National Continuously Operating Reference Station (National CORS) Site Monumentation Final Report (2000)

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NATIONAL GEODETIC SURVEY

PROCESS ACTION TEAM 20

NATIONAL CONTINUOUSLY OPERATING REFERENCE STATION (NATIONAL CORS) SITE MONUMENTATION

FINAL REPORT

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Team Members: Roy Anderson, Miranda Chin, Michael Cline, Dennis Hoar, Orland Murray, William Stone

Facilitator: Joyce Turpin

ESC Liaison: Dennis Milbert

Introduction

Continuously Operating Reference Stations (CORS) play a fundamental and essential role in the establishment, definition, and utility of the National Spatial Reference System (NSRS). The future of the nation's positioning-related activities is dependent on proper implementation of CORS technology. The National Geodetic Survey (NGS) must therefore perform the functions required to assure that the National CORS system is robust and viable and that it is capable of supporting the broad spectrum of the geospatial user community. Site monumentation is an extremely important aspect of CORS technology. CORS monumentation must provide both a high degree of positional stability and an environment that has a minimal impact on the GPS signals. Implementation of the National CORS network requires the involvement of many cooperating organizations. The monumentation materials, therefore, should be readily accessible, the installation procedure should be straightforward, and the overall cost should be affordable.

Process Action Team 20 (PAT 20) was established to address the important issue of CORS site monumentation. This report will discuss the process by which PAT 20 investigated the various technical issues pertaining to CORS monumentation. It will present a summary of some representative existing monumentation systems that were researched. This will be followed by a discussion of the pertinent issues and constraints that impact the specification of a design. Finally, a set of CORS site monumentation design recommendations, as well as information about the resultant prototype monument installation, will be presented. A variety of related background and research materials pertaining to the Team's efforts is included with this report (Book 2).

[See attached .pdf file for more.]

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