

Final Report: 1993 Iowa Department of
Transportation Organizational Survey

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EXECUTIVE SUMMARY

In March 1993, all 3,666 employees of the Iowa Department of Transportation (DOT) were invited to participate in a survey related to morale and work practices. Survey questionnaires were sent to employees' homes and participation in the study was voluntary. This survey, in part, replicates assessments made by random, stratified samples of DOT employees in 1984 and 1988. Thus it is possible to evaluate some changes in morale and work practices at three points in time. The present survey was designed to allow for generalizations about all DOT employees and various subgroups of employees (i.e., majority and minority employees, males and females, employees less than 40 years of age and those 40 years of age or older, and work area location). Altogether, 2249 usable questionnaires were returned, yielding a much higher-than-average response rate 61.3%.

Topics featured in this survey were job satisfaction, work environment characteristics or climate, communication, Total Quality Management (TQM) work practices, and discriminatory harassment. The first two topics were evaluated in 1984 and 1988 while communication was assessed only in 1988. TQM work practices and discriminatory harassment represented new additions to the 1993 survey, although sexual harassment was investigated in 1988.

Job satisfaction has achieved a near steady-state level since 1984. Employees are reasonably well satisfied with their jobs overall, supervision and coworkers. There has been some decline in satisfaction with the work itself since 1984 and 1988. In view of recent reductions in force, satisfaction with promotional opportunities was not evaluated in the 1993 survey. No differences in job satisfaction seem to be associated with race or sex and older employees persist in their tendency to report higher levels of job satisfaction. Some locational differences were observed in connection with satisfaction with the work itself and satisfaction with coworkers.

Seven perceptions of the work environment were evaluated. Perceptions of support and identity have remained relatively constant over time while perceptions of warmth and structure have declined slightly since 1984. Three aspects of climate new to the 1993 survey generated mixed findings. Ratings of the openness and trust of the working environment could be characterized as medium while ratings of the extent to which the environment was perceived as non-harassing and ratings of morale were relatively high. Race and sex did not seem to affect these findings but older employees again rendered more favorable judgments. The driver's license areas exhibited noticeably higher evaluations of several aspects of climate.

Opinions about communication at the DOT were more favorable than unfavorable, with the exception of ratings of the quality and quantity of communication from the Iowa Department of Personnel (IDOP). These ratings were low, comparatively speaking. While there were no dramatic declines from the evaluations posted in 1988, virtually every 1993 communication rating was slightly lower. Individually, the differences between the 1988 and 1993 ratings are unimportant, but collectively they suggest a decline in satisfaction with communication which merits further exploration.

The purpose in evaluating TQM work practices in 1993 was to secure baseline or benchmark ratings of work practices prior to the start of organization-wide

TQM training. Nine areas were selected for tracking and some were, as forecast, relatively low. On the other hand, four of these nine areas already exhibited average ratings exceeding the midpoint of the rating scale (i.e., feedback, customer orientation, the importance of continuous improvement, and job training). It would thus appear that some of the concepts associated with TQM have already been integrated into the DOT culture, even though they have not been formally recognized as TQM practices per se. Some demographic differences were observed in work practice ratings, with women and older employees supplying higher judgments. TQM-oriented practices were seen as more operational in some work area locations than others.

The last major survey topic, discriminatory harassment, represents an outgrowth of the 1988 survey wherein some employees expressed a concern over forms of harassment other than sexual harassment (e.g., hazing, workplace profanity, behaviors indicative of racism or sexism). The DOT undertook a program to make employees aware of discriminatory harassment and the DOT's policies related to it. Nearly all employees (92%) indicated that they understood what discriminatory harassment was and a similarly high percentage (86.6%) indicated that they were aware of DOT's policies on the subject. These levels of awareness are excellent. Questions pertaining to the experience of discriminatory harassment were limited by a failure to restrict the issue to a specific time frame of, say, the past three years. Thus the reporting of some discriminatory harassment experience at the DOT by 30.7% of the employees represents their cumulative experiences (i.e., events reported may have transpired long before such harassment was recognized as discriminatory). There was evidence of reluctance among some employees to report discriminatory harassment to DOT management.

Finally, the 1993 survey findings show few differences in ratings associated with race and sex. This is how it should be. The age findings illustrate that older employees continue to provide more favorable ratings; an observation that has been noted in many organizational studies and therefore is not surprising. The work location findings were not directly comparable to earlier survey versions. The 1993 findings do suggest that the driver's license areas are populated with employees demonstrating higher levels of morale and more favorable assessments of work practices.

Recommendations

Morale surveys like this one nearly always identify organizational strengths and weaknesses and this endeavor was no exception. Listed below are some recommendations and "food for thought" regarding what issues DOT leaders should consider further. It is recognized that these are not easy times for state government and that public agencies must be realistic about their opportunities to address certain problems. There are some constraints and conditions that the agency simply cannot control. On the other hand, not all problems require an infusion of resources in order to be solved.

1. Demographically speaking, the DOT is an aging organization. Average length of service has progressed from 11.46 years in 1984, to 13.68 years in 1988, to 15.12 years in 1993. This is not necessarily a problem. However, such a pattern implies very low turnover and, concomitantly, a lack of new ideas and perspectives which otherwise might be introduced by new employees into the organization. In addition, the potential impact of large numbers of retirements concentrated in certain geographical locations or job categories should be

evaluated in order to avoid any expertise or experience "shortfalls".

2. The number of years spent at the same pay grade continues to increase, suggesting that the lack of upward mobility opportunities persists as a morale problem. The increase from 5.43 years at the same pay grade in 1988 to 7.00 years in 1993 is more than can be accounted for by the increasing average length of service. Understandably, remaining at the same pay grade for an extensive period of time does not have a positive impact on morale. While it is easy to suggest that pay grades be expanded, employees recognize such changes as purely cosmetic when they are not accompanied by increases in job responsibility and/or remuneration. This problem is therefore one with no readily apparent solution but is one which might benefit from some creative thought (e.g., would an increase in social rewards such as recognition be beneficial?).

3. The decline in satisfaction with the work itself, while certainly not alarming, merits inquiry. Moreover, it is significantly lower in some district work locations. Is the nature of the work changed or are decreased staffing levels in these areas responsible for the lower ratings? What other possible explanations exist? Focus groups of employees from these districts might provide some insight into the causes of the decreased satisfaction. In addition, since District 2 does not seem to report lower than average ratings, a comparative focus group with employees from this group might be further enlightening.

4. Communication activity between DOT employees and representatives of IDOP should be examined in order to discern why DOT employees are less satisfied with this communication source relative to others. Perhaps some dissatisfaction should be expected as IDOP has assumed some human resource management responsibilities formerly handled by DOT staff. However, until the nature of the problem is better understood, remedies cannot be formulated.

5. It is recommended that the question of why communication ratings were uniformly lower in 1993 compared to 1988 be investigated. Particularly bothersome are the declines in perceived usefulness of bulletin boards, newsletters, handbooks/procedures manuals, check stuffers, and, most troubling, performance evaluations. Performance evaluations are especially troubling because they were perceived as relatively low in usefulness in 1988. Some communication vehicles like bulletin boards and check stuffers may be in the process of being supplanted by other vehicles like PROFs. Perhaps other channels like procedures manuals are not being kept up-to-date or are not as "user-friendly" as they might be. A task force internal to the DOT might examine this problem.

6. It is hoped that the plans to monitor changes in TQM-oriented work practices over time are realized. Despite the popularity of TQM, few organizations have had the discipline and courage to subject TQM to a scientific assessment and no organizations are known to have evaluated its impact on employee attitudes.

7. With respect to discriminatory harassment, efforts to educate employees on this form of harassment and convey DOT's policies relative to it have been successful. It is recommended that efforts now be directed toward understanding why some employees are reluctant to report such offensive behaviors and why some employees do not perceive effective action has been taken. These are exceptionally delicate matters which require a great deal of diplomacy in order

to investigate. If a strong climate of trust and belief that confidentiality will be maintained do not exist, it is not likely that people will come forward to relate their concerns. Concomitantly, there is the problem of confidentiality in disciplining employees for engaging in discriminatory harassment. Employee opinion leaders may need to be recruited and asked to encourage employees who have experienced discriminatory harassment to communicate openly with appropriate DOT staff.

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Introduction

In March 1993, all 3666 employees of the Iowa Department of Transportation (DOT) were asked to complete a mailed questionnaire asking for their opinions on employee morale issues such as perceptions of the work climate and communication within the DOT. The survey was not only intended to monitor current attitudes and perceptions but represented a follow-up to organizational surveys conducted at the DOT in July, 1984 and June, 1988. Such systematic "snapshots" of an organization over time carry many benefits. It provides administrators with objective, as opposed to perceived, ad-hoc impressions about what things are really like from the employee's point of view. Moreover, areas for morale improvement can be identified and the effectiveness of interventions, over time, can be assessed. Participation in an organizational survey also serves as an important channel of upward communication to management for employees and enhances their perceptions of ownership and involvement in the organization. Finally, this survey had an additional, express purpose of collecting some baseline information on organizational practices reflecting implementation of a Total Quality Management (TQM) philosophy, prior to initiation of organization-wide TQM training. Thus, administering a survey at this particular time seemed to serve several purposes.

All three surveys were designed by Paula C. Morrow, with the assistance of various individuals at the DOT. The 1993 instrument was developed in consultation with DOT staff, Shirley Andre, Terry Dellinger, Denny Tice, and Tom Sally and approved by Iowa State University's Human Subjects Committee, a group charged with safeguarding the public's interest during scientific inquiry. In addition, all three data collection efforts relied on questionnaires sent

directly to employees' homes, with instructions to return completed questionnaires to the consultant at her office address. All responses were therefore anonymous. The analysis of the survey data was completed by the consultant and thus this evaluation represents an independent assessment of morale and TQM practices at the DOT.

This report is divided into three major sections. The first section describes the nature of the sample more fully, including representation by work area location. The second section deals primarily with morale at the DOT and contains comparative information concerning how things have changed, or not changed, since 1984 and 1988. The major topics covered include job satisfaction, specific work climate characteristics, and communication. The third section is devoted to topics not covered in the original surveys. The major focus of this section is on work practices commonly associated with TQM such as recognition for improvement, teamwork, and customer orientation. The second issue covered in this section is discriminatory harassment.

Finally, in previous studies, a great deal of attention was given to how the classifications of majority/minority, female/male, and younger/older (40 years of age or more) and district affiliation affected perceptions and attitudes. Data will be reported here using the same demographic classifications. Work area locations, termed districts in the previous report, have been expanded from 9 to 13 categories in order to track the TQM implementation process more precisely.

Description of the Sample

Because of the planned training of all DOT employees in TQM, all 3666 employees were invited to participation in the survey. With the adequate response rate which was achieved in this study, this sample size allows for

generalizations to be made about (1) all DOT employees, (2) female employees and male employees, (3) majority employees and minority employees, (4) older and younger employees and (5) employees affiliated with each of thirteen work areas: motor vehicle enforcement, drivers license areas, the six districts, Parkfair mall, Ames (Hwy.D. - Highway Division), planning and research, administration, and Ames/Des Moines. The following data collection strategy was used:

An official census on February 26, 1993 identified 3666 persons working at the DOT. Of these employees, 178 were classified as minority group members (i.e., Native American Indian, African American/Black, Hispanic, Asian or Pacific Islander, or Other) and 3488 were classified as majority group members. There were 887 females and 2779 males. In summary, all Iowa DOT employees were selected to be in the study and were mailed questionnaires on March 8, 1993.

By April 16, 1993, 2249 usable and 118 non-usable questionnaires had been returned. This represents an overall response rate of 2367 or 64.6% and an effective or usable response rate of 61.3%. Since most mailed questionnaires achieve a response rate around 40%, the return rate associated with this study is considerably above average. The response rate of this survey also compares quite favorable to the response rates of 61.0% in 1984 and 55.1% in 1988. This relatively high response rate also suggests some very positive things about morale at the DOT. High rates of voluntary participation mean that people feel that the communication channels are open, that their input is valued and may make a difference, and that they remain interested in making "the system" work. A breakdown of the population and actual sample characteristics by race, sex and work area is provided in Table 1.

The sample consisted of 1415 (62.9%) majority males, 662 (29.4%) majority females, 94 (4.2%) minority males, 35 (1.6%) minority females, and 43 (1.9%) of

unknown race/sex combinations. While the absolute numbers of male and female minority responses was small, these two groups demonstrated a higher response rate (67.1% and 92.1%, respectively) than the overall sample (61.3%). It might be noted that a reverse pattern was found in previous survey administrations. In 1984, minority males exhibited a response rate of 43.0%, minority females demonstrated a rate of 52.0%, both less than the overall response rate of 61.0%. For 1988, comparable figures associated with male minority responses were 34.8% and 48.1% for females, considerably lower than the 1988 overall response rate of 55.1%. Each race/sex group of employees in the present study was thus judged to be adequately represented. Moreover, this is the largest sample ($N = 129$) of minority employees at the DOT to date (i.e., in 1984, 40 minorities participated; in 1988, 52 minorities participated). Nevertheless, as in the previous assessments, the absolute number of 129 (5.7% of the participating respondents) is too small to support separate analyses of minority groups by sex. Accordingly, all subsequent analyses of minority responses will combine male and female minority data.

The large sample size associated with this survey readily facilitates comparisons between DOT employees less than 40 years of age ($N=810$ or 36.0%) and those 40 or older ($N=1409$ or 62.7%). Thirty employees (1.3%) failed to report their age. In 1988, the percentage less than 40 years of age was 42.7% and for those 40 years and over, 56.9%. Taken together, these percentage changes suggest that the DOT is a "graying" employee population (i.e., the average employee age is increasing).

As previously indicated, the number of work area locations was expanded from 9 to 13 in order to follow the TQM implementation process more precisely (e.g., the customers served in each work area location can be more narrowly

defined). Table 1 shows the DOT population or total number of employees working at each location, the number returning surveys and what percentage of the final sample comes from that location, and the response rate. Ideally the response rates from each district will match the overall response rate (see the last column in Table 1). The extent to which the response rate varies appreciably from 61.3% indicates the over- or under-representation of a work area location. With this relatively high overall response rate, one would only become concerned about the response rate associated with a particular work area location if it (a) were far below the 61.3% overall average and/or (b) was small in absolute size. What constitutes small in absolute size is a judgment call. Statistically speaking, sample sizes over 100 are normally fine, those less than 50 are problematic, while those between 50 and 100 require guarded interpretation. Using these two guidelines together, only one work area location demonstrated a response rate more than ten percentage points less than the overall percentage and was smaller than 100 in terms of absolute size: the drivers license areas (47.2% response rate, N=93). Less confidence can be placed in the generalizability of the survey results to all drivers license area employees and their viewpoint is slightly under-represented in the overall findings. The small absolute size of the sample working in the planning and research area (N=71) is sufficiently small that care should also be exercised regarding conclusions about this group. The higher than average response rate connected with the motor vehicle enforcement group (72.6%) could raise questions about over-representation of this work area in the overall findings, but with a sample size of only 85, this is not too likely. With these caveats, then, the response rates and sample sizes are judged adequate for the reporting of all findings by work area location.

Other sample characteristics. In addition to the race, sex, age and work area location characteristics of the sample, there are other noteworthy characteristics. For example, in 1988, 5.8% (44 of 739) of DOT employees classified themselves as disables in some way while the corresponding figures for 1993 were 8.5% (186 of 2,249). Table 2 reports on two other noteworthy characteristics, average length of service at the DOT and average length of time at the same pay grade.

The overall average length of service for DOT employees in 1993 was 15.12 years. This compares with an average of 11.46 years in 1984 and 13.68 years in 1988. This suggests that the DOT, demographically speaking, continues to age as an organization. The average length of service for minorities and females was significantly lower than their majority and male counterparts, a pattern which was also evident in 1984 and 1988. Naturally, older respondents also demonstrated more years of service. There was considerable variation in average length of service associated with work area location. Many work areas contained staff with average tenures far greater than the average of 9.40 years observed in the drivers license areas and the average of 10.57 years observed at Parkfair Mall.

The number of years spent at the same pay grade, which can be viewed as an indicator of upward mobility in an organization, has increased substantially since 1988. In 1988, the average was 5.43 years while DOT employees reported an average of 7.00 years in the present survey. This compares with 4.92 years in 1984. The increase from 1984 to 1988 was attributed to an accompanying increase in the average length of service at the DOT, a condition also present in the 1988 to 1993 time frame. However, the magnitude of the jump from 5.43 to 7.00 suggests that an exceptionally low level of upward mobility has occurred (or has

been perceived to have occurred) between 1988 and 1993. This topic merits further investigation, if only to substantiate whether the perception of being at the same job for an extended period is accurate. It may simply be true that more and more senior employees are reaching the top end of their salary ranges and there are no further pay grades to work toward. Still, remaining at the same pay grade for extended periods of time does not contribute to motivation and satisfaction.

The data further indicate that females spend significantly less time at the same pay grade (i.e., 4.92 years for females vs. 7.68 years for males). This may reflect higher turnover among women, resulting in their lower number of years of service with the DOT, and the fact that advancement is typically faster at lower pay grades. Or, it might mean that job classifications that attract a disproportionate number of women simply have more pay grades. Similarly, minorities exhibited fewer number of years at the same pay grade (i.e., 4.71) than their majority counterparts (i.e., 7.18). This differential may be a function of the increase in the number of minorities at the DOT since the 1988 study, who, as new employees, are working at lower pay grades and have greater potential for advancement. Affirmative Action efforts or higher turnover rates among minorities may also be contributing to this difference.

Employees associated with districts 3 and 6 demonstrated significantly higher average length of time at the same pay grade (i.e., 8.07 and 8.45 years, respectively) than their counterparts in the drivers license areas and Parkfair Mall (i.e., 4.36 and 4.71 years, respectively). However, these differences are likely an artifact of their differences in average length of service (16.51 and 16.91 years, respectively for districts 3 and 6, and 9.40 and 10.57 years for drivers license areas and Parkfair Mall).

Job Satisfaction at the DOT

Respondents were asked to describe their level of job satisfaction along four dimensions: (1) satisfaction with the work itself (i.e., does it provide a sense of accomplishment, is it respected), (2) satisfaction with supervision (i.e., do supervisors exhibit tact and fairness, do they provide needed information), and (3) satisfaction with coworkers (i.e., are coworkers stimulating, responsible and intelligent). Each of these dimensions was measured by 10 to 20 questionnaire items which were then averaged to yield a single scale score for each dimension (see Table 3). Since the scale scores could range from 0 (very dissatisfied) to 3 (very satisfied), one can regard a score around 1.5 as neutral (i.e., neither very satisfied nor dissatisfied).

Satisfaction with the work itself yielded precisely just such an intermediary level with a mean of 1.50 for the entire sample, slightly less than the 1988 mean of 1.60 and the 1984 mean of 1.58. Older agency members ($M=1.54$) were appreciably more satisfied than younger members ($M=1.44$), a finding also observed in 1988. There was some noteworthy variation in satisfaction with the work itself by work area location. In general, employees working in district 4 ($M=1.30$), district 5 ($M=1.37$), and district 6 ($M=1.38$) were significantly less satisfied than employees working in the Ames (Hwy. Division) district ($M=1.67$), administration ($M=1.67$), and Ames/Des Moines district ($M=1.66$). One might speculate that the nature of the work (i.e., day-to-day tasks) in the district locations is fundamentally different from the work done at the other locations. It is also possible that work in the Ames and Des Moines locations is felt to be more meaningful because of its implications for the entire agency. Similar findings were noted between district 5 and employees working in Ames in 1988, although the Ames work area location categories are not directly comparable.

Thus it continues to be important that decision makers based in Ames not regard employees in their work area location as a "DOT in miniature" or test case when considering work changes likely to affect employees' opinions about the work itself.

Finally, the sex difference observed in the 1984 findings continues not to be replicated, suggesting that work available to men and women is potentially equally satisfying. In the 1984 study, females ($M=1.49$) were significantly less satisfied with the work itself than males ($M=1.65$). In 1988, the corresponding means were 1.64 for females and 1.59 for males. The respective 1993 means of 1.55 and 1.50 indicate that the DOT's efforts to diversify the number of jobs available to women at the DOT, thereby enhancing their satisfaction with the work itself, has been sustained.

Satisfaction with supervision has historically been rated higher than satisfaction with the work itself and the 1993 overall mean of 1.82 continues to support this trend. The 1993 mean is slightly less than the 1988 mean of 1.88 and the 1984 mean of 1.95. Only one subgroup difference was evident. The Ames-Hwy. Division location ($M=1.93$) rated satisfaction with supervision significantly higher than the district 4 location ($M=1.63$).

Satisfaction with coworkers received the highest levels of endorsement with an overall mean of 1.99, virtually identical to the 1988 value of 1.99 and the 1984 value of 2.00. While in 1988 there were no subgroup differences whatsoever, the 1993 findings reveal that older workers ($M=2.04$) are significantly more satisfied than younger workers ($M=1.91$). In addition, differences were evident in work area locations. In general, DOT employees working in motor vehicle enforcement ($M=2.34$) and driver's license areas ($M=2.39$) were significantly more satisfied with their coworkers than employees working in

district 4 (M=1.85), district 6 (M=1.85), district 3 (M=1.85), and district 1 (M=1.87).

The evidence associated with satisfaction with coworkers among minority and majority groups has also demonstrated a positive trend since 1984. In 1984, minority group members were significantly less satisfied with coworkers (M=1.71) than majority group members (M=2.05). In 1988 and 1993, the means were identical (Ms=1.96 and 1.99, respectively) and not significantly different. This sustained convergence of opinion with respect to satisfaction with coworkers, at such a high level, suggests that minority employees are now much more pleased with their colleagues.

The last measure of job satisfaction entailed a global assessment of the job. Respondents were asked, "How much of the time do you feel satisfied with your job at the DOT?". Seven response options were presented, ranging from 1=Never to 7=All of the time. In the present survey, 66.0% of the respondents indicated that they were satisfied more than half of the time (see Table 3). This compares with 73.0% in 1988 and 69.4% in 1984. Only one subgroup difference was detected. Younger employees were significantly less likely to report overall satisfaction (60.7%) than older employees (69.2%), consistent with the satisfaction with the work itself and coworker findings.

Summary. Job satisfaction at the DOT has not varied a great deal since 1984. There may be some deterioration occurring in satisfaction with the work itself and this dimension therefore warrants observation. The lack of promotional opportunities was thought to still be a problem, but one with no ready solution, and thus this dimension was not included in the 1993 survey. On the plus side, women and minorities continue to be more satisfied in some areas than they were in 1984. Indeed, race and sex no longer seem to be associated

with differential perceptions. This reduces the need to target satisfaction enhancement programs to specific employee populations. On the other hand, older workers continue to be more satisfied than younger workers and additional differences were noted in conjunction with work area locations. Some of these differences may be a function of the more precise location breakdowns; however, it does seem that districts 3, 4, 5, and 6 disproportionately reported lower levels of satisfaction with the work itself and coworkers than other work area locations.

Work Climate Characteristics at the DOT

Many factors, besides job satisfaction, are assumed to influence the motivation and work behavior of employees (e.g., attendance, quality of work, expression of grievances). Among these factors is the notion of organizational climate. Organizational climate refers to a set of characteristics of the work environment, perceived directly or indirectly by the people who work in that environment. Seven such characteristics were evaluated in the 1993 DOT survey: warmth, support, identity, structure, openness and trust, non-harassing work environment, and morale. Comparative data for 1984 and 1988 are available for the first three climate characteristics and 1984 data are available for the fourth characteristic, structure. The findings may be previewed in Table 4.

Warmth. This characteristic describes the feeling of general good fellowship that prevails in the work group atmosphere; the emphasis on being well-liked; the prevalence of friendly and informal social groups. It received a rating nearly equivalent to the theoretical midpoint of the 1 to 4 response option range (i.e., $M=2.51$), suggesting that the agency is viewed by most as a moderately relaxed and friendly place to work. This compares to a similar mean of 2.50 reported in 1988, which in turn is down from the 1984 mean of 2.70.

No statistically significant differences in warmth were associated with race, sex, or age. Districts 3 ($M=2.41$) and 6 ($M=2.45$) demonstrated significantly lower levels of warmth than the administration work area ($M=2.70$).

Support. Support refers to the perceived helpfulness of the managers and other employees in the group; the emphasis on mutual support from above and below. The overall mean ($M=2.26$) on this characteristic suggests that perceptions of support are somewhat low if one regards the hypothetical midpoint of 2.5 as an average rating. While this climate dimension received the lowest rating compared to other dimensions, it is not appreciably different from the 1988 rating of 2.27 and the 1984 rating of 2.35. The subgroup analysis revealed no significant differences in perceptions of support associated with demographic traits or work area location.

A clearer understanding of the comparatively low rating associated with the support scale can be achieved through an examination of some items used in this scale. The overall support rating suffered primarily because of low agreement with one item. The statement, "Management makes an effort to talk with you about your career aspirations within the agency", received an average rating of only 1.87. This finding is consistent with the 1984 and 1988 survey results and underscores the problem of limited upward mobility at the DOT. It is likely that "management" avoids discussing career aspirations because of the limited number of promotional opportunities available. The more interpersonal aspects of support do not appear so problematic.

Identity. Identity refers to the feeling that you belong to an organization and that you are a valuable member of a working team. It also refers to the importance others place on this kind of spirit. The overall rating of this characteristic ($M=2.37$) places it slightly below the middle of the theoretical

1 to 4 range, implying that a moderate feeling of identity exists. Older respondents ($M=2.40$) were slightly more likely to have higher feelings of identity than younger respondents ($M=2.33$), but this sense of increased commitment is common among all long tenured workers (a factor which covaries with age) and is thus not particularly useful information. Ratings of identity were also significantly higher in the driver's license areas ($M=2.78$) than in the six districts, Parkfair Mall, the Ames highway division, and planning and research.

These first three climate characteristics, warmth, support, and identity have now been evaluated at three points in time. In only one instance was a marked change in climate noted. The magnitude of the decline in warmth perceptions between 1984 ($M=2.70$) and 1988 ($M=2.50$) was rather disconcerting. Only small changes were observed elsewhere. Indeed, 1988 and 1993 perceptions are very similar for all three rating dimensions. In view of the downsizing and reorganization which has been occurring at the DOT over the last several years, not observing additional declines in climate is perhaps more than could reasonably have been expected.

Structure. Structure refers to the feelings that employees have about the constraints in their work group or organization; e.g., how many rules, procedures, and regulations there are. It also reflects the degree of emphasis on "red tape" and "going through channels", as contrasted with a more informal atmosphere. The overall findings for 1993 ($M=2.29$) indicate that perceptions of structure fall somewhat below the theoretical midpoint, suggesting that at least part of the DOT's organizational structure is not ideal. While data were not available for 1988 due to a lack of reliability in the structure measure for that year, ratings of structure were observed to be more favorable in 1984 ($M=2.42$). Subgroup differences were not seen with respect to race and sex but older

employees ($M=2.32$) were found to rate structure more favorably than younger employees ($M=2.23$). In addition, employees working in the driver's license areas ($M=2.55$) rated structure significantly higher than employees assigned to districts 1, 2, 3, and 4.

Openness and trust. This climate dimension, along with the next two, were developed expressly for the 1993 survey. Openness and trust refers to whether employees feel they can express their ideas and viewpoints freely, without fear of reprisals, and the extent to which relationships among employees and managers or supervisors are characterized by trust. Sample items include, "Employees in my work unit can voice their opinions freely" and "The people I work with really trust each other". The overall average rating on this scale was 2.41, only slightly below the midpoint on the 1 to 4 response option range. While no race or sex differences were detected, older employees ($M=2.44$) reported significantly higher ratings than younger employees ($M=2.36$). As previously noted in conjunction with previously discussed climate dimensions, the driver's license areas ($M=2.68$) displayed higher ratings than several other work area locations (i.e., districts 1, 4, and 6).

Non-harassing environment. This climate dimension focused on the extent to which employees experience job situations which some might find offensive or harassing in nature (e.g., profanity, hazing, sexual harassment). Items used to assess this environmental dimension included "Objects which are sexually suggestive or racist can be found in my work unit" (reverse coded) and "Employees in my work unit treat each other in a dignified and professional manner". Items were scored such that high scores indicated a non-harassing work environment. This climate dimension received the most favorable rating with an overall mean of 2.72, indicating the more employees felt the environment was more non-

harassing than harassing. There were no significant differences connected with race and females ($M=2.83$) rated the environment more favorably than males ($M=2.69$). Older employees ($M=2.75$) rated the environment less harassing than younger employees ($M=2.68$). Numerous locational differences were observed, indicating that some work environments are more and less harassing than others. In general, the driver's license areas ($M=3.18$) exhibited a more favorable environment while districts 3 ($M=2.58$), 4 ($M=2.55$), 5 ($M=2.60$), and 6 ($M=2.53$) demonstrated significantly lower ratings than several other work locations.

Some individual items within this scale perhaps merit comment. The item receiving the lowest, most unfavorable rating ($M=2.00$) was "I sometimes hear profanity in my work unit" (reverse coded). While such language cannot be condoned, societal acceptance of such behavior is probably greater for this practice than other behaviors tapped by the measure. Higher, more favorable, ratings were observed in association with "Sexual harassment is not a problem in my work unit" ($M=3.20$) and "Objects which are sexually suggestive or racist can be found in my work unit" (reverse coded) ($M=3.22$). Such ratings--on a scale of 1 to 4--imply that efforts to reduce sexism and, to a lesser extent, racism at the DOT have been successful. This conclusion is further reinforced by the observation that women rated the environment as less harassing than men and by the absence of significant differences between majority and minority employee ratings.

Morale. The final climate dimension examined overall morale. As such, this measure touched on a number of morale indicators such as the level of recognition given to employees, feelings that one's work is valued by other people, and the extent to which divisional management understands and appreciates employees' work related concerns. The 1993 mean for morale was 2.61, all in all

suggesting a more favorable than unfavorable rating. No race or sex differences were evident while older employees ($M=2.63$) showed higher ratings of morale than younger employees ($M=2.56$). The driver's license area ratings ($M=2.87$) were, again, significantly higher than eight other work locations.

Summary. Several conclusions regarding climate can be offered. With respect to changes over time, perceptions of support and identity have remained relatively constant while perceptions of warmth and structure have shown some slight declines since 1984. It would appear that these declines are more associated with the 1984 to 1988 period than the 1988 to 1993 period. For the 1993 indicators of climate (i.e., openness and trust, non-harassing environment, and morale), the findings were mixed. Openness and trust were neither exceptionally high or low. In contrast, the most favorable ratings of climate were associated with the non-harassing environment and morale dimensions. Climate perceptions seemed unrelated to race and sex while older employees reported more favorable perceptions than younger employees--a pattern previously noted in both 1984 and 1988. With respect to work location, the driver's license areas typically reported significantly more favorable perceptions, particularly in relation to districts 1, 3, 4, and 6.

Communication at the DOT

In developing the 1988 survey a great deal of emphasis was placed on monitoring changes related to communication since 1984. The communication areas emphasized included the overall quality and quantity of information communicated, specific aspects of communication (e.g., availability, accuracy), and the usefulness of various communication sources (e.g., Inside TV Report).

Quality of information. Quality of information at the DOT was assessed by

asking respondents how satisfied they were with the quality of information they received from their immediate supervisors (downward communication), their peers (lateral communication), their subordinates, if applicable (upward communication), the Iowa Department of Personnel (IDOP). The IDOP evaluation replaced the previous evaluation of the Human Resources Bureau in order to be consistent with the reorganization of some state government personnel functions. Response options ranged from 1 (incorrect, not useful information) to 5 (accurate, useful information). The quality of information associated with three sources was good; although slightly lower than comparable 1988 ratings. Scores ranged from 2.79 (IDOP) to 3.58 (immediate supervisors), with all but the IDOP rating above the hypothetical mid-point of 3.00 (see Table 5). Several significant differences were noted by work area location. The driver's license areas (M=3.98) and Ames (Hwy.Division) (M=3.76) reported significantly higher ratings of information quality than did district 4 (M=3.27). Quality of information from peers was rated more highly by the driver's license areas (M=3.76) than by district 3 (M=3.15). The driver's license areas (M=3.43) and district 6 (M=3.19) assessed the quality of information from IDOP to be significantly better than five and three other work locations, respectively. While there is always room for improvement, these findings are reassuring in that the most important organizational communication link, that associated with immediate supervisors, was the most highly rated.

Quantity of information. This aspect of communication was measured in the same manner as quality of information (see Table 6). Response options ranged from 1 (too little or too much) to 5 (just right). Thus this measure recognizes that too much information, like too little information, can detract from employee performance. Satisfaction with the quantity of information was moderate, with

means ranging from 2.39 (IDOP) to 3.13 (peers). The latter finding is not surprising given the relatively high level of satisfaction with co-workers. These means, however, are noticeably lower than those associated with the quality of information responses and two of the overall means are less than the 3.00 midpoint. This implies that the quality of information may be acceptable but the quantity is not. While it is possible that there may be excessive communication from time to time, the dissatisfaction with communication quantity is probably more related to an inadequate amount of information.

Locational differences in quantity of information ratings were only observed in conjunction with IDOP ratings. The driver's license areas (M=2.93) and district 6 (M=2.83) reported more favorable evaluations than four and three other work locations, respectively. Most troubling however was the rating provided by planning and research (M=1.90). On a scale of 1 to 5, this perception is quite low and calls for some investigation.

In comparison with 1988 data, the 1993 quantity of information ratings are slightly lower. This observation also parallels the 1988 to 1993 quality of information findings.

Specific aspects of communication. Many forms of job related communication exist at DOT (e.g., Inside TV Report, Inside Magazine, bulletin boards, meetings, performance evaluations). Collectively, these information sources were rated on their availability, usefulness, and accuracy (see Table 7). Availability was rated from 1 (never) to 5 (always), usefulness was rated from 1 (no use) to 5 (very useful) and accuracy was rated from 1 (not accurate) to 5 (very accurate). Availability received the highest overall rating (M=3.85) followed by accuracy (M=3.33) and usefulness (M=3.01). With respect to demographic differences, no age differences were detected but minority employees (M=3.62) rated communication

availability lower than majority employees ($M=3.86$). Females rated each aspect of communication significantly more highly than males. To the extent that females are more heavily involved in clerical work, they may be more aware or sensitive to the written forms of communication. Finally, the driver's license areas ($M=3.27$) rated communication usefulness more highly than district 5 ($M=2.84$).

Comparing these results with those generated in 1988 again repeats the pattern of a slight decline in communication practices. Each 1993 rating is slightly less than its 1988 counterpart. The pattern of findings connected with sex and age was the same as in 1988. The observation of a racial difference in communication availability in 1993 was not found in 1988. Work area location findings were also similar with no differences in 1988 and only one difference in 1993. Given the large number of assessments, the lone 1993 difference might be a purely chance finding.

Usefulness of communication sources. Since usefulness was rated the lowest of all three forms of evaluation in both 1988 and 1993, the individual communication sources were examined more closely (see Table 8). The usefulness of each communication source ranged from 2.10 (grapevine, rumors) to 3.70 (handbooks, procedures manuals). These two sources were also rated highest and lowest in 1988.

Given the resource commitments attached to some of these communication devices, it was recommended in 1988 that sources rated around the midpoint of 3.00 or less in usefulness be reviewed (i.e., Inside TV Report, Inside Magazine, grapevine/rumors, performance evaluations). This same recommendation could be made again, particularly since none of the communication sources saw an appreciable increase in their utility ratings (i.e., most communication sources

were rated lower in 1993 than 1988). In addition, some of the declines in ratings are substantial. Bulletin boards, for example, declined from 3.53 in 1988 to 3.22 in 1993. Newsletters, performance evaluations, check stuffers, and even handbooks/procedures manuals experienced similar declines.

Summary. The communication findings can only be described as "mixed", in terms of an overall assessment for the DOT. The "good news" is that most communication ratings still hover slightly above the midpoint, suggesting more favorable than unfavorable judgments about communication. Only ratings connected with IDOP fell noticeably below the midpoint of the response option range. The "bad news" entails the pattern of decline in ratings relative to the 1988 data collection effort. While the magnitude of these declines is not large, their pervasive nature in communication quality, quantity, availability, usefulness, and accuracy ratings is an ominous trend which merits further examination.

TQM Work Practices at the DOT

In view of the DOT's commitment to Total Quality Management (TQM), it seemed highly appropriate to engage in some internal "benchmarking" of work practices prior to the start of TQM training. Toward that end, a review of literature related to TQM revealed that no established measures for validating the presence of a TQM work culture are yet available. Accordingly, measures were developed expressly for this survey which reflect the major principles of a TQM- oriented work philosophy. These measures are far from perfect but they should provide a comparative basis for future assessments of the extent to which employees and administrators are embracing TQM concepts and practices.

Nine separate TQM work practice measures were developed. Operationally, each consisted of several statements describing a work practice to which employees

were asked to report their level of agreement using a (1) "strongly disagree" to (5) "strongly agree" set of response options. Employees were not asked to evaluate how they felt about TQM or whether they liked it; rather, they were asked only to report whether or not a certain practice characterized their work experience. Stated differently, employees were asked only to be descriptive and not evaluative. The results associated with each measure are discussed individually and the corresponding data are reported in Table 9. It should be noted that relatively low scores on these measures were anticipated since TQM training has only recently begun. The TQM program is expected to increase levels of the work practices in question.

TQM leadership. The first measure was designated as TQM leadership, reflecting the extent to which DOT leaders demonstrate personal involvement and commitment to work quality. The following four items were used:

1. Managers and supervisors at the DOT exhibit personal commitment to quality improvement.
2. Division management strongly encourages employee involvement in work unit decision-making.
3. Managers and supervisors at the DOT accept their responsibility for quality.
4. The DOT has made quality improvement a top priority.

As shown in Table 9, the overall mean for this measure was 2.88, slightly less than the theoretical neutral midpoint of 3 on the 1 to 5 range. Employees were thus more inclined to disagree than to agree that DOT leaders are presently committed to work quality. There were no differences in perception associated with demographic group membership and only one work area location was significantly different from the others. The driver's license areas ($M=3.56$) reported significantly higher ratings of TQM leadership than any of the other

work area locations.

Recognition for quality improvement. The second measure focused on the extent to which employees are recognized for quality improvements. Four items were used to capture this idea:

1. DOT employees are recognized for quality improvement.
2. If I improve quality, management will recognize me.
3. DOT managers and supervisors are recognized for quality improvement.
4. Improvements in quality are recognized in employee performance reviews.

The overall mean for this measure was slightly lower than TQM leadership at 2.67. Again, there were no demographic subgroup differences and only one work area location difference was detected. The driver's license areas ($M=3.02$) were observed to report more recognition for quality improvement than employees working in district 4 ($M=2.58$).

Feedback. The extent to which employees are informed about the quality of their work was the third TQM work practice measure. It was operationalized using the following two items:

1. I am never told whether I am doing a good job. (Reverse coded)
2. My manager or supervisor never comments about the quality of my work. (Reverse coded)

Feedback ratings were among the higher ratings of TQM work practices with an overall mean of 3.17. No significant differences were observed in relation to subgroup membership or work area location.

Teamwork. TQM places a great deal of emphasis on organizing employees into teams (i.e., the use of small groups of employees working together). Teamwork is thought to promote more creative problem-solving and participatory decision-making. The extent to which the DOT has adopted a team-based organizational structure was reflected in the following four items:

1. My work unit use teams to solve problems.
2. The DOT has embraced the team concept.
3. Many work problems are now being solved through team meetings.
4. During team meetings, we make an effort to get all team members' opinions and ideas before making a decision.

As shown in Table 9, the overall mean for teamwork was 2.59, slightly lower than the 3.00 midpoint of the response option range. This suggests that teams are used to some extent at the DOT, but that their use should be expanded considerably to be consistent with recommended TQM practices. Interestingly, older employees ($M=2.63$) described more teamwork in the work environment than younger employees ($M=2.52$). There were some locational differences also evident with respect to teamwork. The driver's license areas ($M=3.33$) were significantly higher than ten other work area locations, and, Parkfair Mall ($M=2.94$) was significantly higher than four other work locations.

Customer orientation. The fifth work practice measure was termed customer orientation and refers to the extent to which DOT employees emphasize contact with and responsiveness to customers. Four statements were developed to capture this idea:

1. The people my unit serves (i.e., our customers) meet with us regularly.
2. My co-workers have a good understanding of who their customers are.
3. The people my work unit serves (i.e., our customers) give us feedback on the quality of our work.
4. People in my work unit maintain close contact with the people we serve.

Customer orientation was rated almost exactly as "neutral", with an overall mean of 3.05. Females ($M=3.22$) reported a higher customer orientation than males ($M=3.01$), perhaps reflecting differences in the amount of public contact entailed in their jobs. This explanation for sex differences should become less tenable

in the future, however, as employees come to recognize internal as well as external customers via their TQM training. Older employees ($M=3.10$) also exhibited more customer orientation than their younger counterparts ($M=2.96$). A number of locational differences were noted. In general, the driver's license areas ($M=3.73$), motor vehicle enforcement ($M=3.45$), and the administration work area ($M=3.30$) demonstrated a significantly higher level of customer orientation than other work area locations.

TQM culture. The extent to which the DOT's organizational culture manifests TQM principles was also evaluated for base-line information purposes. Since even the idea of measuring a corporate culture is fairly complex, a minimum of eight items were needed. They were as follows:

1. The DOT is moving away from an "inspection" orientation to a "do it right the first time" philosophy.
2. Employee ideas are encouraged - even if they later don't work out.
3. My supervisor or manager is more a "team leader" than a "boss".
4. Decisions are being made more by people doing the job than by managers.
5. I understand more "why" we do things than I did in the past.
6. Employee suggestions are given a fair hearing by DOT managers and supervisors.
7. It is easy to get a new idea on the table for discussion.
8. Employees are being given the opportunity to be responsible for work quality.

Again, given the fact that the DOT has just begun to implement TQM training, it was not surprising to find that the overall mean was a relatively low 2.80. This indicates that employees were more inclined to say that their work environment did not embody TQM elements, than already embodies such elements. There were no demographic subgroup differences in this assessment while the driver's license areas ($M=3.19$) reported a significantly higher rating of a TQM-oriented culture

than four other work area locations.

Continuous improvement. One of the most fundamental ideas associated with TQM is that of the importance of always striving to improve work performance. The extent to which DOT employees understand and are committed to improving work performance was measured using the following four items:

1. My work unit understands the concept of "continuous improvement".
2. My work unit has accepted the goal of continuous improvement.
3. I am committed to continuous improvement in my work.
4. My boss really believes that we can improve our work continuously.

For the sample as a whole, this TQM work practice received the highest baseline rating with a mean of 3.36. Employees were more inclined to agree than disagree with the idea that DOT employees value continuous improvement. Females ($M=3.44$) endorsed continuous improvement more highly than males ($M=3.34$) and older employees ($M=3.39$) endorsed continuous improvement more highly than younger employees ($M=3.31$). The driver's license areas again exhibited higher continuous improvement ratings ($M=3.84$) than many other work area locations. In addition, Parkfair Mall ($M=3.56$) demonstrated a significantly higher rating than district 4 ($M=3.21$).

TQM training. The eighth measure was the extent to which an organization has provided employees with training related to Total Quality Management which employees can understand and use to improve their job performance. Four items were developed to evaluate training efficacy:

1. I have a good understanding of Total Quality Management (TQM).
2. TQM training has helped me improve my job performance.
3. I have received adequate training in TQM.
4. TQM ideas have been clearly explained to me.

This work practice, understandably, received the lowest overall rating ($M=2.51$). Anecdotally, many respondents commented on these items as being "inappropriate" to the survey since they were scheduled for TQM training but had not yet attended their first training session. Females ($M=2.64$) reported receiving more TQM training than males ($M=2.46$). It may be that job classifications or work locations employing more women may have already received some TQM-like training. This is further borne out by the finding that the driver's license areas ($M=2.96$) reported significantly higher ratings than six other work area locations while Parkfair Mall ($M=2.79$) reported significantly higher ratings than three other work area locations. Other work area location differences were observed. District 5 ($M=2.34$) and district 6 ($M=2.35$) demonstrated significantly lower ratings of TQM training than four other work area locations.

Job training. The final work practice evaluated reflects the idea that in a TQM-oriented work environment, employees must be continually trained in subjects related specifically to their jobs in order to provide the best possible job performance, understand organizational goals, keep up with technological changes, etc. The extent to which this has occurred at the DOT was measure with the following four items:

1. Training provided by the DOT helps me do a better job.
2. I receive all the training I need to do a good job.
3. The quality of job related training I have received has been good.
4. The job related training I have received has been very worthwhile.

The overall mean rating for job training was 3.17, which slightly exceeded the midpoint of the 1 to 5 response option range, suggesting that more employees agreed than disagreed with the above statements. The only racial difference in work practice ratings was noted in conjunction with this variable. Majority

employees (M=3.19) rated their access to job related training more highly than minority employees (M=3.00). Older employees (M=3.21) also rated their job training more favorably than younger employees (M=3.11). Two work area locations, Parkfair Mall (M=2.96) and Planning and Research (M=2.92) rated their job related training less favorably than motor vehicle enforcement employees (M=3.55).

Summary. This review of the prevalence of TQM work practices at the DOT indicates, as expected, that there is room for improvement in all of the areas identified. On the other hand, it is worthwhile to note that on-going management practices have been somewhat successful in advancing TQM goals as evidenced by the fact that the lowest rating fell only to 2.51 (TQM training) and four of the nine ratings already exceeded the 3.00 midpoint of response option range. With respect to demographic subgroup differences, only one racial grouping difference was observed. Three sex differences and four age differences were noted, with higher ratings exhibited by females and older employees. This merits some inquiry. The sex differences may be function of work area location (i.e., driver's license areas, Parkfair Mall) or type of job (i.e., jobs with considerable interpersonal contact). The age difference is not so readily explicable. It may simply be a carryover effect of higher levels of job satisfaction. In general, TQM-oriented work practices were seen as more operational in the driver's license areas and Parkfair Mall and less operational in districts 4, 5, and 6.

Issues Related to Discriminatory Harassment at the DOT

Between 1984 and 1988, the DOT undertook a number of activities designed to eliminate sexual harassment within the organization (e.g., educational programs

explaining what sexual harassment is, what supervisors should do when a complaint is made). This programming was shown to be very effective in the 1988 survey, with over 96% of the 769 surveyed employees reporting that they knew and understood what sexual harassment is. This effort was extended to include discriminatory harassment (i.e., hazing, profanity, behaviors indicative of racism or sexism, etc., in addition to sexual harassment) in the 1988-1993 period. This programming was also undertaken as a direct result of a question included in the 1988 survey. It asked, "Have you ever felt you have been a victim of any other forms of harassment (e.g., excessive horseplay, hazing, practical jokes)?" Over 17% or 132 of the 1988 respondents reported that they had been a victim of some form of harassment. Such a high percentage resulted in further investigation of this topic.

As shown in Table 10, employees at the DOT indicate that they understand what discriminatory harassment is, with 92.0% overall reporting that they do indeed understand this term. Moreover, no demographic or locational differences were observed, indicating that the topic has been explained thoroughly throughout the organization. Respondents were further queried as to whether they understood the DOT's policies with respect to such harassment. Overall, 86.6% reported that they understood and, again, no demographic or locational differences were noted (see Table 10).

Following up on this potential problem, employees were asked about their experiences related to discriminatory harassment during their tenure at the DOT. Unfortunately no data were collected concerning when any such incidents occurred (i.e., incidents could have taken place within the last several years or many years ago, when awareness of the inappropriateness of such behavior was not well understood). Table 11 shows both absolute numbers and percentages of respondents

experiencing discriminatory harassment, reports to management, and judgments concerning whether appropriate actions were taken by supervisors to stop the harassment.

Approximately 24.8% of the respondents indicated that they had been a victim of harassment at sometime while working at the DOT while another 5.9% indicated that they were unsure as to whether they had been a victim. Over two-thirds (68.8%) of the respondents reported they had not had such an experience. The data become somewhat more difficult to track as one moves to the issue of reporting to management because of "no response" answers. Theoretically, the 690 people who answered either "yes" or "unsure" to the experience question, could have indicated "yes" or "no" as to whether they reported the behavior to management. Of the 690, 640 did just that, with 223 (34.8%) saying "yes" and 417 (65.2%) saying "no". While this indicates some reluctance to report such problems to management, it must be remembered that at the time some of these incidents occurred, there may have been no explicit policy prohibiting the behavior.

The final follow-up question investigated whether appropriate action was taken by management. Focusing on the 223 respondents who acknowledged reporting to management, 44.8% (N=100) said that management did take appropriate action while 64.1% (N=143) said that management did not engage in appropriate action. One could also look at this data solely on the basis of respondents answering "yes" or "no" to the appropriate action taken question, wherein the base response rate increases to 243, changing the percentages from 41.2% "yes" and 58.8% "no". These percentages are not all that different, thus from this one can conclude that approximately 40% of the victims reporting their experience to management felt that appropriate action was taken, and 60% felt that appropriate action was

not taken.

While direct comparisons with the 1988 data cannot be made because only sexual harassment and the responses of women were considered, there are some interesting parallels. Fifty-two (20.3%) of the females in the 1988 survey reported that they had been victims of sexual harassment while working at the DOT. The corresponding percentage for 1993 of 24.8% (30.7% counting "unsure" responses) represents a percentage increase, but probably not a meaningful one, since the offensive behavior has been expanded dramatically (e.g., profanity in the workplace) and the respondent pool now includes men. In addition, since the 1988 sexual harassment question also had no time period associated with it, the reports of harassment are likely cumulative (i.e., the 1993 percentages include harassment experienced prior to 1989 and new events).

Not quite half (44.8%) of the women in the 1988 survey reported the harassment to management and 64.9% of this group felt that satisfactory action was taken. This compares with 34.8% reporting harassment and 40% of that group reporting satisfactory action by management in 1993. While again these trends between 1988 and 1993 may not seem to be going in the "right" direction, it is not a valid comparison. It may be more difficult for men in a male dominated work environment like the DOT to complain about infractions like hazing. Objecting to profanity may also result in considerable interpersonal conflict with a large number of coworkers. Unless these behaviors come to be viewed as excessive, employees may feel they are better off ignoring or handling these problems on their own.

Summary. This examination of discriminatory harassment at the DOT indicates that while as many as 30.7% of employees may have experienced some harassment, approximately 70% of the employees report no such problem. Moreover, the

overwhelming majority of employees understand what discriminatory harassment is and the DOT's policies regarding it. For an organization as large and geographically diverse as the DOT, these levels of awareness are excellent. Finally, it should be recalled that the climate findings indicated that most employees viewed the environment as non-harassing.

On the other hand, evidence that discriminatory harassment is not widespread does not mean there is no room for improvement. The findings showing a lack of willingness among some employees to report the offensive behavior and in management's perceived response (i.e., the supervisor may initiate some corrective action but the employee may not be aware of it or may view the action taken as inadequate), is somewhat troubling. It is also possible, as indicated by some anecdotal comments by respondents, that the supervisor may indeed be the harasser. Thus, additional publicity and/or training regarding the DOT's intent to discipline employees who engage in harassing behavior may be useful. Finally, future assessments of discriminatory behavior should be bounded by specific time frames to avoid the cumulative reporting of negative experiences which may have occurred in the distant past.

Final Note

An overall summary of this report is provided in the Executive Summary, page iii.

Table 1: Population and Sample Characteristics

Race/Sex/Area Characteristics	DOT Population	Number Returning Surveys	Response Rate
<u>Race/Sex</u>			
Majority Males	2,639	1,415 (62.9%)	53.6%
Majority Females	849	662 (29.4%)	78.0%
Minority Males	140	94 (4.2%)	67.1%
Minority Females	38	35 (1.6%)	92.1%
No Response	-----	43 (1.9%)	-----
	3,666	2,249 (100.0%)	61.3%
<u>Work Area</u>			
Motor Vehicle			
Enforcement	117	85 (3.8%)	72.6%
Drivers License Areas	197	93 (4.1%)	47.2%
District 1	381	238 (10.6%)	62.5%
District 2	309	180 (8.0%)	58.3%
District 3	292	178 (7.9%)	61.0%
District 4	312	209 (9.3%)	67.0%
District 5	289	198 (8.8%)	68.5%
District 6	391	270 (12.0%)	69.1%
Parkfair Mall	263	131 (5.8%)	49.8%
Ames-Hwy. Div.	494	298 (13.3%)	60.3%
Planning & Research	124	71 (3.2%)	57.3%
Administration	325	162 (7.2%)	49.8%
Ames/Des Moines	172	93 (4.1%)	54.1%
No Response	-----	43 (1.9%)	-----
TOTAL	3,666	2,249 (100.0%)	61.3%

Note: Percentages may not add exactly to 100%, because of rounding.

Table 2: Average Length of Service at DOT and Average Length at Same Pay Grade by Overall, Race, Sex, Age and Work Area Status

Group	Average Length of Service (yrs.)	Average Length at Same Pay Grade (yrs.)
Overall 1984	11.46	4.92
Overall 1988	13.68	5.43
Overall 1993	15.12	7.00
Race		
Majority	15.47	7.18
Minority	10.57*	4.71*
Sex		
Male	16.67	7.68
Female	10.42*	4.92*
Age		
< 40	8.35	4.39
≥ 40	18.99*	8.53*
<u>Work Area</u>		
Motor Vehicle Enforcement	13.16	6.18
Driver's License Areas	9.40	4.36
District 1	14.65	7.17
District 2	13.83	6.62
District 3	16.51 ^{a,b}	8.07 ^{a,b}
District 4	15.38 ^a	7.07
District 5	15.11	6.70
District 6	16.91 ^{a,b}	8.45 ^{a,b}
Parkfair Mall	10.57	4.71
Ames-Hwy. Division	17.86 ^{a,b}	7.21
Planning & Research	16.85 ^a	7.30
Administration	15.99 ^{a,b}	7.25
Ames/Des Moines	13.69	6.79

Notes:

* Signifies a statistically significant difference ($p \leq .01$) between group characteristics.

^a These work area locations are significantly different ($p \leq .05$) from the Driver's License areas.

^b These work area locations are significantly different ($p \leq .05$) from the Parkfair Mall area.

Table 3: Average (M) Job Satisfaction Scores by Overall, Race, Sex, Age, and Work Area Status

Group	Job Satisfaction Dimension			
	Work Itself	Supervision	Coworkers	% Satisfied > Half Time
Overall 1984	1.58	1.95	2.00	69.4
Overall 1988	1.60	1.88	1.99	73.0
Overall 1993	1.50	1.82	1.99	66.0
Race				
Majority	1.51	1.82	1.99	66.2
Minority	1.46	1.83	1.96	61.9
Sex				
Male	1.50	1.83	1.98	66.1
Female	1.55	1.82	2.04	67.0
Age				
< 40	1.44	1.82	1.91	60.7
≥ 40	1.54*	1.83	2.04*	69.2*
Work Area				
Motor Vehicle Enforcement	1.64 ^a	1.89	2.34 ^{a,c,d,e}	80.7
Driver's License Areas	1.53	1.97	2.39 ^{a,b,c,d,e}	79.5
District 1	1.46	1.80	1.87	66.1
District 2	1.53	1.77	2.06	70.7
District 3	1.42	1.74	1.85	63.8
District 4	1.30	1.63	1.85	63.8
District 5	1.37	1.88	1.93	62.0
District 6	1.38	1.83	1.85	67.5
Parkfair Mall	1.59	1.81	2.02	63.8
Ames-Hwy. Division	1.67 ^a	1.93 ^a	2.06	62.8
Planning & Research	1.58	1.89	1.96	54.9
Administration	1.67 ^{a,b,c}	1.85	2.10	66.0
Ames/Des Moines	1.66 ^{a,b,c,d}	1.81	2.09	67.8

NOTES: Scores range from 0 (very dissatisfied) to 3 (very satisfied).
 * Signifies a statistically significant difference ($p \leq .01$) between group characteristics.
^a These work area locations are significantly different ($p \leq .05$) from the District 4 work area.
^b These work area locations are significantly different ($p \leq .05$) from the District 5 work area.
^c These work area locations are significantly different ($p \leq .05$) from the District 6 work area.
^d These work area locations are significantly different ($p \leq .05$) from the District 3 work area.
^e These work area locations are significantly different ($p \leq .05$) from the District 1 work area.

Table 4: Average (M) Work Climate Characteristics by Overall,
Race, Sex, Age and Work Area Status

Group	Climate Dimension			
	Warmth	Support	Identity	Structure
Overall 1984	2.70	2.35	2.44	2.42
Overall 1988	2.50	2.27	2.40	---
Overall 1993	2.51	2.26	2.37	2.29
Race				
Majority	2.51	2.26	2.33	2.29
Minority	2.45	2.27	2.37	2.26
Sex				
Male	2.51	2.26	2.37	2.29
Female	2.53	2.25	2.39	2.29
Age				
< 40	2.49	2.23	2.33	2.23
≥ 40	2.53	2.28	2.40*	2.32*
Work Area				
Motor Vehicle				
Enforcement	2.53	2.26	2.51	2.42
Driver's License Areas	2.72	2.50	2.78	2.55
District 1	2.47	2.22	2.34 ^b	2.24 ^b
District 2	2.49	2.25	2.38 ^b	2.23 ^b
District 3	2.41 ^a	2.24	2.32 ^b	2.23 ^b
District 4	2.52	2.23	2.33 ^b	2.26 ^b
District 5	2.53	2.29	2.34 ^b	2.28
District 6	2.45 ^a	2.23	2.30 ^b	2.28
Parkfair Mall	2.45	2.22	2.34 ^b	2.28
Ames-Hwy. Div.	2.54	2.23	2.34 ^b	2.33
Planning & Research	2.45	2.21	2.24 ^b	2.20
Administration	2.70	2.33	2.47	2.31
Ames/Des Moines	2.57	2.33	2.44	2.31

Continued . . .

Continuing Table 4 . . .

Group			
	Openness & Trust	Non- Harassing Environ- ment	Morale
Overall 1984	---	---	---
Overall 1988	---	---	---
Overall 1993	2.41	2.72	2.61
Race			
Majority	2.42	2.73	2.61
Minority	2.29	2.63	2.55
Sex			
Male	2.42	2.69	2.61
Female	2.39	2.83*	2.62
Age			
< 40	2.36	2.68	2.56
≥ 40	2.44*	2.75*	2.63*
<u>Work Area</u>			
Motor Vehicle Enforcement	2.46	2.77 ^b	2.67
Driver's License Areas	2.68	3.18	2.87
District 1	2.36 ^b	2.69 ^b	2.56 ^b
District 2	2.41	2.67 ^b	2.68
District 3	2.35	2.58 ^{b,d,e}	2.58 ^b
District 4	2.33 ^b	2.55 ^{a,b,d,e}	2.59 ^b
District 5	2.44	2.60 ^{b,d,e}	2.53 ^b
District 6	2.35 ^b	2.53 ^{a,b,c,d,e}	2.55 ^b
Parkfair Mall	2.42	2.93	2.65
Ames-Hwy. Div.	2.45	2.87	2.61 ^b
Planning & Research	2.35	2.83 ^b	2.52 ^b
Administration	2.49	2.82 ^b	2.63 ^b
Ames/Des Moines	2.49	2.85	2.69
<p>NOTES: Responses range from 1 (feeling that warmth is low, a nonsupportive climate, etc.) to 4 (high warmth, supportive climate).</p> <p>* Signifies a statistically significant difference ($p \leq .01$) between group characteristics.</p> <p>^a These work area locations are significantly different ($p \leq .05$) from the Administration work area.</p> <p>^b These work area locations are significantly different ($p \leq .05$) from the Driver's License work areas.</p> <p>^c These work area locations are significantly different ($p \leq .05$) from the Ames/Des Moines work area.</p> <p>^d These work area locations are significantly different ($p \leq .05$) from the Ames Highway Division work area.</p> <p>^e These work area locations are significantly different ($p \leq .05$) from the Parkfair Mall work area.</p>			

Table 5: Average (M) Quality of Information from Four Sources by Overall and Work Area Status

Group	Quality of Information from:			
	Immediate Supervisors	Peers	Subordinates	IDOP
Overall 1988	3.72	3.49	3.23	---
Overall 1993	3.58	3.32	3.14	2.79
<u>Work Area</u>				
Motor Vehicle Enforcement	3.58	3.43	3.33	2.66
Driver's License Areas	3.98 ^a	3.76	3.50	3.43
District 1	3.55	3.28	3.02	2.82
District 2	3.60	3.40	3.29	2.93
District 3	3.37	3.15 ^b	2.93	2.63 ^b
District 4	3.27	3.29	2.98	2.81
District 5	3.70	3.25	2.98	2.54 ^{b,c}
District 6	3.61	3.25	2.94	3.19
Parkfair Mall	3.57	3.28	3.21	2.76
Ames-Hwy. Division	3.76 ^a	3.41	3.32	2.60 ^{b,c}
Planning & Research	3.49	3.37	3.61	2.40 ^{b,c}
Administration	3.54	3.34	3.18	2.65 ^b
Ames/Des Moines	3.63	3.35	3.08	2.75
<p>NOTES: Responses range from 1 (incorrect or not useful information) to 5 (accurate, useful information).</p> <p>^a These work area locations are significantly different ($p \leq .05$) from the District 4 work area.</p> <p>^b These work are locations are significantly different ($p \leq .05$) from the Driver's License work areas.</p> <p>^c These work are locations are significantly different ($p \leq .05$) from the District 6 work area.</p>				

Table 6: Average (M) Quantity of Information from Four Sources by Overall and Work Area Status

Group	Quantity of Information from:			
	Immediate Supervisors	Peers	Subordinates	IDOP
Overall 1988	3.13	3.18	3.07	---
Overall 1993	3.05	3.13	2.98	2.39
<u>Work Area</u>				
Motor Vehicle Enforcement	3.09	3.20	3.25	2.28
Driver's License Areas	3.48	3.50	3.24	2.93
District 1	3.09	3.14	2.86	2.45
District 2	3.04	3.14	3.06	2.53
District 3	3.01	3.08	2.83	2.49
District 4	2.87	3.12	2.89	2.46
District 5	3.18	3.06	2.84	2.67 ^a
District 6	3.13	3.12	2.85	2.83
Parkfair Mall	3.04	3.12	2.88	2.29
Ames-Hwy. Division	3.07	3.11	3.21	2.08 ^{a, b}
Planning & Research	2.72	3.11	3.18	1.90 ^{a, b}
Administration	2.94	3.12	2.98	2.10 ^{a, b}
Ames/Des Moines	3.02	3.14	3.04	2.33

NOTES: Responses range from 1 (too little or too much information) to 5 (just the right amount of information).

^a These work area locations are significantly different ($p \leq .05$) from the District 6 work area.

^b These work area locations are significantly different ($p \leq .05$) from the Driver's License work areas.

Table 7: Average (M) Communication by Overall, Race, Sex, Age, and Work Area Status

Group	Communication Dimension		
	Availability	Usefulness	Accuracy
Overall 1988	3.96	3.30	3.60
Overall 1993	3.85	3.01	3.33
Race			
Majority	3.86	3.01	3.34
Minority	3.62*	3.03	3.23
Sex			
Male	3.84	2.97	3.31
Female	3.92*	3.15*	3.46*
Age			
< 40	3.82	3.00	3.29
≥ 40	3.86	3.02	3.36
<u>Work Area</u>			
Motor Vehicle Enforcement	3.65	3.07	3.39
Driver's License Areas	3.85	3.27	3.52
District 1	3.75	3.01	3.25
District 2	3.83	3.05	3.35
District 3	3.80	2.93	3.17
District 4	3.76	2.95	3.24
District 5	3.76	2.84 ^a	3.21
District 6	4.04	3.02	3.32
Parkfair Mall	3.76	3.05	3.39
Ames-Hwy. Division	3.89	2.98	3.40
Planning & Research	3.97	2.98	3.40
Administration	3.99	3.08	3.49
Ames/Des Moines	3.90	3.17	3.51

NOTES: Responses range from 1 (poor communication) to 5 (good communication).

* Signifies a statistically significant difference ($p \leq .01$) between group characteristics.

^a These work area locations are significantly different ($p \leq .05$) from the Driver's License work areas.

Table 8: Average (M) Usefulness Ratings Associated with Various Communication Sources

Source	Usefulness Rating	
	1988	1993
Inside TV Report	2.58	2.53
Inside Magazine	3.02	3.07
Memo, Letters	3.68	3.47
Bulletin Boards	3.53	3.22
Handbooks, Procedures Manuals	4.00	3.70
Newsletters	3.30	2.96
Meetings	3.36	3.14
PROFs	---	3.26
Grapevine, Rumors	2.07	2.10
Performance Evaluation	2.98	2.62
Check Stuffers	3.47	3.03

NOTE: Responses range from 1 (not useful) to 5 (very useful).

Table 9: Average (M) TQM Work Practices Scores by Overall, Race, Sex, Age, and Work Area Status

Group	TQM Work Practice				
	Leadership Quality	Recognition for Improvement	Feedback	Teamwork	Customer Orientation
Overall 1993	2.88	2.67	3.17	2.59	3.05
Race					
Majority	2.89	2.67	3.17	2.59	3.06
Minority	2.75	2.64	3.11	2.58	2.95
Sex					
Male	2.87	2.66	3.17	2.58	3.01
Female	2.94	2.70	3.18	2.66	3.22*
Age					
< 40	2.83	2.62	3.17	2.52	2.96
≥ 40	2.92	2.70	3.17	2.63*	3.10*
<u>Work Area</u>					
Motor Vehicle Enforcement	2.98 ^a	2.86	3.32	2.78	3.45
Driver's License Areas	3.56	3.02	3.31	3.33	3.73
District 1	2.82 ^a	2.68	3.21	2.47 ^{a,b}	3.01 ^{a,c}
District 2	2.88 ^a	2.65	3.14	2.55 ^a	2.95 ^{a,c}
District 3	2.84 ^a	2.58	3.01	2.46 ^{a,b}	2.92 ^{a,d,e}
District 4	2.70 ^a	2.58 ^a	3.13	2.37 ^{a,b}	2.81 ^{a,b,c,d,e}
District 5	2.92 ^a	2.68	3.11	2.45 ^{a,b}	2.96 ^{a,e}
District 6	2.99 ^a	2.70	3.17	2.57 ^a	2.90 ^{a,d,e}
Parkfair Mall	3.01 ^a	2.76	3.20	2.94	3.23 ^{a,e}
Ames-Hwy. Division	2.77 ^a	2.62	3.23	2.54 ^a	3.01 ^{a,e}
Planning & Research	2.69 ^a	2.47	2.98	2.65 ^a	2.88 ^{a,e}
Administration	2.84 ^a	2.64	3.20	2.64 ^a	3.30
Ames/Des Moines	2.86 ^a	2.60	3.32	2.62 ^a	3.23 ^{a,e}

Continuing Table 9 . . .

Group	TQM Work Practice			
	TQM Culture	Continuous Improvement	TQM Training	Job Training
Overall 1993	2.80	3.36	2.51	3.17
Race				
Majority	2.80	3.36	2.51	3.19
Minority	2.74	3.29	2.48	3.00*
Sex				
Male	2.80	3.34	2.46	3.20
Female	2.83	3.44*	2.64*	3.14
Age				
< 40	2.78	3.31	2.49	3.11
≥ 40	2.82	3.39*	2.52	3.21*
<u>Work Area</u>				
Motor Vehicle Enforcement	2.88	3.53	2.83	3.55
Driver's License Areas	3.19	3.84	2.96	3.38
District 1	2.74 ^a	3.34 ^a	2.48 ^a	3.22
District 2	2.80	3.32 ^a	2.36 ^{a,b}	3.23
District 3	2.80	3.28 ^a	2.47	3.31
District 4	2.69 ^a	3.21 ^{a,b}	2.43 ^a	3.18
District 5	2.76 ^a	3.35 ^a	2.34 ^{a,b,f,g}	3.16
District 6	2.81	3.31 ^a	2.35 ^{a,b,f,g}	3.15
Parkfair Mall	2.85	3.56	2.79	2.96 ^g
Ames-Hwy. Division	2.74 ^a	3.34 ^a	2.44 ^a	3.10
Planning & Research	2.75	3.26 ^a	2.86	2.92 ^g
Administration	2.88	3.32 ^a	2.48	3.09
Ames/Des Moines	2.91	3.38 ^a	2.70	3.17

NOTES: Responses range from 1 (strongly disagree that the work practice is common or in place) to 5 (strongly agree that the work practice is common or in place).

* Signifies a statistically significant difference ($p \leq .01$) between group characteristics.

^a These work area locations are significantly different ($p \leq .05$) from the Driver's License areas.

^b These work area locations are significantly different ($p \leq .05$) from the Parkfair Mall work area.

^c These work area locations are significantly different ($p \leq .05$) from the Ames/Des Moines work area.

^d These work area locations are significantly different ($p \leq .05$) from the Administration work area.

^e These work area locations are significantly different ($p \leq .05$) from the Motor Vehicle Enforcement work area.

^f These work area locations are significantly different ($p \leq .05$) from the Planning & Research work area.

^g These work area locations are significantly different ($p \leq .05$) from the Motor Vehicle Enforcement work area.

Table 10: Understanding Discriminatory Harassment and DOT Policies by Overall, Race, Sex, Age, and Work Area Status

Group	% Understanding Discriminatory Harassment	% Understanding DOT Policies
Overall 1993	92.0	86.6
Race		
Majority	92.3	87.2
Minority	87.6	77.5
Sex		
Male	92.3	87.1
Female	92.5	87.4
Age		
< 40	92.7	85.2
≥ 40	91.8	87.6
<u>Work Area</u>		
Motor Vehicle Enforcement	96.5	91.8
Driver's License Areas	94.6	91.4
District 1	90.3	87.0
District 2	92.2	82.1
District 3	89.9	81.5
District 4	91.8	87.5
District 5	87.9	81.3
District 6	90.0	84.4
Parkfair Mall	91.6	84.7
Ames-Hwy. Division	93.6	90.6
Planning & Research	95.8	90.1
Administration	92.0	86.6
Ames/Des Moines	96.8	91.4
NOTE: No differences were statistically significant.		

Table 11: Experiences Related to Discriminatory Harassment

<u>Experience of Harassment</u>	<u>Number</u>	<u>Percent</u>
Yes	558	24.8
Not Sure	132	5.9
No	1,547	68.8
No Response	12	.5
	2,249	100.0
<u>Report to Management</u>	<u>Number</u>	<u>Percent</u>
Yes	223	9.9
No	417	18.5
Not Applicable	1,584	70.4
No Response	25	1.1
	2,249	100.0
<u>Appropriate Action Taken^a</u>	<u>Number</u>	<u>Percent</u>
Yes	100	4.4
No	143	6.4
Not Applicable	1,978	87.9
No Response	28	1.2
	2,249	100.0

^a These responses should be interpreted with care since the applicable base could be N=223 or N=243 (see text).

Appendix A: Survey Instrument

Appendix B: Tabular Analysis of Survey Findings
by Organizational Tenure at the DOT

The following Tables 12 to 18 repeat the major survey findings by tenure group. Five reasonably equal groups were selected for this analysis, representing 0 to 5 years (N=445), 6 to 10 years (N=497), 11 to 15 years (N=365), 16 to 24 years (N=469), and 25 years or more (N=446). In general, the 25 years or more group was found to provide more favorable ratings. They reported significantly higher ratings compared to some groups in the areas of satisfaction with the work itself, coworkers, and overall job satisfaction. Similarly, higher ratings of work climate were reported for this group in the areas of support, identity, structure, openness and trust, and morale. With respect to communication, relatively few differences were noted but those observed seemed to suggest some dissatisfaction with communication among the 6 to 10 years tenure group. Some of the TQM oriented findings suggested that higher than average perceptions among the 25 years and older group and lower than average perceptions among the 6 to 10 years group. No significant differences were evident with respect to feedback, customer orientation, or TQM training. Finally, no differences in understanding discriminatory harassment or DOT's policies in this area were detected. In sum, it would appear that with respect to morale, the longest tenure employees are the most satisfied and view the environment and work practices the most favorably. The 6 to 10 year group seem to be lowest along these dimensions.

Table 12: Average (M) Job Satisfaction Scores by Tenure Group

Tenure Group	Job Satisfaction Dimension			
	Work Itself	Supervision	Coworkers	% Satisfied > Half Time
0-5 Years (N=445)	1.51	1.92 ^b	1.97	66.1
6-10 Years (N=497)	1.42	1.75	1.90	60.2
11-15 Years (N=365)	1.41	1.78	1.96	61.8
16-24 Years (N=469)	1.49	1.79	2.02	66.6
≥ 25 Years (N=446)	1.69 ^a	1.87	2.12 ^b	75.7 ^a

NOTES: Scores range from 0 (very dissatisfied) to 3 (very satisfied).

^a This tenure group was significantly different ($p \leq .05$) from all other tenure groups.

^b This tenure group was significantly different ($p \leq .05$) from the 6-10 years group.

Table 13: Average (M) Work Climate Characteristics by Tenure Group

Tenure Group	Climate Dimension						
	Warmth	Support	Identity	Structure	Openness & Trust	Non-Harassing Environment	Morale
0-5 Years (N=445)	2.51	2.30	2.39	2.27	2.41	2.73	2.60
6-10 Years (N=497)	2.50	2.20	2.32	2.21	2.33	2.68	2.57
11-15 Years (N=365)	2.50	2.21	2.33	2.26	2.38	2.68	2.57
16-24 Years (N=469)	2.53	2.26	2.38	2.30	2.43	2.75	2.60
≥ 25 Years (N=446)	2.54	2.33 ^a	2.45 ^a	2.40 ^b	2.52 ^c	2.78	2.69 ^d

NOTES: Responses range from 1 (feeling that warmth is low, a nonsupportive climate, etc.) to 4 (high warmth, supportive climate).

^a This tenure group was significantly different ($p \leq .05$) from the 6-10 years group.

^b This tenure group was significantly different ($p \leq .05$) from the 0-5 years, 6-10 years, and 11-15 years groups.

^c This tenure group was significantly different ($p \leq .05$) from the 6-10 years and 11-15 years groups.

^d This tenure group was significantly different ($p \leq .05$) from all other tenure groups.

Table 14: Average (M) Quality of Information from Four Sources by Tenure Group

Tenure Group	Quality of Information from:			
	Immediate Supervisors	Peers	Subordinates	IDOP
0-5 Years (N=445)	3.73 ^a	3.41	3.11	2.93
6-10 Years (N=497)	3.47	3.24	2.85 ^b	2.73
11-15 Years (N=365)	3.50	3.25	3.08	2.65
16-24 Years (N=469)	3.59	3.35	3.21	2.81
≥ 25 Years (N=446)	3.61	3.38	3.32	2.83

NOTES: Responses range from 1 (incorrect or not useful information) to 5 (accurate, useful information).

^a This tenure group was significantly different ($p \leq .05$) from the 6-10 years group.

^b This tenure group was significantly different ($p \leq .05$) from the 16-24 years and ≥ 25 years groups.

Table 15: Average (M) Quality of Information from Four Sources by Tenure Group

Tenure Group	Quality of Information from:			
	Immediate Supervisors	Peers	Subordinates	IDOP
0-5 Years (N=445)	3.14	3.26	3.08	2.49
6-10 Years (N=497)	2.94	3.05	2.61 ^a	2.26
11-15 Years (N=365)	2.99	3.08	2.92	2.31
16-24 Years (N=469)	3.03	3.12	3.08	2.43
≥ 25 Years (N=446)	3.16	3.15	3.14	2.47

NOTES: Responses range from 1 (too little or too much information) to 5 (just the right amount of information).

^a This tenure group was significantly different ($p \leq .05$) from the 0-5 years, 16-24 years, and ≥ 25 years groups.

Table 16: Average (M) Communication by Tenure Group			
Tenure Group	Communication Dimension		
	Availability	Usefulness	Accuracy
0-5 Years (N=445)	3.75 ^a	3.09	3.32
6-10 Years (N=497)	3.79	2.94 ^b	3.26
11-15 Years (N=365)	3.84	3.01	3.28
16-24 Years (N=469)	3.93	3.01	3.39
≥ 25 Years (N=446)	3.93	3.02	3.41 ^c
NOTES: Responses range from 1 (poor communication) to 5 (good communication). ^a This tenure group was significantly different ($p \leq .05$) from 16-24 years and ≥ 25 years groups. ^b This tenure group was significantly different ($p \leq .05$) from the 0-5 years group. ^c This tenure group was significantly different ($p \leq .05$) from the 6-10 years group.			

Table 17: Average (M) TQM Work Practices Scores by Tenure Group

Tenure Group	TQM Work Practice								
	Leader-ship Quality	Recognition for Improvement	Feedback	Team-work	Customer Orientation	TQM Culture	Continuous Improvement	TQM Training	Job Training
0-5 Years (N=445)	2.90	2.70	3.26	2.60	3.02	2.85	3.37	2.59	3.12
6-10 Years (N=497)	2.76	2.58	3.11	2.47 ^c	2.96	2.70 ^d	3.28	2.50	3.08
11-15 Years (N=365)	2.84	2.61	3.09	2.55	3.10	2.79	3.34	2.47	3.13
16-24 Years (N=469)	2.90	2.70	3.21	2.65	3.08	2.80	3.38	2.51	3.21
≥ 25 Years (N=446)	3.03 ^a	2.76 ^b	3.19	2.68	3.11	2.90	3.44 ^b	2.47	3.34 ^e

NOTES: Responses range from 1 (strongly disagree that the work practice is common or in place) to 5 (strongly agree that the work practice is common or in place).

^a This tenure group was significantly different ($p \leq .05$) from 6-10 years and 11-15 years group.

^b This tenure group was significantly different ($p \leq .05$) from 6-10 years group.

^c This tenure group was significantly different ($p \leq .05$) from the 16-24 years and ≥ 25 years group.

^d This tenure group was significantly different ($p \leq .05$) from the 0-5 years and ≥ 25 years groups.

^e This tenure group was significantly different ($p \leq .05$) from the 0-5 years, 6-10 years, and 11-15 years groups.

Table 18: Understanding Discriminatory Harassment and DOT Policies by Tenure Group

Tenure Group	% Understanding Discriminatory Harassment	% Understanding DOT Policies
0-5 Years (N=445)	91.9	85.8
6-10 Years (N=497)	92.9	85.9
11-15 Years (N=365)	91.2	84.7
16-24 Years (N=469)	92.4	89.3
≥ 25 Years (N=446)	91.7	87.9

NOTE: No differences were statistically significant.