UNIVERSITY ASSISTANCE TO EMERGING MINORITY CONSTRUCTION CONTRACTORS

by

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DISCLAIMER

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( Pages 87-88 )
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Randall C. Porter

Submitted to the Department of Urban Studies and Planning on June 3, 1970 in partial fulfillment of the requirement for the degree of Master in City Planning.

Programs to integrate the construction unions are best organized on an area-wide basis. University efforts to improve employment opportunities for minority workers by increasing the numbers of minority workers on campus construction sites will not be effective as a long range means to increase the number of minority tradesmen.

A role more suited to the strengths of universities lies in programs of assistance to emerging minority contractors.

Central to success in the construction industry is manipulation of a wide range of informal relationships upon which access to contracts and financing depend. Exclusion from informal industry circles stymies the growth of small firms.

The weaknesses of emerging minority contractors are similar to those of small white firms and center around staffing deficiencies in estimating and accounting, and poor coordination, cost control, scheduling and financing.

MIT and Harvard University, stimulated by student demonstrations, have helped minority firms obtain university contracts by opening competitive bidding opportunities and in some cases by negotiating contracts. They have offered financial aid and technical assistance in coordination, scheduling and quality control.
University assistance efforts have not responded to the fundamental needs of emerging firms. A comprehensive proposal based upon a successful joint venture forms the central recommendation in a discussion of suggested elements of assistance to minority contractors.

Thesis Supervisor: Bernard J. Frieden
Title: Professor of Urban Studies and Planning
ACKNOWLEDGMENTS

I would like to express my appreciation to my faculty advisor, Professor Bernard Frieden, for his help in establishing the format for this study and for assisting in the clarification of methods, objectives and style. Professor John T. Howard deserves thanks for his generous provision of financial assistance during my second year in the Department. Professor Quinn Mills was kind enough to contribute the initial exposition of the construction issue as a whole which enabled me to define this topic.

The contractors and administrators whose insights and information form the body of this study were generous in the use of their time and made many of our encounters particularly enjoyable.
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The issue of discrimination in the construction industry has received increasing attention from the federal government, urban institutions and the construction industry. Attempts to open opportunities to minority groups have faced substantial problems, based in part on the decentralized characteristics of the construction industry. A good deal of emphasis has been focused on construction trades workers and on programs designed to assist them in gaining access to employment. Less attention has been given to minority construction contractors and their efforts to achieve an equitable share of the construction market. Universities, in entering the issue area of discrimination in the construction industry, have directed their programs for the most part toward affirmative action plans designed to increase the number of minority workers employed on university construction projects. They have devoted a smaller part of their effort to improving opportunities for minority contractors.

The first section of this study will assess university policy alternatives with respect to the issue of integration of the construction industry by analyzing the characteristics
of the industry and the potential impact of university policies. The central question in this section will be whether or not universities may more appropriately devote their resources to programs designed to bring minority workers to university construction sites or to efforts to improve the competitive status of minority contractors. The analysis of an appropriate focus for universities will examine the distribution of employment opportunities, the importance of the unions in providing employment and the availability of minority journeymen workers. The importance of assistance to minority contractors will be discussed in light of black contractors' ability to pay standard wages and retain qualified workers.

Section One discusses the difficulties universities face in attempting to directly affect employment of minority workers. It seems apparent that universities will find it desirable to direct their efforts at elements of the construction industry which they can influence directly. An appropriate role for educational institutions attempting to contribute to the integration of the construction industry centers around opening access to university construction projects for minority contractors and providing them assistance in meeting the demands of the work. Such a
focus for university efforts, however, does not preclude efforts to increase the numbers of minority tradesmen employed in the industry.

Section One sets the stage for an analysis in Section Two of current university efforts to assist the development of inexperienced minority contractors. Section Two attempts to utilize case studies of university programs of assistance to contractors to examine the effectiveness and appropriateness of policies pursued by M.I.T. and Harvard. The analysis is made in the context of the characteristics of emerging contractors and the manner in which the informal relationships characteristic of the industry affect access to contracts and financing. An attempt is made to determine how well the needs of minority contractors are in fact met by the universities' efforts to increase the numbers of black contractors working on university construction projects and to assist them in meeting the demands of the work. The success of minority contractors in securing university contracts through competitive bidding will be compared with the experiences of other small firms under similar circumstances. Finally, suggestions will be made as to ways in which universities might increase the effectiveness of their programs.
The study is based primarily on twenty-six personal interviews and 5 telephone interviews with twenty-eight persons associated with universities and with construction contracting. In addition, persons connected with the Contractors Association of Boston, the Economic Development Component of the Boston Model Cities Administration and Housing Innovations (an architectural firm involved in assistance to minority contractors) were interviewed. Of the contractors interviewed, ten were heads of small black firms (all with less than $1,000,000 yearly volume) and six were heads of small- or moderate-sized white firms (largest yearly volume, $3,000,000).

Approximately half of the conversations were tape-recorded and then transcribed. In almost all cases respondents were willing to talk extensively about their activities.
SECTION ONE

The following discussion is designed to clarify the appropriateness of two general policy approaches available to universities with respect to the issue of the integration of the construction industry. On the one hand are policies and programs which attempt to improve employment opportunities for minority tradesmen, and on the other hand, programs which attempt to improve opportunities in the industry for minority construction contractors. Programs aimed at improving opportunities for minority tradesmen and efforts to improve the competitive position of minority contractors are both important and necessary undertakings. Increased participation in the industry by both minority workers and contractors is essential. The discussion will attempt to indicate that universities can perhaps bring their resources more effectively to bear on programs which are of assistance to minority contractors than on efforts to increase the numbers of minority tradesmen employed in the industry.
THE CONSTRUCTION INDUSTRY

A brief analysis of certain characteristics of the construction industry serves as a prelude to the discussion of the role of the university in efforts to integrate the construction industry. It is well to note, for example, that the industry labor force is dispersed throughout a metropolitan area. Individual workers remain on a given site only long enough to complete their particular trades and then move on to other sites, often changing employers in the process. Normally, two or three months are sufficient for the completion of a specialty and a construction worker may have five or six employers in one year. The number of men at work on a site may vary from a handful involved in crane operations to forty or fifty men in each of several different trades. Because workers change sites and employers frequently, the industry has arranged its hiring, training and labor-management relations on an area-wide basis. For the construction worker, "Job security comes from the local union", not from employers. A study in New York City finds:

The economic structure of the building industry tends to concentrate in the local unions the decision as to who obtains employment . . . and who gets admitted to the craft.
Contractors tend to take little responsibility for employment discrimination because of their limited ability to control the characteristics of those whom they employ. The frequency with which workers change sites and employers means that efforts to integrate a segment of the work force by relying on employee quotas for single sites will have little direct effect on employment opportunities on other sites, and cannot assure stable long-term employment. Individual employees brought to one site may have no assurance that they will be able to find appropriate positions at other sites because of the control unions exert over the distribution of hiring opportunities. Action which attempts to affect long-term employment by means of policies which put pressure on contractors to create employment opportunities on their projects will probably be ineffective in improving the status of craftsmen unless union practices are changed at the same time. Individual institutions such as universities will find it difficult to force contractors and unions to develop area-wide hiring and training programs. An authority in the field of discrimination in the construction trades states:

There is no evidence that a purely compulsory anti-discriminatory program can be more effective than a "voluntary" program with sanction as an ultimate threat. There are too many ways to lawfully avoid making important changes in Negro employment. (3)
For example, the Labor Department's Philadelphia Plan (see below) indicates that if a contractor fails to meet proposed goals "he shall be given an opportunity to demonstrate that he made every good faith effort to meet his commitment". (4) Harvard University has inserted a similar escape clause in its contracts which call for quotas on two of its construction projects. An administrator says of the contractor, "his only responsibility is to try. He probably will not be able to live up to the manning table, although not through lack of effort". (5)

Access to the unions is ordinarily achieved through apprenticeship programs. A study of apprenticeship discrimination, undertaken by the United States Commission on Civil Rights, finds that in New Jersey "apprenticeship training occupies a pivotal position both in gaining union membership and in procuring skilled employment". (6)

In New York City, the same study shows that union apprenticeship programs "determine who shall acquire the skills--and the journeyman rating--necessary to employment on nearly all new construction in the city". (7) Because apprenticeship training is the usual vehicle by which journeyman status and union membership is achieved, widespread restrictions on the entrance of blacks to apprenticeship programs has meant that their access to employment in
the trades has been restricted as well. The USCCR studies mentioned above cover Connecticut, New Jersey, Maryland, New York City and California and show a consistent pattern of exclusion, sometimes systematic, of minority group applicants. (8) The numbers of black apprentices in Boston indicate that the same is true there. (9)

There are no figures for the total number of black tradesmen in the Boston area who are currently not union members, but black contractors indicate that there are few blacks in the licensed trades of plumbing and electrical work either in or out of the unions—less than thirty in each trade. Current Population Survey data (U.S. Bureau of the Census) indicates that nationwide, 3.6% of all electricians and 3.2% of plumbers are black, and Mills, using unpublished Current Population Survey data, estimates that approximately one-half of these are actually employed in construction. (10) Efforts which induce employers to hire tradesmen in these categories will bring only limited changes in the total percentages of blacks employed in construction.

In trades such as carpentry and painting, for which opportunities associated with residential construction in the black community have been such that black tradesmen
not associated with unions have been able to gain employment experience, there are higher proportions of qualified black workers. Nationwide, the percentage of all black workers was 6.1 for carpenters and 10 for painters in 1967. Nonetheless, there appear to be insufficient numbers of black carpenters available in the Boston area to meet the demands of general contractors seeking to adhere to compliance requirements. At Tufts University, an administrator states that a contractor attempting to employ minority carpenters in compliance with a university contract was unable to find sufficient numbers to meet his needs. Qualified minority workers are in high demand. At another university, a general contractor alleges that West Indian painters were brought on a construction site by a community organization which had insisted that there were pools of local qualified painters available. Mills asserts that:

repeated attempts to enroll minority group journeymen mechanics in many of the building trades in most American cities have revealed that large numbers of already skilled craftsmen are not available.
A weakness, then, of programs which seek to improve employment opportunities of minority workers on a project-by-project basis is the absence of significant numbers of qualified minority journeymen in most trades. The implication for universities is that compliance measures which stress employment project-by-project will fail to attack the heart of the problem, that is, the shortage of qualified minority tradesmen.

Because there are relatively few experienced black workers, training offers an important contribution to the solution of the problem. Would it be useful for universities to induce contractors to train workers on their sites? Mills indicates that effective training programs require on-the-job experience over a significant period. He asserts that training is most feasible when undertaken on an area-wide basis and administered jointly by committees of labor and management.

The Labor Department has funded several "area-wide, multi-employer affirmative action programs"\textsuperscript{13} involving local unions and offering training to minority apprentices and upgrading to union members. Descriptions of these and other training programs funded during the last two years indicate that training characteristically extends from six months to over a year on non-apprenticeship programs\textsuperscript{14} and up to five years on apprenticeship programs. The length of training
necessary makes it difficult to provide adequate training on a single construction project. When training is sponsored by local labor organizations they provide an area-wide training vehicle and offer assurance of opportunities for union membership after trainees complete the programs.\textsuperscript{15} A spokesman for the Office of Federal Contract Compliance has called area-wide, multi-employer affirmative action programs an essential part of the effort to move away from "the OFCC's conventional contract-by-contract approach to compliance".\textsuperscript{16} The programs call for commitments on the part of unions and contractors to area-wide recruiting, training and upgrading but do not set quotas for individual sites.

The Labor Department has gained a good deal of attention in its efforts to implement a quota system through the Philadelphia Plan, but it has made it clear to Boston and other cities subject to similar action that the Department prefers to see the implementation of area-wide programs based on agreements among unions, contractors and owners which make project-by-project quotas unnecessary. The Department has announced in Philadelphia that unions there could avoid implementation of the Plan by offering training programs of their own\textsuperscript{17} and has stipulated in a memorandum for Boston that it will regard an adequate area-wide
training and hiring program as a substitute for the quota system. It appears that the Philadelphia Plan may be assigned the status of a sanction and kept in reserve.

A prototype affirmative action plan suggested by the Labor Department for the unions calls for a "specific numerical goal" for new minority employment in the industry, but instead of proposing a quota for each project, suggests that the increase be distributed "equitably" among the trades. The programs would cover all construction work performed by contractors who are members of the Building Trades Council, the General Contractors Association and the Specialty Contractors Association. According to Mills, national AFL-CIO negotiations over conditions for training and employment of residents of areas included in union jurisdictions indicate that the unions have moved around to a position in which they are willing to sponsor training.

In Boston, unions, general contractors and subcontractors are developing "an affirmative action recruitment and training program on an area-wide basis". These qualities of area-wide participation which spread responsibility over a large number of participants and allow continuity of both training and employment, along with the provisions for labor participation in the development of the program, recognize the decentralized characteristics of the
construction industry.

Universities may find it reasonable to insist that contractors participate in available area training programs including apprenticeship programs, but they cannot effectively promote training by insisting that contractors train workers on a project-by-project basis. On the other hand, Harvard has undertaken a program of in-house training, relying on its own construction projects, currently 21 in number, to provide continuity of training opportunities for 41 men. The program has union approval and, when finished, its trainees will be eligible for union membership. The implication of this effort is that universities individually and in consortia may be able to provide the continuity of work experience necessary for training, if they wish to sponsor it themselves.

Area-wide programs, too, have limitations. Because they do not allow for specifications of any particular numerical representation of blacks on a specific job, training efforts can only proceed on the assumption that as the pool of trained manpower enlarges, minority group representation on jobs across the metropolitan area will grow.
Potential Financial Impact of Private Educational Institutions

Private educational institutions and other private organizations find themselves increasingly inclined to undertake efforts to influence the minority employment policies of the construction industry. To assess the potential impact of universities on the construction industry it is useful to examine the financial weight private educational institutions wield. Can universities, alone or in consortia with other non-profit institutions, exert financial influence sufficient to affect substantially the policies area-wide of construction contractors and unions?

The financial impact of universities and other non-profit institutions can be gauged by looking at their outlays for construction. Private educational construction in 1968 represented 5 per cent of all private non-residential construction, 2 per cent of national public and private non-residential construction and 1 per cent of total construction expenditures. (Table 1) In absolute figures, construction for private education accounted for expenditures in 1968 of $984 million out of a total construction figure of $85 billion.19 The figure for total national construction does not include maintenance and repair, which, if included, would bring the total to approximately $100 billion.20 (See Table 1)
Table 1

New Construction Put in Place in the United States (Billions of Dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Construction</th>
<th>Private Construction</th>
<th>Public Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>$72.3</td>
<td>$75.1</td>
<td>$57.0</td>
</tr>
<tr>
<td>1966</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1968</td>
<td>$76.7</td>
<td>$84.7</td>
<td></td>
</tr>
</tbody>
</table>

1968 Private Construction 57

- Private Non-Residential 18.8
- Private Residential 28.8
- Public Utilities 7.5
- Other-Primarily Farm 3
- Private Educational 0.984
- Total Private Educational, Religious, Hospital and other Institutional 2.6

1968 Public Construction 28

- Federally Owned 3.5
- State and Local 24.2

Table 2
Total Private Non-Residential Construction Authorized in Boston (Selected Permit-Issuing Places) SMSA, 1968; in Millions of Dollars

<table>
<thead>
<tr>
<th>Boston Total Construction</th>
<th>906</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Residential Construction</td>
<td>547</td>
</tr>
<tr>
<td>Total Non-Residential Construction</td>
<td>559</td>
</tr>
<tr>
<td>Total Private Non-Residential</td>
<td>270.5</td>
</tr>
<tr>
<td>Office</td>
<td>87.9</td>
</tr>
<tr>
<td>Educational</td>
<td>47</td>
</tr>
<tr>
<td>Industrial</td>
<td>49.6</td>
</tr>
<tr>
<td>Hospitals and Other</td>
<td>39</td>
</tr>
<tr>
<td>Commercial</td>
<td>35</td>
</tr>
<tr>
<td>Religious</td>
<td>3</td>
</tr>
</tbody>
</table>
In the Boston area, private education contributed a relatively larger proportion of total private, non-residential construction authorized in the SMSA during 1968 than in most other metropolitan areas. (Table 2) The figure of $47 million spent for private education constitutes 17% of the $270 million total outlay for private non-residential construction and 5% of all construction in Boston in 1968. With the exception of the Philadelphia area, where the proportion was 22%, all other SMSAs surveyed by Construction Review showed a significantly smaller proportion devoted to private education. In New York City, private educational institutions contributed only $18 million, or 3% of the total. Detroit, Los Angeles and San Francisco's private educational institutions made similarly minor contributions. (Table 3)

In the Boston SMSA, if one combines figures for religious institutions, hospitals and other private non-profit institutions with figures for private education in an attempt to gain perspective on the financial contribution made by private, non-profit organizations, one finds that they contributed $89 million or 33% of the total private non-residential construction outlay in the metropolitan area. (Table 2) This figure represents 16% of all non-residential construction and 10% of Boston's total construction in 1968. (Table 3). Nationwide, private
<table>
<thead>
<tr>
<th></th>
<th>Boston</th>
<th>Chicago</th>
<th>Detroit</th>
<th>Los Angeles</th>
<th>New York</th>
<th>Philadelphia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Private</td>
<td>271</td>
<td>505</td>
<td>262</td>
<td>532</td>
<td>658</td>
<td>200</td>
</tr>
<tr>
<td>Non-Residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational</td>
<td>47</td>
<td>49</td>
<td>6</td>
<td>21</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>Religious</td>
<td>3</td>
<td>25</td>
<td>9</td>
<td>10</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Hospitals and Others</td>
<td>39</td>
<td>26</td>
<td>16</td>
<td>58</td>
<td>35</td>
<td>9</td>
</tr>
<tr>
<td>Total Ed., Rel. and</td>
<td>89</td>
<td>100</td>
<td>32</td>
<td>89</td>
<td>66</td>
<td>59</td>
</tr>
<tr>
<td>Hosp.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Educational as Percent | 17%    | 10      | 2       | 4           | 3        | 22           |
| of Total Private       |        |         |         |             |          |              |
| Non-Residential        |        |         |         |             |          |              |

| Total Ed., Rel. and    | 32%    | 20      | 12      | 17          | 10       | 29           |
| Hosp. as Percent       |        |         |         |             |          |              |
| of Total Private       |        |         |         |             |          |              |
| Non-Residential        |        |         |         |             |          |              |

non-profit institutions represented 14% of total private non-residential construction and 5% of total non-residential construction. (Table 1)

According to analysis by Construction Review the value of construction by private institutions of higher learning fell 5% in 1968, and the publication predicted that for the next several years outlays for private education would remain stable, indicating an actual reduction in the volume of new facilities, primarily because of rising costs.

It is apparent that construction by educational institutions does not represent a major proportion of total new construction or of total non-residential construction in the Boston area. Consortia of non-profit institutions may represent a greater potential impact, approaching 16% of non-residential construction. However, non-profit institutions cannot exert the kind of influence associated with a primary purchaser and would probably find it difficult to influence the industry as a whole through the use of financial sanctions such as selective contract formation. According to Mills, universities which attempt to intervene in the affairs of contractors are external third parties trying in effect to influence the relationship between employers and employees. They have no legal prerogative to do so, and
they are misguided when they believe that they can successfully write provisions into contracts which call upon an employer to act in a way which is unacceptable to his employees (that is, the unions), which cause him to violate his collective bargaining agreements or which are unacceptable to his own best interests in the long run.\textsuperscript{22}

This discussion has looked at the difficulties associated with university efforts to affect directly the employment of minority workers. It seems clear that universities can make a more substantial impact on the integration of the construction industry when they focus their efforts on problems which they can directly affect. Educational institutions exert greater control over the choice of those with whom they form contracts than those whom their contractors in turn employ. The body of this study will analyze university attempts to open construction opportunities for minority construction contractors and to assist them in responding to the demands of the work.

It should be noted that universities as private owners are in a better position than public agencies to offer special consideration to minority contractors. Local statutes require public agencies to accept the lowest responsible bidder. Except in special cases, there is no means by which to give contractors opportunities to secure negotiated contracts or other special bidding considerations on public projects, and bonding requirements are usually mandatory. When using private funds, universities
as owners are free to select contractors by whatever criteria they deem appropriate. They can take steps to assure the participation of minority contractors on their construction projects.
Minority Contractors and Minority Labor

An important element in attempts to open opportunities for black construction contractors is that of the relationship between emerging minority contractors and minority workers. An analysis of this relationship underlines the importance of assistance to minority contractors which complements programs to improve the status of minority workers. It appears that efforts to improve the competitive status of black firms are imperative if they are to retain their qualified workers.

As was noted above, black workers have largely been excluded from the construction trades until recently. Black contractors in the Roxbury area are often limited primarily to workers from the black community, a large proportion of whom have poorly-developed work skills. A significant number of minority firms complain of inadequately trained work forces and a scarcity of qualified tradesmen. Some of those who do not complain of poor workers employ primarily white labor. According to an official of the Contractors Association of Boston, an organization to aid black contractors, skilled black tradesmen are difficult to secure primarily because of past discrimination in the trades; but black contractors, too, have avoided upgrading their employees. They have feared that well-trained workers would leave for union wages elsewhere.
Mills has suggested that major white contracting firms, under pressure to bring in black workers, will sometimes hire untrained men and pay them union wages. There is an indication that contractors in this area are doing so. A staff member of Housing Innovations indicates that part of the current labor problem black firms face stems from increased demand for black workers by general contractors. White contractors, under pressure to meet manning tables or to adhere to equal opportunity commitments, are allegedly offering union wages not only to qualified and experienced men but to inexperienced workers as well.

One current program seeks to assure that training and employment efforts are linked to safeguards for minority contractors. Project Upgrade, a training program in Oakland, California, sees to it that trainees work initially for black contractors. This policy was instituted even though larger white firms, because "they need minority tradesmen to meet quotas on government work," are willing to train men. An official associated with the effort states,

While these larger contractors are better able to stand the expense of the training programs the project must be careful not to rob (minority contractors) of their employees. We could put a contractor out of business by taking away his men.

One contractor points to another source of competition—federally sponsored training programs which offer trainees
journeymen wages. "This has taken a lot of my workers, including those I was trying to train."

Black contractors sometimes attribute their inability to offer union wages to low profit margins arising from the inefficiency of their untrained work forces. A Roxbury contractor states:

When a large contractor pays his workers $5.00 an hour he gets back nearly that amount worth of work. But black contractors, since they have to use a large number of poorly skilled workers, get only about $3.50 worth of work in return for a $5.00 wage.

Another contractor claims that black contractors should receive a 25% subsidy on institutional contracts in order to make up for the poor performance of their workers. Others familiar with the industry say that black contractors find it difficult to control costs when employing non-union labor because of high turnover of workers and the unreliable quality of their work.

As black contractors undertake more demanding work, including commercial and institutional construction under highly competitive circumstances, indications from black contractors are that they will find it increasingly desirable to "go union"--to employ union workers and pay union wages. One contractor states that union attitudes toward black contractors have altered significantly during the last two years and that in most trades contractor
associations and unions are willing to accept black firms and workers. He goes on to assert that any qualified contractor who wants to do good work will find after five years in business that he has to have union workers. Mills states:

There have been many instances in this country of unions seeking to organize larger non-white contractors, in part because of the attraction of their non-white work force, only to find the contractor insist on replacing his old employees with the current union work force. 25

There are indications, however, that many black firms cannot afford to pay standard union wages. One firm, known in the black community as a well-established enterprise, was criticized on a Harvard project recently by the union for failing to pay full union scale. The contractor himself, however, asserts that all of his workers are licensed journeymen (80% of them white). For this firm, at least, inadequately trained workers do not lie at the center of its inability to offer union wages. Other black contractors engaged in institutional or commercial construction have been criticized by the unions for paying less than union wages on union jobs.

It seems safe to say that contractors' inability to pay full scale wages derives only in part from poor work forces and is due in large measure to their other inefficiencies as firms, inefficiencies which are characteristic
of most small, inexperienced contractors. Section Two will examine the weaknesses of small firms. Let it be said here that efforts to improve the training and employment opportunities of black workers should coincide with technical assistance to black contractors, if black firms are to begin to compete successfully with established firms. As black workers are sought in increasing numbers by white contractors and offered union wages, black contractors who have not achieved a level of efficiency which allows them to offer union wages will find their qualified work forces depleted. Ineffective management, technical difficulties and poor financing contribute to the difficulties black contractors face. To improve their labor pools without meeting their other needs as well might leave them in a position worse than before. Universities have the opportunity to perform an important service by developing programs to contribute to the development of minority contractors.

The preceding discussion of the importance of assistance to minority contractors and the role universities may play in providing assistance is not designed to imply that the interests of minority workers and minority contractors are in conflict or that assistance to minority contractors should receive higher priority than efforts on behalf of
minority workers. The discussion attempts to suggest that universities will find the more effective use of their resources in programs directed at aspects of the industry which they can affect directly. Universities can bring their resources directly to bear on the process by which firms secure contracts and meet contractual obligations.
Summary

Universities have been among those institutions which have attempted to respond to the issue of discrimination in the construction trades by increasing the number of minority workers employed on campus construction sites. It is clear, however, that project-by-project efforts to increase the numbers of minority workers employed are of limited efficacy. The area-wide, multi-employer characteristics of construction employment and the small numbers of qualified black tradesmen available in many of the trades limit the impact of policies which affect isolated sites. Similarly, the characteristics of training necessitate programs organized on an area-wide basis (unless, as is the case at Harvard, they can be arranged on an in-house basis). It does not appear that universities or consortia of non-profit institutions carry sufficient weight to influence policies of the industry as a whole by means of financial sanctions.

As black workers receive increasing opportunities for training and higher wages elsewhere, black firms may find it difficult to retain a competent work force. While black contractors may find it increasingly to their advantage to employ union workers, a significant proportion of the emerging contractors appear incapable of offering union
wages. The problem of wages and workers appears to stem in part from inefficiencies characteristic of small firms, which will be discussed in the next section.

Because universities can make more significant contribution to the integration of the construction industry by concentrating their efforts on programs which influence directly that phase of discrimination they wish to attack, efforts to improve opportunities for minority contractors offer an effective use of university resources. Perhaps the needs of emerging minority contractors and the capabilities of the universities may be made to coincide. Universities may be able to perform an important service by establishing programs to assist minority contractors in securing, financing and managing university construction projects.

The analysis does not intend to indicate that the aims and needs of minority construction workers and minority contractors are in conflict. It does show that efforts to improve opportunities for minority tradesmen should be pursued in conjunction with programs to improve the competitive status of minority contractors.
SECTION TWO

This discussion will compare the needs and characteristics of minority contractors undertaking institutional construction with current efforts by universities to improve their access to university construction contracts and to assist them in responding to the demands of the work.

Certain informal relationships between elements of the industry prove to be important factors in the problems minority contractors face and are discussed first.
Informal Characteristics of the Industry

An administrator associated with MIT construction programs summarizes the importance of informal relations in the industry:

Construction is an extremely risky business and the difference between succeeding and not succeeding is very small. It doesn't take very many extra handicaps to make the difference between success and failure.

As is true of most human undertakings under competitive circumstances, informal relationships play a role in the construction industry almost as important as formal relationships. It may be in this facet of the industry that black contractors' problems differ most markedly from whites. To secure opportunities to bid on contracts, to obtain financial aid, in arranging for labor and supplies and to coordinate complex projects, contractors must rely in large measure on informal relationships to achieve their ends. Minority contractors, in addition to confronting the need to develop appropriate technical and managerial skills, must somehow gain entrance to a variety of informal networks within the industry which often make the difference between success and failure. This discussion will begin with an appraisal of the importance in general of informal interrelationships, and then examine more specifically the use of preferred lists of contractors. It might be said that informal relationships are a mixed blessing. While they afford numerous opportunities
for discrimination, they resist codification into rules and procedures which would be difficult to circumvent to create special opportunities for contractors.

**Interrelationships**

The administrator quoted above goes on to say,

Over the years the construction business has been a referral business. You do business with one group of subcontractors and you don't move out of that group unless you have a referral from someone who is in the club.

Black contractors have not been members of the club and have not possessed means of moving into the major construction circles. They have failed to achieve relationships with general contractors which would bring them new contracts. Isolated in Roxbury, black contractors say that they have found themselves limited to residential projects. The effect has been a failure either to develop construction skills in other than residential rehabilitation and construction or to cultivate a network of associates which could help bring in bidding opportunities in commercial and institutional fields.

Those familiar with the industry, including contractors, indicate that interrelationships between parties in the industry serve as important mechanisms by which to reduce the uncertainty associated with contracting. Relationships between contractors and suppliers, for example, rely on informal understandings to make good on "take-offs," or quotations
and delivery dates. The dependency associated with credit and the scheduling of deliveries of materials are central to the needs of contractors. Delays in delivery can upset not only the timing of individual contractors' operations but the coordination of several subcontractors on a project. Accurate quotations from suppliers are essential ingredients in estimating. One must be able to tap a number of different sources and, once they have been approached, to count on them to deliver the best price. Those familiar with construction indicate that such interdependence is characteristic of relationships at all levels of the industry.

Contractors indicate that most of their bidding opportunities arise through informal channels—as one puts it—"Contacts." Another says, "It is almost impossible to get on a bid list unless you know someone." Many find their initial bidding opportunity the most difficult to obtain, the rest following more easily. When contractors wish to move from one general field to another, such as from residential construction to institutional construction, for example, they face a hurdle similar to their first breakthrough.

Contractors who have spent several decades in the industry indicate that the climate of bidding has changed substantially. Until about ten years ago, a large number of contracts, particularly specialty contracts, were awarded informally. It has now become more difficult to secure contracts in the
absence of competitive bidding. Part of the reason lies with increasing costs, which force owners to require bids in order to obtain the lowest possible price. In addition, subcontractors indicate that a larger proportion of construction today is performed by general contractors, who require estimates from subcontractors in order to formulate their bids.

Another setting in which informal relationships make crucial differences is on the job, during construction, as subcontractors responsible for different functions coordinate work among themselves. Timing and scheduling of processes are important. Contractors realize that a poor performance on one specialty can mean losses for most of the firms concerned. The industry attempts to avoid these kinds of difficulties by relying on known quantities—firms which have a reputation for being reliable and efficient. An MIT administrator calls this protective strategy on the part of owners and general contractors the initial block that we are going to have to get over (with respect to black contractors). We have to begin to build up relationships, as an owner, with contractors in the black community until we establish mutual knowledge, trust and dependence.

Most moderately-sized contractors both black and white find loans and bonds difficult to secure, particularly when the firm has not previously received financial assistance. A first loan or bond is often obtained partly through the influence of a personal contact within a financial agency.
White contractors often state that they received their first bond "through a friend," or that "I knew the President of the bank since I was a little boy." One contractor secured his first loan, having been turned down by the bank's Vice President, after literally pleading with the President of the bank, whom he knew. "The Vice President called me back and said they had changed their minds." Black contractors do not often indicate having benefited from this kind of personal influence and one would expect to find their informal relationships with members of white financial institutions at best limited.

Some of those familiar with the industry indicate that with respect to securing contracts, informal relationships are no longer a stumbling block for black contractors because owners and general contractors currently seek out black subcontractors in order to comply with affirmative action requirements. While most black contractors find access to contracts greatly increased since the middle 60's, there is a strong indication that they are still excluded from informal associations which would make available to them the same diversity of opportunity which white contractors enjoy. In the main, statements by black contractors indicate that many more jobs than previously now come their way, but that the jobs are selected and tailored to minority firms. Most commonly, general contractors employ black contractors when in the vicinity of Roxbury. One black subcontractor states that the
general contractors who offer him opportunities to bid when
the project is in Roxbury do not do so when the job is else-
where. "Contractors who give me work here don't let me bid
on work outside." Even as the market improves vis a vis
black contractors and the number of contracts made available
increases, black contractors may continue to suffer exclusion
from the diversity of opportunities open to many white con-
tractors. Such isolation will limit their capacity to grow
in size and in sophistication.

Selected Bid Lists

Most owners and general contractors utilize a system of
"acceptable" or preferred lists of contractors for use in
opening bidding on contracts which are funded privately. The
practice derives in part from the industry's dependence on
informal interrelationships among its elements and is designed
to reduce the risks associated with construction.

Such are the risks involved and the wide variation among
contractors in the quality of work performed that owners find
it to their benefit to offer bidding opportunities only to
general contractors and subcontractors whom they have found
reliable and to restrict bidding to this preferred group.
Instructions to bidders, which accompany project specifications,
usually carry lists of several subcontractors which the owner
trusts. They ask that the general contractor select sub-
contractors from the list, but an escape clause allows the
general contractor to propose additional subcontractors in an alternate bid which the owner reserves the right to accept or reject. If the proposed subcontractor submits the low bid to the general contractor, MIT, as an owner, will "sit down and talk to the contractor to ascertain if the sub is acceptable" and assess his references and resume. If the new subcontractor, once accepted, performs successfully on the job the Institute may add him to its selected list. Generally, MIT and Harvard are made aware of new contractors by means of personal references from an architect or general contractor. Harvard, for example, takes the size and capacities of prospective firms into account by examining the price range of its current work. If a firm normally undertakes five painting contracts in the range of $20,000 each during the course of a year the feasibility of a project for $50,000 would appear low in light of this record. Because most firms considered for any particular project possess essentially similar basic capabilities in terms of tools and equipment and to some degree experience, the choice of a preferred bid list narrows down to assessments of the depth of the organization's work force, financial capacity, current volume of work and whatever previous experience sets one apart from the other. Even when a firm is selected by this careful process, the chance remains that it will turn out to be a bad risk. An official at MIT observes, "We've got stung several times, even after pre-qualifying the contractor."
It should be noted that the creation and updating of preferred lists is standard textbook procedure when private funds are involved. "Private owners may proceed in any manner they choose to select a contractor" and it is common for an owner "to select a few contractors, each of whom he considers to be reputable and capable, and invite them to bid."

While it is apparent that characteristics of uncertainty and the possibility of large losses necessitate safeguards for good workmanship and militate against random solicitation of bids, there remains the possibility that unnecessary and unfair influence will enter the process by which bids are solicited and contracts awarded. Recently, a minority contractor accused MIT administrators not only of maintaining preferred lists but in some cases handing out jobs in the absence of bidding or a semblance of competition. The Department of Physical Plant asserts that such practice does not occur with respect to the greater part of its contracts but that some of its associated departments which handle minor contracts have assigned some projects arbitrarily. They indicate that they are attempting to prevent the practice.
Small Construction Contractors

Several studies have been made of small scale homebuilding enterprises and small construction businesses. Two reports published by the Small Business Administration find a pattern of similar problems among small contractors. The reports were undertaken at two universities and consist of a number of case studies of small construction firms. The reports' conclusions are not substantiated by means of systematic analysis of the case histories but depend on generalizations abstracted from the material. The studies were undertaken independently and tend to agree on basic conclusions.

Most small firms are managed by men whose chief experience with construction derives from former employment as skilled tradesmen. While these businesses seldom confront difficulties associated with handling the techniques of construction itself, particularly when the firm confines its operations to residential work, they often fail to confront or attempt to master the complexities of management, estimating and financing. Even when they attempt to enlarge their operations, inexperienced contractors preserve business methods which were barely adequate at their former size. The long range effectiveness of most firms, according to the SBA studies, depends on how well they handle the problems of acquisition of capital, personnel coordination, cost control, estimating and accounting. It will be useful here to summarize and assess the available studies of small contractors as an
introduction to the problems of minority contractors. It should then be possible to distinguish between problems characteristics of small entrepreneurs generally and those which plague minority contractors in particular.

Management

Contracting management on a small scale consistently fails to recognize the need for outside management assistance. When firms expand, the contractor, accustomed to remaining near the work site but no longer able to do so, often loses control of coordination, scheduling and cost control recording because an inexperienced foreman exercises supervision on the job. Inexperienced entrepreneurs fail to see that their firms need specialists to keep the management and coordination system functioning. Coordinating the work phases of each project is one of the most difficult tasks of management, involving as it does the scheduling of operations, use of materials and personnel assignments.

Accounting

Because of their inexperience in business practices, "few builders have sufficient background to design accounting and cost control systems to fit their enterprises." Often, keeping accounts is regarded as a matter of only passing interest to the contractor himself. He may leave the accounts to a part-time bookkeeper and retain "only a general idea of the total amount of his orders, of his receivables, of the value of his fixed assets and of the basic features of his wage and salary costs." While he may have a grasp of his purchasing
requirements and adequately forecast his needs for a projected undertaking, this remains the extent of his planning.

Cost Control

Cost control is closely allied with the function of estimating and bidding. Small operators tend to lack experience with elements of cost and cost control is considered by some a fundamental stumbling block for small builders. According to one study,

successful firms . . . allocate expenses carefully to particular jobs and make sure that each cost is clearly identified. Every item of expense is traced to its proper destination. Successful management knows day-by-day the exact costs incurred on a particular contract up to that point, and the relationship of such costs to those budgeted in the original estimate and bid.4

Similarly, contractors may continue to utilize inappropriate accounting methods in attempting to record the information on which cost control and estimating are based even after their firms begin to enlarge.

Estimating

Because the methods of compiling cost reports used by emerging contractors are often so haphazard, they provide only a weak basis on which to develop estimates for bidding purposes.

The most common and damaging consequence of an ill-kept accounting and cost control system is the underestimating of costs at the start of a project or during bidding.5

Larger firms, or more management-conscious firms, utilize professional estimators in detailing bids. Both
overestimation and underestimation are often due to insufficient information on the demands of the processes involved, inability to measure the productivity of the work force, and ignorance as to the performance to be expected from other operators on the same job. "Errors due to lack of cost data are nearly unavoidable in custom-built construction." Unless contractors can develop cost control techniques, they remain unable not only to estimate and bid accurately but unable to remain within their budget constraints as the work progresses.

**Bidding**

One of the reasons small contractors fail to develop estimating and bidding skills, one study finds, is that most minor contracts are assigned on a personal basis via friendship contacts or through other channels in which price is a secondary factor. When small contractors attempt to expand or undertake more sophisticated projects they move out of the arena of relaxed bidding relationships into highly competitive situations, and in an attempt to gain an advantage may bid rashly. The desire to take on larger jobs often induces contractors to rely on hunches or base estimates on crude rules of thumb. Bidding procedures associated with large jobs are based on their margins of profit and meticulous analysis of the firm's capacities with respect to work force, supply sources, financing arrangements and management procedures. "The careful preparation of a bid is time consuming and expensive. It must be done by competent, experienced individuals."
Financing

Maisel, in his study of residential construction financing, finds that because both small and large contractors ordinarily operate with small amounts of capital relative to the value of the work they undertake, they must schedule capital outlays carefully so that they coincide appropriately with financial payments. "All phases of the construction process tend to be equity-poor." General contractors usually provide equity of from 10 to 20 percent of the value of the finished project. Subcontractors find that they can stretch their capital even farther with careful management.

While the contractor desires to invest as little equity as possible in any given job, the owner, for his part, wants to be assured that the contractor has sufficient funds to complete construction. These needs are worked out in a system of partial payments against the contract price agreed upon in the bid. The owner places sufficient funds to cover the construction with a bank or other escrow agent and requisitions from the contractor are honored according to a schedule. The amount of capital loans or other funds available to a contractor, as well as the payment schedule, limit the amount of work a firm can undertake at any given time. The firm must gauge the size and number of its commitments so that investments in current projects are not greater than the capital available to it; otherwise there will be points at which it cannot meet its bills. "He may be solvent
but illiquid."

The Small Business Administration studies find that of those construction firms which fail, inadequate equity capital is often a central cause. Supplies can be purchased on credit, labor paid on a short term basis (usually on a schedule such that partial payments for work in progress cover labor costs) and equipment can be rented. Therefore, men go into business with little capital. But the likelihood is great that they will possess insufficient capital reserves to meet unexpected setbacks.

Lenders regard loans for construction projects as high risk "because so many things can go wrong. The cost can rise above the initial estimates. Funds can be diverted into other projects." The lender ordinarily obtains submission of the plans and specifications, a credit statement and records of previous undertakings. Lenders may refuse to accept applications if, on the one hand, they believe that the contractor has overestimated the costs and appears to be asking for a loan so large as to minimize unreasonably his personal capital commitment. On the other hand, he may have underestimated costs and the lender may surmise that he will not be able to finish the job. Lenders attempt to determine whether or not builders can finish a proposed job by an analysis of factors which reflect applicants' credit status. This may include financial statements of assets and liabilities and of
previous income, frequently a signed statement of anticipated costs in considerable detail, and a projection of the availability of the funds required to finish the project."

The lender may also secure a report on the contractor's financial integrity and fiscal stability. The lender wants to ascertain total costs of the undertaking carefully in order to make certain that the contractor possesses sufficient working capital to meet his bills and to determine to his satisfaction that assets are deep enough to absorb unexpected setbacks. Because of their financial and record-keeping weaknesses, credit and expansion capital are difficult for small firms to obtain.

This discussion of the small construction firm will serve as a basis on which to discuss the needs and problems of emerging black contractors. The studies from which the above material was obtained focused primarily on the home-building industry. Most black contractors now involved in attempts to enlarge the scope of their operations evidence experience almost exclusively in residential construction and rehabilitation and their problems should for that reason bear some resemblance to those of small homebuilders in general.
Characteristics of Small Minority Contractors

The preceding analysis generalized about difficulties small contractors face when attempting to enlarge their firms or move into areas which in some manner demand more sophisticated operations. The following discussion will examine the problems which black contractors confront as they attempt to enlarge in scope or complexity. Many of the contractors discussed here are in the process of transferring from residential work involving primarily rehabilitation or new construction to institutional renovation and construction. Rather than simply enlarging residential operations, they are enlarging and at the same time undertaking more demanding work in terms of technical processes and the quality of finished product demanded.

Information for this section was gained by means of interviews with black contractors and with technical and administrative staff associated with Harvard, MIT, Tufts, Beacon Construction Company and the Contractors Association of Boston. The assessments rest on comments by technical and administrative staff familiar with the performance of emerging contractors and by contractors themselves. The interviews attempted to ascertain the firms' experience with estimating, cost control, credit arrangements, payment schedules, management and technical demands.

In most cases, contractors met difficulties attempting to cope with the demands of the projects. Problems appeared
to stem from an unfamiliarity with the technical demands of the work, the managerial complexities of larger-than-usual projects and lack of capital. An architect familiar with emerging contractors states,

There is a lot of difference between laying out a new building, knowing how to order and knowing how to coordinate your work, compared to renovating two rooms in an apartment. The quality of the rehabilitation, its character and the amount of funds involved determine what kind of experience contractors have had. There are very few black contractors who have had extensive experience.

Management

Some emerging contractors find it difficult to coordinate procedures and to schedule materials delivery. They usually lack experienced office personnel and clerical assistance to help make operations more efficient. A University administrator goes so far as to say, "In effect, we have to supervise the jobs ourselves."

One contractor described as weak in coordination and supervision "didn't push his men and failed to finish in the length of time most contractors would have." The contractor himself corroborated that assessment, stating that he continues to need assistance in bringing subcontractors on the job at the appropriate moment. He discovered as a result of experience on the project that "you can't rely on anyone else to do your coordination for you." Another minority subcontractor indicates that he relies on staff members associated with the general contractor "to do the pushing" on the site.
In order to give their men more work, small contractors sometimes utilize individual workers on several phases of one project, thereby asking them to undertake more than one trade specialty. This can cause greater-than-normal delays because the contractor must wait until one trade procedure is finished before putting his men on another. Under ordinary circumstances general contractors use their standing work force only for the basic work and subcontract most of the trades. They are then able to bring in and coordinate several processes at the same time, thereby moving the job rapidly. The tendency of inexperienced contractors to over-utilize their own men also increases the likelihood that the work will be of less than acceptable quality, since specialists in the trade are said to be substantially better skilled in a single process than are those who attempt two or more.

It appears to one architect experienced in assistance to black contractors that the difference between those who can manage new undertakings and those who cannot rests to a significant degree on personal capacities less connected with technical skill than with attention to details, punctuality and total effort invested in the operation.

**Accounting**

The majority of black contractors interviewed had either secured or were attempting to secure the services of accountants. Several indicated that they consulted periodically with accounting firms rather than hiring full or part-time staff members.
Some firms voiced concern that they had not yet developed an accounting system which lending agencies would take seriously. Others had experienced difficulties obtaining reliable accounting personnel and had lost money on poor advice.

**Cost Control**

An administrator states, "A number of subcontractors run their businesses out of a check book" and find it difficult to determine whether or not they make a profit. An executive of a contracting firm sponsoring a joint venture with a black contractor said,

> We had to set up a complete cost control system for him. We're handling the whole thing. We're breaking the job down, coding it into its various increments, (associating) labor with all those categories, costing it out, entering it and comparing it to what work was done and how much we should have spent.

**Estimating and Bidding**

Emerging black contractors find it difficult to bid accurately, partly for the same reasons other inexperienced contractors do; that is, they do not have an understanding of or control over the capacities of their own firms. One official points out that "many (minority) contractors do not know the cost of their overhead or labor or their cash requirements." When contractors transfer from residential work to institutional projects some of the elements of institutional construction are unfamiliar and they meet difficulty ascertaining the exact characteristics of the new demands. They cannot forecast accurately the costs involved.
Contractors' lack of estimating skill is illustrated by a firm which secured its first large new residential construction project through a negotiated contract. The contractor accepted the general contractor's breakdown of the costs and later found that he had been deceived. He asserts that his lack of experience led to a $96,000 mistake.

Experienced estimating and supervisory assistance is especially necessary when firms undertake estimations on large scale new construction. One contractor discussed the problems which arise in construction projects of several stories. They create imposing problems of logistics and coordination and an experienced estimator is essential. Firms will find variations in labor output and problems of scheduling on multi-story projects not encountered on smaller projects. These will require not only reliable predictions of costs but experienced supervisors to make expenditures hold true to estimates. For example, no opportunity presents itself to store materials on the site and arrangements must be worked out by which to transport materials to the floor under construction. The resulting effort to coordinate material and large numbers of workers is a feat unfamiliar to emerging contractors and one which requires experienced supervisory and estimating personnel, particularly under current conditions of high costs and severe competition.

Administrators at MIT complain that black firms often submit bids late, after the cutoff date beyond which consideration is
the cutoff date beyond which consideration is regarded as unethical. Others associated with assistance to emerging firms also find punctuality problem but associate the problem with inexperienced firms both black and white. The inability to offer bids on schedule may be a function of an inadequate estimating staff.

**Financing**

Minority contractors often lack the capital resources and credit necessary to finance projects of $25,000 or more. For example, owners and general contractors find it necessary to provide more frequent payments on projects underway than is normally the case, sometimes every week. One black contractor indicated that on three planned projects he expected to receive payments either every week or every two weeks. Under ordinary circumstances monthly payments are the rule.

Loans are difficult for all emerging firms to obtain before they have acquired a good credit reputation, and black contractors often find that their accounts are not kept in a form which lending institutions are willing to review. Other minority contractors have failed to establish the kind of relationships with suppliers which allow them to obtain credit.

An official of the Boston Model Cities economic development component finds bonding central to the financial problems small contractors face in attempting to obtain public contracts. City contracting procedure involves a complicated set of requirements which amount to a substantial financial demand on the contractor. For example, a Boston Model Cities
memorandum states,

a small contractor who has $100,000 of private work and wants to obtain a $100,000 City contract would need net quick assets of $20,000 (assets that can be converted immediately to cash less current liabilities), cash of $10,000 and a line of credit of some $30,000.12

A black contractor indicates that with $1,500,000 in work currently underway he needs $150,000 in liquid assets in order to obtain a bond. He does not have close to that amount of capital reserves. However, few of the black contractors interviewed have found it necessary to secure bonds for their current projects. General contractors and owners attempting to assist minority contracts appear to realize that it is unreasonable to expect emerging contractors to secure them.

Technical Ability

Administrators indicate that many inexperienced contractors have not previously confronted the relatively demanding quality requirements associated with institutional work at MIT and Harvard and have difficulty meeting them. They make it clear that they regard the quality of construction expected on residential projects, particularly rehabilitation, and that required by institutions as substantially different. The architect quoted above, who has assisted black contractors both in residential rehabilitation and institutional renovation says,
Black contractors in the past have had bad jobs and limited budgets in rough neighborhoods, where survival meant more than the quality of the work.

A university staff member states of one contractor,

There were things which are routine to us but which he had not had experience with, and some of the techniques required he did not have the expertise to handle.

A contractor, asked whether he expected to make any profit on what was his first institutional job, stated that he was not certain that he would, because of demands for a degree of quality that he had not expected.

On the other hand, some black subcontractors are highly competent in their trade skills and fully capable of handling institutional work. A superintendent says of two licensed tradesmen from a small firm undertaking one of its first institutional projects, "they are as good as I've run into. They do an excellent job."

Those associated with efforts to bring minority contractors into institutional work more often than not find it necessary to deal with a calibre of work below that which they normally demand, but one says that they would expect the same problems were they dealing with any inexperienced firm.

You are bringing black contractors in and giving them jobs that small white contractors can't do either. There are not very many special problems they face that are different from those of emerging white contractors.
Summary

The black firms studied are undergoing transitions not only from smaller to larger operations but from primarily residential to institutional construction. Among the difficulties characterizing minority contractors are lack of experience in coordination of work procedures and materials scheduling, inadequate accounting procedures, difficulty establishing effective cost control methods, inaccurate estimating and bidding, insufficient capital resources, poor credit and lower-than-normal technical performance. As was discussed in Section One, black contractors face difficulty finding and retaining qualified workers.

Not all firms evidence all such weaknesses and some emerging firms have overcome almost all such difficulties. The most pervasive handicaps are undercapitalization and inaccurate estimating, the latter closely tied to cost control and the reliability of the work force.

With regard to professional assistance and staffing, competent accounting advice appears to be difficult to secure, and contractors are frequently reluctant to invest in estimating staff.

A large number of emerging firms require weekly payments on projects underway because their capital reserves are insufficient to cover a full month's expenses. Loans and bonds are difficult for most of the firms to obtain.
A significant number of small firms find it difficult to implement plans and specifications on institutional projects and often undertake university construction unprepared to provide the quality of work demanded.

It can be said that small black contractors face problems similar in many ways to those of other inexperienced contractors, particularly with respect to problems of management, cost control and estimating, and financing.
Minority Contractors at MIT
Origins of Assistance Efforts

Administrators indicate that student demonstrations at Tufts during the latter part of 1969 were among the most important factors inducing MIT to increase its efforts to engage minority contractors in the execution of new construction and renovation projects. In addition, efforts by the Institute's Black Student Union and the MIT Opportunity Development Officer brought into focus the issues raised at neighboring universities. The Black Student Union, in association with black student groups across the metropolitan area, called upon the university to initiate affirmative action programs which would include the formation of contracts with black construction firms. The College Construction Coalition, an association of black student organizations in the metropolitan area, asked the presidents of four major universities including Harvard and MIT, to

aggressively seek black contractors and subcontractors for future university construction and rehabilitation projects. (Memorandum, 11/69)

During the same period, James Allison, Opportunity Development Officer at MIT, took advantage of the turbulence at Tufts to inform President Johnson that MIT might be spared a similar confrontation if the Institute accepted his affirmative action plan.

By incorporating the plans that I have outlined . . . MIT can successfully meet the critical inquiries of the student activists . . . , community
agencies that are embattled with the construction companies and federal and state compliance officers. (Memorandum, 11/7/69)

Allison suggested that the Institute seek "total involvement of qualified black contractors" and actively solicit their participation.

In December, the Black Student Union submitted proposed plans for the Institute's affirmative action with respect to minority contractors. It requested that MIT arrange pre-bid discussions with general contractors designed to secure written agreements to "produce before bidding, black contractors who are willing to do venture or subcontractorial (sic) work."

While the wording was not intended to induce the Institute to establish quotas of black subcontractors, the BSU made additional demands that the Opportunity Development Officer, BSU and a proposed "project coordinator . . . review and discuss" all agreements and that the Institute refuse to grant contracts to contractors who failed to agree to solicit the participation of black contractors on Institute projects.

Previous to the flurry of activity accompanying the upheavals at other universities, MIT had undertaken efforts to increase the number of black workers associated with its construction projects but had not concentrated attention on engaging minority contractors. It has come to the conclusion that engaging minority contractors will prove to be one of the few feasible means of increasing the number of minority trades-
men at work at MIT. A staff member of the Department of Physical Plant states,

We put pressure on our contractors (to) put black faces on the job. As soon as one trade component was finished, the worker would leave and then we would be back where we started. We decided it would be more substantive if contractors could work with black contractors and subcontractors. This looks like the most rewarding approach.

Current Assistance Efforts

The administration responded to the recommendations of the black groups by agreeing to present contractors with lists of subcontractors both black and white whom it believed to be qualified to do the work in question. On several projects the Institute invited the Black Contractors Association of Boston to suggest contractors qualified to bid. For the most part MIT reserved the right to review the qualifications of potential candidates. It was apparent that such a policy did not constitute a formal effort to provide technical assistance to the contractors but would give those already qualified or nearly qualified a chance to compete. MIT has attempted to preserve competitive bidding among selected contractors as the process by which most of its contracts are let, has expanded its lists of acceptable subcontractors and general contractors to include black firms it considers competent and has encouraged general contractors to open bidding to them. From time to time it has supplemented this approach with experiments with different contractual arrangements. The Institute's first significant success in attempting to secure
the participation of a black contractor involved a contract situation resembling a joint venture.

The contractor secured a contract to renovate several classrooms in January, 1970. The project had originally been offered for bidding to three white general contractors, and H. H. Hawkins offered low bid, which MIT accepted. At this point the administration intervened and directed the Department of Physical Plant to delay the award of the contract pending a decision as to what steps should be taken to bring black contractors on the project. "The administration realized that it had to show positive action or face real trouble."

Physical Plant informed Hawkins that he was low bidder and told him that the Institute wanted to involve black contractors. Initially at a loss as to how to proceed, they decided to negotiate a new contract in a manner which would allow Hawkins to develop some form of joint undertaking with a black general contractor. Hawkins agreed to do so and the Institute Opportunity Development Officer recommended a contractor, CAB (see p. 76) having failed to do so. They succeeded in negotiating with the contractor a total subcontract for the renovation project. The job carried a price of $25,000.

At the time he formed the contract, the contractor was in the throes of bankruptcy, devoid of capital. Hawkins estimated the job, financed the purchasing for the project and provided weekly payments for work completed.
The minority contractor requested that the contract price be raised 10 percent to cover additional expenses associated with travel to and from the job by his workers. Because he did not have other contracts at MIT, he claimed that his men would spend a good deal of time off the job traveling from other sites to MIT. Institute staff regarded the request as reasonable and granted the increase.

The quality of the performance fell below that normally required and achieved on MIT projects. A staff member states,

Initially we are going to have to accept something less than best. The administration is willing to do this.

The contractor evidenced several of the weaknesses associated with small, inexperienced contractors. MIT offered some technical advice, primarily in the form of instructions on interpreting specifications and quality control. Hawkins offered help in coordination, but the contractor was not advised with respect to accounting, estimating or cost control.

While the total cost to MIT was low, Hawkins is said to have made no profit and the black contractor's profit was cut by devoting a more-than-necessary amount of time to the project. What cost there was to the Institute derived from the greater than normal technical and clerical staff time required to oversee the project and from the possibility that the work would require greater than normal upkeep expenditures.

**Subsequent Contracts**

MIT's second attempt to create a contract situation in which a general contractor would work with minority contractors
involved the renovation of a building as a facility for the Medical Department. The Institute attempted to incorporate an equal opportunity affirmative action clause in the original contract specifications, using the suggestions of Allison and the BSU. It used language which required a contractor to complete an affirmative action plan before a contract would be considered by MIT. Three of the six potential bidders refused to bid; the other three bid while expressing objections. The Association of General Contractors and the Building and Construction Trades Council sent an angry letter to the administration saying that they would not work under such conditions, would not be a party to a quota system and would seek court action against any employer who attempted to implement such a system.

What the clause does is put all the responsibility on the general contractor to fulfill the clause's obligations. The generals say they don't really have that kind of control over subcontractors. (Correspondence, 1/70)

The three bids were all at least 35 percent over budget allocations in any case; consequently, MIT decided to negotiate the contract. This gave the administration an opportunity to informally arrange affirmative action plans with the low bidder and bring the contract within budget at the same time. MIT negotiated an agreement with H. H. Hawkins again and arranged to solicit bids from black contractors. Specifications were sent to CAB to ask the organization to select members to
bid on the contract as a whole and on any of the subcontracts, but the Institute did not take steps to assure minority contractor representation. The contracting arrangement required in effect that the bidding contractors be competent to compete with more experienced contractors. The black contractors were not successful in doing so and none received a contract.

Although no black contractors bid successfully, a black general contractor approached the Department of Physical Plant to ask for a contract. The administration awarded him the demolition phase, not yet having completed negotiations with Hawkins. The same contractor bid on the entire project but overbid by 9 percent.

Physical Plant continues to solicit bids from black contractors on the several small projects which it has underway and has arranged contracts from time to time in the past with black painting firms for small jobs, none of which involved significant assistance by Institute staff.

In conjunction with a renovation project for a clinic in Building 18, Physical Plant undertook a different approach to the bidding procedure by acting in effect as general contractor. It solicited subcontract bids from black contractors in each of several trades and two black firms, electrical and painting contractors, succeeded in securing contracts.

In a more ambitious undertaking, the Institute plans to go beyond the policy of offering bidding opportunities to
black contractors to encourage a large general contractor with previous experience in technical assistance in the Midwest to establish formal programs of managerial training. The project under consideration for this program is the renovation of a men's dormitory. The general contractor, Turner Construction Company, will attempt to utilize black management trainees at "the assistant supervisor level" and maximize the use of black subcontractors and suppliers. The training positions may include an assistant cost accountant, an assistant on lines and grades and assistant superintendents for architecture and mechanical trades. The trainees would work under the tutelage of a company supervisor on the project and receive periodic supplementary training by company management.

MIT has offered the use of its classrooms and the assistance of Institute construction staff to Turner in conjunction with a proposed "series of training seminars at night for black construction foremen and supervisors." As yet, the programs have not begun.
Minority Contractors at Harvard

Origin of Assistance Efforts

Efforts to associate black contractors with Harvard construction projects derived more directly than was the case at MIT from student confrontation over the issue of black workers on campus.

On December 5, 1969, 170 black students at Harvard seized several buildings to dramatize their demands for a change in Harvard policies with respect to construction workers. The takeover followed a demonstration and takeover in November by white and black students in which demonstrators called for a higher percentage of minority workers on construction projects. The administration had replied to these demands by agreeing to upgrade minority painters employed by the university and to establish an apprenticeship training program for painters. But it declined to pay university-employed maintenance tradesmen union rates, stating, "the same thing would have to be done for journeymen in all other crafts."\(^{13}\)

The administration, in addition, declined to agree to employ a 20 percent proportion of minority workers on its construction projects, thereby turning down one of the black students' central demands.

In response, OBU, the Harvard black student association, stated, "at no point does the University's response deal with concrete commitments to the necessary structural changes . . . which would be necessary to achieve the goals set forth in
the OBU demands.¹⁴ Six days after the December 5 occupation black students staged another action and occupied at different times during the day of December 11 the Dean's Office, the Faculty Club and the construction site of Gund Hall. The University responded by suspending students participating in the demonstration and by serving them an injunction at the same time, ordering demonstrators to leave the administration building.

The second demonstration occurred after negotiations had collapsed over disagreement on black demands for a 20 percent minority work force. The University maintained that 20 percent represented an unreasonable figure since the black population in the metropolitan area made up only 9.3 percent of the total.

Disciplinary proceedings were undertaken by the Committee on Rights and Responsibilities, consisting of six faculty members and 3 students. In January, as the CRR held hearings on the black student occupations, OBU held its own hearings on the matter. Blacks protested the illegality of white laws in general when applied to black people and asserted that "the administration is using the disciplinary issue to avoid the political issue: the hiring of more black workers."¹⁵

It had become apparent to the University that the black students were adamant in their demand for a 20 percent black work force. The first indication that Harvard would not attempt to suppress the demands came when the Committee on Rights and Responsibilities handed down its disciplinary
decision. Having one month before expelled 16 white students for seizures associated with the same issue, the CRR went no farther than to put several of the black demonstrators on "suspended suspension." The Crimson indicates that the CRR imposed mild decisions on the blacks in contrast to white students "because none of the blacks were charged with use of force against individuals or damage to property." Nonetheless, the CRR had demonstrated its desire not to further alienate the blacks, and stated that the decisions "should reflect the university's concern for understanding, good faith and progress on the crucial issues at stake." 

One month later, after continued negotiations with black students, Harvard announced an agreement with Jackson Construction Company to hire from 19 to 23 percent minority workers on two construction projects and to attempt to engage minority subcontractors.

Staff in charge of letting contracts believe, as does MIT staff, that requiring contractors to bid on projects is an important means by which to ascertain their capabilities. Contractors who do not have estimating firmly in hand will find it difficult to bid accurately on an undertaking larger or more complex than those it ordinarily handles. Harvard relies partly on CAB to recommend contractors, having sent a large number of representatives to the organization to survey CAB members' construction projects. In one instance,
a contractor secured a bidding opportunity by approaching the staff of a buildings and grounds department and offering them his card. He was subsequently contacted by general contractors associated with Harvard projects and later awarded a subcontract.

Current Assistance Efforts

The Harvard Corporation directed the Department of Buildings and Grounds to form contracts for the School of Education Library and an addition to the Music Building, for a total cost of $5,900,000, such that the agreements would include stipulations bearing on quotas for employment of minority workers. To secure bids the University followed its usual procedure of asking for estimates, but of six firms asked to participate, only two agreed to bid. An administrator explained,

It probably resulted from some concern on the part of the contractors as to what they were getting into. The (specifications) did not include an affirmative action clause, so that was not the stickler. They simply knew we had a problem here and some didn't want to share that problem with us.

The contractors realized in advance of any negotiations that they would be required to agree to stipulations which would make them vulnerable to heavy losses if the unions did not accept the actions. Jackson Construction Company won the bid, but an administrator indicates that had the university been concerned with maximum savings, the second firm would
have been considered low bidder. Jackson, however, was selected on the strength of his affirmative action plan. Advisors to the Corporation reviewed the contracts and decided that Jackson's proposal for minority workers and subcontractors was the better of the two.

The contract terms committed Jackson not only to quotas of minority workers but to action directed at opening bidding to minority contractors. The two contracts include manning tables for each trade, call on subcontractors to agree to honor the equal employment policy of the contractors and promise to work with minority contractors and CAB to insure them the option of submitting bids on all phases of work. They stipulate that Jackson will utilize at least one minority contractor in the construction of the addition to the Music Building. A black contractor subsequently won a subcontract for $160,000. This is the only instance in which Harvard has inserted formal affirmative action clauses in its contracts. Efforts to induce other general contractors to bring in minority contractors have been informal. When in-house contracts (that is, those involving renovation of existing structures) are under consideration bidding is usually competitive.

During 1970, Harvard and its general contractors formed contracts with six minority contractors, one of which was associated with new construction. Most of the contracts called for renovation of existing structures on projects ranging in cost from $50,000 to $1,000. Most of the in-house contracts awarded to black firms were associated with renovation
of a structure associated with Afro-American programs and a special effort was made to solicit bids from black firms.

Summary

Pressure from student demonstrations directed toward integrating university construction projects has served as an important force behind university efforts to engage more minority contractors.

For the most part, universities have attempted to preserve competitive bidding among contractors as the process by which contracts are offered to minority contractors. The institutions have undertaken to bring black contractors into the bidding process by openly soliciting their bids without demanding that their credentials meet the usual qualifications. Minority contractors have experienced difficulty bidding successfully for university contracts and their appear to be few, if any, minority general contractors capable of undertaking new institutional construction.

Universities have used negotiated contracts in some instances as vehicles for assuring participation of minority contractors.
University Assistance to Minority Contractors

Harvard and MIT follow similar procedures in establishing contracts with minority contractors. In the main, their efforts emphasize the provision of bidding opportunities and include some attempts to negotiate contracts with selected contractors. Black contractors usually bid in competition with several other contractors. Because of the uncertainties regarding the capabilities of minority contractors and because few black general contractors have the capacity to handle new construction or renovation of entire structures, most of the contracts offered are relatively small (the largest has amounted to $160,000), usually less than $50,000 and often of a few thousand dollars.

Role of Contractors Association of Boston

The Contractors Association of Boston is designed to act as an intermediary in establishing liaisons between black contractors and owners. It attempts to assess current capabilities of firms and claims to have developed a rating system and a "skills bank" through which it brings together information on the kinds of trades specialties for which contractors are available and on the strength and financial status of member firms. The organization encourages institutions with which it has established liaisons to use its services in seeking out emerging black contractors. It does not offer owners lists of contractors. It rather attempts to assess the proposed project and select its most appropriate member for recommendation for the work.
According to an official, if owners were to work from a simple list of black contractors, they might pick a firm which was not at that moment adequately financed or able to muster sufficient manpower and managerial talents to begin an institutional project. An official of CAB estimates that 10 member general contractors and 25 subcontractors from the black community are capable of undertaking construction at MIT and Harvard, but its membership does not include firms capable of undertaking heavy structural work.

Both MIT and Harvard sent official representatives of their physical plant staffs to CAB to talk to the leaders of the organization and to tour the projects completed by member firms. It was clear to one staff member involved in the tour that the quality of work demanded in the residential community and which made up the preponderance of work performed by CAB firms was not comparable in quality with that demanded by the universities.

When universities and contractors began to seek minority contractors in earnest, CAB had not developed the capacity to evaluate its members' abilities or financial status. It attempted to assess the capabilities of a variety of firms including general contractors, subcontractors in licensed trades, and contractors geared to handle small scale residential rehabilitation. In addition, CAB did not possess the staffing required for adequate review and assessment of project
specifications. As a result, it was not able to respond within a reasonable period to requests by the universities for recommendations of qualified black contractors.

**Federal Funds and Bidding**

As is true of most public funds, federal subsidies carry with them stipulations requiring competitive, open bidding on contracts. One university staff member admits, however, that his institution nevertheless restricts opportunities for bidding on some of its federally assisted contracts to preferred bidders. They find it possible thereby to avoid contractors who underbid but who do shoddy work. Other administrators state that all contracts involving federal money are made public, usually in Dodge Reports' *Bulletin*.

Both MIT and Harvard have inquired about the possibility of establishing joint ventures with minority contractors on projects involving federal funds. MIT found that the government had not made its position clear on the possibility but indicated that where minority contractors were concerned the Department of Education, for one, would remain flexible. Harvard, on the other hand, had substantial success with the proposition. The government gave the university authority to negotiate a joint venture for the Music Building addition by an experienced firm and an emerging minority contractor. The effort failed, ostensibly for lack of a sufficiently experienced black firm. None was capable of handling a $1,600,000 new construction project, even as participant in a joint venture.
Selection

University staff members utilize the same process of informal referral in selecting minority contractors that they use for selecting other contractors. This process was discussed in the section on selected lists of contractors. In some cases, however, as was mentioned above, universities ask CAB to assess the capacities of member firms and to select several competent firms which may be offered bidding opportunities. In attempting to select minority contractors to bid on contracts, Harvard finds it necessary to overlook one or more of its customary criteria. "We may have to look beyond present financial capacity, for example." The university staff recognizes the weaknesses of inexperienced contractors and has "broaden(ed) what is acceptable performance under certain circumstances."

Management and Technical Assistance

Architects and technical staff associated with the universities or with general contractors help coordinate the projects, schedule materials deliveries, introduce shop drawings and examine the work's accuracy and quality. Working from the formal specifications, they give minority contractors assistance in interpreting and implementing blueprints. Staff personnel find it necessary to spend a substantially greater amount of time and effort with inexperienced contractors than they normally devote to assistance. An architect states, Whatever we normally do we do a little more of. We spend more time on the job, we have more meetings, we check jobs out more. With a white contractor we're just trying to get through a job. With a
black contractor we're trying to expose him to a different kind of work and help him get experience.

Quality Standards

Staff members indicate that they can preserve quality standards by paying close attention to work in progress and occasionally demanding that part of the construction be torn out and re-done. They accept variations in the work which they would not permit of experienced firms, but assert that they do not accept deficiencies which weaken the basic quality of the project. "We may yield on a point that we think is relatively insignificant but hold to points we feel are important." Of one project an administrator asserts, "It's not the best job but we expected it and were willing to settle for less."

Financing

General contractors or the universities underwrite minority contractors for supplies when necessary by using their own accounts with suppliers or by otherwise guaranteeing the credit of the contractor. At Harvard, a staff member says,

We tell the suppliers that the materials are being bought for work on our job and that we will pay through the subcontractor at whatever the terms are in order for him to get the material.

As was mentioned in a previous section, universities have found it necessary to subsidize contractors in many cases by increasing the frequency of payments to as often as once a week.
Cost

The costs of small projects do not change substantially when inexperienced minority contractors are involved. What extra costs there are arise primarily from demands on technical and clerical staff. Extra hours are spent by technical staff on the job site and a large effort must be expended to balance accounts and compile records for the large number of payment requisitions essential to an undercapitalized contractor. Accounts must be balanced every week or two rather than once a month.

When universities attempt to include affirmative action clauses in contracts over $1,000,000 so that general contractors are obliged not only to offer competitive bidding opportunities to minority contractors but to guarantee their involvement on some phase of the project, costs rise substantially. An administrator associated with the negotiations on Harvard's contract with a general contractor believes that the extra cost occurs in terms of higher contract prices. It cannot immediately be measured but is substantial.

We started off having a job which was not competitive. We called 10 contractors, talked with 6 and ended up with two. We would be naive if we didn't realize that the contractors took the lack of competition into account.

It is believed that contractors add a percentage of the costs to their prices when they realize that they will be required to engage both minority workers and minority contractors. A subcontractor told Harvard administrators that he added 20
percent to his (unsuccessful) subcontract bid price. Contractors are alleged to have created a term for the mark-up, the EEF, or Equal Employment Factor. A staff member reasons that when a university requires general contractors to bring in minority subcontractors it must expect to pay a higher price than under ordinary circumstances. "How can you expect a man to give you the best price and still control his use of subcontractors?"

Benefits to Minority Contractors

No one associated with efforts to assist black contractors believes that experience on projects buttressed by technical assistance can make small contractors competitive with well-established contractors in anything less than several years time. But an introduction to institutional work, if the project taxes the contractor without overwhelming him, serves to begin the development of skills appropriate to more competitive non-residential work. Perhaps more importantly, work successfully completed at a well-known institution may assist the contractor in obtaining credit on subsequent projects, particularly with suppliers. He may also find it easier to secure bidding opportunities on other ventures, and contractors who undertake successfully work for an organization are often added to that organization's preferred bidding list.
Tufts University

Tufts University, the site of the first significant student actions in the Boston area directed at securing equal construction employment, does not carry a substantial construction budget. Its construction projects for the near future will total $250,000 on its Medford Campus. (The Tufts medical complex in Boston has in planning a multi-million dollar construction program. Minority group programs associated with that venture were not investigated.)

Two minority contractors have received contracts at the university, both on the same job. The general contractor was a former Cuban who employed a highly competent Cuban work force. One subcontractor was black. Neither firm required any assistance, financial, technical or managerial. The remaining proposed construction is not yet underway, but the Department of Facilities Planning and Construction will solicit bids from minority contractors for the projects.
Summary

Central to success in the construction industry is manipulation of a wide range of informal relationships upon which depend access to contracts, financing and credit for supplies, as well as effective coordination of construction processes. Contracting is a high risk industry, and owners, general contractors and financing institutions seek to reduce its uncertainties by relying on known quantities. Private institutions as owners maintain selected lists of contractors to whom they offer bidding opportunities. Inclusion on the lists is achieved for the most part through personal references. For emerging minority firms, this suggests that informal exclusion from the industry's inner circles is as detrimental to business as is systematic discrimination.

Because of stringent requirements for financing associated with public contracts, minority contractors find public construction projects as difficult to secure as private ones, in spite of statutes intended to assure open bidding.

An examination of small, inexperienced white and black firms reveals largely similar problems, centering around accounting, coordination, cost control, estimating, bidding, and financing. Most minority firms evidence weaknesses in estimating and accounting staff. Until the recent past (the late 60's), minority contractors found their range of
work opportunities limited to residential construction in or near Roxbury.

Minority contractors, most of whom are making a transition from residential construction to institutional and commercial projects, find that in some cases the quality of their work does not meet university standards.

The origin of assistance efforts at MIT and Harvard can be traced to student demonstrations at Tufts University and Harvard. Tufts has not yet had experience with assistance programs and plans only a small volume of new construction. University policy at MIT and Harvard has centered around opening competitive bidding opportunities to minority contractors. In some cases contracts have been negotiated.

The federal government has indicated that joint ventures are acceptable when federal subsidies are involved but the approach has not yet been used on new construction. One such attempt failed because no minority firm was found capable of undertaking large-scale new construction.

Members of the universities' technical staffs provide assistance with coordination, scheduling materials, interpreting specifications and maintaining quality control. While some of these services are rendered to all contractors on university projects, emerging firms receive more intensive attention. Inexperienced contractors are usually
paid weekly rather than monthly and their credit is backed with supply firms.

The cost to universities to induce general contractors to engage minority subcontractors on large, new construction appears in some cases to be substantial, although not easily measured. Costs for smaller projects and for technical assistance are low.

At neither university have minority general contractors secured contracts greater than $50,000 and the largest subcontract amounts to $160,000.
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SECTION THREE

ASSESSMENTS AND RECOMMENDATIONS

This section will attempt to extract from the body of the study an evaluation of programs undertaken by the two universities and recommendations for subsequent efforts. The needs of minority contractors will be measured against university efforts to assist them.

Some of the recommended elements of assistance may best be provided in conjunction with other urban organizations such as minority contractors associations. Discussions among universities, the Contractors Association of Boston and other organizations may assist the coordination of programs of mutual concern and make clear those tasks which one or another body can best perform. The emphasis in this discussion will center primarily around programs appropriate for universities.

The immensity of the difficulties minority contractors face in attempting to achieve competitive status and the pervasive effects of previous discrimination make it clear that assistance to minority contractors will require a long-range commitment by a variety of institutions.
University Programs of Assistance

Current university programs to aid emerging contractors recognize some of the important needs of minority firms. The universities have made efforts to offer bidding opportunities to minority contractors without imposing strict standards regarding previous experience and financial capacity. Some firms have been offered negotiated contracts, allowing them to forego bidding. Attempts to improve bidding opportunities have formed the mainstay of university policy to date, but few minority contractors have been successful bidders.

Universities have facilitated financing by underwriting credit with suppliers and by providing more-frequent-than-normal payments for work in progress. Weekly payment for work underway is in effect a loan because it relieves contractors of the need for capital reserves sufficient to cover monthly payments for labor.

University technical staff members, including engineers, supervisors and architects, devote a good deal of time on the job site to facilitating the scheduling of materials delivery, coordinating subcontractors and interpreting specifications as well as providing guidelines for the quality of work expected. Quality standards have been modified but not compromised.
All of these forms of assistance are useful but they do not penetrate to some of the central causes of the weaknesses of minority firms.

**Bidding**

There are indications that efforts to open bidding to black firms do not provide meaningful opportunities for inexperienced firms to obtain contracts. Minority firms have not met with significant success in bidding for those contracts made available to them. Nevertheless, some staff members maintain that the bid offers an equitable method of selecting black contractors. It induces firms to improve their overall operations to the point where they not only can accurately estimate and bid but can effectively manage a project and control costs. The assumption is that the capacity to bid successfully on institutional projects reflects the capacity to handle the work. There are indications that this is true.

The foundations of bidding are such that thorough cost control and detailed knowledge of the firm's operations are prerequisites for success. Bidding is based on estimating, and estimating depends in turn on detailed accounting and bookkeeping. Cost control is central to carrying through a project and is tied closely to bidding because the bid serves as the budget. The firm must know
within what range of variation it can expect to adhere to its budget. Unless a contractor has been able to control costs on previous jobs, accurate accounting and estimating will be of no use and will reflect not trends and patterns but uncontrolled fluctuations among costs.

Because bidding shows so much about the effectiveness of an organization, it is not surprising that universities as owners, even as they work to introduce black contractors to institutional construction, want to preserve bidding as a yardstick by which contractors can measure their competence. A staff member points out that if owners omit bidding competition in order to offer contracts to inexperienced contractors, the contractors may find it unnecessary to remain within strict cost constraints and may fail to use their experience to develop procedures and techniques which will make them competitive in subsequent bidding situations. In addition, when an owner is deprived of the bidding mechanism, a staff member also indicates, he has no means of determining the lowest reasonable cost. When an institution cannot determine the cost of a project it will be unable to maintain cost guidelines and therefore will find it difficult to guide an inexperienced firm's cost control efforts.
Unfortunately, these characteristics of bidding dictate that firms bidding on a project while unfamiliar with projects of similar requirements and complexity will find it difficult to bid accurately no matter what the calibre of their management and cost control. It appears that if they do not somehow achieve in advance some introduction to the detailed demands of the work they will almost invariably estimate incorrectly. Interviews with small, established firms indicate that they secured their initial introduction to projects of increased sophistication—such as a transfer to institutional work from residential projects—not via competitive bidding but by means of informal mechanisms which circumvented or modified competitive bidding.

Most of the white contractors interviewed either had found it unnecessary to offer the lowest bid, or achieved the successful low estimate and bid through some special knowledge of the project to which their competitors were not privy. A contractor indicates that had he been required to estimate and bid on his first large job he "could have made a big mistake" and jeopardized his firm, but he was offered the job on a cost-plus basis. Other firms, required to bid competitively, reveal, "We had worked for the firm which originally figured the bid".
Another contractor states,

We did our own engineering design on the specifications. This helped us bid and meant that we could change the specifications if we wanted to during the job.

It appears that a significant proportion of small contractors secure some initial experience with institutional construction before they bid competitively.

Although the interviews discussed above do not provide conclusive evidence, they give reason to believe that firms unfamiliar with institutional construction and without some special access to information find it difficult to bid successfully. While efforts to open university construction to minority contractors have been supplemented by procedures which forego bidding, the mainstay of policy with respect to contracts remains to see to it that minority firms have a chance to bid. While such an approach should not be abandoned, it should be recognized that a large proportion of black firms are insufficiently sophisticated to take advantage of such opportunities. They require stronger measures of assistance.

**Negotiated Contracts**

Negotiated contracts assure the participation of the selected firm. They do, however, pose certain shortcomings for the owner, who loses the benefit of the bid as a
determinant both of the price of the project and of the capability of the firm in question. Such projects may therefore cost more than they would if opened to competitive bidding. Joint ventures often involve negotiated contracts. If universities decide to develop comprehensive programs of assistance to minority contractors they will probably find it useful to negotiate the contracts.

Financial Assistance

The cost of inducing general contractors to assure the participation of inexperienced contractors on large projects (those over $500,000) is significant, perhaps entailing a 10 to 20 percent mark-up. In addition, fewer contractors appear willing to become involved in assistance to black firms and the competition for such projects has tended to be low. It is believed that a reduction in competition causes prices to rise. Other costs, such as those associated with staff time spent on the job or in processing payment requisitions, are probably not to be considered significant.

Because they may continue to find it necessary to supplement the price of contracts involving emerging contractors, universities should not be expected to provide other kinds of subsidies, direct or indirect, to under-capitalized firms. Federal and private funds have been
made available in other cities to minority contractors associations and these kinds of organizations are more likely vehicles for providing direct subsidies such as loans and expansion capital.

**Assistance on the Job**

Assistance efforts appear to be piecemeal, directed at correcting the manifestations of ineffective management rather than attempting to deal with the causes of the problems. Assistance in scheduling, coordination and interpretation of specifications, as well as accounting, cost control and estimating should be directed at the basic mechanisms upon which these procedures rest. A subsequent discussion of a successful joint venture may offer guidelines for a program of thorough and coordinated assistance.

In fairness to the universities' staffs it should be said that the units responsible for assistance have only recently (since late in 1969) been directed to give the construction issue high priority. They appear to have responded in good faith to the demands placed upon them. Their staff members are the first to admit, however, that they are only beginning to make progress.

**Joint Ventures**

Joint ventures, contractual agreements in which two firms share responsibility for a project, are often mentioned
as vehicles for assistance to minority contractors. But they do not have a reputation for being helpful. Some contractors and staff members say that the experienced, or senior partner usually finds it impossible or inconvenient to devote extended periods of staff time to instruction and assistance. Minority contractors have said that most such undertakings are simply arrangements by which the senior partner uses the manpower of the inexperienced firm.

Only one joint venture could be discovered which involved institutional or commercial construction. The joint venture in question proved extremely helpful in the eyes of the emerging contractor. It was recently undertaken by Beacon Construction Company and Simeon Niles of S.N.H. Construction. The project is a $240,000 commercial building in Roxbury. Niles has responsibility for the actual construction, while Beacon oversees the coordination and scheduling of the project and takes responsibility for approving each phase of the work. A Beacon executive states that it is utilizing its capital for the project and has undertaken the purchasing. Beacon absorbed the bonding requirements and the owner provided an advance of $10,000. Beacon, whose volume is in the range of $50 million annually, sees the cost of the venture primarily in terms of time spent by staff in assistance efforts.
According to Niles, Beacon has gone out of its way to offer comprehensive and detailed assistance. The following account of the assistance is a summary of his assessment.

The day the venture was established, Niles met with the executive and upper echelon staff of the company and its President asked them to cooperate to their utmost with Niles. He said, "Take an extra step."

The assistance included advice and instruction in coordination of subcontractors, scheduling, cost control and accounting. Niles and the President of Beacon worked together on negotiations with potential subcontractors. The company arranged instruction in the Critical Path Method of scheduling,\textsuperscript{1} and Niles worked closely with staff members in developing CPM diagrams for the project. He was introduced as well to cost control methods by which to monitor and compare the costs of labor and materials with budget estimates. Beacon staff taught him a new accounting system. Staff headquarters was made open to him at all times and he made frequent use of the wide range of expertise available there. Niles expressed satisfaction with the undertaking and said of Beacon's President, "It takes a dedicated person to do what he has done".

However, Niles, by his own admission, is at this time in severe financial straits and does not expect to make a profit on the venture. In addition, despite his pleasure
with the project, he believes that he requires the benefit of another such undertaking with Beacon if he is to fully grasp the new tools to which he has been introduced.

The characteristics of this successful joint venture carry several implications. First, universities might attempt to develop programs of assistance similar in comprehensiveness and detail to this example. Second, when confronted with comprehensive assistance in implementing new business techniques, an emerging firm may find the new methods and information too much to absorb in one exposure. Because of this, repetitions of the techniques under supervised circumstances may be necessary before the developing firm can begin to manipulate them competently. Perhaps joint ventures should be supplemented by additional smaller projects on which contractors can experiment with new techniques. Third, formal coursework on the fundamentals of such methods as cost control, the Critical Path Method and accounting may be useful for contractors or their staff as supplements to their use on joint ventures.

The small scale renovation projects continually underway at universities may present useful opportunities for contractors to practice new business techniques. The relatively small size of the projects would enable the larger of the emerging firms, previously having been
introduced to the techniques on large joint ventures such as the Beacon undertaking, to practice the implementation of one or two new methods at a time. One of the difficulties Niles faced and which may have reduced his ability to make a profit, was his attempt to implement several new methods simultaneously. Smaller projects, supplemented by staff guidance, would enable contractors to implement new techniques not yet firmly in their grasp without the risks inherent in a large scale undertaking.

In sum, even effective joint ventures may be insufficient in themselves to offer contractors more than an introduction to complex new managerial techniques. Such programs should be supplemented by continued instruction and advice tailored to reinforce what is learned on the larger, initial joint ventures.

University staff may well be competent to handle joint ventures similar to that of Beacon Construction and certainly would be capable of supplementing such large scale undertakings with smaller projects and continued formal guidance.

While the university's potential role here seems fairly clear, a question does arise relating to the background and experience of its construction engineers and other physical plant staff. Do they possess sufficient
expertise in cost control, the Critical Path Method and other such tools to enable them to instruct and advise contractors in depth?

**Assistance with new methods of construction management** should probably be supplemented by coursework in the same areas. Local universities may already offer many appropriate courses, as may some of the national contractors organizations such as the National Electrical Contractors Association, which offers estimating instruction. Whether or not MIT and Harvard should offer courses in such areas remains to be seen. There have been periodic discussions at MIT of new uses for the Lowell School; perhaps coursework in business methods appropriate to emerging firms would contribute to a useful role by the School.

**Coordination**

A serious effort by universities to contribute to assistance will require substantial efforts at coordination with a variety of urban organizations, particularly those minority contractors organizations such as CAB. The depth of emerging contractors' problems and the usually slow growth of construction firms make it clear that a variety of organizations and institutions must cooperate in the task of integrating the construction industry. Furthermore, this cooperation must extend over a long period if the
programs provided are to be adequate to the need.

**Educational Information**

Universities might perform a useful service by listing, describing and appraising local educational programs in construction fields.

**Consortia**

Since 1968, a consortium of area universities and several other non-profit institutions has met intermittently and attempted to work out policy matters pertaining to employment of minority trades workers. It may be feasible for such an already-convened body to discuss and coordinate programs of assistance. Emerging contractors will in all probability require assistance on a series of construction projects, perhaps at several different institutions.

**Programs of Assistance in Residential Construction**

In the segment of the industry concerned with residential construction, assistance to emerging minority contractors has been given attention by a number of organizations, including the federal government. It is not within the scope of this study to examine the patterns of assistance which have
grown up around residential construction, but university efforts to coordinate programs and information about assistance in general should examine the services available in this segment of the industry.

**Staffing:**

**Estimating**

A previously noted difficulty facing firms which do not bid successfully for contracts is that of inaccurate estimating. Poor estimating is often a reflection of other weaknesses, among them inadequate cost control, coordination, and an inefficient work force. Heads of small, established white firms, along with several black contractors, indicate that they have found it necessary to invest in estimating staff in order to facilitate expansion efforts. A significant number of emerging contractors have not done so. As firms begin to undertake several projects at a time and put together bids for a number of projects at once, they will find it necessary to invest in a full-time estimator.

**Accounting**

As firms attempt to expand, they find that accounting systems increase in importance because of the central role they play in cost control and in securing financial and
insurance backing. Most emerging firms appear to recognize the importance of accounting but a number find difficulty either securing the services of competent accountants or have not yet developed an appropriate accounting system.

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It appears that professional advice in accounting and full-time attention to estimating are essential to the development of small firms. Emerging contractors who wish to undertake a substantial volume of construction should be encouraged to invest in estimating staff and in periodic or full-time accounting counsel. Second, it may be feasible to subsidize accounting and estimating interns for black firms, and to contribute to the cost of their education. If there is a shortage of personnel in these fields, if some members of such professions will not work for black firms, if emerging firms cannot afford such services or if persons available are inadequately trained, subsidies for education and employment may be reasonable contributions to emerging firms. It is not clear whether universities should take responsibility for either providing or distributing such funds or whether the responsibility fits more closely the role of organizations such as CAB.
Performance Evaluations

It sometimes appears that emerging contractors lack perspective on the demands of institutional construction. Some of those contractors interviewed do not appear to realize that the calibre of management of their projects was below that normally seen. In discussing their firms' shortcomings and difficulties, they tend to stress the poor quality of their workers and the difficulties they face obtaining loans and bonds. They do not discuss management difficulties or estimating and accounting inadequacies as problems yet to be solved. Some do not appear to realize that weekly payments, assistance with coordination and scheduling and the staff time spent on interpretation of specifications often constitute greater than normal assistance and sometimes special consideration.

While this may simply represent businessmen's efforts to avoid exposing weakness, the strong impression remains that many contractors do not recognize the complexities of the problems they face.

Part of the cause of this failure to sense the demands facing them as they undertake institutional construction may derive from segregation and the inability to communicate with contractors already involved in institutional contracting.
While it is possible that this lack of insight is characteristic of most small contractors, there can be little doubt that segregation reduces the ability of many of those discriminated against to achieve an understanding of the subtleties of the industry.

Perhaps more importantly, emerging contractors apparently receive little or no feedback from the firms for whom they work. Contractors might well benefit from detailed assessments by university staffs of their strengths and weaknesses and the quality of their work. Firms need both formal and informal advice on improving their operations.

Even more helpful might be part-time or periodic participation in the operation of emerging firms by experienced, perhaps retired, contractors. Many contractors' problems are rooted in practices peculiar to their individual firms and assistance may require the kind of detailed understanding gained from long-term association with a firm.

Informal Relationships

Because of the central role informal relationships play in the industry, those institutions which wish to assure black entrepreneurs continued access to the full range of opportunities will find it necessary to sustain such efforts over a long period of time. The informal manner in which
owners select general contractors and general contractors select subcontractors will continue to leave minority contractors vulnerable to exclusion based on personal considerations. Prejudice will continue to play an important role in the process of contract formation, particularly contracts involving private funds. These circumstances will demand continued efforts on the part of concerned institutions to see to it that minority contractors achieve access to an equitable share of the market.

Universities and other owners who seek to promote the opportunities of black contractors should recognize the importance not only of helping black firms secure contract opportunities but of seeing that they receive equitable consideration by suppliers, insurance agencies and finance companies. It may be possible to assist them in their efforts to secure credit, loans and expansion capital, and universities may find that they can play the role of informal sponsor for firms they have found competent on university projects. Such are the informal characteristics of the industry that preservation of equal opportunity demands long-term affirmative action on the part of universities not only on their own projects but perhaps as advocates for emerging contractors with other agencies and institutions.
Relevance of Assistance Programs

More research needs to be undertaken on the question of the usefulness of programs which seek to assist the development of small contracting firms. The assumption here has been that black entrepreneurship not only makes an important contribution to the economy of the black community but that the industry is sufficiently open to allow the growth of new, large firms. The state of institutional and commercial construction, however, may be such that the largest, nationwide construction corporations will absorb the greater part of further growth. If such is the case, programs to aid small firms may be irrelevant in many respects. Perhaps efforts would be more appropriate if they included programs directed toward training men for middle management in already-established firms.

Political Considerations

While the importance of university assistance to minority contractors cannot be denied, it is well to remember that the decision to undertake it is a political one. It is political in the sense that some firms will be denied access to contracts which they might otherwise have secured. Meyerson and Banfield define politics as "the activity (negotiation, argument, discussion, application of force,"
persuasion, etc.) by which an issue is agitated or settled". An issue exists "when there is a conflict, real or apparent, between the ends of different actors . . ., and not all of the conflicting ends can be realized...." 2 It is possible that small white contractors may insist that their needs are as comprehensive as those of blacks, that the pattern of their exclusion from the mainstream of the industry is as pervasive and that aid to black firms unfairly reduces their own opportunities.

MIT staff has indicated that competition for small projects is not severe. An administrator indicates that such contracts represent a genre of projects to which contractors on preferred lists have enjoyed what they recognize as special access. With regard to larger projects, some large firms choose to ignore contracts which include equal opportunity clauses they find unreasonable. If they can afford to do so, they may not be significantly affected by the loss of contracts due to special considerations for black bidders.

Early in 1970, the institutional construction market was said by one administrator to be healthy. Many of the firms with which MIT was associated found opportunities for contracts plentiful. More recently, there is evidence that
contractors are finding work more difficult to secure. If the construction economy contracts, competition will increase, along with the greater possibility of complaints by whites that contractual considerations are inequitably weighted in favor of minority firms.

It may be reasonable and possible to justify university measures to assist emerging firms by invoking Executive Order 11246. The Order states that contractors shall not discriminate against minority employees or applicants for employment. Further, contractors shall take affirmative action to ensure such employment. Interpretation of the Order by the United States Commission on Civil Rights asserts that affirmative action commitments "apply to all of the contractors operations, not just those for the contracted item". If it is possible to define subcontractors as employees of general contractors, it may follow that affirmative action commitments legitimize special considerations for minority subcontractors. In cases in which the university acts as a general contractor and hires subcontractors, the same definition and conclusion may hold. When universities as owners seek to engage minority contractors as general contractors, however, the letter and current interpretation of the Executive Order do not appear
to justify affirmative action. The university is not technically a contractor in such a situation.

It is possible that the federal government will grant considerable leeway in the interpretation of affirmative action so long as the interpretation favors minority groups. But more important may be justification in the eyes of white contractors. It remains to be seen whether such a defense of university policy will be either necessary or possible.

Summary

It is too early to determine whether or not black contractors have benefited from university programs of assistance. It is probable that greater attention to fundamental business techniques will yield substantial improvements in performance.

If aid to minority contractors is to be successful, non-profit institutions must seek the coordination and cooperation of a wide range of urban organizations.

Both the significance and the depth of emerging contractors' difficulties are reflected in the possibility that they may be unable to hire qualified workers unless their profit-making capacity improves. Most, if not all, of the tools necessary to aid emerging firms are available, the
costs of doing so lay within the means of private institutions, and perhaps most importantly, the initiative rests with the universities.
FOOTNOTES

SECTION ONE


2. Ibid., p. 113.


5. William Murphy, personal interview.

6. United States Commission on Civil Rights, op.cit., p. 94.

7. Ibid., p. 120.

8. Ibid., p. 94.


10. Mills manuscript, p. 5.


15. Ibid., 12/5/68, p. 55.
16. Ibid., 8/1/68, p. 99.
22. Mills, Quinn, personal interview.
24. Ibid., 12/5/68, p. 55.
25. Mills manuscript, p. 60.

SECTION TWO

3. Ibid., p. 250.
6. Ibid., p. 251.
SECTION THREE

1. Deatherage, George, Construction Scheduling and Control. New York, 1965, pp. 28-34. The Critical Path Method is one of a variety of management systems designed to assist contractors in the scheduling and control of construction processes. It consists primarily of a flow chart of the entire project in which each process is connected by arrows to related processes. For each particular step in construction the diagram shows which preceding process(es) must be completed before the one in question can begin. Similarly, it shows which subsequent process(es) can begin once the process in question has been completed.


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