



Design Development Update

July 31, 2009

Transbay Transit Center

TJPA





Design Development Activity



DD Effort

- Extensive coordination and "partnering" between the TJPA, Transit Center design team, Webcor/Obayashi, and DTX design team on engineering and design issues
- Implement planning and programming study to incorporate the extension of the Train Box / Rail Concourse to accommodate CHSRA platform length requirements
- Continue monitoring costs and study Value Engineering options
- Increase detailed design activities



Architectural Design

- Refine plan and program – retail, core adjustments, support spaces, etc.
- Detailed development of exterior walls including Basket Columns and glazed walls
- Public space materials and finishes selection and specification (floors, walls, ceiling, etc.)
- Integration of lighting, ventilation and wayfinding systems into architectural spaces
- Detailed building maintenance study



Vehicle and Pedestrian Movement

- Refining Bus Plaza and Bus Deck design, testing and coordination with operators
- Continuing Life Safety analysis and coordination with DBI
- Refining Vertical Transportation analysis
- Wayfinding /Signage system development and coordination



Structural Design

- Geotech shoring and buttress design
- Finalizing Threat & Vulnerability Assessment recommendations
- Refinement of exterior structural superstructure and substructures
- Structural detail refinement and coordination with MEP and Architecture



MEP Design

- MEP systems analysis and integration
- Geothermal study
- Greywater system design and coordination with City agencies
- Interior and exterior lighting scheme design and fixture/system selection
- Lighting and ventilation design integration at Bus Deck, Rail Level and Grand Hall



ARRA Funding Request for Rail Levels



Background

- At the June 2009 Board meeting, the Board authorized directing the Design Team to proceed with Design Development assuming that the rail levels of the Transit Center will be included in the first phase of construction
- The Board further requested that the team report on how the re-design effort could be minimized in the event that the TJPA is unable to secure ARRA funding for the train box



Schedule

- The FRA decision on Round 1 ARRA applications is expected by the first of October – two and a half months before the end of Design Development
- Advance knowledge of the decision will allow the design team to redirect its efforts and minimize the time and cost impact of the redesign effort
- The Design Team is working towards a 50% Design Development Submittal on August 31st. In September, the team will be preparing updated cost estimates and responding to TJPA review of the 50% submittal
- The timing of the FRA decision will allow TJPA to redirect the design team prior to the focused effort to complete Design Development



Architectural Design

- Significant portions of the architectural design will be unaffected by a redesign change
- Considering how spaces will be organized in a design change further reduces the impact of a redesign effort on the architectural design and by extension on many other building systems
- Maintaining primary organization of spaces and axis of circulation to minimize redesign impact on signage, elevator/escalator, lighting and other MEP systems
- Adopting Life /Safety strategies – stairs /core elements – that are flexible and responsive to alternative phasing strategies without redesign



Mechanical, Electrical and Plumbing Design

- Adopt a flexible design approach allowing MEP design to adapt to potential changes in system requirements, the building cross section and enclosure design and program area layout without necessitating further architectural changes
- Maintain points of connection with utilities so that utility/mechanical spaces can be located at-grade or below-grade w/o redesigning site utilities and/or extensively redesigning interior MEP systems



Structural & Geotechnical Design

- The structural design will be most impacted by a redesign as the geometry, size and placement of structural columns and beams is greatly influenced by the sequence of construction
- Detailed structural analysis on the revised structure will be required
- Some current design refinement – e.g., coordinating the placement of structural elements relative to circulation cores – will benefit either design approach
- Principal geotechnical mitigation measures will be consistent with both construction methods



Summary

- While not carrying forward two designs, the design team continues to consider the implications of a potential redesign as they advance the design of the building
- Maintaining an adaptable design approach while leveraging the advantages of including the train box construction in Phase 1
- Timing of the FRA funding decision aligns well with the Design Development schedule