

# BYLAWS

## ***CALIFORNIA SPATIAL REFERENCE CENTER COORDINATING COUNCIL***

**Cecil H. and Ida M. Green Institute of Geophysics and Planetary Physics (IGPP)  
Scripps Institution of Oceanography (SIO)  
University of California, San Diego (UCSD)**

### **ARTICLE I – NAME**

This organization shall be known as the *California Spatial Reference Center Coordinating Council*, hereinafter referred to as the Council.

### **ARTICLE II – PURPOSE**

The primary purpose of the Council is to provide support for, and advice to, the California Spatial Reference Center (hereinafter referred to as the Center) within the Cecil H. and Ida M. Green Institute of Geophysics and Planetary Physics (IGPP), a branch of the multi-campus research unit IGPP located at Scripps Institution of Oceanography at the University of California, San Diego.

### **ARTICLE III – MISSION**

The mission of the Council is, in cooperation with the National Geodetic Survey (NGS) and the Center, to:

***Ensure the availability of accurate, consistent, and timely spatial referencing data for California.***

### **ARTICLE IV – OBJECTIVES**

The objectives of the Council are, in cooperation with NGS and the Center, to:

1. Ensure that a high-accuracy, horizontal and vertical geodetic reference network is maintained in California. This network shall be based on Global Positioning System (GPS) and related technologies and consist of in-ground monuments, Continuously Operating Reference Stations (CORS), and geodetic models as necessary to meet the spatial positioning needs within California for surveying, engineering, Earth science research (e.g., crustal motion/earthquake studies), geographic information systems, geomatics engineering, resource management, disaster preparedness and recovery, and other activities dependent upon reliable spatial referencing.
2. Promote the inclusion of this network in the “California Spatial Reference System (CSRS)”, and promote the CSRS as California’s official spatial reference system.
3. Ensure that applicable GPS and other observations by the Center are processed, adjusted, and provided to NGS, with appropriate electronic data files and related information, for inclusion into

the National Spatial Reference System (NSRS) database. Such efforts shall be in accordance with accepted NGS procedures and the California Land Surveyors' Act.

4. Ensure that time-dependent geodetic coordinates, velocities, GPS observational data, and supplemental station information (historical coordinates, seismic data, etc.) are distributed to agencies, research entities, and other public and private organizations involved in spatial referencing. Such distribution shall be in conformance with the California Land Surveyors' Act and other applicable State laws.
5. Promote the development of specifications and guidelines for GPS surveys, not otherwise provided at the national level.
6. Educate users and potential users on (a) spatial referencing issues; (b) availability and application of the Center's data, products, and other information; and (c) services available from the Center.
7. Foster cooperation and partnerships among agencies, research entities, and organizations involved in spatial referencing issues.
8. Promote development of a Masters of Science degree program in spatial referencing and geodesy at the University of California, San Diego.

#### **ARTICLE V – MEMBERSHIP**

- A. Membership: Those eligible for membership in the Council shall be all persons who have an interest in spatial referencing in California and who are accepted for membership by the Executive Committee. The Executive Committee shall strive to have a member (or members) representing each organization shown in Appendix A, with the number of representatives from each organization as shown. Preferably, each member shall be appointed by the entity (firm, organization, agency, etc.) that he/or she represents, except "Non-Designated Professionals" and "at large" members shall be appointed by the Executive Committee. If an appointing entity fails to appoint a representative within 90 days after the Council Chairperson makes a request or if there is not an applicable entity available to make an appointment, the Executive Committee may appoint an appropriate person.

The following shall be ex-officio voting members of the Council.

- a. The UCSD Chancellor or the Chancellor's designate.
  - b. The IGPP Director or the Director's designate.
  - c. The Director of the Center.
  - d. The Director of NGS.
  - e. The NGS State Geodetic Advisor for California.
  - f. The President of the California Land Surveyors Association.
  - g. The immediate past Chairperson of the Council's Executive Committee.
- B. Subgroups: Each member shall be assigned to a "Membership Subgroup" as shown in Appendix A by the Executive Committee. To the extent feasible, the Executive Committee shall maintain a membership "balance" between the various Membership Subgroups as shown in Appendix A. The

Executive Committee may make minor changes in Appendix A if it determines that such changes are in the best interest of the Council.

- C. Terms: Each member of the Council may continue as a member until a successor is chosen by the entity that he/she represents or until he/she resigns, retires, or dies or until the member's membership is terminated by the Executive Committee for being inactive.
- D. Dues: There shall be no dues for Council membership.
- E. Alternate Members: A Council member may appoint, for a specified time period not to exceed six months, an alternate Council representative from the same entity that he/she represents. The alternate Council representative shall replace the regular Council member, and shall have the same authorities as the regular Council member, in all of the Council activities for the specified time period. An alternate member appointment is not effective until the Council Chairperson is notified of name and appointment period of the alternate Council member.
- F. Responsibilities and Duties: The primary responsibility of the Council is to ensure that all issues, concerns, and needs of the spatial referencing community are considered by the Center. Specific duties and responsibilities include:
  - a. Reviews and recommends revisions to, or approves, the Council Bylaws.
  - b. Develops and adopts broad directives, goals, and objectives for the Council.
  - c. Recommends solutions for controversial and sensitive issues.
  - d. Promotes the Center and assists in obtaining funds for the Center.
  - e. Fosters cooperation and partnerships among agencies, research entities, and organizations involved in spatial referencing issues.
  - f. Educates users and potential users on (a) spatial referencing issues; (b) availability and application of the Center's data, products, and other information; and (c) services available from the Center.

## **ARTICLE VI – NONDISCRIMINATION**

In compliance with the policy of the University of California, the Council does not discriminate on the basis of race, color, national origin, religion, sex, handicap, age, marital status, or sexual orientation. This nondiscrimination policy covers membership selection, activities, policies, and practices of the Council.

## **ARTICLE VII – OFFICERS**

- A. Officers: The officers of the Council shall be elected and shall consist of the Chairperson, Vice Chairperson, Secretary, and Treasurer.
- B. Chairperson: The Chairperson shall have general and active management of the business of the Council and shall see that all orders and resolutions of the Council and Executive Committee are carried into effect. The Chairperson shall preside over meetings of the Council and the Executive Committee and perform other duties and exercise other powers as designated by the Council or Executive Committee. The Chairperson shall appoint committees and committee chairs and delegate authority to them to perform the work necessary to the operation of the Council.

However, committees and their membership shall not be effective until approved by the Executive Committee.

The Chairperson, with the assistance of the Center's Director, shall prepare an annual written report on the activities of the Council and the Center. The report shall include, but is not limited to, the past-year's accomplishments, current issues, the past-year and proposed next-year budgets of the Center, proposed goals and objectives to be accomplished in the near term and long range, suggested actions for the Council, and the current Council roster. The report shall be distributed to the Council members prior to, or at, the annual Council meeting. At the annual Council meeting, the Chairperson shall provide an overview presentation on the required annual report.

- C. Vice Chairperson: The Vice Chairperson, in the absence or disability of the Chairperson, shall perform the duties and exercise the powers of the Chairperson. In addition, the Vice Chairperson shall perform such other duties and exercise such other powers as the Council or Executive Committee shall prescribe.
- D. Secretary: The Secretary shall be responsible for ensuring that a) minutes are prepared for all meetings and other official actions of the Council and Executive Committee, b) correspondence is received, prepared, and filed, and c) current membership rosters are maintained. In addition, the Secretary shall perform such other duties as the Council, Executive Committee, or Chairperson shall prescribe.
- E. Treasurer: The Treasurer is responsible for the financial administration of the Council under the direction of the Executive Committee, which includes signing checks, making financial commitments of behalf of the Council, requesting payment on behalf of the Council, and safeguarding the assets of the Council. The Treasurer must prepare periodic financial reports to the Council, Executive Committee, and annually to the UCSD Support Group operations office.
- F. Terms: The terms of all offices shall begin on July 1 and end on June 30. The term of office for each officer shall be two years. Each officer shall be eligible to serve not more than two consecutive full two-year terms.
- G. Vacancies: If the Chairperson should temporarily be unable to serve, the Vice Chairperson shall serve in his/her absence. If the Chairperson should resign, or be unable to serve for the balance of his/her term of office, the Vice Chairperson will serve as Acting Chairperson for the unexpired portion of the Chairperson's term. If any other officer is unable to serve or resigns, the Executive Committee shall appoint an appropriate Council member to fill the unexpired portion of his/her term.

#### **ARTICLE VIII – EXECUTIVE COMMITTEE**

- A. Executive Committee: The Chancellor of UCSD (or the Chancellor's designee), the Director of the IGPP (or the Director's designee), and the Director of the Center shall be ex-officio voting members of the Executive Committee and any other committee empowered to act on the Council's behalf. The NGS State Geodetic Advisor also shall be an ex-officio voting member of the Executive Committee. In total, the Executive Committee shall consist of the 13 members as follows:

- a. The Chancellor of UCSD (or the Chancellor's designee).
  - b. The Director of the IGPP (or the Director's designee).
  - c. The Director of the Center.
  - d. The four officers.
  - e. The immediate past Chairperson of the Council.
  - f. Four members elected from the Council membership (excluding those members that are already Executive Committee members).
  - g. The NGS State Geodetic Advisor for California.
- B. Terms: The terms of all elected Executive Committee members shall begin on July 1 and end on June 30. The term of office for each elected Executive Committee member shall be two years. Each elected Executive Committee member shall be eligible to serve not more than two consecutive full two-year terms.
- C. Vacancies: If any Executive Committee member is unable to serve or resigns, the remaining Executive Committee members shall appoint an appropriate Council member to fill the unexpired portion of his/her term.
- D. Participation: If any member of the Executive Committee fails to attend three or more consecutive regular meetings of the Committee, the other Committee members, at their discretion, may declare that the member's position is vacant. Such vacancies shall be filled as noted in Article VIII, paragraph C.
- E. Responsibilities and Duties: The Executive Committee shall be authorized to conduct the operations of the Council, open bank accounts, authorize signatures thereon, approve expense disbursements, receive and deposit funds, plan programs and set fees for such programs (if applicable). The Executive Committee shall develop and adopt policies and procedures that are consistent with the direction of the Council membership and these Bylaws.

Specific duties of the Executive Committee are:

- a. Reviews the operational policies of the Center and recommends additions and/or changes to such policies.
- b. Pursues and solicits funds for the Center.
- c. Develops and reviews priorities, work efforts, and programs for the Center and ensures that such priorities, work efforts, and programs are consistent with the direction of the Council membership, these Bylaws, and the Council's mission and objectives.
- d. Reviews and recommends changes to, or approval of, the annual budget of the Center.
- e. Reviews revisions to the adopted annual budget of the Center and recommends changes to, or approval of, such revisions.
- f. Reviews the qualifications of persons under consideration for appointment as the Center's Director and provides recommendations; also, provides recommendations for termination.
- g. Reviews and recommends compensation rates for consultants (experts) that are contracted by the Center to perform specific efforts.
- h. Reviews and approves (or disapproves) committee memberships and chairs selected by the Chairperson.
- i. Approves (or disapproves) persons nominated for Council membership and assigns approved members to a Membership Subgroup.

- j. Determines what issues are controversial and/or sensitive and refers such issues to the Council's membership for resolution.
- g. Provides advice to the Center on what geodetic data and related data shall be maintained and archived by the Center.
- h. Fosters cooperation and partnerships among agencies, research entities, and organizations involved in spatial referencing issues.
- i. Educates users and potential users on (a) spatial referencing issues; (b) availability and application of the Center's data, products, and other information; and (c) services available from the Center.

## **ARTICLE IX – ELECTIONS**

- A. Election and Eligibility: The officers and elected Executive Committee members shall be elected by the members of the Council. Each elected person must be a Council member at the time he/she is elected and throughout his/her term of office.
- B. Schedule: All elections shall be conducted at the annual meeting of the Council.
- C. Representation: It is the goal of the Center to have broad representation among the officers and Executive Committee. At least three different Membership Subgroups shall be represented by the combined body of officers and elected Executive Committee members.
- D. Voting: Election shall be by written ballot that may be cast in person by a Council member at the meeting, or may be submitted by mail, facsimile or e-mail if received by the Director of the Center before the meeting. An election shall be valid if sufficient ballots are received from members to meet the quorum requirements. Each election shall be decided in favor of the nominee receiving a majority of votes.
- E. Ballots: A valid ballot shall not contain more votes for a given position than specified on the ballot.
- F. Counting Ballots: The ballots shall be counted by the Director of the Center and two selected Coordinating Council members who are not candidates for the given election.
- G. Term of Office: See Article XII and XIII.

## **ARTICLE X – MEETINGS**

- A. Council Membership Meetings: There shall normally be at least two regularly scheduled meetings of the Council membership during each fiscal year – one in the spring and one in the fall of each calendar year. The Chairperson may call meetings at other times. Notices of meetings of the Council shall be mailed or e-mailed to members of the Council at least seven days prior to the meeting. An agenda for the meeting shall be prepared by the Chairperson and accompany the meeting notice.
- B. Executive Committee Meetings: Executive Committee meetings shall be held as required. The Chairperson shall call the meetings, but any member of the Executive Committee may suggest a

meeting. Notices of meetings of the Executive Committee shall be mailed or e-mailed to members of the Committee by the Chairperson. The purpose of the meeting shall be prepared by the Chairperson and accompany the meeting notice.

- C. Annual Meeting: An annual meeting of the Council shall be held each fiscal year. The annual meeting shall be the spring meeting of the Council.
- D. Attendance: Meetings may be conducted (attended) in-person, by telephone conference, or electronically via the Internet as designated by the Chairperson.
- E. Minutes: Minutes for each meeting shall be prepared, distributed, and maintained by the Secretary. Distribution shall be to all members within two weeks of the meeting.
- F. Location: The Chairperson shall designate the location of each meeting. The location of each meeting shall be specified in the meeting notice.
- G. Open Meetings: All meetings shall be open to the public, and all persons shall be permitted to attend any meeting. Closed sessions may be conducted during any meeting to consider those matters deemed appropriate to be considered in closed sessions.
- H. Action Without a Meeting: Any action required or permitted to be taken by the Council or Executive Committee may be taken without a meeting if a majority of the voting members of the Council or Executive Committee consent in writing or by e-mail to the adoption of a resolution authorizing the action. Minutes of such actions shall be prepared and shall contain the resolution and the written/e-mail consents from each approving member. The minutes of such actions shall be included with the minutes of the next official meeting of the Council or Executive Committee.
- G. Quorums:
  - a. *Council Membership Meetings*: A quorum to conduct official business at Council membership meetings shall be 50 percent of the members.
  - b. *Executive Committee Meetings*: A quorum to conduct official business at Executive Committee meetings shall be seven members.
- H. Voting:
  - a. *Council Membership Meetings*: Each member of the Council shall be entitled to one vote on each issue.
  - b. *Executive Committee Meetings*: Each member of the Committee shall be entitled to one vote on each issue.
- I. Proxy Votes: There shall be no proxy votes permitted.
- J. Decisions: Except as otherwise expressly required by these Bylaws, all matters shall be decided by a majority of the members voting at the time of the vote, providing a quorum is then present.
- K. Conflicting Decisions: By appropriate action, the Council membership may supersede any decision made by the Executive Committee.

## ARTICLE XI – GEODETIC REFERENCE NETWORK

The geodetic reference network referred to in Article IV, item 1, shall conform to the conceptual and design details described in Appendix B. Periodically, the Executive Committee (or a special committee appointed by the Chairperson) shall review the specified network details and make appropriate revisions to Appendix B to ensure that the described geodetic reference network is consistent with current technology and user needs. Significant revisions to Appendix B shall be approved by the Council membership before becoming effective.

## ARTICLE XII – FISCAL and RELATED MATTERS

- A. Fiscal year: The fiscal year of the Council shall be July 1 through June 30.
- B. Contracts: Contracts for work related to the Center activities will be entered into directly by the University of California. The Council recommends that all professional engineering and surveying contracts be awarded on a “qualifications based selection” process. Officers and Executive Committee members that have any relationship with a firm that has submitted a proposal for a given contract, or any other potential conflict of interest, shall not be involved in the contractor selection process for that contract.
- C. Compensation for Officers, Executive Committee Members, Council Members: Officers, Executive Committee members, and Council members will not be compensated, except as provided herein. At the discretion of the Chairperson and the Center’s Director, reimbursement for actual travel costs may be provided in accordance with the requirements of the University of California and the funding agencies. In general, the policy of the Council shall be to reimburse travel costs only if the officers, Executive Committee members, or Council members incur personal expenses; i.e., travel costs are not reimbursed by the organization that he/she represents. Prior approval must be obtained from the Chairperson and the Center’s Director for any reimbursement of travel costs.
- D. Check Signing: The Chairperson and Treasurer shall co-sign any check written in amount of \$1,000 or more from any account maintained by the Council.
- E. Access to Information: The Council Treasurer, the University of California Auditor, and the UCSD Internal Auditor Office shall be authorized to receive from any financial institution with which the organization maintains accounts, any information, records, or photocopies of transactions relating to the Council’s accounts as the University may at any time request from the financial institution.

## ARTICLE XIII – PARLIAMENTARY PROCEDURE

*Robert’s Rules of Order, Revised*, when not in conflict with these Bylaws, shall govern all meetings of the Council, the Executive Committee, and other organizational groups of the Council.

## ARTICLE XIV – AMENDMENTS

These Bylaws may be amended by a resolution that is approved by a two-thirds majority of the Council members voting at a legally convened meeting of the Council membership. The proposed

amendments shall be distributed by regular mail or e-mail to all current Council members at least 10 days prior to the meeting at which the Council will act on the proposed amendment. Before becoming effective, the approved resolution must be approved in writing by UCSD.

#### **ARTICLE XV – DISSOLUTION**

If the Council should ever dissolve, any remaining assets held in its name shall be transferred within three months to The Regents of the University of California or the University of California, San Diego Foundation, as designated by the Chancellor of UCSD, for purposes consistent with the terms of the individual gifts, if any, and purposes of the Council.

(end)

## APPENDIX A – CSRC COORDINATING COUNCIL MEMBERSHIP

| Membership Subgroup  | Organization  | No. of Members |
|--|---|----------------|
| Professional Surveying Organizations (Active, State Legislation) – 5 | CELSOC (south, north)   | 2              |
|  | CLSA (south, north)   | 2              |
|  | CLSA President  | 1              |
| Professional Surveying Organizations (Other) – 3                     | League of California Surveying Organizations                  | 1              |
|  | ACSM  | 1              |
|  | ASPRS   | 1              |
| GIS Organizations and Professionals – 4                              | CGIA  | 1              |
|  | URISA (south, north/BAAMA)                                    | 2              |
|  | GIS Professional (at large)                                   | 1              |
| Geophysical Research Professionals – 8                               | SCIGN   | 2              |
|  | BARD  | 1              |
|  | BARGEN  | 1              |
|  | PANGA   | 1              |
|  | Geophysical Professionals (at large)                          | 1              |
|  | PBO   | 2              |
| Federal Agencies – 8   | USGS  | 1              |
|  | Director of NGS   | 1              |
|  | NGS State Geodetic Advisor                                    | 1              |
|  | FEMA  | 1              |
|  | USCE  | 1              |
|  | BLM   | 1              |
|  | U.S. Forest Service   | 1              |
|  | U.S. Bureau of Reclamation                                    | 1              |
| State Resources Agency – 5   | Resource Agency (at large)                                    | 1              |
|  | DWR   | 1              |
|  | BCDC  | 1              |
|  | California Coastal Commission                                 | 1              |
|  | Mines and Geology   | 1              |
| Other State Agencies – 6   | Other State Agencies (at large)                               | 1              |
|  | CA Geographic Information Officer                             | 1              |
|  | BOPELS  | 1              |
|  | Food and Agriculture  | 1              |
|  | Office of Emergency Services                                  | 1              |
|  | Department of Transportation (Caltrans)                       | 2              |
| Cities, Counties, and Local Agencies – 6                             | County Engineers Association (north, south)                   | 2              |
|  | League of California Cities                                   | 1              |
|  | Local Agencies (at large)                                     | 1              |
|  | City/County/Local Agency Professionals (at large)*            | 2              |
| Utility Firms, Organizations, & Districts – 5                        | Metropolitan Water District                                   | 1              |
|  | Utilities Companies (at large)                                | 1              |
|  | Flood/Irrigation Districts (at large)                         | 1              |
|  | Water/Utility/Flood/Irrigation/etc. Professionals (at large)* | 2              |
| Educational Professionals (Surveying, GIS, and Geophysical) – 3      | University of California - San Diego                          | 1              |
|  | California State University - Fresno                          | 1              |
|  | Educational Professional (at large)                           | 1              |
| Non-Designated Professionals – 6                                     | Various Professionals (at large)                              | 6              |
| UCSD Ex-officio Members – 3  | Director of the Center  | 1              |
|  | Chancellor of UCSD (or designee)                              | 1              |
|  | Director of the IGPP (or designee)                            | 1              |
| <b>Total</b>   |   | <b>63</b>      |

\*Includes employees, officials, retired employees, and consultants who perform this work.

**APPENDIX B –GEODETIC REFERENCE NETWORK  
(Conceptual and Design Details)**

- A. Purpose: The purpose of the geodetic reference network – as envisioned by the Council and established, maintained, and monitored by NGS, the Center, and others – is to provide an accurate, consistent spatial reference network, throughout the State of California, that will fulfill the many diverse spatial referencing needs of California’s users.
- B. Concepts: The Council-envisioned network shall conform to the following basic concepts:
- The network shall be part of the National Spatial Reference System (NSRS).
  - The network shall conform to the datum, accuracy classifications, guidelines, and methodologies accepted by the National Geodetic Survey (NGS).
  - The basis of the network shall be derived from NGS CORS and science-based continuous GPS arrays including SCIGN, BARD, BARGEN, and PANGA.
  - The network shall be established, maintained, and monitored through GPS geodetic survey procedures conforming to the accuracy classifications, guidelines, and methodologies accepted by the NGS.
  - Each network station shall have, at the minimum, values for horizontal position, ellipsoidal and orthometric heights, horizontal velocity, and a stated accuracy standard for each value.
  - The geodetic values for the network stations shall be kept current or supplemental information shall be provided to enable the user to determine the current geodetic values. An exception is vertical values for stations within identified subsidence or unstable areas.
  - The network design shall provide suitable stations and appropriate geodetic data for GPS positioning techniques – both horizontal and vertical. In general, each station shall provide both horizontal and vertical data. Exceptions are selected NAVD88 benchmarks that are stable and located in non-subsidence areas, as determined by the Executive Committee.
  - In general, accuracy standards and station spacing shall conform to the provisions specified in this document. The Council recognizes that exceptions are necessary and appropriate in specific areas.
  - The objective of the envisioned network is to provide a statewide “basic” (framework) spatial reference system; it is not intended to provide specific project-related control monuments.
- C. Network Components: The Council-envisioned network shall consist of three components – CORS, Primary Stations, and Secondary Stations. The goals for accuracy standards (two sigma level), station spacing, and the involvement of NGS, the Center and others for each component shall be as follows:

| Component | Standard (2 $\sigma$ , cm) |           | Station Spacing (km) | Involvement (3) |           |          |
|-----------|----------------------------|-----------|----------------------|-----------------|-----------|----------|
|           | Horiz.                     | Ortho.(1) |                      | (2)             | Establish | Maintain |
| CORS      | 1                          | 2         | 80 (Nominal)         | Yes (4)         | Yes (4)   | Yes      |
| Primary   | 1                          | 2         | 40 (Nominal)         | Yes (5)         | Yes (5)   | Yes (7)  |
| Secondary | 1                          | 2         | 7 (Average)          | No (6)          | No (6)    | Yes (7)  |

Notes:

1. Stations in terrain with significant relief may have a lesser standard as appropriate.

2. Stations in sparsely populated areas (deserts, forest areas, mountainous areas, etc.) may have a greater station spacing as appropriate.
3. Definition of Involvement Terms:
  - Establish* – To establish new stations or to select suitable existing stations.
  - Maintain* – To replace stations that are disturbed or destroyed.
  - Monitor* – To periodically establish new geodetic values for the stations based on new GPS observations.
4. As feasible, existing CORS shall be utilized. If existing CORS are not available at the selected, proposed locations, the Council shall encourage NGS, the Center, or others to establish such CORS. The Council will encourage partnership efforts.
5. Generally, the Council envisions that only Primary Stations required for the 40-km network shall be established and maintained by NGS or the Center.
6. Generally, the Council envisions that Secondary Stations shall be established and maintained by others, in cooperation with the NGS and the Center.
7. Primary and Secondary Stations in non-subsidence areas shall be monitored by NGS, the Center, or others using data obtained from monitoring the CORS together with available seismic knowledge and information. Subsidence areas shall be monitored as appropriate.

D. Network Establishment: The efforts of the Council shall be directed primarily towards the establishment and maintenance of the stations required to meet the 80 km spaced (nominally) CORS and 40 km spaced (nominally) Primary Stations. The Council shall work in partnership and in cooperation with others to densify the network.

E. Lesser Spaced Stations: In general, the Council shall recommend that stations spaced less than seven km (average) shall not be accepted into the Center's network (database), unless approved by the Executive Committee. The Council shall encourage users to file "Records of Surveys" for such stations with the applicable county official.

F. Standards: All stations included in the geodetic reference network shall be established in accordance with the accuracy classifications, guidelines, and methodologies accepted by NGS. The geodetic surveys establishing the network stations shall be submitted to NGS for inclusion in the NSRS, in a format and in accordance with NGS's approved procedures.

G. Network Stations:

- a. *CORS:* CORS included in the geodetic reference network shall conform to the specifications established by NGS and the Center. CORS included in the Center's network that are not established by the Center shall be certified, in writing, that the CORS meet NGS and the Center's requirements.
- b. *In Ground Monuments:* In ground monuments for the Primary and Secondary Stations of the geodetic reference network shall conform to the specifications established by NGS and the Center.
- c. *Public Access:* All stations, except CORS, included in the geodetic reference network shall be accessible to the public. Exceptions to the "public access" requirement may be required in certain cases.

- H. Links to Other Networks: The Council shall encourage that the Center to provide Internet links to other geodetic data such as those included in NGS/CORS, SCIGN, BARD, BARGEN, PANGA, and other continuous GPS arrays in California.
- I. Geodetic Models: The Council shall encourage NGS and the Center to cooperatively develop and distribute geodetic models necessary to properly use the geodetic reference network and related data. These models shall become a related component of the geodetic reference network and shall include as a minimum the following:
- a. *Transformation Parameters*: Seven parameters (i.e. delta [X, Y, Z], rotation [X, Y, Z], and scale) for transformation from the current International Terrestrial Reference Frame (ITRF) datum to the current NGS datum.
  - b. *Horizontal Velocity*: Secular and episodic crustal motion data compiled into a computer readable format for coordinate conversion between epoch dates.
  - c. *Geoid Heights*: The most current geoid model approved by NGS.
  - d. *GPS Orbits*: Precise post-fit ephemeris for the GPS constellation.