Transportation Research Center Inc. independently manages a transportation research and testing facility, serving the needs of industries, governments, trade associations, and educational organizations worldwide. Transportation Research Center (the Center) is located near East Liberty, Ohio, approximately 40 miles northwest of Columbus. Because much of TRC Inc.’s work is proprietary, many projects are described in general terms. However, the information presented on the following pages will give the reader an appreciation of the extent of TRC Inc.’s capabilities.

**History**

The Center was developed by the State of Ohio as a transportation research and development proving ground with the purpose of encouraging motor vehicle research and development activities in Ohio. The Center began testing in 1974. In 1979, the State of Ohio’s Transportation Research Board entered into a management agreement with The Ohio State University’s (University) College of Engineering to oversee the operations of the Center. In 1987, the Center was sold as part of an economic inducement to Honda of America Manufacturing, Inc. to build an automobile plant in Ohio. In order to insure that the business of the Center could be preserved without violating the confidentiality of the Center’s customers, the University established Transportation Research Center Inc., a non-profit corporation. TRC Inc. is governed by a Board of Directors chaired by the University’s Dean of College of Engineering.

**Mission Statement**

As the leading independent provider of testing, development and research, TRC Inc. helps the transportation industry create safer, improved products. We will accomplish our mission through high-quality services while satisfying stakeholders’ expectations.

**Vision**

Customer satisfaction is our competitive advantage.

**Quality Policy**

We will strive to meet or exceed customer expectations.

**Environmental**

We will strive to protect the environment and assure safe and healthful working conditions.

“ISO 9001 and ISO 14001 Registered”

**Equal Employment Opportunity**

It is the policy of Transportation Research Center Inc. to provide equal opportunity in all areas of employment practices, without regard to race, color, religion, national origin, sex, age, disability, veteran status, or any other reason prohibited by law.
President’s Message

I am pleased to present, on behalf of our staff, the annual report for Transportation Research Center Inc. (TRC Inc.) for the fiscal year ending June 30, 2005.

Revenue from all sources for Fiscal Year 2005 was $39.5 million, reflecting a 6% decrease from the previous year. The general uncertainty controlling the overall economy and the severe winter weather both contributed to this decrease in revenues.

Since 1974, we have served over 800 customers worldwide. As we begin our fourth decade in automotive testing, we reflect on the past 30 years with the knowledge that we are fulfilling our mission “to help the transportation industry create safer, improved products” and to continue in our role as an industry leader. We accomplish this by recognizing the need to be the best in every way – by providing our customers with the highest quality testing services and facilities available anywhere.

I am pleased to announce the construction of our new Dynamic Handling Course (DHC). This facility, designed by a noted track designer, is an addition that will provide our customers with more facility options for dynamic vehicle testing.

We continue to work diligently to maintain our ISO 9001 and 14001 accreditations and to continue to satisfy our stakeholders’ expectations. During this past fiscal year, our recently-acquired Emissions Laboratory Operations became ISO compliant.

The automotive industry has been presented with many challenges in the recent past. Increased international competition and skyrocketing steel and energy costs have presented the automotive industry with a need to be more innovative in developing energy-saving devices and affordable alternatives to conventional technologies.

TRC Inc. is proud to help automotive suppliers transform challenges into opportunities by assisting them in their efforts to bridge the gap between ideas and solutions. By our involvement with Automotive News PACE Awards program, we support the concept of innovation in the automotive industry. TRC Inc. also supported the first annual Injury Biomechanics Symposium held by The Ohio State University. The Symposium, a venue for research by students and recent graduates, is an extension of Ohio State’s collaboration with TRC Inc. to create a nationally-recognized center for trauma research. The new initiative is comprised of faculty of Ohio State’s Injury Biomechanics Research Laboratory and their Center for Automotive Research, along with Children’s Hospital of Columbus, Ohio, and TRC Inc.

I would like to thank TRC Inc.’s stakeholders, especially our staff, for their hard work and dedication during this past year. I would also like to thank our Board of Directors for their continued guidance and support throughout the years, enabling TRC Inc. to fulfill our mission of providing the highest quality services available in the industry.
Introduction

Transportation Research Center Inc. has gained a reputation as the world’s leading provider of vehicular testing services. This reputation has been maintained, not only because of the quality of the services offered, but also because the challenges that each year brings are viewed as new and exciting opportunities for growth.

Since the Center began operations in 1974, new programs have been developed for customers in the areas of collision avoidance, energy absorption, fuel economy, emissions, durability, performance, noise, crash simulation, and crashworthiness. Please see the timeline presented on page five of this report for an overview of our progress since we began. Test programs evaluate the performance of passenger cars, trucks, airplanes, tracked vehicles, off-road vehicles, recreational vehicles, buses, motorcycles, electric vehicles, and automotive components. TRC Inc. schedules and monitors all facilities with primary importance placed on the safety and security of each customer.

TRC Inc. is continually improving and adapting to meet changing customer needs. To enhance the Center and TRC Inc.’s overall service offerings, new facilities have been designed to assist customers in developing safe and marketable products. To complement our new facilities, TRC Inc. has acquired ISO 9001 and 14001 registrations. These registrations demonstrate TRC Inc.’s commitment to our customers. We will continue to measure and improve the quality of the services we provide.

The following pages of this report are dedicated to describing each of TRC Inc.’s primary business areas - Contract Services, Durability & Dynamics Operations, and Impact Laboratory Operations - including a brief review of their activities and accomplishments during the past year.
Timeline of TRC from 1962 to 2005

- **1962**: Establishment of the Research Facility by The Ohio State University and Ohio Division of Highways
- **1968**: 8100 Acres Acquired
- **1970**: Groundbreaking
- **1971**: Track Complete, Official Opening
- **1976**: NHTSA/Office of Defects Investigation
- **1978**: NHTSA Engineering Test Facility
- **1979**: NHTSA Safety Research Lab
- **1981**: Established as an EPA Coatsdown Test Center
- **1982**: Epoxy Pad
- **1984**: Paved Rough Road & Chipping & Corrosion Course
- **1985**: Winding Gravel Road
- **1986**: Noise, Vibration and Handling Durability Courses
- **1987**: Components Testing Laboratory
- **1988**: Research Park Construction
- **1989**: ISO Noise Pad and Clean Water Trough
- **1990**: TRC Inc. Created
- **1992**: Corrosion Facility
- **1993**: Crash Barrier
- **1994**: Off-Road Course
- **1995**: 28th Anniversary
- **1996**: Additional Brake Slope
- **1998**: 25th Anniversary Japanese Nat'l Traffic Safety and Environment Lab Center
- **1999**: Ride & Handling Course Wet Handling Course
- **2000**: 25th Anniversary of the Crashworthiness and Life Safety Center
- **2001**: ISO 14001 Registered Crash Lighting Upgrade
- **2002**: Paved 10% & 23% Slopes
- **2003**: Japanese Nat'l Traffic Safety and Environment Lab Center
- **2004**: Basalt/Ceramic Tile Crash Barrier Runway Enclosed Humidity Cabinet Ride Roads
- **2005**: ISO 9001 Registered Repaved 50-acre Vehicle Dynamics Area
- **2006**: Dynamic Handling Course
- **2007**: Emissions Lab Acquired
Under the terms of our management agreement, Transportation Research Center Inc. (TRC Inc.) exclusively schedules the facilities and equipment of the Center. In addition, TRC Inc. maintains the facilities and buildings, which include approximately 145 lane miles of improved and unimproved road surfaces and 328,000 square feet of building space. Annual extensive facility upgrades are made through maintenance and repair, procurement of equipment, and facility construction based on customer survey feedback.

During Fiscal Year 2005, TRC Inc. has overseen the groundbreaking of our new Dynamic Handling Course (DHC), a course for vehicle development and engineering handling. This course will give our customers a new combination of elevation changes and turns of varying camber. We look forward to its completion in 2005 as a complement to our existing facility offering.

TRC Inc. has also overseen an upgrade in our sport utility vehicle testing area with the installation of a new boulder durability course. Additionally, the installation of a shock cooling station, adjacent to our paved rough road, was completed this fiscal year.

Durability and Dynamics Operations' rolling stock was also increased this past year with the purchase of a new skid truck and trailer system for coefficient of friction measurement. The skid truck and trailer system measures pavement at accident sites for litigation purposes and can also provide measurements for government pavement monitoring. Additionally, it is used for on-site correlation and calibration services for skid measurement systems.

Impact Laboratory Operations upgraded their capabilities with the purchase of an ES-2re Side Impact Crash Dummy, additional high-speed digital-imaging cameras and various other hardware and software upgrades.

Understanding our customers' expectations and staying abreast of their changing needs has always been of utmost importance to TRC Inc. We are committed to continual monitoring and improvement of all of our services and facilities.
Durability and Dynamics Operations (DDO) experienced a 6.8% decline in revenue from Fiscal Year 2004. Several vehicle manufacturers, who have historically been major contributors to our revenue stream, decreased their level of outsourced testing from the previous fiscal year. This decrease has resulted from increased price pressure in the industry and has resulted in a 11.6% decline in DDO’s principle revenue-producing area of test-driving hours. DDO performed testing services for 20 domestic and foreign vehicle manufacturers. The following table describes the percent of business by industry classification.

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Manufacturers</td>
<td>75.3%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>9.5%</td>
</tr>
<tr>
<td>Fuel &amp; Lubes</td>
<td>6.9%</td>
</tr>
<tr>
<td>State &amp; Federal Organizations</td>
<td>5.8%</td>
</tr>
<tr>
<td>Independent Labs</td>
<td>1.1%</td>
</tr>
<tr>
<td>Litigation/Engineering Firms</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

The majority of testing involves powertrain, rough road, chassis, corrosion, and fuel additive, durability, and emissions. In addition, DDO conducts brake, fuel economy, skid truck correlation, and vehicle handling testing to FMVSS, SAE, and ASTM standards. DDO maintains 24-hour-a-day, seven-day-a-week operation for rapid, but safe, mileage accumulation. Despite decreased revenue, Fiscal Year 2005 still saw many improvements for DDO, with the groundbreaking of a new passenger vehicle Dynamic Handling Course (DHC). Designed with vehicle development and engineering handling in mind, the asphalt DHC is about 1.75 miles in length and can be run in both directions. The course comprises a variety of slow, medium, and high-speed corners along with slight elevation changes and turns of varying camber. Noted racetrack designer Alan Wilson, who is responsible for tracks in North America and Asia, designed the course. The addition of the DHC, slated for completion in late summer of 2005, will enhance our leadership position as the premier facility for vehicular handling research and development testing.

DDO has also purchased a new skid calibration truck and trailer, overseen improvements in our Sport Utility Courses, and installed a shock cooling facility on our Paved Rough Road Facility. Additionally, the DDO management team worked diligently to bring the Emissions Laboratory Operations under the ISO management system. This will allow for more consistent testing and allow TRC Inc. to better measure customer satisfaction and to develop key performance matrices.

Due to the continued questionable health of the domestic automotive manufacturers DDO has budgeted a modest decrease of 4% in revenues in Fiscal Year 2006.
Impact Laboratory Operations (ILO) experienced a slight decline in crash testing from Fiscal Year 2004. A total of 338 crashes were performed in Fiscal Year 2005 reflecting a 7.2% decrease from Fiscal Year 2004. Additionally, 64 impact simulations tests were performed in Fiscal Year 2005 reflecting a decrease of 61.3% from Fiscal Year 2004. Changes in FMVSS protocol, decreased dummy development, the fulfillment of the TREAD Act over the past two fiscal years, an increase in the number of sleds available and a decrease in testing have accounted for this decrease. The majority of ILO’s testing involved development and certification of automobiles and light trucks to meet occupant protection requirements established by U.S. Federal and Canadian Motor Vehicle Standards, European Economic Community, and manufacturers.

ILO continued to support government contracts for the National Highway Traffic Safety Administration, Vehicle Research and Test Center, and Volpe National Transportation Systems Center. Government crash testing for front and side occupant protection and fuel system integrity, sled simulation testing, static fixture structural integrity, and crash dummy and standards development research programs comprised 13.9% of ILO’s activities. The following table describes the percent of business by industry classification:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Manufacturers</td>
<td>79.7%</td>
</tr>
<tr>
<td>Government Agencies</td>
<td>13.9%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>3.4%</td>
</tr>
<tr>
<td>Other</td>
<td>3.0%</td>
</tr>
</tbody>
</table>

ILO strives to understand customers’ expectations and respond accordingly. As a result, ILO continues to improve data quality from high-speed images. In Fiscal Year 2005 we purchased additional high-speed digital cameras to bring our total digital camera coverage to almost 30. Additionally, to expand our testing capabilities and stay abreast of changes in test protocol, we purchased one ES-2re crash dummy for European testing, Insurance Institute for Highway Safety (IIHS) test protocol, and proposed NHTSA testing. Also, two Sid-IIs side impact dummies were acquired for IIHS testing and the proposed NHTSA 214 standard.
Customers of Contract Services include automotive manufacturers, component manufacturers, and the federal government. The mission of Contract Services is to provide customers with high quality engineering and technical support to improve the safety, quality and competitiveness of their products.

Contract Services is comprised of technical personnel whose services are dedicated to specific customers on a full-time basis. Their work predominantly involves research and development testing, including vehicle components, crashworthiness, crash avoidance, biomechanics, research analysis, and test device and procedure development. The personnel in these groups include engineering technicians, mechanical and electrical technicians, engineering assistants, photographers, research engineers and research scientists.

The staff holds memberships in professional societies, such as the Society of Automotive Engineers (SAE) and plays major roles in various technical committees. Numerous technical papers were authored or co-authored by our personnel during the past year. The affiliations, committee work, and published writings bring recognition and industry/professional exposure to TRC Inc.

The following table describes the percentage of business by industry classification for Fiscal Year 2005:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Agencies</td>
<td>47%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>30%</td>
</tr>
<tr>
<td>Vehicle Manufacturers</td>
<td>23%</td>
</tr>
</tbody>
</table>

Record revenues were achieved with a 6% increase over the prior year. Employment remained stable throughout Fiscal Year 2005. Continued improvement in our hiring process led to increased customer satisfaction. A moderate increase in revenues and employment is expected in Fiscal Year 2006.

We look forward to meeting the challenges of the coming year and exceeding the expectations of our customers.
The Activities

**Quality Planning, Assurance, Improvement, and Control**

TRC Inc.’s Quality Policy:  
*We will strive to meet or exceed customer expectations.*

TRC Inc. is committed to providing services that meet or exceed the expectations of its customers and is dedicated to a quality policy which is understood, implemented, and maintained at all levels of the organization.

Each of TRC Inc.’s five Primary Business Functions (Crash, Sled, Durability, Dynamics, Contract Services) has its own quality system process definition (SPD) team, which has determined the expectations of its customers and the technical requirements necessary to meet those expectations. Based on these expectations and requirements, performance goals and objectives have been established and are monitored throughout the organization and through customer surveys. Performance ratings and internal process measurement results are reviewed on a regular basis, and potential performance issues and preventive actions are managed through a formal corrective and preventive action system.

**ISO 9001 Registration**

As part of TRC Inc.’s commitment to customer satisfaction and continual improvement, the organization acquired registration to the ISO 9001:1994 in May 2000 and successfully acquired/upgraded registration to the ISO 9001:2000 revision of the Standard in May 2002. The ISO 9001 Standard is an international model for quality management systems. Organizations are required to identify and document best business practices, and to implement these practices to achieve consistent quality services to meet and exceed customer expectations.

Following registration, the registrar conducts surveillance audits to ensure continuing compliance to the Standard. Since the initial registration, TRC Inc. has maintained compliance through five surveillance audits. The 9001:2000 version includes a process-based quality management system model with an increased focus on customer satisfaction and continual improvement. For TRC Inc., the process of upgrading to the 9001:2000 Standard included streamlining the internal audit process and utilizing process data to further drive improvements. TRC Inc. will continue to be dedicated to providing quality service to our customers through completion of our company-wide quality objectives of accurate services, timely services, and well-planned and organized services.

**ISO 14001 Registration**

TRC Inc. received its ISO 14001 registration in October 2002. ISO 14001 is a model for environmental management systems and addresses the management of business activities impacting the environment. Although not required by the ISO 14001 Standard, TRC Inc. has incorporated health and safety into our environmental management system. TRC Inc. is currently in the process of updating its management system to the ISO 14001:2004 revised standard in preparation for its next surveillance audit in September 2005.

**Environmental, Health and Safety (EH&S) Policy**

TRC Inc.’s Policy Statement  
*We will strive to protect the environment and assure safe and healthful working conditions.*

TRC Inc.’s EH&S Policy Principles

1. TRC Inc. is committed to continual improvement in TRC Inc.’s environmental, health, and safety programs by setting objectives and targets and by evaluating our performance to those goals.

2. TRC Inc. is committed to prevention of pollution by using processes and materials that prevent, reduce, or minimize pollution. This includes recycling, control mechanisms, material substitution, and efficient use of resources.

3. TRC Inc. is committed to compliance with all applicable environmental, health, and safety regulations, laws, and other internal and external requirements.

4. TRC Inc. provides education and training to ensure understanding of the environmental, health, and safety policies throughout the organization.

Through preparation for the ISO 14001 registration audit, TRC Inc. has identified applicable significant environmental aspects and their impacts on the surroundings. TRC Inc. is focusing its efforts on the following aspects of its activities:

- Waste
- Natural Resources
- Air Emissions
- Hazardous Materials
- Resource Conservation
- Occupational Health & Safety

Targets have been established at the company-wide or area-specific level to measure the organization’s performance in meeting these objectives.
Automotive News PACE Award Sponsorship Activities

TRC Inc. has renewed our sponsorship of the Automotive News PACE™ Award for the fourth year. PACE™ is the acronym for Premier Automotive Suppliers’ Contribution to Excellence.

Now in its twelfth year, the PACE™ Award honors automotive suppliers who have embraced innovation or adapted and reinvented themselves to meet the demands of the OEM customer. This prestigious award sets the standard for innovation and excellence and has become a significant industry credential.

Annually, hundreds of automotive suppliers around the globe submit their innovation to win this distinguished award. The winners earn the distinction of joining the automotive world’s list of “Who’s Who.”

The PACE Award sponsorship has been a natural tie-in the past four years as many of the innovations featured are ultimately validated at our proving ground. Through this sponsorship we have had, and will continue to have, the opportunity to support our customers and their efforts in the marketplace by acknowledging their hard work.

Staff Activities/Community Service

Transportation Research Center Inc. believes in maintaining its role as a good corporate citizen in the community. TRC Inc. provides financial support through payrolls, payroll taxes, and local procurement of goods and services.

TRC Inc.’s “Partnership in Technology Scholarship” program provides $1,000 renewable college scholarships for high school seniors planning to major in a two- or four-year automotive-related field, as well as the opportunity for an internship at The Center. Three first-year students were added this year for a total of eight students receiving this award.

Good corporate citizenship includes protecting the environment. At the Center, this is accomplished in a variety of ways including the recycling of paper, plastics, glass, and metals. TRC Inc. participates in the Ohio Department of Transportation’s Adopt-a-Highway program and supports the Logan County Clean Committee, an organization that encourages recycling and litter prevention. Our Environmental, Health and Safety Policy and supporting principles are outlined in this report, under the heading “The Activities.”

Child safety is promoted through TRC Inc.’s Child Seat Awareness Program, which provides employee reimbursement for the purchase of child restraints and assists the community through child restraint distribution programs administered by local health departments. In Fiscal Year 2005, 13 employees were reimbursed for their purchase of 15 child restraints and 82 child restraints were provided for distribution through local health departments.

Some of the organizations that have benefitted this fiscal year through donations from TRC Inc. are:

- American Cancer Society
- American Heart Association
- American Red Cross
- Bellefontaine Cultural Arts Commission
- Bokescreek EMS
- Cedar Bog Preservation Association
- Children’s Hospital, Columbus
- Children’s Medical Center, Dayton
- Early Childhood Education Center, Franklin Co.
- MRDD
- International Family Center of Union County
- Leesburg, Marysville, & Ridgeway Firefighters
- Logan County Clean Committee
- March of Dimes
- Mary Rutan Hospital
- Memorial Hospital of Union County Women’s Health Center
- Pediatric Brain Tumor Foundation
- St. Rita’s Hospice
- Union County Chamber of Commerce
- United Way
Governance

Board of Directors

Mr. George Arnold  
Business Development Director, H.R. Gray  
TRC Inc. Vice Chairman of the Board

Dr. William A. Baslack III  
Dean of the College of Engineering  
The Ohio State University  
TRC Inc. Chairman of the Board

Mr. C. John Easton  
Chairman (retired), Honeywell Sensotec

Dr. Robert T. McGrath  
Senior Vice President for Research  
The Ohio State University

Ms. Greta J. Russell  
University Controller  
The Ohio State University

Mr. Rick D. Gildow  
Transportation Research Center Inc.  
TRC Inc. President

Other Officers

Mr. Shawn T. Ahern, CPA  
TRC Inc. Vice President  
Treasurer of the Board

Mr. Milton J. Dunlop  
TRC Inc. Vice President

Ms. Jill R. Macy  
TRC Inc. Vice President

Mr. John W. Phillips  
TRC Inc. Vice President

Mr. Stacy Weislogel  
Associate Dean  
College of Engineering  
The Ohio State University  
TRC Inc. Board Secretary

General Counsel

Mr. John S. De Libera

Independent Auditors

Deloitte & Touche LLP

Board Changes

Mr. George Arnold, H.R. Gray Business Development Director and Vice Chairman of the Board, was reappointed to the Board for a two-year term ending at the close of the annual meeting in 2006. Mr. C. John Easton, Chairman (retired), Honeywell Sensotec, was appointed to the Board to fill the vacant, unexpired term ending at the close of the annual meeting in 2005.