November 15, 1956

A new Concept in Public Works Planning

One of the most immediate problems before the Public Works Planning Unit now is the implementation of a new, nationwide "basic program" for the planning of public works.

There has been formulated by the Public Works Planning Unit a program for comprehensive and coordinated long-range planning based on measured needs and relative urgencies for all types of works at all levels of government. The immediate need of this "basic program" is legislation to provide for Federal grants-in-aid (a) to States who establish comprehensive public works planning units; (b) to "Special Metropolitan Governments" established to provide central jurisdiction over metropolitan areas in lieu of present overlapping authorities.

The characteristics of the concept for public works planning are:

1. Comprehensive in its application to all types of public works;
2. Nationwide, to be carried out at all levels of government;
3. Based on measured needs and
4. Relative urgencies of needs
   Needs are translated into
5. Balanced, Long-Range Plans, which are
6. Phased into Mid-Range Plans, then developed into
7. Annual or Biennial Budget Programs.
The planner involves:

1. Application of a new methodology both (a) for the development of flexible and rational standards for measuring of needs, (b) for the determination of Relative Urgencies, and (c) for their use in building up Long-Range and Mid-Range Programs;

2. Collection of needs in all fields by Federal agencies based on uniform procedural methods;

3. Development by Federal agencies of their own Long-Range and Mid-Range Plans;

4. Development by States of their public works needs and Long-Range and Mid-Range Programs through uniform procedural methods;

5. Newly established State units for comprehensive public works planning;

6. Encouraging "Special Metropolitan Governments" to establish comprehensive planning units for public works in metropolitan areas;

7. Development by other multi-functioning local governments of their own long-range, comprehensive programs along the same pattern as above;

8. To bring about 4 through 7, the adoption of such public relations and collaborative procedures as will secure State and local acceptance;

9. Legislation for grants-in-aid to States and "Special Metropolitan Governments" to encourage comprehensive long-range planning.

With reference to item 1, former proposals for establishing standards have been considered hopeless or visionary, or too complex, or futile because
of the belief that local pressures of public opinion or politics must always control the make-up of public works programs. A workable methodology has been formulated.

Another element of "newness" is the nationwide "over-allness" of the program, i.e., the proposed integration of similar planning at all levels. This will promote intergovernmental collaboration and lead eventually to limiting duplication and outlining respective spheres. It should eventually lead to balance between the various fields of public works competing for the available public works dollar.

The soundness, feasibility, and desirability of this approach has been concurred in by numerous authorities in this field. It has been presented in a number of speeches by the Special Assistant for Public Works Planning, and another series of these speeches has been scheduled before prominent audiences including the Conference of Mayors in St. Louis. It is proposed also to present it at the next meeting of Governors. It received excellent acceptance by the groups to which it has been presented.

To give the plan stronger support, it would be desirable to issue a White House release describing it, and stating the intention to seek legislation for grants-in-aid.
THE NATION’S PUBLIC WORKS...

EXECUTED BY THOUSANDS OF GOVERNMENTS

SERVING MILLIONS OF PEOPLE

COSTING BILLIONS OF DOLLARS

DEMAND COMPREHENSIVE LONG RANGE PLANNING
Who Plans and Executes Public Works?

- Federal Agencies
- States, Territories, Possessions
- Counties
- Special Districts
- Municipalities
- Townships
- School Districts
- Total Governmental Entities

0 0 0 4 0
0 0 0 5 3
0 0 3 0 4 9
0 1 2 3 1 9
0 1 6 7 7 8
0 1 7 2 0 2
0 5 9 6 3 1
1 0 9 0 7 2
CONSTRUCTION... A Significant Element in the Nation’s Economy

GROSS NATIONAL PRODUCT

CONSTRUCTION AS PERCENT OF GNP

PERCENT

12

10

8

6

4

2

0

WWI
ARMISTICE
1929
PEARL HARBOR
KOREA
ARMISTICE
VJ DAY

PRIVATE

STATE-LOCAL

FEDERAL AID

FEDERAL

1915
'20
'25
'30
'35
'40
'45
'50
1955
Population Growth

After 320 Years
131 Million
Users of Public Services

In only 35 Years,
90 Million More

THEIR NEEDS FOR PUBLIC FACILITIES ARE UNLIMITED
State and Local Public Works Requirements

(BILLIONS)

10 YEAR REQ'T
$204.0 TOTAL

ANNUAL RATE REQUIRED TO "CATCH UP" BY 1964
$20.4
42.3%

92.0 HIGHWAYS
$9.20
37.6%

41.5 EDUCATION
$4.15
63.0%

22.0 HOSPITALS & INSTITUTIONS
$2.20
29.7%

WATER & SEWER
$2.53
41.7%

25.3 COMPONENTS OF REQUIREMENT

23.2 ALL OTHER
$2.32
37.9%

WATER & SEWER

BACKLOG 10.0
OBSOL. 6.2
GROWTH 9.1

$25.3
The Case for Accelerating School Construction

PUBLIC SCHOOL ENROLLMENT IS RISING

1930: 25.8
1940: 25.8
1950: 25.2
1955: 32.0
1965: 42.0

MILLIONS OF PUPILS

CLASS ROOMS NEEDED IN THE NEXT 5 YEARS

FOR ADD'L ENROLLMENT: 470
TO REPLACE OBsolescENCE: 210
TO RELIEVE OVER-CROWDING: 180

DEFICIENCY UNLESS RATE IS INCREASED: 145
PRESENT RATE IF MAINTAINED WILL PRODUCE: 325

THOUSANDS OF CLASSROOMS

WHAT IS BEING DONE
Obsolete Roads Cost Needless Waste of Lives and Dollars

72% FEWER DEATHS

76% FEWER ACCIDENTS

Estimated Savings of The New Interstate System Alone

$550 Millions Gasoline & Tires

$725 Millions Accidents

$825 Millions Commercial Vehicle Time

Total Annual Savings $2.1 Billions

Source: Auto Manufacturers Assoc.
WATER ... and The Future

PER CAPITA USE IS RISING AT AN INCREASING RATE

AND, THE TOTAL DAILY USE INCREASE BETWEEN 1955 AND 1975, ESTIMATED AS

191,000,000,000 GALLONS IS EQUAL TO
11 COLORADO RIVERS

OR
120 NEW YORK CITIES

GALLONS PER CAPITA PER DAY

THE SUPPLY IS NOT INEXHAUSTIBLE

We Must Store and Use Water More Efficiently ... Clean up Our Rivers... and Refine Sea Water or FACE INCREASING WATER SHORTAGES!
Polluted Water is Wasted Water

LESS THAN \( \frac{1}{4} \) OF POTENTIAL POLLUTION SOURCES HAVE ADEQUATE TREATMENT

22,000 WASTE TREATMENT PLANTS

- INADEQUATE OR NON EXISTENT: 8,300
- ADEQUATE CAPACITY: 3,700
- MUNICIPAL: 12,000
- INDUSTRIAL: 10,000

WASTE TREATMENT UPSTREAM PERMITS WATER RE-USE DOWNSTREAM

RE-USE OF WATER IS ESSENTIAL IF THE INCREASING DEMAND IS TO BE MET
The Rapid Growth of Metropolitan Areas.

**U.S. POPULATION GROWTH 1950-1955**
11.8 MILLIONS

3% NON METROPOLITAN AREAS

97% METROPOLITAN AREAS

DEMANDS A CONTINUING EXPANSION OF PUBLIC FACILITIES
Overlapping Jurisdiction:
A Problem of Metropolitan Areas
Maintaining Balanced Public Works Expenditures by Financial Management

Times of Abundant Revenue vs. Times of Decreased Revenue

A Stable Level of Capital Improvement Expenditures
General Sequence of Public Works Planning

PLANS FOR STABILIZATION ACCELERATION AN ADJUNCT TO LONG RANGE PLANNING

Needs

Long Range Plans
- More specific
- By ownership
- Estimate of cost
- 15-20 years into the future

Multi-Year Programs
- Specific
- 3-5 yrs.
- Cost estimate

Annual Program
- Exact
- Project plans
- Detailed cost estimate

- Broad and general terms
- No regard to ownership
- 20 to 50 years into the future
Controlling Factors in the Planning Process

**MEASURED NEEDS**

- **FACTOR A** - Deviation from Standards

**LONG RANGE PLANS**

- **FACTOR A** PLUS
- **FACTOR B** - Essentiality of Service

**MULTI-YEAR PROGRAMS** *(Mid-Range Plans)*

- **FACTOR A** PLUS **FACTOR B** PLUS
- **FACTOR C** - Urgency in Time

**ANNUAL OR BIENNIAL PROGRAM** *(Budget)*

- **FACTOR A** PLUS **FACTOR B** PLUS **FACTOR C** PLUS
- **FACTOR D** - Financial Capabilities

**IN ADDITION PUBLIC POLICY AND PUBLIC OPINION BEAR ON ALL STEPS**
Measurement of Needs for Public Works

MEASURED NEEDS

EXISTING ASSETS

REQUIRES THESE TOOLS

GENERAL CRITERIA

SPECIFIC CRITERIA
The First Tool in Measuring Needs is ... General Criteria Basic to All Functional Fields

**Population Growth**
- 1900
- 1956
- 19?

**Economic Growth**
- 1900
- 1956
- 19?

For:
- Nation or Region
- State or Community
Development and Use of Specific Criteria for Each Functional Field is a Cooperative Action

**Example: Municipal Water Supply**

1. The Federal Government Furnishes as a Guide, Data on Recommended Nationwide Usage...
   - Range: 200 gallons
   - Lower: 140 gallons

2. The State Government Furnishes Guides of State and Regional Usage...
   - Range: 185 gallons
   - Lower: 120 gallons

3. The Local Government, Based on Local Conditions, Climate, and Water Resources, Chooses for Forward Planning...
   - Range: 160 gallons

**Results:**

- Uniformity of planning goals in like communities
- Basis for comparison of relative urgencies of functional fields
- Intensified progress toward meeting needs
- Due recognition of local needs
Why Relative Urgencies?

The pressures of needs requires the executive to:

1. Carefully weigh functional assets against applicable criteria,

2. Weigh each against the others... and establish the relative urgency of each need.
Preparation of Balanced Long Range Plans

1. IN A FUNCTIONAL AGENCY OR DEPARTMENT...
   - Weighing the functional priorities of segments of needs
   - Results in
   - Priority list of functional segments
   - 1. Roads
   - 2. Highways
   - 3. Highways
   - 4. Bridge
   - 5. Roads

2. IN THE PLANNING UNIT OF THE PARENT GOVERNMENT...
   - Weighing the relative urgencies of functional fields and their segments
   - Results in
   - Composite list and balanced comprehensive plan
   - 1. Schools
   - 2. Roads
   - 3. Hospital
   - 4. Airport
   - 5. Highways
The Phasing of Balanced Long Range Plans

**Phase I**
1-5 Years
- Parks
- Water
- Sewers
- Schools
- Roads

**Phase II**
6-10 Years
- Parks
- Water
- Sewers
- Schools
- Roads

**Phase III**
11-15 Years
- Water
- Sewers
- Parks
- Schools
- Roads
Proper Planning Avoids Waste

BALANCED AND PHASED LONG RANGE PLANS

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<tr>
<th>TOTAL</th>
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<td>TRANSIT</td>
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<td>WASTE TREATMENT</td>
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AVAILABLE RESOURCES

SCHOOLS
HOSPITALS
TRANSIT
STREETS
WATER SUPPLY
WASTE TREATMENT
Organization for Comprehensive Public Works Planning at All Levels of Government

- Chief Executive
- Legislative Body
- Advisory Groups
- Coordinating Planning Unit
- Finance Officer
- Operating Departments
  - Originate and Develop Functional Plans
- Planning Units of Adjacent Governments
- Liaison
TheRelationofComprehensivePublicWorksPlanningUnits

InformationonPublicWorksNeeds

FunctionalFields

TechnicalAssistance&RecommendedCriteria

ComprehensivePlanningUnit

BalancedLongRangePlan

FunctionalDepartments

FEDERALGOVERNMENT

STATEGOVERNMENTS

LOCALGOVERNMENTS
The Road to Adequate Public Assets for the Nation

LEADS TO A BETTER FUTURE FOR AMERICA

- Constant Review
- Inter Governmental Cooperation
- Realistic and Planned Budgets
- Active Multiyear Programs
- Balanced and Phased Long Range Plans
- Establishment of Relative Urgencies
- Measurement of Needs
- Organization