ANALYSIS AND DESIGN OF RUBBLE MASONRY GRAVITY RETAINING WALL AT CUSU CREEK

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March 2000

ANALYSIS AND DESIGN OF RUBBLE MASONRY GRAVITY RETAINING WALL AT CvSU CREEK

An Undergraduate Design Project
Submitted to the Faculty of the
College of Engineering
Cavite State University
Indang, Cavite

In partial fulfillment
of the requirements for the degree of
Bachelor of Science in Civil Engineering

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March 2000

ABSTRACT

ROCELA, LARRY ESBER. " ANALYSIS AND DESIGN OF RUBBLE MASONRY GRAVITY RETAINING WALL AT CvSU CREEK ". Cavite State University, Indang, Cavite, March 2000.
Adviser: **Engr. Roslyn P. Peña**

The Analysis and Design of Rubble Masonry Gravity Retaining Wall at CvSU Creek was conducted at the Cavite State University, Indang, Cavite from November 1999 to February 2000. Specifically, it was aimed to: investigate the existing condition of the creek; design a retaining wall that will maintain the stability of the soil; and determine the estimated cost of the Rubble Masonry Gravity Retaining Wall.

The result of the design was adequate and safe to the factors that can affect into it. It will bring safety to the Central Supply Building as well as maintain the stability of the soil along the creek. The existing Retaining Wall was recommended for renovation for economical purpose and to maintain into a good shape. The design was economical compared to other types of retaining wall. Sidewalks were also proposed to be used as a shortcut to the Student Union Building and to add beauty to the University.

TABLE OF CONTENTS

LIST OF TABLE

Table **Page**

LIST OF FIGURES

LIST OF APPENDIX TABLE

LIST OF APPENDIX FIGURES

FIGURE **Page**

CROSS – SECTION OF CUT AND FILL

ANALYSIS AND DESIGN OF RUBBLE MASONRY GRAVITY RETAINING WALL AT CvSU CREEK [1/]

Larry Esber Rocela

[1/] An undergraduate design project presented to the faculty of the Department of Civil Engineering, College of Engineering, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Civil Engineering (BSCE) with Contribution No. CE-99-2000-337-06. Prepared under the supervision of Engr. Roslyn P. Peña.

INTRODUCTION

Retaining walls are structures built for the purpose of holding back the one-sided lateral confinement for soil or other loose materials. It is commonly used to support soil from assuming its natural slope.

There are several types of retaining walls but whichever type is used, there will be three forces involved that must be brought into equilibrium. These include: the gravity loads of the concrete wall and any soil on top of the footing or the developed weight; the lateral forces/pressure from the soil; and the bearing resistance of the soil.