

National Academy of Engineering (NAE)

Establishment & Early Work

1965-1970

[The following collection note is adapted from The National Academy of Engineering: The First Ten Years (NAE, 1976)]

The idea of a National Academy of Engineering was suggested in the late 1950s to the Engineers Joint Council (EJC). When the EJC presented the suggestion to individuals in government, however, it was rejected on the grounds that the formation of such an academy would drive a wedge between science and engineering to the detriment of both. In early 1960, J. Herbert Hollomon suggested, independently, that a national academy of engineering be established—a recommendation which was reported in Science Magazine. After discussion with Hollomon, Harold K. Work, then Director of the Engineering Foundation in New York, presented the idea to the Foundation's Research Procedure Committee. Acting on the recommendation of that group, the Foundation's Executive Committee in mid-June 1960 authorized a feasibility study of a national academy of engineering. There was strong feeling that the EJC should also be involved, and discussion between the two organizations was initiated.

In August 1960 the EJC formed a committee to study the pros and cons of establishing an engineering academy, either as part of the National Academy of Sciences or as a separate institution. The EJC asked the Engineering Foundation for Work's services as Executive Secretary of this exploratory committee, and for supporting funds.

It was decided early on that any exploration with respect to a national engineering organization should include the NAS, because the objectives of both the NAS and an engineering academy were considered to be similar. Consequently, the NAS was invited to participate in the exploratory committee's discussions. Thus, the committee included representatives of the NAS and its operating arm, the National Research Council, as well as the EJC (which took lead responsibility for the endeavor), the Engineering Foundation, and the Engineers Council for Professional Development.

At its meeting of 20 September 1961, the exploratory committee voted in favor of establishing a national academy of engineering. The specific recommendations were that: 1) A National Academy of Engineering be established in cooperation with the NAS; 2) The initial membership and the constitution and bylaws be subject to approval by the NAS Council and the Board of the EJC; and 3) A 12-member committee be formed to explore the founding of a National Academy of Engineering.

A second study was then initiated, for which a special committee of the NAS was appointed to work with the EJC committee. The EJC committee was charged with developing a proposal for the establishment of an engineering organization representative of the engineering profession, while the NAS committee was requested to consider how the proposed engineering unit could be integrated in the NAS in a manner satisfactory to the engineers and consistent with the principles of the NAS.

On 20 February 1963 the EJC transmitted its proposal to the NAS committee, recommending that a national academy of engineering similar in character and complementary to the NAS be established within the NAS framework, with all decisions regarding the proposed academy being ratified by the NAS Council. The NAS membership gave its approval at their Annual Meeting in April.

Upon the recommendation of the EJC, NAS President Frederick Seitz in March 1964 appointed a "Committee of Twenty-Five" to establish an NAE. Seitz offered a plan whereby the new academy would be established under the NAS charter, allowing the NAE to select its own members, officers, and governing council; establish its own bylaws; use existing NAS facilities; and issue reports in its own name. The NAS membership voted in support of the plan, and on 5 December 1964 the Council of the NAS approved the Articles of Organization of the National Academy of Engineering, thus bringing the NAE into being.

The size of the collection is approximately 3.75 linear feet, spanning the dates of 1958-1976 with the bulk of the collection dating from 1961-1970. Provenance: Files of Harold K. Work, NAE Secretary

SERIES 1: NAE ACTIVITIES

Series contains records documenting the early (i.e., 1965-1970) activities of NAE committees, or NAE involvement in NAS-NRC committee work. Materials include correspondence, meeting minutes, reports, membership records, records of funding activities, and other documents.

- Commission on Scientific & Technical Communication: NAS-NAE: Proposed
 - Plan for Establishing Joint Commission on Scientific & Technical Information: 1969
 - Proposal: 1970
 - General: 1969-1970
- Committees
 - Administration: 1967-1968
 - Control of Wastes on Air Water & Land: Ad hoc
 - Membership: 1966
 - Reports: 1966
 - General: 1966-1967
 - Development Planning: Ad hoc
 - Areas of Interest
 - Environment: 1969-1970
 - Transportation: 1969-1970
 - Report & Analysis of Development Planning Survey: Aug 1969
 - General: 1969
 - Engineering Foundation
 - Ad hoc: 1966-1967
 - Fellowship Program: 1965-1966
 - Joint NAE-Commission on Engineering Education (COEE) Committee
 - Meeting: Apr 1966
 - General: 1966-1967
 - Merging Activities of Commission on Engineering Education (COEE) with NAE: 1967
 - Mine Rescue & Survival Techniques
 - Activities Summaries: 1969
 - Areas of Investigation: 1969-1970
 - Contract: 1969-1970
 - Membership: 1969-1970
 - Reports
 - Final: 1970
 - Background Material: 1969-1970

- General: 1969-1970
 - Interim: 1969
 - Background Material: 1969-1970
 - General: 1969-1970
 - Quarterly: 1969-1970
 - General: 1968-1970
- NAE-NSF Liaison Committee: 1965-1966
- NAE Seal: Ad hoc
 - Designs: Proposed: 1965
 - General: 1965-1966
- National Institute of Building Science: Ad hoc
 - Background: 1968
 - Meeting
 - Notes: 19 Jun 1968
 - Proceedings: 19 Jun 1968
 - General: 19 Jun 1968
 - General: 1968
- National Materials Advisory Board (NMAB)
 - Ad hoc: 1968-1969
- Non-Rail Transit Vehicles
 - Beginning of Program: 1966
 - Conference: 27 Jul 1967
 - Funding: 1967-1968
 - Meetings: 1967
 - Membership: 1967
 - Progress Reports to HUD: 1968
 - Proposal: 1966
 - Report: Transmittal: 1968
 - General: 1966-1968
- Planning Committee: 1965-1970
- Proceedings [of NAE]: Ad hoc
 - Survey on Need for PNAE: 1967
 - General: 1966-1967
- Rapid Excavation Techniques
 - Contract: 1966-1968
 - Membership: 1967
 - Reports
 - Final: Approval & Transmittal: 1968-1969
 - Interim: 1967
 - General: 1966-1969
- Science Engineering & Regional Development: NAS-NAE
 - Contract & Proposal: 1966-1967
 - Membership: 1967-1968
 - General: 1966-1969
- Scientific & Technical Communication (SATCOM)
 - Funding: 1966-1969
 - Meetings: 1968

- Membership: 1966-1969
 - Report: Comments & Distribution: 1968-1970
 - General: 1965-1969
- Scientific & Technologic Base of Puerto Rico's Economy
 - Contract: 1966-1967
 - General: 1965-1967
- Technology Assessment
 - Beginning of Program: 1967-1968
 - Contract: 1968
 - History: 1968
 - Membership: 1968-1969
 - Panels: Subsonic Aircraft Noise: 1968
 - Pilot Assessment Studies: 1967-1968
 - Progress Reports: 1968-1969
 - Proposal: 1968
 - Summary Report on Technology Assessment: 1968
 - General: 1968-1970
- Telecommunications
 - Subcontracts
 - Georgia Institute of Technology & U of Georgia: 1970
 - Nashville & Davidson: 1970
- To Prepare Essay on Criteria of Excellence of Engineer: Ad hoc: 1965-1967
 - Conference on Cost of Health Care Facilities
 - Beginning of Program: 1967
 - Correspondence with Participants: 1967-1968
 - Funding: 1967-1968
 - Panels
 - Construction Factors
 - Proceedings: 5 Dec 1967
 - General: 1967-1968
 - Design Consideration
 - Proceedings: 5 Dec 1967
 - General: 1967-1968
 - Planning & Programming Factors
 - Proceedings: 5 Dec 1967
 - General: 1967-1968
 - General: 1967-1968
 - Planning Meeting: 31 May 1967
 - Proceedings: 6 Dec 1967
 - Roster of Speakers Participants & Observers: 1967
 - Steering Committee
 - Meeting: Proceedings: 7 Sept 1967
 - Meeting: Proceedings: 6 Sept 1967
 - General: 1967-1968
 - General: 1967-1968
- Voice of America Committee

- Letters of Acknowledgement to Contributors to World of Engineer Program: 1968
 - Meetings: 29 Apr 1966
 - Membership: 1965-1968
 - General: 1965-1969
- Summer Employment of Engineering Students
 - Program & Proceedings: 1965
 - General: 1965-1966
- Discussion Group on NASA Technology Utilization Program: 1966-1967
- Issues of Interest to NAE
 - Environmental Pollution: 1965-1966
 - Patent Policy: 1965-1966
- Meeting to Discuss Study of Field Engineering Staff of Dept of Housing & Urban Development (HUD)
 - Proceedings: May 1967
 - Report: 1967
 - General: 1967
- NAS Office of Documentation
 - Ad hoc Committee on Copyright Law Revision: 1965
- General: 1965-1968

SERIES 2: NAE FUNDING RECORDS

Series contains correspondence, proposals, contracts, and other records documenting the financial support of NAE activities for the period 1965-1969.

- Aeronautics & Space Engineering Board (ASEB)
 - Contract & Proposal: 1967-1968
- Commission on Engineering Education (COEE)
 - Funding: Transfer to NAE: 1968
 - Summer Study on Computer Software: Proposal: 1968
 - General: 1968
- Committees
 - Advisory to HUD (Housing & Urban Development)
 - Proposal: 1969
 - Computer Sciences in Electrical Engineering (COSINE)
 - Proposal: 1968
 - Continuing Support: 1967-1968
 - Earthquake Engineering
 - Proposals: 1966-1968
 - Engineering Education
 - Finance
 - Membership: 1969
 - Interplay of Engineering with Biology & Medicine
 - Contract & Proposal: 1967-1969
 - Subcontracts: 1968
 - General: 1968-1969
 - Ocean Engineering

- Proposal & Contract: 1965-1969
- Pollution Abatement & Control
 - Air Quality Management: Contract & Proposal: 1968
 - Noise: Contract & Proposal: 1967-1968
 - Solid Wastes Management: Contract & Proposal: 1966-1968
 - Water Quality Management: Contract & Proposal: 1968-1969
- Public Engineering Policy (COPEP)
 - NASA Support: Proposal: Draft: 1968
 - Review of Engineering Needs of US: Funding: 1967-1969
 - Seminars: Creativity in Engineering: Proposal: 1969
 - Use of NAE Funds: 1967-1968
 - General: 1968-1969
- Telecommunications
 - Contracts
 - HUD (Housing & Urban Development): 1968
 - Office of Emergency Preparedness: 1968
 - Office of Telecommunications Management: 1968
 - General: 1968
 - Panel on Urban Communications: Proposal: 1969
- Urban Technology
 - Contract & Proposal: 1967-1968
- US National Committee on Engineering in Medicine & Biology
 - General Operational Funding: 1966-1969
 - Meetings: Funding: 1964-1969
- Conferences
 - Helicopter & Subsonic V/STOL Aircraft Noise: Proposal: 1968
- Contracts
 - Listing: Sept 1967
- Environmental Studies Board
 - Studies: Effects of Contaminants in Atmosphere [Carbon Monoxide Toxicity]: Funding: 1967-1968
 - General: 1968-1969
- Fund Authorization Report: Jun 1969
- NAS-NAE
 - Committee Advisory to Environmental Science Services Administration (ESSA): Proposals: 1966-1969
 - Committee on North American Datum: Ad hoc: Funding: 1968
 - Panels Advisory to NBS (National Bureau of Standards): Proposals: 1968
- Request for Proposal
 - Ambulance Design Criteria: 1968
- Workshop
 - Engineering Systems in City: Funding: 1969

SERIES 3: NAE ESTABLISHMENT

Series contains chronologically arranged correspondence documenting the conception and establishment of the National Academy of Engineering.

- NAE Establishment: Correspondence
 - Oct-Dec 1964
 - Jun-Sept 1964
 - Mar-May 1964
 - Jan-Feb 1964
 - Sept-Dec 1963
 - May-Aug 1963
 - Jan-Apr 1963
 - Jan-Dec 1962
 - May-Dec 1961
 - Apr 1961
 - Mar 1961
 - Jan-Feb 1961
 - 1959-1960

SERIES 4: FILES OF HAROLD K. WORK

Series consists of correspondence and other files of Harold K. Work documenting his work in the establishment of NAE and his service on the Engineering Foundation/Engineers Joint Council Exploratory Committee on NAE (1960-1964) and the NAS Committee of Twenty-five on an NAE (1964-1965). Series reflects Work's arrangement of files according to stages of NAE start-up.

- Charter Members of NAE
 - Proposed: Dec 1962
- Comments on Establishment of NAE: ca 1961
- Committees
 - Committee of Twenty-Five on NAE
 - Subcommittee on Distribution of Membership: 1964
 - Meetings
 - Agenda: 1 Oct 1964
 - Minutes: 1 Oct 1964
 - Agenda: 27 Apr 1964
 - Minutes: 27 Apr 1964
 - Presentation by NAS President Seitz: 27 Apr 1964
 - Membership: May 1964
 - Exploratory Committee on NAE
 - Meetings: 1961-1963
 - Progress Reports: 1961
 - EJC Exploratory Committee on NAE
 - Membership: 1961
 - Progress Reports: 1962
 - EJC & NAS Exploratory Committees on NAE
 - Membership: 1963
 - Planning [Background] Papers for Exploratory Committee: 1961
 - Recommendations to EJC Committee Relative to Report on Need for NAE: 15 Aug 1961
- Correspondence
 - NAE & Future Goals of Engineering: 1963-1964
- Draft of Proposal for Establishment of NAE

- Sept 1962
- EJC Seminar on National Engineering Problems: 1964
- Engineering Foundation
 - Budget for Study on Establishing NAE: 1960-1964
- NAE Articles of Organization
 - Correspondence: 1964
 - Draft: Oct 1964
- NAE Charter Constitution Bylaws
 - Draft: Nov 1963
- NAE Opening Ceremony
 - Proposed: 1963
- NAE Organizing Members
 - Proposed: 1963
- NAE Membership Qualifications
 - Proposed: 1964
- NAE: Press Coverage: 1962-1964
- Proposal for Establishment of NAE
 - Nov 1962
 - Apr 1963
 - Nov 1963
- Responses to "Question of Establishing NAE": 1961
- Report to EJC Concerning NAE: 17 Nov 1961
- Review of Existing Foreign Academies of Engineering & Academies of Science: 1961
- Work H K
 - NAE Correspondence: 1965-1968
 - Speeches & Articles
 - Establishment of NAE: 1965
 - Purposes Program & Probable Effect on Future of Engineering Profession: 1967
 - NAE Represents 100 Year Evolution: 1965
 - Question of Establishing NAE: 1960
 - What is Being Done about NAE: 1962
 - General: 1958-1962
 - Work H K: General: 1965-1976