ਮਹਾਰਾਜਾ ਰਣਜੀਤ ਸਿੰਘ ਪੰਜਾਬ ਟੈਕਨੀਕਲ ਯੂਨੀਵਰਸਿਟੀ, ਬਠਿੰਡਾ

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

(A State Univ. Estd. by Govt. of Punjab vide Punjab Act No. 5 of 2015 and Approved u/s 2(f) & 12 (B) of UGC; Member AIU)

Bathinda-151001 (Punjab), India

REPORT

GREEN CHARTER/ENERGY AUDIT/ ENVIRONMENT AUDIT/GREEN AUDIT/GREEN CAMPUS INITIATIVE

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY
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2021

INTERNAL QUALITY ASSURANCE CELL

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

BATHINDA 151001

Green Charter/Energy Audit/ Environment Audit/Green Audit/Green Campus Initiative

Prepared by

- Dr. Ripudaman Singh, GZS SAP, MRSPTU, Bathinda
- Dr. Ved Prakash, Department of Electrical Engg., GZSCCET, MRSPTU, Bathinda
- Dr. Meenu, Department of Chemistry, MRSPTU, Bathinda
- Ar. Amandeep Kaur Khiva, GZS SAP, MRSPTU, Bathinda
- Er. Rupinder Singh, Estate, MRSPTU, Bathinda

Inputs by

- Dr. Ashish Baldi, Director, IQAC

Version 1

Year 2021

INTERNAL QUALITY ASSURANCE CELL

Green Charter

The rapid environmental degradation at local, regional and global level is leading us to global "Environmental poverty". Stabilization of human population, adoption of environmentally sound and sustainable technologies, reforestation and ecological restoration are crucial elements in creating an equitable and sustainable future for all humans in harmony with nature and natural resources.

Maharaja Ranjit Singh Punjab Technical University, Bathinda subscribes to the fact that humans should be stewards of Mother Nature and that we all have a profound responsibility to protect the earth's resources in perpetuity. Being a premier institution of higher learning, MRSPTU is aware of its responsibilities towards environmental issues and therefore has resolved to play a major role in the education, research, policy formation and information exchange necessary for a sustained environmental campaign. The Green Charter of Maharaja Ranjit Singh Punjab Technical University, Bathinda aims for a synergy with nature, within the constraints. Through education, research and extension services, the University shall promote the principles and practices for sustainable development, especially the 6R's (Reduce, Reuse, Recycle, Refuse, Rethink and Respect).

The University shall envisage addressing the Global concerns by university level initiatives and action plan through the creation of a knowledge society which is sensitized towards green initiatives, thereby striving for environmental education and conservation.

In all important spheres of activity – Academics, Research, Administrative, Co-curricular and extra- curricular, the community shall work together around the green initiatives planned by the University. The University shall issue specific Green guidelines of Do's and Don'ts for each stakeholder. Use of plastic and other polluting substances would be discouraged and that of Green and sustainable products would be highly encouraged. The vehicular movement shall be restricted to the peripheral zones of the university and use of cycles, e-rickshaws, e-bikes shall be promoted. Electric charging station shall be established to promote green vehicles. Pedestrian walk ability comfort shall be enhanced through shaded pathways, well maintained footpaths, well lit pathways, creation of tabletop walkways for smooth crossingsetc.

A culture of segregation and recycling of waste would be encouraged. A paper recycling unit and facility for producing value added products shall be installed for making use of the waste papers including expired answer scripts with the help of some external agency. University shall make all efforts to popularize ethnic foods and beverages and discourage the junk ones.

An outlet selling ethnic drinks including buttermilk, fresh juice, lime juice, sugarcane juice etc. would be opened in the campus in association with an organic food supplier/agriculturist.

To combat the menace of bottled water, water purifiers would be placed in all buildings or floors based on population density and accessibility. Foreign varieties of plants/ trees in the Campus shall be gradually replaced with a variety of trees aimed at preserving and enhancing the biodiversity of the Campus. Uniform dust bins with Green Messages shall be placed in every nook and corner support form sponsors.

E-governance drive shall be initiated to reduce the use of paper. At the same time, awareness would be created about carbon emission associated with emails, search engines and social networking facilities. All new buildings shall be constructed as Green buildings, which minimize artificial lighting and air- conditioning.

OBJECTIVES:

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The University has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Auditare:

To map the Geographical Location of the University

To document the floral and faunal diversity of the University

To record the meteorological parameters of Bathinda where University issituated

To document the ambient environmental condition of weather, air,water and noise of the University

To document the waste disposal system

To estimate the Energy requirements of the University

To report the expenditure on green initiatives during the last five years

METHODOLOGY:

The purpose of the green audit of MRSPTU Bathinda is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

GENERAL OVERVIEW OF THE CONCEPT OF LAND USE

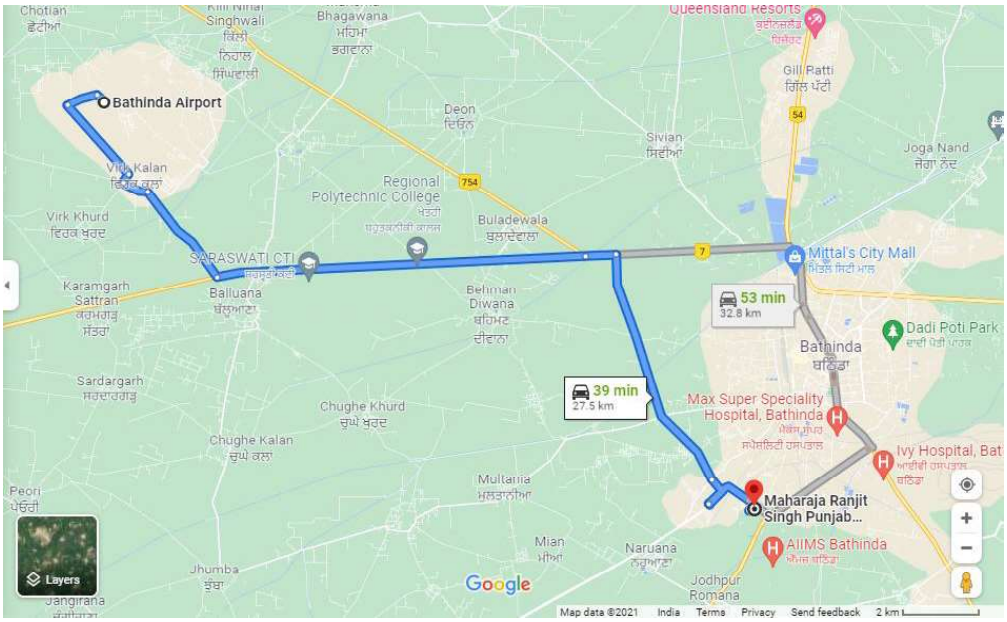
Land use refers to man's activities and the various uses which are carried on and derived from land. Viewing the earth from space, it is now very crucial in man's activities on natural resource. In situations of rapid changes in land use, observations of the Earth from space give the information of human activities and utilization of the landscape.

Remote sensing and GIS techniques are now providing new tools for advanced land use mapping and planning. The collection of remotely sensed data facilitates the synoptic analyses of earth system, functions, patterning, and change in the local, regional as well as at global scales over time. Satellite imagery particularly is a valuable tool for generating land use map.

GEOGRAPHICAL LOCATION WITH CAMPUS MAP

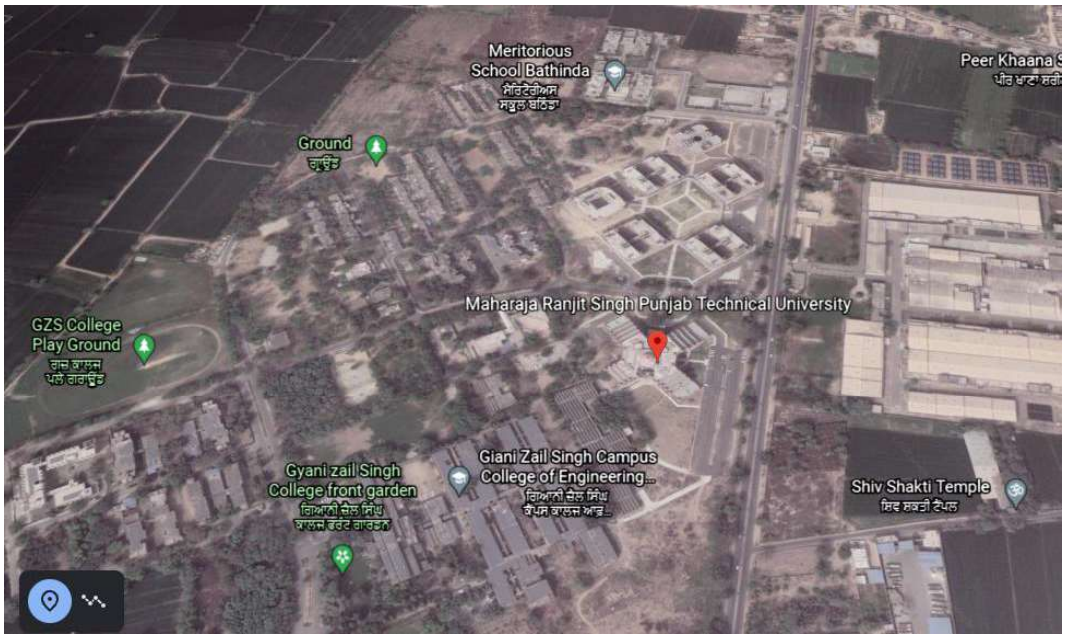
MRSPTU is within the geo-position between latitude 30.1749° N and longitude74.9243° E in Bathinda, Punjab, India. It encompasses an area of about 145 Acres. The University has a sprawling pollution-free campus spread over acres of land on the outskirts of Bathinda. Bathinda has a long and illustrious history. Located in central region known as Malwa in agricultural state of Punjab, Bathinda has been developing on a fast pace since last more than 10 years. The Airport is at Bhisiana, 33 kms from Bathinda city. Representative location map image of university campus is shown in Photo 1& Photo 2. The Google aerial views of College Campus are shown in Photorespectively which are showing different college buildings, sports stadium, hostels and residential areas.

1. Map shows the location of Maharaja Ranjit Singh Punjab Technical University, Bathinda to Bus Stand Bathinda to Railway Station Bathinda to Airport Bathinda.



2. Location of Maharaja Ranjit Singh Punjab Technical University, Bathinda.

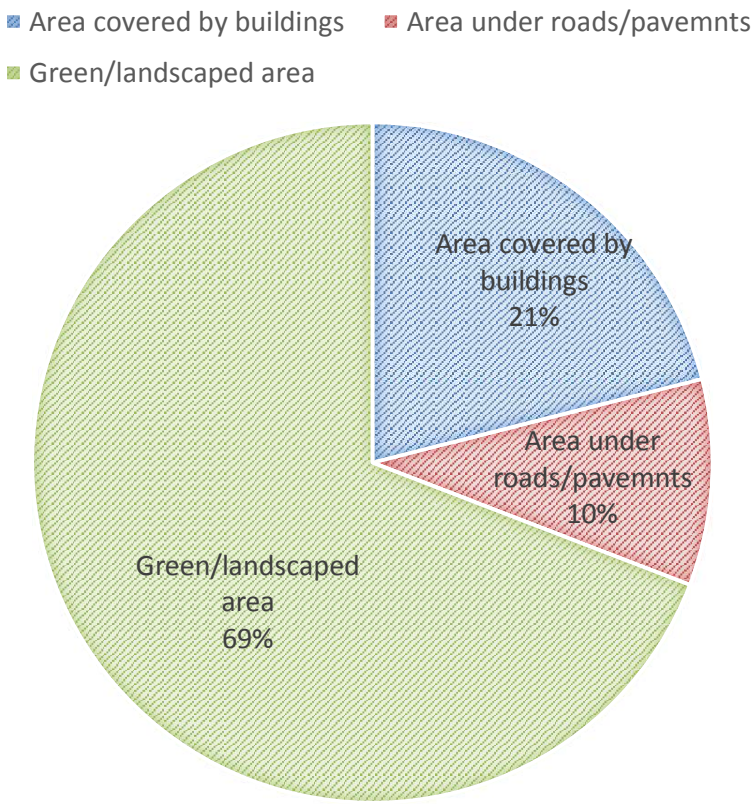
3. Aerial view of Maharaja Ranjit Singh Punjab Technical University, Bathinda.


Meritorious School Bathinda
Ground
Maharaja Ranjit Singh Punjab Technical University
GZS College Play Ground
Gyani zail Singh College front garden
Giani Zail Singh Campus College of Engineering...
Shiv Shakti Temple

LAND USE ANALYSIS:

Parameter	Area (in sq.m.)	% age of Site area
Site Area	**593269**	**100%**
Area covered by buildings	**122244**	**20% (Approx.)**
Area under roads/ pavements	**58318.02**	**10% (Approx.)**
Green/ Landscaped area	**412706.98**	**70% (Approx.)**

Pie Chart:



The total area of MRSPTU Bathinda is 593269 m2 out of which the built up area (including Roads) is 30% (i.e 180562.02 m2) and plantation area is 70% (i.e. 412706.98m2).

LAND USE (BUILT UP AREA) ANALYSIS:

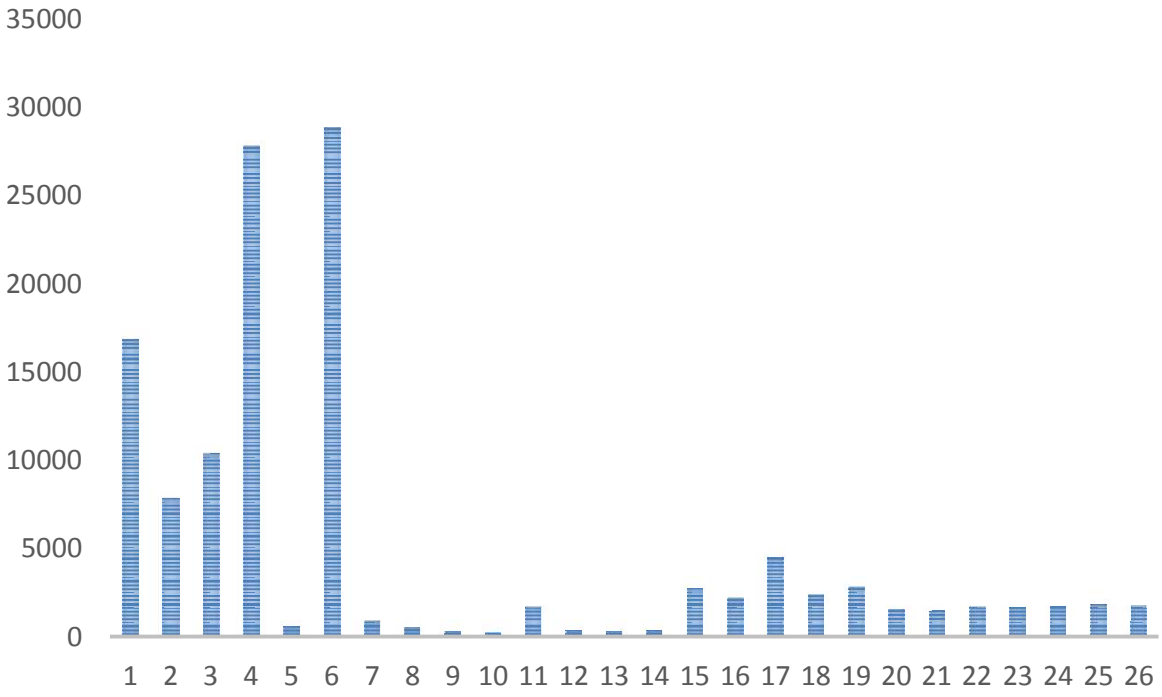
The built up area of 20% (approx.) (i.e 122244m2) consists of the following regions as stated below for land consumption in built up area of MRSPTU, Bathinda:

The Northern and Eastern region of MRSPTU is densely built up having Main Administrative Block: Academic Blocks, GZSCCET Blocks, and Central Workshops. The western region comprises of: Faculty/ Staff colony, Girls Hostels, Sports Stadium and Athletic Tracks. The Southern region has Boys Hostels, Water works area and some sports facilities. The central region has Dispensary, Student Centre cum Open Air Theatre and Shopping complex.

Sr No	Name of Building	Area (m2)
1.	Administrative Block of University Campus	16822.62
2.	Lecture Theatre	7789.92
3.	Library	10313.90
4.	Academic Block	27764.84
5.	VC Residence	551.97
6.	Academic Buildings of GZSCCET	28807.06
7.	P.G Lecture Hall Blocks	879.97
8.	Gymnasium	479.98
9.	Dispensary	262.99
10.	Shoping Complex	193.99
11.	Student Centre	1699.94
12.	Guest House	277.99
13.	Campus Director Residence	255.99
14.	Pump room at water treatment plant	299.99
15.	P-Type Houses	2674.91
16.	AP-Type Houses	2172.93
17.	L-Type Houses	4459.85

18.	C-Type Houses	2340.92
19.	D-Type Houses	2786.91
20.	Boys Hostel No.1	1522.95
21.	Boys Hostel No.2	1406.95
22.	Boys Hostel No.3	1679.94
23.	Boys Hostel No.4	1631.95
24.	Boys Hostel No.5	1649.95
25.	Girls Hostel No. 1	1783.94
26.	Girls Hostel No. 2	1731.94

Table: Area occupied by various buildings at MRSPTU, Bathinda



Bar Chart of area occupied by buildings

FINDINGS:

MRSPTU Bathinda campus, which was established in the year 1989 as Government Engineering College, Bathinda, has an eco-friendly environment. It has a long legacy of healthy environmental practices including periodic plantation, their preservation and maintenance. Its land use is such that about % of the total area is occupied by open land and plantation that generates a better and sustainable campus environment.

TREE DIVERSITY OF MRSPTU, BATHINDA, PUNJAB:

The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programs organized by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many spices of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf – covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. Even individual trees vary their appearance throughout the course of the year as the seasons change. The strength, long lifespan and regal stature of trees give them a monument – like quality. They also remind us the glorious history of our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cut down dust and storms. Thus, the college has been playing a significant role in maintaining the environment of the entire Ludhiana town in its surrounding areas. The following are the tree species with whom we are being attached-

Table: List of tree species

S. No.	Botanical Name	Common Name	Total
1	Dalbergia Sisso	Shisham	150
2	Acacia Nilotica	Kikkar	100
3	Acacia catechu	Khair	10
4	Aegle marmelos	Bael	10
5	Anthocephalus Kadamba	Kadam	05
6	Azadirachta Indica	Neem	100
7	Bauhinia Purpurea	Kachnar	18
8	Callistemon Uimiclis	Bottle Brush	48
9	Cassia Fistula	Amaltas	54
10	Camphora	Alistonia	47
11	Delonix Regia	Gulmohar	20
12	Dendrocalamus Strictus	Bamboo	24
13	Emblica Officinalis	Amla	35
14	Mangigera Indica	Mango	68
15	Ficus Benghalensis	Bohar	8
16	Ficus Religiosa	Pipal	6
17	Morus Alba	Toot	23
18	Saraca Indica	Ashoka	70

Photographs of Trees, Plants (As Annexure)

FAUNAL DIVERSITY IN MRSPTU CAMPUS:

MRSPTU, Bathinda is located in Bathinda District of Punjab. The district derives its name from the district headquarters town of Bathinda, which is of great antiquity. According to Khalifa Muhammad Hassan, author of History of Patiala, its ancient name was Bikramgarh. According to raverty, Bathinda was known as Tabarhindh (Labb-ut-Twarikh). According to Ibn Batuta it was known as Batrind. The earliest mention of Tabarhindh occurs in the "Jami-Ul-Hakayat" written about 607 Hijri or 1211 AD. According to "Ainai-Barar Bans" Bathinda was built by Bhati Rao, son of Bal Band, who became ruler of Punjab in 336 Bikrami Sambat. He also founded Bhatner. It was also called Whatinda and Bitunda which finally become known as Bhatinda. But its name was changed to Bathinda on the authority of Survey of India to conform to the phonetic expression as locally pronounced. In recent times the town was conquered by Maharaja Ala Singh (near about 1754 AD) and since then it followed the history of erstwhile

princely state of Patiala. With the dawn of independence and merger of Patiala and East Punjab States into a division styled at PEPSU, Bathinda become full-fledged district which states has combined even after the merger of PEPSU with erstwhile Punjab State in1956.

It is a part of the Composite climate zone of the country. The highest temperature is recorded 46^0 C just prior to the onset of monsoon (around May- early June). Summer rain is normal, and is principally caused from late July to August by the moisture-laden South-West Monsoon, on striking the Himalayan foothills of the north. The climatic condition of the Bathinda district as a whole and MRSPTU, Bathinda in particular is very suitable for a wide variedly of flora and fauna to support its rich biodiversity. The faunal Diversity of MRSPTU campus has been studied and documented as below:

Table: Common and Scientific names of birds and animals

S.No	Common Name	Scientific Name
1.	Dove	Colum Bidae
2.	Pigeon	Columbidae Livia
3.	Sparrow	Passer Domesticus
4.	Grey Crow	Corvous Tristis
5.	Green Parrot	Psittacula Eupatria
6.	Teetar Bird	Grey Francolin
7.	Cat	Felis Catus
8.	Rabbit	Oryctolagus Cuniculus
9.	Snake	Sarpentes

Photographs of birds and animals (As Annexure)

WEATHER DATA OF BATHINDA:

Station: Bathinda, Punjab (INDIASTATIONS NORTH OF LATITUDE) Location:N 30°12'31", E 74°57'31" The average annual temperature in Bathinda is 25°C and precipitation level is about 518 mm.

The driest month is generally November. There is 5 mm of precipitation in November. The greatest amount of precipitation occurs in July, with an average of 128 mm. With an average of 33.9°C, June is the warmest month. The lowest average temperatures in the year occur in January, when it is around 12.8°C. The precipitation varies 123 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 21.1 °C.

WEATHER DATA MONTH WISE Bathinda (Source: Google)

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	12.8 °C (55.1) °F	16.2 °C (61.1) °F	22 °C (71.5) °F	28.7 °C (83.6) °F	33.1 °C (91.5) °F	33.9 °C (93) °F	31.6 °C (89) °F	30.5 °C (86.9) °F	29.4 °C (85) °F	26.4 °C (79.5) °F	20.5 °C (68.9) °F	14.9 °C (58.9) °F
Min. Temperature °C (°F)	6.9 °C (44.4) °F	9.6 °C (49.3) °F	14.6 °C (58.3) °F	20.4 °C (68.8) °F	25.2 °C (77.3) °F	28 °C (82.3) °F	27.7 °C (81.8) °F	26.9 °C (80.4) °F	24.7 °C (76.4) °F	19.8 °C (67.7) °F	14 °C (57.2) °F	8.5 °C (47.4) °F
Max. Temperature °C (°F)	19.4 °C (66.8) °F	22.9 °C (73.2) °F	29.2 °C (84.5) °F	36.3 °C (97.3) °F	40.2 °C (104.4) °F	39.4 °C (103) °F	35.9 °C (96.6) °F	34.7 °C (94.4) °F	34.6 °C (94.2) °F	33.2 °C (91.8) °F	27.7 °C (81.8) °F	22.1 °C (71.7) °F
Precipitation / Rainfall mm (in)	19 (0.7)	33 (1.3)	25 (1)	20 (0.8)	20 (0.8)	58 (2.3)	128 (5)	121 (4.8)	68 (2.7)	12 (0.5)	5 (0.2)	9 (0.4)
Humidity(%)	67%	60%	48%	30%	28%	42%	64%	69%	61%	47%	51%	60%
Rainy days (d)	2	3	3	3	4	7	12	11	6	2	1	1
avg. Sun hours (hours)	7.9	9.2	10.5	11.5	12.2	12.2	10.6	10.3	10.2	10.2	9.4	8.6

The likes of an alluvial plain are strong characteristics of the city of Bathinda and its surroundings. The city does have a Central location in the plan region. The geographical co-ordinate of Bathinda are N 30°12'31", E 74°57'31".

Bathinda was very much feasible for peanut cultivation with sand dunes. However a lot of irrigation and environmental changes have made the land more viable for wheat cultivation.

The climatic conditions bear a strong resemblance with the other cities in the northern part of India. The summers are usually very hot and the winters are very cold. The summers are prevalent during the months of April to September with June, July, and August till mid-September being the hottest months. The winter is prevalent from the month of November till the month of March. There is onset of Monsoon in September and from mid of September till November one experiences the transitional weather.

AIR QUALITY IN BATHINDA AND MRSPTU:

The ambient air quality data for Bathinda and MRSPTU campus for the last one year shows that there are very less polluted particles in ambient air; AQI for SO2 & NOX parameters are within the range of Indian living standards, there are a number of factors responsible for this cleanliness, calmness and serenity in this area. Firstly, population which is most responsible for all the problems and hurdles in smooth living is lowest here of all the districts of Punjab. Secondly, in this area more trees have been planted as compared to other cities. Furthermore, no air polluting industry is established near here.

Therefore, the ambient air quality of Bathinda Area falls in between moderate to rich quality state. The Punjab Pollution Control Board is pondering over the various possibilities to reduce the air pollution for the improvement of ambient air quality with respect to AQI is concerned. However, the annual average value of PM10, SO2, NOx in the ambient air quality of Bathinda city falls in the range of 50-62 µg/m3, 3- 5 µg/m3, 10-12 µg/m3 for most of the months, as such, the graded response action plan to eradicate the problem

AIR QUALITY DETERMINATION

Satisfactory air quality index (OVERALL=114) in Bathinda, Punjab, India on dated 08-10-2021

Parameter	Result (Range)
NO2	17 µg/m³
SO2	3.9 µg/m³
PM2.5	40.5 µg/m³
PM10	4.3 µg/m³
O3	32 µg/m³
Humidity	19%
Barometric Pressure	1004 mb
Wind Speed	9.9 Km/Hr.

Wind Direction	S-SW
Sun Rise	6:27 AM
Sun Set	6:08 PM
Moonrise	8:15 AM
Moonset	7:35 PM

WATER ANALYSIS REPORT OF MRSPTU, Bathinda:

Water quality testing is important because it identifies contaminants and prevents water- borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.
The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

Drinking water indicators:
The following is a list of indicators often measured by situational category:

- Alkalinity
- Color of water
- pHvalue
- Taste and odor (geosmin, 2-Methylisoborneol (MIB),etc.)
- Dissolved metals and salts (sodium, chloride, potassium, calcium, manganese, magnesium)
- Microorganisms such as fecal coliform bacteria (Escherichia coli), Cryptosporidium, and Giardia lamblia; see Bacteriological water analysis
- Dissolved metals and metalloids (lead, mercury, arsenic,etc.)
- Dissolved organics: colored dissolved organic matter (CDOM), dissolved organic carbon(DOC)
- Heavy metals

Report No.-DWTL/Bti/506/2021

DISTRICT WATER TESTING LABORATORY
(TECH. MISSION)
WATER SUPPLY AND SANITATION DEPTT.PUNJAB

ANALYSIS REPORT FOR PHYSICAL AND CHEMICAL TEST
EXAMINATION OF WATER SAMPLE

PARTICULARS OF SAMPLE

Name of Place	:- **Bathinda**	Whether water chlorination or Not :-	----
Block	:- Bathinda	Date of collection :-	29-06-2021
District	:- Bathinda	Name and designation of person :	Sh.Surjeet Singh
Source of sample	:- Water Sample from Water Works at MRSPTU	collecting sample	Pump Operator
Spring level (mt)/ft	:- ----	Date of receipt :-	29-06-2021
Depth level (mt)/ft	:- ----	Date of commencing examination :-	01-07-2021

	TEST RESULT	Permissible Limit	Permissible Limits(max)
Turbidity(JTU)	**0.78**	1.00	5.00
Colour(Unit on Pt-Co scale)	**Colourless**	5	15
Taste&Odour(Qualitative)	**Ordinary**	Agreeable	Agreeable
PH	**7.54**	6.5-3.5	No Relaxation
Total Dissolved Solids(mg/l)	**158**	500	2000
Total Alkalinity(CaCo3)mg/I	**66**	200	600
Total Hardness(CaCo3)mg/I	**102**	200	600
Calcium(Ca)mg/I	**54**	75	200
Magnesium(Mg)mg/I	**16**	30	100
Chlorides(CI)mg/I	**42**	250	1000
Sulphates(SO4)mg/I	**38**	200	400
Flourides(F) mg/l	**0.35**	1.00	1.50
Nitrates(NC2)mg/I	**8**	45	No Relaxation
Iron(Fe)mg/I	**0.02**	0.03	1.00
Residual Chlorine mg/I	----	0.02	1.00
Bacteriological Test			
Coliform Organism MPN/100 ml	Not Detected		

REMARKS:-

Chemist
Distt. Water Testing Laboratory
W/S & Sanitation Department
Bathinda

Note -The above conclusion is on the basis of avobe Parameter tested only

1. This report is not for legal purpose.
2. Whole sample consumed in testing.

Save Water, Every drop counts.

Rain Water Harvesting System:

Ten Rain Harvesting Wells (photo attached)

NOISE LEVEL IN THE SURROUNDING OF MRSPTU:

The human ear is constantly being assailed by man-made sounds from all sides, and there remain few places in populous areas where relative quiet prevails. There are two basic properties of sound:

- Loudness and
- Frequency.

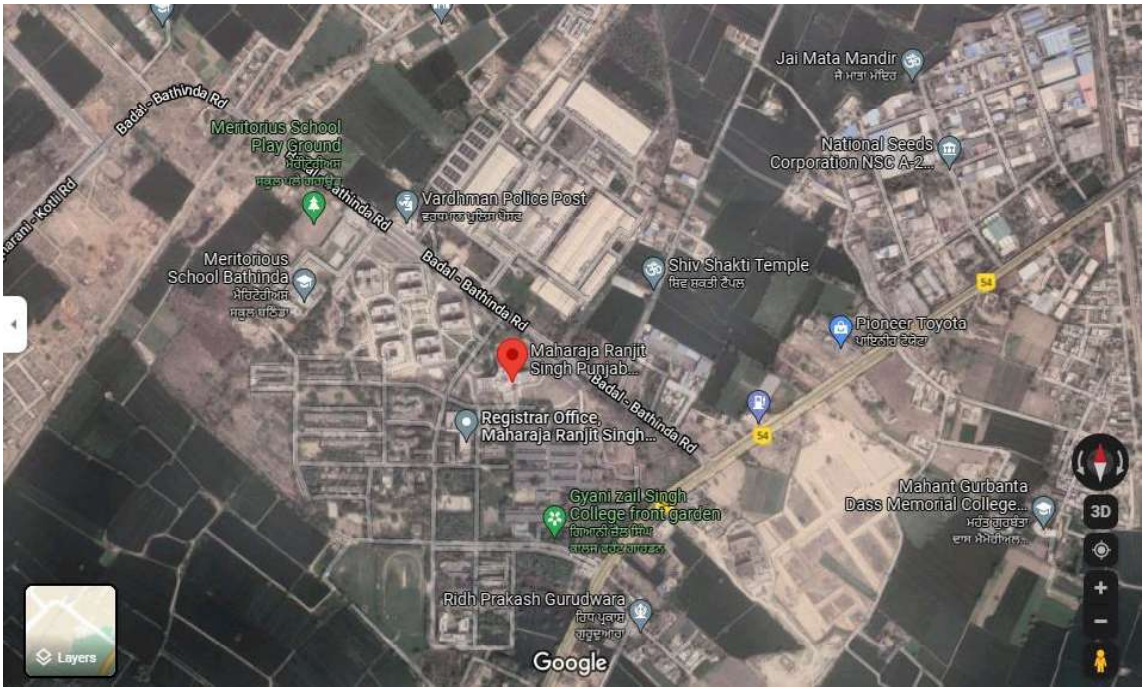
Loudness is the strength of sensation of sound perceived by the individual. It is measured in terms of Decibels. Just audible sound is about 10 dB, a whisper about 20 dB, library place 30 dB, normal conversation about 35-60 dB, heavy street traffic 60-0 dB, boiler factories 120 dB, jet planes during take- off is about 150 dB, rocket engine about 180 dB. The loudest sound a person can stand without much discomfort is about 80 dB. Sounds beyond 80 dB can be safely regarded as Pollutant as it harms hearing system. The WHO has fixed 45 dB as the safe noise level for a city. For international standards a noise level up to 65 dB is considered tolerate. Loudness is also expressed in sones. One sone equals the loudness of 40 dB sound pressure at 1000 Hz. Frequency is defined as the number of vibration per second. It is denoted as Hertz(Hz).

MATERIALS, STUDY AREA & METHODS

Noise level meter or noise measuring app, Noise test pro (version: 1.0.2), was used to measure the noise level. Noise test pro detect of any noise, music or sound in your surroundings. It will tell you maximum, minimum and average decibels.

DESCRIPTION OF THE UNIVERSITY SITE

The site of the MRSPTU is bounded to the East by Bathinda Dabwali road and on North by Badal Road. Rest of the sides are surrounded by Agricultural land. Below photo shows the satellite image of the university site.



Satellite Image

MEASUREMENT PROCEDURE

The noise level was recorded at the different Important Locations of MRSPTU, Bathinda. At each spot, the measurements were taken for 60 seconds during day time (6 AM- 6 PM) and noted down the measurements. Screen shots of the measurements of noise were taken immediately on the app at the time of 60th second of each measurement.

RESULTS

The results of the experiments at different places have been tabulated in the following table:

Table 1: Measurements of Noise in and around MRSPTU:

PLACE	**MEASUREMENTS (Duration in Sec.)**	**MINIMUM (dBA)**	**Maximum (dBA)**	**AVERAGE (dBA)**
Activity Room	30	35	40	37.5
Art Room	30	35	40	37.5
Circulation Spaces	30	35	45	40
Civil Canteen	30	60	70	65
Class Room, GZSCCET	30	45	50	47.5
Class Room, MRSPTU	30	60	65	62.5
Counselling Room	30	30	35	32.5
Dining Room	30	40	45	42.5
Entry Gate, Badal Road	30	60	80	70
General purpose rooms, multi-purpose hall	30	35	40	37.5
Gymnasium	30	35	40	37.5
Kitchen	30	45	50	47.5
Laboratory	30	35	40	37.5
Lecture Room	30	30	35	32.5
Library	30	35	40	37.5
Main gate, Dabwali Road	30	60	80	70
Medical Room	30	30	35	32.5
Offices	30	35	40	37.5
Toilets	30	40	50	45

Solid Waste Management

Red, Blue and Green dustbins are placed at different locations throughout the University Campus. These bins help in collecting the waste material in segregating manner. Also the garbage from different locations such as hostels, Administrative block, staff colony etc is collected on a daily basis in the morning.

ThisSegregated waste is then taken away by the Municipal Corporation, Bathinda workers by the means of truck on daily basis from the University Campus to further process the collected waste at their waste management plant located on the outskirts of the city.

Copy of Agreement attached

ਪੰਜਾਬ PUNJAB Z 610383

Solid Waste Transportation and Disposal Agreement

This Solid Waste Transportation and Disposal Agreement, effective as of 01/09/2019, is made by and between M/s Executive Engineer, MRSPTU, Bathinda ("Bulk Waste Generator") & Municipal Corporation, Bathinda to provide Solid Waste Transportation and processing services under the contract (hereinafter "Contractor"). WHERE as M/s JITF Urban Waste management (Bathinda) limited is a contractor of the Municipal Corporation, Bathinda for the processing and disposal of Solid waste in Treatment plan established at ITI Chowk, Mansa Road, Bathinda on every day basis.

Now, therefore, in consideration of the premises and the mutual agreement herein contained, the parties here to agree as follows:-

1. **TERM OF CONTRACT:** The term of this Contract shall commence on the Effective Date and shall continue initially for 12 Months unless terminated at any time by either party with or without cause on 30 days prior written notice.
2. **PERFORMANCE OF SERVICES:** CONTRACTOR agrees to meet BW Generator's distinct Solid Waster Transportation services on daily basis after the effective date and dispose it scientifically. CONTRACTOR shall provide Bulk Waster Generator with solid waste Transportation and Disposal services.
3. **RATES AND CHARGES:** CONTRACTOR agrees to provide Solid Waste Transportation and Disposal services at fee/ charges of Rs. 5000/- * per month. These rates are applicable till the validity of the said contract.
   i) The Bulk waste Generator will pay monthly dues within seven days of every month.
   ii) If the Bulk Waste Generator does not pay the monthly dues then he will be charged with interest and a penalty of Rs. 100/- per day at the time of payment of pending monthly dues.

(6)

* Municipal Corporation Bathinda reserves the right, notwithstanding anything agreed to above (S.No.3) to enhance or reduce the rates chargeable, after approval in MC House.

4. **CONTRACTOR RESPONSIBILITY:** In case of breakdown/ late reporting of Waste transportation vehicle or any other reason, the CONTRACTOR shall provide alternate vehicle immediately.

5. **EXCUSABLE DELAYS:** The CONTRACTOR shall be liable for default unless non-performance is called by an occurrence beyond the reasonable control of the CONTRACTOR and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in its sovereign or contractual capacity, fires, foods, epidemics, quarantine restriction, strikes and unusually severe weather.

6. **SUCCESSORS AND ASSIGNING:** This agreement shall be binding upon the successors and assignees of the parties hereto. CONTRACTOR shall not assign or subcontract its scope of work to any party under this contract, or any part thereof, without prior information to Bulk Waste Generator.

7. **ENTIRE AGREEMENT:** This agreement of 7 (Seven) clauses constitutes the whole agreement between the parties, which cannot be varied or added to except with the written consent to both parties. This contract supersedes any and all prior agreements whether written or oral, that may exist between the parties. No terms, conditions prior course of dealing, course of performance, usage of trade, understanding or agreement purporting to modify, vary, supplement or explain any provision of contract shall be effe3etive in writing, signed by representatives of parties authorized to amend this Contact. In no event shall the preprinted terms of conditions found on any CONTRACTOR's documents or acknowledgments be considered an amendment or modification of this Contract even if such document are signed by representative of parties, such pre-printed terms or conditions shall be considered null and of no effect.

8. WITNESS WHEREOF, the undersigned individuals have executed this contract at _____Bathinda & effective date is from _____

On the behalf of Bulk Waste Generator	On the behalf of Municipal Corporation, Bathinda.	On the behalf of M/s JITF Urban Waste Management (Bathinda) Ltd.
Executive Engineer, Maharaja Ranjit Singh Punjab Technical University Bathinda	Superintending Engineer Municipal Corporation, Bathinda	

Bio Medical Waste

Biomedical waste is any kind of waste containing infectious material that may include waste associated with medical or laboratory origin (unused bandages, infusion kits, discarded gloves, body fluids and animal tissues). They have the possibility of being contaminated and propensity to cause injury when not properly contained and disposed. Biomedical waste disposal requires services of an outside contractor and segregation of waste material at department level.

Department of Pharmaceutical Sciences and Technology, MRSPTU, Bathinda has signed a contract with the Midwaste Solution Private Limited for the proper disposal of biowaste (from laboratories and Animal house). Biomedical waste is packed in the containers provided by the Midwaste Solution Private Limited and tied with an overhand knot to prevent any liquid leaks and to meet shipping requirements. When we have full container, a request or call is made to Midwaste Solution Private Limited and pickup is scheduled.

Chemical Waste

Policy for Chemical waste disposal

In chemistry laboratories chemical waste generated is disposed through **The EHS Hazardous Waste Program**. For the safety and security of faculty, lab staff and students working in the chemistry laboratories various steps are recommended including the disposal of expired chemicals (deemed to be waste) from the shelves.

Responsibility: Every person working in the chemistry laboratory who generates chemical waste is responsible for the proper management of chemical wastes. These responsibilities include:

Waste must be categorized as to its identity, constituents, and hazards so that it may be safely handled and managed. After the identification waste material is classified as follows.

Classification of Chemical Waste

Non-hazardous Waste: A chemical which does not come under the category is not necessarily safe for disposal via sink. In some cases, removal of non-hazardous waste is difficult than hazardous waste. For example, ethidium bromide, which is not a hazardous waste but isn't safe for handling as regular trash. They should be handled properly according to available sop. In cases where a chemical is collected as a non-hazardous waste, hazardous

waste management rules do not apply.

- **Hazardous Waste**: A chemical which exhibits a 'hazardous' characteristic must be managed as a hazardous waste. Hazardous waste has potential to harm the people and environment and should be treated according to the EHS rules.

  A chemical waste can be hazardous waste due to ignitability if:

- **Liquid waste**: If the flash point of the liquid waste is less than or equal to 60 degrees C, it is included into hazardous waste.
- Common examples include:
- Alcohols
- Organic Solvents and mixtures containing organic solvents such as xylenes, hexane, toluene, acetone, etc.
- Stains and mixtures containing stains
- Oil-based paints and coatings
- **Solid waste**: The solid waste if capableof causing fire through friction, absorption of moisture or spontaneous chemical changes, and burns vigorously when ignited should be treated as hazardous waste. Common examples include
- Paraformaldehyde
- Parafin wax with xylene
- Rags saturated with an ignitable liquid
- **Compressed Gas**: Ignitable compressed gases must also be managed as hazardous wastes.
- Partially-full, or left-over cylinders of gas of
- Hydrogen
- Acetylene
- Propane
- Butane
- **Oxidizers**: the waste if capable of enhancing the combustion of other materials, generally by yielding oxygen is oxidizer waste.
- Common examples include:
- Chlorates
- Chlorites
- Nitrates
- Perchlorates
- Perchlorites
- Permanganates

- Peroxides

If your chemical waste exhibits any of the 'ignitable' characteristics above, you must manage it as an ignitable hazardous waste.

Corrosive Waste

- Common corrosive materials include:
  - Hydrochloric Acid
  - Sulfuric Acid
  - Nitric Acid
  - Sodium Hydroxide

Reactive Waste

A reactive hazardous waste is unstable that can undergo violent changes without detonating or reacts violently with water

- Common Examples Include:
  - Sodium metal,
  - Anhydrides,
  - Sodium Borohydride
- Chemicals that reacts violently with Air
  - Common Examples Include:
  - *tert*-butyllithium,
- Capable of detonation or violent explosion
  - Common Examples Include:
  - Dry picric acid,
  - Azide compounds,
  - Organic peroxides,
  - Old ether or tetrahydrofuran with peroxide formation
- **Toxic Waste**

The concentration of some materials beyond certain level is hazardous. Common list toxic chemicals with concentration include:

Material	TCLP Concentration (mg/l)
Benzene	0.5
Carbon Tetrachloride	0.5
Chlorobenzene	100.0

Material	TCLP Concentration (mg/l)
Chloroform	6.0
o-Cresol	200.0
m-Cresol	200.0
p-Cresol	200.0
Cresol	200.0
1,4-Dichlorobenzene	7.5
1,2-Dichloroethane	0.5
1,1-Dichloroethylene	0.7
2,4-Dinitrotoluene	0.13
Hexachlorobenzene	0.13
Hexachloro-1,3-butadiene	0.5
Hexachloroethane	3.0
Methyl ethyl ketone	200.0
Nitrobenzene	2.0
Pentachlorophenol	100.0
Pyridine	5.0
Tetrachloroethylene	0.7
Trichloroethylene	0.5
2,4,5-Trichlorophenol	400.0
2,4,6-Trichlorophenol	2.0
Vinyl Chloride	0.2

Listed Hazardous Wastes

The hazardous waste are listed as F, U and P category chemicals as given below

The F List

The “F List” specifies some commonly-generated chemical wastes at specific concentrations.

- Any dioxin waste
- Any waste with any combination of the following halogenated solvents at a concentration of 10% or more by volume before use (these wastes are toxic):
  - Tetrachloroethylene
  - Methylene Chloride
  - Trichloroethylene
  - 1,1,1-trichloroethane
  - Chlorobenzene
  - 1,1,2-trichloro-1,2,2-trifluoroethane
  - Orthodichlorobenzene
  - 1,1,2-trichloroethane
  - Carbon tetrachloride
  - Any chlorinated fluorocarbons
- Any waste with any of the following non-halogenated solvents at a concentration of 10% or more by volume (these wastes are ignitable except as indicated below):
  - Xylene
  - Acetone
  - Ethyl acetate
  - Ethyl benzene
  - Ethyl ether
  - Methyl isobutyl ketone
  - N-butyl alcohol
  - Cyclohexanone
  - Methanol
  - Cresols (toxic)
  - Cresylic acid (toxic)
  - Nitrobenzene (toxic)
  - Toluene (ignitable and toxic)
  - Methyl Ethyl Ketone (ignitable and toxic)
  - Carbon disulfide (ignitable and toxic)
  - Isobutanol (ignitable and toxic)
  - Pyridine (ignitable and toxic)
  - Benzene (ignitable and toxic)
  - 2-ethoxyethanol (ignitable and toxic)

- 2-nitropropane (ignitable and toxic)

The U List

The 'U List' technically only applies to un-used chemicals that become wastes (expired, spilled, or no longer necessary for a laboratory's experimentation).

The P List

The EPA has a list of chemicals which are considered 'acutely' hazardous, generally these chemicals are related to pharmaceuticals. The empty containers which once held 'P-listed' materials must be handled as hazardous wastes themselves.

The P List chemicals are:

- Acrolein
- Allyl alcohol
- Carbon Disulfide
- 2,4, Dinitrophenol
- Nitric oxide
- Nitrogen dioxide
- p-Nitroaniline
- Osmium Tetroxide
- Phosgene
- Phosphine
- Sodium Azide
- Vanadium pentoxide
-

Nanoparticles: Fete of nanoparticles is not clear in the environment so they should be treated as hazardous waste material.

Management of waste materials

Steps for the disposal of waste from Chemistry laboratory

1. Waste must be categorized as to its identity, constituents, and hazards so that it may besafely handled and managed.
2. Proper management and disposal of laboratory waste requires information about

itsproperties, it is very important that laboratory personnel accurately and completelyidentify and clearly label all chemical and waste containers in their laboratory. It isrecommended that supplementary information be kept in a separate, readily availablerecord (e.g., laboratory information system, lab notebook).

3. Each category of waste has certain precautions and appropriate disposal methods. Given belowis a list of requirements and good practices for accumulating chemical waste in the laboratory:

A. Collect hazardous or flammable waste solvents in an appropriate container

B. Take care not to mix incompatible waste. This is a special concern with commingled waste solvents, which must be chemically compatible to ensure that heat generation,gas evolution, or another reaction does not occur.

C. Keep wastes segregated on the basis of their disposal method.

D. Collect waste in dependable containers that are compatible with their contents.

E. Use an appropriate container for the collection of liquid waste. Glass bottles areimpervious to most chemicals but present a breakage hazard, and narrow-neck bottlesare difficult to empty. The use of plastic (e.g., polyethylene jerry cans) or metal(galvanized or stainless steel) safety containers for the collection of liquid waste isstrongly encouraged.

F. Collect aqueous waste separately from organic solvent waste.

4. Clearly and securely label waste containers with their contents.

5. Disposal methods: It is the clear responsibility of all workers to ensure the safe andcorrect disposal of all wastes produced in the course of their work.

A. Wash down drains with excess water [Concentrated and dilute acids and alkalis (to be disposed after neutralizing them and diluting the neutralized solution) Harmless soluble inorganic salts (including all drying agents such as $CaCl_2$,$MgSO_4$, Na_2SO_4, P_2O_5), Alcohols containing salts (e.g. for destroying sodium) etc.]

B. Incineration(all organic solvents including water-miscible ones, soluble organic waste including most organic solids, paraffin and mineral oil (from oil baths and pumps)

C. Laboratory waste bins and controlled waste

I. Items in this category which includes dirty paper, plastic, rubber andwood, should generally be placed in the waste bins available in eachlaboratory

II. Different waste bins should be allocated to all broken laboratoryglassware, any sharp objects of metal or glass, all fine powders (preferablyinside a bottle or jar) and dirty sample tubes or other items.

I. contaminated with chemicals (but not any syringes or needles) and all syringes and needles.
II. Each laboratory should have a bin for recyclable glass. Only clean glass bottles such as those in which chemicals are received, and broken or waste glassware free from any chemical are considered in the category of recyclable glass.
III. Sharps" contaminated with biologically hazardous materials must be collected in special containers to be sent for incineration

The MRSPTU faculty, laboratory staff and students are fully committed to work for clean and green environment and disposal of chemical waste.

TRANSPORTATION AT MRSPTU Bathinda:

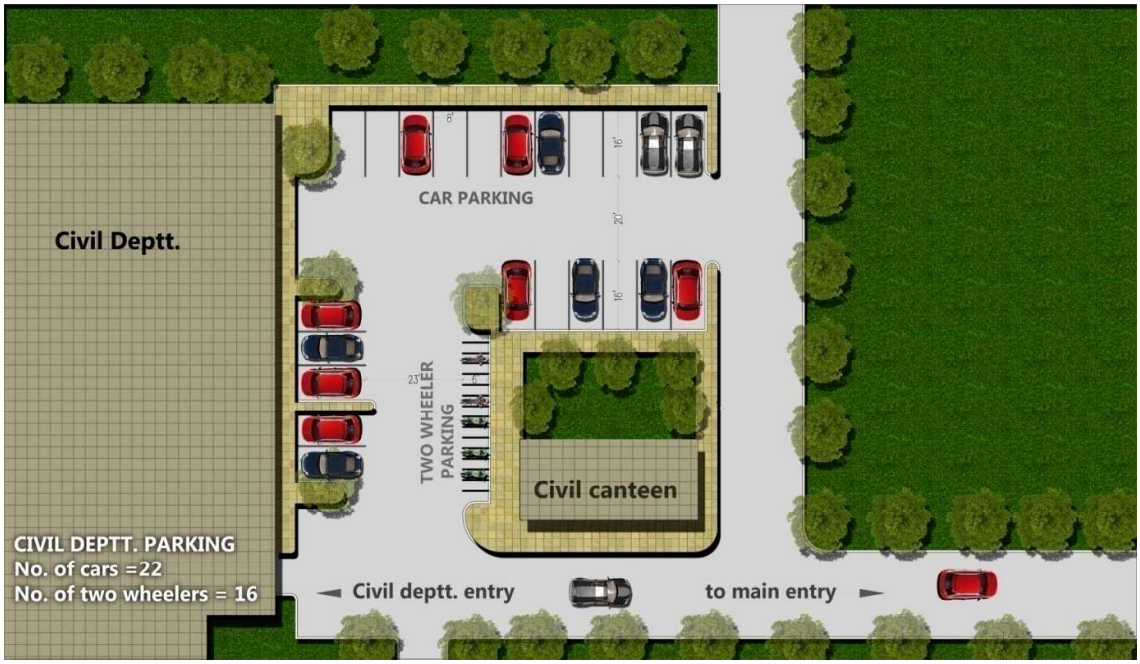
Being a largest campus in the region and located centrally, MRSPTU faculty, staff and students commute on their own. The university is dedicated to provide its students and staff all the comfort and convenience to help them to achieve their targets. The students are encouraged to use cycles, two wheelers rather than four wheelers which leads to fuel saving and also the contribution of pollutants to atmosphere is less.

Student Vehicles are parked at the parking area earmarked for students (separate for boys and girls) near the Entrance gate. Staff / Faculty vehicles are parked at the peripheral parking lots away from the academic blocks.

Photos as Annexure

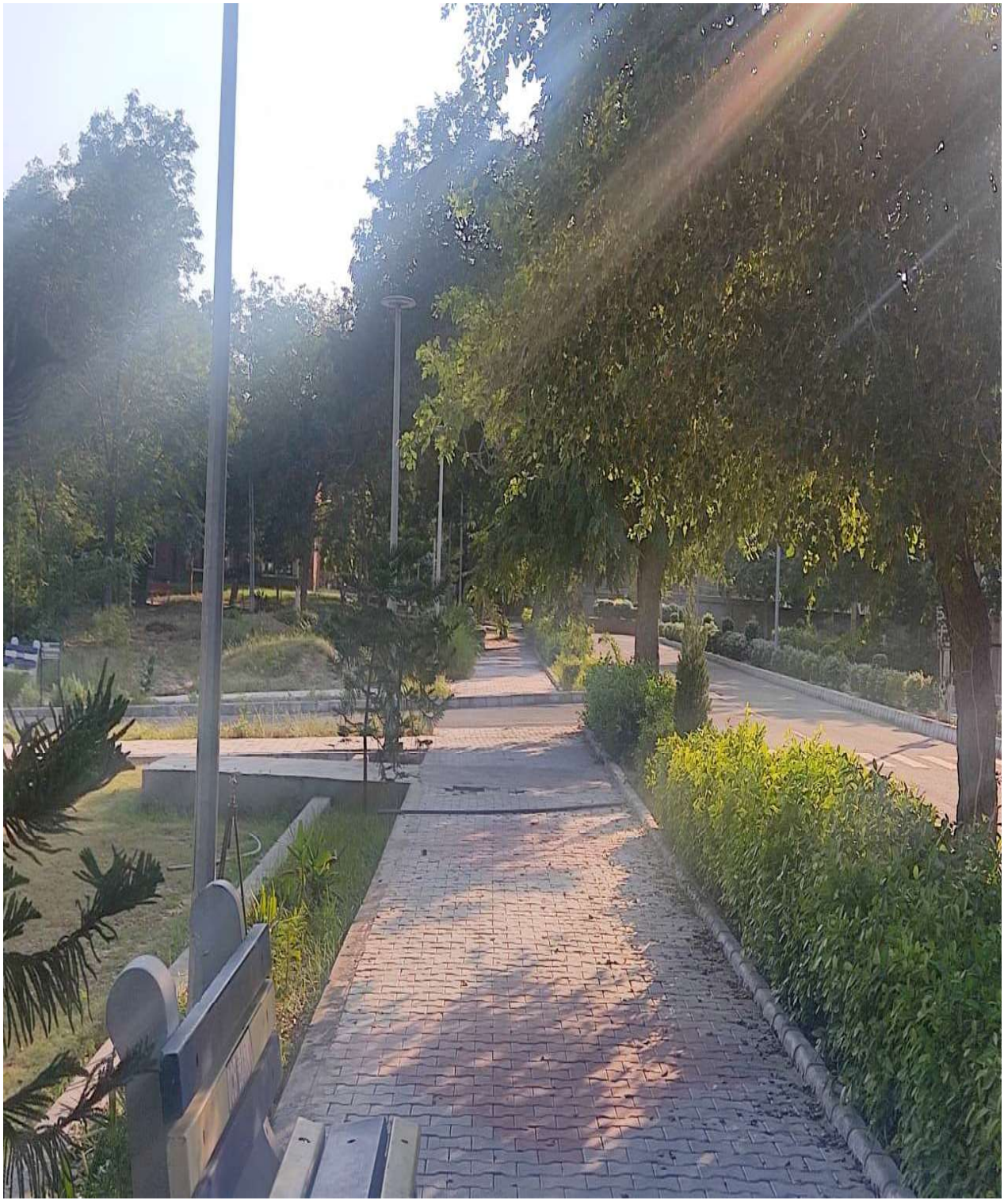

PROJECT:-
LAYOUT PLAN OF GZS PTU CAMPUS AT BATHINDA
CLIENT:-
DIRECTOR CAMPUS, GZS PTU CAMPUS, BATHINDA
LEGEND:
BOUNDARY
METALLED ROAD
RCC ROAD
TREE
ELECTRIC POLE
LIGHT POLE
TRANSFORMERS
ELECTRIC WIRE
MANHOLE
NOTE:-
ALL DIMENSIONS ARE IN MTRS.
SCALE : 1:1600
AREA INCLUDING KATCHA RASTA = 624566.74 sq.m. = 6719338.81 sq.ft. = 746593.20 sq.yds. = 154.25 Acres
AREA IN BOUNDARY WALL = 623365.40 sq.m. = 6706414.31 sq.ft. = 745157.14 sq.yds. = 153.95 Acres
PRIVATE AGRICULTURE LAND
AGRICULTURE LAND
QUARTERS
PARK
GROUND
TO BATHINDA CITY
TO DABWALI

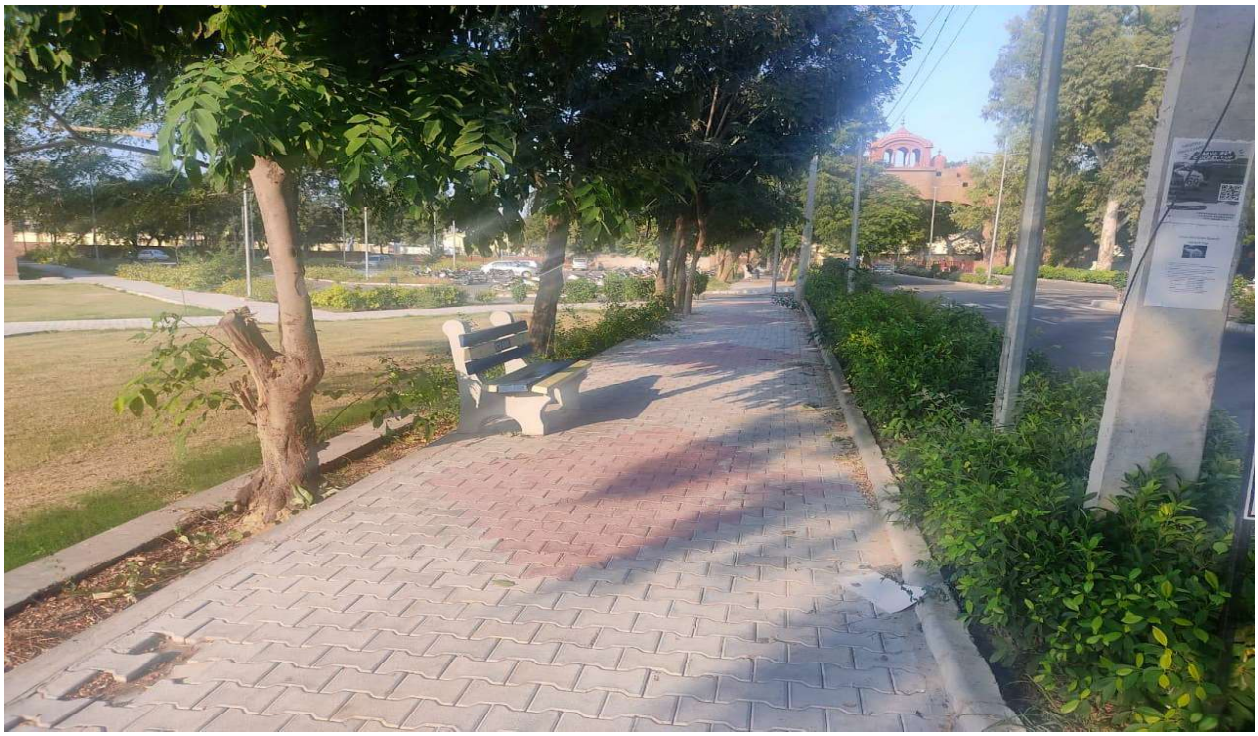

ADMIN / ACADMIC PARKING
No. of cars = 36
No. of two wheelers = 50
ACADEMIC/ADMIN BLOCK
CAR PARKING
TWO WHEELER PARKING
Porch
civil deptt.
TO ELECRICAL DEPTT.
CAR PARKING
TWO WHEELER PARKING
LAWN
CAR PARKING
CAR PARKING
FOOTPATH
to hostel
to main entrance

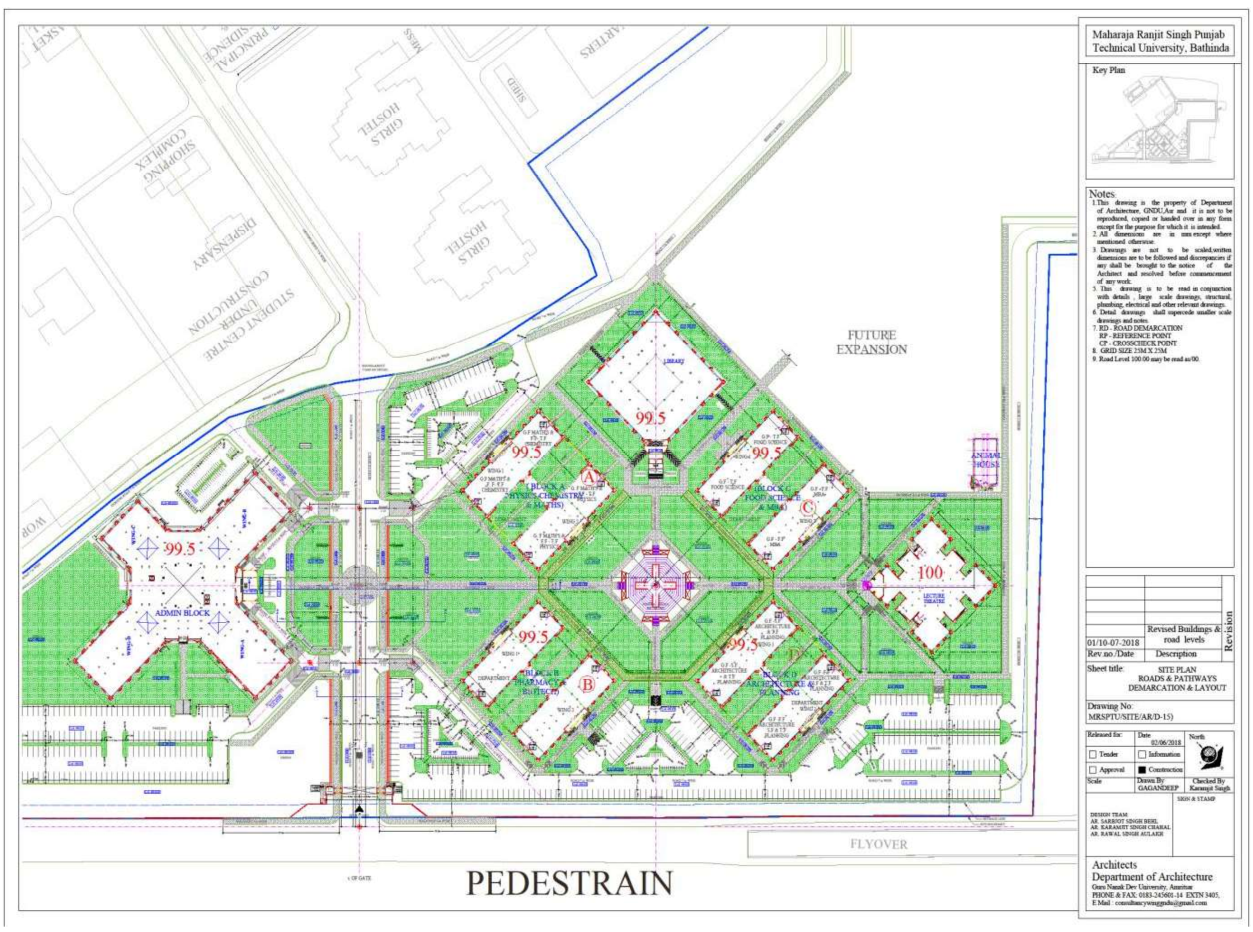

Civil Deptt.
CAR PARKING
TWO WHEELER PARKING
Civil canteen
CIVIL DEPTT. PARKING
No. of cars =22
No. of two wheelers = 16
Civil deptt. entry
to main entry

Pedestrian friendly pathways:

Campus has Eco-friendly pedestrian pathway for easy and smooth connectivity with all building blocks. Total Pedestrian Area 10325 Sqm. (photo of Pedestrian pathways attached).






Maharaja Ranjit Singh Punjab Technical University, Bathinda
Key Plan
Notes:
FUTURE EXPANSION
99.5
100
ADMIN BLOCK
Revised Buildings & road levels
01/10-07-2018
Rev.no./Date
Description
Revision
Sheet title:
SITE PLAN ROADS & PATHWAYS DEMARCATION & LAYOUT
Drawing No:
MRSPTU/SITE/AR/D-15)
FLYOVER
PEDESTRAIN
Architects
Department of Architecture

ELECTRICAL POWER CONSUMPTION AT MRSPTU:

MRSPTU, being one of the largest campuses of Punjab, consumes on an average 100000 kWh/ month (approx.) (units) of electricity which turns out to be 1200000 kW-hr per year (approx.) only to maintain its volumetric activities throughout the year. As a policy decision, the authority keeps on replacing the old filament bulbs, CFL bulbs and tube lights by low energy consuming LED bulbs and LED tubes and bulky high-power consuming fans by energy efficient fans in order to keep the electricity consumption of the college as low as possible.

In addition to making Environmental Studies a very vital subject in our syllabus, MRSPTU Bathinda has gone a step further by putting that theory into practice. The college has installed solar panels having a capacity of 1 MW. The energy from this solar installation is helping offset the institute's daytime peak electricity demand from the grid. MRSPTU with the installation of kWp grid connected solar rooftop plant under RESCO mode was able to offset 20% (approx.) of its energy usage from the state grid thus moving towards a more reliable and greener option and reducing its carbon foot print.

Percentage of annual power requirement of the Institution met by the renewable energy sources Response: 80% (approx.)

Annual power requirement met by the renewable energy sources (in kWh) Response: 938642 Unit (Approx.)

Total annual power requirement (in kWh) Response: 1200000 (Approx.)

Power Requirements met by renewable energy

Power Requirements met by renewable energy Sources	**Total Power Requirements**	**Renewable energy Source**	**Renewable energy generated and used**	**Energy supplied to the grid**
kWh/year NA	kWh/Year 1200000	Solar Roof Top	938642/ 788182 kWh/year	150460

EXPENDITURE ON GREEN INITIATIVES DURING THE LAST FIVE YEARS:

Financial Year	**Gardening & lawn Work (Tractor Running & Maintenance) (in Rs.)**	**Sewerage Treatment Plant (in Rs.)**	**Purchase of LED's**
2020 – 2021	220000	620779	53280 + New Building *
2019 - 2020	195000	283510	73420 + new building *
2018 – 2019	167000	---	2793
2017 – 2018	151000	---	21008
2016 - 2017	132000	---	9920

- New Building under construction

Energy Efficient Buildings:

Features of Campus Buildings:

a) Double walled outer walls.

b) Controlled ventilation.

c) Bioclimatic architecture

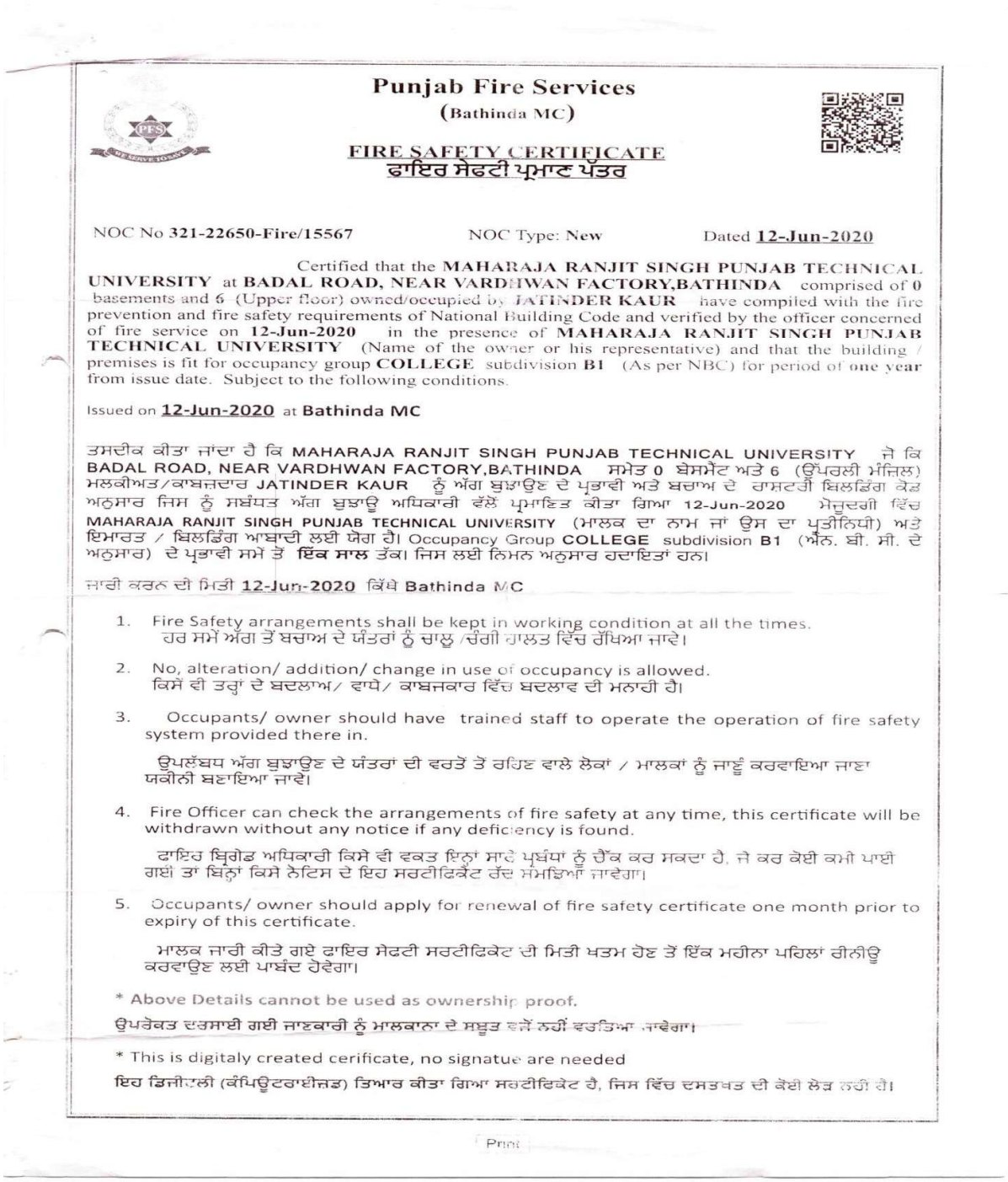
d) Orientation of Building Blocks. (Photo Attached)

Fire Safety:

Fire Extinguishers CO_2, ABC, DCP, AFFF and Water CO_2 are installed at appropriate points in all building blocks.

Fire Hydrants, over Head Water tanks with required capacity are installed in Campus Blocks.

The Fire Safety certificate of buildings attached.



Punjab Fire Services
(Bathinda MC)

FIRE SAFETY CERTIFICATE
ਫਾਇਰ ਸੇਫਟੀ ਪ੍ਰਮਾਣ ਪੱਤਰ

NOC No **321-22650-Fire/15567** NOC Type: **New** Dated **12-Jun-2020**

Certified that the **MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY** at **BADAL ROAD, NEAR VARDHWAN FACTORY,BATHINDA** comprised of **0** basements and **6** (Upper floor) owned/occupied by **JATINDER KAUR** have compiled with the fire prevention and fire safety requirements of National Building Code and verified by the officer concerned of fire service on **12-Jun-2020** in the presence of **MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY** (Name of the owner or his representative) and that the building / premises is fit for occupancy group **COLLEGE** subdivision **B1** (As per NBC) for period of **one year** from issue date. Subject to the following conditions.

Issued on **12-Jun-2020** at **Bathinda MC**

ਤਸਦੀਕ ਕੀਤਾ ਜਾਂਦਾ ਹੈ ਕਿ **MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY** ਜੋ ਕਿ **BADAL ROAD, NEAR VARDHWAN FACTORY,BATHINDA** ਸਮੇਤ **0** ਬੇਸਮੈਂਟ ਅਤੇ **6** (ਉੱਪਰਲੀ ਮੰਜ਼ਿਲ) ਮਲਕੀਅਤ/ਕਾਬਜ਼ਦਾਰ **JATINDER KAUR** ਨੂੰ ਅੱਗ ਬੁਝਾਉਣ ਦੇ ਪ੍ਰਭਾਵੀ ਅਤੇ ਬਚਾਅ ਦੇ ਰਾਸ਼ਟਰੀ ਬਿਲਡਿੰਗ ਕੋਡ ਅਨੁਸਾਰ ਜਿਸ ਨੂੰ ਸਬੰਧਤ ਅੱਗ ਬੁਝਾਊ ਅਧਿਕਾਰੀ ਵੱਲੋਂ ਪ੍ਰਮਾਣਿਤ ਕੀਤਾ ਗਿਆ **12-Jun-2020** ਮੌਜੂਦਗੀ ਵਿੱਚ **MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY** (ਮਾਲਕ ਦਾ ਨਾਮ ਜਾਂ ਉਸ ਦਾ ਪ੍ਰਤੀਨਿਧੀ) ਅਤੇ ਇਮਾਰਤ / ਬਿਲਡਿੰਗ ਆਬਾਦੀ ਲਈ ਯੋਗ ਹੈ। Occupancy Group **COLLEGE** subdivision **B1** (ਐੱਨ. ਬੀ. ਸੀ. ਦੇ ਅਨੁਸਾਰ) ਦੇ ਪ੍ਰਭਾਵੀ ਸਮੇਂ ਤੋਂ **ਇੱਕ ਸਾਲ** ਤੱਕ। ਜਿਸ ਲਈ ਨਿਮਨ ਅਨੁਸਾਰ ਹਦਾਇਤਾਂ ਹਨ।

ਜਾਰੀ ਕਰਨ ਦੀ ਮਿਤੀ **12-Jun-2020** ਕਿੱਥੇ **Bathinda MC**

1. Fire Safety arrangements shall be kept in working condition at all the times.
   ਹਰ ਸਮੇਂ ਅੱਗ ਤੋਂ ਬਚਾਅ ਦੇ ਯੰਤਰਾਂ ਨੂੰ ਚਾਲੂ /ਚੰਗੀ ਹਾਲਤ ਵਿੱਚ ਰੱਖਿਆ ਜਾਵੇ।
2. No, alteration/ addition/ change in use of occupancy is allowed.
   ਕਿਸੇ ਵੀ ਤਰ੍ਹਾਂ ਦੇ ਬਦਲਾਅ/ ਵਾਧੇ/ ਕਾਬਜਕਾਰ ਵਿੱਚ ਬਦਲਾਵ ਦੀ ਮਨਾਹੀ ਹੈ।
3. Occupants/ owner should have trained staff to operate the operation of fire safety system provided there in.
   ਉਪਲੱਬਧ ਅੱਗ ਬੁਝਾਉਣ ਦੇ ਯੰਤਰਾਂ ਦੀ ਵਰਤੋਂ ਤੋ ਰਹਿਣ ਵਾਲੇ ਲੋਕਾਂ / ਮਾਲਕਾਂ ਨੂੰ ਜਾਣੂੰ ਕਰਵਾਇਆ ਜਾਣਾ ਯਕੀਨੀ ਬਣਾਇਆ ਜਾਵੇ।
4. Fire Officer can check the arrangements of fire safety at any time, this certificate will be withdrawn without any notice if any deficiency is found.
   ਫਾਇਰ ਬ੍ਰਿਗੇਡ ਅਧਿਕਾਰੀ ਕਿਸੇ ਵੀ ਵਕਤ ਇਨ੍ਹਾਂ ਸਾਰੇ ਪ੍ਰਬੰਧਾਂ ਨੂੰ ਚੈੱਕ ਕਰ ਸਕਦਾ ਹੈ, ਜੇ ਕਰ ਕੋਈ ਕਮੀ ਪਾਈ ਗਈ ਤਾਂ ਬਿਨ੍ਹਾਂ ਕਿਸੇ ਨੋਟਿਸ ਦੇ ਇਹ ਸਰਟੀਫਿਕੈਟ ਰੱਦ ਸਮਝਿਆ ਜਾਵੇਗਾ।
5. Occupants/ owner should apply for renewal of fire safety certificate one month prior to expiry of this certificate.
   ਮਾਲਕ ਜਾਰੀ ਕੀਤੇ ਗਏ ਫਾਇਰ ਸੇਫਟੀ ਸਰਟੀਫਿਕੇਟ ਦੀ ਮਿਤੀ ਖਤਮ ਹੋਣ ਤੋਂ ਇੱਕ ਮਹੀਨਾ ਪਹਿਲਾਂ ਰੀਨੀਊ ਕਰਵਾਉਣ ਲਈ ਪਾਬੰਦ ਹੋਵੇਗਾ।

* Above Details cannot be used as ownership proof.
ਉਪਰੋਕਤ ਦਰਸਾਈ ਗਈ ਜਾਣਕਾਰੀ ਨੂੰ ਮਾਲਕਾਨਾ ਦੇ ਸਬੂਤ ਵਜੋਂ ਨਹੀਂ ਵਰਤਿਆ ਜਾਵੇਗਾ।

* This is digitaly created cerificate, no signatue are needed
ਇਹ ਡਿਜੀਟਲੀ (ਕੰਪਿਊਟਰਾਈਜ਼ਡ) ਤਿਆਰ ਕੀਤਾ ਗਿਆ ਸਰਟੀਫਿਕੇਟ ਹੈ, ਜਿਸ ਵਿੱਚ ਦਸਤਖਤ ਦੀ ਕੋਈ ਲੋੜ ਨਹੀਂ ਹੈ।

Print

Other measures related to Green practices adopted by MRSPTU

Online Management System to reduce usage of paper/ printing

Examination: Students can check their semester results online. Students fills their Regular and Reappear Examination forms online, which saves a lot of Paper and Printing and moreover in COVID exams of the students were created online. And apart from this, the services provided to the students are also online.

Accounts: In this, students pays their fee online and the receipt of the fee paid is also generated online. All sanctions for the purchase of any item in the University is online and their bill payments are also online which saves a lot of paper and printing cost.

Admissions: all the tasks related to admission of candidate are online like candidate registration, candidate admission and candidate can even upload his/her certificates online. Hence candidate can take admission online from his/her home which saves a lot of paper and printing cost.

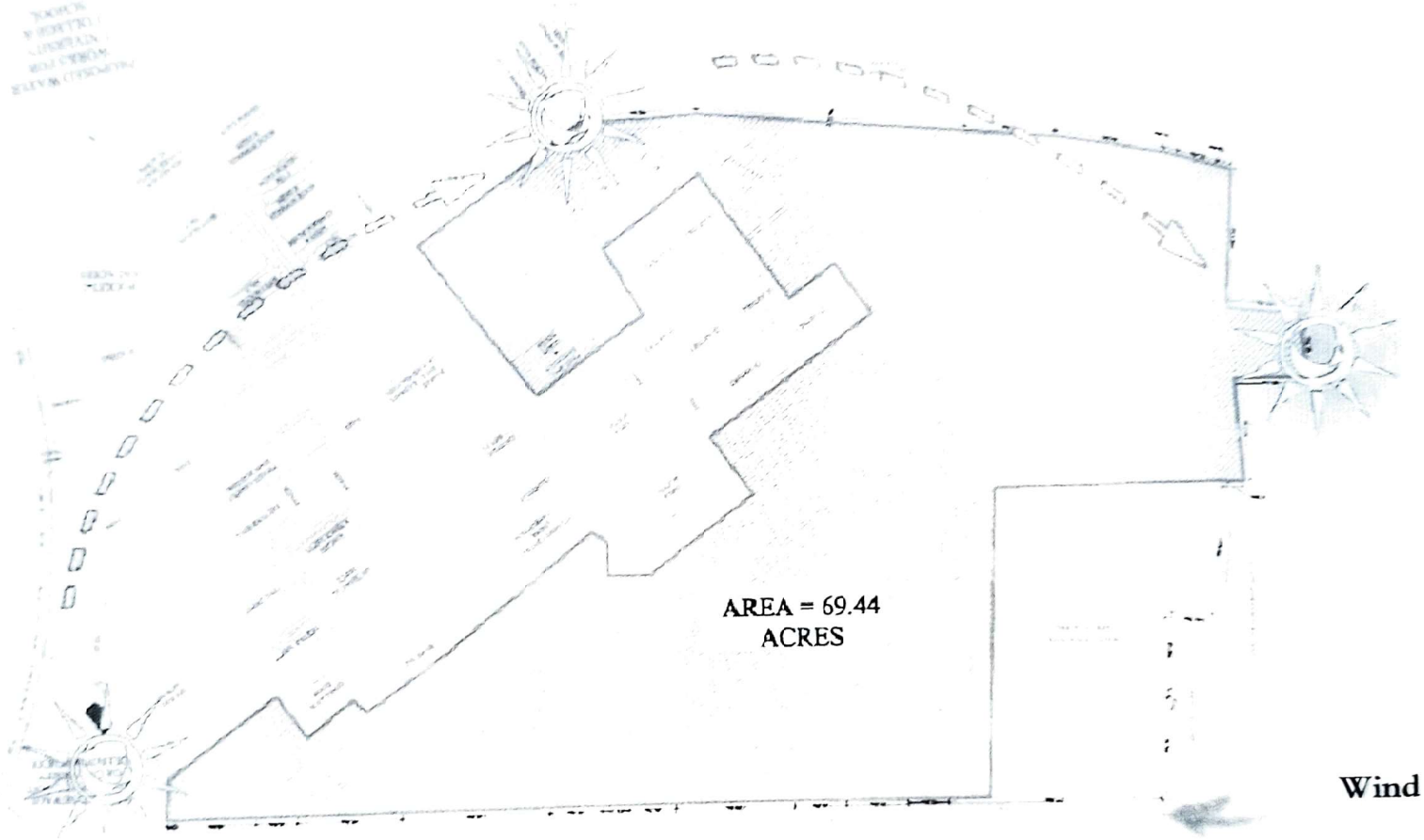
IQAC: In this portal, teaching employees of the University fills their information regarding appraisal and research online which saves a lot of paper and printing cost.

CDC: This portal saves paper and printing as work related to all Constituent/affiliated colleges is done online. Eg. Colleges applies online for affiliation from the University and pays the fee online which saves paper and printing.

Digilocker: With this Mobile Application, developed by Govt. of India, student of the University can get their degrees at home on this portal which saves printing and paper.

LMS: On this portal, students can attend classes online. Teachers can also do all activities related to student online like Assignment and Attendance reports can be submitted online. Also student can get details of syllabus and other course details online which saves paper and printing.

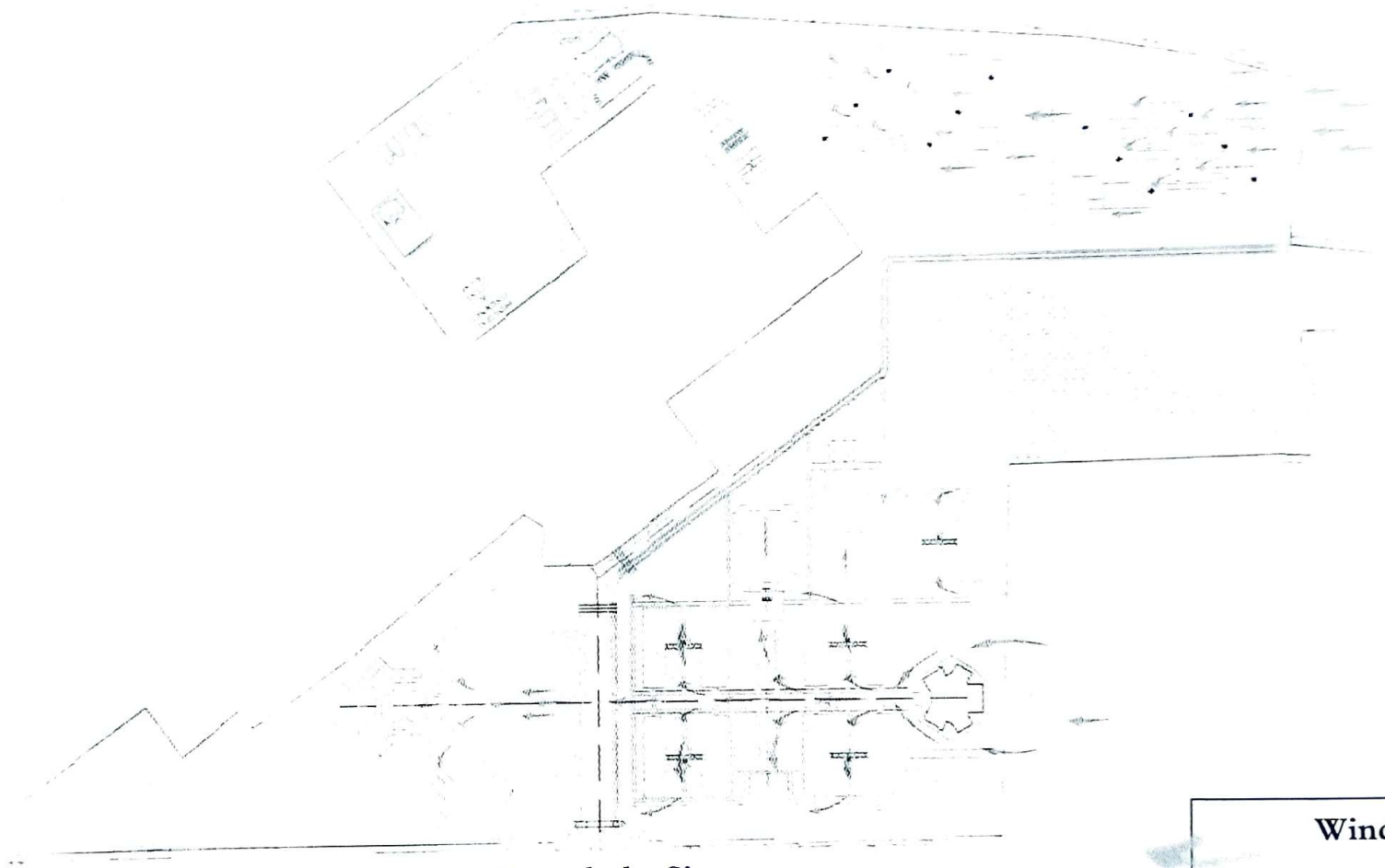
SITE ANALYSIS



- **Sun movement**

SITE ANALYSIS

- **Wind Flow -**

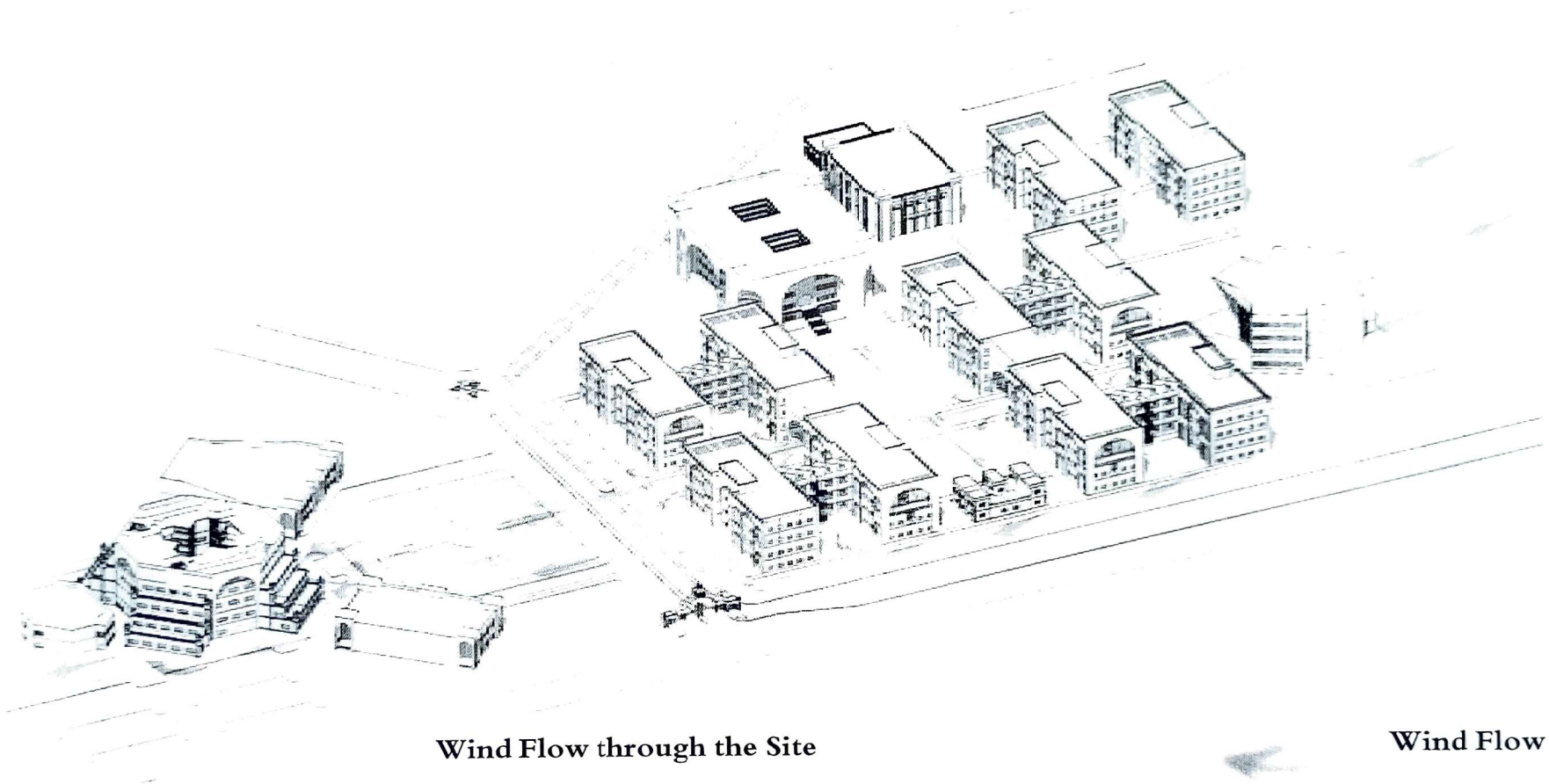


Wind Flow

Wind Flow through the Site

SITE ANALYSIS

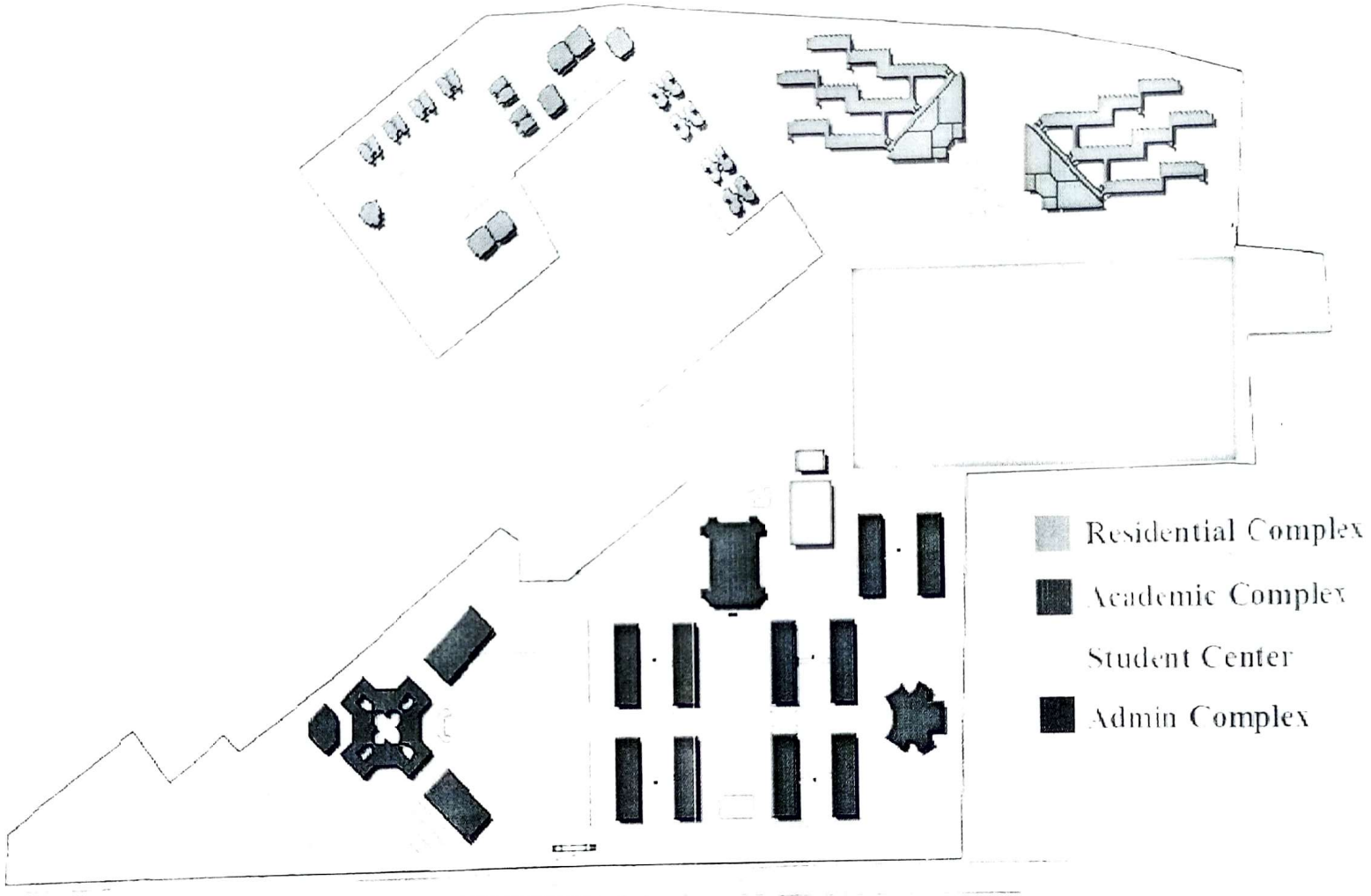
- **Wind Flow-**



Wind Flow through the Site

Wind Flow

SITE ZONING



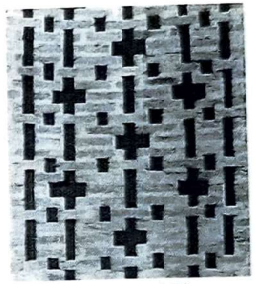
Zoning Pattern

CONCEPT

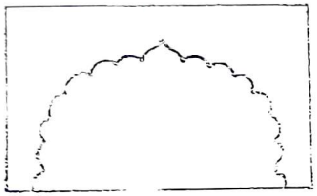
In the vocabulary of **Vernacular Art** of **Sikh Architecture** the design is proposed as a tribute to **Sher-e-Punjab Maharaja Ranjit Singh Ji because** Sikh Architecture is established during his period. In order to maintain this essence of **Traditional Architecture** of the state , following elements have been incorporated in the design-

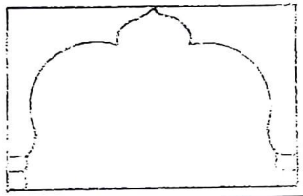
- Use of traditional materials.
- Use of jallis(brick jalli).
- Use of arches, chhatris, minarets, kiosks and domes.

Brick

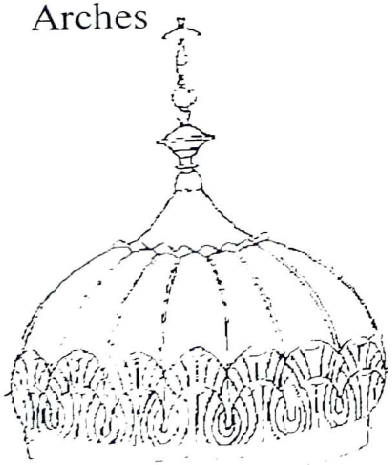


Brick Jalli

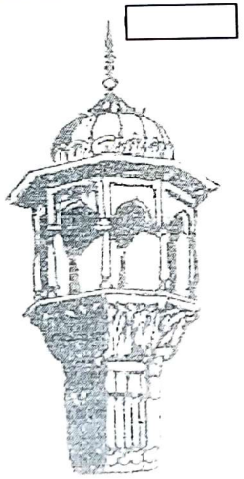




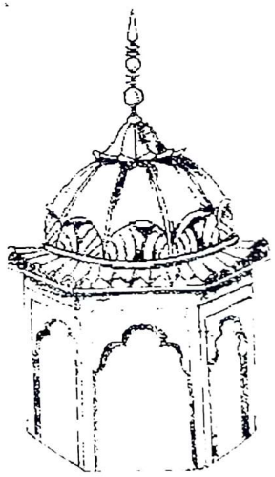
Arches



Dome



Minaret



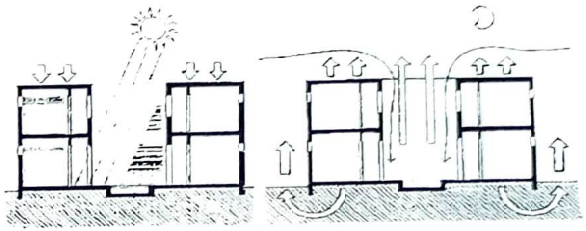
Kiosk

Chhatis

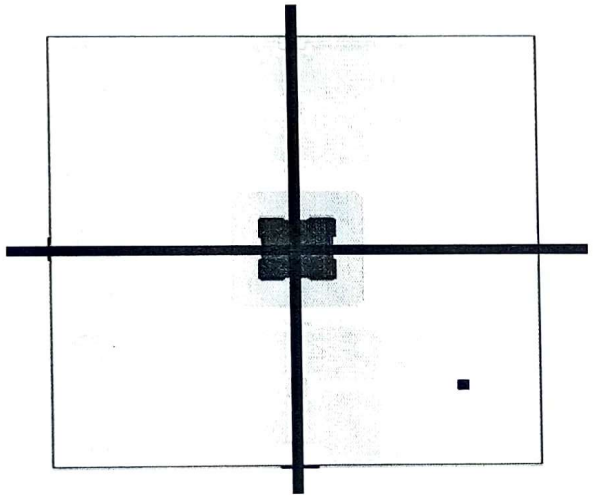
CONCEPT

- **Courtyard Planning.**
- **Multiple Axes.**
- Concept of **Char-Bagh** (Royal Gardens)-

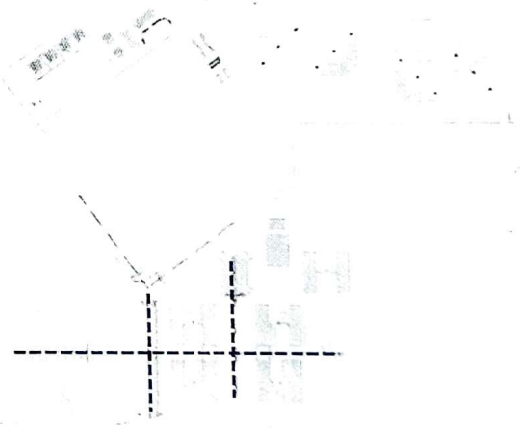
The simplicity in Char-Bagh is spiritually divine and functionally appropriate. Royal gardens have always reflected this philosophy into design.



Wind flow through the building section



Char- Bagh



CONCEPT

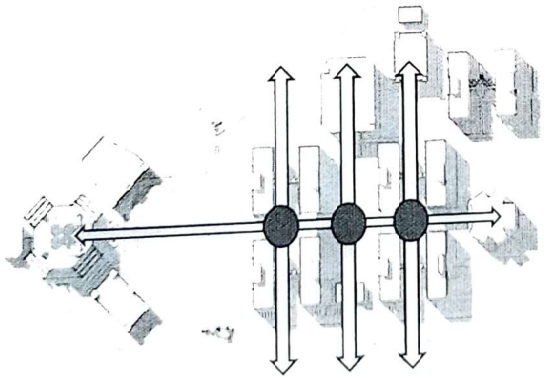
- Concept of **Thread and Knot-** The Urban concept of Threads and Knots is not all together Urban rather a traditional element in Urban language.

Thread acting as major spines, that binds and connects far ends.

Knot acting as major nodes of development, with variety of activities. Adding interest by adding by breaking monotony of linear development.

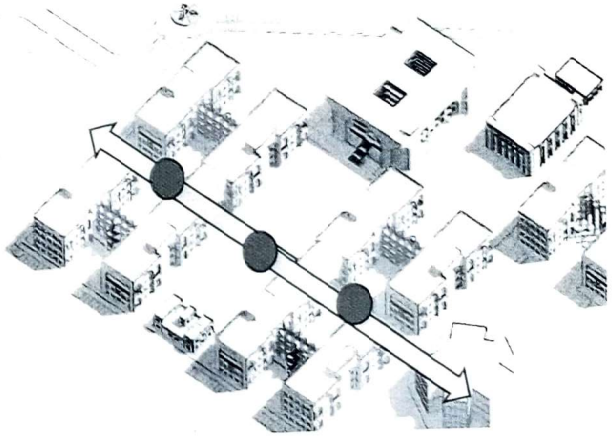
The intersections of threads running at right angles enable the formation of **nodes** that embody the energy of multiple axis. Multiple options leading to further multiple nodes and thus a network of options and development.

The use of such elements create a sense of belonging together with a **sustainable** approach in design. The traditional elements are rooted in the context of society and climatic conditions of the place.



Thread

Knot



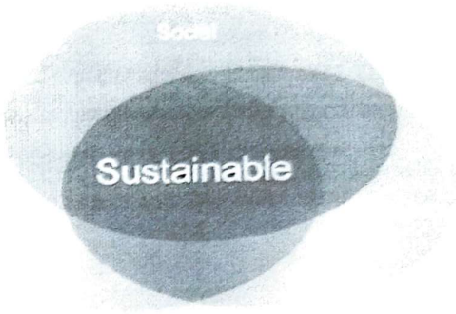
CONCEPT

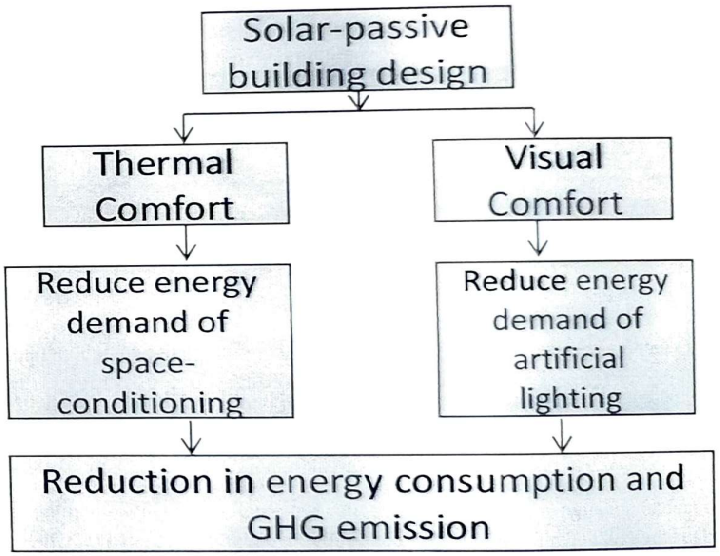
Sustainable Design-

Buildings adopt traditional design principles and yet appear contemporary.

Integrated and coordinated design approach ….in planning, design, construction and management.

In buildings design orientation, forms, shading, materials, fenestration(window/door openings) and site planning enable the structure to naturally store thermal energy from the sun and cool the structure by shielding it from the sun rays and causing an unassisted air flow





ENERGY AUDIT REPORT 2019-20

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY, BATHINDA

ENERGY AUDIT REPORT

As on dt. 18-10-2021

ENERGY MANAGEMENT

1. Contract Demand:	1629 KVA		
2. Transformer Capacity:	3000 KVA		
3. Connected Load:	1466.820 KW		
4. Electricity Consumption Per Year:	2017	2018	2019
	(16,39,760)	(16,15,680)	(11,20,153)
	2017	2018	2019
5. Energy Cost Per Year:	Rs. 2,10,90,162/-	Rs. 1,39,92000/-	Rs. 1,00,30,957/-
	2017	2018	2019
6. Diesel Consumption Per Year:	3800 Ltr.	4200 Ltr	3600 Ltr.
7. Winter Electricity Load Per Year: (October to March)	185 KW	190 KW	150 KW
8. Summer Electricity Load Per Year: (April to September)	300 KW	315 KW	200 KW
9. Load in Admin. Building MRSPTU:			55.500 KW
10. Load in Guest House:			30.100 KW
11. Connected Load Civil Engineering Department:			49.606 KW
12. Connected Load Electrical Engineering Department:			38.100 KW
13. Connected Load Textile Engineering Department:			33.700 KW
14. Connected Load Mechanical Engineering Department:			105.400 KW
15. Connected Load Computer Science & Engineering Department:			65.500 KW
16. Connected Load Electronics Communication & Engineering Department:			20.600 KW
17. Connected Load in Workshop Department:			231.974 KW
18. Connected Load in all hostels (Boys & Girls):			435.050 KW
19. Connected Load Block-A:			40.330 KW
20. Connected Load Block-B:			55.270 KW
21. Connected Load Block-C:			65.930 KW
22. Connected Load Block-D:			26.200 KW
23. Connected Load Block-LT:			12.790 KW
24. Connected Load Library Block:			55.600 KW
25. Connected Load LED Street Light:			10.330 KW

26. Connected Load Applied Sciences Department:	09.100 KW
27. Connected Load Water Works:	125.740 KW
Sr. No. 09 to 27- Total Load:	**1466.820 KW**
28. Average AC's Use Time:	8 Hrs daily for 4 months.
29. Percentage of LED Lights to incandescent lights:	80%.
30. Energy from alternative source of roof:	The University has already initiated for initiated for installation top solar power panel in different buildings of University of 1000 KW capacity and completed in 2019. It is expected to produce electricity of 10, 26, 761 unit per year.
Net Profit per year (Saving):	Rs. 21,94, 277/-

LED LIGHTING AT ADMINISTRATIVE BUILDING

LED LIGHTING AT PHARMACEUTICAL SCIENCES & TECHNOLOGY

LED LIGHTING AT UNIVERSITY BUSINESS SCHOOL DEPARTMENT

LED LIGHTINGS AT APPLIED SCIENCES DEPARTMENT

STREET LED LIGHTINGS

ROOFTOP SOLAR PANELS

DG SET 380 KVA

DG SET 160 KVA

TRANSFORMER 2000 KVA

TRANSFORMER 500 KVA

ELECTRICITY CONSERVATION PRACTICES

- **SAVE THE NATION BY SAVING ENERGY.**
- **SAVE ENERGY, SAVE EARTH!**
- **MAKE USE OF NATURAL LIGHT.**
- **UNPLUG ANY ELECTRICAL GADGET.**
- **TURN OFF THE FAN WHEN YOU LEAVE A ROOM.**

Energy Conservation

Energy conservation is the process of identifying energy wastage and taking steps to reduce this wastage.

Why We Should Conserve Energy?

There are two main reasons to conserve energy:

- A huge chunk of this money goes to unnecessary use of energy.
- The way we use energy has a direct effect on the environment. The less electricity we consume, the less toxic fumes will be released by power plants.

MRSPTU is committed to save energy through

a) Adjust our day-to-day behaviors in campus by creating awareness among students, faculty, staff and other workers for conservation of energy

b) Replace our light bulbs (Traditional incandescent light bulbs and fluorescent tubes) by Halogen incandescent bulbs, light-emitting diode bulbs (LEDs) and LED tubes

c) Clean or replace air filters of air conditioners

Air conditioners and heaters use the most energy and make up a large part of our electricity bill. They use even more energy when the air filters are dirty. Make an effort to clean and replace filters as recommended.

d) Shut doors and close curtains

A simple way to practice how to conserve energy around the campus is shutting doors and windows of unused area. Also, only cool or heat the rooms where we spend the most time.

e) Save money with solar energy

Solar energy is a safer alternative of electricity, cheaper (actually almost free) and kinder to the environment.

f) Turn off your water heater in winter vacation if leaving hostel for a few days

g) Unplug battery chargers

This is one of the most easily ignored energy conservation techniques. Unplug chargers as soon as the batteries are fully charged or the chargers are not in use. Most chargers continue to draw power even when not charging a device.

h) Replacement ofinduction motor Ceiling Fans by BLDC motor ceiling fans

i) Losses is reduced on replacement of electrical wiring.

j) Use energy efficient appliances of energy star label that consume less energy during use and when on standby than standard models.

k) Install energy efficient windows

Windows are significant source of energy waste, single-pane windows can bereplaced with double-pane products for prevention of heat loss through your windows.

l) Upgrade your HVAC system

An HVAC system is composed of heating, ventilation, and air conditioning equipment. Heating alone is responsible for more than 40% of our energy use. ENERGY STAR central air conditioning units are eight percent more efficient than conventional models. third component of an HVAC system, ventilation can also improve energy efficiency.

m) Weatherize ourcampus

Weatherizing, or sealing air leaks around our campus, is a great way to reduce heating and cooling expenses. The most common sources of air leaks are vents, windows, and doors. To prevent these leaks, we should ensure that there are no cracks or openings between the wall and vent, window, or doorframe.

n) Insulate our campus

Insulation plays a key role in lowering our utility bills through retaining heat during the winter and keeping heat out of our campusduring the summer.

Kindly check the Content, Grammer, typographical errors etc. & return it by Monday 10:00 AM

Dr. Ved Prakash, EE

DIR/IQAC/MRSPTU/UNA 01.10.2021

CLEAN AND GREEN CAMPUS

Campus is a mini community where people from different states, culture live. A clean green campus is requirement for healthy living and ecofriendly system. The modern era technology has not only provided the comfortable living but also the by product for this is the generation of waste. It should be managed properly for healthy living. The habit to keep campus clean is inculcated through habits and practice.

To keep MRSPTU clean and green: -

Peer teams in Sanitation and Hygiene, Waste Management, Water Management, Green Cover and Energy Conservation are formed.

Each peer team will consist of one faculty member, ten students and supporting staff to monitor one given criteria.

The zones of campus will be formed for convenient working of teams.

Social media platform will be used to connect all the departments of the campus.

The core five teams will monitor the cleanliness and other parameters for green campus.

1. Sanitation and Hygiene

MRSPTU is committed to provide safe drinking water, functional toilets, clean surroundings.

The methodologies adopted will be for long term benefits and will include: -

a) Adequate number of toilets (student/Toilet ratio)
b) Gender balance toilets
c) Adequate facility for water
d) Proper sanitation and efficiency
e) Water efficient toilets
f) Disabled friendly toilets
g) Mess hygiene
h) Canteen hygiene
i) Dedicated Staff for monitoring hygiene

2. Waste Management

The waste in the campus will be categorized into different categories including e-waste, organic waste, paper metal, plastic and bio medical waste.

Policy for waste handling

a) Biomedical waste in the pharmaceutical department is disposed off as per the guidelines of PCI. There is a contract for disposal of biomedical waste with a designated contractor.

b) Incinerator are there for disposal of sanitary napkins in the hostels.

c) There are strict rules for littering in the campus

d) The sale and use of plastic is banned in the campus.

e) Reusable cloth banners are supported instead of flex and paper pamphlets.

f) The awareness drives are planned in campus to motivate students and staff to minimize the waste generation.

g) The students and staff will be motivated to reuse the things as instead of polythene bags they will be motivated to use cloth bags.

3. Water Conservation

The basic idea of Water conservation to reduce the wastage of water in the campus. The values will be inculcated in the students and staff to

a) Monitor running taps

b) Monitor the overflow in overhead tanks

c) Will sick to indigenous variety of plants which require lesser amount of water

d) There is rain water recharging system in the campus

e) Regular maintenance of water taps, pipes and other equipments

4. Greenery

MRSPTU has lushy green campus with almost 50% area covered with plants. There are wide variety of plants which provide ecofriendly environment in the campus. To maintain the plants horticulture department works round o'clock. Campus has its own nursery and seed bed. To maintain this green cover number of programs are organized

a) World environment day

b) Van Mahotsav

c) Tree plantation drives

d) The students are motivated to organize camps for cutting the weeds of the area.

5. Energy Conservation

It has been noticed that normally campuses consume good quantity of energy. However, MRSPTU is committed to save energy through: -

a) Solar system is installed in the campus

b) Solar power generated is linked to grid.

c) Energy efficient equipments and LED's are installed in the campus.

d) Air filters and AC's are cleaned regularly

e) The temperature of AC's is suggested to keep at 24 °C.

In nutshell our endeavor is to reduce the carbon footprints to provide clean and green campus.

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Energy conservation is the process of identifying energy wastage and taking steps to reduce this wastage.

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13/11/2021

HESD/8261

Dt - 18-10-21

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n) Insulate our campus

Insulation plays a key role in lowering our utility bills through retaining heat during the winter and keeping heat out of our campus during the summer.

Modified Energy Conservation policy is being submitted for kind consideration.

18/10/2021

RDO to Director IQAC & copy is sent to Estate Officer, MRSPTU.

Estate Officer

Kindly Check the Content, Grammer, typographical errors etc. & return it by Monday 10:00am.

Dr. Ved Prakash, EE

UBS DIR/IQAC/MRSPTU/19/01.10.2021

PLASTIC BAN POLICY

There are number of reasons for banning plastic, including, plastic waste has emerged as one of the biggest environmental concerns adversely impacting the soil, water, health and well-being of citizen at large, excess-consumption of plastic combined with limited waste disposal systems has become a challenge to the urban waste disposal systems, and has choked the rivers and water systems in rural areas, the time has come for a systematic campaign to reduce the usage of plastic especially the single-use plastic, the University has decided to take plastic ban as a campaign of importance to address the environmental hazards being and bring attitudinal changes that shun use of plastics, the educational institutions have the unique spread and influence to educate the students and households on the needs for avoiding usage of plastic.

As per the University Grant Commission (UGC) guidelines to ban the use of plastic in Universities/educational institutions and in support of the 'Swachhata Hi Sewa' Campaign, launched by the Government of India with an aim to eliminate the use of plastic and to dispose of plastic waste, Maharaja Ranjit Singh Punjab Technical University implement strict ban on single use plastic in its campus, constituent colleges and affiliated institutions with immediate effect.

Towards achieving the objective, following measures will be taken to make their campuses 'plastic-free' by systematically banning the use of plastic and replacing the same with suitable environment-friendly substitutes at all institutions and adoption of policies and practices towards cleaner and plastic-free campuses.

For this, every institution shall:

a) Ban use of single-use plastics in canteens, shopping complexes in the institution's premises and hostels, etc.

b) Carry out awareness drives and sensitization workshops on the harmful impacts of single-use plastics.

c) Mandate all students to avoid bringing non-bio-degradable plastic items to the institutions.

d) Encourage their students to sensitize their respective households about the harmful effects of plastics and make their households 'plastic-free'

e) Install necessary alternative facilities like water units to avoid the use of plastic water bottles, and encourage the use of alternative solutions like cloth bags, paper bags, etc, instead of plastic bottles, bags, cover, and other goods on campuses.

f) All institutions, which have adopted villages under Unnat Bharat Abhiyan shall undertake a campaign in their adopted villages till they are converted into 'plastic-free villages' through promoting awareness and encouraging the shift to alternative products.

What is it?

Plastic Free Campus, PFC is dedicated to helping schools fight single-use plastic pollution worldwide. PFC helps schools make a difference for the environment and our own health.

Why?

- Plastic pollution is a real issue – just look around
- Plastics are made from oil and gas and their production harms our environment from added greenhouse gases.
- Nature can't digest it, Plastics break UP into smaller pieces called micro-plastics. It never breaks down.
- Plastics affect millions of sea and land creatures who are injured or killed eating them.
- Plastics are now found everywhere: in our food, drink, in nature and all over the planet.
- Plastic food and drink packaging often contain harmful chemical additives that affect human health.

Therefore, we need to kick the plastics habit.

How?

- Enabling schools and communities to make a meaningful environmental impact
- Inspiring students to adopt sustainable values within their own live
- Empowering them throughout the art of negotiation and self-guided research.

The plastic free campus programme will:

- Empower students to make change
- Help students to organise teams to create a movement
- Teach students negotiation techniques and the power of persuasion
- Ask students to investigate existing local waste management systems
- Lead students to create community awareness of the plastic pollution issue

- Inspire behavioural changes at university, home and community
- See the How to Get Started Video: https://youtu.be/3qQG0LhPOS8

The plastic free campus programme will:

a) Encourage discussion at home on how and why to reduce reliance on plastics

b) Provide students to develop key life skills; teamwork, organisation, communication, negotiation and project management

c) Allow parents/teachers to follow progress as observers

d) What do the Faculty and Students say? Watch: https://youtu.be/HKCBi9n-GAg

The plastic free campus programme will:

1. Provide students the chance to develop key life skills; teamwork, organisation, communication, negotiation and project management
2. Improve curriculum links to integrate the issue of plastic pollution and waste management into the classroom
3. Provide resources and tools to conduct community and locally-focused projects
4. Help schools better apply the values reflected in school policy
5. See How to Get Started Video: https://youtu.be/Vh0BWAYjI3w

The plastic free campus programme provides:

- An active hands-on learning opportunity
- Measurable results – baseline metrics at the start and quantified results at the end
- Individual, family, school and community engagement
- Sharing lessons learned here and from others around the world

HSED/8200
Dt-18-10-21

Dr Meera has framed a Policy for Plastic Ban. As per telephonic conversation with her, the policy under consideration is fine. RTO is submitted. Copy of above is submitted to Estate Officer. 18/10/2021

Physical Facilities

Sr No	Name of Facilities
01	Campus Guest House
02	Cafeteria
03	Student Centre
04	Canteen near Workshop Deptt.
05	Canteen Near Civil Engineering Deptt.
06	Girls Common Room in GZS School of Planning & Architecture Deptt.
07	Common Room in Boys Hostel No. 01, 02, 03, 04, 05 and Girls Hostel No. 01 & 02
08	Conference Hall
09	Committee Room
10	Library
11	Auditorium
12	Multipurpose Hall
13	Dispensary
14	Open Air Theatre
15	High filtration Campus Treatment Plant
16	Day Care facilities
17	**Sports Facilities**
a)	Gymnasium Hall
	Table Tennis
	Badminton Court
b)	Outdoor Grounds
	Hockey Ground
	Cricket Ground
	Athletic Track
	Basketball Courts (03 No's)
	Lawn Tennis Court

Shopping Complex	
18	Book Shop
19	Photostat Shop
20	Cyber Café Shop
21	Post Office
22	Central Bank of India

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

Dabwali Road, Bathinda

ਗੈਸਟਹਾਊਸਬੁਕਿੰਗਫਾਰਮ/ GUEST HOUSE BOOKING FORM

ਬੁਕਿੰਗਨੰ:/Booking No.: ..... ਮਿਤੀ/Date: .....

1. ਆਉਣਵਾਲੇਦਾਨਾਮ/ Name of Visitor : .....
2. ਅਹੁਦਾ/ Designation : .....
3. ਆਉਣਵਾਲੇਦਾਪਤਾ/ Postal Address of Visitor: .....

   .....

   ਟੈਲੀਫੋਨਨੰ:/Telephone No.:..... ਈਮੇਲ/Email ID.....
4. ਬੁਕਿੰਗਦਾਮਨੋਰਥPurpose of Booking : ……..
5. ਅੰਦਾਜਨਪਹੁੰਚਣਦੀਮਿਤੀਅਤੇਸਮਾਂ/ Expected arrival date and time: .....
6. ਅੰਦਾਜਨਛੱਡਣਦੀਮਿਤੀਅਤੇਸਮਾਂ/ Expected departure date and time: .....
7. ਕਮਰਿਆਂਦੀਸੰਖਿਆ/ No. of Rooms required : .....
8. ਮੈਂਬਰਾਂਦੀਸੰਖਿਆ/ No. of Person(s) : .....
9. ਖਾਣੇਦੀਜਰੂਰਤ (ਬਰੇਕਫਾਸਟ/ਲੰਚ/ਡਿਨਰ)/ Tentative requirement for meals (BF/L/D)

ਖਾਣਾ/ Meal	ਗਿਣਤੀ/ Number	ਮਿਤੀ/ Date
ਬਰੇਕਫਾਸਟ/ Breakfast		
ਲੰਚ/ Lunch		
ਡਿਨਰ/ Dinner		

10. ਬੁਕਿੰਗਕਰਵਾਉਣਵਾਲੇਦਾਪਤਾ (ਜੇਕਰਸ਼੍ਰੇਣੀ 1, 2 ਜਾਂ 3 ਅਧੀਨਹੋਵੇ)*

    Details of Person make the booking (if under category 1,2 or 3)*

    (ੳ) ਨਾਮਅਤੇਪਤਾ/ Name & Address : .....

    (ਅ) ਅਹੁਦਾ, ਅਦਾਰਾ/ਵਿਭਾਗ/ਸੈਂਟਰ (Designation, Institute/Deptt./Centre .....

    (ੲ) ਟੈਲੀਫੋਨਨੰ:/Telephone No.:.....ਈਮੇਲ/Email ID .....

    ( ) ਕਿਰਪਾਕਰਕੇਮਹਿਮਾਨਤੋਂਬਣਦਾਕਿਰਾਇਆਵਸੂਲਿਆਜਾਵੇ/ Please collect the charge from the guest.

    ( ) ਜੇਕਰਮਹਿਮਾਨਭੁਗਤਾਨਨਹੀਂਕਰਦਾਤਾਂਬਿੱਲਦਾਭੁਗਤਾਨਬਿਨੈਕਾਰਸੈਟਲਕਰੇਗਾ

    If charges are not paid by the guest then applicant agrees to settle the bills.

ਕੇਅਰਟੇਕਰ/ Care Taker **ਬਿਨੈਕਾਰਦੇਹਸਤਾਖਰ/ Signature of Applicant**

*Category/ ਸ਼੍ਰੇਣੀ	Rent per room&per day/ਕਿਰਾਇਆਪ੍ਰਤੀਕਮਰਾਤੇਪ੍ਰਤੀਦਿਨ	
1. Guest of Staff (Blood relations of staff & his/her spouse)	400/-	☐
2. Guest of Staff (Friends etc *i.e.* not blood relations)	500/-	☐
3. Official duty with College/University	500/-	☐
4. Parents of Students/ Alumni of the College	500/-	☐
5. Private	1000/-	☐

Recommended for allotment of room under the above mentioned rates.

Approved/ Not Approved **Incharge Guest House**

Registrar

ਨੋਟ:/Note: ਕਿਸੇਵੀਹੋਰਜਾਣਕਾਰੀਦੇਲਈ, ਸੰਪਰਕਕਰੋ/ For any other information, kindly contact:

1. ਇੰਜ: ਰੁਪਿੰਦਰਸਿੰਘ , ਇੰਚਾਰਜਗੈਸਟਹਾਊਸ (Er.RupinderSingh ,Incharge Guest House —M: 87250-72357
2. ਸ਼੍ਰੀਬੰਸੀਲਾਲ, ਕੇਅਰਟੇਕਰ (Sh. Bansi Lal, Care Taker) —M: 87250-72432

Maharaja Ranjit Singh Punjab Technical University, Bathinda

(Gaini Zail Singh Campus College of Engineering & Technology, Bathinda)

Ref No:/_____ **Dated:_____**

Performa for use of Auditorium

Name of the department:_____

Date & Time of programme:_____

Type of programme:_____

LIST OF ITEMS IN AUDITORIUM

PA System fitted with other accessories including projector					
Wooden Chairs	40 No's	Sofa sets (02 Seater each)	6 No's	Centre Tables	6 No's
Supreme Chairs	120 No's	Lecture Dais	1 No		

UNDERTAKING

We do hereby undertake that:

1. The inner verandahs and open spaces (road & floor) outside Administrative Block will not be used for cooking purposes. The open ground away from building only shall be used for cooking purposes and the same will be got cleaned by us either through the caterer or by the tent house. The cleaning will be got done before 9 a.m of the next day.
2. It will also be ensured that no eatables or cold-drinks etc. are served in the Auditorium except to the guests or VIP's.
3. We will ensure that all posters etc. relating to the function are got removed.
4. The Auditorium will mainly be used for academic activities only and will be used for cultural functions only under un-avoidable circumstances.
5. We undertake responsibility for the cleanliness of the venue apart from ensuring compliance of the above points.
6. Received the items as per pre-page in proper working condition and agree to return in the same condition.
7. We will not use D.J at high volume and volume will be such that no disturbance is created outside.
8. We will not use Cello tape on walls & Pillars of Auditorium.

Head of Deptt. Faculty Co-ordinator Student Co-ordinator

Name:

Branch:

Roll No: Mob:

The Auditorium is vacant on _____ and may be allowed.

S.D.E

Registrar

Maharaja Ranjit Singh Punjab Technical University, Bathinda

(Gaini Zail Singh Campus College of Engineering & Technology, Bathinda)

Ref No:/_____ **Dated:_____**

Performa for use of Conference Hall

Name of the department:_____

Date & Time of programme:_____

Type of programme:_____

LIST OF ITEMS IN CONFERENCE HALL

Cordless Mike		Remote for AC		Remote for projector	
Battery 9V		Mike Receiver with adaptor		Collar Mike	
Green Laser Pointer		Mike stand		Spring Rod	
VGA to double VGA Cable		Aux Lead			
Amplifier	1 No	Projector & LCD	2 No's	Supreme Chairs	120 No's
Wooden Chairs	40 No's	Sofa sets (02 Seater each)	6 No's	Centre Tables	6 No's
Red Carpet	1 No	Wall fans	20 No's	Connection Leads	4 No's
Sound Box with Rack	1 No	Lecture Dais	1 No	Heavy Lock	1 No

UNDERTAKING

We do hereby undertake that:

1. The inner verandahs and open spaces outside Academic Branch, near Computer Centre will not be used for cooking purposes. The open ground away from building only shall be used for cooking purposes and the same will be got cleaned by us either through the caterer or by the tent house. The cleaning will be got done before 9 a.m of the next day.
2. It will also be ensured that no eatables or cold-drinks etc. are served in the Conference Room except to the guests or VIP's.
3. We will ensure that all posters etc. relating to the function are got removed.
4. The Conference Room will mainly be used for academic activities only and will be used for cultural functions only under un-avoidable circumstances.
5. We undertake responsibility for the cleanliness of the venue apart from ensuring compliance of the above points.
6. Received the items as per pre-page in proper working condition and agree to return in the same condition.
7. We will not use D.J at high volume and volume will be such that no disturbance is created outside.
8. We will not use Cello tape on walls & Pillars of Conference Room.

Head of Deptt. Faculty Co-ordinator Student Co-ordinator

Name:

Branch:

Roll No: Mob:

The Conference Hall is vacant on _____ and may be allowed.

S.D.E

Registrar

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY, DABWALI ROAD, BATHINDA

Ref No:/_____ **Dated:_____**

Performa for use of Multipurpose Hall

Name of the department:_____

Date & Time of programme:_____

Name & Type of programme:_____

UNDERTAKING

We do hereby undertake that:

1. The area of Multipurpose Hall and Parking will not be used for cooking purposes. The grassy ground away from building only shall be used for cooking purposes and the same will be got cleaned by us either through the caterer or by the tent house. The cleaning will be got done before 9 a.m of the next day.
2. We will ensure that all posters etc. relating to the function are got removed.
3. The Multipurpose Hall will mainly be used for academic and cultural technical functions/ activities.
4. We undertake responsibility for the cleanliness of the venue apart from ensuring compliance of the above points.
5. We will not use D.J at high volume and volume will be such that no disturbance is created outside.
6. We will not use Cello tape on walls & Pillars of Multipurpose Hall.
7. We assure that the function will get over by 10.00 P.M (Summer) and 9.00 P.M (Winter).

Head of Deptt. Faculty Co-ordinator Student Co-ordinator

Name:

Branch:

Roll No: Mob:

The Multipurpose Hall is vacant on _____ and may be allowed.

S.D.E

Registrar

MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY, DABWALI ROAD, BATHINDA

Ref No:/_____ **Dated:_____**

Performa for use of Open Air Theatre (OAT) at Student Centre

Name of the department:_____

Date & Time of programme:_____

Name & Type of programme:_____

UNDERTAKING

We do hereby undertake that:

1. The area of OAT and Parking will not be used for cooking purposes. The road away from building only shall be used for cooking purposes and the same will be got cleaned by us either through the caterer or by the tent house. The cleaning will be got done before 9 a.m of the next day.
2. We will ensure that all posters etc. relating to the function are got removed.
3. The OAT will mainly be used for academic and cultural technical functions.
4. We undertake responsibility for the cleanliness of the venue apart from ensuring compliance of the above points.
5. We will not use D.J at high volume and volume will be such that no disturbance is created outside.
6. We will not use Cello tape on walls & Pillars of OAT.
7. We assure that the function will get over by 10.00 P.M (Summer) and 9.00 P.M (Winter).

Head of Deptt. Faculty Co-ordinator Student Co-ordinator

Name:

Branch:

Roll No: Mob:

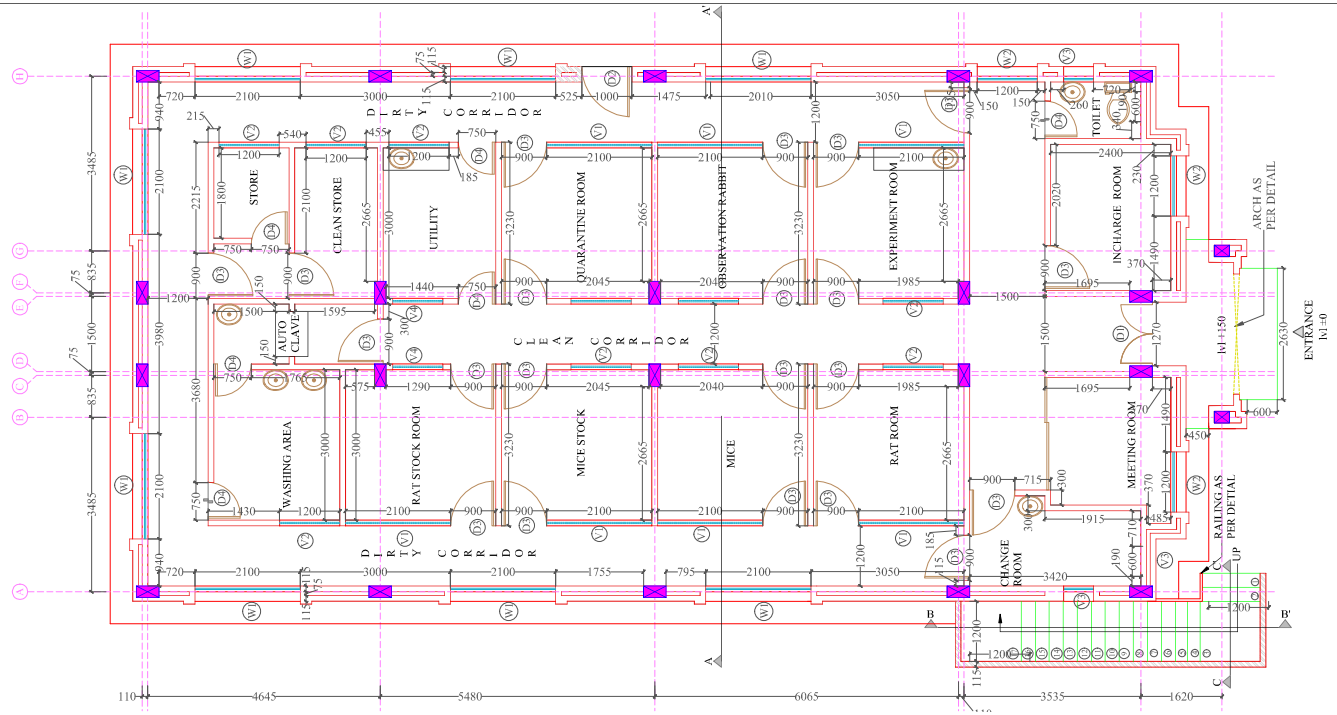
Recommended & Forwarded

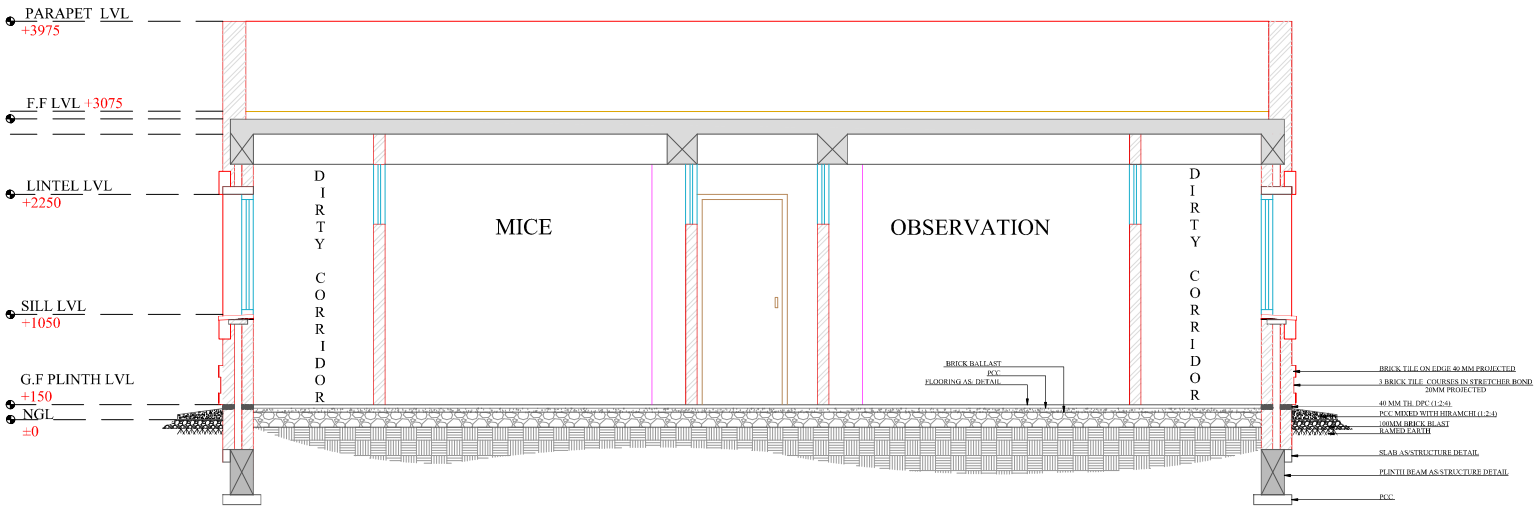
Campus Director

The Open Air Theatre is vacant on _____ and may be allowed.

S.D.E

Registrar



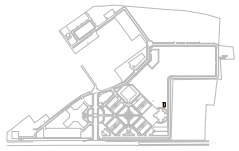


SECTION AT A-A'

Scale=1:50

Maharaja Ranjit Singh Punjab Technical University, Bathinda

Key Plan



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6. Detail drawings shall supercede smaller scale drawings and notes.

Revision		
Rev.no./Date	Description	

Sheet title: ANIMAL HOUSE

FRONT AND SIDE ELEVATION

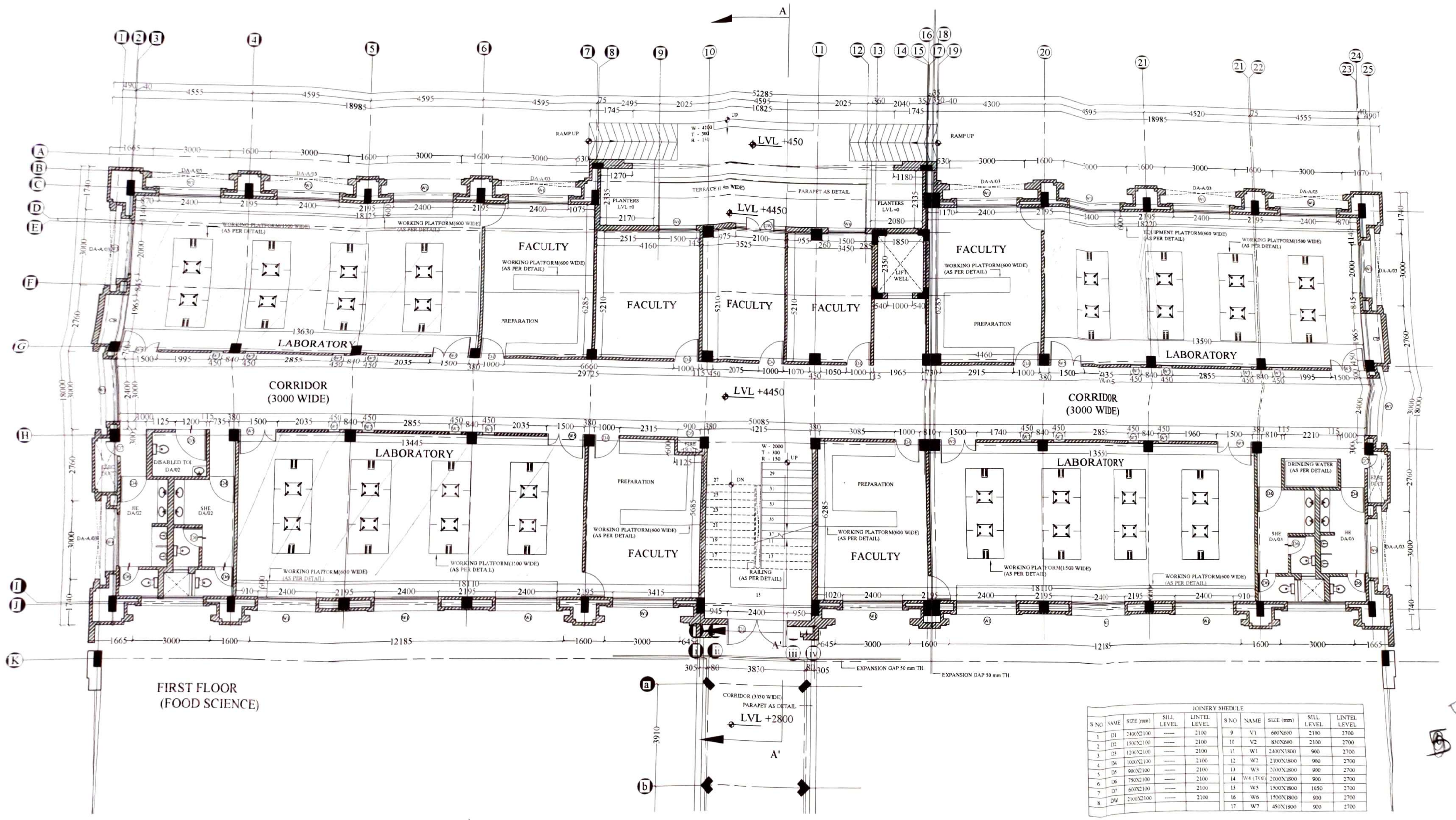
Drawing No: MRSPTU/AH/AR/F,S.E

Released for:	Date	North
	04/08/2017	
☐ Tender	☐ Information	
☐ Approval	■ Construction	
Scale 1:100	Drawn By Kawaljeet Kaur	Checked By Karamjit Singh

DESIGN TEAM:
AR. SARBJOT SINGH BEHL
AR. KARAMJIT SINGH CHAHAL
AR. RAWAL SINGH AULAKH

SIGN & STAMP

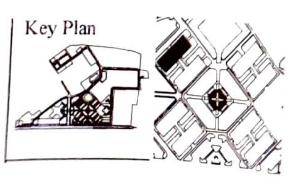
Architects
Department of Architecture
Guru Nanak Dev University, Amritsar
PHONE & FAX: 0183-245601-14 EXTN 3405,
E Mail : consultancywinggndu@gmail.com



JOINERY SHEDULE									
S NO	NAME	SIZE (mm)	SILL LEVEL	LINTEL LEVEL	S NO	NAME	SIZE (mm)	SILL LEVEL	LINTEL LEVEL
1	D1	2400X2100	----	2100	9	V1	600X600	2100	2700
2	D2	1500X2100	----	2100	10	V2	850X600	2100	2700
3	D3	1200X2100	----	2100	11	W1	2400X1800	900	2700
4	D4	1000X2100	----	2100	12	W2	2100X1800	900	2700
5	D5	900X2100	----	2100	13	W3	2000X1800	900	2700
6	D6	750X2100	----	2100	14	W4 (TOI)	2000X1800	900	2700
7	D7	600X2100	----	2100	15	W5	1500X1800	1050	2700
8	DW	2100X2100	----	2100	16	W6	1500X1800	900	2700
					17	W7	450X1800	900	2700

Maharaja Ranjit Singh Punjab Technical University, Bathinda

Key Plan



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Rev.no./ Date	Description

Revision

Sheet Title: DEPARTMENT- FOOD SCIENCE AND TECHNOLOGY (First floor plan)

Drawing No. MRSPTU/DEPT/B-A/W-1/AR/F.F (3/15)

Released for: ☐ Tender ☐ Information ☐ Approval ■ Construction

Date 15.09.2016 | Scale 1:100

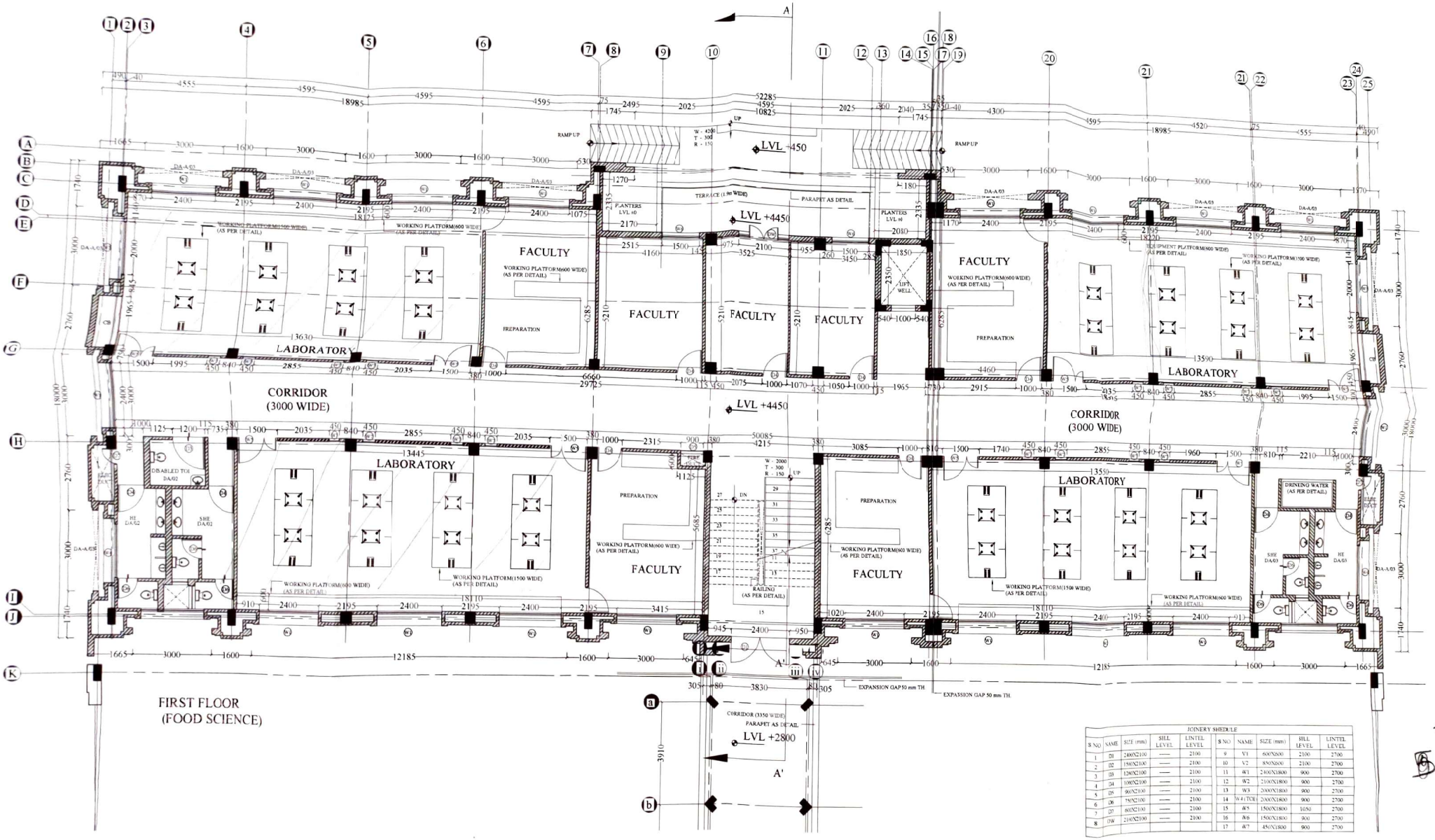
Drawn By Avneet Maan | Checked By Karamjit Singh

North

DESIGN TEAM:
AR. SARBJOT SINGH BEHL
AR. KARAMJIT SINGH CHAHAL
AR. RAWAL SINGH AULAKH

Architects Department of Architecture
Guru Nanak Dev University, Amritsar
PHONE & FAX: 0183-245601-14 EXTN 3405,
E Mail: consultancywinggndu@gmail.com

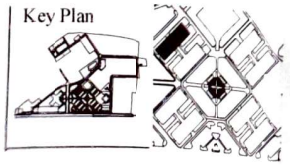
Sign & Stamp:



JOINERY SHEDULE

S NO	NAME	SIZE (mm)	SILL LEVEL	LINTEL LEVEL	S NO	NAME	SIZE (mm)	SILL LEVEL	LINTEL LEVEL
1	D1	2400X2100	——	2100	9	V1	600X600	2100	2700
2	D2	1500X2100	——	2100	10	V2	850X600	2100	2700
3	D3	1200X2100	——	2100	11	W1	2400X1800	900	2700
4	D4	1000X2100	——	2100	12	W2	2100X1800	900	2700
5	D5	900X2100	——	2100	13	W3	2000X1800	900	2700
6	D6	750X2100	——	2100	14	W4/TOI	2000X1800	900	2700
7	D7	600X2100	——	2100	15	W5	1500X1800	1050	2700
8	DW	2100X2100	——	2100	16	W6	1500X1800	900	2700
					17	W7	450X1800	900	2700

Key Plan



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Rev.no./ Date	Description	Revision

Sheet Title: DEPARTMENT- FOOD SCIENCE AND TECHNOLOGY (First floor plan)

Drawing No. MRSPTU/DEPT/B-A/W-1/AR/F.F (3/15)

Released for:

☐ Tender	☐ Information	
☐ Approval	■ Construction	
Date 15/09/2016	Scale 1:100	
Drawn By Avneet Jaan	Checked By Karamjit Singh	

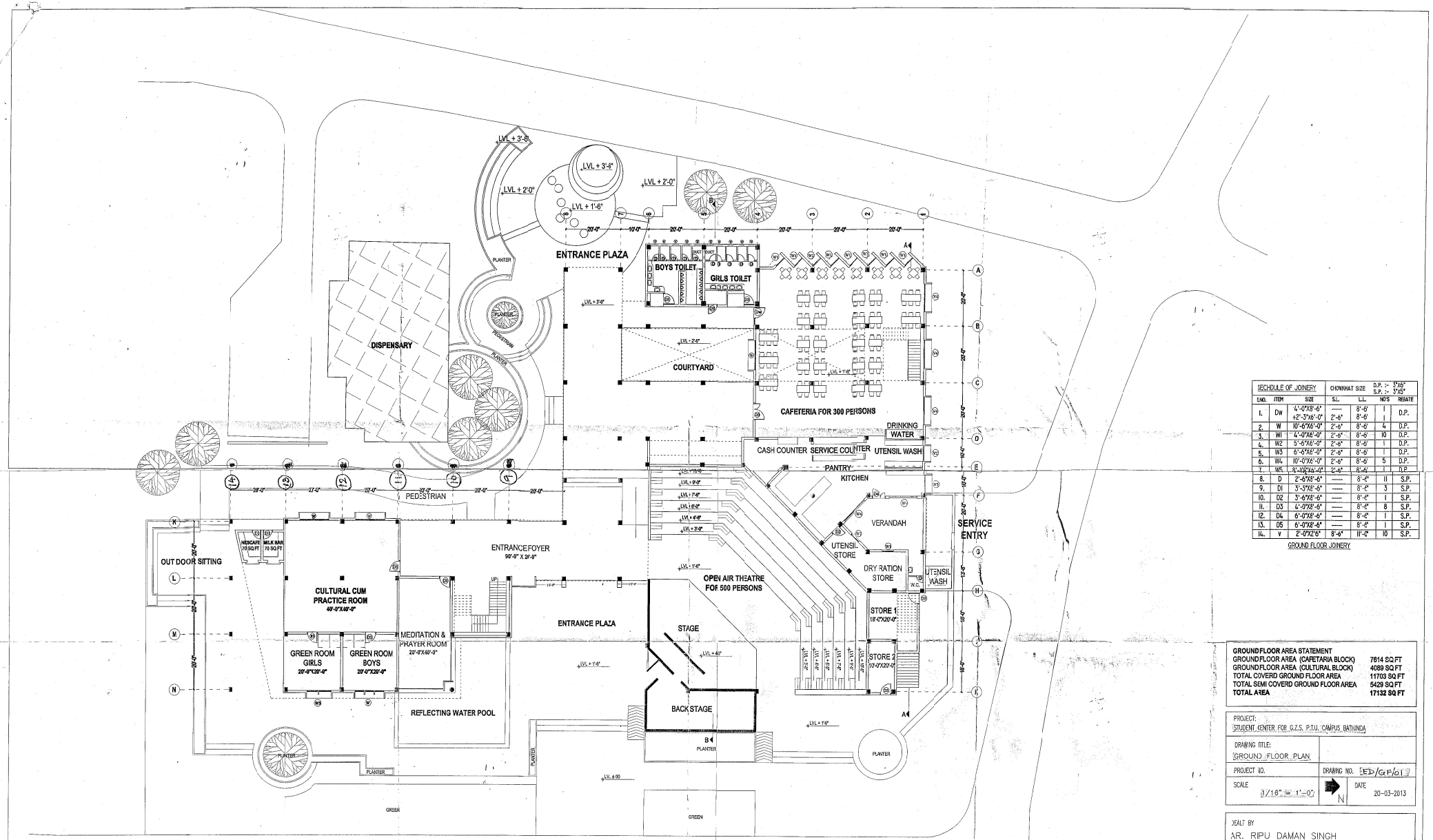
North

DESIGN TEAM
AR. SARBJOT SINGH BEHL
AR. KARAMJIT SINGH CHAHAL
AR. RAWAL SINGH AULAKH

Architects Department of Architecture
Guru Nanak Dev University, Amritsar
PHONE & FAX: 0183-2456014 EXTN 3405,
E Mail: consultancywinggndu@gmail.com

Sign & Stamp:

Maharaja Ranjit Singh Punjab Technical University, Bathinda



SCHEDULE OF JOINERY			CHOWKHAT SIZE			D.P. :- 5"X6" S.P. :- 3"X5"
S.NO.	ITEM	SIZE	S.L.	L.L.	NO'S	REBATE
1.	DW	4'-0"X8'-6" +2'-3"X6'-0"	------ 2'-6"	8'-6" 8'-6"	1 1	D.P.
2.	W	10'-6"X6'-0"	2'-6"	8'-6"	4	D.P.
3.	W1	4'-0"X6'-0"	2'-6"	8'-6"	10	D.P.
4.	W2	5'-6"X6'-0"	2'-6"	8'-6"	1	D.P.
5.	W3	6'-6"X6'-0"	2'-6"	8'-6"	1	D.P.
6.	W4	10'-0"X6'-0"	2'-6"	8'-6"	5	D.P.
7.	W5	8'-10"X6'-0"	2'-6"	8'-6"	1	D.P.
8.	D	2'-6"X8'-6"	------	8'-0"	11	S.P.
9.	D1	3'-3"X8'-6"	------	8'-0"	3	S.P.
10.	D2	3'-6"X8'-6"	------	8'-0"	1	S.P.
11.	D3	4'-0"X8'-6"	------	8'-0"	8	S.P.
12.	D4	6'-0"X8'-6"	------	8'-0"	1	S.P.
13.	D5	6'-0"X8'-6"	------	8'-0"	1	S.P.
14.	V	2'-0"X2'6"	8'-6"	11'-0"	10	S.P.

GROUND FLOOR JOINERY

GROUND FLOOR AREA STATEMENT	
GROUND FLOOR AREA (CAFETARIA BLOCK)	7614 SQ.FT
GROUND FLOOR AREA (CULTURAL BLOCK)	4089 SQ.FT
TOTAL COVERD GROUND FLOOR AREA	11703 SQ.FT
TOTAL SEMI COVERD GROUND FLOOR AREA	5429 SQ.FT
TOTAL AREA	**17132 SQ.FT**

PROJECT:
STUDENT CENTER FOR G.Z.S. P.T.U. CAMPUS BATHINDA

DRAWING TITLE:
GROUND FLOOR PLAN

PROJECT NO.

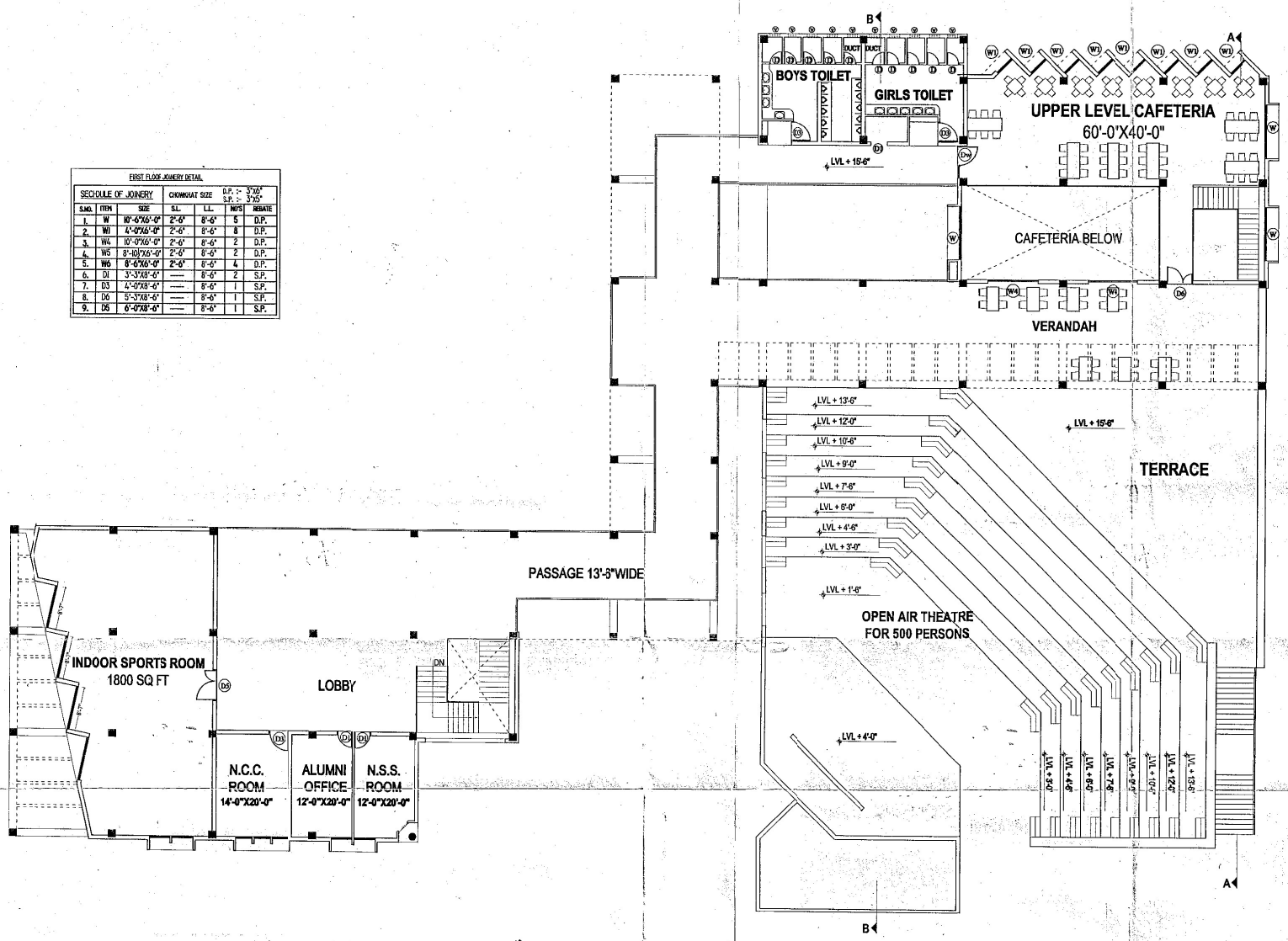
DRAWING NO. SCD/GFP/01

SCALE 1/16" = 1'-0"

N

DATE 20-03-2013

DEALT BY
AR. RIPU DAMAN SINGH
AR. JATINDER KAUR
Asstt Professor
Deptt of Architecture
PTU GZS Campus
BATHINDA
CO-ORDINATOR
DEPARTMENT OF ARCHITECTURE
G.Z.S. P.T.U. CAMPUS BATHINDA



FIRST FLOOR JOINERY DETAIL

SCHEDULE OF JOINERY			CHOWKHAT SIZE		D.P. :- 3"X6" S.P. :- 3"X5"	
S.NO.	ITEM	SIZE	S.L.	L.L.	NO'S	REBATE
1.	W	10'-6"X6'-0"	2'-6"	8'-6"	5	D.P.
2.	W1	4'-0"X6'-0"	2'-6"	8'-6"	8	D.P.
3.	W4	10'-0"X6'-0"	2'-6"	8'-6"	2	D.P.
4.	W5	8'-10"X6'-0"	2'-6"	8'-6"	2	D.P.
5.	W6	8'-6"X6'-0"	2'-6"	8'-6"	4	D.P.
6.	D1	3'-3"X8'-6"	——	8'-6"	2	S.P.
7.	D3	4'-0"X8'-6"	——	8'-6"	1	S.P.
8.	D6	5'-3"X8'-6"	——	8'-6"	1	S.P.
9.	D5	6'-0"X8'-6"	——	8'-6"	1	S.P.

FIRST FLOOR AREA STATEMENT	
FIRST FLOOR AREA (CAFETERIA BLOCK)	3264 SQ FT
FIRST FLOOR AREA (CULTURAL BLOCK)	2884 SQ FT
TOTAL COVERED AREA	6148 SQ FT
SEMI COVERED AREA	2600 SQ FT
OPEN AIRTHEATRE	6500 SQ FT
BACK STAGE	672 SQ FT

PROJECT:
STUDENT CENTER FOR G.Z.S. P.T.U. CAMPUS BATHINDA

DRAWING TITLE:
FIRST FLOOR PLAN

PROJECT NO.

DRAWING NO. ED/FF/01

SCALE 1/16" = 1'-0"

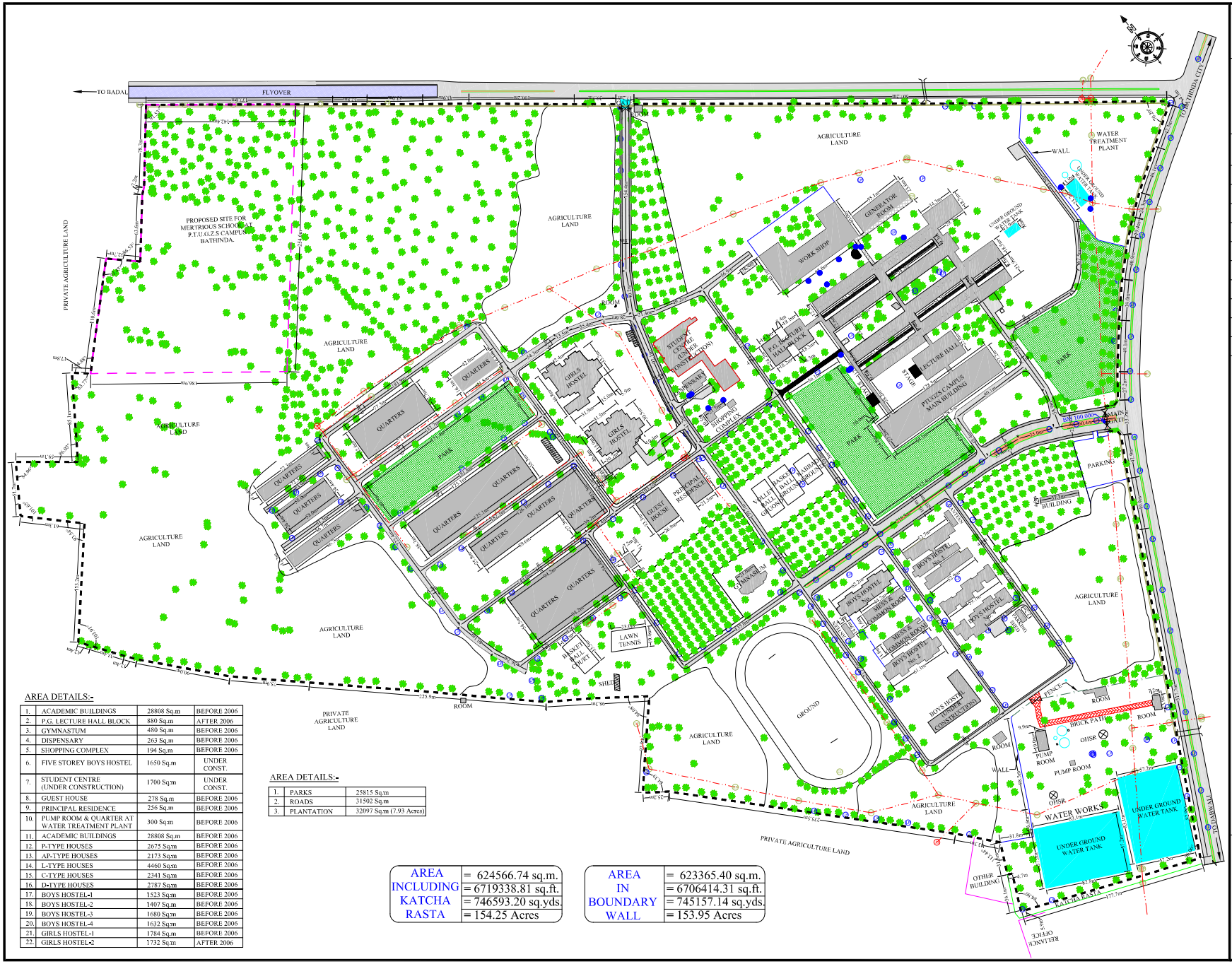
N

DATE 20-03-2013

DEALT BY
AR. RIPU DAMAN SINGH
AR. JATINDER KAUR

CO-ORDINATOR
DEPARTMENT OF ARCHITECTURE
G.Z.S. P.T.U. CAMPUS BATHINDA

Asstt. Professor
Deptt. of Architecture
PTU CAMPUS BATHINDA



AREA DETAILS:-

1.	ACADEMIC BUILDINGS	28808 Sq.m	BEFORE 2006
2.	P.G. LECTURE HALL BLOCK	880 Sq.m	AFTER 2006
3.	GYMNASTUM	480 Sq.m	BEFORE 2006
4.	DISPENSARY	263 Sq.m	BEFORE 2006
5.	SHOPPING COMPLEX	194 Sq.m	BEFORE 2006
6.	FIVE STOREY BOYS HOSTEL	1650 Sq.m	UNDER CONST.
7.	STUDENT CENTRE (UNDER CONSTRUCTION)	1700 Sq.m	UNDER CONST.
8.	GUEST HOUSE	278 Sq.m	BEFORE 2006
9.	PRINCIPAL RESIDENCE	256 Sq.m	BEFORE 2006
10.	PUMP ROOM & QUARTER AT WATER TREATMENT PLANT	300 Sq.m	BEFORE 2006
11.	ACADEMIC BUILDINGS	28808 Sq.m	BEFORE 2006
12.	P-TYPE HOUSES	2675 Sq.m	BEFORE 2006
13.	AP-TYPE HOUSES	2173 Sq.m	BEFORE 2006
14.	L-TYPE HOUSES	4460 Sq.m	BEFORE 2006
15.	C-TYPE HOUSES	2341 Sq.m	BEFORE 2006
16.	D-TYPE HOUSES	2787 Sq.m	BEFORE 2006
17.	BOYS HOSTEL-1	1523 Sq.m	BEFORE 2006
18.	BOYS HOSTEL-2	1407 Sq.m	BEFORE 2006
19.	BOYS HOSTEL-3	1680 Sq.m	BEFORE 2006
20.	BOYS HOSTEL-4	1632 Sq.m	BEFORE 2006
21.	GIRLS HOSTEL-1	1784 Sq.m	BEFORE 2006
22.	GIRLS HOSTEL-2	1732 Sq.m	AFTER 2006

AREA DETAILS:-

1.	PARKS	25815 Sq.m
2.	ROADS	31502 Sq.m
3.	PLANTATION	32097 Sq.m (7.93 Acres)

AREA INCLUDING KATCHA RASTA	= 624566.74 sq.m. = 6719338.81 sq.ft. = 746593.20 sq.yds. = 154.25 Acres

AREA IN BOUNDARY WALL	= 623365.40 sq.m. = 6706414.31 sq.ft. = 745157.14 sq.yds. = 153.95 Acres

PROJECT:-
LAYOUT PLAN OF GZS PTU CAMPUS AT BATHINDA

CLIENT:-
DIRECTOR CAMPUS,
GZS PTU CAMPUS,
BATHINDA

LEGEND:

S.NO.	NAME	SIGN
1)	BOUNDARY	
2)	METTALED ROAD	
3)	RCC ROAD	
4)	TREE	
5)	ELECTRIC POLE	EP
6)	LIGHT POLE	LP
7)	TRANSFORMERS	TF
8)	ELECTRIC WIRE	
9)	MANHOLE	

NOTE:-
ALL DIMENSIONS ARE IN MTRS.

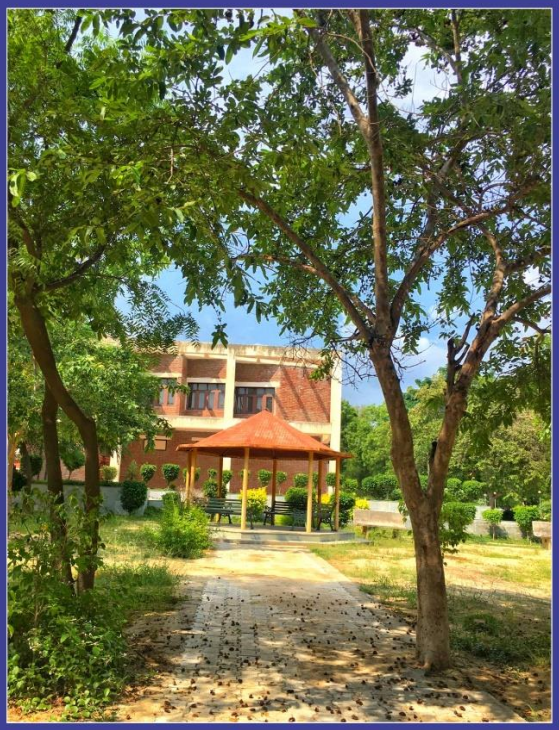
SCALE : 1:1600

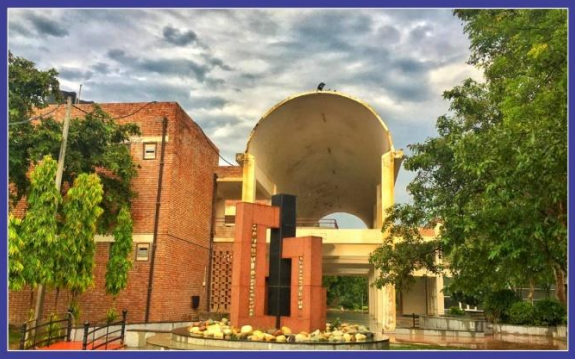
MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY

Dabwali Road, Bathinda (Pb.) - 151001

(Estd. by Govt. of Punjab Vide Punjab Act No. 5 of 2015) ONLY TECHNICAL UNIVERSITY OF PUNJAB HAVING UGC APPROVAL UNDER 2(f) AND 12 B OF UGC ACT, MEMBER AIU.

Think Excellence, Live Excellence





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