SRI VENKATESWARA COLLEGE OF ENGINEERING

(*an Autonomous Institution affiliated to Anna University, Chennai*)

Pennalur, Sriperumbudur Tk - 602117

Department of Civil Engineering

Report of the Webinar on "Pile Design and construction practice for Metro Projects"

Date : 16th April 2021, Friday

Time : 10:00 A.M – 11.00 A.M

Mode : Online through Google Meet

Meeting Link : https://meet.google.com/zzd-stpz-gxd

Speaker

Dr.B.P.Naveen

Associate Professor & Head

Amity University, Haryana

Convener & Organizing Secretary

Dr.K.Kumutha

Professor & Head / Civil

Sri Venkateswara College of Engineering, Sriperumbudur

Coordinator

Mr.S.Hariswaran

Assistant Professor / Civil

Sri Venkateswara College of Engineering, Sriperumbudur

Target Audience : UG Students, PG Students & Faculty Members

Number of Participants Benefited : **67**

UG Students : 53

PG Students : 04

Faculty Members : 09

Industrial Persons : 01

BROCHURE

SRI VENKATESWARA COLLEGE OF ENGINEERING

An Autonomous Institution – Affiliated to Anna University
Pennalur, Sriperumbudur Tk. – 602117, Tamil Nadu

DEPARTMENT OF CIVIL ENGINEERING

cordially invites you for a

Webinar

on

"Pile Design and Construction Practice for Metro Projects"

Date: 16th April 2021, Time: 10.00 am to 11.00 am

Dr.B.P.Naveen
Associate Professor & Head
Department of Civil Engineering
Amity University, Haryana

Registration link : https://forms.gle/XfZmdcGVRhnLc8nW9

Faculty Coordinator
Mr.S.Hariswaran
Assistant Professor / Civil

Convenor & Organising Secretary
Dr.R.Kumutha
Professor & Head / Civil

SPEAKER PROFILE

Dr. B.P.Naveen is currently working as a Head & Associate Professor in the Department of Civil Engineering at Amity University, Haryana. He completed his B.E (Civil Engineering) from University Visvesvaraya College of Engineering (UVCE), Bangalore., M.Tech (Geotechnical Engineering) from National Institute of Technology Karnataka, Surathkal, M.S (Geotechnical Engineering), Ph.D. & Postdoctoral(Geotechnical Engineering) from Indian Institute of Science, Bangalore.

Dynamic, committed, and results-driven professional, with over 15years of diverse and progressive experience in the field of Geotechnical Engineering, Geo-Environmental Engineering, Metro works, Waste Management, and Ground Improvement. His work has been recognized by Aqua Foundation's Academic Excellence Award for Solid Waste Management in 2016 and the Oasys Project of the year -2016. He was also a recipient of the ISSMGE Foundation Award, Centre for International Co-operation in Science (CICS), Young Researcher and Scholar Icon-2017 Award, Young Educator, and Scholar Award-2017 & 2018, IEI Young Engineers Award, Professional Excellence Award, Sir M Visvesvaraya Award and recipient of many other awards. He also reviewed papers for many International Journals and Conferences. He also has many articles in local newspapers & websites on topics useful for societies.

He is the Chief Editor of one international Journal in his area of research. He has also collaborated on research with different groups and research centers during his academic career. He has overseas working experience having worked in Kenya, Japan, USA.

BRIEF REPORT ON WEBINAR

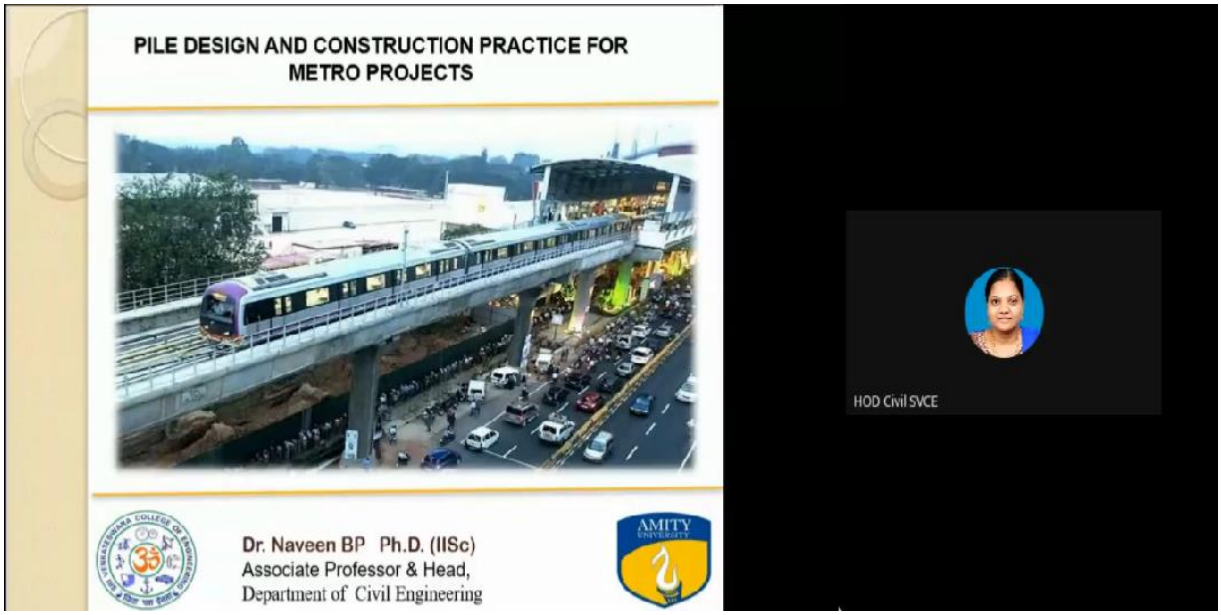
The webinar started with a welcome note by **Dr.R.Kumutha**, Professor & Head, Department of Civil Engineering, SVCE and the introduction of the speaker to the Participants by **Mr.S.Hariswaran**, Assistant Professor, Department of Civil Engineering, SVCE. **Dr.B.P.Naveen** outlined the basic concepts of Metro project construction. He described about the different components of Metro projects and procedure of site investigation. He highlighted the importance of site investigation for bridge and the components to be considered while designing pile foundation. He explained the different methods of soil investigations in detail with pictorial presentation. He outlined the different design codes related to pile design and soil investigations. **Dr.B.P.Naveen** shared the case study to make the participants to understand the field test procedure in the better way.

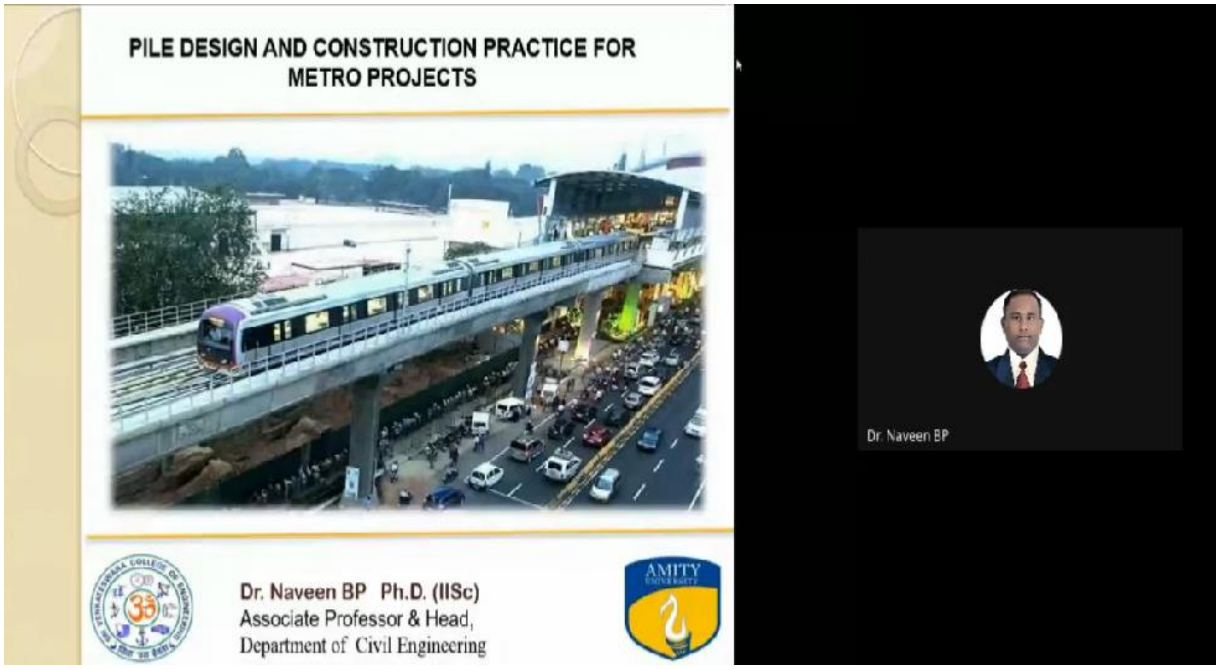
The following queries were raised by participants and which were answered by **Dr.B.P.Naveen**

1. How to investigate black cotton soil?
2. Up to which depth we have to investigate for bridge pier?
3. Which method of investigation will be economical?
4. How to decide the route for metro stations?
5. Weather earthquake load considered while designing the bridge pier for metro projects?

The Session ended with a vote of thanks delivered by **Mr.S.Hariswaran**, Assistant Professor / Civil Engineering. The participants appreciated the webinar through their feedback.

SNAPSHOTS OF THE WEBINAR

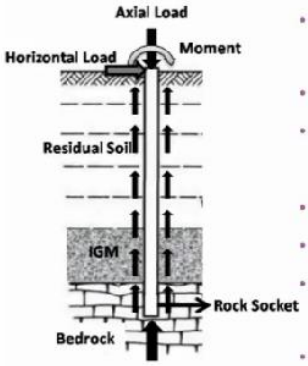




Presentation Outlines

1. Introduction
2. Construction practices
3. Field Testing and Numerical Simulation
4. Case Studies

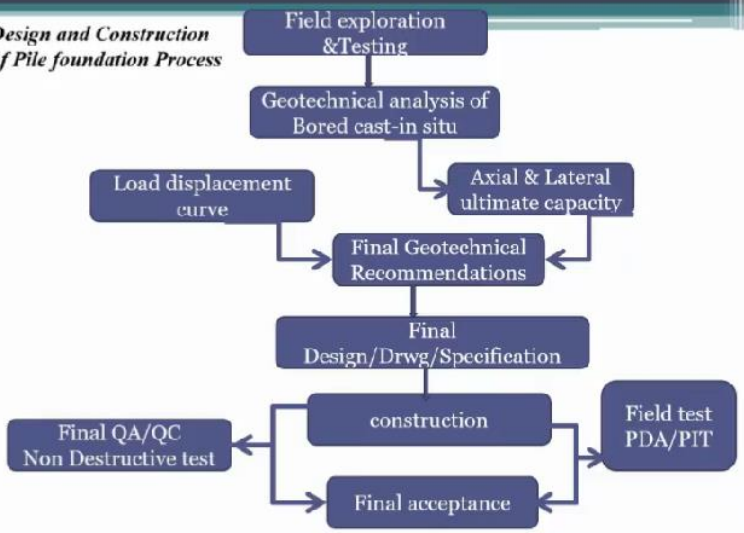
Issues in Large Diameter Piles Foundations in Residual Soils



- Identifying the transition between the sub-strata layers. Sometimes IGM can be mistaken for bedrock.
- At what depth should the pile be terminated?
- How large should the diameter of the pile be?
  India:1.6m Abroad: Upto 4-4.7 m
- Should one socket in IGM or rock?
- How deep should the socket should be?
- Testing techniques developed, proven for small dia piles only
- Predicting Load-Displacement relationships
- Know-how on grouting to improve load bearing capacity.

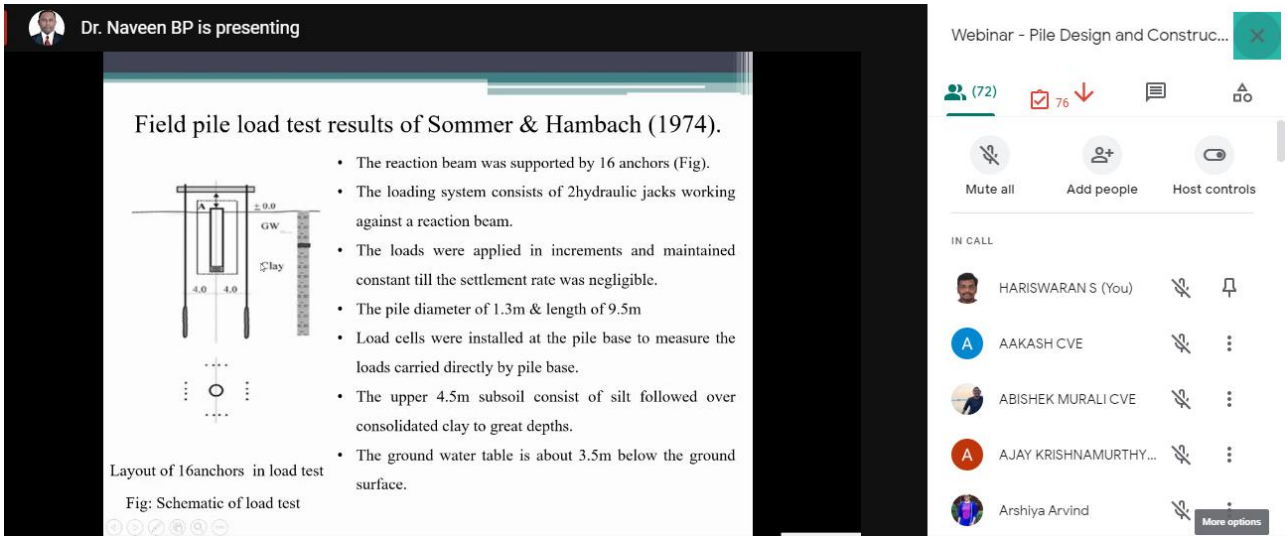
*Intermediate geometrical(IGM)

Design and Construction of Pile foundation Process




ROUND SHANK CHISEL CORE BARREL
WITH CORE CATCHER
CORE
CORE CATCHER
CORE BARRE
Pile Toe-Rock Contact Verification by Contact Coring
Dr. Naveen BP


Mumbai Monorail
Method At Monorail Project-Mumbai
L&T Sites
Dr. Naveen BP


Dr. Naveen BP is presenting
Field pile load test results of Sommer & Hambach (1974).
The reaction beam was supported by 16 anchors (Fig).
The loading system consists of 2hydraulic jacks working against a reaction beam.
The loads were applied in increments and maintained constant till the settlement rate was negligible.
The pile diameter of 1.3m & length of 9.5m
Load cells were installed at the pile base to measure the loads carried directly by pile base.
The upper 4.5m subsoil consist of silt followed over consolidated clay to great depths.
The ground water table is about 3.5m below the ground surface.
GW
Clay
4.0
4.0
Layout of 16anchors in load test
Fig: Schematic of load test
Webinar - Pile Design and Construc...
(72)
76
Mute all
Add people
Host controls
IN CALL
HARISWARAN S (You)
AAKASH CVE
ABISHEK MURALI CVE
AJAY KRISHNAMURTHY...
Arshiya Arvind
More options

LIST OF PARTICIPANTS

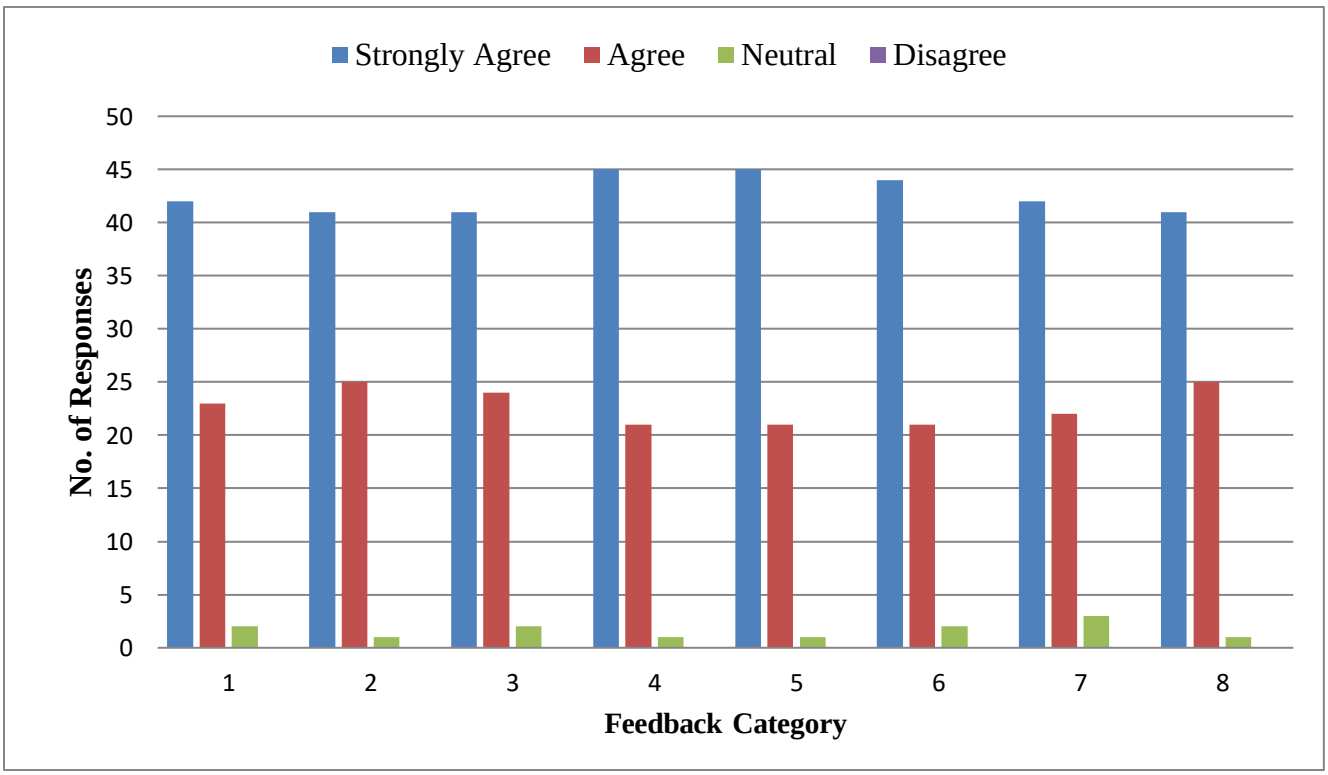
Sl No.	Name of the Participant	Name of the Institution / Industry	Location	Category
1	DIRAVIA BALAN S	Sri Venkateswara College of Engineering	Sriperumbudur	Faculty
2	RANJITHKUMAR M	Park College of Technology	Coimbatore	Faculty
3	KALAIVANNAN R	Sri Venkateswara College of Engineering	Sriperumbudur	Faculty
4	RAMESH BABU SHANMUGAM	Sri Venkateswara College of Engineering	Sriperumbudur	Faculty
5	NIKHAR PANDYA	B & B Institute of Technology	V V Nagar	Faculty
6	M.JENANI	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
7	SAMUEL JAMES	Hindustan Institute of Technology & Science	Chennai	Faculty
8	HEMALATHA R	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
9	LALEETH KUMAR D	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
10	NITIN KUMAR SAMAIYA	Jaypee University of Engineering and Technology, Guna	Guna	Faculty
11	MUNIRAJ M	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
12	ABIRAMI R	Aarupdai Veedu Institute of Technology	Chennai	Faculty
13	HARIBABU S	Panimalar Engineering College	Chennai	Faculty
14	VIKASH M	Chadalawada Venkata Subbaiah College of Engineering	Tirupathi	PG Student
15	PRAVEEN KUMAR V	Panimalar Engineering College	Chennai	UG Student
16	KAVINSELVA P	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
17	VENGADESH V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
18	BRITHISHA S	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
19	AKRIITHA K	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
20	SRIRAM L	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
21	R.HUMSA VARDHANA	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
22	ARCHANA GIRISH TANAWADE	Vishwakarma Institute of Information Technology,Pune	Pune , Maharashtra , India	Faculty

23	G.HARSHAVARTHANI	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
24	S.GOWTHAM	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
25	BHARANIDHARAN. B	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
26	GOGULA CHEZHIYAN.N	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
27	M.SOUNDHARYA	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
28	MD SUJAAT SHOUKAT	Birla Institute of Technology, Mesra	Patna	UG Student
29	PRABHAKARAN V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
30	ARVIND K	Cookscape Home Interior	Chennai	Industry Personnel
31	SIDDHARTH J U	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
32	RUBY FREYA	Sri Venkateswara College of Engineering	Sriperumbudur	Faculty
33	HARIHARAN.V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
34	B.SAKTHI RAGAVAN	Vellore Institute of Technology	Vellore	PG Student
35	HEMALATHA VEERASAMY	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
36	A.VIGNESH	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
37	A.JENISHA	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
38	THIYAGESH.L	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
39	MR.A.SATHESH KANNA	Sri Angalamman College Of Engineering And Technology	Trichy	Faculty
40	MR. KISHALAY RAJ	Birla Institute of Technology, Mesra	Ranchi Jharkhand	UG Student
41	SENTHAZHAL T P	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
42	KARTHICK S	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
43	MONISHA. Y	Panimalar Engineering College	Chennai	UG Student
44	NAVANEETHA K	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
45	GOPINATH A V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
46	G.SIVANI	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student

47	RAJASEKARAN E	Valivalam Desikar Polytechnic College	Nagapattinam	Faculty
48	MUHAMMED ASHARUDHEEN . M	Jawaharlal College of Engineering and Technology	Palakkad.Kerala	PG Student
49	RAMANAN.B.B	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
50	HAQSALIN MECANO.K	Jeppiaar Engineering College	Chennai	UG Student
51	KEERTHI VAASAN R	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
52	AAYSHA FATHIMA M Y	Jeppiaar Engineering College	Chennai	UG Student
53	BHARATH VAZHVARASAN T	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
54	RAJARAJAN V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
55	SANJEEV KUMAR SINGH	Faculty of Engineering and Technology, University of Lucknow	Lucknow	UG Student
56	ARSHIYA AS	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
57	G.SARAVANAPANDI	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
58	COUMARAN C	Government Polytechnic College for Women's	Lawspet	Faculty
59	TILAQ ROHITH T M	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
60	NAVEEN S	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
61	PRE ENGINEERED BUILDINGS	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
62	J.HARITHA	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
63	RAAGHUL R	Jeppiaar Engineering College	Chennai	UG Student
64	ROHIT V	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
65	KIRAN KUMAR PON	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student
66	A D THIRUMAL VIJAI	Misrimal Navajee Munoth Jain Engineering College	Thoraipakkam	Faculty
67	LOGESHWARI R	Sri Venkateswara College of Engineering	Sriperumbudur	UG Student

SUMMARY OF FEEDBACK

Total Number of Participants = 67					
Feedback Statement		**Strongly Agree**	**Agree**	**Neutral**	**Disagree**
1	**The session delivered the information I expected to receive.**	42	23	02	00
2	**The subject matter was presented effectively.**	41	25	01	00
3	**The pace and duration of the webinar was satisfactory.**	41	24	02	00
4	**The resource person is knowledgeable.**	45	21	01	00
5	**The resource person presented the information in a clear and logical manner.**	45	21	01	00
6	**Sufficient time was given for interaction.**	44	21	02	00
7	**The webinar was well organized.**	42	22	03	00
8	**As a result of this webinar, I gained new knowledge.**	41	25	01	00



Additional Comments / Feedback from Participants

- Very Informative session
- Session was good and explained with neat sketches
- Excellent and informative Presentation
- I was so helpful in knowing about piles and also about metro construction
- It's very useful to our core and to gain more knowledge
- Informative Session. Expecting good session like this in future

SAMPLE PARTICIPATION CERTIFICATE

SRI VENKATESWARA COLLEGE OF ENGINEERING

(an Autonomous Institution affiliated to Anna University, Chennai)

Sriperumbudur - 602117

DEPARTMENT OF CIVIL ENGINEERING

IGBC

Certificate of Participation

This is to Certify that

Mr.R.KALAIVANNAN

has participated in the Webinar on **"Pile Design and Construction Practice for Metro Projects"**, delivered by **Dr.B.P.Naveen**, Associate Professor & Head, Department of Civil Engineering, Amity University, Haryana, India held on **16th April 2021**.

Coordinator
Mr.S.Hariswaran
Assistant Professor / Civil

Convener and Organising Secretary
Dr.R.Kumutha
Professor & Head / Civil

Prepared By

Mr.S.Hariswaran

(AP / Civil)

Coordinator

Approved By

Dr.R.Kumutha

(Prof. & Head / Civil)

Organizing Secretary & Convener