## CONSTRUCTION PROGRAM UNDER FEDERAL PUBLIC WORKS ADMINISTRATION

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For years past, many people have advocated an extensive program of public works during times of depression to take up the slack in labor. This remedy for unemployment was again advocated for the local units of government in the early stages of this depression. Where communities elected to go forward with a public works program, they were faced by an absence of any market for their bonds. After most private and local governmental credits had dried up, those who were at the helm of our governmental structure enacted as an emergency to stem the tide of unemployment the National Industrial Recovery Act.

Title II of this act provides for financing a public works program by the federal government, which program contemplates the re-employment of labor on useful public works. For financing this program, \$3,300,000,000 has been appropriated to be used partly as a direct expenditure and partly as a loan to local units of government and to private corporations. Through the purchase of material and with the purchasing power of labor restored, the capital goods and building industries will be revived and a more lasting foundation for economic recovery established.

To administer Title II of the act, there has been created a Federal Emergency Administration of Public Works, and there has been set up in Washington a central organization, with financial, legal, and engineering branches, to pass finally upon non-federal loans. There has also been created an Auditing Division, a Board of Labor Review, an Inspection Division, and a Technical Board of Review, each of which has its special function to perform with reference to the expenditure of the huge sums of money. In each state there is a State Engineer and an Advisory Board, consisting of three members, for promoting the activity of filing application for loans and making preliminary examination of their eligibility.

States, counties, municipalities, and other public bodies may secure a loan on almost any kind of public project if there is a social necessity for it, provided that it is sound from an engineering standpoint and has a legal status, and that sufficient security can be offered for the repayment of the loan. Such projects include waterworks, sewers, sewage disposal plants, highways, bridges, schools, hospitals, jails, electric light plants, markets, parks, etc.

For public bodies, 30% of the cost of the labor and material in a project may be considered as a grant, which need

not be repaid. If the applicant has enough cash on hand to finance all but 30% of the cost of labor and material on a project, it may secure the grant without securing the loan. This kind of financing is much simpler than where the loan is requested, as the question of security for a loan is not involved.

## INDIANA P.W.A. PROGRAM TO DATE

To date there have been filed with the Administration of Public Works for this state, 161 applications for loans, totaling about \$39,000,000. These are classified as follows:

FORMAL APPLICATIONS FILED TO DATE ON VARIOUS PROJECTS AND THEIR APPROVAL BY WASHINGTON JANUARY 19, 1934

Total Projects Received to Date-161

Total Projects Forwarded to Washington to Date—135 Total Projects Approved by Washington to Date—52

No. Projects Requested	Kind	Amount Requested	Approved by Washington	
			No.	Amount
37	Water Works	\$3,498,032.68	14	\$1,796,000.00
34	Sewerage Systems	6,746,899.06	8	2,296,000.00
18	Schools	2,279,183.74	5	302,100.00
1	Memorial	700,000.00	1	192,000.00
1	Flood Protection	14,016.34		
3	Gas Utilities	10,295,866.12	1	75,000.00
1	Park Improvement and Extension	381,000.00		
5	Electric Light and Water Plants	321,733.62	3	234,500.00
3	City Street Resurfacing	168,720.50		
1	Street Lighting	60,000.00	1	60,000.00
8	City Buildings	1,051,075.60		
3	County Bridges	1,834,293.21		
6	County Roads and Bridges	4,292,676.50		
6	Swimming Pools			
1	Fire and Police Alarm System	295,700.00		
26	State Highway Construction (Grant only)	1,170,660.23	17	928,300.00
1	Garbage Digestor, Pump and Pit	62,000.00		
1	Farm Development	343,593.00		
1	Dunes Harbor	1,997,367.88		
1	Street Railways			
1 (RFC)	Water Works (Petersburg)			50,000.00
1 (RFC)	Sewer System (Beech Grove)	37,000.00	1	45,000.00
1	Ditch Dredging	· · ·		· · · · · · · · · · · · · · · · · · ·
161		\$38,985,718.48	52	\$5,978,900.00

Of these projects, 52, totaling about \$6,000,000, have been tentatively approved by the administration; and fifteen projects, totaling about \$2,700,000, are under construction.

Excessive expenditures of money during the boom years of the hectic twenties and the magnifying of the debts resulting from these expenditures by the depression, provoked in our state drastic laws perhaps unduly limiting the incurring of debts to be paid in future years. Hence, we find ourselves not only restricted to the 2% constitutional limitation on indebtedness, but with the five-year road bond moratorium, and the \$1.50 tax law contemplated to restrict *ad valorem* taxes to \$1.50 per \$100 valuation.

Since at present in only one of the political subdivisions of the state which has made application for a loan is the tax rate under \$1.50, apparently the \$1.50 tax law will prevent the financing of many of the projects for which loans are requested. Thirty-four of the loans applied for totaling about \$5,400,000 are proposed to be financed by general obligation bonds. Thirty-two of these will probably be disqualified by the \$1.50 tax law.

Although these tax-restrictive laws will prevent many projects from securing loans, it does not mean that many others cannot be financed. There are acts of the legislature providing for the financing of certain classes of projects from the revenues of the project. Such projects include water works, gas plants, electric light plants, and distributing systems, sewage disposal plants and intercepting sewers. In addition, a great variety of recreational projects are provided for in Chapter 85 of the Acts of 1933. Revenue bonds are issued for such projects and are an obligation against the revenues of the project and not a general obligation against the property of the taxing unit.

# INERTIA OF THE PUBLIC WORKS PROGRAM

The public works program was at first misunderstood by many. It is still misunderstood by some. It was contemplated that much of the money would be used as a loan. The government is merely extending credit because credit from other sources has dried up. The procedure for the financing requires all the steps and legal transactions of financing without a government loan, with some additional safeguards required by the government. Bids must be advertised for the sale of the bonds. In the absence of a bidder, the government buys the bonds at par. Fortunately it is not a case of the applicant, after making the formal application, "shuffling off" to Washington and bringing back the money in a bag, as some believed.

Inasmuch as a condition of the loan exacts a future obligation to pay, the question of taxes is involved, and here the arguments frequently start. Protests have been made against any more debts. This is a most natural thing in normal times and might be expected under the present economic conditions. Although, as mentioned above, there are many needed and worthy projects that are self-liquidating in character, it is frequently difficult to make speed in financing them. Many of the projects that come to us have been under way for two or more years, long before a Federal Public Works Administration was conceived. After the local officials have been tussling with the project against protests by taxpayers, they have mustered sufficient public support to put them over. Hence, it can readily be seen how difficult it has been to rush forward a public works program, particularly in a state that has so many tax restrictions as Indiana. However, as the public becomes more acquainted with the purpose of the program to put the unemployed to work and at the same time secure some needed project, it is in many places looking upon the program in a new light. An added interest is being taken and new applications are being filed almost every day. With a better understanding of our tax restricting laws, it can be better predicted what projects are most likely to receive favorable action.

Because of the extreme difficulty which local units of government had in offering good security for the federal loan, much of the money has been assigned to federal projects. To bring about prompt relief, \$400,000,000 of the appropriation has been assigned to the Civil Works Administration, which allots the funds and is spending the money direct and which is not handicapped by the multitudinous restrictions of local units of government. This work has gone forward with a rush and put tens of thousands of the idle to work and brought cheer to many a home. While no one pretends that the highest degree of efficiency is secured on all of this work, it is believed that it is well justified. The degree of efficiency secured depends wholly upon the efficient organization of the local units of government which are spending this money. This work can be observed in many places being done very efficiently; in other places, with poor organization and management, inefficient work results. The local units of government have no one more to blame than themselves if any of this money is being wasted.

Although there were many contributing causes to the world economic depression and each one as it developed brought others into action, a major cause has been the failure of organized society to revise its government to keep pace with the scientific and industrial development of the age. Revision in our tax laws was delayed too long, and, unfortunately, the change had to come at a time when our governmental structure was disturbed. It seems almost to require revolution to compel us to shake off our old customs when they become obsolete. Society as a whole, like the individual, is a bundle of habits. We do not like to shift our methods, particularly our methods of taxation. We are prone to postpone our adjustment until forced by almost a revolutionary movement; then we have to change suddenly, instead of by gradual stages, and, as a result, our whole governmental structure may be temporarily disturbed.

After many years of attempting to make the farmers pay the cost of a system of super-highways for automobiles, we changed our taxing laws so as to tax those most benefited directly by the highways. Ill omens were predicted as we placed a tax on gasoline, but the inventions forced the automobile upon us so suddenly that we had to do something. As a last resort, we reluctantly placed sufficient tax on the automobile, in the form of license fees and gasoline tax, to build a great system of highways spreading all over the state and to the credit of all of society. No one has been burdened thereby. This is an outstanding illustration of how a taxation system must be changed from time to time to harmonize with changing customs of society resulting from new inventions and discoveries.

The gross sales and income tax law will undoubtedly be a great relief in our taxation problems when it gets well under way. No doubt it is not perfect in all respects and will need some adjustment. However, this law is another step in the direction of a reformation that must take place in our taxation system from time to time to accommodate the new features and adjustments resulting from the scientific and industrial development. We cannot depart far from the fundamentals in taxation which require that the taxes shall be based upon "ability to pay" and the "benefits derived from the taxes."

We must encourage and not discourage the taking advantage of our scientific and industrial development. We must arrange as soon as possible to use all our big machinery when it is cheaper and to do work by machine than by hand. By so doing, we can have many advantages and pleasures and opportunities which cannot be secured without machines. is true that China does not use machinery to any large extent, but we do not want to return to its type of civilization. Civilized man should be able to take advantage of the inventions and discoveries he has made. The problem is, first, how to distribute equitably the advantages of the inventions and discoveries among the population and, second, how to persuade men to take up new occupations, either for pleasure or profit, if the inventions and discoveries have made the products from their old occupations in excess. This excess may come from the machinery's making, at less cost, a greater quantity of the product, or in a reduced need for the product.

Modern advantages of our scientific and industrial development in this country are such that with all of labor working and the products of labor properly distributed, all of society should enjoy a civilization little dreamed of even in the hectic days of 1928 and 1929.

The National Industrial Recovery Act was passed as an emergency measure to legalize the many emergency steps necessary to stem the tide of the depression which, like a fatal disease, was slowly creeping upon us. Now that the greatest emergency is past, let it be said that for a while, even though such government was contrary to the ideals of the American people, it seemed that we *might* slip off into the Russian, German, Italian, or some other dictatorship form of government. The many acts passed by the President and Congress that lent financial help to our institutions did real service in stemming the tide. The greatest of all these measures was the National Industrial Recovery Act. Not only did it provide for a public works program; but under the NRA provided for in Title I of the Act, there has been put forth the greatest effort to reform a well-developed commercial and industrial system ever undertaken in any country in the world during peace times. It contemplates that all of industry shall function henceforth under codes of fair competition, with the ultimate supervision of the administration of those codes resting with the administration forces of the government.

#### OBJECTIONS OFFERED TO THE PUBLIC WORKS PROGRAM

Many objections have been offered to the public works program. While some of these have been well-founded and with sincere intention, many of the objections have been based on misinformation or gross ignorance. Usually the objectors have given little thought or consideration to any method of solving our economic problems.

One of the objections offered was to the high minimumwage rate established by those in authority. However, most people who offered this objection changed their minds after they gave careful thought to the best method of distribution of employment among as many persons as possible and readily saw the necessity for the higher wage rate in view of the limited number of hours of employment per individual.

Big utilities object to the creation of municipal light plants, as these plants compete with their business. Others object to the "red tape." While we recognize that there is considerable detail required in the process of securing a loan caused by the necessity for a sudden creation of an organization to handle the work in Washington and each of the forty-eight states, it is quite natural that in any procedure some detail would be required which might not seem necessary. However, it is also quite true that some of the more exacting methods required by the federal government in checking the social necessity and financial soundness of many of the projects should have been used in past years by the local units of government, which, had they used such methods, would frequently not find themselves in their present financial plight.

The investigation division of the government has a wholesome effect upon the proper expenditure of the huge funds. This division is ever on the job, and apparently when trouble is brewing on some project, the investigators appear upon the scene, almost overnight. From my slight contact with this division, I can speak only too highly of the good it is doing. It is unfortunate to have to admit that some of our local officials come under the control of certain selfish interests, which aid materially in breaking down and sometimes almost destroying local self-government, but it is believed that this division of the government will aid materially in breaking up some of these local combinations which are unhealthy for good government. Hence, we cannot say that the red tape is necessarily a handicap to efficient management. It may be a great asset in the proper expenditure of the taxpayers' money, and it is hoped that the influence of this work will be left with the local communities as a permanent value to local self-government.

The public works program was conceived with the idea of giving the unemployed remunerative work and thus reducing the relief roll and at the same time making it possible for this great army to maintain their self-respect by having an opportunity to work for a living instead of accepting charity. In turn, the public is to receive something it needs or should have, in the form of some worthy project or improvement which will add to the betterment of society. Thus, with proper supervision, none of the funds would be wasted or used as mere charity.

Never has an organization put forth greater efforts to carry out the purpose of the act than the P.W.A. at Washington. When it was seen that some of the states were slow in coming across with requests for loans on acceptable projects with good security, much of the funds was allotted to federal projects. Then the C.W.A. was created to spend directly and forthwith a certain amount of the funds. Almost immediate results from these expenditures were noted. The P.W.A. projects are now getting under way throughout the country and should absorb some of the labor as it is released by the C.W.A.

Much concern has been expressed about the huge national debt being created by the P.W.A. This is indeed entitled to serious thought. However, no one yet has offered an acceptable substitute for the public works program. Moreover, in passing judgment on it, one must take all facts into consideration. When one really thinks seriously and recognizes that during the past year the incurring of indebtedness by all public and private institutions to be paid by future generations is not even approximately equal to the rate of incurring future indebtedness before the depression hit us, our minds should be somewhat relieved. The only difference is that now it is a national debt, where before it was local governmental and private debts. Someone says, "Yes, true, but why should I be concerned with private debts?" You are certainly concerned in the stocks, bonds, and bank deposits on which you are unable to realize. Any excess in spending private borrowed capital has to a large extent the same effect upon our whole financial structure as if it were the spending of public funds. As a whole, we are reducing the sum total of our public and private debts. Local bonded indebtedness is decreasing at a satisfactory rate. The reduction in the local governmental and private debts is counteracting the increased national debt.

#### SHOULD PREPARE FOR THE ERA AHEAD

We know from all past history that a prosperous era is ahead. Every indication points to this depression as having passed its worst and to our being well on our way to recovery. Let us hope that not only our own nation but all the world will profit by the experience of the past decade, because our troubles during the past four years are largely the result of things that preceded them. We should prepare for a return of normal times, as we know that they must return. If there is too great a delay in preparing, prosperity may find us as unprepared as we found ourselves unprepared for the depres-We should go forward with any necessary projects, sion. whether they be public or private and whether or not they are financed by a government loan. It is probable that after we have fully passed the present crisis and can intelligently look back upon all the causes and remedies for the depression. it will be recognized that the financing of the public works program was the one real material thing that started the recovery on its way. Even the knowing with certainty that a large sum of money was to be expended for labor and miscellaneous materials of every description would naturally have the effect of stimulating business even before the funds were expended.

### SUBGRADE DRAINAGE AND TREATMENT

By F. H. Eno, Professor of Highway Engineering, Ohio State University, Columbus, Ohio

It is said that during a technical talk given by a particularly experienced highway engineer the question was asked, "What is the most important phase of road construction?" His answer was, "Drainage." The question came back im-