial	Add a clause that the laboratory shall be NABL Certified.	Make Changes According to Comments. Needs to be reviewed by WG to include CSIR, CBRI labs/Govt labs
9.	Shri Alok Bhowmick	Forword 2 nd line	Editorial	project planning phase play a critical role	project planning phase, play a critical role
		Forword 6 th line	Editorial	or structural failures during construction or during service.	Modifications suggested are shown in RED During service life. Accepted
		Forword 7 th line	Editorialis an important activity prior to structural design.....is an important activity prior to structural design..... Accepted
		Forword 3 rd Para (d)	Editorial	and Geotechnical Investigation agencies (GIA)	and Geotechnical Investigation Agencies (GIA) Accepted
		Forword 4 th Para	Editorial	This Indian Standard defines the scope roles and responsibilities	Modifications suggested are shown in RED Accepted
		Forword 5 th Para		appropriate decisions on it to upgrade these qualification requirements, based	Modifications suggested are shown in RED Accepted
		Clause 2	Editorial	given in IS 18299:2023 Structural Design and Proof Checking Consultancy Services for Structures – Requirements and, the following	given in IS 18299:2023 “Structural Design and Proof Checking Consultancy Services for Structures – Requirements”, and the following as per IS 12
		Model 1	Editorial	AA Appointing Authority (AA)	Modifications suggested are shown in RED Accepted
		Model 1 Left box	Editorial	GC to propose scope for.....	GC to propose Scope for.... Accepted

		Model 1 Left diamond box	Editorial	Review of scope by.....	Review of Scope by..... Accepted
		Model 1 Right diamond box		Review of report GIR by GC	Modifications suggested are shown in RED Accepted
		Model 2	Editorial	AA Appointing Authority (AA)	Modifications suggested are shown in RED Accepted
		Model 2		FIG. 2 FLOW CHART FOR MODEL 2 – AA APPOINTS ONLY	AA APPOINTS GC ONLY Accepted
		Clause 5.1 (c)	Editorial	AA shall be primarily responsible	AA shall be primarily responsible Accepted
		Clause 5.1 (d)	Editorial	AA shall examine documents	AA shall examine documents Accepted
		Clause 5.1 (e)	Editorial	AA shall clearly define the	AA shall clearly define the Accepted
		Clause 5.1 (j)	Editorial	Shall give prompt	Shall give prompt Accepted
		Clause 7.1 Note	additional qualification and /or experience for GC based on the site.....	Modifications suggested are shown in RED Accepted
		Page 12 Table 1	Editorial	(4) Team Leader of Geotechnical Investigation agency	(4) Team Leader of Geotechnical Investigation Agency Accepted
		Page 12 Table 1	Editorial	(4) Team Leader of Geotechnical Investigation agency	(4) Team Leader of Geotechnical Investigation Agency Accepted