

***NDDOT Workforce Analysis:
A Necessary Step in Creating
An Effective Strategic Human Capital Plan***

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for

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EXECUTIVE SUMMARY

This project was proposed by NDDOT Human Resources Director, Bob Evans, and Human Resources Manager from the Fargo Office, Lorrie Pavlicek, in response to a need for background information from which the NDDOT plan for human capital could be developed. NDDOT contracted with the Upper Great Plains Transportation Institute in Fargo, North Dakota to complete a study of the external and internal factors affecting future NDDOT workforce planning.

The study involved three distinct components: an updated external analysis of trends and workforce demographics, an internal analysis of several areas affecting NDDOT human capital planning, and predictions about NDDOT's future workforce needs and challenges. The new external information was obtained from various sources including the Job Service North Dakota, while the internal data were compiled from organizational records taken from a specific period of time and interviews with key NDDOT staff. Finally, a roundtable discussion was held with NDDOT's top management team to share ideas regarding future NDDOT workforce needs and challenges.

The updated external analysis of workforce trends were separated into three categories:

- National trends (changing demographics, changes due to technology, alternative types of work arrangements),
- North Dakota trends (ageing population, migration from rural to urban areas)
- Trends specifically affecting transportation agencies (expected retirements, outsourcing, downsizing/reorganization).

Each of the trends outlined for this analysis will affect NDDOT's ability to staff its future workforce.

The internal analysis included six main topics. These topics were:

- Applicant/employee movement through the organization (recruitment, hiring, transfers, promotions, turnover, retirements)
- Technology (impact on work, training)
- Capabilities and external needs (employee counts, temporary workers)
- Performance (performance appraisals, bonuses)
- Structure and workforce flexibility (teams, flexible work arrangements)
- Training and employee development (leadership training, succession planning, mentoring).

For some of these topics, more information was available than for others. Some areas are associated with many new programs; for example, training and development includes succession planning and mentoring which are newer programs that have not had a chance to be fully implemented and evaluated.

The roundtable discussion with NDDOT's top management team allowed these key members to share their perceptions, ideas, and concerns about the challenges for staffing NDDOT in the future. The issues highlighted during this discussion and those that were documented in the internal and external analyses led to the following conclusions regarding the possibilities for staffing the future NDDOT workforce.

1. The availability of the traditional rural white male workforce is disappearing. The Department needs

to expand and reform its recruiting effort in order to attract the kind of workforce that will be available in the future. In order to have workers, the Department must shift to a more diverse workplace that is attractive to female and minority workers as well as white males. The Department should reach out to female and minority individuals at younger ages in order to encourage them to prepare for the exciting careers in transportation and to expand its partnership with people at college, high school, and elementary levels.

2. In order to meet the future challenges of doing more with less, an enhanced workplace having individuals with greater technical and judgment skills will be required. Therefore, the level of education and training requirements for entry and advanced levels must be raised commensurate with these growing expectations. The Department should evaluate minimum requirements for positions throughout the organization.
3. In order to attract and retain high quality employees for maintenance and customer service positions, the Department needs to expand career growth opportunities through an augmented work base and training opportunities.
4. The Department should continue to focus on salary issues, including overall base salaries and compression between levels. If the Department is to retain its experienced workers who perform the more complex activities, it also needs an effective pay-for-performance component based on hard measurable data.
5. The Department would benefit from encouraging and supporting employee professional achievement by paying associated costs and providing financial recognition for obtaining professional credentials and licenses.
6. In order to evaluate the overall level of employee performance and productivity, the Department needs an automated, fully functioning human resource management system that will provide the ability to quantify employee inputs and outputs. PeopleSoft may provide this functionality.
7. The Department should investigate the possibility of adopting a standard protocol for providing opportunities to long-tenured employees. Such a protocol would allow many of these employees to continue working on a more flexible, part-time basis after they had retired from full-time employment.
8. The Department needs to make every effort to ensure the continuation of recent employee initiatives in order to provide future Department employees with the appropriate skills, information, and cultural identity. Such programs include the new employee orientation, mentoring, succession planning for management and executive positions, an employee development plan for all employees at lower levels, and a full range of soft skill, hard skill, technical, and leadership training for all employees.
9. The Department should try to support and recognize, through formal recognition, employees in professional and management positions who obtain advanced degrees.
10. In order to ensure fairness, consistency, and evenhandedness in the treatment of employees, the Department should evaluate all HR policies and practices with an emphasis of removing all barriers

that may interfere with the full performance of duties.

11. The Department should consider expanding the use of flexible work arrangements such as telecommuting, contract employment, and other relationships which encourage and support a wider participation in the Department program.
12. The Department should determine whether it would be appropriate to develop a program to encourage entrepreneurship on the part of NDDOT employees. Work skills and applications learned and developed at NDDOT can be provided as a service to others.
13. It would be a benefit to the Department to continue to maintain and update on a regular basis the internal and external analyses of factors likely to affect NDDOT staffing. Unfortunately, by the time this report was complete, much of the internal information was outdated. Future updates of the internal analysis can now follow the process that was used to develop this report and can be focused more specifically on the most recent data.

INTRODUCTION

In order for an organization to be competitive, a focus must be placed on human capital. Due to an economy based on knowledge workers and customer service orientation, people are one of the most important assets to an organization. As a result, the human resources function has become more central to the strategic planning and development process. A recent study showed that human resources functions that were most effective were those that spent more time on strategic issues, including organization design and development. Therefore, to be most effective, human resources functions need to make a shift from the mechanical focus of implementing practices to one of maximizing human capital and guiding strategic management. Changing demographics and political and economic situations are just a few of the driving forces that have made this shift necessary (Transportation Research Board, 2003).

State DOTs are encountering many challenges to planning for their future workforces. Changing demographics and political situations will affect the way in which these state agencies recruit, hire, develop, and retain employees in the future. However, these changes, in addition to others including advancements in technology, will affect the entire nature of the relationship between the organization and its workforce. Short-term planning will not be sufficient to meet the challenges of staffing the DOTs of the future.

The December 2000 *Transportation Research Circular* indicated that state DOTs have had to embrace strategic planning as a method for dealing with their changing environments. In order to remain competitive, just as in the private sector, state DOTs will have to develop long-term plans to deal with the forces affecting their future pool of workers. These forces will include a combination of external (demographic, economic) and internal (organizational policies and culture) factors.

The strategic plan of NDDOT for the years 2003 to 2009 outlines a major goal and several objectives focused on human capital. These objectives include developing career pathing and succession planning programs and enhancing training opportunities to ensure employee growth. However, before these objectives can be accomplished, accounting for the internal and external factors that will impact NDDOT plans and programs for the future workforce of the organization is necessary. A project designed to document these internal and external issues was developed by examining similar programs from the Federal Highway Administration and the Minnesota DOT.

In order to accomplish the goals of this project, three major steps were proposed. The first step was to supplement the external trend data documented in the Human Resource Planning External Analysis report compiled by the University of Mary in early 2002. This task involved consulting external sources of information, including the Job Service North Dakota, to address current trends in areas such as technology that will affect the future NDDOT workforce. The second step was to conduct an internal analysis of NDDOT's staffing-related issues. This analysis involved gathering information from organizational records and databases as well as interviewing key individuals having the knowledge and expertise regarding specific topics and questions in each area. The final step of the project was to involve key NDDOT leaders in making predictions about the future NDDOT workforce based on the internal and external information gathered in the first two steps of the study.

UPDATED EXTERNAL ANALYSIS

Methodology

In early 2002, the University of Mary completed an external analysis of many relevant factors having an effect on workforce planning. As a result, the goal of this paper is to update and capture some of the most important aspects of this analysis as it applies to the development of the NDDOT human capital plan. To accomplish this goal, several sources were consulted in order to obtain the most current and relevant data. The University of Mary study utilized Census 2000 data; as a result, much of the demographic and trend information has not changed since that study was completed.

In order to obtain a more complete picture of the external factors affecting NDDOT's ability to recruit, hire, and retain talented employees, workforce demographics and trends were examined on three different levels: 1) overall (national), 2) North Dakota, and 3) transportation field. Nationally, there are several trends that will impact future staffing plans. In addition, there are also trends that will specifically affect North Dakota and those that will have a distinct impact on the field of transportation. Much of the information reported for this section was obtained from various agency websites, telephone conversations with key agency individuals, and published reports.

National Trends

The demographics of the national workforce continue to change. These changes will determine what types of employees will be available in the future labor pool which, in turn, will be potential recruits for NDDOT. In addition to the changing demographics of the workforce, there are also some very important employment trends that will affect the strategic human capital planning process.

Changing Demographics

Several demographic changes for the future workforce are worth discussing. These changes include:

- an ageing workforce
- an increase in the number of women entering male-dominated fields
- growing numbers of minorities, especially Hispanics, in the workforce.

Research suggests that the Baby Boom generation will continue to work on at least a part-time basis after they have reached the traditional retirement age of 65 years (Patel, 2002). This will mean that there will be many older employees in the workforce, having different wants and needs. Whether these needs are prescription drug benefits or flexible work arrangements, they will have to be addressed in order to best utilize and retain such experienced workers. A second trend is that women outnumber men in earning bachelor's and graduate degrees and will become more prevalent in many traditionally male-dominated jobs (Patel, 2002). This is especially important to NDDOT, which is heavily dominated by males.

Other trends based on race and ethnicity are also important to note. The Hispanic population in the United States has grown to the point that it will constitute the largest minority group in the next two years. In addition, studies have indicated that by the third generation of Hispanics in the U. S., they will obtain the same

education and socioeconomic levels as their non-Hispanic counterparts (Patel, 2002). The trend of growing minority groups, in general, will also affect the nation's future workforce. Ethnic and racial minorities will increase at a much faster pace than Caucasians (Patel, 2002). As a result, managing the needs and talents of a more diverse workforce will continue to be an issue for organizations.

Future Employment Trends

Although many employment trends have been predicted for the future workforce, those that stand out for the purpose of this paper (in relation to the ability to staff an organization) include the following:

- Increased demand for highly skilled workers
- Widespread reliance of organizations on Internet technology
- More informed employees as a result of technology
- Greater use of computer-based training and education tools
- The use of different types of employees such as contract workers and those that telecommute (Patel, 2002)

This is not an exhaustive list of all trends that may affect employment, instead, it is meant to highlight those that appear to be most closely related to the issues addressed in the internal workforce analysis.

Several of the employment trends are focused on changes brought about by technology. In fact, most predicted employment trends are associated with technological advances, at least in part. Internet technology has led to changes in the way organizations communicate with their employees and has allowed employees to become better informed. Organizational communication with employees can be almost instantaneous (for those who have access to computers), and transfer of data is much faster and easier with the use of email. As a result, there is greater freedom in where and how work is performed. Traditional practices of all workers performing work on the same project in the same location will not be necessary. It may be that co-workers will never meet face-to-face.

Through the Internet, many employees also have access to a wide array of information regarding job alternatives and compensation. If they obtain information that suggests that their current situation does not measure up to what they could have by being employed elsewhere, they may decide to leave the organization. Whether access to more information is seen as a positive or negative, it is clear that employees will continue to become more informed in both what is happening internally and what is occurring outside the organization in terms of job opportunities, salary, and benefits (Patel, 2002). However, those individuals who do not have access to computers and the Internet will be at a serious disadvantage in terms of organizational communication and personal knowledge of external information.

Organizations will also come to rely more exclusively upon computer-based training and educational tools (Patel, 2002). The initial costs to organizations will be substantial, but they will be offset by the long-term benefits which could include access to training from employee workstations and less time and difficulty in updating training programs. However, some material will still need to be taught by another method rather than through the computer. The challenge will be to ensure that the workforce is ready to accept and participate in computer-based training.

Other employment trends focus on the types of employees that will be needed for the jobs of the future. One such trend is that there will be greater demand for high-skilled jobs and, consequently, more highly skilled workers than in the past. These jobs are predicted to require more general and occupation-specific skills, more teamwork, and a greater amount of creative thinking (Patel, 2002). The Bureau of Labor Statistics has indicated that there will be an increase in the amount of education needed for many jobs by 2010. The largest increase (by 32 percent) will be jobs that require an associate degree.

Another trend will be that organizations will make greater use of special types of workers. These special workers can include those that work on a contract and those that telecommute. One specific group of employees that will need to be considered are older workers who want to work fewer hours or have more flexible schedules. Technological advances will make it easier for organizations to utilize and manage these workers. However, there may be some difficulty in determining which jobs are best suited to different work arrangements.

North Dakota Trends

As indicated earlier, the Human Resource Planning External Analysis completed by the University of Mary (2002) contains much of the information about trends affecting the available workforce in the state of North Dakota. Some of this information will be included in this section of the paper in addition to other information obtained from the Job Service North Dakota and the North Dakota Census Data Center.

Population and Demographics

Population. Census data have shown that the population of North Dakota increased less than one percent from 1990 to 1995 and again less than one percent from 1995 to 2000 for a total population of 642,200 in the 2000 Census. However, this growth does not match the more than five percent gain in population which has taken place throughout the United States over the same ten-year period. In addition, although both the Fargo-Moorhead and Bismarck areas have steadily grown over this time period, the Grand Forks area showed a substantial decline in population from 1995 to 2000.

According to the University of Mary report (2002), the population in North Dakota has been moving from the rural to the more urban areas of the state. The reasons given for this trend, which is expected to continue, include a poor agricultural economy and few employment alternatives providing a living wage.

Age. Another trend cited in the University of Mary report (2002) is the aging population of North Dakota. The percentage of North Dakotans aged 65 and older is expected to increase from 14.9 percent in 2000 to 20.1 percent in 2015. Conversely, the percentage of individuals under 20 years of age is expected to decrease from 26.8 percent in 2000 to 23.3 percent in 2015.

Gender. The number of women participating in the North Dakota workforce is increasing. According to the latest Local Employment Survey (2003) conducted by the Job Service North Dakota, in 9 out of 15 North Dakota areas (14 cities and 1 county), over 50 percent of those participating in the workforce were female. These findings suggest that organizations in North Dakota will need to remain concerned about how to attract, manage, and retain a workforce consisting of a larger number of females.

Race. Although North Dakota is less racially and ethnically diverse than many other states, it is still important to note that from 1990 to 2000, the number of minorities grew, while the number of Caucasians decreased. The largest minority group in North Dakota continued to be Native Americans. The percentage of Native Americans in North Dakota increased from 4.1 percent of the population in 1990 to 4.9 percent in 2000. The second largest minority group was Hispanics. The Hispanic population grew from .7% of the North Dakota population in 1990 to 1.2% of the population in 2000.

Social and Economic Trends in North Dakota

Educational Level. According to information from the Job Service North Dakota website, the relative level of educational attainment in North Dakota varies. Although North Dakota had the lowest percentage of high school dropouts in the United States in 1990. The state also had the lowest percentage of people with advanced or graduate degrees in that same year. However, in 1990, North Dakota also had the highest percentage of individuals having associate degrees in the country.

According to new information from Job Service North Dakota, the 2000 census data shows that North Dakota continued to have the highest percentage of associate degrees and the lowest percentage of graduate and professional degrees when compared with the rest of the country. As a result, the data seemed to indicate that the North Dakota population is well-educated at the secondary school and associate degree level, but less educated in terms of more advanced degrees than the population in the rest of the United States.

An article in the October 22, 2003 Fargo Forum newspaper reported interesting comments made by a consultant who had examined the relationship between educational level and income in North Dakota. The consultant, Dennis Jones, indicated that although North Dakotans are typically better educated than the rest of the country, they are not compensated for this education. Perhaps this reasoning could partially explain the lower percentage of advanced degrees but higher percentage of high school graduates and associate degrees in North Dakota. It may be that residents of North Dakota realize that higher levels of education may not translate into better jobs with higher incomes, and as a result, choose to complete fewer years of post-secondary education.

Income. According to 1999 data from the U.S. Census Bureau, the per capita income in North Dakota was \$17,769 in comparison to the per capita income of the entire United States, which was \$21,587. Although wages have continued to increase from year to year in North Dakota, the state is far behind the rest of the country in terms of relative income level.

Unemployment Rate. The unemployment rate in North Dakota increased from 2.9 percent in 2001 to 4 percent in 2002. However, in comparison to the overall unemployment rate for the United States, which jumped from 4.7 percent in 2001 to 5.8 percent in 2002, North Dakota's unemployment is still at a significantly lower rate.

Trends Affecting Transportation Agencies

The Transportation Research Board (TRB) has documented the important trends affecting state departments of transportation. These trends include downsizing and reorganization, high levels of expected retirements, augmented programs, and increased outsourcing. Much of this information will directly impact strategic planning for the future human capital needs of NDDOT. As a result, these trends need to be addressed.

Downsizing and Reorganization. The TRB (2003) paper emphasized the important impact state revenue shortages and budget crunches have had in leading to substantial reductions in force and reorganizations of state agencies. The state agencies have had to learn how to “do more with less.” This requires employees of downsized and/or reorganized agencies to demonstrate a greater array of skills and abilities in order to help the organization remain productive.

Expected Retirements. Due to the aging Baby Boom generation, a large group of employees are expected to retire in the next 10 years (TRB, 2003). According to a study cited in the TRB paper, approximately 50 percent of state DOT employees will be eligible to retire in the next 10 years, which is twice the rate of other employees. This finding also extends to executives in the state DOTs. Almost 90 percent of the current executives will be able to retire within the next 10 years.

Growing Programs. Increased funding from the Transportation Equity Act for the 21st Century has expanded the programs and activities of state DOTs (TRB, 2003). This has created additional hardship for some state DOTs that are working with an already reduced staff.

Outsourcing. According to the TRB (2003) paper, many of the state DOTs are outsourcing much of their work in order to meet the needs associated with increased program funding and the limitations of a reduced workforce. The paper suggests that this outsourcing trend is one that will continue well into the future.

INTERNAL ANALYSIS

Methodology

The specific topics to be addressed in the internal analysis were first conceptualized through a combination of examining similar types of studies done by others and outlining important NDDOT staffing-related issues. Several phone conversations and emails between the researcher and Human Resources Manager, Lorrie Pavlicek, helped to finalize the exact scope of the project and the specific topics and questions to be addressed. It was determined that six main topics would be included in the analysis. These topics are: 1) applicant/employee movement through the organization, 2) technology, 3) capabilities and external needs, 4) performance, 5) structure and workforce flexibility, and 6) training and employee development. Other topics were discussed but were determined to be less of a priority for NDDOT at this time. The NDDOT employee survey that was conducted approximately two years ago and was updated this year will be discussed before each of the specific topics listed above are examined.

Much of the information for each of the topic areas was gathered from organizational records. However, little of this information was kept in a way which would allow us to perform various statistical analyses to summarize the data. As a result, most of the information documented in this report was compiled by sorting through relevant documents and manually summarizing related data into meaningful components. Information was also gathered through telephone interviews with key NDDOT individuals having the background knowledge in certain topic areas. The findings for each topic area will be presented on the following pages.

NDDOT Employee Survey

In 2002, the Upper Great Plains Transportation Institute (UGPTI) conducted an organization-wide employee survey for NDDOT to assess the overall health of the organization and to focus specifically on the motivation and retention of employees. Two separate surveys were distributed, one to NDDOT managers and the second to all other NDDOT employees. Approximately 70% of the distributed surveys were completed and returned. Overall, the findings from the survey were positive for the organization. They showed that employees were generally happy with their work environment, especially with their co-workers, and that employees typically enjoyed the work they performed. The survey area that received the most negative ratings was compensation, which was similar to findings of previously conducted surveys. Additional results from this survey will be referenced in other areas of this report.

The 2002 survey was designed to provide a baseline to which future survey data could be compared. NDDOT wanted to be able to examine shifts in the perceptions of employees in response to new policies and programs and organizational changes. In March 2004, an updated survey was distributed to all NDDOT employees. The results from this current survey will be detailed in a separate report.

Applicant/Employee Movement through the Organization

The applicant/employee movement through the organization topic area focused on the demographics of the workforce, recruitment, hiring, and promotion strategies, as well as turnover (including retirements). Much

of this information was broken down to make comparisons between different functional areas or specialties in the organization.

Workforce Demographics

According to the May 8, 2003 Job Class and Grade Analysis from the Payroll/Personnel System, the NDDOT organization is made up of the following:

<u>Gender</u>	Avg. Age	Avg. Tenure (yrs)	Avg. Time in Class (yrs)	# of HS diplomas	# of Assoc. Degrees	# of Bachelor Degrees	# of Higher Degrees
Males	47.3	15.4	8.2	250	121	168	17
Females	47.0	15.2	6.4	56	43	50	5

The total number of females at this time was 241 and the total number of males was 758. In addition, the highest level of education for most employees was at least a high school degree or GED; however, the majority have at least attended some college.

This information points to a few different issues that NDDOT should keep in mind when planning for the future staffing needs. The age of the workforce is one concern. Although the average employee has only been with the organization for 15 years, the average age of employees is 47 years. The aging workforce is especially a concern when considering that many NDDOT employees retire early (before the age of 65). This concern will be discussed more thoroughly in the following section of the paper.

Another potential concern is the comparatively small number of female employees. The smaller number of females may be an issue when trying to recruit future candidates for positions within the NDDOT. Female candidates often examine an organization to determine whether there are employees who are similar to themselves. This allows women to make the decision as to whether they will fit into a specific organization (Schneider, 1987). Low numbers of female employees, especially in the more technical fields, may lead to future problems of recruiting and hiring qualified female workers.

The data from the Job Class and Grade Analysis were also used in comparing different functional areas. Five main job groupings were utilized to categorize the NDDOT positions listed in the Job Class and Grade Analysis. These job groupings were: administrative/business, driver and vehicle services, information technology, engineering, and maintenance. See Appendix A for the job titles that are included in each of the five categories.

The educational level of employees varied with the job groupings. The highest concentration of advanced degrees belonged to employees in the administrative/business job grouping (8 master's degrees, 2 professional degrees), followed by the engineering job grouping (7 master's degrees, but no professional degrees). The largest number of bachelor's degrees belonged to employees in the engineering group (138); however, the administrative/business group also contained several employees with bachelor's degrees (45). At the other end of the educational spectrum, the maintenance job grouping had the highest number of people with no high

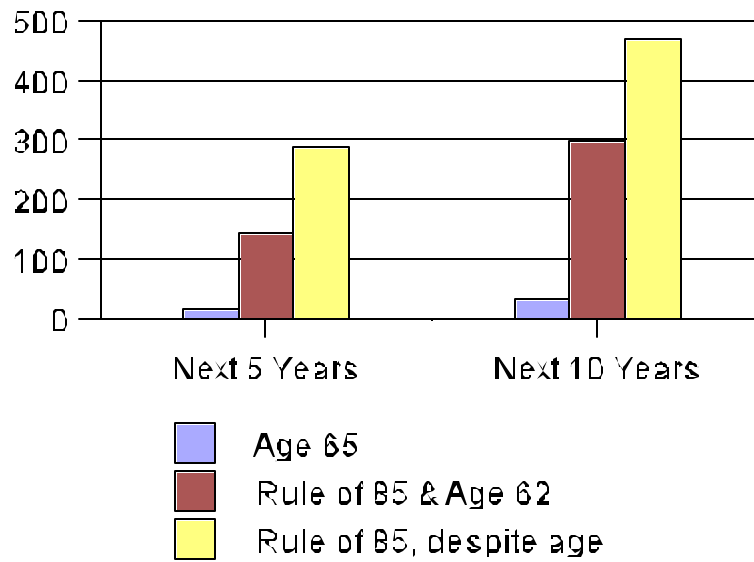
school diploma and the highest number having only a high school diploma or GED. However, the maintenance group also included many employees having a trade school background (40) or an associate's degree (22). In order to meet increased needs associated with new technology and a faster pace of work, NDDOT may need to consider reassessing the educational requirements for some positions. It may be that some positions will require at least an associate's degree to ensure that new employees have the background necessary for learning and adapting quickly on the job. In addition, NDDOT may also consider requiring master's degrees for executive positions.

Retirement Predictions

According to the latest projections, there are 143 NDDOT employees that will meet both the Rule of 85 and the Age 62 criteria for retirement in the next 5 years (see the following chart). The age of 62 is used to represent the age that the majority of NDDOT employees benchmark when deciding to retire from the organization, while the Rule of 85 is a standard that NDDOT uses for retirement eligibility. It is met when an employee's age plus years of service is equal to or greater than 85. This large number of employees meeting the predetermined criteria is alarming, considering that it represents approximately one seventh of the total population of NDDOT employees. There are also an additional 15 people who will reach retirement eligibility at the age of 65 in the next 5 years. Even more concerning is the fact that 288 employees will meet the Rule of 85 criterion in the next 5 years, regardless of their age.

The numbers are not any more encouraging when extended another five years (see the chart below). The number of employees who will meet both the Age 62 and Rule of 85 criteria in the next 10 years more than doubles the five-year figure of 143 to 297. Thirty-four employees will reach retirement eligibility at the age of 65 in the next 10 years. In addition, 469 employees will reach the Rule of 85 in the next 10 years, regardless of their age. Unfortunately, it is impossible to know how many of these individuals will actually retire when they reach Age 62 or the Rule of 85. However, examining previous turnover information can provide the numbers of retirements and early retirements that occurred in the recent past.

Retirement Eligibility



Turnover Statistics

The NDDOT termination summary for 2002 (see Appendix B) showed that overall turnover rates were much lower than they were in the past three years. In addition, the controllable turnover rate, which includes such reasons for leaving as early retirement, other employment, and relocation, has also decreased significantly from the previous years. However, the uncontrollable turnover rate, which includes those who retire at 65 or older, those who are discharged, and other unique situations not classified as other employment, has remained relatively constant over the last several years. The total number of terminations, including both those that were controllable and uncontrollable, for the past four years are shown in the following table.

Year	Turnover Numbers		
	Controllable	Uncontrollable	Total
2002	23	23	46
2001	38	24	62
2000	54	26	80
1999	59	22	81

The lower turnover rates of 2002 may have resulted from two different circumstances affecting employees over the last year and a half. First, the poor economy probably accounts for much of the decrease in the turnover rates. An October 2003 *HR Magazine* article that cited a recent survey assessing likelihood of future turnover conducted by Society for Human Resource Management and Career Journal.com seems to support this idea. The results of the survey indicated that job seekers reported that they would be more likely to search or intensify their search for another job once the economy improves. Furthermore, in a weak economy, there are fewer job opportunities available, making it less likely that employees will receive unsolicited job offers and will make it more difficult for them to find other outside opportunities. Second, NDDOT has spent a good amount of time and energy in talking with employees about specific issues including communication and retention and motivation. The practice of allowing employees to express their opinions and ideas regarding the job and the organization often leads to greater job satisfaction and subsequently less voluntary turnover.

Although the overall rates of turnover were relatively low in 2002, the rates of turnover in some districts and certain classifications should be taken into account when planning for future staffing needs. The Fargo and Valley City districts continue to have a higher percentage of controllable turnover. In both districts, the controllable turnover resulted mainly from individuals who retired early. In addition, the Equipment Operator classifications (Equipment Operator I-III) continue to have high numbers of people leaving the organization through early retirement and for other personal reasons including other job opportunities. There were also four individuals who were in the Transportation Engineer III classification that left NDDOT in 2002. One of these individuals had been discharged; however, two others retired early and one transferred to NDSU. Although the overall turnover numbers remain low, there are some areas in which the organization needs to examine why these individuals are choosing to leave and whether there is anything NDDOT can do to prevent

them from leaving. This type of turnover is definitely undesirable and should impact future retention and recruitment strategies.

Recruitment

NDDOT has developed many strategies for recruiting new employees. Several of them focus on the need to foster relationships with specific technical schools or universities. The internship and cooperative education program, with the associated DOT Service Center (DOTSC) and grant programs, included more than 40 students in 2003. The DOTSC is a cooperative effort between NDDOT and NDSU in which students are provided with space on campus and pay to complete work for NDDOT. The grant program awards money to students who are then guaranteed work with NDDOT in the summer and are offered employment upon graduation. Interns and grant students having summer jobs with NDDOT came from the following schools:

- 26 from North Dakota State University
- 6 from North Dakota State College of Science
- 5 from University of North Dakota
- 2 from University of Mary
- 1 from Bismarck State College
- 1 from Northwest Technical College
- 1 from University of Minnesota - Twin Cities

Several students who worked as interns in past years have indicated interest in pursuing a job, and at least nine students have gone on to work for NDDOT in full-time regular positions after graduating from college.

Other recruitment strategies emphasize the effort to provide incentives and flexibility to employees. Results of the Retention and Motivation Survey (Griffin, Jacobson, & Kalnbach, 2002) indicated that employees believed NDDOT was doing a good job in recruiting by using sign-on bonuses for hard to fill positions and by continuing to provide tuition reimbursement for employees. The recruitment bonuses are lump sum payments given to recruit new employees into positions that have been demonstrated to be difficult to fill. NDDOT began to provide these bonuses in the Spring of 2001. As of October 2003, 73 bonuses had been given, and only 6 of those who received the bonuses have left the organization. Although the program is relatively new, it appears that bonuses may not only benefit recruitment efforts but also in retaining valued employees.

Tuition Reimbursement has also been widely used by NDDOT employees for courses ranging from College Algebra to Master's Thesis to various leadership courses. The tuition reimbursement policy allows an employee to recover 100% of tuition and fees for courses that are related to their current positions or 80% for those courses that are related to a future classification within the NDDOT.

NDDOT also offers flexible scheduling, which is often seen as an important incentive to employees who are trying to balance work and family responsibilities. Any flexible work arrangements must be approved by the division director, district engineer, or office director of the employees and must be followed for at least two weeks. Two possible flexible work schedules include four 10-hour days or four 9-hour days with one 4-hour day. The Information Technology Division allows employees to use one of 14 different schedules, as long as there is continuous coverage from 8:00 a.m. to 5:00 p.m. Monday through Friday. The majority of employees work either four 10-hour days or five 8-hour days with different starting and ending times. These

flexible hours provide employees with the opportunity to work a schedule that fits well with their lives outside of the job.

Moving allowances are also available for all employees transferred from one city in the state to a new location in order to assume new responsibilities within the organization. Expenses of up to \$5000, depending on employee's pay grade and incurred costs, may be reimbursed. Since August 2001, 16 individuals have received some reimbursement of moving expenses, averaging \$1147.38 per recipient. The job classification having the largest number of recipients was Equipment Operator; 7 of the 16 individuals were in this classification. Only one of the 16 individuals has left the organization, suggesting that payment of moving expenses also contributes to at least the short-term retention of employees.

In addition to all of the policies NDDOT has implemented to address immediate recruitment challenges, the organization has also begun to focus on the future of the transportation field. By utilizing the AASHTO Transportation and Civil Engineering (TRAC) program, NDDOT is beginning to reach out to students in high schools in order to build interest in math, science, and the field of transportation. The ultimate goal of this program is to attract talented young individuals from diverse backgrounds into the field of transportation, which may then lead to a larger pool of candidates for future DOT jobs.

Affect of Compensation on Recruitment and Retention

Although NDDOT has developed many incentives to try to boost the recruitment and retention of qualified workers, compensation for NDDOT employees continues to be a difficult constraint. According to the results from the 2002 NDDOT Employee Retention and Motivation Survey, compensation is the one area that received the lowest ratings from employees. Although it seems that employees understand that there are limitations to the changes and increases in salaries that can be given, many employees still feel that compensation is too low. As a result, it may be difficult to retain employees who are determined to make higher wages. However, NDDOT may be able to benefit in both recruitment of new employees and retention of existing employees through greater implementation of bonuses and other financial incentives.

Hiring, Transfers, and Promotions

NDDOT maintains a Recruitment Listing that documents all positions that are filled, vacant, and are posted in a year. This information helps to show where in the organization the largest numbers of new hires, transfers, and vacancies are occurring. The listing from May 2003 showed that the Design and Construction Services areas had the most vacancies (three for each) at that time. The number of vacancies and hires are displayed in the following table for each of the divisions in which at least one vacancy or new hire occurred during the period of January 2003 to May 2003. Also at that time, Dickinson was the district having the greatest number of vacancies (four vacant positions). In terms of transfers, both the Design division and the Fargo district had the largest numbers of employees move into different positions. As displayed in the following table, the largest number of new employees were hired into the Design division (five new employees since January 2003). Although five new employees were hired into Design, both the Information Technology and Drivers License and Traffic Safety divisions hired four new employees as well (see the following table for the number of hires in each division). As a result, there are several areas of the organization that need special attention when developing the human capital plan for NDDOT's future.

Division	# of Vacancies (May 2003 report)	# of Hires (May 2003 report)
Information Technology	0	4
Drivers License & Traffic Safety	0	4
Motor Vehicle	1	2
Planning and Programming	0	1
Design	3	5
Bridge	1	0
Financial Management	1	0
Office of Operations	0	1
Construction Services	3	1
Materials and Research	1	1

Promotions are another way in which employees move through the organization. Every year many NDDOT employees are promoted either by applying for a posted opening or by meeting the requirements for a natural progression from one classification to another. From May 2002 to April 2003, there were an average of 3.3 promotions a month. There were more total promotions in the first part of 2003 than there were in the preceding eight months. However, many of these promotions occurred as natural progressions from one classification to the next as the individuals met the requirements (e.g., equipment operator I to equipment operator II). Still, this information is important to consider when making plans for future staffing. Candidates for entry level jobs will want to have some information regarding possibilities for advancement and associated time frames. As a result, it is beneficial in recruiting new employees to be able to address the issue of average time to promotion in certain classifications and requirements for such promotions.

The NDDOT Human Resources Division is currently undertaking a career pathing project to address some of the advancement needs of employees and occupational needs of the organization. Career pathing is designed to provide multiple career opportunities within an organization that meet organizational needs and provide promotion and professional growth opportunities for employees. One important benefit of career pathing to the employees and the organization is the flexibility for employees to advance in the organization without having to necessarily be promoted to management. NDDOT is in the design and development stage of this system. A specific plan has been put together to proceed with the subsequent stages, including implementation and evaluation of the system.

Technology

Technological advancements have had an effect on the NDDOT workforce. Specifically, technology has impacted how some of the work is accomplished. According to DeLane Meiers, much of the work requires a greater level of knowledge than it has in the past. In order to use the more technologically sophisticated

equipment, surveyors need to have strong mathematical skills, greater experience with global positioning systems (GPS) and more on-the-job training. In most areas of the organization, higher levels of education are needed by NDDOT applicants to ensure that they have the necessary background and standard technical skills to be successful on the job and to be able to learn new processes or methods resulting from advancements in technology.

According to some of the NDDOT department leaders, advances in technology have allowed fewer employees to do greater amounts of work. This is important considering the department has had to meet the needs associated with increased funding for programs without having similar increases in staff. However, such a trend can only continue as long as NDDOT has access to the most recent technology and has employees who are trained and ready to utilize that technology.

A telephone conversation with Diane Laub at NDDOT revealed that technical training needs are being met with the use of much more customized and specific training, rather than generic training that is designed to meet the needs of a large group of workers having widely varying skill levels. She also indicated that NDDOT is purchasing some training products from very good vendors. There has also been some movement toward the use of computer-based training (CBT). However, the high cost and the need for training that does not lend itself to being administered on the computer have made it more difficult to completely adopt CBT.

Capabilities and External Needs

NDDOT maintains an employee count report and supporting document on a weekly basis. This report documents the current budgeted, actual, and temporary positions in the NDDOT divisions and districts. However, it does not account for any work that is outsourced to consultants. As a result, the employee count report is a useful tool in determining where gaps exist between the budgeted and actual positions, but it does not address employee utilization or the need for additional outside contractors.

Comparisons of the employee count reports from June 2003 to November 2003 show increases in the number of positions (budgeted, actual, and temporary) at NDDOT. In fact, there was a large increase in the number of temporary workers in the districts. The area having the largest increase in temporary employees was Construction, with 42 (up from 26 temporary employees in June). According to Lorrie Pavlicek, the numbers of temporary employees in Construction and Maintenance vary with the season. She said that the numbers are higher in the summer when field construction projects are in process. Typically, the numbers of temporary employees in Construction and Maintenance peak in July or August.

Performance

Although NDDOT has not put a formal performance management system in place, assessment of individual performance of employees has improved. According to anecdotal reports, the new performance appraisal form and process have been well-received.

In addition to the more traditional assessment of employee performance, the NDDOT performance appraisal system includes identification of the employees' duties, performance goals for the upcoming period, and career development plan by their supervisors. Employees also have an opportunity to report their accomplishments from the past year. Division directors or district engineers are also required to provide a

rating of employees' performance. In some ways, this process, which involves at least two levels of management, allows employees to have a more complete assessment of their job performance.

Judy Froseth, Training Manager, indicated that she has received positive feedback regarding the performance appraisal form and its ties to the position information questionnaires (PIQs) and to employee development. She also reported that supervisors are using the new forms in a variety of ways. Some use it as a formal communication tool on a regular basis, but others use it formally only once a year while maintaining daily contact with their employees.

A review of the completed NDDOT performance appraisals this year showed the following ratings: 60 percent of employees were *satisfactory*, 35 percent were *exceeds standards*, 2.8 percent were *exceptional*, less than 1 percent were *marginal*, and .1 percent were *unsatisfactory*. Although the distribution of ratings was somewhat negatively skewed, meaning that there were more positive ratings and fewer negative ratings than would be expected, the percent of employees who were rated as satisfactory reflects the percentage that would be expected based on a normal curve. This skewed distribution would suggest that NDDOT consisted of a majority of high-performing workers, with only a few employees who were not meeting standards.

NDDOT is authorized to provide performance bonuses to employees who have exhibited performance that goes "above and beyond the call of duty." A maximum of \$1000 can be awarded in a biennium to an employee who "has achieved unexpected positive results or achieved acceptable results in unusually complex and difficult circumstances." An employee can receive only one bonus per fiscal year (a total of \$1000 per biennium). However, these bonuses still provide a useful tool for recognizing and rewarding exceptional performance.

Structure and Workforce Flexibility

Although NDDOT is still structured primarily hierarchically, there are specific areas that have begun to adopt a more team-oriented approach to the work. In areas where teams have been put together, they are not self-managing. Team members still report to their individual supervisors and complete much of their work autonomously. Nonetheless, the team approach has its place in the organization.

Workforce flexibility is being used in limited ways by NDDOT to accommodate employee needs. NDDOT offers flexible schedules to certain groups of employees that allow them to better balance the demands of work and family. Some NDDOT management members have noted that these flexible schedules have not been applied to everyone in the organization. Unfortunately, some groups of employees, managers and members of field crews, are not able to benefit from this program because of the type of work they do, which does not allow for as much flexibility as other NDDOT positions. In addition, NDDOT does not currently have anyone who telecommutes or works from home on a part-time basis. It may be that the majority of NDDOT positions are not well-suited to part-time workers or to telecommuting. However, in the future, it may be beneficial for the organization to determine whether there are some positions in which more flexibility could be offered to employees.

Training and Development

The area of training and development is one in which many changes and new programs have recently been initiated. These changes include everything from expanded leadership training to a new mentoring program. In addition, NDDOT is in the early stages of developing a succession planning program and utilizing a training task force to determine specific training needs for employees in various areas of the organization.

The area of training at NDDOT has recently seen a lot of changes and improvements. Judy Froseth indicated that although there is already good supervisory training provided, NDDOT is continuing to build on their leadership training opportunities. Currently, there is one leadership course that is offered to anyone who wants to attend through Bismarck State College, but there will soon be a second course covering the next level of material offered. Several training programs are also offered over the Tel8 system. In addition, a task force has been put together to assess specific training needs in each division and district. The findings of such an assessment would allow NDDOT to match the training and courses offered to the needs for specific skills and abilities from different areas throughout the organization. NDDOT currently captures some of the reported training needs on the performance appraisal forms that are completed for each employee. This information is summarized and provided to the training section of the human resources division. As a result, NDDOT will be better able to determine specific training needs, rather than focusing on providing a wide range of more general training that may not meet the needs of specific areas or positions in the organization.

NDDOT's new mentoring program allows a mentor and a person wanting to be mentored (mentee) to be paired together for 12 months in order to accomplish objectives specified in a "Mentee Development Plan." During this 12-month partnership, mentors and mentees are supposed to spend at least two to three hours a month in face-to-face meetings, phone conversations, or email discussions. According to Duane Bentz, there were recently 12 pairs of mentors and mentees who reacted positively to their participation in the program. The plan is to formally evaluate the program and its outcomes once this 12-month period of mentoring has been completed. Currently, a second group of 14 pairs has begun the mentoring process.

Succession planning is another program that NDDOT is in the process of developing. Although the details of the program have not been completely determined, the plan is to start with the top NDDOT positions. Specifically, employees will be encouraged to identify themselves as interested in future positions at the Division Director or District Engineer level and above. Currently, fifty-five individuals have identified themselves as being interested in pursuing these advanced positions.

Another area of employee development that has received attention at NDDOT recently is that of possible support for employees obtaining or those who have already obtained professional certifications or licenses. Many positions throughout the organization require employees to be certified or licensed in their areas of expertise. In some of these positions, part or all of the costs associated with the licensing or certification process are covered. However, in many of the cases, costs are not covered and there is no additional compensation paid to those who have already obtained the certification or license. NDDOT is currently evaluating whether or not to cover more of these costs or to provide some additional compensation to those who attain the professional certification in their area of expertise. If the decision is made to go forward with the support for such certifications, NDDOT employees may see the change as an incentive to obtain the certification or license more quickly than in the past.

Organizational Strengths and Weaknesses

As the internal analysis was being completed, the strengths and weaknesses of the organization with regard to its workforce became more evident. NDDOT is doing well with several newly created programs addressing employee development. These programs include mentoring, succession planning, and career pathing. However, the challenge will be to maintain and expand these programs in the future. Another organizational strength is the way in which NDDOT is making use of new technology to automate work in many areas and to increase efficiency of employees. Continued assessment and analysis of the organization's strengths and weaknesses in specific areas is also another positive approach NDDOT has taken to dealing with workforce issues. The internal analysis of this report serves as a valuable resource for future workforce planning. It can be updated periodically in order to ensure that the information being used is current.

NDDOT also has some areas of weakness that may need to be addressed in order to plan for the future. Although the organization has policies that allow workforce flexibility, such as alternative work schedules or flextime, the fact is that there are many positions or areas within the organization that are not eligible. There will always be some jobs that are not well-suited to programs designed to provide employees with flexibility; however, in some way, the organization should provide benefits that could be perceived as being equal in value to these employees. Another weakness is associated with the hesitancy to utilize retention bonuses to reward and encourage employees to remain with the organization. Members of NDDOT top management have suggested that the bonuses have had limited use as a result of possible perceptions of inequity or lack of fairness.

Unfortunately, NDDOT also does not have a comprehensive performance measurement system in place to assess not only individual performance but also organizational and unit performance. According to some of the members of top management at NDDOT, many individual units or areas monitor their own performance closely. However, there is no way of determining overall productivity or of making comparisons between different units within the organization. Finally, a more technical weakness for the organization which affects the workforce and any future planning is the difficulty in obtaining accurate, summarized or electronic data for the workforce in terms of retirement predictions, training records, and general workforce demographics. Perhaps with the implementation of PeopleSoft, some of this information will become more readily available.

FUTURE WORKFORCE NEEDS AND CHALLENGES

On February 18, 2004, a meeting that included several members of NDDOT top management, was held in order to obtain the perspectives of this group regarding various issues affecting the future NDDOT workforce. The goal of the discussion was to determine how the future NDDOT workforce would differ from the current one when taking into account the external and internal factors highlighted in this report. The detailed notes from this discussion, including a list of participants, are located in Appendix C. The following questions were asked of the participants of this group to more specifically address the changes taking place and the programs and policies designed to deal with such changes. After each of the listed questions, a summary of the responses and issues discussed are provided.

1) Nationally, trends in the transportation field are showing that DOTs are having “to do more with less”, meaning there continues to be increased funding for programs, while agencies are losing people to reorganizations and downsizing. How is NDDOT able to accomplish this? How will strategies for doing more with less change for the future? How will NDDOT ensure that staffing and productivity needs will be met?

This question was asked of the group to determine if and how NDDOT is preparing for the upcoming demands that will be placed upon the agency as a result of the upcoming transportation bill. However, the responses of the participants suggest that they already feel the pressure of increased work demands without an accompanying increase in staff. Still, the majority of respondents indicated that technology plays a large role in meeting these needs. Along with an increased reliance on technology comes a need for a higher caliber of skills in employees. Sometimes additional skills can be trained; however, training is often perceived negatively by employees because it takes them away from doing their jobs.

At least one respondent indicated that he is able “to do more with less” by giving employees the authority and responsibility to do their work and make decisions on their own. Part of the success in his area may be due to the fact that they do not conduct a lot of meetings; instead, employees are able to contact directly the appropriate people.

In some areas, excessive overtime and temporary workers have been used as a solution to the high work demands. However, people in these areas recognize that an alternative long-term solution is needed.

2) Population trends in North Dakota show that people are moving from the rural to the urban areas. How does this trend affect the recruitment and hiring of employees in some of the districts? How will NDDOT respond when needed KSAs are not available in the local workforce? To what extent will this affect the amount of work that is outsourced?

Participants had several concerns and ideas surrounding this question of where workers will be obtained when the needed skills and abilities are not available in the local workforce. At least one person suggested that incentives (pay increases) could be given to those employees who are willing to work in the rural areas. Alternatively, some of the participants agreed that rural areas may, at some point, not be a valid source of employees. Many suggested that this may not be as much of a problem with the increase of people willing to commute long distances to work. However, the number and type of services needed by the public will also increase as the number of people commuting large distances increases.

Possible solutions mentioned by the discussion group participants included hiring individuals with strong technical backgrounds, rather than focusing specifically on engineers and outsourcing additional tasks or possibly even workers. The outsourcing issue was regarded with some disagreement because as more work is outsourced, there is more time that needs to be spent internally on overseeing and managing the consultants doing the work. One possibility that has not previously been considered by NDDOT is to contract for design/build/warranty.

3) NDDOT currently has an ageing workforce and one that is heavily male-dominated. Knowing that demographic trends suggest that the future workforce will be largely female and older workers, what impact will there be on the hiring and retention of qualified employees? How will the use of workforce flexibility (flextime, telecommuting, etc.) be impacted? How will the large number of retiring employees affect these policies?

The participants had a few suggestions for dealing with the hiring and retention issues associated with the changing demographics of the workforce. They seemed to agree that NDDOT will need to obtain the appropriate skills and abilities wherever they can, even if it is only on a short-term basis. Some of the participants suggested that the structure of the organization needs to become more fluid, allowing for the creation and utilization of teams to complete the work. Finally, another suggestion was to use money to get the people that are needed. It may be that “out-of-the-box” thinking needs to be used to overcome this problem.

4) NDDOT is currently developing and utilizing many programs that will help in hiring, retaining, and promoting employees. Examples of such programs include career pathing, succession planning, and recruitment, retention and performance bonuses. What will the role of these programs be in the future when taking into consideration changes in workforce demographics and possible changes in the economy?

Most of the discussion participants agreed that these programs will continue to be important for the future NDDOT workforce. There is some concern that these programs may not be continued in the future if they do not become part of the organization and its culture. There is also some concern that these programs do not go far enough in providing opportunities to all employees in the organization. Participants named a few groups of employees for whom the programs (including flextime and bonuses) are not applicable. Possible solutions to this problem were discussed. Most of the participants agreed that compensation needs to be a top priority. However, the options associated with solving the compensation issues are unclear. Participants questioned the current options for compensation and job classification. At least one person suggested that NDDOT determine whether the organization is different enough to warrant different treatment by the Legislature, and if so, NDDOT needs to make the case for being treated differently.

5) Technology is continually changing how work at NDDOT is being done. In many areas, new technology has led to a need for additional or different knowledge, skills, and abilities (KSAs) in employees. How will these needs be met in the future?

In addition, some skills that were previously required for certain positions will no longer be necessary. How will this affect the future training and development of NDDOT employees? How will it affect the assessment of employee performance?

The impact of technology on the skill and ability needs of the organization was discussed primarily in response to the first question assessing the ways in which NDDOT has been able to do more with less. The majority of discussion participants seemed to suggest that utilization of new technology is not a constraint in accomplishing the work of the organization. However, there are several issues associated with the implementation of this technology that do have consequences for the organization. Even with greater technological advancements, there are limits to what can be done on the human side. Sometimes the new technology is not deployed in manageable incremental steps. As a result, it may require more people resources than are available to adequately manage a major change or new program.

With the increased efficiencies associated with new technology comes higher expectations from internal and external customers. Email is a relatively basic example of this situation. Email allows for great amounts of information and data to be transferred very quickly from one person to another. Unfortunately, people expect responses to email to be very immediate as well, but each individual still needs to sort through all of this information before providing the appropriate response (if a response is even determined to be needed). Participants discussed the need for revised processes that would allow the organization to better deal with changes in technology.

6) NDDOT currently does not have a comprehensive performance management system in place that provides metrics for various divisions and for the overall department. How does NDDOT assess organizational performance? To what extent is this going to change in the future?

The responses to this question were somewhat limited. This may have been due to the varied nature by which different areas in the organization measure their performance. Overall, one measure of performance for the organization is the number of complaints that are received. Additional assessment has been developed for specific concerns of the organization. For example, employee satisfaction is currently being measured on an organization-wide scale.

7) NDDOT has recently been putting great effort into identifying the strengths and weaknesses in various areas of the organization. Regarding the NDDOT workforce, what policies and programs have done the most to move the organization forward? What are the biggest areas that still need attention? What are the biggest threats and opportunities that you need to address for the future?

The responses to this question focused mainly on what the participants perceive as the major challenges for the future. The top priority seemed to be the potential for a major turnover of NDDOT staff. Participants agreed that the organization must concentrate on retaining employees, including members of the management team. The discussion concerning the best approach for this retention quickly became focused on issues associated with money/compensation. There are concerns about the organizational culture and the use of retention bonuses. At least one person suggested that NDDOT may be too risk adverse as an agency to make substantial changes in the way bonuses and other rewards are utilized. Another suggestion for dealing with future workforce challenges was to change the structure of the organization so that the focus could be placed on finding individuals who have both the technical and interpersonal skills to be able to do both types of work.

CONCLUSIONS

This workforce assessment is only the first step in developing a strategic human capital plan for NDDOT. The external and internal forces affecting the availability of the future workforce have been documented for a specific period of time. NDDOT has begun to develop several programs including succession planning and career pathing that will aid the strategic planning process. However, in order to move forward with the strategic planning process for a human capital plan, NDDOT will need to examine some of the policies and practices discussed in this report to decide whether they are adequate to meet their changing needs. Additional discussions with the top management team will be essential for determining the appropriate course for the organization in terms of its future workforce. The conclusions stated in the Executive Summary of this report could serve as the focus of these additional discussions.

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APPENDIX A

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION CAREER PATHING OPPORTUNITIES MASTER Current Position Classification Levels in NDDOT

Pay Range	Gr	Admin, Business	Information Tech.	Engineering	Maintenance	Driver & Vehicle Serv.
1081-1441-1801	03	Custodian Office Assistant I Clerk II				
1189-1585-1981	04	Office Assistant II	Data Input Operator III Document Imaging Specialist I		Automotive Service Worker I	
1303-1744-2180	05	Account Technician I Office Assistant III	Printing Equipment Operator I	Engineer Technician I	Automotive Service Worker II Equipment Operator I Maintenance Worker I	
1439-1918-2398	06	Administrative Assistant I State Fleet Dispatcher Storekeeper I	Printing Equipment Operator II		Highway Traffic Control Specialist I Maintenance Worker II	Drivers License Examiner I Licensing Clerk
1538-2110-2638	07	Account Technician II Administrative Assistant II Storekeeper I	Printing Equipment Operator III Production Control Specialist I	Engineer Technician II	Equipment Operator II Fleet and Equipment Technician I Maintenance Mechanic I	

Pay Range	Gr	Admin, Business	Information Tech.	Engineering	Maintenance	Driver & Vehicle Serv.
1741-2321-2901	08	Accounting/Budget Specialist I Administrative Assistant III Administrative Officer I Civil Rights Officer I Human Resource Technician I Public Information Specialist I Storekeeper II Realty Officer I State Fleet Dispatch Supervisor	Customer Technical Support Specialist I Graphic Artist II Production Control Specialist II	Engineer Technician III	Equipment Operator III Fleet and Equipment Technician II Highway Traffic Control Specialist II Maintenance Mechanic II	Drivers License Examiner II
1918-2557-3196	09	Administrative Staff Officer I Auditor I Human Resource Technician I Planner I Realty Officer II Research Analyst I Records Management Specialist	Customer Technical Support Specialist II Data Processing Coordinator I Multi-Media Developer Photogrammetrist Telecommunications Technician I	Chemist I	Fleet and Equipment Technician III Highway Maintenance Foreman Highway Traffic Control Supervisor Maintenance Mechanic III	Drivers License Examiner Supervisor
2089-2785-3481	10	Accounting/Budget Specialist II Administrative Officer II Civil Rights Officer II Planner II Public Information Specialist II Purchasing Agent I Research Analyst II Transportation Management Officer I	Computer and Network Specialist I Data Processing Coordinator II Production Control Specialist III Programmer Analyst I Telecommunications Analyst I Telecommunications Technician II	Engineering Technician IV Transportation Engineer I		Motor Vehicle Services Representative

Pay Range	Gr	Admin, Business	Information Tech.	Engineering	Maintenance	Driver & Vehicle Serv.
2318-3090-3863	11	Attorney I Auditor II Human Resource Officer I Planner III Public Information Specialist III Realty Officer III Safety Officer Administrative Staff Officer II	Computer and Network Specialist II Customer Technical Support Specialist III Multi Media Producer/Director I	Archeologist I Biologist I Chemist II Transportation Project Manager	Fleet & Equipment Service Supervisor	
2571-3428-4285	12	Accounting/Budget Specialist III Administrative Staff Officer III Auditor III Civil Rights Officer III Hearing Officer I Pilot II Public Information Specialist IV Purchasing Agent II Realty Officer IV Research Analyst III Training Officer III Transportation Management Officer II	Data Processing Coordinator III Multi-Media Producer/Director II Programmer Analyst II Telecommunications Analyst II Telecommunications Technician III	Archeologist II Biologist II Transportation Engineer II Transportation Senior Manager	Highway Maintenance Superintendent	

Pay Range	Gr	Admin, Business	Information Tech.	Engineering	Maintenance	Driver & Vehicle Serv.
2850-3800-4750	13	Business Operations Manager Business Planner Hearing Officer II Human Resource Officer II Planner IV Research Analyst IV	Computer and Network Specialist III Data Processing Coordinator IV Programmer Analyst III Telecommunications Analyst III	Highway Materials Coordinator Surveys and Photogrammetry Manager Transportation Engineer III Transportation Eng Services Manager Transportation Programming Manager		
3098-4130-5163	14	Accounting Manager I Auditor IV Attorney II Human Resource Director I Right of Way Director	Senior Programmer Analyst	Administrative Transportation Engineer I Highway Construction Coordinator	Highway Maintenance Coordinator	
3497-4662-5828	15	Accounting Manager II Administrative Division Director Human Resource Director II				
3870-5160-6450	16	Attorney III Financial Management Director Information Technology Division Director		Administrative Transportation Engineer II		

Pay Range	Gr	Admin, Business	Information Tech.	Engineering	Maintenance	Driver & Vehicle Serv.
4283-5710-7138	17			Administrative Transportation Engineer III Assistant Chief Transportation Engineer		
4739-6318-7898	18					
5239-6985-8731	19			Chief Transportation Engineer		
5797-7729-9661	20					

APPENDIX B

40/ORG

MEMORANDUM

TO: Dave Sprynczynatyk, Director
Tom Freier, Deputy Director for Business Support
Grant Levi, Deputy Director for Engineering
Keith Magnusson, Deputy Director for Driver & Vehicle Services
Gary Berreth, Office of Operations
Tim Horner, Office of Transportation Programs
Francis Ziegler, Office of Project Development

FM: Linda Kuether, Personnel Officer
Human Resources Division

DATE: January 30, 2003

SUBJECT: Termination Summary for 2002

Attached are the summaries for terminations for 2002. Information is presented by 1) reason for termination, 2) division and district, and 3) classification. In addition to the department's turnover rate and controllable turnover rate, the divisions' and districts' controllable turnover rates are also included.

Attachments (4)

copy: Human Resources Division staff
Deb Igoe, Civil Rights Officer, Office of Operations

Termination Summary by Reason for Termination

<u>Reason</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>	<u>1998</u>
<u>Controllable Termination Reasons</u>					
Continue education	-	3	1	2	1
Job Dissatisfaction	-	-	-	-	-
Moving from area (other than employment)	1	2	-	1	-
Other employment	5	16	29	27	15
Poor working conditions	-	-	2	-	-
Retirement before age 65	17	17	22	29	19
<u>Uncontrollable Termination Reasons</u>					
Discharge/involuntary resignation	7	6	4	3	6
Illness, disability, death	2	1	-	1	4
Retirement at 65 and over	4	4	5	7	8
Transferred to another agency	1	-	-	-	5
Other reasons related to unique situations not identified as other employment	<u>9</u>	<u>13</u>	<u>17</u>	<u>11</u>	<u>10</u>
Totals	46	62	80	81	68
Controllable Turnover Rate	2.25	3.77	5.41	5.86	3.49
Total Turnover Rate	4.51	6.15	8.02	8.04	6.79

2002 Termination Summary by Division and District

<u>Classification</u>	<u>Salary</u>	<u>Years of Service</u>	<u>Sex</u>	<u>Age</u>	<u>Race</u>	<u>Date of Termination</u>	<u>Reason</u>
<u>Bridge</u>							
trans engineer III	3664	3	M	35	W	8-23-02	discharged
<u>Construction Services</u>							
eng technician II	2238	6 mo	M	23	W	9-30-02	discharged
trans engineer I	2840	3 mo	F	23	W	6-14-02	other employment
<u>Design</u>							
admin trans eng II	5652	34	M	59	W	12-31-02	early retirement
trans engineer II	3335	3	M	27	W	10-31-02	other employment
trans engineer III	3823	14	M	60	W	8-31-02	early retirement
<u>Drivers License & Traffic Safety</u>							
dr lic exam II	2287	14	M	62	W	7-3-02	early retirement
dr lic exam II	2033	4	F	36	W	12-31-02	moving
<u>Financial Management</u>							
data input oper II	1869	20	F	56	W	5-10-02	early retirement
<u>Information Technology</u>							
cmptr & net spec I	14.15	3	M	23	W	10-31-02	personal reasons
data proc coord IV	3768	18	M	59	W	4-30-02	early retirement
program/analyst III	3753	1	F	37	W	10-24-02	other employment
<u>Local Government</u>							
trans engineer III	4231	30	M	60	W	9-30-02	early retirement
<u>Materials & Research</u>							
trans engineer II	3489	15	M	47	W	8-31-02	personal reasons
<u>Motor Vehicle</u>							
account tech I	1817	33	F	54	W	6-6-02	died
admin officer I	2673	26	F	52	W	10-31-02	early retirement
office assistant I	1531	20	F	77	W	12-31-02	normal retirement
<u>Planning & Programming</u>							
trans project mgr	3617	41	M	62	W	11-30-02	early retirement

Bismarck District

equip oper II	2224	17	M	57	W	10-25-02	discharged
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Attachment 2
January 30, 2003

2002 Termination Summary by Division and District

<u>Classification</u>	<u>Salary</u>	<u>Years of Service</u>	<u>Sex</u>	<u>Age</u>	<u>Race</u>	<u>Date of Termination</u>	<u>Reason</u>
<u>Devils Lake District</u>							
equip oper II	2248	17	M	40	W	10-31-02	personal reasons
flt & equip serv spvr	3027	17	M	65	W	11-30-02	normal retirement
hwy traf cntr spec II	1916	5	M	49	W	6-30-02	personal reasons
<u>Dickinson District</u>							
eng technician IV	3176	41	M	62	W	12-31-02	early retirement
equip oper II	2243	18	M	65	W	4-30-02	normal retirement
<u>Fargo District</u>							
admin assistant I	2199	32	M	60	W	9-30-02	early retirement
eng technician III	2729	1	M	27	W	10-31-02	personal reasons
eng technician IV	2900	32	M	51	W	3-31-02	early retirement
eng technician IV	3116	31	M	58	W	4-30-02	early retirement
equip oper II	2258	21	M	62	W	4-30-02	early retirement
equip oper II	12.59	12	M	47	AI	5-21-02	discharged
equip oper III	2657	23	M	59	W	6-9-02	died
trans engineer III	3625	2	F	30	W	11-30-02	transfer to NDSU
<u>Grand Forks District</u>							
equip oper I	1450	4 mo	M	35	W	3-15-02	other employment
trans project mgr	3592	41	M	66	W	6-30-03	normal retirement
<u>Minot District</u>							
auto serv wkr II	1816	4	M	54	W	5-16-02	discharged
equip oper I	1425	3 mo	M	40	W	8-31-02	personal reasons
equip oper II	2537	22	M	62	W	2-28-02	early retirement
equip oper II	2231	23	M	62	W	12-31-02	early retirement
<u>Valley City District</u>							
eng technician I	1754	3	F	34	W	9-3-02	personal reasons
equip oper I	1450	1mo	M	50	W	4-5-02	personal reasons
equip oper II	1995	7	M	62	W	1-31-02	early retirement
equip oper II	1956	6	M	31	W	3-8-02	discharged
equip oper II	2402	30	M	54	W	4-30-02	early retirement
equip oper II	1778	1	M	25	W	8-15-02	other employment

hwy mtrls coord	3985	39	M	61	W	7-5-02	personal reasons
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Williston District

equip oper I	1400	1 mo	M	39	AI	1-11-02	discharged
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2002 Termination Summary by Classification

<u>Number</u>	<u>Classification</u>
1	Account Technician I
1	Administrative Assistant I
1	Administrative Officer I
1	Administrative Transportation Engineer II
1	Automotive Service Worker II
1	Computer & Network Specialist I
1	Data Input Operator II
1	Data Processing Coordinator IV
2	Drivers License Examiner II
1	Engineering Technician I
1	Engineering Technician II
1	Engineering Technician III
3	Engineering Technician IV
4	Equipment Operator I
11	Equipment Operator II
1	Equipment Operator III
1	Fleet & Equipment Technician Supervisor
1	Highway Materials Coordinator
1	Highway Traffic Control Specialist II
1	Office Assistant I
1	Programmer/Analyst III
1	Transportation Engineer I
2	Transportation Engineer II
4	Transportation Engineer III
<u>2</u>	Transportation Project Manager
46	Total

2002 Turnover Percentages by Division and District

Division/District	Total Terminations	Controllable Terminations	Controllable Turnover Percentage
Bridge	1	0	0
Construction Services	2	1	4.52
Design	3	3	4.17
Drivers License & Traffic Safety	2	2	3.19
Executive Office	-	-	-
Financial Management	1	1	3.87
Human Resources	-	-	-
Information Technology	3	2	3.64
Legal	-	-	-
Local Government	1	1	9.85
Maintenance & Engineering Services	-	-	-
Materials & Research	1	0	0
Motor Vehicle	3	1	2.59
Office of Business Support	-	-	-
Office of Driver & Vehicle Services	-	-	-
Office of Operations	-	-	-
Office of Project Development	-	-	-
Office of Transportation Programs	-	-	-
Planning & Programming	1	1	3.39
State Fleet Services	-	-	-
Bismarck District	1	0	0
Devils Lake District	3	0	0
Dickinson District	2	1	1.54
Fargo District	8	4	4.62
Grand Forks District	2	1	1.33
Minot District	4	2	2.83
Valley City District	7	3	4.08
Williston District	1	0	0
Totals	46	23	2.25

APPENDIX C

NDDOT Future Workforce Assessment Questions Asked of Upper Management in Bismarck on February 18, 2004

Participants:

Lorrie Pavlicek, Human Resources Manager and session facilitator
David Sprynczynatyk, Director

Grant Levi, Deputy Director for Engineering
Tom Freier, Deputy Director and Director of Business Support
Keith Magnusson, Director of Driver and Vehicle Services
Gary Berreth, Director of Operations
Tim Horner, Director of Transportation Program Services
Francis Ziegler, Director of Infrastructure Support
Bob Evans, Human Resources Director
Shannon Sauer, Financial Management Director
Bob Walton, Fargo District Engineer
Larry Gangl, Dickinson District Engineer
Keith Kiser, Motor Vehicle Director
Paul Seado, Legal Director
Lynn Kalnbach and Dennis Jacobson, NDSU Upper Great Plains Transportation Institute

Purpose: We have completed an external workforce assessment and are in the process of completing an internal workforce assessment. Through the past number of years there have been many factors discussed in human resources and throughout the department that have an impact on us as an organization. We thought it important to bring many of those factors together in the assessment and look at them in their totality. It was decided with Executive Management, to bring together this group of department leaders to discuss some topics for which we needed their input. This will provide a practical vision of what is happening now and in the future in our organization that does and will affect our workforce.

1) Nationally, trends in the transportation field are showing that DOTs are having “to do more with less”, meaning there continues to be increased funding for programs, while agencies are losing people to reorganizations and downsizing. How is NDDOT able to accomplish this? How will strategies for doing more with less change for the future? How will NDDOT ensure that staffing and productivity needs will be met?

Responses to this question were as follows:

- Increased reliance on technology; higher caliber of skills—need to be able to learn and accomplish new tasks quickly; sometimes there are back burner items that cannot be addressed immediately
- One perspective is that the Legislature micro-manages technology
- There is a disconnect between the Legislature and the need for new technology
- At some point, new technology is not the way to move forward, because it will not always help us to do more with less

- Training is sometimes perceived as a waste of time because it takes employees away from them doing their jobs
- In the Fargo district, they let supervisors supervise; they empower employees by giving them authority and responsibility. They identify needed training, and try to get it in time. They don't hold a lot of meetings; instead, employees deal directly with the people they need to assist them (manage closer to the bottom level). Technology has also helped keep the work with the employees. Be honest about what you can actually deliver to customers.
- We need to use better meeting management skills to make meetings more productive, to use meetings styles that are appropriate to what needs to be accomplished, or to determine whether they are necessary in some cases
- Need to have more clear job authority boundaries so staff understand better where and when they can act or decide or when they have to elevate the action or decision
- Sometimes technology does not always come in manageable incremental steps; sometimes technology or software takes more people resources to manage especially in initial stages of learning and/or conversion of a new program or change, and in maintaining it (ex: Peoplesoft, EDMS, etc.)
- We've not necessarily done a good job of revising or revamping our processes to catch up with or to use some of the technology we do have
- In Motor Vehicle: long-term overtime commitments and temporary workers are not a long-term solution; something has to change—work expectations are going up, and staffing numbers are going down.
- In response to a question about whether excessive overtime affects retention in the long term: pressure is put on employees, and now they are told they have to work overtime (rather than volunteering). Some may start to look somewhere else for employment.
- In Project Development, technology is not a limiter; the constraints are associated with feeding the technology (from the least technological processes which are controlled by outside forces); there is tremendous potential for litigation in these processes.
- Weakest pieces of design process (not the staff) is environmental and right of way; they are the least automated
- Does the machinery create more work for the thinkers? Sometimes it does. The slow part of the process is feeding information back to the customers. The data come in very fast, but cannot sort through it and summarize fast enough.
- How do you let technology do what it needs, but not let it control you? Email has created problems in that it is so easy for people to access others that there are times information is being sent to people who during the days of paper mail would not see or deal with this info (a subordinate would); it comes so fast and people expect more immediate responses and answers; sometimes we don't have or take the time to think through completely our response and implications of what a response might create in work for others—should we have more email filtered through our support staff (like in the days of paper mail)?
- Does some of this stem from being risk averse? Need to find a way to change processes to deal with the technology. On the human side, being classified into a particular job defines what work can be done.
- The public and other entities are more likely than ever to present an issue or problem to our Director, the Governor, and/or a Legislator and we are expected to respond or make a situation right; sometimes these individuals could be referred to a division or district; sometimes we may go too far in trying respond and meet individual needs (what is good for

the public at large; most cost effective, etc.)

2) Population trends in North Dakota show that people are moving from the rural to the urban areas. How does this trend affect the recruitment and hiring of employees in some of the districts? How will NDDOT respond when needed KSAs are not available in the local workforce? To what extent will this affect the amount of work that is outsourced?

Responses to this question were as follows:

- Hire people who have a strong technical background—don't necessarily always need to be engineers. The needed skills include analysis and communication.
- Put the people in the right spots (positions)
- In 10-20 years how will the rural sections be staffed? Will there need to be staffed sections in some of these rural areas? May need to change how business is done—contract it out
- Rural areas may not be a valid or reliable source of workers in some areas—concern for future
- For too long our solution is hiring engineers—do we need to evaluate types of people and jobs and hire more disciplines; discussion that some of this has begun to happen and the positives that are resulting from it (environmental scientist; changing some positions from engineering related to business related categories, etc.)
- Have to keep in mind the changes being made by the professional engineering board and balance both engineering and other types of positions and disciplines
- Demands by and needs of the public have increased significantly
- May have employees commuting large distances, which also increases the number and type of services needed
- Efficiencies that were expected are now being eaten up by increased demand for services
- How do you account for work ethic differences in the various generations?
- As population drops, funding drops. There may not be the money for the bigger, better technology.
- State (\$\$\$) resources are dropping as our population changes and ages—related to tax base, etc.—unless economic development changes population base, we may have real trouble having the state resources to cover services, etc.

- Are we outsourcing the right things? Are we better suited to do some of this internally? What is the core function of the organization? Even with outsourcing, you still need a core of people to oversee and manage.
- With more outsourcing, contract administration/management takes a lot of time and the people or positions to do it
- NDDOT currently outsources projects and tasks, but does not outsource hours or employees—this may need to be explored
- Where will these outsourced people come from? Contract for design/build/warranty; NDDOT does not currently do this; it would require writing of standards
- Pay differently in different locations to get the KSAs that are needed (incentive given to work in rural areas)
- There is an obligation to allow and encourage employees to go to other areas in the DOT; need to identify the barriers to people moving around in the organization or to employees

realizing their full potential.

3) NDDOT currently has an ageing workforce and one that is heavily male-dominated. Knowing that demographic trends suggest that the future workforce will be largely female and older workers, what impact will there be on the hiring and retention of qualified employees? How will the use of workforce flexibility (flextime, telecommuting, etc.) be impacted? How will the large number of retiring employees affect these policies?

Responses to this question were as follows:

- Could we hire needed expertise on a short term basis—temporary situation to fill a specific need and then let them move on
- We have a gap in distribution of ages (!!experience!!); a few years back we depleted middle managers and hired construction management majors
- Employees staying with a job (a company/organization) long term is not the same as before
- Becoming a more fluid structure—grabbing talent where you can get it
- Money is one way to get some of the people that are needed
- We throw many newer engineers into pretty heavy work sooner than in the past
- Get rid of lines in the organization chart, and put together teams to do the work; however, they will be limited by the structure and the policies (especially compensation and grade classification)
- Will some of the outsourcing decisions be made for the organization by the Legislature? Be proactive and come out of the box.
- When these teams are put together, additional stressors are created for those who are left in the organization—need to deal with these as well.

4) NDDOT is currently developing and utilizing many programs that will help in hiring, retaining, and promoting employees. Examples of such programs include career pathing, succession planning, and recruitment, retention and performance bonuses. What will the role of these programs be in the future when taking into consideration changes in workforce demographics and possible changes in the economy?

Responses to this question were as follows:

- Managers (division head level) are a forgotten group in some of these programs—for example, they cannot use flextime
- Actually, flextime is really only available to a small group of employees—workers on the crews are not able to take part in this program
- Hiring back some of the workers who had been lost to other employment or early retirement—should the hiring of these workers as contractors be part of the staffing plan? This should be given some additional thought.
- Have to continue with these programs; they need to become part of the organization and its culture so they can sustain leadership changes—they need to be very visible
- It is difficult to sell many changes to the Legislature
- Cultural changes would need to occur to allow for large bonuses for special projects and smaller base salaries
- It's the money that needs to be settled first!
- If NDDOT feels that it is different and should be treated differently, then make the case for the Legislature to make changes. Are there enough differences in overtime, outsourcing, etc. to

say that NDDOT should be treated differently?

- We still have salary compression problems
- Are we really different—do we go outside norms of state (classification/pay) system—or do we deal with the cards we are dealt
- Do PIQs limit us—interdisciplinary teams, flexibility to use person’s KSA more completely, etc.
What are our compensation options, not reclassifying job
- Career pathing may allow for some better classifications; must make sure that we don’t undersell our employees
- Need to classify jobs based on organizational need; not use the system for salary increases; we are still encouraging or being encouraged to do that**

5) Technology is continually changing how work at NDDOT is being done. In many areas, new technology has led to a need for additional or different knowledge, skills, and abilities (KSAs) in employees. How will these needs be met in the future?

In addition, some skills that were previously required for certain positions will no longer be necessary. How will this affect the future training and development of NDDOT employees? How will it affect the assessment of employee performance?

See the responses to #1.

6) NDDOT currently does not have a comprehensive performance management system in place that provides metrics for various divisions and for the overall department. How does NDDOT assess organizational performance? To what extent is this going to change in the future?

Responses to this question were as follows:

- Measures are always being taken within work units or areas but not in the overall Department; there are standards for staffing, and outcome-based measurements are used
- The industry has not provided performance measures to model (inputs vs. outputs)
- In some areas, performance is monitored closely, and this information is used internally in those areas
- The gauge is the number of complaints that are received; that is NDDOT’s bottom line
- Employee satisfaction is also being measured on an organization-wide scale

Does the physical structure meet the needs for staffing?

- There are still some barriers between divisions and districts
- We still have fixed walls/organizational territories that hinder work getting done
- It often comes down to core business functions vs. additional tasks and duties; sometimes you do not have the staff needed for these additional tasks
- Always gravitate back to a core existence, even when good changes have been made; core structure always remains (is it because it’s comfortable or because it actually works?)
- Is outsourcing more expensive? Don’t know specifically—do know that there are some things

that NDDOT does really well internally. Is it the easy stuff that is outsourced?

7) NDDOT has recently been putting great effort into identifying the strengths and weaknesses in various areas of the organization. Regarding the NDDOT workforce, what policies and programs have done the most to move the organization forward? What are the biggest areas that still need attention? What are the biggest threats and opportunities that you need to address for the future?

Responses to this question were as follows:

- Potential for major turnover of staff—must concentrate on retention; much of the management team is close to Rule 85
- Knowing that there will be a big influx of funds, structure will need to change some; will need to have engineers/managers (people who can be both)
- There is so much focus on retaining young workers, the more tenured management team has not received the appropriate attention
- Some managers don't like and don't use performance bonuses; others use more often; how about retention bonuses
- There have been issues with retention bonuses—culture makes it difficult to use these because of fairness (or lack of) perceptions; may need to lower the threshold of risk—develop the case, so you can present the opportunity to the press
- Are we too risk adverse as an agency?
- HRD time is occupied with dealing with a small group of poor employees
- Could overtime pay be opened up to managers? What about substantial variable pay (pay-for-performance) as another alternative?
- The construction industry culture is part of our slower pace to change our culture; should it be; shouldn't we lead

Closing comment by Dave: Some of the issues discussed seem to be more in line with a cultural or organizational assessment—more than just a workforce assessment. The discussion brought out many good ideas—many will need to be followed up on in future meetings of the same kind.