

Public Works Program — Performance Evaluation

Rutgers University
New Jersey Institute of Technology
Columbia University
Princeton University
National Association of Regional Councils
University of Cincinnati

Final Report
May 1997



Economic Development Administration
U.S. Department of Commerce

Public Works Program

Performance Evaluation

Prepared for:

**U.S. Department of Commerce
Economic Development Administration
Office of Program Research and Evaluation
(EDA Project No. 99-06-07415)**

Prime Contractor:

**Rutgers University
Center for Urban Policy Research**

Robert W. Burchell, Ph.D.
(Principal Investigator)
William R. Dolphin
Naveed A. Shad
Alex Zakrewsky
(Associate Investigators)

Althea L. Clarke
Mark Field
Heidi A. Kaplan
Curtis Krauss
Wanda I. Mills

Danelle Mitchell
Andrew Siemsen
Milo Mason Turk
Kathy Vossough

Subcontractors:

**New Jersey Institute of Technology
National Center for Transportation and Industrial Productivity**

Louis J. Pignataro, D.Sc.
(Associate Investigator)

Hong Lin
Sally O'Malley

Eugene Reilly
Mei Chen

**Columbia University
National Center for Infrastructure Studies**

F. H. (Bud) Griffiths, Ph.D.
(Associate Investigator)

Carrie Sturts

**National Association of Regional Councils
Economic Development and Planning Division**

John Epling, D.P.A.
(Associate Investigator)

Patricia Sue Atkins, Ph.D.
Richard Hartman

**Princeton University
Woodrow Wilson School of Public and International Affairs
Center of Domestic and Comparative Policy Studies**

Andrew F. Haughwout, Ph.D.
(Associate Investigator)

**University of Cincinnati
School of Planning**

Davis Varady, Ph.D.
Johanna Looye, Ph.D.
(Associate Investigators)

Charles Ellison, Ph.D.
David Allor, Ph.D.

MAY 1997

A research team headed by Rutgers University prepared this report. Its findings, conclusions, and recommendations are those of its authors and do not necessarily reflect the views or policies of the Economic Development Administration or the U.S. Department of Commerce.

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SUMMARY OF FINDINGS

**SUMMARY OF FINDINGS
PUBLIC WORKS PROGRAM PERFORMANCE EVALUATION**

STUDY OVERVIEW

- The purpose of the research described here is to evaluate all 205 Economic Development Administration (EDA) Public Works Program projects that received their last payment in FY 1990. This means that, as of that date, the projects were completed and structures associated with them either occupied or soon to be occupied. Thus, at the time of this research—six years later—these projects had been sufficiently established to make their evaluation possible.
- Since 1965, EDA’s mission has been to promote the long-term recovery of economically depressed areas by assisting local governments via public works project grants in generating and retaining jobs and in stimulating commercial and industrial growth.

STUDY PROCEDURES

- The study was undertaken from November 1996 through March 1997 by research teams from five universities and a major professional organization. All principals of the research teams have extensive experience in both economic development and infrastructure studies. Each principal spent significant time in the field researching individual projects and talking to grantees. Each principal and affiliated staff participated in some aspect of research analysis and in writing the final report. All concur with the findings presented below.
- The research team contacted by mail and telephone 205 grantees of public works projects. To help the grantees better understand the purpose and types of information necessary to undertake the evaluation, all grantees were invited to attend seminars conducted by the research team at 13

locations nationally. Sixty (60) project sites were visited to conduct in-depth discussions with grantees to learn more about their individual projects’ impacts and to validate the information that they were in the process of providing.

- The analysis uses performance measures developed by EDA specifically to evaluate public works projects. Performance measures relate primarily to numbers of various types of jobs created or retained and amounts of private- and public-sector funds leveraged.

PROJECT TYPE AND CONTEXT

- From a universe of 205 EDA public works projects receiving a closeout payment in FY 1990, all 205 were successfully contacted.
- The composition of the 203 completed¹ public works projects is as follows:

	<i>Number</i>	<i>Percent</i>
Buildings	27	13.3
Industrial Parks	59	29.1
Roads	17	8.4
Water/Sewer	87	42.8
Marine/Tourism	13	6.4
Total	203	100.0

- In terms of the context of the above projects, EDA public works projects take place in locations where levels of unemployment and percents of the population below the poverty level are 40 percent higher than state and national averages. These are also locations where per capita income is typically 40 percent lower than averages at the state and national levels.

¹ Two projects aborted and were not constructed because of local financial or market reasons.

PROJECT COMPLETION

- Of those public works projects contacted by the research team, 99 percent (203) were completed as planned.
- Ninety-one percent (185) of the projects were completed on time.
- Fifty-two percent (105) were completed under budget.

PROJECT IMPACTS**Project-Related Direct Impacts**

- Ninety-six percent (195) of the public works projects produced permanent jobs six years after completion.
- Eighty-four percent (171) leveraged private-sector investment over the period.
- On average, each public works project produced 327 direct permanent jobs for every \$1 million of EDA funding.
- Based on average EDA funding of \$660,557 per project, \$3,058 in EDA funds was spent per job created or retained. Total cost (all sources of funding, including EDA) per job created or retained was \$4,857.
- Not including public projects, for every \$1 million of EDA funding, \$10.08 million was leveraged in private-sector investment.
- For all projects, for every \$1 million of EDA funding, another \$1 million was leveraged in federal, state or local investment.
- 15.0 FTE (full-time-equivalent) construction jobs were created per \$1 million of EDA funding, carrying out solely the grant-supported component of capital infrastructure.

Nonproject-Related Direct and Indirect Impacts

- Nonproject-related direct or indirect jobs (those that occur because of the

project or the project's jobs) were found to be present in 30 and 35 percent, respectively, of all public works projects.

- Considering all projects' ability to generate nonproject-related direct or indirect effects, for every \$1 million of EDA funding, an additional 50 jobs and \$1.18 million in private-sector investment were generated in nonproject-related direct effects, and an additional 64 jobs and \$126,180 were generated in indirect effects.
- Except in cases where the project was tax-exempt, public works projects increased the local tax base at a level of \$10.13 million per \$1 million of EDA funding.

PROJECT IMPACTS (GENERAL)

- Public works projects' economic impacts generally increase with time. Jobs resulting six years after completion were, on average, twice the number witnessed at project completion.
- EDA public-sector economic stimuli create private-sector jobs at high levels of success and low levels of cost.

CONCLUSIONS

- Most of the public works projects achieved EDA's objective of providing communities with the necessary infrastructure to expand their economic base.
- Jobs and private investment have occurred in many areas that would not have experienced these benefits without EDA assistance.
- EDA offices as an instrument of government, and EDA field representatives who interact with grantees, are well-regarded by their constituencies.

SECTION I
—
**INTRODUCTION
TO THE RESEARCH**

SECTION I—INTRODUCTION TO THE RESEARCH

A. INTRODUCTION

The Nature and Value of Infrastructure

Infrastructure is defined as roads, water/sewer lines, water/sewer treatment facilities, piers and ports, public buildings, energy and communications facilities, and other capital facilities required by the citizenry. Infrastructure in the nation's 83,000 cities and other local jurisdictions is directly linked to the national economy. Public infrastructure is the foundation upon which industrial wealth is created; it is utilized by every citizen and all industries.

EDA investments fund locally developed *public works* infrastructure projects to assist localities in establishing and supporting private-sector businesses. The purpose of these grants is to attract new industry, encourage business expansion, diversify local economies, and generate long-term, private-sector jobs.

In the mid-1990s, infrastructure represents an annual expenditure in the United States of approximately \$140 billion, with 24 percent of this amount (\$33.6 billion) coming from the federal government. Even with this level of national investment in infrastructure, relatively little has been done to document the economic effects of such investment.

The Relationship between Strategic Economic Development and Infrastructure Development

Economic development is the promotion of beneficial economic growth to improve both the quality of life and the standard of living of an area's residents. It does this by targeting areas of critical capital spending to expand existing growth nodes and to encourage new enterprises in areas where they currently do not exist. Business

locational decisions are heavily influenced by factors in a geographic area that encourage business growth. In addition to a skilled labor force and access to suppliers, adequate public facilities in the form of roads, water/sewer, and utilities, and appropriately developable land in the form of platted industrial and commercial parks, are magnets that attract businesses to an area.

Growth within a region is often very uneven. The suburbs, peripheral areas within commuting distances of the central core, are highly sought by businesses and industry. These are locations of prime residential growth and potential expansion sites for new nonresidential tenants seeking the best locations relative to an available labor force and supplier markets.

Since growth is linked to quality of life, typically the highest qualities of life exist in suburban locations. Schools are better, housing has more value, recreation and cultural facilities are more plentiful, and so on.

For these same reasons, growth is sought by places where it is currently not occurring. These are rural areas that have yet to realize their economic development potential or urban areas that are past their prime. Primarily due to their location, these areas need a stimulus to attract business and industrial development. This is one of the roles filled by the EDA public works grant program.

In a free-enterprise economy, a locality's economic health depends upon growth. Growth produces jobs, housing, and commerce. Growth is needed to generate tax revenues to maintain roads, transit systems, water and wastewater systems, and other infrastructure. Economic development, infrastructure, and quality of life are closely linked. Infrastructure drives economic development and vice versa, and both contribute to quality of life.

B. RESEARCH CHARGE AND APPROACH TO THE RESEARCH

The research team consisting of Rutgers University, New Jersey Institute of Technology, Columbia University, Princeton University, and the National Association of Regional Councils, assisted by the University of Cincinnati, approached the research in the following manner. First, it was necessary to obtain a general understanding of the specific research subject matter. This was accomplished by members of the research team reading the applicable literature on EDA activities as well as past evaluations. The latter included studies by Mt. Auburn Associates (1992), the General Accounting Office (1996), and others.

EDA management decided that the research team would *not* sample the projects to be studied. *All* projects of the program group selected for study would be analyzed; all grantees would be invited to a series of local seminars; and fully 25 percent of the projects would be chosen for a site visit.

The research team decided that the presentation of the research would be visual—very accessible data and statistics and a picture of the project or activity if possible. Accordingly, project profile sheets were developed containing all applicable performance measurement information. The research design was formulated to ensure that all projects would be presented in standardized fashion and that their base data would be available to those reviewing this report. Thus, for each project, there is a project profile sheet presenting information on magnitude of, and participants in, the grant; contact information on the people overseeing the project; demographic and employment data on the community or county where the project took place; and finally, data on outcomes of the project in the form of direct and indirect jobs and private-sector capital investment. Each project profile, to the degree possible, is

accompanied by a photograph or other illustration—a visual representation of the tangible results the EDA project achieved—and by a map showing the project's location.

A third approach of the study design specified that four of the five research principals would each spend a month in the field visiting projects and speaking to grantees. The fifth would be in charge of the seminars and interact with grantees via this medium. Only through this process could a uniform assessment of project scale, context, accomplishments, and difficulties be obtained. The month of January 1997 was spent in the field visiting 60 public works sites. Seminars at thirteen locations were also undertaken during this month.

A final approach was that the resulting message would be simple. Did EDA activity produce jobs, private-sector leverage, a more diverse economy, and tax base augmentation in the community? Did EDA do its job, and how was it rated?

C. EDA'S PUBLIC WORKS PROGRAM

Since 1965, EDA's mission has been to promote the long-term recovery of economically depressed areas by assisting local governments in generating and retaining jobs and in stimulating commercial and industrial growth.

Authority for EDA to provide regular Public Works grants, which is the focus of this study, comes under Titles I and IV of the Public Works and Economic Development Act of 1965. EDA offers grant assistance for the construction or expansion of projects that will:

- improve opportunities for the establishment or expansion of commercial and industrial plants and facilities;
- create and/or retain permanent private-sector jobs;

- alleviate the impacts of long-term distress; and
- provide benefits for the long-term unemployed and the poor.

Types of EDA Public Works Grants

The key component of any EDA-supported public works project is the creation of permanent private-sector jobs. Typical projects that realize this goal include industrial parks, water and sewer system improvements, industrial access roads, vocational/technical education facilities, harbor and ports, business incubators, and other community development activities.

EDA assistance is available only to those areas that have been determined eligible for such assistance based on certain criteria of distress. Such communities are expected to use EDA assistance in the funding of public works and development facilities that contribute to the creation or retention of private-sector jobs and to the achievement of lasting economic improvements. Priority is given to projects that emphasize the alleviation of unemployment (locations of high unemployment rates) and underemployment (locations of low per capita income) among residents of the project areas. In addition, public works projects must be consistent with local development plans and should relate to other area development investments.

Proposed projects are usually located within an EDA-designated Redevelopment Area (RA) or Economic Development Center. Projects in other areas of an EDA-designated Economic Development District are also eligible if they will directly benefit an RA within the District. Projects must be consistent with an approved Overall Economic Development Program (OEDP). An applicant may be a state, a political subdivision of a state, an Indian tribe, a special-purpose unit of government, a public or private nonprofit organization, or an association representing the RA or a part thereof.

EDA may provide grants up to 80 percent of project costs. However, on average, EDA funds between 50 percent and 60 percent of project costs. EDA expects local applicants to use other federal, state, and/or local development resources to cover the remaining project costs. Although project dollar size has varied over the years, the typical EDA public works project is approximately \$1.25 million, with EDA's share amounting to about \$650,000 (in 1996 dollars). EDA also expects that each funded project will leverage a reasonable amount of private-sector investment, often multiples of the total amount of the grant.

Project Types and Activity Levels

The most common types of projects are industrial parks and water and sewer facilities. For example, for the twenty-year period 1977–1996, EDA funded approximately 4,000 public works projects throughout the country. Industrial parks accounted for 1,020 of this total, and water and sewer facilities amounted to 1,488 projects. These two types of projects represent about 2,500 of 4,000,² or 62.5 percent, of traditional public works projects. Other common project types are roads (9 percent), buildings (20 percent), and marine/tourism projects (7 percent).

A typical EDA project might consist of a grant to a local government to develop a parcel of land for industrial use. EDA funds might be used to purchase the land; grade and develop the site; install basic water, sewer, and other utility services; and construct roads. The development of such a site is expected to improve the community's ability to attract industry. Similarly, EDA may fund a project that extends the water and sewer capacity to an existing industrial facility, thus also allowing for that facility's expansion.

² An additional approximately 500 projects involved education/training and conservation/beautification; these are not shown in the above distribution.

D. THE UNIVERSE OF PROJECTS

The research reported on in this report involves an analysis of 203 public works projects that received a closeout payment in FY 1990. The universe of projects at the time that this study was undertaken had approximately six years to achieve results.

In some cases the grant “end, actual” date falls (1) before or (2) after the FY 1990 (10-1-89 through 9-30-90) project selection criterion. This is because (1) some projects were completed before FY 1990, but the concluding payment and paperwork did not catch up until FY 1990; or (2) the final EDA payment was made in FY 1990, but the overall project was not completed until somewhat later. In the first case, the projects are more mature than just the nominal six years.

Of an initial 205 public works projects, 203 were completed. Two projects—one in the Chicago Region and one in the Austin Region—were aborted. In the former case, this was due to an applicant not being able to raise its local share; in the latter case, it was related to a downturn in the aerospace industry and a decision not to proceed with the project once the ramifications of this information were understood. Two hundred three (203) projects represented the universe of EDA public works projects to be contacted.

These projects received their initial payments in the late 1980s (usually 1988 and 1989) and underwent a one- to two-year construction process. For the purpose of this study, projects were selected on the basis of their time in existence and consequent ability to have achieved measurable results during that time. A second consideration was that the projects be sufficiently recent that individuals who served oversight roles could recall the project and report on it accurately—thus, the reason for the six-year period from completion of project to selection for performance evaluation.

The 203 public works projects described in Section II were found in 44 of the 50 states and in Puerto Rico (Figure 1). They usually involved the construction of industrial parks, water/sewer lines, roads, buildings, tourism centers, and marine facilities reconstruction. They range in scale from approximately \$200,000 to \$6 million, of which EDA’s share was 15 to 80 percent, with minimum and maximum grants of \$100,000 and \$3 million per project, respectively. The projects were found in either very rural or in dense urban areas, with the vast majority in the former type of setting. Projects were usually built for a specific beneficiary or with a likely beneficiary in mind. In every case, the ultimate goal of the projects was to serve employment growth. In very few cases was a residential subdivision even a participatory beneficiary of an EDA public works grant.

E. THE PERFORMANCE MEASURES

Performance measures for public works projects have been developed by EDA’s Program Research and Evaluation staff in a collaborative agency-wide process that included broad field staff participation and feedback from grantees and other constituencies. These performance measures have had the benefit of input and comment from EDA’s six Regional Offices (Atlanta, Austin, Chicago, Denver, Philadelphia, and Seattle) and from field representatives as well. This process enabled the performance measures to achieve broad-based support both within EDA and from its customer base.

Measures for public works projects are concerned with permanent jobs created and private and public funds leveraged. They also seek to quantify information on diversification of the local economy and tax base added to the community. These measures apply to projects: (1) at time of approval and project completion, and (2) post-project completion, at 2 and 4 years. For this evaluation, the latter measure applies at six years after project completion.

(Figure 1 is not included in this PDF. It is a map of the United States showing the locations of all 203 projects completed during FY 1990 and examined in this evaluation, flagging the 143 and 60 that were also surveyed and visited, respectively, during the evaluation.)

Public Works Projects

- *Performance and outcomes at project completion*
 1. Construction schedule met as to start and finish dates.
 2. Private-sector dollars invested in the EDA project (estimated, at time of approval).
 3. Private-sector dollars invested in the EDA project (actual, at time of completion).
 4. Additional dollars (federal, state, and local) invested in the EDA project.
 5. Additional dollars invested (nonfederal, local, and private) directly related to, but not part of, the EDA project.
 6. Local capacity improved: Intended beneficiary(ies) actually located, retained, or expanded in the community.
- *Project outcomes at 2 years and 4 years after completion*
 1. Jobs created and/or retained, as estimated at time of approval.
 2. Jobs created and/or retained—*actual*.
 3. Additional private-sector dollars directly related to, but not part of, the EDA project—*actual*.
 4. Additional dollars (other federal) directly related to, but not part of, the EDA project—*actual*.
 5. Additional dollars (nonfederal, state, and local) directly related to, but not part of, the EDA project—*actual*.
 6. Other dollars invested indirectly related to the EDA project.
 7. Percentage and dollar increases in local tax base³ (actual or based on recognized multiplier).
 8. Local capacity improved: Diversification of local economy (fulfillment of strategic plan).

³ There is a close relationship between private-sector dollars invested and tax base added, as most private-sector investment is treated as taxable real and business personal property.

These performance measures are applied using historical information on project scope and estimates of project impact available from central and regional EDA data files, and from current (post-project closeout) information supplied by the grantees interviewed, as well as others at the site of the public works improvement.

Although the performance measures seek information on direct and indirect effects, both historical and current, the most valuable information is on current, direct effects in the form of permanent jobs and private-sector funds leveraged. Performance measures used and reported on here will be reviewed periodically for effectiveness and accuracy by EDA's Program Research and Evaluation staff.

F. PROCEDURES USED TO OBTAIN RESULTS

The evaluation of projects contained in this report is based on a three-pronged approach to accessing information. The first comprised phone and mail solicitation to obtain project statistics and to quantify project outcomes. This involved mailed surveys to the 203 grantees with a series of six callbacks to obtain and verify project information.

The second approach involved inviting grantees to seminars at thirteen locations across the country where they were instructed on technicalities of the team's information requests and the specific information that would be required as part of the evaluation. One-day seminars were held in Atlanta, Austin, Chicago, Cincinnati, Denver, Hartford, Little Rock, Los Angeles, Myrtle Beach, Orlando, Philadelphia, San Francisco, and St. Louis.

The third approach involved research team members physically visiting 25 percent of the grantee locations for a site inspection. These 60 visits, usually lasting one-half day, included a trip to the EDA project and a two- to three-hour interview with personnel who had overseen the

project. Site visits allowed field verification of both scale and relative health of the project, numbers of direct and indirect jobs, and grantee relationships with EDA Regional Offices throughout project evolution.

The project grantees were contacted by mail and telephone. All were invited to the seminars; about 25 percent attended. The site visits were determined randomly, reflecting the following criteria:

- a. geographical diversity
- b. project type diversity
- c. project funding-level variations
- d. EDA funding-share variations

The response to mail/telephone solicitations and to site visit requests was 100 percent.

G. COUNTING AND ATTRIBUTING JOBS AND INVESTMENT

The Attribution of Jobs and Private-Sector Investment

In most instances, EDA's investment in a project is the critical component that launches a project into implementation. The EDA funding is the critical or "*but for*" element of the project that created the jobs in the area. Indeed, in making its project selection decisions, the *but for* argument is decisive for EDA. The role of filling this funding gap defines to a large extent EDA's role in economic development.

EDA was established, and continues to be needed, to fill a funding gap. Much of a locality's development after the completion of an EDA project is dependent on the initial EDA decision to provide that funding. In relatively isolated rural locations, turnarounds might never occur without EDA's early entrance decisions. In urban locales, without EDA's timely involvement, neighboring economic forces could negatively impact the possible future of a

project. Thus, given either the absence of local resources or the inability of the public or private capital market in an area to generate the funding necessary to *get a project off the ground*, infrastructure projects often would not be built without EDA funding. Without EDA, the industrial park, incubator building, or other enterprise would not be built, and the jobs would not be created or retained. In such cases, because of the critical nature of EDA funding and the risk capital that EDA provides, EDA is credited for the resulting jobs. No other funder—public or private—fills that important, initial role.

Second, only the public-sector investment should form the basis for the calculation of investment credit for a project. Leveraging of private-sector investment is the goal—the actual product—of EDA's and other public-sector investment. It is not a part of the initial component of project funding. With time, development around an EDA project proceeds and private-sector investments increase. Just as a risk-taking venture capital funder gets its reward from the increased value of its equity investment as subsequent investors come in, so does EDA's investment increase in value as later private-sector investments are made.

Third, in most instances, it is only after EDA commits to funding a project that the grantee then can produce its local share, be it CDBG, other local funds, or private funds. EDA's "gap" funding—the special value that EDA contributes to economic development in distressed areas—generates the impact of EDA's investments.

In counting jobs as an indicator of the impact of EDA funding, the correlation between EDA's investment and jobs is more accurately described as follows: Jobs in EDA-funded projects *result* from EDA's investment, rather than are *caused* by it. In addition to implementation funding, EDA's investment includes earlier, careful planning assistance that mobilizes

community support and refines projects. EDA planning assistance is the building block for the ultimate implementation of a project. Jobs, therefore, result from EDA assistance because EDA has *primed* the area.

EDA's investment in rural and economically troubled areas is crucial. In most instances, *but for* the EDA funding, there would not have been a successful project, and more than likely none of the other related jobs would have come about. In such cases, the resulting jobs are fully attributed to the EDA funding.

For the purpose of job attribution in this study, projects are classified as to whether EDA's investment was considered *critical* at the time of approval (and thus appropriately in the *but for* category with full attribution of resulting jobs), or *essential* (and thus more appropriately in the category in which jobs are attributed on a proportional basis with other public funders).

Project grantees were asked whether EDA's role was "critical" (without funding the project would have stopped) or "essential" (without funding the project would have been seriously compromised). Regional office directors were asked to research this same question. There was a nearly 9 in 10 correspondence between the two source designations of "critical" and "essential." Also very apparent was the almost uniform classification of EDA activities as *essential* as opposed to critical when the EDA funding share fell below 25 percent. Following this field-developed relationship, the research team classified EDA activities as *essential* in *all* cases when the EDA share was less than 25 percent.

Information in the analytic summaries (found in Section II and repeated in the Summary of Findings) credits jobs created/retained to EDA reflective of the above convention. EDA is given *full* credit

when its role is *critical* and *proportional* credit when its role is *essential*. In the individual project summaries, this convention is not employed.

H. DATA AND DOLLARS: SOURCES AND YEARS

Data on project-area unemployment rates and per capita income have been obtained from EDA's centralized data file. They are 24-month averages for the time period just before project approval. These have been researched and checked by the study team and, where data are missing, they have been supplied from other sources.

For the most part, this information is presented for the county of which the project is a part. Where large cities are the project sites, these are the data that are used. Thus, information on unemployment rates and per capita income for public works projects most often reflects years 1986 or 1987—two years before project approval. These are individually compared by project to state or national averages for the same year, with results displayed in the project profiles. Data for percent minority and percent below the poverty level are from decennial U.S. Census information for 1990.

All financial information is left in its original dollar time period (current 1988 or 1989 dollars) in the project profiles and site visit summaries. In the analytic summaries of cost per project or per \$1 million invested (found in Section II and repeated in the Summary of Findings), these costs are expressed in constant (1996) dollars. Project expenditures in 1990 or slightly before have been taken to 1996 using the Consumer Price Index (CPI) as an index of inflation. This is about a 20 to 22 percent increase in actual project expenditure dollars depending upon the year of the project. Per capita income at project sites is also in its original form in the project profiles and site summaries (1986–1987 dollars).

**I. MEASURES OF
CENTRAL TENDENCY:
WHICH ONES ARE USED**

Throughout Section II of this study, statistical information will be presented on the *average* EDA project. Choices available to the researcher for selection of the average project are the mean, the median, and the trimmed mean (5 percent of the cases removed at each end). The distribution of EDA public works projects contains about 12 percent of projects below \$300,000 of EDA funding and about 6 percent of projects above \$1.5 million. These extremes obviously influence the overall distribution.

The most robust measure of central tendency for interpreting this distribution is the median. It isolates and provides information on the middle case. This is the measure used for almost all comparisons in this study. The median is employed in all instances except when zero values are so numerous that the median value is also zero. In these situations (only in nonproject-related and indirect jobs/private-sector investment), the trimmed mean is used. The trimmed mean produces values between the mean and the median and dampens the impact of extreme cases on the mean. Given the non-normal distributions, in no case is the unaltered mean used as a measure of central tendency.

**J. RELIABILITY OF PROCEDURES AND
EFFECT ON RESULTS**

The state of the art of job and investment counting is just that—jobs must be physically counted. This means that those individuals closest to, and with the most knowledge about, where and when economic development is taking place must tabulate the fruits of this investment. These are local economic development officers, tax assessors, and owners of local businesses.

Those who count jobs and investments must be guided in their assessments. This guidance involves an education process that distinguishes between differing levels of job creation, i.e., direct and indirect, as well as specific instruction on how to credit jobs. Further, the results of this process must be checked and validated. This three-part process—counting, educating, and validating—produces the most reliable results.

The procedure described above is the research design of this study. The design allowed those most familiar with the outcomes of EDA projects to provide quantitative and qualitative information on job creation and private-sector investment. Those who did this were guided by instruments and instruction sessions provided by the research team. The research team, in turn, standardized and aggregated all results and subjected these results to their own tests of plausibility.

The final step was physically checking the results of such analyses by conducting on-site visits. One in four of the projects analyzed for economic benefits was visited in person by a research team member. Numbers were checked with those who provided them, and site visits ensued in which the numbers and results (jobs and private-sector leverage) were verified. This type of procedure assured the greatest possible overall accuracy in reporting research results.

SECTION II
—
**RESEARCH RESULTS:
QUANTITATIVE**

SECTION II—RESEARCH RESULTS: QUANTITATIVE

A. INTRODUCTION

This section of the report deals with the findings of the research. It begins with a discussion of the sites that were surveyed and how information was gathered; it then presents the *quantitative* results of the research. The research described here reflects information obtained via telephone, mail survey, and feedback from the seminars. Also included here are results from the site visits both in terms of additional quantitative information and direct verification of telephone and mail information. The section following (Section III) contains a *qualitative* summary of the results of the site visits.

B. PROJECT CONTEXT

EDA’s Public Works Program is targeted to economically impacted areas. This is evident in the socioeconomic characteristics of the localities of the 203 public works projects studied:

1. The median 1990 two-year host county unemployment rate was 9.6 percent.
(30 to 40 percent more than host state and national medians)
2. Median 1990 host county per capita income was \$7,666.
(60 percent of host state and national medians)
3. Median 1990 city percentage of population below the poverty level was 18.1 percent.
(40 percent more than host state and national medians)
4. Median 1990 city percentage of population that is minority is 11.0 percent.
(20 percent below the state median and 40 percent below the national median)

CONTEXT OF PUBLIC WORKS PROJECTS (1990) [n = 203]			
	<i>Median</i>	<i>Ratio* to State</i>	<i>Ratio* to Nation</i>
Unemployment Rate (%)	9.6	1.3	1.4
Per Capita Income (\$)	7,666	0.6	0.6
Below Poverty Level (%)	18.1	1.4	1.4
Minority Population (%)	11.0	0.8	0.6

* See prior text for explanation of ratios.

C. CONTACT RESPONSE

As stated earlier, these projects represent the universe of public works projects that received their final payments in FY 1990. They completed the construction stage and were operational about six years before they were examined by the research team. These 203 projects had their genesis in the late 1980s. All 203 projects were contacted successfully. Their information is presented individually in the Project Profiles of Section V and is summarized in the aggregate here.

D. PROJECT DATA

EDA tabulates a twenty-category classification for all of its programs. Most public works projects fall into five of the twenty categories. These are: (1) buildings, (2) industrial parks, (3) roads, (4) water/sewer, and (5) marine/tourism projects.

Of the 203 projects analyzed in this report, 87, or 43 percent, involved the construction of water and sewer lines; another 59 projects, or 29 percent, involved industrial parks; and about 27

projects, or 13 percent, involved free-standing commercial or industrial buildings. Thirteen and 17 projects (6% and 8%) involved the construction of marine/tourism projects or roads, respectively.

This proportional distribution of projects—most of which were water and sewer lines, the least of which were marine/tourism projects—is what one would expect from public works projects constructed in the late 1980s. This was an era of the program when there was heavy emphasis on the provision of basic infrastructure and industrial parks to rural areas.

EDA classifies a multiple-category project according to its primary purpose, so a number of the above categories may have other project types within them. For instance, most of EDA’s industrial park projects are, almost exclusively, combined road and water/sewer public works improvements.

CLASSIFICATION OF PROJECTS		
Type of Project	Number	Percent
Buildings	27	13.3
Industrial Parks	59	29.1
Roads	17	8.4
Water/Sewer Lines	87	42.8
Marine/Tourism	13	6.4
Total	203	100.0

E. PROJECT COMPLETION

Public works projects undergo a standardized process of review at their respective EDA Regional Offices. Often, before a project is formalized into a proposal, there are informal discussions between the Economic Development Representative (EDR) and the potential grantee. Then, a proposal is submitted in abbreviated form for informal review. If the proposal meets EDA criteria for distress and purpose, an application is officially invited. Prior to selection, the proposal undergoes legal review to determine ownership of the

land and clear title. Further reviews include environmental and market feasibility analyses.

The Regional Office of EDA then reviews the proposal and recommends action to EDA headquarters. The grantee is notified that the proposal has or has not been selected as eligible for funding.

The grantee must then publicly advertise for bids on the work; the lowest bidder qualified receives the job. The grantee must submit project reviews and billing documents quarterly to EDA to obtain funding disbursements. At project completion or soon thereafter, the project is audited, and the grantee receives a letter of completion with EDA’s proportional share adjusted downward or remaining the same, depending upon whether the project was completed under or over budget. If the project was over budget, EDA’s share does not increase; the grantee or another source of local funding must pay for the overrun. On the other hand, if the project was under budget, EDA does not retain these funds as “extra” regional or central office monies. Rather, saved revenues are deobligated and returned to the Treasury.

Given the above procedures, it is not surprising that 99 percent of EDA public works projects (203) are fully completed (only the two earlier-mentioned cases did not go to completion); 91 percent of projects (185) are on time; and 52 percent (105 projects) come in under budget. Those projects more frequently meeting or ahead of schedule, *by type*, are roads and water/sewer projects (at 94 and 95 percent, respectively, on time). Also meeting or ahead of schedule are those projects that are, *by funding level*, mid-sized: \$1 million to \$2 million in total project costs (again, about 94 percent on time). Those projects least likely to meet their schedule are the large public works projects (> \$2 million—88 percent).

Projects more likely to come in under budget, *by type*, are road projects (76

percent); those least likely are marine/-tourism projects (23 percent). Projects more likely to come in under budget, by funding level, are small projects (< \$1 million—72 percent); those least likely to come in under budget are large projects (> \$2 million—26 percent).

PROJECT COMPLETION (All 203 Projects)	
99%	Completed
91%	On Time
52%	Under Budget

F. PROJECT FUNDING

Information obtained from EDA’s records indicates that the median public works project costs \$1.27 million when all sources of funding are counted (1996 dollars). EDA’s median contribution is \$660,557. The most expensive projects are marine/tourism (dredging, bulkheading, and pier reconstruction—\$1.68 million); the least expensive are roads or buildings (\$1.13 million). EDA’s median share of total public works project funding is 53.6 percent.

OVERALL PROJECT FUNDING (Medians) (All 203 Projects)	
Total Cost	\$1.27 million
EDA Cost	\$660,557
EDA Share	53.6% †
† EDA share is not the simple ratio of the first to the second cost number when medians are employed.	

G. PROJECT IMPACTS (PROJECT-RELATED DIRECT IMPACTS)

Projects Producing Jobs

The purpose of EDA funding is to produce permanent private-sector jobs. EDA public works projects are conceived and executed with the explicit purpose of producing nonresidential structures that will be the locus of permanent jobs.

Of the 203 projects studied, 96.1 percent (195 projects) created or retained permanent jobs; 84 percent (171 projects) leveraged private-sector investment. In the first case, all projects at one time or another created permanent jobs. As of 1997, however, eight projects no longer had permanent jobs associated with them. Projects no longer having employment include a failed Indian skills-training center (Maine) and a public incubator (West Virginia) in the Philadelphia Region; an underdeveloped recreational dock (Florida) in the Atlanta Region; an industrial building (North Dakota) in the Denver Region; a cold-storage fisheries facility (Alaska), an unoccupied industrial tract (California), and a riot-destroyed public incubator (Nevada) in the Seattle Region; and a speculative industrial building (Texas) in the Austin Region.

In the second case, 16 percent (32 projects) did not produce private-sector investment as of 1997. Of these, five had at one time produced private-sector investment, and some portion of this investment still remains with the structure. Four projects are federal, state, or local prisons; another eight are public incubators; three are public recreation facilities; two are currently college buildings; four are manufacturing facilities developed for the employment of low-income workers; two are public transportation improvements; and four are public piers. Except for the first five, none of the above projects ever leveraged private-sector investment.

PROJECT JOB PRODUCTION (All 203 Projects)	
96.1%	Produced Permanent Jobs
84%	Leveraged Private-Sector Investment

Number and Cost of Direct Permanent Jobs

Six years after project completion, the total number of direct permanent jobs resulting from the 203 studied public works projects was 107,662. This is 327 jobs per \$1 million of EDA funding and amounts to \$3,058 in EDA funds per job. The 107,662 jobs represent 206 jobs per \$1 million total investment, or \$4,857 per job. The \$3,058 figure represents solely EDA funding compared to resulting jobs; the \$4,857 total figure represents all sources of direct project funding (applicant, local, state, and federal) compared to resulting jobs.

Direct permanent jobs per \$1 million of EDA funding are highest and EDA costs per direct job are lowest in road projects (471/\$2,122), industrial parks (450/\$2,221), and water/sewer projects (401/\$2,496). Direct permanent jobs per \$1 million are lowest and EDA costs per direct job are highest in buildings (208/\$4,800) and marine/tourism (102/\$9,825) projects.

NUMBER OF JOBS (Medians) (All 203 Projects)	
107,662	Total Jobs
327	Jobs per \$1 Million of EDA Funding
\$3,058	EDA Cost per Job
206	Jobs per \$1 Million Total Investment
\$4,857	Total Cost per Job

Construction Employment

Although not usually counted by EDA, construction employment related solely to the *public works component of the project* is significant. The 203 public works projects produced 2,435 construction jobs, or 15.0 full-time-equivalent (FTE) construction jobs per \$1 million in EDA funding.⁴ Construction jobs per \$1 million of EDA funding are highest in building (16.0) and roads (15.4) projects and lowest in water/sewer (15.0) and tourism/marine (12.0) projects.

CONSTRUCTION EMPLOYMENT (Median) (All 203 Projects)	
2,435	Total FTE Construction Jobs
15.0	FTE Construction Jobs Per \$1 Million of EDA funding

Direct Private-Sector Investment

Direct private-sector investment primarily involves the building or improvement of structures. For most utility and road public works projects, direct private-sector investment takes place after the public works improvement. For freestanding buildings, it is often part of the EDA grant. For harbor, pier, and dock improvements, insofar as job creation is concerned, direct private-sector investment is often less than investment in other categories of public works improvements. For 171⁵ of the 203 public works projects studied, six years after completion of these projects, private-sector investment totaled \$2.75 billion. This amounts to \$10.08 million per \$1 million of EDA funding.

⁴ Except in the case of buildings, this does not include private- or other public-sector improvements on the land.

⁵ As indicated previously, 32 EDA projects had no direct private-sector investment.

Total private-sector investment per \$1 million of EDA funding is highest for roads (\$18.7 million) and water/sewer projects (\$11.7 million) and lowest for buildings (\$781,250) and marine/tourism (\$712,490) projects. Buildings projects are low because many of the structures have been constructed for incubators, tribal industries on Indian reservations, or to retain an industry that is about to leave an area. In each of these cases, subsequent private-sector investment is often relatively low.

PRIVATE-SECTOR INVESTMENT (Median) (171 Projects)	
\$2.75 Billion	Total Private-Sector Investment
\$10.08 Million	Per \$1 Million of EDA Funding

Public-Sector Investment

Non-EDA public-sector investment, including grant as well as additional public-sector monies, amounts to \$690 million. The median case amounts to \$1 million per \$1 million of EDA funding.

Total public-sector investment per \$1 million of EDA funding is highest for marine/tourism (\$1.01 million) and industrial park (\$1.0 million) projects and lowest for water/sewer (\$905,284) and buildings (\$735,946) projects.

PUBLIC-SECTOR INVESTMENT (All 203 Projects)	
\$690 Million	Total Public-Sector Investment
\$1.0 Million	Per \$1 Million of EDA Funding

H. PROJECT IMPACTS (NONPROJECT-RELATED DIRECT IMPACTS AND INDIRECT IMPACTS)

Nonproject-related direct impacts and indirect impacts are obviously more difficult to quantify than project-related direct impacts. Nonproject-related direct impacts are jobs and private-sector investments that occur due to the excess capacity of the road or water/sewer line that the EDA grant funded. Usually, these impacts occur only in the aforementioned types of projects.

Indirect effects are the spin-off commercial businesses and/or industrial wholesalers related to the primary direct-effect jobs and private-sector investment.

As best can be measured here, nonproject-related direct-effect jobs occur in about 30 percent of the public works projects; indirect-effect jobs occur in about 35 percent of the public works projects.

Number of Direct Nonproject-Related and Indirect Jobs

The total number of direct nonproject-related jobs for the 203 projects studied is 17,229. This amounts to approximately 50 jobs per \$1 million of EDA funding.

The most significant sources of direct nonproject-related jobs per \$1 million of EDA funding are road (129) and industrial park (72) projects; the least significant source is buildings projects (10).

The total number of indirect jobs for the 203 projects studied is 21,661. This amounts to 64 jobs per \$1 million of EDA funding.

The most significant sources of indirect jobs per \$1 million of EDA funding are industrial parks (111) and water sewer (69) projects; the least significant source is tourism/marine projects (26).

DIRECT NONPROJECT-RELATED AND INDIRECT JOBS (Medians)	
(All 203 Projects)	
<i>Nonproject-Related Direct:</i>	
17,229	Total Jobs
50 Jobs	Per \$1 Million of EDA Funding
<i>Project-Related Indirect:</i>	
21,661	Total Jobs
64 Jobs	Per \$1 Million of EDA Funding

DIRECT NONPROJECT-RELATED AND INDIRECT PRIVATE-SECTOR INVESTMENT (Medians)	
(All 203 Projects)	
<i>Nonproject-Related Direct Private-Sector Investment:</i>	
\$1.18 Million	Per \$1 Million of EDA Funding
(150 Projects)	
<i>Indirect Private-Sector Investment:</i>	
\$126,180	Per \$1 Million of EDA Funding

Direct Nonproject-Related and Indirect Private-Sector Investment

The total amount of direct nonproject-related private-sector investment is \$474 million for the 203 projects. This amounts to \$1.18 million per \$1 million of EDA funding. Total indirect private-sector investment is \$101 million for 150 projects.⁶ This amounts to \$126,180 per \$1 million of EDA funding.

The most significant sources of direct nonproject-related private-sector investment per \$1 million of EDA funding are roads (\$6.0 million) and marine/tourism (\$4.2 million) projects; the least significant is buildings projects (\$48,812). Similar information cannot be subdivided by category for indirect private-sector investment per \$1 million of EDA funding due to the small number of cases with information other than zero on this variable.

I. PROJECT IMPACTS (GENERAL)

Impacts over Time

EDA public works projects produce jobs, usually in increasing amounts, after project completion. It is not uncommon that direct employment counts at time of project completion are exceeded by a factor of 100 percent six years after project completion. In the 203 public works projects reviewed in this study, direct jobs six years after completion are, on average, twice those found at completion. This means that if the initial count at project completion was 200 jobs, actual resulting jobs six years after completion of the project could be as high as 400. Thus, monitoring at project completion and monitoring six years after a project has been operational can produce differences in job counts of as high as 2 to 1.

Impacts of Tax Base

EDA projects have a potentially significant impact on the local tax base. For approximately 83 percent (168) of the 203 cases analyzed, where the EDA project was not part of a nonprofit or tax-exempt entity, the tax base added amounted to \$2.71 billion. For every \$1 million in funding committed by EDA, the local tax base increased by \$10.13 million from additional private-sector and

⁶ There are fifty-three cases for which there is information on permanent indirect jobs but no information on private-sector indirect investment.

other investments. As indicated above, this happens on average in only four out of five EDA public works projects. Another reality of assessment practice is that if a project fails and bankruptcy is not sought as a shield, most property taxes continue to be owed and must be paid before a subsequent owner can take title to the property. Of the current eight EDA public works projects that are inactive due to business failure, five contain private-sector investment that averages \$8.75 million. Most of this translates directly into tax base additions. Thus, not only are the property taxes paid by most EDA projects significant, but if the business fails, there is significant private-sector investment that runs with the land and potentially can be reaped by the host municipality from a new owner.

TAX-BASE ADDED TO THE LOCAL COMMUNITY (Medians) (All 203 Projects)	
<i>Tax Base Added</i>	
\$2.71 Billion	Total Dollars
\$10.13 Million	Per \$1 Million of EDA Funding

Diversification of the Economy

EDA public works projects seem to generate jobs significantly different from the profile of jobs that currently exist in a region. Most of the rural EDA sites have historic employment strongly associated with agriculture and heavy manufacturing. EDA industrial parks have a variety of technology (automobile, machinery, and computers) and service-oriented (business services) firms, some commercial (retail and wholesale) firms, and occasionally nonstandard occupants of industrial parks, such as educational institutions and prisons.

Of the 203 EDA public works projects surveyed, 189 grantees, or 89 percent, indicated that the EDA project helped to diversify their local economies. Most indicated that both the project itself and the project’s catalytic effect on other projects introduced industries different from the industry types historically found in the region.

The Early and Critical Nature of EDA Funding

A study finding that is repeated throughout this report is that EDA funding is both critical to the success of local economic development efforts and is usually available sufficiently early in the funding process that it acts as a magnet for other sources of funding. Of the 203 public works respondents, 168 projects, or 83 percent, viewed EDA funding as critical to putting the entire package together; further, it served to link and magnify private and other local sources of project funding. A principal of the research team summed his impressions as follows:

This member of the research team has spent 36 years associated with the U.S. Army Corps of Engineers, the Environmental Protection Agency, the General Services Administration, and state and local agencies. No single universe of those agencies’ projects echoed the unanimous success and support observed in this array of EDA projects.

SECTION III
—
**RESEARCH RESULTS:
QUALITATIVE**

SECTION III—RESEARCH RESULTS: QUALITATIVE

A. INTRODUCTION

The following descriptions of several EDA public works projects present information about public works activities in a more qualitative form. Subsections D through I view projects in a grouped analysis; subsection J presents case analyses of selected individual projects. This is done in the first case to contrast and compare projects across certain dimensions; in the second case, the entire flow of a project is presented.

B. GENERAL OBSERVATIONS ON DATA AND IMPACTS

- Almost all of the public works sites had reasonably good information about the number of direct jobs created or retained.
- Fewer sites had information about indirect jobs and direct nonproject jobs.
- Where indirect jobs and direct nonproject jobs information was available, it was usually in a small community where the project person had supervisory responsibility (town manager or business administrator) and where the economic development project was a major activity in that town.
- In communities where multiple EDA grants were obtained, the contact person often had difficulty in isolating the specific impacts of the different grants, especially when the grants funded various activities on the same site. (As indicated by local government officials, “What difference does it make?”)
- Extension of water and sewer lines to a site through undeveloped acreage with road frontage appears to produce more indirect and direct nonproject jobs than just extension of such services onto the project site. (Often it is not the development of the project site that attracts jobs off-site as much as it is the availability of new, basic services to nearby parcels.)

C. PUBLIC WORKS SITES

The vast majority of the projects involved the creation or extension of water and sewer services for individual sites or specifically designated local industrial parks. Other sites involved more diverse activities: development of multimodal transportation hubs, harbor and pier improvements, or construction of business incubators.

D. RATIONALE FOR EDA INVOLVEMENT

The impetus for almost all of the EDA public works projects was economic rejuvenation: the need for highly skilled jobs in the Alameda, California, area, for instance; the closing of Anaconda Company (copper) and the Milwaukee Road Railroad (Butte, Montana); the closing of copper mines and the need to switch to manufacturing (Casa Grande, Arizona); the decline in the oil industry and the resultant need to try to attract state prisons as a job source (Dayton, Texas); high unemployment along with the impending closing of a major beef-processing plant (Liberal, Kansas); the decline in the timber industry as an economic generator along with the difficulty in attracting industry due to a lack of clean water (Mena, Arkansas); or the decline in both the oil industry and agriculture, and the consequent need to diversify the economy (Woodward, Oklahoma).

In a few cases, EDA involvement was either more idiosyncratic or did not directly benefit an *industrial* tenant. The grant to Livingston, California, helped the city relocate a shopping area that was in the way of a realigned state highway. Livingston used the opportunity to create a shopping center that was larger and more attractive than the original one. The grant to Issaquah, Washington, enabled the city to respond to the need for more housing and commercial facilities in this eastern Seattle growth center. Up to the time of

the EDA grant, expansion had been limited due to the absence of a water storage facility with adequate capacity for additional users.

E. THE IMPORTANCE OF EDA INVOLVEMENT

Most informants stated flatly that, absent EDA funding, the projects in their cities would not have gone forward. In a minority of cases, the cities might have used local funding to initiate the projects; however, had this been done, the projects would have been much more modest or, in some cases, a larger share of these costs would have been passed on to the private sector.

As an example of the criticality of EDA involvement, Dion Griffin of the Harbor Bay Business and Research Park (Alameda, California) stated that, without the EDA-funded road extension, it never would have been possible to add seven buildings to the industrial and business park. LaVern Phillips of the Woodward (Oklahoma) Industrial Foundation indicated that, “[Without the grant] Woodward would have continued to experience a decrease in population and a continuous outmigration of jobs.”

F. DIRECT RESULTS OF EDA INVOLVEMENT

Although the study teams looked at different measures of direct project-related results, the most straightforward measure is direct jobs added or retained. Most projects led to considerable job gains: Alameda (850), Casa Grande (225), Liberal (1,350), Mena (659), and Woodward (100). Officials in Issaquah, Washington, although unable to pinpoint exactly the number of jobs added to the local economy, indicated that it was large (about 6,000). In Issaquah, additional water made possible three million square feet of commercial development, including cinemas, bookstores, and restaurants. In Dayton, the availability of water and sewage treatment made possible a significant cluster of three correction facilities on the city’s north side, employing 70 workers: a

federal prison for men and two state jails for women. In other cities, the impact of the EDA project on job creation was much more modest: Butte (42 jobs), Livingston (12). In each of these cities, however, the indirect results of the project were as great as, or greater than, direct job impacts.

G. INDIRECT RESULTS OF EDA INVOLVEMENT

EDA-funded projects led to classic economic spillover effects, such as attraction of commercial businesses to the sites as suppliers of services (regrettably, in some cases it was not possible to ascertain the numbers involved, as in Alameda and Casa Grande); jobs added to the local economy, over and beyond those added at the project site (Butte); expansion in the size of the local population (Issaquah); a lower unemployment rate (Casa Grande, Mena); or a more stabilized and diversified local economy (Woodward). However, EDA projects also led to some unique indirect benefits: *Alameda*—increased access to the site by public transit; *Butte*—increased competition among railroads serving Montana, resulting in lower rates; *Dayton*—construction of an affordable private housing development to serve prison employees; *Liberal*—increased tourism dollars resulting from the creation of a recreation area at the end of a water treatment line; *Livingston*—creation of a pedestrian-oriented downtown based on a Spanish theme; *Woodward*—impetus for the city’s economic development program, resulting in the city receiving an additional large Oklahoma economic development grant.

H. DIRECT NONPROJECT-RELATED RESULTS OF EDA INVOLVEMENT

In many cases, job creation and private investment are the result of the excess capacity of the direct public works projects. In most instances, this relates to the availability of water and sewer services. In Dayton, a Sam’s Club located along the extension to the water storage and water treatment facilities. The property, assessed at \$1.2 million, yielded about \$32,200 in taxes each year to the city,

county, and school district. This is the typical example of a *direct, nonproject-related result*. Often, spillover effects are captured in either direct project-related results or indirect project-related results, but usually not in both.

I. OVERALL ASSESSMENT OF THE EDA EFFORT

The vast majority of EDA projects appear to be successful. Several stand out and require mention. Issaquah, Liberal, and Mena—among others—have been successful either in reversing patterns of decline or in increasing what had been a basically stable pattern. EDA projects were especially important in the above three cities because they addressed these cities' fundamental economic development problems: lack of clean water (Issaquah and Mena) and the lack of separate water treatment facilities for the residential population and the beef-producing industry (Liberal).

Example cities further deserve recognition for linking economic development with aspects of quality of life: Harbor Bay Business and Research Park's (Alameda) effort to make the park accessible by public transit; Issaquah's effort to use tax dollars from EDA-generated commercial development to preserve the city's historic downtown and to link (by privately funded jitney service) lower-income families near the historic downtown and job opportunities provided by new stores and offices; and Livingston's use of EDA project funds as one part of its efforts to create a pedestrian-oriented center.

J. ADDITIONAL EXAMPLES OF EDA'S ACTIVITIES

Marianna, Florida: Federal Corrections Facility

Site Characteristics

Marianna is a relatively depressed Florida town. Before the project, high unemployment and low-paying jobs characterized

the town's economy. The local attitude before the project was that a poorly paid labor force was a reality of life. A large tract of publicly owned land near the general aviation airport (World War II Graham Field) had no water, gas, or sewer. It was adjacent to the Sun Land Training Facility. A small sewing factory in the area employed about 20 persons. Marianna applied for a state grant for economic development of the industrial area. It used \$697,306 from its budget to undertake capital improvements that would encourage the federal corrections institution to build a new prison facility at the site.

EDA Involvement

EDA was critical to the project. Without the EDA grant, the project would not have been constructed. The magnitude of the project was such that the city could not undertake it alone. The EDA grant removed much of the risk and added push to the project to allow those against it to be swayed.

Results of the EDA Effort

The federal corrections institution created 394 new jobs with an average salary of \$41,000. The industrial park adjacent to the corrections institution witnessed an economic explosion. Russell Industries, a major athletic clothing maker that had a 20-person sewing factory in Marianna, moved its worldwide distribution center to the industrial park, creating 550 additional jobs. In addition, Unimac, the manufacturer of Speed Queen washers and dryers, created a manufacturing facility with another 320 jobs. Other industries (Airtronics, Lehigh Furniture Warehouse, McKee Engineering, and other smaller companies) moved within the area, retaining yet another 770 jobs. This was an extremely successful EDA undertaking. The Jackson County Fire and Rescue and the Jackson Recycling Center also have moved into the area, creating approximately 30 more jobs. Two retail food facilities moved nearby the industrial park, creating an additional 10 jobs.

***Sumpter, Oregon:
A Sewage Collection System***

Site Characteristics

In Sumpter, Oregon, a town of 150 population, the research team was advised to come to the town clerk's office: "It is the room behind the town ambulance's parking spot." The city of Sumpter is in the Eastern Oregon mountains. It was at one time a gold-mining town on the Powder River, employing 286 workers in 1982. A projected workforce of 480 by 1985 did not materialize due to the drop in the metals market. When gold prices fell from \$800 per ounce to below \$400, the local mining operation was no longer viable. The town fell into a deep decline. In 1985, of 71 households, 57 had annual incomes of less than \$17,499; 8 of these households' incomes were less than 15,000.

The employed members of households in Sumpter relied primarily on tourism for support. Unfortunately, the entire town was on septic tanks. The tanks were old, and the water table was rising. Municipal files contained letter after letter from households and businesses describing problems with the septic tanks. Restaurants in town threatened to close because their septic tanks required pumping twice each month.

EDA Involvement

The city applied for an EDA grant of \$589,000 to install a sanitary waste disposal system. The system would link users to collection lines that emptied into a lagoon and irrigation field for land treatment. EDA was crucial to the survival of this town. The health and safety—indeed, the total economy—of the town were threatened by the decrepit septic tanks.

Results of the EDA Effort

This was clearly a successful EDA public works project. The sewer system, costing a total of \$726,500 (\$581,200 from EDA), permitted 3 small restaurants and the Elkhorn Saloon to remain open, retaining 26

jobs. In addition, it attracted two small motels, a full-service recreational vehicle park, a laundromat, an ice cream parlor, and the Miner's Exchange Tavern. A railroad park and new public restroom facility opened. The ensuing economic activity resulted in the creation of at least 28 new jobs and private-sector investment of \$750,000. The town now supports 3 flea markets during the summer, attracting 7,000 to 10,000 visitors. A new railroad park is opening approximately one mile from the town—a project that would not have been possible without the motel facilities in Sumpter. Approximately 10 new jobs are associated with this park.

Although this project is not in the category of the "mega-projects" often read about, it is an example of tax dollars being spent directly for the benefit of the public. It represents good government.

***Tompkinsville, Kentucky:
Monroe County Airport***

Site Characteristics

The economic composition of rural Monroe County (population 13,500) and the town of Tompkinsville (population 3,000) is agriculture (largely tobacco) and forestry. Most industry has come within the last 15 years and is north of the city. At the time of the EDA application, Belding Corporation, a wire and cable manufacturer (televisions, telecommunications) and a significant local employer, was owned by Cooper Industries, whose company jets routinely flew its executives nationwide. Belding, the primary force behind the airport, was planning a major expansion into fiber optics. The urgency of shipping the product required an airstrip. In addition, the local hospital, a four-hour drive from Louisville (nearest source of medical specialists), would be able to attract top doctors if they could fly into such a facility.

EDA Involvement

Since the Tompkinsville situation was economically driven and FAA funding was

extremely difficult to obtain (they had to guarantee a certain number of landings, which would generate income from fees), the community economic development agency sought and successfully obtained an EDA grant. EDA provided \$1.5 million, the land was cleared, and a 4,000-foot airstrip and hangar were constructed.

Results of the EDA Effort

The airstrip is in excellent condition but is far from being utilized as envisioned. Several businesses have attempted to develop nearby but have failed. Until recently, lacking a full-time radio operator, the airport functioned mainly as a self-service operation with no one logging its use. Incoming planes trigger runway lights, which is an annoyance to nearby residents. Vandalism (mostly stealing and breaking runway light bulbs) and break-ins initially drove away an operator who was attempting to locate there and manage the airport. He has since returned and is in the process of negotiating a management contract, but this is complicated by a recent notice from Kentucky authorities that ownership of the land is unclear.

No fees are currently charged for airport use except for overnight storage. A new board has recently been chosen to pay bills and oversee planning. Local and county support, which seems not to have been forthcoming, is needed to maintain the airport and pay its bills. A newspaper article dated January 30, 1997, noted that “the Town Council (of Tompkinsville) voted to pay \$500 per month for a period of six months (January to June) to the Tompkinsville/Monroe County Airport to help with the operation of the airport.” A similar \$500 per month was granted recently by the county. These operating amounts are far from what the facility requires to be maintained adequately. Future marketing efforts by the few benefiting industries are considered essential to keep the airport afloat in the near term.

K. CONCLUSIONS

After visiting six Regional Offices and reviewing the contents of 203 project folders, holding 13 seminars nationally, and meeting face-to-face with 52 public works grantees; undertaking 203 mail surveys and a minimum of six callbacks to each site; and finally, after visiting 60 project sites, the research team concludes the following:

- EDA public works projects are completed both efficiently and effectively.
- EDA public works projects create significant direct and indirect jobs and private investment in the political jurisdictions in which they are developed.
- The jurisdictions where EDA activities take place have economies that are far more impacted than the economies of the host state or the nation as a whole.
- These locations were not being actively sought for economic development activities before EDA’s involvement, yet most experienced sustained growth as a result of the funded project.
- Public works projects produce more jobs and more private investment later in their existence than they do earlier on. Both jobs and private investment increase significantly as the public works project matures.
- As in all public agencies, some problems exist. A few EDA grantees indicated that the public works project was poorly managed by EDA; a larger percentage indicated that the paperwork was burdensome; one indicated that EDA was slow in disbursing its payments. These criticisms collectively accounted for less than 5 percent of the projects surveyed.

SECTION IV
—
**RESEARCH TEAM,
ACKNOWLEDGMENTS,
REFERENCES**

SECTION IV—RESEARCH TEAM, ACKNOWLEDGMENTS, REFERENCES

RESEARCH TEAM

The foregoing research was funded by the Economic Development Administration. It was undertaken by Rutgers University, Center for Urban Policy Research (CUPR); New Jersey Institute of Technology, National Center for Transportation and Industrial Productivity (NJIT); Columbia University, National Center for Infrastructure Studies (NCIS); Princeton University, Woodrow Wilson School; the National Association of Regional Councils' Economic Development and Planning Division (NARC); and the University of Cincinnati, School of Planning and Urban Policy. The Rutgers-NJIT-Columbia-Princeton-NARC-Cincinnati team was led by four senior academic principals—Robert W. Burchell, Louis J. Pignataro, F.H. (Bud) Griffis, and John W. Epling.

Robert W. Burchell, Ph.D.

Dr. Burchell has served as principal or co-principal investigator on more than 60 research contracts in a thirty-year career at Rutgers University. He has conducted studies for the Federal Transit Administration, U.S. Department of Agriculture, Fannie Mae, U.S. Department of Housing and Urban Development, and other federal, state, and local agencies. For the last five years, his work has been concentrated in the areas of economic impacts and costs of infrastructure development.

Louis J. Pignataro, D.Sc.

Dr. Pignataro is Executive Director of NJIT's Institute for Transportation and Distinguished Research Professor of Transportation Engineering. He has served as primary investigator for more than 55 sponsored research projects in a variety of areas, including pipeline infrastructure studies in the New York metropolitan area.

F.H. (Bud) Griffis, Ph.D.

Dr. Griffis has more than 37 years of experience in design, construction and maintenance of national and international infrastructure systems such as program management of the JFK International

Airport redevelopment program, management of the design and construction of Ramon Airbase in Israel, and numerous infrastructure design and construction projects in Europe and the Far East.

John W. Epling, D.P.A.

Dr. Epling brings to the project more than 30 years of experience working for local, regional, and state governments in four different states on issues of economic development, infrastructure investment, urban and rural revitalization, and other areas. As the Executive Director of the National Association of Regional Councils, he has interacted with elected and appointed officials across the country on community and regional development and infrastructure needs.

Burchell, Pignataro, Griffis, and Epling were joined by the following colleagues:

Rutgers University

Research Associates

William R. Dolphin
Naveed A. Shad
Alex Zakrewsky

Editorial Staff

Shannon Darroch
Linda Hayes
Arlene Pashman

Research Assistants

Althea L. Clarke
Mark Field
Heidi A. Kaplan
Curtis Krauss
Wanda I. Mills
Danelle Mitchell
Andrew Siemsen
Milo Mason Turk
Kathy Vossough

New Jersey Inst. of Technology (NJIT)

Research Associates

Mei Chen
Hong Lin
Sally O'Malley
Eugene Reilly

Columbia University*Research Assistant*

Carrie Sturts

Princeton University*Research Associate*

Andrew F. Haughwout

**National Association of
Regional Councils***Research Associates*

Patricia Sue Atkins

Richard Hartman

University of Cincinnati*Research Associates*

David Allor, Professor

Charles Ellison, Professor

Johanna Looye, Professor

David P. Varady, Professor

RESEARCH ORGANIZATIONS**Rutgers University****Center for Urban Policy Research
(CUPR)**

For nearly three decades, the Center for Urban Policy Research has conducted a broad spectrum of urban research. In particular, CUPR has concentrated its efforts in analysis of infrastructure, public finance, economic impacts and forecasting, land use, environmental policy, and geographic information systems.

The Center for Urban Policy Research has undertaken economic impact and infrastructure studies for the National Academy of Science, National Trust for Historic Preservation, Environmental Protection Agency, New York Metropolitan Transportation Commission, States of South Carolina and New Jersey, Southeast Michigan Council of Governments, and North Jersey Transportation Planning Authority.

**New Jersey Institute of Technology
(NJIT)****National Center for Transportation and
Industrial Productivity**

The National Center for Transportation and Industrial Productivity represents a substantial investment of the NJIT's resources and research capacity in activities that are intended to address problems of relevance to local governments, the state, and the nation. The National Center's research involves federal and state transportation studies for motor vehicles and transit-based systems.

Current research projects include estimation of multi-modal freight flows in the United States; smart sensors for freight movement; rail intermodal service planning; pipeline infrastructure studies to evaluate and develop criteria for the siting of natural gas and hazardous liquid transmission pipelines in proximity to the public in urban areas and in sensitive environments; economic and land use impacts of transportation projects; design and construction of prototype noise barriers; and seismic retrofitting of major bridges.

**Columbia University
National Center for
Infrastructure Studies**

The National Center for Infrastructure Studies was established to research technologies, techniques, and materials to improve the productivity and durability of infrastructure facilities in urban areas. The Center has performed studies of infrastructure demand and supply with funding from federal agencies, states, and major cities.

The Center has established a preventive maintenance management plan for the bridges of New York, developed environmentally responsible guidelines for New York City Bridges, and performed extensive destructive and non-destructive testing on many of the nation's suspension bridges. It has recently developed an innovative concrete mixture substituting ground waste glass for portland cement. The Center is active in the study of transportation systems, water supply,

waste water treatment, solid waste disposal, and dredging.

**Princeton University
The Woodrow Wilson School of Public
and International Affairs**

The Woodrow Wilson School of Public and International Affairs has more than 50 regular faculty members, most of whom have joint appointments with the departments of Economics, Politics, or Sociology. It has research programs in demography, development, domestic policy, international studies, and survey research. The principal research units are the Center of Domestic and Comparative Policy Studies, the Center of International Studies, the Office of Population Research, and the Survey Center. The Office of Population Research has undertaken multiple studies of the economic impacts of public works projects.

**National Association of
Regional Councils (NARC)**

The National Association of Regional Councils promotes and encourages intergovernmental cooperation, recognition of the region as an economic entity, and cooperation among the nation's public, private, and civic sectors. Research thrusts include the capacity and ability of localities to undertake economic development.

**University of Cincinnati
School of Planning and Urban Policy**

In the last twenty years, the faculty of the School of Planning and Urban Policy have conducted research on community health, computer simulation and GIS, edge cities/metro-towns, environmental management and policy, housing, inner-city development, international urban development, and urban design.

ACKNOWLEDGMENTS

This study would have been impossible without the assistance of the EDA headquarters office, including:

Phillip A. Singerman, Assistant Secretary for Economic Development

Awilda R. Marquez, Deputy Assistant Secretary, Program Research & Evaluation

John B. Fieser, Economist, Research and National Technical Assistance

John J. McNamee, Director, Research and National Technical Assistance

Also essential to the research effort were the support and accommodation rendered by EDA Regional Office Directors:

John E. Corrigan, Philadelphia

William J. Day, Atlanta

Pedro R. Garza, Austin

C. Robert Sawyer, Chicago

A. Leonard Smith, Seattle

John D. Woodward, Denver

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SECTION V
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**PROJECT PROFILES
AND
SITE VISIT SUMMARIES**

(This PDF contains all of the evaluation's analysis and findings but does not include individual project profiles or site visit summaries. Project-by-project details are contained in the full report. The following lists are included to identify the projects that were the basis of the evaluation.)

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