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|  | **Visvesvaraya Technological University**  **“Jnana Sangama”**  **Belagavi: 590018 Karnataka, India.**  **Tele: 0831-2498225, 2405454** |

**VTU Sponsored Student Project Proposal Format**

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| 01 | Academic Year: | 2021-2022 | |
| 02 | Semester: | 8th Semester | |
| 03 | Name of the College: | VIVEKANANDA INSTITUTE OF TECHNOLOGY | |
| 04 | Branch: | CIVIL ENGINEERING | |
| 05 | Project Title: | AN EXPERIMENTAL STUDY ON MARSHALL PROPERTIES OF BITUMINOUS CONCRETE MIX PREPARED USING E-WASTE AND GGBS | |
| 06 | Project Discipline: | HIGHWAY | |
| 07 | Principal | Name: | Dr. PADMANABHA S |
| Contact No: | +91 7625013435 |
| Email id: | [vkitprincipal@gmail.com](mailto:vkitprincipal@gmail.com) |
| 08 | HOD | Name: | Dr. C S SHASHIKUMAR |
| Contact No: | +91 9886506760 |
| Email id: | [shashicsk.cv@gmail.com](mailto:shashicsk.cv@gmail.com) |
| 09 | Project Guide | Name: | SIDDARAJU N |
| Contact No: | 9902652361 |
| Email id: | [siddaraju.cv@gmail.com](mailto:siddaraju.cv@gmail.com) |
| 10 | Project Co-Guide (If any) | Name: | - |
| Contact No: | - |
| Email id: | - |
| 11 | Project Committee coordinator  (Identified by the college) : | Name: | Dr. Vidya A |
| Contact No: | +91 9986011084 |
| Email id: | [vidya.csehod.vkit@gmail.com](mailto:vidya.csehod.vkit@gmail.com) |

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| 12 | Name of project group Members | | |
| 1.Group leader and Member | | |
| Name: SHIVRAJ ANAND BATWAL | |  |
| USN No.: 1VK18CV020 | |
| Contact No: 7348901822 | |
| Email id: shivrajbatwal5@gmail.com | |
| 2.Member | | |
| Name: NITHIN KUMAR B | |  |
| USN No.: 1VK18CV011 | |
| Contact No: 8151050516 | |
| Email id: nithinnithu2999@gmail.com | |
| 3.Member | | |
| Name: SHASHIKANT Y DALAWAI | |  |
| USN No.: 1VK18CV019 | |
| Contact No: 9148821740 | |
| Email id: sydshashikant8505@gmail.com | |
| 4.Member | | |
| Name: S ARPITHA | |  |
| USN No.: 1VK18CV017 | |
| Contact No: 9845274311 | |
| Email id: arpithanarayan2000@gmail.com | |
| 13 | Scope / Objectives of the project: | * To determine the properties of aggregate and assess the test results as per MORTH specification. * To determine the properties of viscosity grade bitumen (VG-30) and assess the test result as per IRC SP: 53-2010 requirements. * To determine the optimum bitumen content in the prepared bituminous concrete mix * To determine the Marshal Properties of bituminous concrete mix prepared using E-waste and GGBS as filler material. * Comparison of Marshal Properties of Conventional and non-conventional bituminous concrete mix. * To workout the cost requirement of bituminous concrete mix for 1KM road construction. | |
| 14 | Methodology of work:  (Including diagram, flow chart and design calculations) | * Conduction of test on the Aggregates to determine the desirable properties of Aggregates. * Conduction of test on the Bitumen to determine the desirable properties of Bitumen. * Conduction of Marshall Stability test on Bituminous Concrete Mix prepared using E-waste and GGB+S. * Determination of Marshall properties such as Stability, Flow ,VMA, VFB, Air voids etc., * Comparison of results of Marshall properties for Conventional and non-conventional Bituminous Mix. | |
| 15 | Expected Outcome of the project: | * Based on experimental investigation conducted on Bituminous Concrete Mix prepared using E-waste and GGBS. It is concluded that the material properties of Bituminous Concrete Mix prepared using E-waste and GGBS is found to be superior when compared to non-conventional mix and also results are satisfied as per Mohr’s Specification. | |
| 16 | Application of the project: | * Stability of Bituminous concrete mix prepared using E-waste and GGBS is increased and this mix can be used for construction of road as a surface course for under heavy traffic volume. | |
| 17 | Budget details with Materials required: | |  |  |  | | --- | --- | --- | | Material | Quantity | Amount | | Aggreagtes(20mm down) | 10kg | Rs. 2000/- | | Bitumen | 15kg | Rs. 1350/- | | Dust | 3 Bags | Rs. 600/- | | Moulds | 8 | Rs. 3200/- | |  |  | Total= Rs. 7150/- | | |

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| 18 | Date of commencement of the Project: | 04-10-2021 |
| 19 | Probable date of completion of the project: | 16-06-2022 |
| 20 | Duration of project work: | 6 Months  (Effectively) |
| 21 | Pert chart for completion of the project in said duration as per planned activities: | |

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| Sl.No | Activities  Planned | 1 Month/  Week | 2 Month/  Week | 3 Month/  Week | 4 Month/  Week | 5 Month/  Week | 6 Month/  Week |
| 01 | Literature  review |  |  |  |  |  |  |
| 02 | Planning/  Designing |  |  |  |  |  |  |
| 03 | Assembly/  Fabrication work |  |  |  |  |  |  |
| 04 | Final  Testing |  |  |  |  |  |  |
| 05 | Result & Calculation/  Conclusion |  |  |  |  |  |  |
| 06 | Preparation of Report &  Submission |  |  |  |  |  |  |

**DECLARATION BY THE STUDENTS**

We, the project group members hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge. We undertake to inform VTU, of any changes there in the project title, students name will be intimated immediately. In case, any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it.

We are aware that the project group has to exhibit / demonstrate the project for evaluation in the VTU Regional center and for exhibition at VTU, Belagavi. If the project group fails to attend the evaluation in Regional center and for Exhibition in VTU Belagavi, the sponsored project amount will be returned back to VTU immediately.

We also hereby, enclose the endorsement form to VTU, Belagavi.

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| --- | --- | --- |
| Sl.No | Name of the Student | Signature with date |
| 01 | Shivraj Anand Batwal |  |
| 02 | Nithin Kumar B |  |
| 03 | Shashikant Y Dalawai |  |
| 04 | S Arpitha |  |

ENDORSEMENT

This is to certify that

**1] Shivraj Anand Batwal**

**2] Nithin Kumar B**

**3] Shashikant Y Dalawai**

**4] S Arpitha**

Are bonafide students of Department of Civil Engineering in Vivekananda Institute of Technology, of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional Centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional center and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

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| Signature of Project Guide with date | Signature of HOD with Seal and date | Signature of the Principal with Seal and date |
|  |  |  |
| Name: Mr. Siddaraju N | Name: Dr. Shashikumar C S | Name: Dr. Padmanabha S |

ENDORSEMENT

(Endorsement to be taken in the institution on Department Letter head) This is to certify that 1] ………….

2] ………….

3] ………….

4] ………….

Are bonafide students of Department in…………………………., of our institution. If the project proposal submitted by these students under VTU Sponsored Student Project Proposal is selected by VTU, we will provide the required laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps that the project group will exhibit / demonstrate their project in the Regional Centre and for exhibition at VTU, Belagavi. If the student group fails to attend the evaluation in Regional centre and exhibition at VTU Belagavi, the supported project amount will be returned back to VTU immediately.

|  |  |  |
| --- | --- | --- |
| Signature of Project Guide with date | Signature of HOD with Seal and date | Signature of the Principal with Seal and date |
|  |  |  |
| Name: | Name: | Name: |