NRMCA/State Affiliate Strategies for Leveraging MIT LCA Research Results—Year 2

August 31, 2011

NRMCA/State Affiliate Strategies for Leveraging MIT LCA Research Results—Year 2

Background:

The MIT Concrete Sustainability Hub is conducting research to determine the life cycle impact of concrete buildings and roadways. The research seeks a quantitative approach to material flows, embodied and operational energies and life-cycle assessments that will allow the identification of the ecological and economical advantage of concrete compared to other materials for pavements and buildings. The focus of the research is to develop a rigorous basis for identifying and quantifying the ecological and economic performance of concrete. In addition, the MIT researchers are conducting economic analyses on concrete buildings and roadways.

This document present goals and strategies to leverage the MIT research results in order to make concrete the sustainable design material of choice for government, design professionals, contractors, and students/professors through education, promotion, technical advancement and advocacy. In addition it provides objectives and tactics for how NRMCA and its state affiliates can work together to achieve the goal.

Goal:

Make concrete the sustainable design material of choice for government, design professionals, contractors, and students/professors through education, promotion, technical advancement and advocacy by leveraging the MIT LCA research results.

Strategy 1 – Educate

Educate government officials, design professionals, contractors, and concrete industry professionals on the life cycle benefits of concrete based on MIT LCA research results

Objective and Tactics	Timeframe	Responsible
1.1. **NRMCA:** Develop and deliver an online course on life cycle assessment of concrete structures for design professionals (including MIT LCA research results). **State Affiliate:** Encourage design professionals in the state to attend the course.	September 2011, March 2012, twice annually	Lemay, O'Neill, Killingsworth, Peng
1.2. **NRMCA:** Develop and deliver an online course on life cycle assessment of concrete structures for concrete industry professionals (including MIT LCA research results). Offer State Affiliates deep discounts for staff and members. **State Affiliate:** Encourage state affiliate staff and member to attend the course.	September 2011, March 2012, twice annually	Lemay, O'Neill, Killingsworth, Peng

1.3.	**NRMCA:** Develop and deliver a free webinar to concrete promoters on leveraging MIT LCA research results to influence design professionals. **State Affiliate:** Encourage state affiliate staff and members to attend the webinar.	August 2011, others as required	Ochsenreiter, Lemay, Killingsworth, Peng, Leininger, Carr-Smith
1.4.	**NRMCA:** Develop and deliver a free webinar on leveraging MIT LCA research results to influence government officials to adopt LCA in state building codes for concrete promoters. **State Affiliate:** State affiliate staff and members to attend the webinar.	August 2011, others as required	Ochsenreiter, Lemay, Killingsworth, Peng, Leininger, Carr-Smith
1.5.	**NRMCA:** Organize a Sustainability Session at ConcreteWorks to discuss leveraging the MIT LCA research results. **State Affiliate:** State affiliate staff and members participate in Session.	September 2011	Ochsenreiter, Lemay, Killingsworth, Peng, Leininger, Carr-Smith
1.6.	**NRMCA:** Educate NRMCA state affiliates regarding opportunities and tools available from NRMCA to leverage MIT LCA research results at NRMCA regional work plan meetings. **State Affiliate:** Staff and members attend the NRMCA regional work plan meetings.	Ongoing	Garbini, Maher
1.7.	**NRMCA:** Provide an engineering expert in LCA and sustainability to help state affiliates provide to educate design professionals on the life cycle benefits of concrete. **State Affiliate:** Provide an engineering expert in LCA and sustainability to provide education to design professionals (or utilize NRMCA staff as appropriate).	Ongoing	Lemay, Killingsworth, Hult, Peng

1.8.	**NRMCA:** Develop PPT presentations and handout materials for education programs targeting design professionals and delivered by state affiliates.
	- 4 1-page summaries of MIT research results
	  - LCA of Commercial Buildings
	  - LCA of Residential Buildings
	  - LCA of Concrete Pavements
	  - LCCA of Concrete Pavements and Buildings
	- 4 10-minute presentations on MIT research results
	- 4 30-minute presentations on MIT research results
	State Affiliate: Deliver education programs to design professionals.
		September 2011	Lemay, Killingsworth, Hult, Peng

Strategy 2 – Promote

Develop promotion tools for members and state affiliate promoters that promote the life cycle benefits of concrete based on MIT LCA research results

Objectives and Tactics	Timeframe	Responsible
2.1. **NRMCA:** Develop a PowerPoint presentation highlighting the life cycle benefits of concrete buildings targeting design professionals. **State Affiliate:** Deliver presentations to design professionals highlighting the life cycle benefits of concrete buildings.	September 2011	Peng
2.2. **NRMCA:** Develop a PowerPoint presentation highlighting the life cycle benefits of concrete roadways targeting design professionals. **State Affiliate:** Deliver presentations to design professionals highlighting the life cycle benefits of concrete roadways.	September 2011	Killingsworth
2.3. **NRMCA:** Develop a PowerPoint presentation highlighting the life cycle benefits of concrete buildings targeting government officials. **State Affiliate:** Deliver presentations to government officials highlighting the life cycle benefits of concrete buildings.	September 2011	Peng
2.4. **NRMCA:** Develop a PowerPoint presentation highlighting the life cycle benefits of concrete roadways targeting government officials. **State Affiliate:** Deliver presentations to government officials highlighting the life cycle benefits of concrete roadways.	September 2011	Killingsworth
2.5. **NRMCA:** Develop sample Op Eds, news releases, letters to the editor and social media ideas to highlight the need for full LCA and LCCA for buildings and roadways. **State Affiliate:** Use tools to garner publicity of the MIT research and encourage decisionmakers to consider LCA and LCCA for buildings and roadways.	September 2011	Kathleen Carr-Smith
2.6. **NRMCA:** Deliver presentations via a dedicated web page at www.concretepromotion.org. **State Affiliate:** View and download promotion tools from www.concretepromotion.org.	September 2011	Lemay, Ochsenreiter

Strategy 3 – Advance Technology

Disseminate MIT LCA research results for to design professionals and academics.

Objectives and Tactics	Timeframe	Responsible
3.1. **NRMCA:** Publish Concrete Sustainability Reports on the life cycle benefits of concrete buildings targeting design professionals. **State Affiliate:** Distribute Concrete Sustainability Reports on life cycle benefits of concrete buildings to design professionals.	September 2011	Lemay
3.2. **NRMCA:** Publish Concrete Sustainability Report articles on the life cycle benefits of concrete roadways targeting design professionals. **State Affiliates:** Distribute Concrete Sustainability Reports on life cycle benefits of concrete roadways to design professionals.	Done	Lemay
3.3. **NRMCA:** Publish a web page dedicated to disseminating information on the life cycle benefits of concrete **State Affiliate:** Direct design professionals to the web site.	September 2011	Lemay, Ochsenreiter
3.4. **NRMCA:** Publish a database of life cycle assessment (and general sustainability) papers and reports for access on the web for use by design professionals and researchers. **State Affiliate:** Direct design professionals and researchers to the web site.	December 2011	Peng

Strategy 4 – Advocate

Develop tools and programs to assist state affiliates modify state and local laws that would leverage the life cycle benefits of concrete based on MIT LCA research results.

Objectives and Tactics	Timeframe	Responsible
4.1. **NRMCA:** Where appropriate, incorporate LCA into national building codes and standards (IgCC, LEED). **State Affiliate:** Encourage state and local governments to adopt the latest model building codes that incorporate LCA.	Ongoing	Peng, Lemay, Killingsworth, Hult.
4.2. **NRMCA:** Develop proposed changes to state and local building codes to adopt LCA, high albedo pavements, pervious pavements, energy efficiency, etc. **State Affiliate:** Lobby state and local governments to adopt changes to building codes.	Ongoing	Leininger, Walgenbach, Peng, Lemay, Killingsworth, Hult
4.3. NRMCA: Develop proposed changes to state and local laws that would require states and local governments to require full (environmental) life cycle assessment for publically funded roadways. State Affiliate: Lobby state and local governments to adopt changes to laws.	Ongoing	Leininger, Walgenbach, Peng, Lemay, Killingsworth, Hult

4.4.	**NRMCA:** Develop proposed changes to state and local laws that would require states and local governments to require life cycle cost analysis and incorporate realistic inflation rates for concrete and competing materials. **State Affiliate:** Lobby state and local governments to adopt changes to laws.	Ongoing	Leininger, Walgenbach, Peng, Lemay, Killingsworth, Hult
4.5.	**NRMCA:** Provide technical support in the form of a building code expert to assist state affiliates with building codes changes favoring LCA and other sustainable practices at the state and local government level. **State Affiliate:** Utilize the services of NRMCA building code expert to prepare proposed changes to building codes at the state and local government level favoring LCA and other sustainable practices.	Ongoing	Lemay, Peng
4.6.	**NRMCA:** Provide technical support in the form of a pavement expert to assist state affiliates with specifications favoring LCA and other sustainable practices at the state and local government level. **State Affiliate:** Utilize the services of NRMCA pavement experts to prepare proposed changes to specificaions at the state and local government level favoring LCA, LCCA and other sustainable practices.	Ongoing	Lemay, Killingsworth, Hult
4.7.	**NRMCA:** Develop template letters targeting state and local government officials for NRMCA members and state affiliates supporting LCA and LCCA in building codes and road building standards. **State Affiliate:** Encourage members to write and meet with state and local government officials to support LCA and LCCA in the building codes and road building standards.	Ongoing	Leininger, Walgenbach
4.8.	**NRMCA:** Develop concrete industry position statements on LCA, LCCA, sustainability and the building codes targeting state and local government officials. **State Affiliate:** Distribute concrete industry position statements on LCA, LCCA, sustainability and the building codes to state and local government officials.	September 2011	Leininger, Walgenbach
4.9.	**NRMCA:** Develop a briefing document that explains the life cycle benefits and life cycle cost benefits of concrete targeting state and local government officials. **State Affiliate:** Distribute a briefing document that explains the life cycle and life cycle cost benefits of concrete to state and local government officials.	September 2011	Leininger, Walgenbach