HIGH LOAD MULTI-ROTATION BEARINGS AND SEISMIC ISOLATION DEVICES COURSE OUTLINE

I. Introduction- a brief history of structural bearings will be presented starting with early rocker/roller type systems and how they have evolved into contemporary designs.

II. Contemporary Bearings- This section will cover the current types of bearings systems in use today such as elastomeric, pot, disc and spherical designs. The advantages and disadvantages of each system will be presented along with some basic design information.

III. Research and Testing- High load multi-rotational bearings have undergone significant large scale testing and research, Static testing such as vertical/horizontal load and rotation tests are typically conducted on each project. Dynamic friction and rotation tests have also been conducted. A review of standard project tests will be made along with specialty prototype tests for durability as well as research and development.

IV. Case Histories- Several case histories will be evaluated to demonstrate that high load multi-rotational bearings are applicable to both steel and concrete structures. Replaceability details and installation procedures will also be reviewed in order to demonstrate the importance of proper construction procedures.

V. Sliding Isolation Bearings- High load multi-rotational bearings can be easily modified to provide isolated response for applications where seismic forces govern. Shake table, full-scale prototype, and production bearing testing will be reviewed. Case histories will also be shown.