

COMPETITION VOLUNTEERS

Jim Ashworth	<i>Hull & Associates, Incorporated</i>
Jamie Ashworth	<i>Daughter of Jim Ashworth</i>
Jamie Adkins	<i>Westerville City Schools</i>
Jeremy Boyd	<i>Westerville City Schools</i>
James Buckson	<i>FHWA - Ohio Division</i>
Dennis Clement	<i>Ohio EPA</i>
Cheryl Cuthbert	<i>OSU Extension Office</i>
Charmagné Crook	<i>Moody Nolan, Incorporated</i>
Carol Elbancol	<i>Fallet Photography Studios</i>
Jeanette Fitzpatrick	<i>Excel, Incorporated</i>
Mike Flaherty	<i>PPG Industries</i>
Dona Furrow	<i>Anna Local Schools</i>
Emma Henderson	<i>Westerville City Schools</i>
Kevin Huber	<i>Excel, Incorporated</i>
Lindsay Huber	<i>Daughter of Kevin</i>
Donna Huelskamp	<i>Donna Heulskamp Photography</i>
Jeremy Johnston	<i>Westerville Schools</i>
Andrea Kilbourne	<i>Ohio EPA</i>
Jay Lanham	<i>Burgess & Niple</i>
Paul Locascio	<i>EWP Designer</i>
Abby McFarland	
Tammy Neely	<i>Excel, Incorporated</i>
Candy Stoer	<i>Globid</i>
Andy Volenik	<i>MORPC</i>

Special Thanks to Glen Gainer, Jeremy Boyd and Emma Henderson, Ohio's 2008 winning team and the National Future City First Place winners, for assisting with this year's medalling ceremony.

FUTURE CITY 2009



**OHIO REGION
JANUARY 17, 2009
COLUMBUS, OHIO**

SPONSORS

The 2009 Future City Competition - Ohio Region is made possible in part by generous support from the following sponsors.

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The Battelle Memorial Institute



Cord Camera



The Enterprise Rent-A-Car Foundation



The 2009 Future City Competition - Ohio Region would also like to thank its host organization:

M-E Companies



Heidi Hatzel-Evans
Kensei Ishikawa
Marie Kalinke Anderse
John Krinks
Tara Lee
Kevin Leedy
Peter Macrae
David Moughton
Volker Mueller
Patrick O'Donovan

*Ohio Department of Natural Resources
Architectural Intern
URS Corporation
URS Corporation
Ohio Department of Natural Resources
WPAFB
TRIAD Architects
XCG Consultants
Bentley
Shirk & O'Donovan*

FINAL ROUND JUDGES

Glenda La Rue, P.E.
Paul Usinowicz, Ph.D., P.E., D.E.E.
Craig Weise, AIA
Kevin Wood, P.E.

*Director, Women in Engineering Program, Ohio State University
Research Leader, Battelle
State Architect of Ohio
Vice President, M-E Companies*

2009 BOARD OF DIRECTORS and STEERING COMMITTEE

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Mark Bonifas
Michael Denison
Benjamin Emley
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*Future City Regional Coordinator / The Ohio State University
Ohio Society of Professional Engineers
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Federal Highway Administration
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TRIAD Architects
Battelle
Ohio Department of Natural Resources
Ohio Department of Natural Resources (retired)
Hull & Associates, Incorporated
NBBJ
Contained Energy Incorporated
TechResources
The Ohio State University*

COMPUTER CITY DESIGN JUDGES

SCHEDULE

James Bactzer Caleb Bell Jon Bernstein Ryan Branch Jim Buckson Kevin Carpenter Judy Crews Rachael Dorothy Megan Dunton Joe Glinski Dan Haake Dick Henry Chester Jordan Peter Macrae Franco Manno Rebecca McNemar Noel Mehlo Chantil Milam Justin Milam Jennifer Murphy Don Phillips Adam Rice Dan Schneider Gus Smithhisler Duane Soisson Brian Toombs Jan Voelker Nate Vogt Andy Volenik Bob Zigmund	<i>Stantec Consulting Services Incorporated</i> <i>Bricker & Eckler</i> <i>Ohio EPA</i> <i>Stantec Consulting Services Incorporated</i> <i>FHA</i> <i>WD Partners</i> <i>Delaware JVC (Retired)</i> <i>Burgess & Niple</i> <i>Stantec Consulting Services Incorporated</i> <i>FHA</i> <i>MORPC</i> <i>FHA</i> <i>MORPC</i> <i>Triad Architects, Incorporated</i> <i>EMH&T</i> <i>Ultron</i> <i>FHA</i> <i>EMH&T</i> <i>City of Upper Arlington</i> <i>Engineer</i> <i>Worthington Engineer, Incorporated</i> <i>Community Housing Network, Incorporated</i> <i>EMH&T</i> <i>Ohio Department of Natural Resources</i> <i>Ohio Department of Transportation</i> <i>Burgess & Niple</i> <i>Ohio Department of Natural Resources (Retired)</i> <i>MORPC</i> <i>MORPC</i> <i>American Electric Power</i>	7-10 a.m. 7:15-7:45 a.m. 7:30-9:20 a.m. 8:25-11:30 a.m. 11:30-1:00 p.m. 12:30-1:00 p.m. 1:00-4:00 p.m.	Coffee & snacks available for purchase <i>LOBBY</i> Judges Registration <i>LOBBY</i> Team Registration <i>LOBBY</i> Competition Set-up <i>ATRIUM</i> Preliminary Round Model & Presentation Judging <i>MEZZANINE</i> - Open to Teams & Families Special Award Judging <i>ATRIUM</i> - Open to Student Team Members Lunch <i>MEZZANINE LUNCH ROOM</i> - Teams <i>MEZZANINE MEETING ROOM</i> - Preliminary Round Judges <i>GALLERY 3</i> - Special Awards Judges, Volunteers, Steering Committee Teams meet with Media and vote for People's Choice Awards <i>ATRIUM</i> Supervised Public Viewing of Models <i>ATRIUM</i>
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ESSAY JUDGES

Jocelyn Ashby Mark Bonifas Jim Boyd Tom Byrer Erin Crilly Paul Culter Jessica Cunningham Michael Denison Nancy Drexel Al Ehlert Michael Ellerbrock Brett Foley Edward Frederick R.Lynn Gilliland Chris Herzner	<i>Architectural Intern</i> <i>Hull & Associates Incorporated</i> <i>Attorney (Retired)</i> <i>Battelle (Retired)</i> <i>Architectural Intern</i> <i>Edwards and Kelcey</i> <i>Malcolm Pirnie</i> <i>NBBJ</i> <i>Administrative Staff</i> <i>SquareD / Schneider Electric</i> <i>Woolpert LLP</i> <i>TRIAD Architects</i> <i>URS Corporation</i> <i>GM (Retired)</i> <i>Planning</i>	1:20 p.m. 1:30- 3:15 p.m. 3:30-4:30 p.m. 5:15-5:30 p.m.	Team Procession and Announcement of Top 5 Competitors <i>GALLERY 2</i> - Public Welcome Final Round Judging for Top 5 Competitors <i>GALLERY 2</i> - Public Welcome Awards Ceremon & Photographs <i>GALLERY 2</i> - Families Welcome Dismantle Competition
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COMPETITION

The Future City Competition is a national program sponsored by the engineering community to promote an interest in technology and engineering in middle school students through hands-on, real world applications. The competition is open to seventh and eighth grade students in public, private and parochial schools within participating regions of the United States. Regional winners compete in the national finals, a featured event during National Engineers Week.

The competition is team based, with each team comprised of three students, a teacher sponsor and an engineer mentor and has four phases:

PHASE 1: DESIGN

The team develops a future city design using SimCity 4 Deluxe software. When the city design is complete, the team submits for the first round of judging.

PHASE 2: BUILD

Using the software design created in Phase 1, the team builds a scale model of a section of their city. The purpose of the model is to give a 3-D representation of how one section of the teams' future city would look.

The model must contain one moving part, such as a transportation or communications component. There is a \$100 limit on the materials used in the physical model, so most teams use "found" items to create their city. The physical models are judged independently of Phase 1 results.

PHASE 3: WRITE

Each student team writes an essay explaining their response to a specific engineering challenge. This year's challenge was to, "Design an innovative process that will create a self-sufficient system which conserves, recycles and resuses all existing water sources."

In addition, the students write an abstract describing the key features of their city design

PHASE 4: PRESENT

Each student team gives a timed presentation of their city to a panel of judges. Afterwards, they answer questions from the judges related to their city's design.

REGIONAL RESULTS

Scores from the software city model, physical model, essay and team presentation are added together to determine the regional winners. Each qualifying region sends one team to the national competition.

NATIONAL FINALS

During the preliminary round, after the judges have reviewed the models and essays, the regional winners make another presentation to a panel of judges. After this round, the five teams with the top accumulated scores will become the national finalists. These finalists present their cities to a panel of celebrity judges. The team with the best presentation, model, essay and city design as determined by the celebrity judges will become the national winner.

Best Use of Water Resources Engineering

Alauddin Alauddin
Mohamad Dallal
Pejmaan Fallah
Maha Habbal

*Ohio EPA - DEFA
OSU Student
Ohio EPA - DEFA
City of Columbus*

Best Moving Part

Sarah Baughman
Lauren Gallo
Kevin Kindy
Andi Larisch

*Karpinski Engineering
TRIAD Architects
TRIAD Architects
TRIAD Architects*

MODEL / PRESENTATION JUDGES

Dean Bortz
Jim Buckson
Rick Carleski
Kevin Carpenter
Tanushree Courlas
Charles Crews
Jennifer Crites
Annette DeHavilland
Michael Denison
Tony DiNicola
Megan Dunton
Mohammad Finy
Christopher Galilei
Anne Gant
Jim Gant
Rick Herman
Conrade Hinds
Marie Jarden
Jerry Jayjohn
Sara Lowry
Joe Pax
Jeff Persons
Donald Phillips, Jr.
Nicole Reed
Roger Ryder
Andrea Sehic
Jonelle Shotwell
Sudhir Singhal
MaryAnn Silagy
Duane Soisson
Justin Strange
Sean Tolentino
Hilda Velsaco
Adam Wei
Lisa Zigmund

*Columbus State Community College
Federal Highway Administration
Ohio EPA - OCAPP
WD Partners
Ohio EPA - DDGW
NiSource
Hull & Associates, Inc.
Ohio EPA - DSIWM
NBBJ
URS Corporation
R.D. Zande & Associates
Hull & Associates, Inc.
Retired
Battelle
Battelle
Woolpert Consultants
City of Columbus, Division of Water
Ohio EPA DHWM
NanoDynamics - Columbus
Federal Highway Administration
Meyers Architects
Geo Source One
City of Worthington
Roehrenbeck Electric
Federal Highway Administration
Ohio Department of Development
NanoDynamics - Columbus
Ohio EPA - DAPC
Ohio EPA - DHWM
Ohio Department of Transportation
Honda of America Manufacturing
Ohio EPA - OCAPP
Federal Highway Administration
Ohio Rehabilitation Services Commission
Ohio Department of Transportation*

SPECIAL AWARDS JUDGES

HISTORY

Best Architectural Model

Tim Lai
Keriann Ours
Mark Ours
Monica Wangler

*NBBJ
Welsh Architects
ON Architects
NBBJ*

Best Infrastructure

Chantil Milam
Justin Milam
Olivia Miller
Anna Milligan

*EMH&T
City of Upper Arlington
AEP
Shelley Metz Baumann Hawk*

Most Environmentally Friendly

Gregory Barden
Brent Foley
Rick Noss
John Smith

*City of Columbus - DOSD
TRIAD Architects
Stantec Consulting Services
Hull & Associates*

Best Use of Transportation

Michelle Gubola
Barbara Jordan
Sara Lowry
Jim Prosch

*Honda
Woolpert
FHWA - Ohio Division
Woolpert*

Most Economic Project

Steve Hermiller
Kristin Matija
Marva McCall
Fred Trippel

*Mannik & Smith Group
CAD Concepts Incorporated
ODNR Division of Watercraft
Borden (Retired)*

Best Use of Energy

Tom Bryer
Lee Fredette
Terry Sullivan
Dick Robinson

*Battelle (Retired)
Batelle
Batelle (Retired)
Schooley Caldwell Architects*

Best Use of Recreation

Joan Bowman
Judy Fratantonio
Kara Gustafuson
Charity Sims

*AIA Columbus
DesignGroup
Meyers Architects
Meyers Architects*

Best Use of Recycled Materials

Kyle Bunke
Hugh Crowell
Ben Seeley
Eric Shafer

*Meyers Architects
Hull & Associates
Karpinski Engineering
Hull & Associates*

Best Use of Ceramics

Ryan Konst
Nick Schultz
Matt Shamis
Barry Strickland

*Steven Schaefer Associates
Shelley Metz Baumann Hawk
Federal Highway Administration
Strict Construction Services*

Ohio held its first competition at the Engineering Complex at The Ohio State University in January, 1999. That first year was a pilot year to “test the waters” of school interest. Dr. Nadine Hinton and Dr. Sue Amidon of Westerville City Schools led the initiative with the American Ceramic Society. Seventeen teams were present from 14 different schools. While our winning team could not compete at Nationals due to the nature of the piloting, a generous judge Dr. Dan Fleisch, Professor of Physics at Wittenberg University, donated the funds to send the five-member team to the National Finals competition to take notes, pictures, and network.

In the fall of 1999, Dan teamed with Aimee Zerla and Mark Glasper of the American Ceramics Society and Lisa Huelskamp of Westerville City Schools to move the event from pilot to program status and recruited more schools and judges to participate.

The program has grown in popularity with Ohio often enrolling the record number of school registrations for the nation. A strongly committed Steering Committee collaborating with highly motivated and dedicated students, teachers, and engineer mentors lead the way to future successes.

In 2005, the Future City Competition - Ohio Region received the 2005 Organization of the Year Award as selected by the Environmental Education Council of Ohio (ECCO).

In 2007-08, our Ohio team helped us celebrate our 10th anniversary by earning first place at the National Finals in DC. It was a very proud moment for all of us and speaks to the level of dedication of our teachers, students, families, schools, engineers, and committee members.

Below, the 2007-2008 Ohio Region winner Heritage Middle School of Westerville, Ohio accepts their 1st Place Trophy at the Future City National Finals in Washington, D.C.



SPECIAL AWARDS

The following Special Award categories will be presented during the awards ceremony. First place and honorable mentions are determined by the scoring of volunteer judges at the competition.

Best Architectural Model

American Institute of Architects, Columbus Chapter

Cities that have structures in the model that represent a variety of sizes, shapes, designs, colors and materials will do best in this category. The model should be aesthetically pleasing, and form should follow function in choosing methods and materials for construction. Team members should display an understanding of basic architectural concepts.

Best Infrastructure

American Society of Civil Engineers

Cities with innovative infrastructure systems will do well in this category. The city should utilize transportation, power, communication, data, security, water and sewer systems in innovative ways. Team members should display an understanding of basic civil engineering concepts and the role infrastructure plays in their city's functionality.

Most Environmentally Friendly

Stantec Consulting Services, Incorporated

Cities that have a plan for handling outflows from industrial, commercial and residential waste streams will do well in this category. Recycling strategies, advanced energy plants that minimize pollution, treatments techniques and efforts to keep effluent streams away from residential areas, green spaces and water sources score high. Team members should display that engineering processes have considered all the through the waste system.

Best Use of Transportation

Ford Motor Company Fund

Cities that have a plan a variety of roads, rails, people movers, subways, planes, rockets and other advanced transportations ideas will do well in this category. Positioning and accessibility of public transportation in relation to housing, shopping and workplaces is also important. Team members should display that time has been spent engineering the transportation system so that it allows workers and visitors to move easily around the city.

Most Economic Project

Gianola Financial Planning

The student team should be aware of their city's financial performance in the SimCity computer game. Understanding the impact revenues and taxes had on the financial condition of their city is important. Team members should display an understanding that venues such as museums, arenas, zoos and parks and generate revenue but they also must be paid for through tax collections or other sources.

Best Use of Energy

Ohio Department of Development - Office of Energy Efficiency

Cities that have advanced energy production facilities, energy efficient commuting and have renewable, non-polluting energy sources will do well in this category. Creativity is encouraged but team members should be able to demonstrate that their energy system will work even if it is a stretch with current technology. The team should understand how their city's energy is produced and have ideas on energy efficiency in industry, workplaces and at home.

Vatican Academy Homeschool

Future City Name: Triopolis

Teacher: Jennifer Pedrozo

Students: Augustine Pedrozo, Alex Sheehan, Miquel Pedrozo

Engineer: Tom Bodart, Rolls Royce

Waterloo Middle School

Future City Name: Maji

Teacher: Debbie Morgan

Students: Megan Forney, McClaren Skinner, Jared Umstot

Engineer: Tanya Miracle, University of Akron Student

Wellston Middle School

Future City Name: Rocketville

Teacher: J.R. Liston

Students: Jusin Fain, Zalan Rippeth, Cole Robinson

Engineer: Tim Wojdacz, City of Wellston

Yorktown Middle School

Future City Name: Generosity

Teacher: LaVonne L. Clements

Students: Corinna Schwabb, Aliyah Smith, Taylot Feldt

Engineer: Fred Schwabb, Schwabb Architects

TEAMS

Indian Valley Middle School

Future City Name: Kiaville

Teacher: Marilyn Kramer

Students: Marissa Enos, Courtney Leggett, Logan Ridgeway

Engineer: Aaron Kochman, Lauren International

Lakewood Middle School

Future City Name: Triste Nadar

Teacher: Pamela Hundley

Students: Kayla Gowdy, Jarod Rose, Sommer Fry

Engineer: Vern Johnston, C V Johnston and Associates

New Richmond Middle School

Future City Name: North Park

Teacher: Adam Bird

Students: Stone Oliver, Kurt Greisenkamp, Tyler David

North Union Middle School

Future City Name: Verde la Gente

Teacher: Kristi Matlack

Students: Luke Ackerman, Lexi Hall, Riley Hall

Engineer: Josh Holtschulte, Union County Engineer's Office

St. Bernard School

Future City Name: Wally World

Teacher: Mary Obringer

Students: Samantha Marcum, Haley McCarthy, Monica McKinniss

Engineer: Todd Fike, PECO II

St. Matthias

Future City Name: Postremo Urbs

Teacher: Dan Kinley

Students: Catie Woods, Tessa Mulligan, Annie Kobermann

Engineer: Ron Yarano, M-E Companies

St. Vincent de Paul

Future City Name: Selleria

Teacher: Terra Dilley

Students: Stephanie Fongheiser, Daniel Tharp, Avi Wagoner

Engineer: Joseph Tapocsi, Rolls Royce

Tri-County North Middle School

Future City Name: Paniborough

Teacher: Jim Conway

Students: Jesse Cavendish, Urmil Patel, Lehanna Wilson

Engineer: Greg Beers, Air Force (Retired)

Best Use of Recreation

Worthington AM Rotary Club

Cities that look like fun will do well in this category. Green space, water, parks, museums, zoos, sports arenas, and other areas for recreation are important as well as a well thought out plan for how their citizens can spend their leisure time. This should be a fun category, and team members should give the impression that life would be exciting in their city.

Best Use of Recycled Materials

Ohio EPA Office of Environmental Education

Teams that incorporate a variety of odds and ends into their models that are then creatively developed into buildings, houses, parks, landscapes and other living spaces will do well in this category. Given that there is a \$100 limit on model and presentation materials for each team's project, creative use of recycled materials should figure prominently in the cities depicted. This is a fun category, and team members should understand that recycling is an important part of a sustainable future city.

Best Use of Ceramics

Allied Mineral Products

Cities that incorporate traditional ceramics (plaster, cement, bricks, tableware, glass, tile, ceramic magnets, etc) as well as more advanced ceramics (superconducting magnets for Maglev, filters for purifying water, tile for spacecraft thermal insulation, optical fibers, electronics, sensors, solar panels and other advanced structural applications) will score high. Team members should understand ceramics and be able to describe why its properties are important for various applications.

Best Use of Water Resources Engineering

Sam Chebaro Memorial Award - Ohio EPA Office of Environmental Education

A city that plans for good water resources management will do well in this category. Credit will be awarded for selecting appropriate drinking water sources, treatment technologies, collection and distribution systems, and disposal locations. In addition, the strategic location of drinking water and wastewater treatment plants, the use of water conservation strategies, innovative treatment techniques, and efforts to protect water sources and other sensitive resources score high. Team members should display that time has been spent engineering processes all the way from how to provide drinking water to how to treat and dispose of wastewater.

Best Moving Part

Worthington AM Rotary Club

Cities are required to have a Moving Part as a component of the city model. The Moving Part must function with a self-contained energy source and must contribute to the overall design and function of the city. Moving Parts that are designed in a creative fashion, are powered in a unique way and incorporate unusual materials will do well in this category. Team members should understand the function and importance of their Moving Part and its role in the design of their city.

SPECIAL AWARDS

TEAMS

The following Special Award categories will be presented during the awards ceremony. First place and honorable mentions are assessed by the Steering Committee.

Best Computer City Design

M-E Companies

Presented to the team with the highest Computer Map score.

Best Essay

Society of Marketing Professionals - Cincinnati Chapter

Presented to the team with the highest Essay score.

Rookie of the Year

Collector Wells International

Presented to the team with the highest overall score from a school that has never participated at the Ohio Regional Competition.

The following Special Award category will be presented during the awards ceremony.

First place and honorable mentions are determined by the voting of Competition participants.

People's Choice

Battelle Memorial Institute

This award is based on individual preference. Five people's choice ballots are in each team's registration packet – one for each member of the team. Only the competing team members can vote. The voting takes place during lunch and must be turned in by 12:30 p.m. Ballots are turned in at the ballot box on the FCC registration table.

PRIZES

Overall - 1st Place

ReArt recycled glass awards for each team member and a trip to Washington, D.C. to compete at the Future City Competition National Finals. Hotel, airfare and a \$500 stipend are provided for each team member.

Overall - 2nd - 5th Place

ReArt recycled glass awards and \$25 for each team member

Special Awards - 1st Place

ReArt recycled glass suncatchers for each team member

Special Awards - Honorable Mention

Certificates for each team member

All Participants

Everyone who participated at the regional finals will receive medals, personalized certificates, Future City T-shirts and one team photograph for the school that will be mailed with the score sheets approximately 2-3 weeks after the date of the competition.

Anna Local Schools

Future City Name: Stekcor

Teacher: Ben Wilhelm

Students: Nick Beetke, Doug Murray, Adam Berning

Engineer: Lee Eilerman, Ohio Department of Transportation

Batavia Middle School

Future City Name: Mons-Montis

Teacher: Mary Bradburn

Students: Sarah Clark, Alex White, Ben McDonough

Engineer: Laura Michalske, Proctor & Gamble Co.

Benjamin Logan Middle School

Future City Name: City 23

Teacher: Marge Jenkins

Students: Peighton Wagoner, Logan Dunn, Haley Jones

Engineer: Gwendolyn Altenhof, Honda R&D America's, Inc.

Bexley Middle School

Future City Name: Novo-Mundum

Teacher: Margaret Engelhardt

Students: Tommy Krajnak, Wyatt Peery, Abby Sharp

Engineer: Mark Sherman, Franklin County Engineer's Office

Finland Middle School

Future City Name: Plainview

Teacher: Lynette Stephens

Students: Alex Gifford, Morgan Robinson, Hyrum O'Day

Engineer: Ally Payne, OSU Student

Great Western Academy

Future City Name: Golden City

Teacher: Jeff Henderson

Students: Breeana Carder, Emily Derenzo, Kyle Lanthorn

Engineer: Gus Reiter, Emerson Network Power Business

Highland Middle School

Future City Name: Kastiofia

Teacher: Kim Clendaniel

Students: Mackenzie Kastelein, Amanda Sisti, Rachel Horvath

Engineer: Diane Turner

Immaculate Conception Academy

Future City Name: Bogha Ceann

Teacher: James J. Birch

Students: Charlie Federspiel, Katie Rake, Maria Reist

Engineer: Michelangelo Pedicini, Proctor & Gamble (Retired)