




American Concrete Institute®
Advancing concrete knowledge

Site Casting New Form: Inspiring Function to Respond


ACI Fall 2012 Convention
 October 21 – 24, Toronto, ON

ACI
 WEB SESSIONS



Mr. Jim Baty is the Technical Director for the Tilt-Up Concrete Association and a frequent presenter throughout the industry on topics of Tilt-Up design and construction. For more than twenty years, Mr. Baty has been focused on the development of the Tilt-Up industry and has brought dedicated attention to the thermal performance of building envelopes constructed with the Tilt-Up building system.

ACI
 WEB SESSIONS



James R. Baty II (Jim) – Technical Director, Tilt-Up Concrete Association

Dramatic Global Examples of Form Inspiring Function

2013 American Concrete Institute Fall Convention
 Technical Session by ACI 551 Tilt-Up Concrete
Site Casting New Form: Inspiring Function to Respond



Drama Around the Globe

Tilt-Up momentum drives solutions to inspired heights

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond




Drama Around the Globe

Tilt-Up momentum drives solutions to inspired heights

South Africa:	Freedom Towers Walter Sisulu Square of Dedication Sibaya Casino Gateway Theatre of Shopping
Jordan:	Housing Prototype
Dominican Republic:	Supermercados Bravo Bravo Churchill
Mexico:	ADC Loon III
New Zealand:	Waitakere Sports Arena
Canada:	Hana America

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond



Drama | Form | Function

- Identify the presence of drama
- Understand the liberating freedom found in construction method
- Visualize powerful form
- Acknowledge partnership of function flowing through form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond


Drama Around the Globe

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance


Bravo Churchill
Santo Domingo
Dominican Republic

Construcciones Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store



07/09/2011



Drama Around the Globe



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

ADC Loon III
Ciudad Juarez, Chihuahua
Mexico

Constructora Lintel SA de CV
El Paso, Texas
Ciudad Juarez, Mexico

manufacturing and office
headquarters with on-site day
care

tilt-up selected for its
architectural appeal

Drama Around the Globe



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Freedom Towers
Gauteng,
South Africa

Tilt-Up Systems
Kloof
South Africa

entrance feature located on the
busiest traffic circle in the
region

arrival significance to the new
National Monument in South
Africa

Drama Around the Globe



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Gateway Theatre of Shopping
Umhlanga Rocks New Town
Zulu Natal
South Africa

Tilt-Up Systems
Kloof
South Africa

3.42 Million sq.ft. (317,700 sq.m.)
1.36 Million sq.ft. (126,300 sq.m.)

Approx. 65-ft (19.8 m) Tallest
184,000 sq.ft. (17,000 sq.m.)

Drama Around the Globe



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Gateway Theatre of Shopping
Umhlanga Rocks New Town
Zulu Natal
South Africa

Tilt-Up Systems
Kloof
South Africa

3.42 Million sq.ft. (317,700 sq.m.)
1.36 Million sq.ft. (126,300 sq.m.)

Approx. 65-ft (19.8 m) Tallest
184,000 sq.ft. (17,000 sq.m.)



Drama Around the Globe

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Supermercados Bravo
Santo Domingo
Dominican Republic

Construcciones Civiles y
Mechanicos (CCM)
Santo Domingo

distribution center signifying
the presence of the chain of
stores in the regions
marketplace



Drama Around the Globe

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Hana America
Niagara Falls
Ontario, Canada

LJB Inc.
Dayton
Ohio

multi-function property with retail, restaurant and office space combining performance and heritage through tilt-up



Drama Around the Globe

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Housing Prototype
Amman
Jordan

Site Cast Construction Corp.
Ottawa
Ontario, Canada

first tilt-up project in Jordan seeking safe, durable and efficient housing for military



Drama Around the Globe

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Walter Sisulu Square of Dedication
Klipptown Soweto
Gauteng,
South Africa


Tilt-Up Systems
Kloof
South Africa

impossible concrete features delivered in tilt-up operation to symbolize the entrance of the New National Monument in South Africa to apartheid

Drama | Form | Function

- Identify the presence of drama
- Understand the liberating freedom found in construction method
- Visualize powerful form
- Acknowledge partnership of function flowing through form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Bravo Churchill
Santo Domingo
Dominican Republic

Construcciones Civiles y Mecanicos (CCM)
Santo Domingo

2-story parking garage below wholesale grocery supermarket store

Liberating Process of Construction



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

ADC Loon III
Ciudad Juarez, Chihuahua
Mexico

Constructora Lintel SA de CV
El Paso, Texas
Ciudad Juarez, Mexico

manufacturing and office headquarters with on-site day care

tilt-up selected for its architectural appeal



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store

21/09/2009



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store

08/09/2009


Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store

07/09/2009



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store

15/09/2009

Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Gateway Theatre of Shopping
Umhlanga Rocks New Town
Zulu Natal
South Africa

Tilt-Up Systems
Kloof
South Africa

3.42 Million sq.ft. (317,700 sq.m.)
1.36 Million sq.ft. (126,300 sq.m.)

Approx. 65-ft (19.8 m) Tallest
186,000 sq.ft. (17,000 sq.m.)






Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resilience

Housing Prototype
Amman
Jordan

Site Cast Construction Corp.
Ottawa
Ontario, Canada

first tilt-up project in Jordan
seeking safe, durable and
efficient housing for military



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve



Liberating Process of Construction

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Walter Sisulu Square of Dedication
Kligtown Soweto
Gauteng,
South Africa


Tilt-Up Systems
Kloof
South Africa

impossible concrete features delivered in tilt-up operation to symbolize the entrance of the New National Monument in South Africa to apartheid

Drama | Form | Function

- Identify the presence of drama
- Understand the liberating freedom found in construction method
- Visualize powerful form
- Acknowledge partnership of function flowing through form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Power of Form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

ADC Loon III
Ciudad Juarez, Chihuahua
Mexico

Constructora Lintel SA de CV
El Paso, Texas
Ciudad Juarez, Mexico

manufacturing and office headquarters with on-site day care

tilt-up selected for its architectural appeal

Power of Form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

ADC Loon III
Ciudad Juarez, Chihuahua
Mexico

Constructora Lintel SA de CV
El Paso, Texas
Ciudad Juarez, Mexico

manufacturing and office headquarters with on-site day care

tilt-up selected for its architectural appeal



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Supermercados Bravo
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

distribution center signifying the presence of the chain of stores in the regions marketplace



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Supermercados Bravo
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

distribution center signifying the presence of the chain of stores in the regions marketplace

Power of Form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Freedom Towers
Gauteng,
South Africa

Tilt-Up Systems
Kloof
South Africa

entrance feature located on the busiest traffic circle in the region

arrival significance to the new National Monument in South Africa



Power of Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonate

Walter Sisulu Square of
Dedication
Kliptown Soweto
Gauteng,
South Africa


Tilt-Up Systems
Kloof
South Africa

impossible concrete features delivered in tilt-up operation to symbolize the entrance of the New National Monument in South Africa to apartheid

Drama | Form | Function

- Identify the presence of drama
- Understand the liberating freedom found in construction method
- Visualize powerful form
- Acknowledge partnership of function flowing through form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond


Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store

Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store






Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Bravo Churchill
Santo Domingo
Dominican Republic

Construccion Civiles y
Mechanicos (CCM)
Santo Domingo

2-story parking garage below
wholesale grocery supermarket
store



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Hana America
Niagara Falls
Ontario, Canada

LJB Inc.
Dayton
Ohio

multi-function property with
retail, restaurant and office
space combining performance
and heritage through tilt-up



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Hana America
Niagara Falls
Ontario, Canada

LJB Inc.
Dayton
Ohio

multi-function property with
retail, restaurant and office
space combining performance
and heritage through tilt-up





Function Responds to Form


Waitakere Sports and Events Centre
Auckland
New Zealand

Alan Reay Consultants
Christchurch
New Zealand

four-story open dome structure stabilized and braced by tilt-up panel systems for seating and roof



Tilt Up walls used to divide changing rooms and to support stepped bleacher seating and upper high level walkway and roof structure.




Function Responds to Form


Waitakere Sports and Events Centre
Auckland
New Zealand

Alan Reay Consultants
Christchurch
New Zealand

four-story open dome structure stabilized and braced by tilt-up panel systems for seating and roof



Steel structures all supported on Tilt Up walls




Function Responds to Form


Waitakere Sports and Events Centre
Auckland
New Zealand

Alan Reay Consultants
Christchurch
New Zealand

four-story open dome structure stabilized and braced by tilt-up panel systems for seating and roof



Curved Tilt Up panel with rebates to match the Aluminium cladding system.





Function Responds to Form

Waitakere Sports and Events Centre
Auckland
New Zealand

Alan Reay Consultants
Christchurch
New Zealand

four-story open dome structure stabilized and braced by tilt-up panel systems for seating and roof






Function Responds to Form

Supermercados Bravo
Santo Domingo
Dominican Republic

Construcciones Civiles y Mecanicos (CCM)
Santo Domingo

distribution center signifying the presence of the chain of stores in the regions marketplace






Function Responds to Form

Supermercados Bravo
Santo Domingo
Dominican Republic

Construcciones Civiles y Mecanicos (CCM)
Santo Domingo

distribution center signifying the presence of the chain of stores in the regions marketplace



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Sibaya Casino
Umhloti
Durban,
South Africa

Tilt-Up Systems
Kloof
South Africa

magnitude and complexity deliver iconic imagery for a tribal facility for seven tribes of this nation in a facility only tilt-up was able to achieve

Function Responds to Form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Freedom Towers
Gauteng,
South Africa

Tilt-Up Systems
Kloof
South Africa

entrance feature located on the busiest traffic circle in the region

arrival significance to the new National Monument in South Africa



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Walter Sisulu Square of Dedication
Kliptown Soweto
Gauteng,
South Africa

Tilt-Up Systems
Kloof
South Africa

impossible concrete features delivered in tilt-up operation to symbolize the entrance of the New National Monument in South Africa to apartheid



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Walter Sisulu Square of Dedication
Kliptown Soweto
Gauteng,
South Africa

Tilt-Up Systems
Kloof
South Africa

impossible concrete features delivered in tilt-up operation to symbolize the entrance of the New National Monument in South Africa to apartheid



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Resonance

Gateway Theatre of Shopping
Umhlanga Rocks New Town
Zulu Natal
South Africa

Tilt-Up Systems
Kloof
South Africa

3.42 Million sq. ft. (317,700 sq. m.)
1.36 Million sq. ft. (126,300 sq. m.)
Approx. 65-ft (19.8 m) Tallest
184,000 sq. ft. (17,000 sq. m.)



Function Responds to Form

Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Housing Prototype
Amman
Jordan

Site Cast Construction Corp.
Ottawa
Ontario, Canada

first tilt-up project in Jordan seeking safe, durable and efficient housing for military

Function Responds to Form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

ADC Loon III
Ciudad Juarez, Chihuahua
Mexico

Constructora Lintel SA de CV
El Paso, Texas
Ciudad Juarez, Mexico


manufacturing and office headquarters with on-site day care

tilt-up selected for its architectural appeal

Drama | Form | Function

- Identify the presence of drama
- Understand the liberating freedom found in construction method
- Visualize powerful form
- Acknowledge partnership of function flowing through form



Fall Convention 2013 | Site Casting New Form: Inspiring Function to Respond

Questions???

James R. Baty II (Jim) – Technical Director, Tilt-Up Concrete Association
www.tilt-up.org jbaty@tilt-up.org 319-895-6911

Dramatic Global Examples of Form Inspiring Function



2013 American Concrete Institute Fall Convention
Technical Session by ACI 551 Tilt-Up Concrete
Site Casting New Form: Inspiring Function to Respond