From the Department Head

To: Civil Engineering Faculty, Staff, and Members of the Civil Engineering Advisory Council

Our department, owing to its rich history, its place in the present, and our collective plans for its future, faces two parallel challenges. First, we must retain our reputation as a top comprehensive department that covers all traditional areas of civil engineering and ocean engineering. Second, we must evolve to meet the new challenges and those that will be defined in the years ahead. We must embrace new technologies and new areas and we must be at the forefront of redefining the future of our field.

How do we maintain capacity and excellence in the traditional areas of civil engineering while also branching out into new fields? How do we appear at once to be highly traditional and state-of-the-art? These are the very same challenges Texas A&M University faces as an institution. I would argue that our department is exceedingly well positioned to meet these challenges and emerge as a leading national program on both fronts.

Specific challenges our department faces in the coming years include faculty development and retention, continuing to increase the quality of our students while at the same time ensuring our enrollments (and the number of graduates) remain high, increasing the size of our doctoral program, upgrading our teaching laboratories, and addressing the growing need for additional research space. In the following pages, I lay out both challenges and opportunities for our department to continue its forward progress, to capitalize on our momentum, and propel the quality of our academic programs and opportunities for our students even farther.

This second Vision and Strategy Report builds on our collective accomplishments over the last four years and lays out a plan for the next 3-4 years. In preparing this report I’ve followed three guiding principles:

1. Be bold.
2. Be inclusive.

The report includes specific action items and goals. Achieving these goals will require engagement by faculty and staff. And as we did for the goals laid out in the 2005 Vision and Strategy Report, we will regularly assess our progress.

Maintaining our undergraduate and graduate program rankings among the top-10 public programs nationally will take vigilance as well as vision. Improving our rankings to the top-5 (among public universities) is within our reach. I look forward to working with all of you to achieve our collective goals. It continues to be my privilege to serve as your Department Head.

David V. Rosowsky, Ph.D., P.E., F. ASCE
Department Head and A.P. and Florence Wiley Chair Professor
August 2008
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When I arrived in 2004, I set three goals for the Department:

- To be nationally and internationally recognized for excellence in teaching and research, for innovative programs, and for providing a world-class civil engineering education;
- To be ranked as one of the top-10 civil engineering departments in the country; and
- To be an academic department known for its collegial atmosphere and supportive work environment.

Earlier this year, I was asked as part of a Q&A article appearing in the February 2008 issue of the Department’s Civil Engineer magazine, whether these goals had been achieved. What follows is an excerpt from that article.

“The department has made great strides in the last decade, with much of the expansion and the recognition that comes with aggressive hiring and promotion of our programs occurring since the start of the Faculty Reinvestment Program. We are clearly regarded, by both industry and by our peer institutions, as one of the top civil engineering departments in the country. We have a reputation for maintaining very high standards for teaching while at the same time conducting leading edge research in civil and ocean engineering.

Programs recognized as innovative include our broad array of senior capstone design experiences and one-year Master of Engineering programs, our summer study abroad programs (which can be coupled with internships), and our new faculty mentoring program. We regularly host representatives from universities around the world seeking to grow their civil engineering programs or develop ties with our department (for student exchanges, research collaborations, or joint degree programs) – clear evidence that we are indeed a world-class department and leader in civil engineering education.

The most recent U.S. News and World Report rankings place us in the top-10 for both undergraduate and graduate programs in civil engineering. Among our peer public institutions, we are ranked seventh (undergraduate) and eighth (graduate) in the country. We are in excellent company, now ranked among the very best CE departments in the country, a group that includes University of Illinois, UC Berkeley, and Georgia Tech.

Finally, I believe we have achieved our goals of creating both a Culture of Excellence and a Community of Scholars. This community includes a dedicated faculty and staff who are committed to providing the best possible education for our students. We continue to attract our top candidates for faculty and staff positions, and we provide support and development opportunities wherever appropriate. And we are earning a reputation among other departments on campus as being collegial, progressive, innovative, and a nice place to work. As Head, these things are as important to me as improving in the rankings, elevating student quality, or increasing our extramural research. So I would say the three main goals have been achieved, but we must continue to work toward these objectives in the years ahead. As with many goals, it’s far easier to slip backward than to move forward.”
PROGRESS SINCE 2004

The 2005 Department Head Report, *Vision and Strategy for the Department of Civil Engineering*, included a set of very specific goals. That report’s appendix listed specific measures for assessment of progress made toward each stated goal. Over the last three years, progress has been periodically assessed to determine (1) when a goal has been achieved, (2) when additional efforts and/or resources should be directed toward achieving a goal, and (3) when a goal should be revised or updated.

While the assessment of progress toward some goals is difficult to measure, and some metrics are more straightforward than others, there is clear evidence that we indeed have made tremendous progress toward achieving our objectives in three areas: (1) advancing the department, (2) ensuring resources for the future, and (3) creating a work environment based on mutual respect and common goals. Consider the following goals established in the 2005 report:

- **Reduce teaching loads for research active faculty to levels consistent with our peer institutions.**
  Following a realignment of teaching expectations and assignments, the standard teaching load for faculty engaged in research is three courses per year. With reductions for administrative service and buy-outs, the average teaching load across all faculty in 2007-08 was below 2.9 courses per year.

- **Annual research expenditures of $200K per faculty member (tenure and tenure-track).**
  Annual research expenditures per faculty member increased from $170K in 2004 to $197K in 2007.

- **Maintain or improve the rankings of our undergraduate and graduate programs.**
  Our USN&WR rankings among public institutions have improved to 7th (undergraduate) and 8th (graduate).

- **Complete reports by (1) Task Force on the Undergraduate Experience, and (2) Task Force on the Graduate Experience.**
  Two task forces were appointed in Fall 2005 and the reports were completed and submitted to the Department Head in April 2006. These two task force reports, along with the 2005 Vision and Strategy Report, served as guide documents and formed the basis for most decisions relating to undergraduate and graduate programs since early 2006.

- **Ensure we have adequate office and laboratory space to meet our faculty growth plans.**
  Since 2004, we have acquired more than 9000 sq. ft. of new office space and nearly 19,000 sq. ft. of new laboratory space.
Increase discretionary endowment to allow us to offer highly competitive startup packages when recruiting new faculty. The Civil Engineering Excellence Fund has increased significantly since 2004, enabling our new faculty startup packages to be among the most competitive in the country.

Increase the number of awards in the Department.
In addition to the Zachry and Birdwell Awards for Teaching Excellence, the Outstanding Staff Award, and the Allen Ludwig Outstanding Senior Award, the following awards have been established: Truman R. Jones Outstanding Teaching Award (Graduate-level), Civil Engineering Outstanding Faculty Research Award, Excellence in Doctoral-level Research Award, Outstanding Graduate Teaching Assistant Award, Outstanding New Staff Award, and Outstanding Academic Achievement Award (for Civil Engineering Department graduates who have maintained a 4.0 GPR).

Increase the number of PhD students in the Department.
Our number of PhD students has increased from 123 in 2004 to 164 in 2008. As a percentage of the total graduate enrollment, this represents an increase from 35% in 2004 to 40% in 2008.

Increase the number of graduate applicants.
Graduate applications have increased significantly over the last four years, from 435 in 2004 to 687 in 2008 (a 58% increase). This can be attributed, at least in part, to aggressive promotion and marketing of our graduate programs and various degree options.

Develop a plan for maximizing the utility of available funds (teaching assistantships and fellowships) to support ME, MS, and PhD students.
New policies are in place to prioritize use of GAT funds and fellowships funds. Allocation decisions for GAT funds are made by the CE Graduate Office while all fellowship decisions are now made at the division/area level. Priority is placed on (1) providing competitive packages for students pursuing research-oriented degrees (PhD and MS), and (2) using fellowship funds in combination with GAR or GAT funds.

Ensure competitive research assistantship offers that are consistent throughout the Department.
Policies for GAR appointments across the Department have been established, are reviewed every two years, and are updated as needed to remain competitive with our peer institutions. Effective GAR packages (stipend plus tuition/fees) have been aligned between the Department and TTI. Our combined GAR + fellowship packages for top doctoral students should meet or exceed the average among our peer institutions.

Increase undergraduate scholarships and graduate fellowships awarded by the Department.
The Department awarded $203,400 in undergraduate scholarships in 2004-05. In 2007-08, the Department awarded $300,200 in scholarships, an increase of 48%. The Department awarded $72,600 in graduate fellowships in 2004-05, with the majority of funds coming from AUF or other discretionary accounts. In 2007-08, the Department awarded more than $220K in graduate fellowships, an increase of more than 300%. Nearly all of these funds came from endowments or other gifts to the Department.

Successfully fill all reinvestment and replacement faculty positions available to the Department in a timely manner. Faculty hiring has been highly successful. In all, 25 new faculty members have been hired in the Department since the start of the Reinvestment Program in 2004. In nearly every case, the hiring process was completed (offer accepted) by the end of March each year, well ahead of many other universities.

Increase the number of students participating in undergraduate research.
While this is difficult to assess as numbers have not historically been tracked, as of 2007-08 more than 50 students were participating in undergraduate research experiences in the Department. This is now tracked regularly as part of the Faculty Annual Review process.
GRAND CHALLENGES AND CIVIL ENGINEERING

In February of 2008, the National Academy of Engineering released its list of 14 Grand Challenges for Engineering (full information available at: www.engineeringchallenges.org). Beginning with the statement, “Throughout human history, engineering has driven the advance of civilization,” the NAE challenges engineers to develop solutions in four broad areas of human concern: sustainability, health, vulnerability, and joy of living. Visitors to the NAE website were asked to rank the relative importance of the 14 grand challenges. While the ranking will continue to be updated, as of June 30, 2008, more than 25,000 votes had been received resulting in the following ranking:

1. Make solar energy more economical
2. Provide energy from fusion
3. Provide access to clean water
4. Reverse-engineer the brain
5. Advance personalized learning
6. Develop carbon sequestration methods
7. Engineer the tools of scientific discovery
8. Restore and improve urban infrastructure
9. Advance health informatics
10. Prevent nuclear terror
11. Engineer better medicines
12. Enhance virtual reality
13. Manage the nitrogen cycle
14. Secure cyberspace

What strikes me is that Civil Engineers are at the core of technical specialties that will be required to address many of these critical challenges. In recent years, perceptions were that only the “nano-, bio-, and geno-“ fields held promise and the need for more engineers. Civil Engineering was widely viewed as a mature field that was not likely to be on the cutting edge of most significant future advances. This is no longer the case.

Grand Challenges such as those suggested by the American Society of Civil Engineers, NAE, and other groups could be re-cast into the following list of four critical areas:

- ENERGY
- WATER
- TRANSPORTATION
- SUSTAINABLE INFRASTRUCTURE

This more focused list draws attention to our fields and underscores the need for Civil Engineers and Ocean Engineers. This list also can be used to help focus our efforts on research with the greatest potential impact and guide new initiatives in the Department. These areas are not independent, but are in fact highly interconnected. Models and tools for analysis at the broader system level will be needed to address these interconnectivities rationally. And Civil Engineers and Ocean Engineers will need to partner with other fields to analyze impact, develop solutions, and implement the best policy.

Regardless of how you frame the most pressing challenges we face, engineering solutions will depend heavily on our graduates, our research, and our leadership.
I first proposed these parallel themes for the Department in 2004. The first theme mirrored a similar theme at the College and University levels while the second was introduced specifically for the Department. I refer to these themes in my discussions with current, former, and prospective students around the State and they appear in a variety of promotional materials for the Department. These themes galvanize our collective efforts and keep us focused on our goals. Texas A&M University is committed to a **Culture of Excellence** across all of its programs. Building a **Community of Scholars** is intended to engage all faculty and staff in the Civil Engineering Department, reminding us that we are an academic organization and that our two primary roles are education and scholarship.

These two themes have served us well over the past four years and have become, to some extent, a part of the fabric of our department’s culture. I will continue to promote our accomplishments within and beyond the University using these themes as a backdrop.

To have a department as large as ours with a common, unifying goal is perhaps unusual. To say that any group of more than 70 faculty and 30 staff operates as a “community” may also be unusual. But as has been pointed out to me so many times, our department is a family. We are more than a place to come to work. Our family has grown in recent years, our scholarly productivity has increased, and our national rankings have improved. I remain committed to fostering a culture of mutual respect among all faculty, staff, and students and to ensuring an environment conducive to learning and discovery. Maintaining our family environment, our **Community of Scholars**, is essential for our continued advancement.

“I remain committed to fostering a culture of mutual respect among all faculty, staff, and students and to ensuring an environment conducive to learning and discovery.”

**Action item:** Continue to promote the two parallel themes, Culture of Excellence and Community of Scholars, to highlight the rich and productive academic environment in the Department.
We have reached our capacity for office space in the Department. Officially, the Department occupies space in nine different buildings. Faculty offices are located in three buildings: CE/TTI, WERC, and the CE Building. Graduate student offices are located in these three buildings plus the Hydromechanics Lab, CVLB, and the Haynes Coastal Lab. In addition to these six buildings, the Department occupies space in Zachry, the Concrete Materials Lab Building, and Reed-McDonald. We have been able to accommodate the faculty expansion over the last four years through the acquisition of new space in CE/TTI and WERC, faculty retirements, and reassignment of some graduate office space.

While the faculty size is expected to remain more or less constant in the foreseeable future, we are unable to accommodate new senior faculty requiring larger office areas, clustering of faculty groups around common areas, or assignment of visiting scholar or post-doctoral researcher office space close to the faculty.

The need for additional graduate student office space appears even more critical. At present, our first priority is providing appropriate office space (desk in a shared office) for every PhD student. We will also provide shared-occupancy space for graduate teaching assistants who have responsibilities that include student contact (e.g., lab TA’s and TA’s holding office hours). The next priority, for any remaining desk/office space, is to provide space to research-masters students (e.g., MS with thesis). Finally, as space permits, we can provide office space to non-thesis Master’s students. With more than 400 graduate students in the Department, it is not possible for every graduate student to have a desk.

In Fall 2008, the Division Heads will be asked to compile their current space usage and projected needs for the next five years. This will include faculty and graduate student offices, instructional labs, and research space. The College is facing significant space challenges as well. The new Emerging Technology and Economic Development (ETED) building is expected to be completed early in 2011. At that time, it may be possible to acquire office space in Zachry or WERC as the new building is occupied. However until that time, only the following possibilities exist and we must consider each to help relieve our space shortfall:

1. Reconfigure and furnish common areas or underutilized lab space for graduate student offices. (CE/TTI, CVLB, CE Building, Concrete Materials Lab Building, Hydromechanics Lab)

2. Request additional space in Reed-McDonald or the adjacent Graphic Services Building.

Additional faculty and student office space is expected to become available in the next 2-3 years as (1) the new TTI building is completed in the Research Park and selected TTI offices are relocated from CE/TTI, and (2) the new ETED building is completed and occupied by the College. The latter may result in space becoming available in Zachry and WERC.

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Action item: Complete current and projected space needs assessment.

Action item: Acquire and/or renovate new space for graduate student offices.

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1Based on space availability in these buildings as of late Summer 2008, we may be able to accommodate up to 70 graduate students in high quality office space.
The significant growth in our faculty in the last four years, and the increased level of laboratory-based research particularly in the areas of structures and materials, has pushed us to capacity in terms of research space. The environmental engineering, geotechnical engineering, coastal engineering, and ocean engineering labs are also at or near capacity. Given the current space constraints, and with informed projections for additional lab space needs, the Department should explore the potential for constructing a new laboratory building. There are trends in teaching and research laboratories toward creating multi-purpose space, collaborative space, and flexible space. The move toward interdisciplinary research has created a new generation of laboratories including, for example, nanofabrication labs that facilitate research across many engineering and science disciplines. An exploratory committee will be appointed to review our current laboratory usage, projected needs in the next 10-20 years, and laboratory facilities at our peer institutions (with a focus on those facilities recently constructed). As a next step, based on a review of this committee’s findings and recommendations, the committee will be reconstituted as a task force to develop a preliminary plan and budget for a new Civil Engineering Laboratory Building. Once vetted and approved by the faculty, as well as by the College and University to assess their potential for financial support, planning can commence for a targeted, multi-year capital campaign.

This is an ambitious goal that will require significant external support to realize. However the investment in new, state-of-the-art, adaptable laboratory space is critical to ensuring we remain among the top civil engineering departments in the country.

“The investment in new, state-of-the-art, adaptable laboratory space is critical to ensuring we remain among the top civil engineering departments in the country.”

Action item: Appoint New Lab Building exploratory committee.
GRADUATE TEACHING ASSISTANTS

The State does not provide funds for graduate teaching assistants (GAT’s). All GAT support is therefore provided by the Department through a combination of sources including indirect return, salary savings from faculty buy-out, and discretionary funds (e.g., endowments and other gift accounts). Recognizing the need to increase our number of teaching assistants as our enrollment has grown, the Department’s annual support for GAT’s has increased from $320K in 2004 to $400K in 2008 (an increase of 25%). As our graduate program has grown, we are now seeing some graduate courses with 50 or more students. Many of our graduate courses routinely enroll more than 30 students. We must continue to increase the number of GAT’s in the Department.

The Department also provides support (between $20K and $30K) for a small number of graders each year. Graders (typically seniors or graduate students) are paid hourly to grade homework assignments only. For some lower-level courses, this model makes good sense. The Division Heads have been working with their faculty and with the Director of the Graduate Office (who oversees the TA assignments) to identify those courses for which a grader will suffice. This has helped us provide grading support to more classes, thereby extending the available resources to support GAT’s.

We should create more opportunities for our PhD students to gain teaching experience. Starting in 2007, we began placing a small number of highly qualified PhD students (nearing the completion of their program) as instructors in lower-level civil engineering courses at Prairie View A&M University. Based in part on the success of that program, we started a program in our own department in 2008 in which a highly qualified and carefully screened PhD student could teach a lower-level course during the summer. The success of this trial program, as measured by the course evaluations and student feedback, suggests this is something we should continue. The Department should evaluate the potential of expanding this concept of a Teaching Fellow and allowing carefully screened PhD candidates to have sole charge of a course during the academic semester. At most, we might expect only one or two highly qualified PhD students to be selected to teach in any given semester. Teaching Fellows would be mentored and supervised closely by a faculty member in the Department. These types of teaching experiences (both at PVAMU and TAMU) will be of tremendous value to the PhD student when applying for faculty positions.

Action item: Develop new resources to increase the number of GAT’s the Department can support each year, with a goal of increasing our support to $500K per year by 2012.

Action item: Create Teaching Fellow Program to formalize teaching opportunities for outstanding PhD students having interest in obtaining a faculty position.
PARTNERSHIP WITH TTI

The Texas Transportation Institute (TTI), an agency falling under the responsibility of the Vice Chancellor for Engineering, is a valued partner for Civil Engineering. Over the last four years, our department’s relationship with TTI has strengthened. We have faculty members serving in leadership positions in corresponding TTI divisions (constructed facilities, transportation, materials), serving effectively as liaisons between the Department’s academic programs in teaching and research and TTI’s programs in applied research and technology transfer. A new policy for indirect cost return to the Department and the faculty PI’s has been implemented for large research projects administered by TTI but led by CE faculty. Faculty and students have been able to access increased research support from a second University Transportation Center (UTC) administered by TTI. In addition, TTI has generously supported the Department in countless ways ranging from their role as founding partner, along with Civil Engineering and TEES, in the new Advanced Characterization of Infrastructure Materials (ACIM) lab, to providing additional startup support for new faculty.

TTI have a long history of working together, I don’t believe we’ve ever enjoyed such a healthy and productive relationship.

The future funding picture through TTI is uncertain and faculty, like researchers at TTI, must anticipate change. Faculty who have relied heavily on funding from TxDOT or the UTC’s should seek new sources of support to supplement or replace (if it becomes necessary) these historically stable sources.

TTI itself is seeking to expand its funding base as well as the range of projects in which it becomes involved. Within the university they are working closely with the Bush School of Government, the Mays Business School, the College of Architecture, and a number of academic departments outside the College of Engineering. Recognizing the importance of linkages between transportation and policy, materials and sustainability, infrastructure and security (just to name a few), our Department, along with TTI, should seek new partnerships and new collaborations in teaching and research with other campus units.

Since his appointment in 2007, I have worked closely with TTI’s director, Dr. Dennis Christiansen, to enhance our working relationship. We share common goals for our respective organizations, we recognize the extraordinary potential for collaboration, and understand the strengths each of our organizations brings to a research partnership. Although Civil Engineering and

“Although Civil Engineering and TTI have a long history of working together, I don’t believe we’ve ever enjoyed such a healthy and productive relationship.”

Action item: Continue to leverage intellectual, physical, and financial resources with TTI to expand research capacity and develop new opportunities.
The Civil Engineering Staff is essential to our collective success as a teaching and research organization. As with any group of professionals, maintaining a productive staff requires hiring capable people, providing an environment that nurtures their professional development, recognizing contributions and rewarding excellence.

In early 2004 the Department experienced a modest reduction in force as a result of budget constraints across the University. After reviewing options, the Department decided to accommodate the mandated cuts through scheduled retirements without full replacement of staff positions. At the same time, the University was preparing to embark on ambitious faculty hiring as part of the President’s Reinvestment Program. While challenging, the Department has emerged leaner and more efficient in many senses. Support functions have been centralized, fewer but more qualified people have been hired into technical positions, office areas have been made more efficient, and we have leveraged limited academic (State) monies with research funds more under our control. Since the reduction in force in early 2004 and even with the challenges in getting approval for new staff positions during the Reinvestment period, we have been able to increase the academic and research support staff by 19%, from 26 to 31, between 2004 and 2008.

Staff engagement and recognition have been priorities in the last four years. I meet twice a year with the entire staff to update them on Department activities and plans, to solicit input and feedback, and to provide a forum for suggesting improvements in our operations. I also host breakfasts or lunches with smaller groups of staff a few times each year. In 2006, we created the CE Outstanding New Staff Award, presented to a staff member in his/her first two years who has made outstanding contributions to the Department. This new award is presented annually at the same time as the CE Outstanding Staff Award. And while retaining quality staff can be challenging, given the competition from outside the University and even elsewhere on campus, we have had a relatively small turnover in key staff positions in the last few years. In some cases, staff turnover indicated a problem that needed to be corrected and steps were taken (e.g., realignment of staff responsibilities, addition of staff). I believe the low turnover reflects the level of satisfaction most of our staff feel in their jobs. The depth of our applicant pools for staff positions further reflects the Department’s reputation for providing a supportive and congenial work environment.

We must continue to foster a work environment that is respectful of all, that encourages professional development, and that recognizes outstanding contributions. We must engage our professional staff and ensure they feel valued. And we must continue to hire the most highly qualified staff. Our future success depends on it.

Action item: Host a Staff Roundtable meeting once a semester to engage staff in the Department’s mission, solicit feedback and input, and provide a forum for open discussion.

3The academic and research support staff includes those working in the academic Divisions, the Department Head Office, the Undergraduate Student Support Office, the Graduate Office, the Business Office, the Facilities Office, the IT/Systems Office, and the teaching and research lab technicians. This does not include post-docs, TEES research assistants/associates, or other full-time research staff.
The Department has a long history of teaching excellence. We are recognized within the College for having a strong commitment to undergraduate and graduate teaching. Our efforts to assess and ensure teaching effectiveness start with the faculty hiring process. We hire only those faculty we believe will be effective in the classroom and who have a demonstrated interest in teaching. Our recent faculty hiring record confirms that excellence in teaching and excellence in research go hand-in-hand. Throughout the probationary period, the Department’s peer teaching review (PTR) policy ensures regular evaluation of a new faculty member’s classroom teaching and provides valuable feedback. Finally, the teaching effectiveness of every faculty member is monitored and reviewed as part of the Faculty Annual Review process. As further evidence of the importance placed on teaching, the Department presents three different teaching awards annually. A number of our faculty also have been selected to receive highly visible College and University level teaching excellence awards (see below).

The Department’s PTR policy was last revised in 1998. With the significant increase in the size of our faculty, and the commensurate increase in number of reviews conducted each year, the burden placed on PTR review committee members has increased substantially. It is appropriate that this policy be reviewed and revised to reflect changes in classroom instruction, teaching methodologies, student learning expectations, and even faculty composition. A task force will be appointed to review and suggest revisions to the PTR policy. These suggestions will be brought to the full faculty for approval.

### College and University Awards to Civil Engineering Faculty, 2004-2008

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<th>Year</th>
<th>Award Title</th>
<th>Recipient(s)</th>
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<td>2004</td>
<td>Montague-Center for Teaching Excellence Award – University Level</td>
<td><strong>Kelly Brumbelow</strong></td>
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<tr>
<td>2004</td>
<td>Association of Former Students Teaching Award – College Level</td>
<td><strong>Kelly Brumbelow</strong></td>
</tr>
<tr>
<td>2005</td>
<td>Lockheed Martin Aeronautics Company Excellence in Engineering Teaching Award – College Level</td>
<td><strong>Giovanna Biscontin</strong></td>
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<tr>
<td>2006</td>
<td>Association of Former Students Distinguished Achievement Award for Individual Student Relations – University Level</td>
<td><strong>Eyad Masad</strong></td>
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<tr>
<td>2007</td>
<td>Lockheed Martin Aeronautics Company Excellence in Engineering Teaching Award – College Level</td>
<td><strong>Lee Lowery</strong></td>
</tr>
<tr>
<td>2008</td>
<td>Association of Former Students Distinguished Achievement Award for Teaching – University Level</td>
<td><strong>Luciana Barroso</strong></td>
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<tr>
<td>2008</td>
<td>Montague-Center for Teaching Excellence Award – University Level</td>
<td><strong>Scott Socolofsky</strong></td>
</tr>
<tr>
<td>2008</td>
<td>Charles H. Barclay, Jr. ‘45 Faculty Fellow – College Level</td>
<td><strong>Mark Burris</strong></td>
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Action item: Appoint task force to review and revise (if necessary) the Department’s PTR policy.
Our “core practice” is educating students to become civil engineers and ocean engineers. We strive to produce work-ready graduates, many of whom go on to become professional engineers and leaders in their respective professional communities. Our focus must remain on ensuring the quality of our academic programs. Dedicated faculty, pride in our rich history of educating civil engineers, and our steadfast commitment to continual assessment embodied in the ABET process all help us maintain this focus.

Students are becoming more savvy customers. They expect, and actively seek out, experiences that will enhance their academic programs and better prepare them to become engineering professionals. As student quality improves, across the university and within the Department, we can challenge our top students even more. We should foster cross-cutting academic programs that put our students together with those in other majors to address complex problems. We should encourage our students to participate in service-learning programs and to become involved in their communities. Finally, we should prepare our graduates to work in the global economy by exposing them to other cultures and providing opportunities to travel and study internationally. Many of these ideas echo themes presented in the Department’s 2006 report by the Task Force on the Undergraduate Experience.

**ENHANCING UNDERGRADUATE STUDENT EXPERIENCES**

Our “core practice” is educating students to become civil engineers and ocean engineers. We strive to produce work-ready graduates, many of whom go on to become professional engineers and leaders in their respective professional communities.

Action item: Create an undergraduate honors experience for our best students. One promising model appears to be built around a 5-year BS/MEng program.

Action item: Explore certificate programs (using the College’s new project management certificate as a model) in public policy, international business, sustainable design, and other cross-cutting fields.

Action item: Explore the possibility of an interdisciplinary capstone experience with other departments or colleges.

Action item: Continue to expand summer study abroad opportunities and resources for our students.

Action item: Provide recurring financial support for Engineers Without Borders, Engineering Projects in Community Service (EPICS), Habitat for Humanity, and other service-learning based activities at A&M.

Action item: Create a lecture series in which highly placed engineers working in government and the public sector are invited to speak to our students, to complement the many existing programs that bring practicing engineers and corporate leaders to campus.
Undergraduate student quality continues to rise. Students seek new challenges that complement their course-based learning. More of our top students are considering graduate study. These trends all point to the need to create meaningful research experiences for our undergraduate students. The integration of undergraduates in our research programs not only adds value to the education of these students, but also increases research productivity, excites high achieving students about research and graduate study, and creates a cadre of well prepared students for our graduate program.

Undergraduate research supervision must be supported and valued. The Department should develop resources to encourage student participation and faculty supervision. Associated opportunities to highlight our undergraduate research, such as symposia, publications, or travel to professional conferences also should be supported.

Action item: Create program to make available support for undergraduate research opportunities to faculty who receive federal grants through a competitive review process. Modeled after the NSF REU supplement program, this support is more or less automatic to those faculty requesting funds to augment federally funded projects.
The combination of the increased cost of attendance and increased undergraduate enrollments (both in Civil Engineering and Ocean Engineering) has decreased the “power” of our current undergraduate scholarship endowment. At present we are providing some form of departmental scholarship (merit-based) to about 12% of our undergraduate students, and the average scholarship is about $2300 per year. The estimated total costs for an undergraduate to attend A&M in 2008-09 are about $20,000 for in-state and $34,000 for out-of-state students. The Department must increase endowments for undergraduate scholarships.

Action item: Develop new resources to increase the number of scholarships the Department awards each year, with a goal of being able to provide scholarships to 15% of our undergraduate students, with an average award of $3000, by 2012. This will require increasing our total scholarships awarded from $300K to $540K annually, an increase in scholarship endowment from $6M to $10.8M.

Action item: Work with other university offices to create a system allowing each office to view scholarships offered to applicants. This level of “transparency” does not presently exist at A&M. Since each office has the same objective, namely attracting a diverse group of the best and brightest students to A&M, we all stand to benefit from knowing one another’s plans. Such a system will allow the most effective leveraging of scholarship funds and enhance our ability to recruit top students. Once implemented, such a system can (and should) become a model for adoption across the University.

Note that students may also be receiving scholarships, either merit-based or need-based, from the University, the Corps, the Honors College, the Office of Scholarships and Financial Aid, or other units on campus.

Many schools, for example, cite the number of their students receiving some form of financial assistance and the average size of the award. Without the proposed centralization of information, despite the significant scholarship support provided to our students, Texas A&M University cannot utilize this competitive advantage.
The Department does an excellent job of providing our students with access to leaders from industry through Professional Day, student chapter events, capstone design and other courses. By contrast, our students have relatively little contact with the Department’s leadership. Such interactions not only provide a conduit of information from the students to the Department, but they help to inform students of our progress and engage them in shaping our future. Creating this sense of pride and ownership is an important first step in creating a lifetime of engagement with the Department.

As Head, my interaction with students is unfortunately limited. This is in part due to the nature of the position and the demands of my schedule. However, I will also admit this is due in part to the conscious decision to focus my efforts largely on the faculty. I am fortunate to work with so many outstanding faculty who are dedicated to the well being of our students and our academic programs. I realized early on that it would not be wise to attempt to micro-manage or reform this system that worked so well, but rather my best course of action would be to provide these faculty and programs with continued support and resources. As a result, my interactions with our students (now totaling close to 1600) are limited to monthly Civil Engineering Student Advisory Council (CESAC) meetings, department events such as Professional Day and the Civil Engineering Scholarship and Fellowship Banquet, and occasional participation at a student chapter meeting.

(I try to speak to the ASCE Student Chapter once a semester, for example.)

In order to facilitate broader student access to the Head, I held the first “Town Hall Meeting with the Department Head” in the Spring of 2008. This event was organized by the ASCE Student Chapter with assistance from some of the other student chapters. Held in the early evening, this event attracted about 100 students, both undergraduate and graduate, and the spirited dialogue lasted for about 90 minutes. I hope to host a similar Town Hall Meeting each semester.

I’ve considered a number of other possible events, activities, or initiatives that could increase my interactions with students. The two most promising appear to be:

1. Teach an undergraduate seminar class (one credit elective), “Dialogue with the Department Head: Education, Ethics, and Sustainability,” once a year. Essentially this would be a facilitated seminar series with guest speakers. The DH would serve as convener and moderator for the invited speakers, to ensure student participation and discourse both with the Head and the speaker, and also would serve as the speaker for at least a few of the weeks.

2. Select one course at each of the sophomore, junior, and senior levels, and with permission from the instructors, take one class meeting in the semester for “Dialogue with the Department Head.” This could be done, for example, in the Fall semester for Civil Engineering courses/students, and in the Spring semester for Ocean Engineering courses/students. While this relies on faculty willingness to free up one class period, I believe the discourse would be productive and valuable on many levels.

The second option appears to be the easiest to implement and also reaches a greater number of students.

Action item: Hold a Town Hall Meeting with the Department Head once a semester.

Action item: Establish a Dialogue with the Department Head program to reach both Civil Engineering and Ocean Engineering students.

Examples have included new resources for the Undergraduate Student Services Office, increased funds for graduate teaching assistants, new awards for students graduating with a 4.0 GPA, support for the new CE Aggie Ambassadors Program, new teaching awards for faculty and graduate teaching assistants, new resources to support student chapter activities and teams, teaching release for faculty participating in Center for Teaching Excellence programs, resources for student advising, and commissioning and then following many of the recommendations made by the Task Force on the Undergraduate Experience and the Task Force on the Graduate Experience.
SEEKING PARTNERSHIPS WITH THE BEST INSTITUTIONS WORLDWIDE

The Department has a number of Memoranda of Understanding (MOU’s) with universities around the world, many inactive. Typically, these agreements are initiated by other schools owing to the international reputation of Texas A&M University and our recognition as a leading Civil Engineering program. In the last four years we have been far more selective in signing MOU’s. A small number of mutually beneficial MOU’s with leading international universities is far more valuable to the Department than a collection of “in name only” agreements.

We should continue to seek partnerships with leading international universities. The benefits must be bilateral and can include (for example) student exchanges, faculty collaborations, and pipelines to graduate programs. Top engineering programs in the US are partnering with the very best institutions worldwide, in part to create synergies between laboratories and research teams but also in hopes of attracting top graduate students. Toward the latter goal, we should align ourselves with civil engineering and ocean engineering programs at the very best universities in China and India. There are world-class universities elsewhere with whom we should explore agreements. Target regions include Europe, Central and South America, and the Arabian Gulf. Key features to an MOU: (1) both institutions derive benefit, (2) agreements are initiated at the individual faculty level but provide benefit to groups of faculty and/or students, and (3) they are reviewed regularly and renewed only if they are productive.

Our reputation makes us an attractive partner for international MOU’s. As our international reputation grows, we will have more opportunities for such agreements. These agreements take time and some resource to maintain. We should be selective and focus on the quality and not the quantity of these international partnerships.

Action item: Seek partnerships with leading international universities.
PLACING GRADUATES IN ACADEMIA, GOVERNMENT, AND PUBLIC SERVICE

ACADEMIA
One measure of the quality of an academic department is the number of PhD graduates it places as faculty members at leading universities around the world. We have a strong record in this area, having placed more than 130 PhD graduates as faculty members since 1962 (when we started tracking this information). Since 2004 alone we have placed 15 PhD graduates as faculty members. Our PhD program has grown to a record size in the last few years. With more than 150 active PhD students in our department, we should anticipate graduating on the order of 25-30 PhD students per year. It would certainly not be unreasonable to have as our objective the placement of 5-10 PhD graduates per year in faculty positions.

This is a cyclic phenomenon. As we attract better doctoral students, our research productivity increases, we produce graduates who are more competitive for faculty positions, our reputation improves, we attract better doctoral students, and the cycle repeats. Key to continuing this cycle and maintaining our reputation as a top civil engineering department is the placement of our graduates as faculty members. One key to improving our department’s ranking (for example, to top-5 status) will be increasing the number of graduates we place as faculty members at leading universities worldwide.

We should be aggressive in recruiting the highest quality graduate students, identifying as early as possible those having an interest in pursuing academic careers. We should mentor those graduate students specifically toward successfully competing for faculty positions. Finally, research-active faculty should place a priority on PhD student supervision and especially those students having an interest in a faculty career.

GOVERNMENT AND PUBLIC SERVICE
Civil engineers will increasingly be called upon to help solve some of most pressing problems and greatest challenges facing our society. The National Academy of Engineering, ASCE, and other organizations have identified grand challenges we must address to ensure quality of life, economic prosperity, and even our long-term survival as a species. At the risk of oversimplifying, we might reduce the causes of all of these challenges to two “inconvenient truths” –

1. Human beings are negatively impacting our planet’s ability to sustain itself (global climate change).
2. We are fast running out of non-renewable resources, e.g. fossil fuels (energy).

Stated another way, human beings have created the problems we now face and will face in the future. These are complex problems that will require innovative and integrative solutions.
Civil engineers will be at the forefront of efforts to create technologies that address critical needs and to provide solutions that are sustainable and responsible. To do this, however, will require that civil engineers work at high levels of government and relevant public agencies, where the decisions are made. Civil engineers should pursue elected office at the local, state, and national levels. Civil engineers, armed with both their technical knowledge and their commitment to serving the public good, can be most effective when they work at the level at which critical decisions are made.

We should explore options to enlighten our students to the prospects of careers in public service. We should create and promote co-op and internship experiences with government organizations and public agencies. We should bring speakers to campus who have backgrounds in civil engineering and who work at high levels of government. We should explore developing undergraduate certificates and graduate degree options that combine civil engineering and public policy.

Our department is one of the leading producers of graduate civil engineers in the country and Texas A&M University is an institution that prides itself on producing leaders in all fields. We should embrace the challenge of placing more of our graduates in government and public service, further extending our reach and increasing our impact.

“The Department is a proud sponsor and avid supporter of the Association of Civil Engineering Doctoral Students (ACE-DOCS), a graduate organization that started in 2007.”
As our field has changed and demand for graduate education among practicing engineers has increased, there is clearly a market for a major engineering program such as ours to serve a non-traditional student market. And once the off-campus barrier is crossed using distance delivery technologies (i.e., not considering off-site/real-time instruction), there is virtually no limit to how far our instruction can reach. But we will first need to examine the market potential, the investment in initial resources, the competition, and our own interest in moving beyond traditional instructional delivery (i.e., on-campus, classroom instruction).

This is an area in which we have been relatively inactive. In part, this may have been due to our large on-campus program and historically heavy teaching loads. But this may also be due, in part, to our geographic location and perceived lack of a market for anything other than on-campus instruction.

While this may have been the case ten years ago, recent years have seen tremendous advances in technologies to facilitate non-traditional course delivery. Distance to a major population center no longer limits our ability to reach target students. While Texas A&M University as an institution is not generally regarded as a leader in distance education, there are some units within the university that have had successful distance learning programs for a number of years. Civil Engineering has largely been uninvolved in this arena.

Moving seriously toward distance-delivery of courses requires a major investment of resources (personnel, equipment, development time, and so forth). I am not an advocate for moving in this direction nor am I an advocate for extensive web-based learning initiatives to be led by the Department. This may be better suited to other types of institutions, for example those without large research enterprises or those entirely dedicated to distance learning.

On the other hand, we should begin exploring opportunities to deliver on-site instruction beyond our campus. By bringing real-time instruction (at the graduate level) to other audiences, we extend our reach and our impact, and further enhance the national and international reputation of our Department.

There are numerous examples, at A&M and elsewhere, of successful models for doing this. These include “executive-MBA” style programs (often a combination of evening, weekend, and/or week-long intensive courses) and “short course” formats in which a full course is condensed into (e.g.) four weeks or two two-week sessions.

**Houston** represents a large potential market and we are often asked about course delivery plans in this metro area. While it may be difficult to move into the downtown area, Texas A&M University has facilities for on-site instruction in the Woodlands and in Galveston.
Qatar represents another tremendous opportunity to reach a rapidly growing market of engineers in the Gulf Region. Texas A&M University at Qatar (TAMUQ) has been in operation for five years now and is operating in a new, state-of-the-art building with capacity for a wide range of different instructional technologies. The University is exploring options for course delivery by College Station faculty that will likely include “short course” formats and combined on-site/distance delivery.

Other possibilities include China and India, in which many top universities are beginning to offer degree programs and/or short-courses. TAMU is exploring locations in China in which to establish a permanent presence.

Texas A&M University enjoys an outstanding international reputation (even better than our reputation in this country, according to some). Our “brand recognition” overseas offers opportunities many other schools do not have.
ENGINEERING AND PUBLIC POLICY

Engineers are being called upon to help solve increasingly complex problems affecting broad sectors of our population. Many of the problems touch people on a personal level. Technological solutions to societal problems – such as crumbling urban infrastructure, availability of water, rapid growth along the coastal margin, air quality, transport of goods and services, or exploration for new energy sources, to name a few – will require civil and ocean engineers with knowledge of social and political sciences, business, and policy. A number of the top universities in the country have established programs combining engineering with public policy. Many others are looking at ways they can be effective in developing such programs, either within their own institution or through partnerships with other universities.

Texas A&M University is home to one of the nation’s top programs in government and policy, the George Bush School of Government and Public Service. Our faculty already are engaged with colleagues at the Bush School in collaborative research and two Civil Engineering faculty members hold appointments as Fellows of the Institute for Science, Technology, and Policy. Our University has a long history of training leaders and serving the public good. We have a tremendous opportunity to develop programs that combine engineering and public policy that provide direct benefit to our students in Civil Engineering. Given our breadth of faculty expertise, our strong connections with the Bush School (and the Institute for Science, Technology, and Policy in particular), and the fact that civil engineers work in policy-critical areas of sustainable infrastructure, water, transportation, energy, and the environment, our department is well positioned to lead this effort.

As part of its infrastructure policy, ASCE is seeking to ensure that “civil engineers are effectively engaged in and influencing public and private decision-making processes affecting the nation’s infrastructure.”

–ASCE News, July 2008

Action item: Establish a task force to (1) examine existing Engineering and Public Policy programs at other universities, (2) evaluate current course offerings in the Department, the College, and the Bush School that could be part of such a program, (3) develop initial proposals for certificate and masters degree programs, and (4) recommend target dates to begin offering each program.

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7 In 2007, Texas A&M University was ranked #1 among all U.S. universities by Washington Monthly in their poll that focused on tangible contributions to the public interest.

8 Both an undergraduate certificate and a graduate certificate might be considered.

9 This would most likely be a Master of Engineering (MEng) offered through Civil Engineering with a significant number of courses coming from outside the department. It may be appropriate for this degree option to include a project and/or internship experience.
BUILDING FOR THE FUTURE: FACULTY HIRING PRIORITIES

The Reinvestment Program has allowed us to add capacity in a number of strategic areas. These targeted growth areas (in which we have hired new faculty) were identified in the 2005 Vision and Strategy Report as:

- Advanced materials
- Environmental biotechnology
- Transportation systems
- Design and construction integration

In total, 25 faculty were added over a four year period with expertise spanning all areas in the Department. Among the areas added or enhanced were:

- Environmental engineering
- Risk and reliability
- Project finance
- Multi-scale material modeling and simulation
- Coastal hazards

Of course every new faculty member is making an impact on the teaching and research programs in our Department. It will be another few years before the true impact of this aggressive hiring period can be assessed. However early indicators are positive. Class sizes are down, research expenditures are up, graduate applications are up, and PhD enrollment is up. Less tangible evidence, but no less significant, is our increased national recognition and growing reputation as one of the top Civil Engineering departments in the country.

The period of faculty expansion has concluded and we are now operating more or less at steady-state. Future faculty hiring will be approved only for replacement positions, provided enrollment and other metrics justify our requests to the Dean. Our strategy for faculty hiring (both reinvestment and replacement positions) over the last four years has resulted in a balanced and “complete“ faculty (i.e., no significant gaps in area coverage). Future faculty hiring priorities should be established to keep us at the leading edge of our field and create new opportunities for collaboration across engineering disciplines (to address increasingly complex problems). As such, and recognizing the strategic priorities for the College of Engineering, I am suggesting the following broad areas as faculty hiring priorities for the Department in the next 3-5 years:

- Energy (ocean)
- Advanced materials, composites
- Wind engineering
- Sustainable design

"Increasingly, the most significant new scientific and engineering advances are formed to cut across several disciplines."
– Rising Above the Gathering Storm, National Academies, 2007

Action item: Successfully fill all vacant faculty positions with a focus on the areas identified as faculty hiring priorities.
ACCREDITATION AND CONTINUAL ASSESSMENT

I have always been a strong advocate for effective assessment. We are working in an era of unprecedented accountability and requirements for program assessment and accreditation. Our Department is engaged in 12 such activities currently: the ABET accreditation for both our BSCE and BSOE programs, SACS accreditation for the two undergraduate programs (Civil Engineering and Ocean Engineering), SACS accreditation for each of our graduate degrees in both of our program areas, and the OGS Doctoral Program Reviews in both Civil Engineering and Ocean Engineering. These efforts require considerable time and resources, and while the College of Engineering is providing some (non-financial) support, the Department is required to fully resource these mandated activities. That having been said, there are clear opportunities and benefits of our active participation and we must remain both committed to and engaged in these accreditation activities.

The process of continual assessment underlies many of these accreditation efforts. One way to view continual assessment is that it formalizes what many of us already do in terms of critically evaluating our courses, our research programs, and our labs to ensure (1) we are delivering what we promise, and (2) we are operating efficiently, safely, and within State and University regulations. However continual assessment also greatly simplifies the accreditation processes themselves by requiring collection of relatively small amount of data at regular intervals (e.g., annually) rather than a very large and very time-consuming effort at the end of the accreditation period.

Continual assessment efforts, and all other activities in advance of accreditation visits, require faculty participation. The ABET site visits and the Doctoral Program Review site visits, in particular, offer tremendous value to the Department. In the years ahead, we can expect these requirements to continue and perhaps even expand as pressure increases to demonstrate accountability at the University and State levels.

Action item: Continue to work with the College of Engineering to streamline continual assessment processes and to seek assistance in meeting our accreditation obligations.
DEVELOPMENT

The State of Texas supports higher education at above average levels and, as a flagship institution, Texas A&M University continues to receive strong financial support from the State. However, as with many public universities, that level of support as a function of total operating costs continues to decline (below 30% at many of the top public universities including A&M). The distinctions between funding models (and the role of development) at public and private universities continue to diminish. And this trend will continue, with many leading national public universities operating more and more like private institutions, in the years to come.

Our Department enjoys extraordinary support from our Former Students. We also continue to develop new corporate partnerships that provide valuable resources, both financial and otherwise, to many of our academic programs. Development activity continues to increase in magnitude, as the number of former students grows, and in importance, as we rely more and more on external funds to maintain and enhance our programs and our facilities.

I continue to work closely with John Small, the Director of Development for Civil Engineering, to set campaign priorities and reach out to Former Students. John is an employee of the Texas A&M Foundation and also serves as Director of Development for the Department of Biomedical Engineering. One thing that has become clear to me in the last few years is that the scope of our development activities in Civil Engineering exceeds what the two of us can manage. While a case could be made, it does not appear likely that we will have a dedicated development officer for the Department in the near future. As such, I am considering creating the position of Director of Stewardship and Alumni Relations, a new senior staff position in the Department. This person would work closely with the Department Head (TAMU Civil Engineering) and the Director of Development (Texas A&M Foundation) and take a leading role in our many stewardship activities. I have started working with the Foundation to develop a position description and, if the position can be justified financially, I will submit it for approval early this Fall. This is a new direction for the Department, but I believe an important one if we are to responsibly manage our current gifts and their donors, and properly identify and engage the growing number of potential future donors.

Partnership Priorities: 2008-2012 (Campaign goal: $15M in new gifts by 2012)

- Civil Engineering Excellence Fund ($2M)
- Undergraduate Scholarships ($6M)
- Graduate Fellowships ($1.5M)
- Professorships and Chairs ($3M)
- Developmental Professorships ($1M)
- Student Activities and Student Travel ($0.5M)
- Named Laboratories and Classrooms ($1M)
PROMOTING OUR SUCCESS

Action item: Continue to aggressively promote the accomplishments of our faculty, the achievements of our students, and the Department’s collective successes.

Action item: Re-design the Department’s website.

Action item: Create a “Reinvestment Summary” promotional piece for distribution in FY09.

Promotion of the department’s successes, the accomplishments of our faculty, and the achievements of our students is essential to improving our rankings. Historically, Texas A&M University has only modestly promoted its achievements, focusing mainly on audiences within the State. Texas A&M is now a major research university, and as our department moves ever higher in the national rankings of civil engineering programs, we must be proactive in promoting both our research accomplishments and our academic programs. The implications of enhanced visibility, not only for our national rankings (reputation among our professional peers), but for student and faculty recruiting, success in competing for research funding, and increased recognition of our faculty (awards, honors) are substantial.

The department is highly ranked among civil engineering programs in the U.S., with our undergraduate program now ranked in the top 10 among both public and private universities. The U.S. News and World Report rankings are the most widely used annual rankings of academic programs and, as such, are the rankings used by A&M and by our peer institutions. According to the 2007-08 rankings, our undergraduate program is ranked 7th and our graduate program is ranked 8th among all public institutions. Within the College of Engineering (whose overall undergraduate and graduate programs are ranked 9th and 7th, respectively, among public institutions), Civil Engineering continues to be the highest ranked of the three largest departments (Civil, Mechanical, Electrical).

All of the top departments are aiming to maintain or improve their rankings. While the value of these rankings can be debated, the need to maintain our standing as a top-10 program in civil engineering should be clear to all of us. These rankings are used by faculty and students when choosing universities. They also serve as a source of pride for former students, many of whom have been extremely supportive of our programs. Finally, rankings influence (directly or indirectly) our reputation among professional peers, other top universities, program managers at funding agencies, and companies that hire our students.

Every Fall since 2005, the following items have been mailed to all CE Department Heads and Engineering Deans, in advance of the USN&WR solicitation for ranking information:

- Announcement of new Civil Engineering Faculty at Texas A&M University
- Announcement of Civil Engineering faculty searches at Texas A&M University for the coming year
- The Department’s Civil Engineer magazine

The Department produces and mails out a full-color magazine, Civil Engineer, each Spring. With a distribution of 10,000, Civil Engineer has one of the largest distributions
of any departmental news pieces of its kind, comparable to many college of engineering magazines. An online counterpart of *Civil Engineer* is maintained on the Department’s website and is updated continually.

The Department’s website was entirely re-designed in 2005 to enhance accessibility and ease of use. Greater effort was placed on ensuring web content remained current. In the last two years, four highly visible new web pages were created and added to the Department’s site:

1. CE Graduate Programs
2. Industry Portal
3. CE Undergraduate Research
4. Capstone Design Experiences

We anticipate the next complete re-design of our website to occur sometime in AY09, following the release of the College of Engineering’s new website.

In 2004, the *Civil Engineering Research Report* was created to summarize and highlight the department’s research activities, with the intent of publishing approximately every two years. This report has a very broad distribution that includes all CE department chairs/heads and all engineering deans in the US as well as program managers at all of the major funding agencies (at the state and national levels). In addition, this report has become an important tool for recruiting new graduate students and faculty. The first report, covering the period 2003-05, was distributed in March 2006. The second *Civil Engineering Research Report*, covering the period January 1, 2006 through May 31, 2008 will be ready for distribution in Fall 2008.

The importance of active promotion in the competitive academic environment cannot be overstated. Promoting the achievements of faculty and students, promoting the many degree options available in the Department, and announcing new faculty and new programs all are essential to maintaining our national visibility and rankings. Active promotion also helps to keep Former Students and both College and University administration informed about our progress and the promotional pieces are valuable tools for recruiting new students and faculty.
**ASSESSING OUR PROGRESS**

*Q: How will we assess progress toward meeting our goals?*

The **goals** laid out in this report will be periodically assessed to determine (1) when a goal has been achieved, (2) when additional efforts and/or resources should be directed toward achieving a goal, and (3) when a goal should be revised or updated in response to changes in expectations or environment. (I refer to the latter as “re-vectoring,” something frequently observed in university environments.) The associated **action items** are clearly stated and unambiguous. In some cases, action items call for exploring possible opportunities or directions, while in others they are specific and task-oriented. Many action items require direct faculty participation, underscoring the need for faculty engagement to achieve our goals.

In broad terms, my overarching objectives as Head remain: (1) advancing the Department, (2) ensuring resources for the future, and (3) creating a work environment based on mutual respect and common goals. As I stated in the previous **Vision and Strategy Report**, goals must be more than “shot in the dark” targets that are developed without thought as to their merit or their potential for being achieved. Each of the goals and associated action items articulated in this report were written in such a way that progress could be assessed. The concept of outcomes-based assessment is not an unfamiliar one as it underlies the entire ABET 2000 accreditation process.

“In broad terms, my overarching objectives as Head remain: (1) advancing the Department, (2) ensuring resources for the future, and (3) creating a work environment based on mutual respect and common goals.”
1188  Undergraduate Students

402   Graduate Students

70    Full-time Faculty

31    Academic and Research Support Staff

7th   Civil Engineering Undergraduate Program Ranking (Among public universities, as reported in 2008 U.S. News & World Report rankings.)

8th   Civil Engineering Graduate Program Ranking (Among public universities, as reported in 2008 U.S. News & World Report rankings.)

23    Endowed Chairs and Professorships

$520,475  Total scholarship and fellowship funds awarded by the Department in AY2008

$197K  Average annual research expenditures per faculty

2.7/year  Average number of peer-reviewed journal papers per faculty

18    Number of faculty members serving as editors or editorial board members

More than 14,000  Graduates

More than 10,000  Living Graduates

$42,712,605  Total Department Endowments¹ as of July 2008

¹Includes funds held by the Texas A&M Foundation and by the University, as well as pledged gifts. Total as of July 2004: $15,462,601.