

EXECUTIVE SUMMARY

THE ROBERT M. ARNOLD PUBLIC HEALTH SCIENCES BUILDING WAS CONSTRUCTED ON THE CAMPUS OF THE FRED HUTCHINSON CANCER RESEARCH CENTER (FHCRC). THE PUBLIC HEALTH SCIENCES BUILDING HOUSES FOUR PROGRAMS: EPIDEMIOLOGY, CANCER BIOLOGY, BIOSTATISTICS & MATHEMATICS, AND CANCER PREVENTION. THE PURPOSE OF THIS REPORT IS TO PROVIDE AN INTRODUCTION AND INITIAL INVESTIGATION OF THE STRUCTURAL SYSTEM USED FOR ARNOLD BUILDING. INCLUDED IN THE REPORT ARE DETAILED DESCRIPTIONS OF THE VARIOUS ELEMENTS WHICH MAKE UP THE STRUCTURAL SYSTEM OF THE BUILDING. THERE ARE ALSO SPOT CHECK CALCULATIONS OF GRAVITY MEMBERS AND ONE LATERAL FORCE RESISTING MEMBER. THE ASSUMPTIONS MADE IN THESE ANALYSES MAY DIFFER FROM THOSE MADE BY THE HIRED PROFESSIONALS.

THE STRUCTURE OF ROBERT M. ARNOLD BUILDING HAS VARIOUS DIFFERENT ELEMENTS. THE FLOOR SYSTEM IS COMPOSED PRIMARILY OF TWO WAY SLABS. THESE SLABS TRANSFER THE LOAD TO WHAT ARE TYPICALLY CONCRETE COLUMNS. AT THE BASE OF THE COLUMNS THE LOADS ARE THEN TRANSFERRED TO SPREAD FOOTINGS. LATERAL LOADS ARE RESISTED BY A COMBINED SYSTEM OF SHEAR WALLS AND BRACED FRAMES.