

Full-Scale Structural and Nonstructural Building System Performance during Earthquakes & Post-Earthquake Fire

A Joint Venture between Academe,
Industry and Government

Construction Management

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SDSU



Project Meeting | September 29, 2010

Construction Schedule Overview

- ▶ To meet the September 2011 Completion date, construction must start by March 2011
- ▶ Strict compliance with the construction schedule is required to meet this date

**ALL PARTNERS MUST COMPLETE THEIR WORK
WITHIN THE TIME PERIOD SPECIFIED IN THE
CONSTRUCTION SCHEDULE**

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Construction Schedule

- ▶ Preliminary Construction Schedule is posted
- Please let us know if you have any comments or concerns

- ▶ Updates will be made based on the Architectural Drawings as soon as they are complete

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Construction Schedule

	March		April		May		June		July		August	
	1	15	1	15	1	15	1	15	1	15	1	15
Table/Utility Conx												
1st Floor												
Structural												
Non-Building Components												
2nd Floor												
Structural												
Non-Building Components												
3rd Floor												
Structural												
Non-Building Components												
4th Floor												
Structural												
Non-Building Components												
5th Floor												
Structural												
Non-Building Components												
Elevator												
Instrumentation												

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Pull Planning

- ▶ Some significant differences from a “normal” project
- ▶ “Design” aspects are not especially important
 - ▶ Specifications (esp. for finishes) often relatively loose
- ▶ Impact on schedule
 - ▶ Common long leads need not be so
 - ▶ Can afford to delay and see what is available until the last responsible moment
 - ▶ Critical to receive feedback from partners
 - ▶ What is shortest responsible lead time for your products?
 - ▶ What scope are you providing, especially in regards to connections
 - ▶ Realistic feedback on time windows that are possible (and impossible)

No such thing as too early for this information

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Responsibility Matrix

- ▶ Provides a clear overview of who is responsible for what task and identifies where gaps exist.
- ▶ There are currently many gaps that must be filled before construction can begin.
 - ▶ Some of these are “place holders” for expected scope
 - ▶ Completion of architectural design will clarify
 - ▶ As new partners are identified, we seek to understand the nature and scope of any in-kind participation.
 - ▶ There is also a significant quantity of paid work

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Responsibility Tracker Updates

CSI Division(s)	Item	Supplier
1500	Temporary Facilities	No commitment
15423	Temporary Rolling Scaffolding	No commitment
31000	Concrete Forms and Accessories	
31100	Concrete Forming	Englekirk Advisory Board To Bid
31500	Concrete Accessories	Englekirk Advisory Board To Bid
32000	Concrete Reinforcement	
32100	Reinforcing Steel	Englekirk Advisory Board To Bid
33000	CIP Concrete	
33100	Structural Concrete	Englekirk Advisory Board To Bid
33900	Concrete Curing	Englekirk Advisory Board To Bid
34000	Precast Concrete	
34100	Precast Structural Concrete	Englekirk Advisory Board To Bid
34819	Precast Concrete Stairs	Englekirk Advisory Board To Bid
35000	Cast Roof Decks and Underlayment	
35100	Cast Roof Decks	Englekirk Advisory Board To Bid
51000	Structural Metal Framing	
51200	Structural Steel Framing	No commitment
54000	Cold Formed Metal Framing	
54100	Structural Metal Stud Framing	Steel Stud Manufacturers Association
55000	Metal Fabrications	
55100	Metal Stairs	Pacific Stairs
55200	Metal Railings	No commitment

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Responsibility Tracker Updates

CSI Division(s)	Item	Supplier
64000	Architectural Woodwork	
64100	Architectural Wood Casework	No commitment
72000	Thermal Protection	
72100	Thermal Insulation	No commitment
78000	Fire and Smoke Protections	
78100	Applied Fireproofing	No commitment
78600	Smoke Seals	H&B
78700	Smoke Containment Barriers	H&B
79000	Joint Protection	
79100	Preformed Joint Seals	No commitment
79200	Joint Sealants	No commitment
79500	Expansion Control	No commitment
71000	Waterproofing	
71500	Sheet Metal Waterproofing	No commitment
81000	Doors and Frames	
81100	Metal Doors and Frames	No commitment
85000	Windows	
85100	Metal Windows	No commitment
87000	Hardware	
87100	Door Hardware	No commitment
87500	Window Hardware	No commitment
88000	Glazing	
92000	Plaster and Gyp Board	
92100	plaster & Gyp Board Assemblies	Georgia Pacific
92200	Supports for plaster & gyp board	Georgia Pacific
92300	gypsum plastering	Georgia Pacific

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Responsibility Tracker Updates

CSI Division(s)	Item	Supplier
95000	Ceilings	
95100	Acoustical Ceilings	Armstrong
95300	Acoustical Ceiling Suspension Assemblies	Armstrong
95300	Completion of 'ceiling sandwich'	Armstrong
96000	Flooring	
96500	Resilient Flooring	No commitment
96800	Carpeting	No commitment
96900	Access Flooring	Fate Access Floors
97000	Wall Finishes	
98000	Acoustical Treatments	
99000	Painting & Coating	
99100	Painting	No commitment
101000	Information Specialties	No commitment
101400	Signage	No commitment
102000	Interior Specialties	
102200	Partitions	Pending
104000	Safety Specialties	
104400	Fire Protection Specialties	No commitment
117000	Healthcare Equipment	
117600	CU	CSSC
134000	Integrated Construction	
134800	Vibration isolation Computer Mounting Hardware	No commitment
134800	Vibration isolation systems and restraints	Mason
135000	Special Instrumentation	
135100	Stress Instrumentation	NEES UCSD
135200	Seismic Instrumentation	NEES UCSD
142000	Elevator	
142400	Hydraulic Elevator	Schindler

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Responsibility Tracker Updates

CSI Division(s)	Item	Supplier
210000	Fire Suppression	
210529	Hangers and Supports for Fire Suppression Piping	Hilti
210548	Vibration & Seismic Controls for Fire Suppression Piping	Mason
211000	Water Based Fire Suppression Systems	
211100	Facility Fire Suppression Water Service Piping	NFSA
211200	Fire Suppression Standpipes	NFSA
211300	Fire Suppression Sprinkler Systems	NFSA
220000	Plumbing	
220529	Hangers and Supports for Plumbing Piping & Equipment	Hilti
220548	Vibration & Seismic Controls for Plumbing Piping & Equipment	Mason
221000	Plumbing Piping and Pumps	
221100	Facility Water Distribution Cast Iron Piping	Ruskin
224000	Plumbing Fixtures	
224100	Residential Fixtures	No commitment
224300	Healthcare Fixtures	No commitment
230000	HVAC	
230529	Hangers & Supports for HVAC piping & Equipment	Mason
230548	Vibration & Seismic Controls for HVAC piping & equipment	Mason
232000	HVAC Piping and Pumps	
233000	HVAC Air Distribution	
233100	HVAC Ducts and Casings	Pending
233200	Air Plenums and Chases	Pending
233300	Air Duct Accessories	Pending
233313	Dampers	Ruskin
233313.16	Fire Dampers	Ruskin
233313.19	Smoke Control Dampers	Ruskin
233700	Air Outlets and Inlets	No commitment
236000	Central Cooling Equipment	Baltimore Aircoil

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Responsibility Tracker Updates

CSI Division(s)	Item	Supplier
260000	Electrical	
260529	Hangers & Supports for Electrical Systems	Mason
260536	Cabletrays for Electrical Systems	Schneider Electric
260548	Vibration & Seismic Controls for Electrical Systems	Mason
261000	Medium Voltage Distribution	Schneider Electric
262000	Low Voltage Electrical Transmission	Schneider Electric
265000	Lighting	Schneider Electric
265100	Interior Lighting	Schneider Electric
272000	Data Communications/Computer Hardware	
272100	Data Communications Network Equipment	IBM
272200	Data Communications Mounting Hardware	No commitment
275000	Distributed Communications & Monitoring	
275200	Healthcare Communications & Monitoring	No commitment
283000	Electronic Detection and Alarm	SimplexGrinnell
283100	Fire Detection and Alarm	SimplexGrinnell

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Missing Commitments

- ▶ Railings
- ▶ Woodwork
- ▶ Insulation
- ▶ Scaffolding
- ▶ Smoke Seals and Barriers
- ▶ Joints
- ▶ Waterproofing
- ▶ Doors and Frames
- ▶ Windows
- ▶ Door and Window Hardware
- ▶ Flooring/Carpeting
- ▶ Paint
- ▶ Signage
- ▶ Partitions
- ▶ Vibration Isolation Hardware
- ▶ Plumbing Fixtures
- ▶ HVAC Ducts and Chases
- ▶ Data Hardware

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Contracted Work

- ▶ Some major components like concrete have already been identified to be paid for out of the current budget.
- ▶ For any other work items that a partner is not found, funding will have to be available to complete.

Updates

All of our estimates and assumptions are based on the documentation we have received so far

Updates and modifications will be applied based on the architectural drawings and information obtained from today's meeting

Concerns

1. Activities for which no partner has been identified
 - Architectural Plans may identify new activities, or eliminate some scope
 - Any new discussions during today's meeting
2. All contracted items need to be identified.
 - Capital requirement to the project
 - Inversely relate to item 1 above.

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Concerns

3. Partners that provide a product or service must provide it during the scheduled time.
4. What leverage do we have to ensure compliance with the schedule?

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