



Sapthagiri College of Engineering

(Affiliated to Visvesvaraya Technological University, Belagavi & Approved by AICTE, New Delhi)

#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057

Phone: 080-28372800/1/2

www.sapthagiri.edu.in

Fax: 080-28372797

Date: 21/11/2017

To,
The Principal,
Sapthagiri College of Engineering
Bangalore-560057

Sub- Sanction of Research grant for the research project "Analysis and Design of Multistoried Parking Building Proposed at Jalahalli Cross"

In pursuance of the proceedings of the research committee and approval of the Principal through his letter dated 06/11/2017, the management in its meeting has decided to sanction the research grant. The management is pleased to sanction Rs.2,80,000/- (**Rupees two lakhs eighty thousand only**) for the Civil Engineering department for carrying out the project, "Analysis and Design of Multistoried Parking Building Proposed at Jalahalli Cross", by Prof. Pramod K R as per the recommendation of RDECI.

The Principal is directed to facilitate the sanction of the amount and follow all the necessary procedure of the accounts and submit the utilization certificate after securing the same from the researcher.


Executive Director
Sri G.D. MANOJ
Executive Director
Sapthagiri College of Engineering
BENGALURU - 560 057.


Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057



Sapthagiri College of Engineering

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#14/5, Chikkasandra, Hesaraghatta Main Road, Bengaluru - 560057
Phone: 080-28372800/1/2 www.sapthagiri.edu.in Fax: 080-28372797

Date: 06/11/2017

To,
The Executive Director,
Sapthagiri College of Engineering
Bangalore-57

From,
The Principal,
Sapthagiri College of Engineering
Bangalore-57

Sub- Requisition for research grant for the research project.

With reference to the above subject, I hereby inform you that RDECI has approved the research project project "Analysis and Design of Multistoried Parking Building Proposed at Jalahalli Cross" submitted by Prof. Pramod K R of Civil Engineering department after scrutinizing the research proposal.

Therefore, it is requested that an amount of Rs.2,80,000 (**Rupees two lakhs eighty thousand only**) may please be sanctioned for carrying out the above said research project.

Thanking you,


Principal
Sapthagiri College of Engineering
#14/5, Chikkasandra, Hesaraghatta Main Road
Bangaluru - 560 057


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
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Phone: 080-28372800/1/2

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Fax: 080-28372797

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Date: 22/11/2017

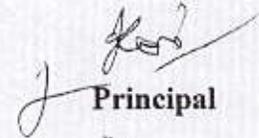
To,
The Convener,
R&D, Entrepreneurship Committee & Incubation Center (RDECI),
Sapthagiri College of Engineering
Bangalore-560057

Sub- Sanction of Research grant for the research project "Analysis and Design of Multistoried Parking Building Proposed at Jalahalli Cross"

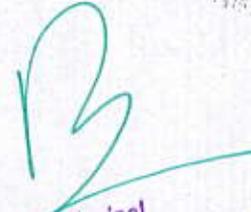
The management of Sapthagiri college of engineering has sanctioned the Research grant of Rs.2,80,000 (**Rupees two lakh eighty thousand only**) for the research project "Analysis and Design of Multistoried Parking Building Proposed at Jalahalli Cross" to be carried out by the department of Civil Engineering.

Copy To,

All Departments


Principal

Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bangalore - 560 057


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bangalore - 560 057

Date:2/10/2017

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To,

The Principal
Sapthagiri College of Engineering
Bangalore-560057

Through HOD & RDECI

From

Pramod K R
Department of Civil Engineering
Sapthagiri College of Engineering
Bangalore-560057

Respected Sir,

Subject: Requisition for the financial assistance for research project

With respect to above subject, I request your kind self to provide financial assistance to carry out the project entitled "ANALYSIS AND DESIGN SOF MULTY STOREYD PARKING BUILDING". The research proposal and budget split up has enclosed along with this letter. Kindly consider the requisition and do the need full.

Thanking you

yours sincerely

RDECI



(PRAMOD K.R)

*Forwarded to principal
@ for T.L
HOD, Dept. of Civil
S.C.E, Bangalore-560057*

Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

*enclosure
- All letters
- Tax Invoice*

+ Kai
Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

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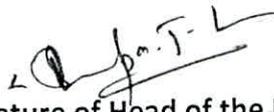
RESEARCH PROPOSAL

A. GENERAL INFORMATION

1	About the project	
A	Title of the project	: ANALYSIS AND DESIGN SOF MULTY STOREYD PARKING BUILDING
B	Subject area as per instruction	: Structural engineering
2	Details of Principal Investigator	
A	Name	: Pramod K R
B	Qualification	: B.E,M.Tech, (Ph.D)
C	Designation	: Assistant Professor
D	Department	: Civil
E	Years of teaching/research experience	: 8
F	Email ID	: pramodkr@sapthagiri.edu.in
G	Cell Number	: 7829470474
H	Details of the Head of the Department	
I	Name of the Head of the Department	Mss. Suvarna P
J	Email ID	: hodcivil@sapthagiri.edu.in
K	Cell Number	: 9035885409



Signature of the Investigator



Signature of Head of the Department



Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

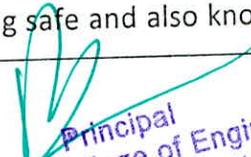


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057



B. DETAILS OF THE PROJECT PROPOSAL

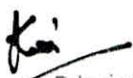
1.	Title of the Project Proposal	:	ANALYSIS AND DESIGN SOF MULTY STOREYD PARKING BUILDING
3.	Objectives of the proposal (Not more than six points)	:	<ol style="list-style-type: none">1. To propose a multi storeyed building near Jalahalli cross. As space, congestion on streets may arise. To overcome this problem we are suggesting to provide the parking complex.2.To reduce the parking area by providing multi-storeyed parking building. multi-storey car parks are located where land costs are so high, e.g. in or about the central areas of large towns, that it is more economical to build vertical facilities rather than purchase additional land for surface parking.3.To provide the safety and secured environment for the parked vehicles. The facility will provide a suitable parking environment for citizens and visitors to the commercial area.4. To reduce the traffic congestion.
4.	Background of the project	:	<p>Now-a-day there is an increase in the number of vehicles on road. It is very easy to park vehicle on road or when vehicle are moving. But, when the vehicle stops, we cannot leave vehicle on road or unsafe place. For proper storage of vehicle when not in use "parking space" is needed. When the person has to stop on route for some purpose other than traffic related, the vehicle needs some halting facility, without disturbing traffic flow otherwise on the street. Such a facility is called parking. Due to increase in population there is increase in vehicle demand and we require more parking space thus in control by constructing multi-storeyed parking building. Parking building is used for safe-guarding the user vehicle. Successful parking structures meet the user demands. It includes feeling safe and also knowing that their</p>


Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

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		vehicles are in a secure environment. Where parking area is unplanned, there is a need to make an improvement in the parking area by constructing multi-storeyed parking building. Parking structures has been an important element in today's urban and suburban environments. Multi-storey parking will help in larger capacity parking. The parking floors, the ramp, the entrance and the exits should be well lighted by using solar panels.
5.	Methodology (Please include flow sheet, if required)	: 1. Investigate the area where parking congestion is high, study of SBC of the soil Planning for multi storey parking. 2. analysis and design of multi storey parking building using ETABS-2016 3. Estimation and costing of building.
6.	Milestones with time schedule & work plan	: Project started in Jan 2018 and ended in July 10, 2018
8.	List of equipment required for Phase-I & Phase-II for Project Implementation (as per the instruction Sl.No.27 under Annexure-II)	: ETABS -2016 Software Rs.2,80,000 apprx
9.	Relevance, importance & application of the project	: Reducing traffic by proving parking building at Jalahalli cross, Bengaluru.
10.	Novelty/Uniqueness of the project proposal	: Multi storey parking building.


(PRAMOD K.R.)


Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057


Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057


HOD, Dept. of Civil Engg
S.C.F, Bangalore-560 057

From,

Research and Development cell,
Sapthagiri College of Engineering
Bangalore-560057

Through: HOD

To,

Principal investigator
Sapthagiri College of Engineering
Bangalore-560057

Subject: Sanction of research grants Reg.,

The committee hereby informed that following projects have been approved for the academic year. The report and the outcome of the project as to be submitted to the committee after the completion of the project. The utilization certificate shall be given along with the final report.

Sl. No	Principal Investigator	Department	Project entitled	Amount Sanctioned
1	Pramod K R	Civil	Analysis And Design of Multi Storey Parking Building	2,80,000/-

Convener *Kari*

Copy To,

Principal

All Departments

IQAC

*Letter Received
on 28/11/17*

(PRAMOD K.R.)

Kari
Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bangaluru - 560 057

Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bangaluru - 560 057

Date : 12/02/2018

To,

Principal,
Sapthagiri College of Engineering
Bangalore-560057

Through HOD

From,

Pramod K R
Department of Civil engineering,
Sapthagiri College of Engineering
Bangalore-560057

Through HOD

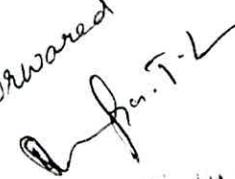
Sub: Procurement of Instruments Reg.,

With reference to the letter received from R& D committee regarding approval of research project, we are here by requesting the procurement of the following equipment's/Instruments for the research project entitled "Analysis And Design of Multi Storey Parking Building" to carry out. Kindly considered and do the need full.

Thanking you,

Yours Faithfully,


(PRAMOD K.R.)

Forwarded

HOD, Dept. of Civil Engg
S.C.E, Bangalore-560 057


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

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Date: 17/07/2018

To,

R and D
Sapthagiri College of Engineering
Bangalore-560057

Through HOD

From

Pramod K R,
Department of Civil engineering
Sapthagiri College of Engineering
Bangalore-560057

Sub: Submission of report and utilization details

With reference above cited subjected I am hereby enclosing project report entitled "Analysis and Design of Multi Storey Parking Building" and utilization certificate. This for your kind information, please.

Sl No	Particulars	Quantity	Amount	Remarks
1	ETABS Software	1	277300/-	Software purchased

Thanking You,

Copy,

Principal


HOD, Dept. of Civil Engg.
S.C.E, Bangalore-560 057


(PRAMOD K.R.)


Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bangaluru - 560 057


Principal
Sapthagiri College of Engineering
14/6, Chikkasandra, Hesaraghatta Main Road
Bangaluru - 560 057

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TAX INVOICE

Sree Technologies # 479, 3rd 'A' Cross, 2nd Block, 3rd Phase, Banashankari 3rd Stage, Bangalore - 560 085 Email: info@sreetechnologies.com Phone No: 98456 99108 GSTIN-29CGPPS8926J1ZA	Invoice No: 033 Date: 16-03-2018 Mode/Terms of Payment: 100% Against Delivery Other Ref: Buyer Order No: 5445(2):2018 Ref Date: 03-03-2018 Despatched Through: By Hand Destination: Bangalore
Buyer, Saphthagiri College Of Engineering 14/5, Hesaraghatta Main Road, Chikkasandra Bengaluru, Karnataka 560057	Terms of Delivery 2-3 Weeks

Sl No	Description	Qty	Unit Price	Total Price
			Rs	Rs
1	ETABS Ultimate v-2016 user license for Education/Research (10 users)	1	235000.00	235000.00
Total				235000.00
			CGST @ 9% on item	21150.00
			SGST @ 9% on item	21150.00
Grand Total				2,77,300
				E. & O.E.

Amount chargeable in words
 Indian Rupees Two Lakh SeventySeven Thousand Three Hundred Only



Principal
 Saphthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road,
 Bengaluru - 560 057

Principal
 Saphthagiri College of Engineering
 Chikkasandra, Hesaraghatta Road,
 Bangalore-560 057

For Sree Technologies

Authorised Signatory

Declaration:
 We declare that this invoice shows the actual price of the goods described and the particulars are true & correct.

Principal
 Saphthagiri College of Engineering
 14/5, Chikkasandra, Hesaraghatta Main Road
 Bengaluru - 560 057

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI-590018 KARNATAKA



PROJECT ON
“ ANALYSIS AND DESIGN OF MULTI STOREYED PARKING
BUILDING”

Submitted in partial fulfillment of the requirements for the award of

BACHELORE OF ENGINEERING
IN
CIVIL ENGINEERING

Submitted by

GAJENDRA D R
(USN: 1SG15CV404)

PAWAN R
(USN: 1SG15CV413)

PRAVEENKUMAR M B
(USN: 1SG15CV414)

VENKATESH K
(USN: 1SG15CV419)

Under the Guidance of
Mr. PRAMOD K R.

Assistant Professor
Dept. of Civil Engineering
Sce, Bangalore



Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road,
Bangalore-560 057

DEPARTMENT OF CIVIL ENGINEERING
SAPTHAGIRI COLLEGE OF ENGINEERING
BANGALORE-560057

2017-2018

SAPTHAGIRI COLLEGE OF ENGINEERING

(Recognized by Govt. of Karnataka, Affiliated to VTU, Belagavi and Approved by AICTE, New Delhi)

BANGALORE-560057 Karnataka

2017-2018

DEPARTMENT OF CIVIL ENGINEERING

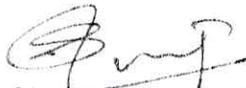


CERTIFICATE

This is to certify that the project work entitled "ANALYSIS AND DESIGN OF MULTI-STOREYED PARKING BUILDING" is carried out by Mr. PAWAN R, Mr. PRAVEENKUMAR M B, Mr. GAJENDRA D R and Mr. VENKATESH K a bonafide student of Sapthagiri college of Engineering in partial fulfillment for the award of **Bachelor of Engineering** of the Visvesvaraya Technological University, Belagavi during the year **2017-2018**. It is certified that all corrections and suggestions indicated for internal assessment have been incorporated in the report deposited in the department. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.



Signature of the Guide
Mr. PRAMOD.K.R
Assistant Professor
Dept. of Civil Engineering
SCE, Bangalore



Signature of the HOD
Mrs. SUVARNA.P
Professor & Head
Dept. of Civil Engineering
SCE, Bangalore

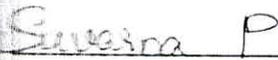


Signature of the Principal
Dr. K.L. SHIVABASAPPA
Principal
SCE, Bangalore

External Viva Voice:



Signature of the Examiners:

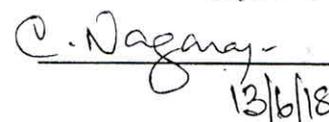




Principal
Sapthagiri College of Engineering
Chikkasandra, Hesaraghatta Road
Bangalore-560 057

Signature with Date:





UTILIZATION CERTIFICATE

SI No	Particulars	Quantity	Amount
1	ETABS software	1	2,77,300
		Total	2,77,300

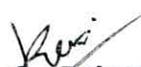
Certified that Sapthagiri college of Engineering has provided partial financial support of **RS 2,77,300/-** (Two lakh seventy seven thousand three hundred only) towards Analysis And Design Of Multi-storeyed Parking Building Proposed At Jalahalli Cross project conducted by Civil Department of Sapthagiri college of Engineering.

Certified that I have satisfied myself that condition on which the grant in aid sanctioned has been duly fulfilled and that I have excised the following check to see that the money was actually utilized for the purpose for which it was sanctioned.

Kinds of check exercised

1. Bills

Signature of the Principal with seal


Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

Signature of Auditor with seal




Principal
Sapthagiri College of Engineering
14/5, Chikkasandra, Hesaraghatta Main Road
Bengaluru - 560 057

Creating Tomorrow