

MINUTES OF THE MEETING
OF THE
MICHIGAN STATE UNIVERSITY
BOARD OF TRUSTEES

February 22, 2008

President Simon called the meeting of the Board of Trustees to order at 9:35 a.m. in the Board Room.

Trustees present: Joel Ferguson, Melanie Foster, Colleen McNamara, Donald Nugent, Faylene Owen, George Perles (via telephone), and Scott Romney.

Trustees absent: Dorothy Gonzales

University officers present: President Simon, Provost Wilcox, Vice President Poston, Secretary Beekman, Vice President and General Counsel Noto, Vice Presidents Denbow, Gray, Hudzik, and Webster, Senior Advisor and Director Granberry Russell, and Senior Associate Vice President Maybank. Faculty liaisons present: Jim Potchen and John Powell. Student liaisons present: Eric Hinojosa, Michael Leahy, Jarrod Morrice, and Yanisleidy Reina.

All actions taken were by unanimous vote of the Trustees present, unless otherwise noted.

1. On a motion by Trustee Foster, supported by Trustee McNamara, the **BOARD VOTED to approve** the agenda.
2. On a motion by Trustee Romney, supported by Trustee Owen, the **BOARD VOTED to approve** the minutes of January 18, 2008.
3. President's Report
 - A. State of the University Address

President Simon stated that the 2008 State of the University Address and annual Awards Convocation was held on February 12. The awards program featured recognition of the recipients of the following awards: Distinguished Faculty, Teacher-Scholar, Outreach Scholarship Community Partnership, MSU Alumni Club of Mid-Michigan Quality in Undergraduate Teaching, Distinguished Academic Staff, and Excellence in Teaching Citations. She congratulated all those honored for their outstanding contributions to Team MSU and noted the State of the University address is available on the MSU web site.

B. Chuck Webb named 29th president of Spring Arbor University

President Simon said that following a nation-wide search, the Spring Arbor University Board of Trustees announced the selection of Dr. Charles H. Webb as the University's 29th president. The announcement followed a special meeting of Spring Arbor's Board on Saturday, February 16. Spring Arbor's next president is a man of integrity and a leader with many talents. Chuck is a team builder and a consensus builder; he is smart and he is wise. His record at Michigan State University has been outstanding, advancing private giving and alumni relations with nationally renowned and honored programs. Chuck will leave MSU with a very successful advancement program that is poised for even greater success in the future. Because of Chuck Webb, the future is brighter at both MSU and Spring Arbor.

C. Founding Dean of Osteopathic Medicine Dies

President Simon stated that the founding dean of MSU's College of Osteopathic Medicine, Myron Magen, died at his home in East Lansing on February 13. He was 81. She noted that MSU and the osteopathic profession have lost a true visionary in Mike Magen. As the founding dean of the College of Osteopathic Medicine, Mike provided the strong leadership necessary to build a world-class medical education program. Throughout his life he was a tireless advocate not only for osteopathic medicine, but for all of health care.

Trustee Owen presented a Resolution honoring Mike Magen. (Appendix A)

Trustee Owen **moved to approve** the recommendation, with support by Trustee McNamara.

THE BOARD VOTED to approve the recommendation.

D. Alfred P. Sloan Research Fellow

President Simon said that Professor Alexandra Gade, Department of Physics and Astronomy, has been selected as an Alfred P. Sloan Research Fellow. This is an extraordinarily competitive award, involving nominations of the very best scientists from the U.S. and Canada. Professor Gade's work brings distinction to MSU.

E. MSU's Nettleman Earns National Honor

President Simon noted that Dr. Mary Nettleman, Chairperson of the Department of Medicine, has been elected to mastership in the American College of Physicians, an internal medicine organization comprised of members, fellows, and masters. The honor makes Dr. Nettleman only the 10th master in the State of Michigan.

F. Two MSU Faculty Members Receive High French Honors

President Simon stated that Steven Pueppke, Assistant Vice President for Research and Graduate Studies and Director of the Michigan Agricultural Experiment Station and the MSU Office of Biobased Technologies, and James Bingen, Professor of Community, Agriculture, Recreation, and Resource Studies, were presented with medals of honor by representatives of the French government at a ceremony on February 1. Dr. Pueppke was honored for his efforts over the past decade to build institutional relationships between U.S. and French university research facilities. Dr. Bingen was honored for his contributions to helping young Americans understand French farming practices that enhance the viability of small family farms, both locally and globally.

G. 2008 Churchill Scholar

President Simon announced that Kate Leitch has been selected as a 2008 Churchill Scholar, the 16th Churchill Scholar from MSU. Ms. Leitch is a senior majoring in zoology in the College of Natural Science and a member of the Honors College. She will study Physiology, Development and Neuroscience at the University of Cambridge.

H. MSU Takes Home Big Ten Debate Title

President Simon noted that The Big Ten Debate Championships were held the last week of January at Northwestern University. MSU entered four teams, all of which advanced to the elimination rounds. Three of these teams made it to the “final four”—capping off a dominant performance by the Spartans.

4. There was no Public Participation on Issues Germane to the Agenda.

5. Personnel Actions

Provost Wilcox presented the following appointment:

Delfosse, Ernest S., AN—Professor, Department of Entomology, \$189,600, with Tenure, effective May 1, 2008.

Trustee McNamara **moved to approve** the recommendation, with support by Trustee Foster.

Provost Wilcox said that Dr. Delfosse has a Ph.D. in Entomology from the University of Florida. He served as a research entomologist in Florida, a research scientist and leader in Australia, and director of the National Biological Control Institute. He is currently the National Program Leader for Weed Science for the USDA-ARS in Maryland.

THE BOARD VOTED to approve the appointment.

6. Gifts, Grants, and Contracts

Vice President Gray presented the Gift, Grant, and Contract report for the period November 22, 2007 through February 11, 2008. The total value for this period is \$48,916,326.84.

Trustee Nugent **moved to approve** the recommendation, with support by Trustee Ferguson.

THE BOARD VOTED to approve the recommendation.

Vice President Gray introduced Dr. David Skole, Professor of Global Change Science in the Department of Forestry. Dr. Skole's research is focused on international environmental research using geo-spatial numerical models, remote sensing, and geographic information systems. Dr. Skole has been working on carbon cycle science for more than 25 years. His research presentation focused on carbon sequestration for climate mitigation and rural poverty alleviation. (Appendix B)

7. Finance Committee

Trustee Nugent presented the Trustee Finance Committee Report and recommendations.

A. Bank Account Delegation

It was recommended that the Board of Trustees adopt the following resolution:

Resolved, that the Vice President for Finance and Operations and Treasurer, the Assistant Vice President for Finance and Operations, and the Assistant Vice President, Chief Financial Officer and Controller, or any one of them, are authorized and

empowered to establish and maintain bank accounts as necessary for the orderly conduct of the business of Michigan State University and to designate signatories for the accounts, to act by actual and facsimile signatures; and

That the Vice President for Finance and Operations and Treasurer may delegate the authority hereby granted; and

That the authority and power conferred by this action shall vest in any successor positions to the Vice President for Finance and Operations and Treasurer, the Assistant Vice President for Finance and Operations, and the Assistant Vice President, Chief Financial Officer and Controller, or individuals appointed to these positions; and

That this action supersedes all prior Board actions relating to authority concerning bank accounts and account signatories.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

B. Increased Financing of MSU Programs of Higher Education in Dubai, United Arab Emirates

It was recommended that the Board adopt the following resolution:

Be it Resolved that the Board of Trustees September 12, 2007 resolution concerning Financing of MSU Programs of Higher Education in Dubai, United Arab Emirates "Original Resolution" is modified to increase the maximum authorized amount of the Financing (as defined in the Original Resolution) from Three Million dollars (\$3,000,000) to Five Million dollars (\$5,000,000), and

That all other resolutions and authorizations as set forth in the Original Resolution are confirmed, ratified, and in full force and effect.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Ferguson.

Vice President Poston said that this resolution was necessary due to the development of activities in Dubai at a rate that has exceeded initial projections. Given the rapid development, a number of expenditures must occur earlier in the process than was

initially anticipated. This change remains consistent with the business plan.

Vice President Hudzik said that MSU is very active in Dubai. Critical support staff are now on site and are preparing for the recruitment and admissions process. There have been approximately 1,100 serious inquiries from prospective students, and there are 90 applications on file for undergraduate students and 65 applications for graduate students.

THE BOARD VOTED to approve the recommendation.

C. Authorization to Plan (footprint change) Forest Akers Golf Course—East Driving Range Enclosure

It was recommended to the Board of Trustees that it authorize the administration to plan for modifications that will result in a material change to the campus footprint for the project entitled Forest Akers Golf Course—East Driving Range Enclosure.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Owen.

Vennie Gore, Assistant Vice President of Housing and Food Services, said that the footprint at the East Akers Golf Course would be extended for the covered driving range. The project will be supported by existing Housing and Food Service funds and will generate revenue sufficient to cover the costs of construction and operations within eight years.

THE BOARD VOTED to approve the recommendation.

D. Project Approval—Authorization to Proceed—Natural Science Building—Window Replacement

It was recommended to the Board of Trustees that it authorize the administration to proceed with the project entitled Natural Science Building—Window Replacement and to approve a budget of \$1,200,000.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

E. Project Approval—Authorization to Proceed—Spartan Village Apartments—Zone One Demolition—Phase II

It was recommended to the Board of Trustees that it authorize the administration to proceed with the project entitled Spartan Village Apartments—Zone One Demolition—Phase II and to approve a budget of \$5,200,000.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee McNamara.

Mr. Gore stated that 34 buildings would be removed and the water distribution system will be repaired and replaced. The strategic planning process will include the Spartan Village property and future uses.

THE BOARD VOTED to approve the recommendation.

F. Project Approval—Authorization to Proceed—Holden Hall—Space Improvements

It was recommended to the Board of Trustees that it authorize the administration to proceed with the project entitled Holden Hall—Space Improvements and to approve a budget of \$9,450,000.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Owen.

Mr. Gore stated that updating of student rooms will include new lighting, paint, carpet, blinds, and loft-able furniture. Public areas will receive updates, including the creation of a high tech lounge for students to gather around technology, a recycling center, and a community kitchen for student use.

THE BOARD VOTED to approve the recommendation.

G. Bid and Contract Award (budget adjustment) Mary Mayo Hall Renovations

It was recommended to the Board of Trustees that a contract in the amount of \$8,756,000 be awarded to Kares Construction Company, Inc. and the budget be increased from \$12,500,000 to \$12,750,000, for the project entitled Mary Mayo Hall Renovations.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Romney.

Mr. Gore stated that this is a restoration project that will include mechanical and electrical upgrades, life safety upgrades, carpet, and furnishings. The building will be closed at the end of spring semester for construction and is scheduled to be completed in August 2009.

THE BOARD VOTED to approve the recommendation.

- H. Bid and Contract Award (budget reduction) Crescent Road/Middlevale Road Reconstruction—Phase IV

It was recommended to the Board of Trustees that a contract in the amount of \$856,400 be awarded to E.T. MacKenzie Company and the budget be reduced from \$2,300,000 to \$1,500,000, for the project entitled Crescent Road/Middlevale Road Reconstruction—Phase IV.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Romney.

THE BOARD VOTED to approve the recommendation.

- I. Bid and Contract Award—West Circle Housing Complex—Steam, Electrical, and Water Distribution Enhancements—Phase I

It was recommended to the Board of Trustees that a contract in the amount of \$2,800,000 be awarded to Sandborn Construction, Inc., for the project entitled West Circle Housing Complex—Steam, Electrical, and Water Distribution Enhancements—Phase I.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Foster.

THE BOARD VOTED to approve the recommendation.

- J. Bid and Contract Award—Spartan Stadium—East Upper Stand Maintenance

It was recommended to the Board of Trustees that a contract in the amount of \$1,062,998 be awarded to the E & L Construction Group for the project entitled Spartan Stadium—East Upper Stand Maintenance.

Trustee Nugent **moved to approve** the recommendation, with support from Trustee Owen.

THE BOARD VOTED to approve the recommendation.

8. Policy Committee

Trustee McNamara presented the Trustee Policy Committee Report and recommendations.

A. Responsible Contractor Policy/Project Labor Agreements

It was recommended to the Board of Trustees that it adopt a Responsible Contractor Policy and that it approve amendments to Board Policy 02-06-01, "Construction and other Real Property Improvements: Project Planning and Approval" and that, in 24 months, the Policy Committee shall review the University's experience with project labor agreements and with the Responsible Contractor Policy. (Appendix C)

Trustee McNamara **moved to approve** the recommendation, with support from Trustee Nugent.

Vice President Poston stated that this policy was the result of analysis over an extended period of time regarding the potential use of project labor agreements. Vice President Poston stated that there are certain circumstances when the use of a project labor agreement would benefit the University.

President Simon commended Trustee McNamara for her leadership on the issue. She stated that the Board effectively balanced institutional interests with MSU's social responsibility.

Trustee McNamara thanked President Simon for being open to the policy and the process involved. She also thanked Vice President Poston and General Counsel Noto for their many hours of work in addition to the many other campus and community members involved in the process.

Trustee Nugent thanked Trustee McNamara for her hard work on this important issue.

Trustee Owen commended Trustee McNamara on her efforts.

THE BOARD VOTED to approve the recommendation.

B. Split of the Marketing and Supply Chain Management Department

It was recommended to the Board of Trustees that the Marketing and Supply Chain Management Department be split into two separate departments: (1) the Marketing Department and (2) the Supply Chain Management Department.

Trustee McNamara **moved to approve** the recommendation, with support from Trustee Nugent.

Provost Wilcox said that the activities in the Marketing and Supply Chain Management Departments have evolved over time into two separate specialties and this is a natural recognition of that evolution.

THE BOARD VOTED to approve the recommendation.

C. Notice of Intent to Negotiate a Contract with *Intermediary Biochemicals, LLC*, a Company in which a Faculty Interest Exists

Pursuant to State law, Trustee McNamara gave public notice of the University's intent to negotiate contracts with *Intermediary Biochemicals, LLC*, a Michigan limited liability company based in Okemos. Dr. J. Gregory Zeikus, a Professor in the Department of Biochemistry and Molecular Biology, Dr. Robert M. Worden, a Professor in the Department of Chemical Engineering & Materials Science, and Dr. Claire Vieille, an Associate Professor in the Department of Biochemistry and Molecular Biology and the Center for Microbial Ecology, each own, or have options to buy, an equity interest of more than 1 percent of the company.

D. Approval of Contract Terms: *NanoBrick, LLC*

It was recommended to the Board of Trustees that it approve the execution of a license agreement with *NanoBrick, LLC*, consistent with earlier public notice given at a Board meeting and with the "License Agreement Term Sheet" presented to the Board. (Appendix D)

Trustee McNamara **moved to approve** the recommendation, with support from Trustee Nugent.

THE BOARD VOTED to approve the recommendation.

9. Trustees Comments

Trustee Ferguson thanked Trustee McNamara for her outstanding work on behalf of the Board.

Trustee Romney congratulated Trustee McNamara on a job well done.

Trustee Owen said the Faculty Liaison group had covered many issues at its meeting, including recruitment and retention of faculty, retirement, health care, tuition, and environmental stewardship. She asked Professor John Powell, Faculty Liaison member, to speak about the meeting.

Professor Powell said that an important part of what makes MSU great is its faculty. In order to be able to pursue a global mission on a world stage, MSU has to be able to recruit and retain high quality faculty. Many times high quality faculty focus on research, but it is also important for them to focus on teaching and the undergraduate and graduate programs at MSU.

Trustee Owen congratulated Vice President Webb on his appointment as President of Spring Arbor University and wished him well in his new position.

Trustee Nugent thanked Vice President Webb for his many years of service to MSU.

Trustee Perles wished Vice President Webb the best of luck as President of Spring Arbor University.

Trustee Foster said that she also wished Vice President Webb well as he begins his presidency. She noted that the Student Liaison group discussed a possible lecture series for MSU professors, student safety and making the MSU campus as safe as it can be, and the 40th anniversary of the Council of Graduate Students (COGS). She asked student liaison Jarrod Morrice to discuss upcoming COGS events.

Mr. Morrice announced that celebrations would be held on March 14-15 for the 40th anniversary of COGS. Events include the hosting of the Midwest Conference for the National Association of Graduate Professional Students, a bowling night, and a banquet.

10. Public Participation on Items not Germane to the Agenda

A. Graduate Employees Union Contract Negotiations

Sandra Schmidt, President of the Graduate Employees Union, said teaching assistants are of great value to MSU. She stated that one-third of MSU classes are taught by teaching assistants. Teaching assistants typically have master's degrees and are established in their field. Ms. Schmidt stated that teaching

assistants, in preparing to be professors, have a commitment to teaching and learning to teach well.

Ms. Schmidt said that one of the items related to the contract negotiations is professional development opportunities. The teaching assistants are asking for better and more discipline-specific professional development that benefits the individual needs of the departments. Ms. Schmidt stated that the other concern for teaching assistants is compensation. She said that the teaching assistants are asking for a raise equal to the rate of inflation. She asked the Board to support a solid, quality, and timely contract for the teaching assistants.

B. Graduate Employees Union Contract Negotiations

Benjamin Dettmar, international graduate student and teaching assistant, said that the issue of compensation greatly affects international students. International students have specific fees such as service fees upon arrival, visa fees, etc. It can also be difficult for international students to secure loans; oftentimes the interest rates are very high. Mr. Dettmar stated that the small increase being sought by the teaching assistants is critical to the international student population. He urged the Board to support the teaching assistants.

C. Graduate Employees Union Contract Negotiations

Jarrod Morrice, president of COGS, said that graduate students perform research not only to increase the knowledge base of their field, but to apply that information while teaching. Mr. Morrice noted that teaching assistants have varied roles, with some teaching recitations and others responsible for undergraduate labs. He said he supports an increase for teaching assistants and encouraged the Board to support it.

D. Campus Civility

Ben Morlock, Chairman of the MSU College Republicans, said he wanted to speak to the misconception that the MSU College Republicans and the Young Americans for Freedom are associated with each other. He stated that the MSU College Republicans have approximately 600 MSU student members, and the purpose and intent of the organization is to advance Republican principles and serve as a network for MSU's Republican students.

Mr. Morlock stated that the MSU College Republicans have not violated the MSU Anti-Discrimination Policy. He indicated that the

MSU administration has made no attempts to contact him regarding the allegations made against the group. Mr. Morlock said that some individuals on campus would like to chill free speech on campus and have asked the Board to define what free speech is and what hate speech is. He stated that all speech, whether it is offensive or hateful, is protected under the First Amendment of the United States Constitution. Mr. Morlock asked the Board to resist demands from organizations on campus that ask to suppress student rights.

11. On a motion by Trustee Owen and supported by Trustee Romney, **THE BOARD VOTED to adjourn** at 11:40 a.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'W Beekman', is written over a light gray rectangular background.

William R. Beekman
Secretary of the Board of Trustees

**MICHIGAN STATE UNIVERSITY
BOARD OF TRUSTEES RESOLUTION
HONORING MYRON S. MAGEN**

February 22, 2008

The Board of Trustees of Michigan State University celebrates and remembers the extraordinary contributions of Myron S. Magen, D.O., the founding dean of the MSU College of Osteopathic Medicine (MSUCOM). An innovative and distinguished educator, he led the privately funded Michigan College of Osteopathic Medicine in Pontiac to the campus of MSU, where it became the first osteopathic school to receive public support and the first to be part of a major university. For 25 years he nurtured and prodded the young school until it became a flagship college of the profession. He achieved global recognition, particularly for his strong emphasis on research, educational excellence, and international health. After his retirement as dean in 1991, he served as dean emeritus and Walter F. Patenge Endowed Professor, and was known for his decisiveness, courage and eloquence.

For the osteopathic profession, Dr. Magen broke down many barriers, particularly in establishing relationships with governmental agencies, the scientific community, and organizations abroad. He was a leader within the profession, serving as the chairman of the Bureau of Professional Education of the American Osteopathic Association, twice president of the American Association of Colleges of Osteopathic Medicine, and fellow and president of the American College of Osteopathic Pediatricians.

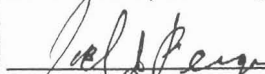
He was the first osteopathic physician to become a member of the prestigious Institute of Medicine of the National Academy of Sciences, and was appointed to numerous committees advisory to state and national government, including those for the governor of Michigan, the U.S. Department of Health and Human Services, the Human Resources Administration of the U.S. Public Health Service, and the Veterans Administration.

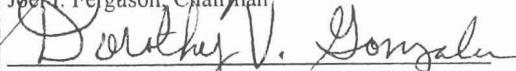
Dr. Magen received numerous awards and several honorary doctorates, including an honorary doctorate of science from MSU in 2004. He was the author of many peer-reviewed publications and has made hundreds of presentations. Dr. Magen also has served on the board of directors of the Michigan Cancer Foundation, on working groups of the Michigan Heart Association, as a member of the National Fund for Medical Education.

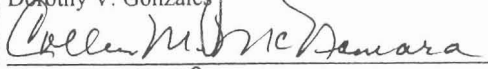
Internationally, he formed working relationships for MSU and the osteopathic profession in Germany, Sweden, Czechoslovakia, Israel, Wales, Costa Rica, Nigeria, Ghana, Niger, Burkina Faso, Tanzania, Sudan, Kenya, Malawi, Zimbabwe, and Sierra Leone.

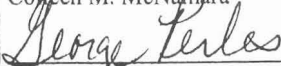
His family too is testament to a life well lived. He is survived by his wife of 55 years, the former Ruth Sherman. Their three sons all are exemplary members of their communities: Jed Magen, D.O., chairperson of the Department of Psychiatry at MSU, and his spouse Carol Barrett; Ned Magen, D.O., an emergency medicine physician in Soldotna, Alaska, and his spouse Charlissa; and Randy H. Magen, Ph.D., professor of social work at the University of Alaska, Anchorage, and his spouse Christine Chandler. Dr. Magen had eight grandchildren – Ben, Zach, Molly, Eli, Maurissa, Darryl, Hannah, and Noah.

For his vision, his example, his demonstrated commitment, his leadership, his sense of humor, and his love for MSUCOM, the osteopathic profession, and most of all his family – we remember with respect and gratitude the life of Dean Myron S. Magen.

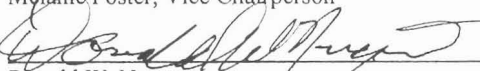

Joel I. Ferguson, Chairman



Dorothy V. Gonzales

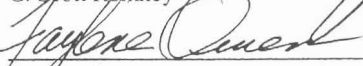

Colleen M. McNamara


George Perles


Melanie Foster, Vice Chairperson


Donald W. Nugent


G. Scott Romney


Faylene Owen

**RESEARCH
PRESENTATION**
TO THE MSU BOARD OF TRUSTEES

FEBRUARY 22, 2008

DAVID L. SKOLE

**COLLEGE OF AGRICULTURE AND
NATURAL RESOURCES**

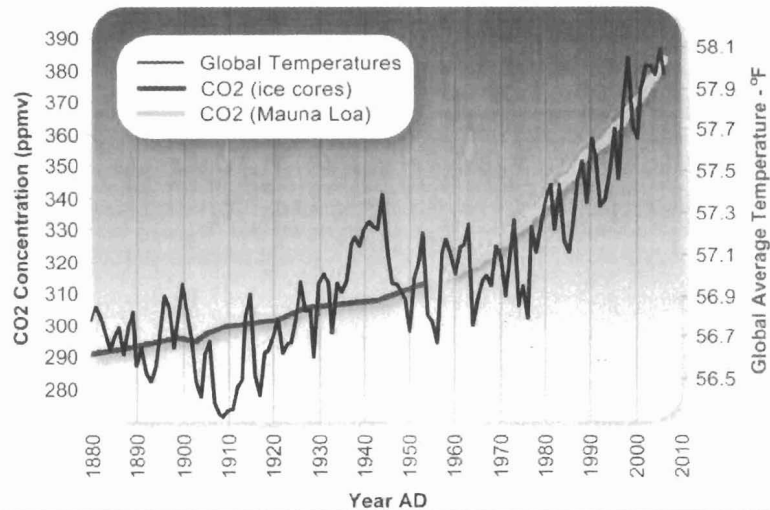
Carbon 2 Markets:

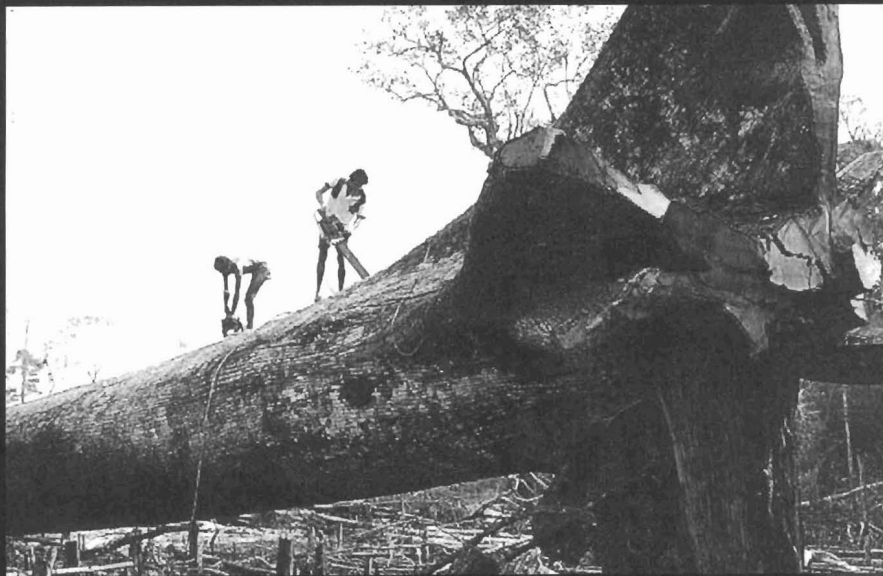
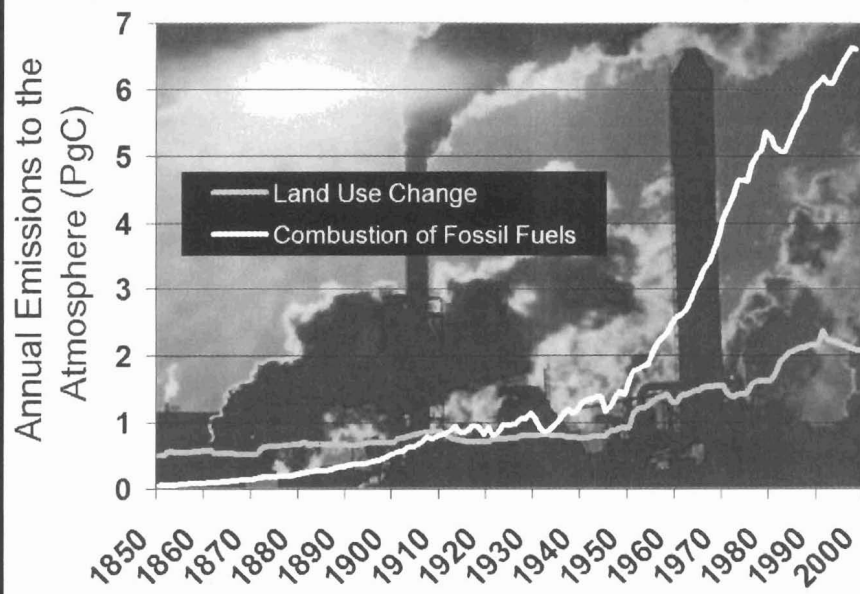
*Carbon Sequestration for Climate Mitigation and
Rural Poverty Alleviation*

David L. Skole

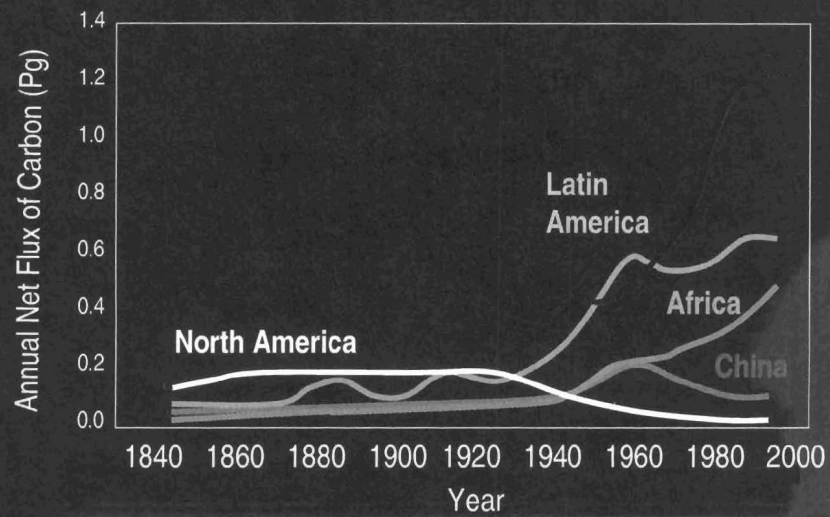
*Professor, Department of Forestry
College of Agriculture and Natural Resources
Michigan State University*

Global Average Temperature and
Carbon Dioxide Concentrations, 1880 - 2006





Net Annual Flux of Carbon from Changes in Land Use



Background: (deforestation)

Native Forest

Barren

Barren

Shrubland

Active Pasture

Idle Pasture

Landsat ETM+, RGB 5/4/3 - 230/069 - 2000

Three ways to reduce carbon in the atmosphere

- ***Emission reduction***: switch to better technologies with lower emissions
- ***Energy substitution***: using more renewable fuels to replace fossil fuels.
- ***Off-setting by sequestration***: biotic uptakes from the atmosphere (e.g. tree planting)

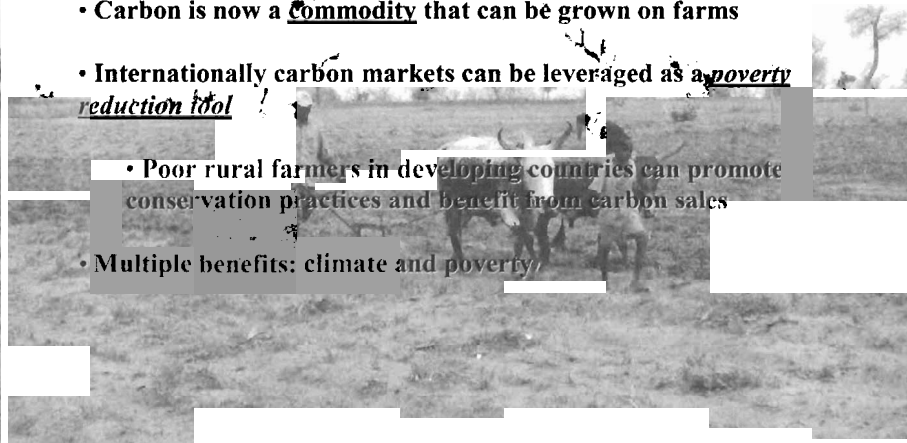
Reducing Greenhouse Gases through Carbon Trading

- Regulatory and Voluntary systems are creating cap-and-trade systems for reducing carbon in the atmosphere.
- A market-based approach
- Buyers = can't meet cap, needs to buy offsets
- Sellers = has carbon sequestration projects and can sell offsets

Carbon markets can reduce poverty

A billion people live in extreme poverty surviving on less than \$1 per day as subsistence farmers

- Carbon is now a commodity that can be grown on farms
- Internationally carbon markets can be leveraged as a poverty reduction tool
- Poor rural farmers in developing countries can promote conservation practices and benefit from carbon sales
- Multiple benefits: climate and poverty



Three ways to reduce carbon in the atmosphere

- *Emission reduction*: switch to better technologies with lower emissions
- *Energy substitution*: using more renewable fuels to replace fossil fuels.
- *Off-setting by sequestration*: biotic uptakes from the atmosphere (e.g. tree planting)



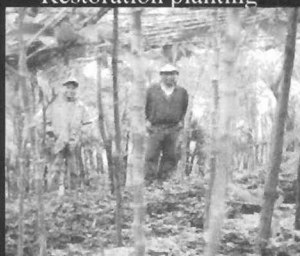
Example Multiple Benefit Projects



Restoration planting



Biofuels



Agroforestry

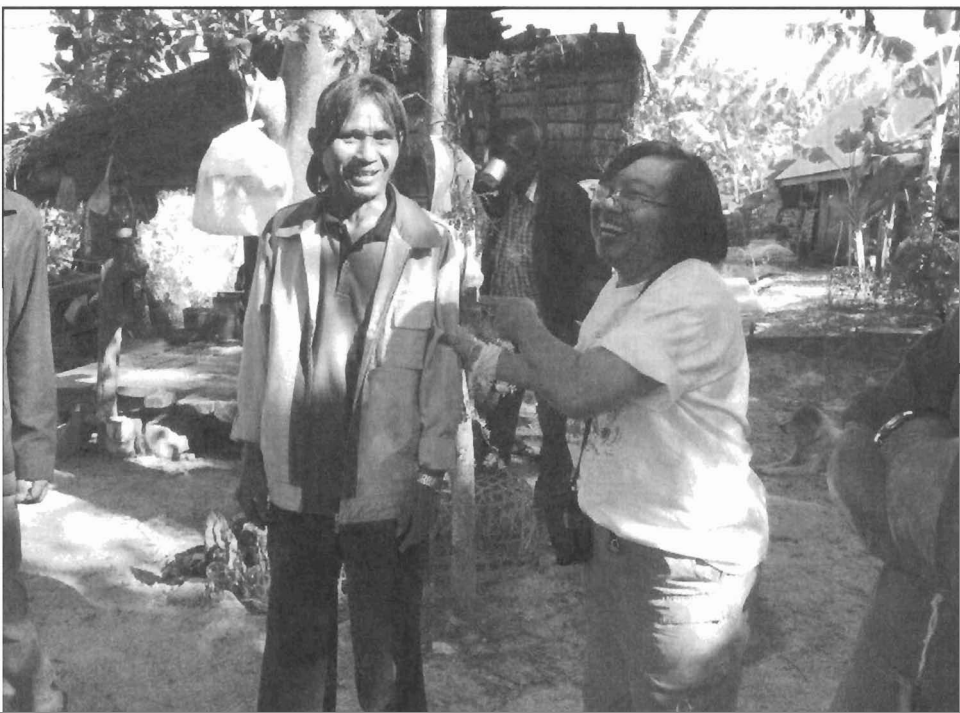


Community Forestry

Shea Nut Over Cassava









Tropical Rain Forest Information Center

- NASA Funded Data and Science Facility
- Since 1999, \$10+M
- Supports Carbon and Climate Science
- Technology Development and IP
- Applications to carbon-climate problems



MICHIGAN STATE
UNIVERSITY

To: Trustee Policy Committee

From: Fred L. Poston
Vice President for Finance and Operations

Re: Responsible Contractor Policy/Project Labor Agreements

Date: February 21, 2008

RECOMMENDATION

BE IT RESOLVED that the Trustee Policy Committee recommends to the Board of Trustees that it adopt the Responsible Contractor Policy attached hereto as Exhibit 1, and that it approve the amendments to Board Policy 02-06-01, "Construction and other Real Property Improvements: Project Planning and Approval" shown on the attached Exhibit 2; and

BE IT FURTHER RESOLVED that, in 24 months, the Policy Committee shall review the University's experience with project labor agreements and with the Responsible Contractor Policy.

S

BACKGROUND

After months of study, including consultation with Professor Dale Belman of the School of Labor and Industrial Relations, with major contractors in Michigan, and with the building trades unions, the administration has concluded that the judicious, targeted use of project labor agreements on a project-specific basis can benefit the University. Examples of benefits the University might accrue from requiring its contractors to use a project labor agreement (PLA) on certain projects include cost savings, improved efficiency, and reduced risk of delays in project completion. As noted in the attachments, it is not intended that the University itself would enter into PLAs for its construction projects and it is not intended that a PLA would be required if doing so would unreasonably restrict competition in the contracting or subcontracting process.

In order to permit the Board to track the use of PLAs, the administration is proposing to amend Board Policy 02-06-01, "Construction and Other Real Property Improvements: Project Planning and Approval" and the related procedures (see the attached Exhibit 3) to require the Vice President for Finance and Operations (VPFO) to report to the Board on the utility of requiring the successful construction manager,

OFFICE OF THE
**VICE PRESIDENT
FOR FINANCE
AND OPERATIONS
AND TREASURER**

Fred L. Poston
Vice President

Michigan State University
420 Administration Building
East Lansing, MI
48824-1046

517/355-5014
FAX: 517/353-6772

design builder, or general contractor on a project, with its contractors and subcontractors, to enter into a PLA in connection with that project. If the VPFO requires that a PLA be used in connection with a project, the VPFO must explain to the Board, by reference to project-specific factors, why mandating a PLA is advantageous to the University. Examples of factors to which the VPFO might refer in the report to the Board are set forth in the amendments to Board Policy 02-06-01. The factors in general are indicators of situations in which additional labor coordination may save money or avoid problems, and include the need to work around open classrooms, laboratories, or offices, any acute time-sensitivity for completion, the availability of skilled trades, and the size and complexity of the project.

In conducting its review of PLAs, the administration also realized that it would be to the University's advantage to collect and state publicly, in a Board-approved Responsible Contractor Policy, steps the University takes to achieve important goals associated with construction contracting at the University, goals like safety at the job site, compliance with the Prevailing Wage Act and other laws, training for workers, promotion of work force and contractor diversity, small business development, a harmonious work environment, and timely and cost effective project completion. The overall goal is set forth in the first sentence of the Policy — “having responsible and ethical contractors and subcontractors on . . . [MSU] construction projects.”

The Responsible Contractor Policy contains text on PLAs that complements the amendments to Board Policy 02-06-01. It authorizes the VPFO to require a contractor to enter into a PLA when doing so would advance MSU's project-specific interests in cost savings, efficiency, timeliness, or quality and would promote the institutional goals set forth in the Policy. The Responsible Contractor Policy also clarifies that the University will not prohibit a contractor from entering into a PLA for a University construction project when the contractor, on its own, chooses to do so.

The VPFO will include a report on the use of PLAs in the annual construction report.

c: L. A. K. Simon
K. A. Wilcox
W. R. Beekman
R. A. Noto
R. Flinn
K. Lindahl
S. Harwood
R. Nestle
P. George
J. Mumma

RESPONSIBLE CONTRACTOR POLICY

Michigan State University is committed to having responsible and ethical contractors and subcontractors on its construction projects. To achieve that goal, the University will take the following steps.

Contractor Qualifications

The University will obtain information from and about the contractors on its major construction projects. Depending on the extent of the University's prior experience with a contractor, that information may include:

- The contractor's experience on projects of similar size and complexity.
- References from other owners.
- The contractor's creditworthiness/financial condition.
- The contractor's safety record and prior history of OSHA/MIOSHA, environmental, or other regulatory violations, discrimination claims, prevailing wage violations, criminal convictions, liens, and litigation (including arbitrations) with owners, contractors, subcontractors, unions, or employees.
- Qualifications of management and supervisory personnel to be assigned by the contractor to the project.
- Access to labor necessary for contract performance.

Contract Specifications

Contracts for the University's major construction projects will include terms requiring:

- Compliance with all applicable health, safety, and environmental laws and regulations during performance of the contract, and timely provision to the University of copies of any complaint or allegation of a violation of any such regulation, and of any accident report, relating to work performed under the contract.
- Contractors and subcontractors to maintain and make available to the University, upon request, documentation of compliance with the Michigan Prevailing Wage Act, including certified payroll reports and complete payroll records.
- Training for all workers assigned to perform work under the project, including any required OSHA/MIOSHA training.
- Registration of apprentices in bona fide training programs consistent with Prevailing Wage Act requirements.
- Contractors and subcontractors to implement and take steps to enforce a requirement that workers on the project be drug and alcohol free on the job site.

- Promotion of work force and contractor diversity to the fullest degree permitted by law, including prohibition of illegal discrimination and violation of the University's Anti-Discrimination Policy.
- Promotion of competition through small business development, by encouraging opportunities for qualified new and small businesses, including those owned by women and minorities, to participate in work under the contract, as contractors, subcontractors, and suppliers.
- Contractors and subcontractors to carry appropriate liability insurance in amounts established by the University's Office of Risk Management and Insurance; to comply with Michigan law on worker's compensation; to provide bid, payment, and performance bonds for the completion of the contracted work; and to maintain these coverages through the period specified by the Office of Risk Management and Insurance.
- Compliance with licensing requirements applicable to those assigned to perform work under the contract.

Work Force Management

On its major construction projects, the University will seek evidence that each successful contractor is able to furnish skilled tradespersons and laborers (a) in numbers sufficient to complete the work under the contract on a timely and cost effective basis, and (b) who are able to work in harmony with the employees of other contractors or subcontractors performing work on that project in order to achieve its completion on a timely and cost effective basis.

In that regard, the University will not discourage a contractor from entering into a project labor agreement (PLA) for a construction project at the University when the contractor determines that a PLA will enhance its ability to perform the work on the project. Further, the Vice President for Finance and Operations (VPFO) is authorized to require the successful contractor to enter into a PLA when doing so would advance MSU's project-specific interests in cost savings, efficiency, timeliness, or quality and would promote the institutional goals set forth in this Policy. The VPFO should not require a contractor to enter into a PLA on any project or part of a project when doing so would unreasonably restrict competition in the contracting or subcontracting process.

Definitions

For purposes of this Policy:

- (a) a "major construction project" is a construction or other real property improvement or maintenance project whose planning and implementation require Board of Trustees approval under Board Policy 02-06-01, "Construction and Other Real Property Improvements: Project Planning and Approval".
- (b) a "contractor" includes a construction manager and a design builder.

EXHIBIT 2

CONSTRUCTION AND OTHER REAL PROPERTY IMPROVEMENTS 02-06-01 PROJECT PLANNING AND APPROVAL

Approval Requirement. Prior approval of the Board of Trustees is required for the planning and implementation of construction of a new building or other real property improvement or maintenance project:

- (1) whose estimated cost would exceed \$1,000,000;
- (2) that would change the height or footprint of an existing building other than a temporary building;
or
- (3) that would make a material long-term change to the landscape.

Procedures. The administration shall prepare written procedures for obtaining the following required Board of Trustees actions:

- (1) project planning approval, including authorization to obtain design and planning services, such as architecture or engineering, for more detailed planning;
- (2) project implementation approval, including approval of a recommended project budget and schematic designs and authorization to submit documentation to the State of Michigan concerning the project and to award contracts (except for design-bid-build contracts) and incur other costs on the project that, in total, do not exceed the approved project budget by more than ten percent; and
- (3) for design-bid-build projects, the award of the contract after the bid process.

Project Labor Agreements. A project labor agreement (PLA) is an agreement between a construction manager, design builder, or general contractor on a University construction project and the union(s) representing workers on that project.

(1) The University will not enter into a PLA for its construction projects, but, in certain circumstances, in order to obtain project-specific benefits in cost savings, efficiency, timeliness, and quality, it may require a construction manager, design builder, or general contractor on a project, with its contractors and subcontractors on that project, to enter into a PLA in connection with that project, and may specify one or more of the terms that the PLA must contain, including the basis, if any, upon which a contractor or subcontractor on the project may be excused from entering into the PLA.

(2) The written procedures prepared by the administration for obtaining Board approval shall include a requirement that the Vice President for Finance and Operations (VPFO) report to the Board on the utility of requiring that the successful construction manager, design builder, or general contractor on the project agree to enter into a PLA in connection with the project. If a construction manager or design builder will be used for the project, the VPFO will make the report when obtaining project planning approval from the Board. If a general contractor will be used for the project, the VPFO will make the report when obtaining project implementation approval from the Board. In the event that the VPFO chooses to require that a PLA be used in connection with the project, the VPFO will explain to the Board, by reference to one or more project-specific factors like those following, why that requirement is advantageous to the University:

- (a) cost savings (e.g., from reduced costs for extra shifts or shifts starting at atypical hours, as on work near classrooms, laboratories, or offices that must be kept open during the day);
- (b) reduced risk of delay in completion of a time-sensitive project (such as work on residence halls that must be finished by the start of school in the Fall or athletic projects that must be completed before a season begins);
- (c) enhanced access to skilled trades whose work is needed to complete a project (taking into consideration other major construction projects in the area); or
- (d) improved efficiency in project management on large, complex, multi-year projects.

Emergency Construction. If an emergency, such as damage or destruction resulting from fire, flood, or explosion, compels immediate action involving construction, so that waiting to obtain Board of Trustees approval would jeopardize, for example, the safety, security or viability of a building or increase the later cost of restoration or replacement, the administration is authorized to undertake and continue to implement measures to secure the building and to remediate the damage or destruction arising from the emergency, and to approve work necessary in light of the circumstances, even though no Board approvals for that project have been obtained. In such a situation, the VPFO shall follow the notification process described below.

Changes During Approved Construction. If during the performance of construction approved under this Policy an unforeseen exigent condition or occurrence is identified that requires immediate action, the administration is authorized to undertake and continue to implement measures to resolve or remediate the unforeseen exigent circumstances and to approve work necessary in light of the circumstances, even though such action may result in total construction project expenses exceeding the approved budget by more than ten percent. In such a situation, the VPFO shall follow the notification process described below.

Notification Process. Upon the occurrence of an emergency requiring immediate construction planning and implementation or upon the discovery of an exigent circumstance that is likely to result in total construction project expenses exceeding the approved budget by more than ten percent, the VPFO will promptly notify the Chair of the Trustee Finance Committee of the situation, provide information about the emergency or the exigent circumstances, identify the project costs (as known at the time), and identify the planned source of funding for the new or additional costs. Unless the Finance Committee Chair requests earlier notification, at its next scheduled meeting the VPFO will give the Finance Committee an update of the information previously provided to the Chair. The VPFO will add to the file a written memorandum that will include his/her approval of expenditures, the information discussed with the Finance Committee Chair and a description of the circumstances precipitating the costs. The Board shall receive a copy of the file memorandum. Once final costs are determined, a project budget, for emergency construction, or an amended project budget, reflecting additional work on an approved project due to exigent circumstances will be presented to the Finance Committee and the Board for approval.

Construction Project Planning & Approval

Overview

EXHIBIT 3

The new Construction Project Planning and Approval Policy requires Board approval for projects that are likely to cost more than \$1,000,000 or that would change the height or footprint of an existing building (other than temporary buildings) or that would make a material long-term change to the landscape.

Board action would be required at least twice for such construction projects, first for authorization to plan the project and second for authorization to proceed with implementation of the project. A third action would be required for contractor selection for projects using a design-bid-build process, and for modified budget approval if the actual costs of a project will exceed the project budget by more than ten percent.

Step #1:

The first Board action would be “**authorization to plan.**” The project information at this step would include: general description and type of project; physical location as commonly known; connectivity to the 2020 Campus Master Plan; preliminary description of the program need; description of the communication plan for the project; project labor agreement report, if a construction manager or design builder will be used for the project; and preliminary estimate of the project cost and identification of the funding sources. Information at this step would be preliminary and before design has begun. With this approval, the administration would be authorized to contract with an architect/engineer, construction manager, and/or design builder.

Step #2:

The second Board action would be “**authorization to proceed.**” The project information at this step would include: description of the project and type of project; project location and schematic design; connectivity to the 2020 Campus Master Plan, Planning Principles and MSU zoning ordinances; final description of program need (defines scope of project); description of the planning process and feedback from communication plan; project labor agreement report, if a general contractor will be used for the project; project cost information, including square footage, construction start and end dates, project budget, identification of funding sources, and method of construction delivery. With this approval, the administration would be authorized to exceed the project costs by 10%.

Step #3:

The third Board action would be the “**bid and contract approval**” when a design-bid-build process is used for the project delivery. If any project exceeds the approved budget taken by earlier Board action, then this step provides an opportunity to amend the budget. If the low bid is not selected this would be the step for Board discussion and approval.

A consent agenda format would be used and would include a list of the firms that bid and have been recommended for construction, including the bid amounts on the project.

Reports:

The administration would provide to the Board periodic project reports on Board-approved projects. Each report will include the name and description of the project; type of project (renovation, new, etc.); project budget; and status of the project. Once the project is completed, the report shall include the final cost of the project and notification of whether it was finished by the projected completion date.

Emergency Projects:

If an emergency, such as damage or destruction resulting from fire, flood, or explosion, compels immediate action involving construction, so that waiting to obtain Board of Trustees approval would jeopardize, for example, the safety, security or viability of a building or increase the later cost of restoration or replacement, the administration is authorized to undertake and continue to implement measures to secure the building and to remediate the damage or destruction arising from the emergency, and to approve work necessary in light of the circumstances, even though no Board approvals for that project have been obtained. In such a situation, the Vice President for Finance and Operations (VPFO) shall follow the notification process described in Board Policy 02-06-01.

Board-Approved Projects and Exigent Circumstances:

If during the performance of construction approved under this Policy an unforeseen exigent condition or occurrence is identified that requires immediate action, the administration is authorized to undertake and continue to implement measures to resolve or remediate the unforeseen exigent circumstances and to approve work necessary in light of the circumstances, even though such action may result in total construction project expenses exceeding the approved budget by more than ten percent. In such a situation, the VPFO shall follow the notification process described in Board Policy 02-06-01.

LICENSE AGREEMENT TERM SHEET

Party: NanoBrick, LLC

License: Exclusive license of two MSU copyrighted works (“Microcontroller Programming Manual” and “Static Charge Manual”) for use in the field of education and training.

Term: The term of the License Agreement is 15 years.

Payment Terms:

NanoBrick will pay MSU a non-refundable initial fee of \$1,000, to be credited toward future royalties owed to MSU.

NanoBrick will pay MSU a running royalty of five percent (5%) of its adjusted gross sales earned from the use of the licensed manuals in educational classes, workshops, or camp events. NanoBrick will pay MSU a running royalty of three percent (3%) of its adjusted gross sales earned from the sale of products embodying the licensed manuals. Running royalty payments are not due on adjusted gross sales earned in Michigan until January 1, 2010. Effective January 1, 2010, NanoBrick will pay MSU an annual minimum royalty of \$500.

NanoBrick will pay to MSU twenty-five percent (25%) of any sublicensing revenues.

Use of University Facilities/Services/Personnel:

No University facilities, services, or personnel will be utilized by NanoBrick under the terms of the License Agreement.

Organization Type:

LLC, Michigan-based small business

Personnel Interest:

Dr. Dean M. Aslam, an Associate Professor in the Department of Electrical and Computer Engineering, owns, or has an option to buy, an equity interest of more than 1% of the company. Dr. Aslam is also a member of *NanoBrick, LLC*.