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Graduate Student Action Research to Support Development of Engineering for Sustainable Development Degree Programs, Part I: Collaborative Community Action Research Vignettes

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## *Abbreviations*

AASHE - Association for the Advancement of Sustainability in Higher Education

CASA - Cole Arts and Science Academy

CSM – Colorado School of Mines

DfE – Design for the Environment

DPS - Denver Public School

EESD – Engineering Education for Sustainable Development

EIC – Environment as an Integrated Context

EPS - Engineering Problem Solving

HEI – Higher Education Institution

HESD – Higher Education for Sustainable Development

HVAC – Heating Venting Air Conditioning

LCA - Life Cycle Assessment

LCC - Life Cycle Cost Assessment

LCSA - Life Cycle Sustainability Assessment

PERW - Participatory Emergent Readers and Writers

S<sup>4</sup> – STEM Sustainability Science Station

SLCA - Social Life Cycle Analysis

STEM – Science Technology Engineering Mathematics

STEAM - Science Technology Engineering Arts and Mathematics

UNESCO - United Nations Educational, Scientific and Cultural Organization

US EPA – United States Environmental Protection Agency

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