TYPE SELECTION ISSUES, TOPICS, AND ITEMS FOR CONSIDERATION

- Project Description
  - EA and CO-RTE-PM
  - Structure Names and Numbers
  - Vicinity Map
  - Purpose
  - General Plans for all structures and alternatives
  - Project Engineer and Architect

- Project Schedule
  - Design Hours for each structure
  - Structures P&Q and PS&E dates
  - Critical dates for other functional units
  - Ability to meet schedule
  - Missing Design Data

- Previous Advance Planning Studies

- Design Alternatives
  - List Alternatives Considered
  - Structure Depth
  - Span Arrangements
  - Material Alternatives
  - Construction Alternatives
  - Describe Pros and Cons

- Accelerated Bridge Construction (ABC)
  - ABC Decision Making Guidance (ABC Design Impact Questionnaire & ABC Decision Flowchart)
  - (see Structure Policy and Innovation intranet site)

- Physical Constraints
  - Horizontal Clearance
  - Vertical Clearance

- Loads
  - Special Loading Requirements
  - Construction Overloads

- Adjacent Structures
  - Clearances
  - Transition to other structures

- Existing Bridge
  - Removal/Replacement
  - Strengthening
  - Widening Methods

- Future Widening
  - Superstructure
  - Lower Roadway
  - Impacts on Current Project

- Frame Layout
  - Hinge Locations
  - Selection Process

- Abutment
  - Embankment Slopes
  - Seat, diaphragm, bin, strutted, rigid frame
  - Embankment surcharge and settlement
  - Approach Slabs
  - Slope Protection
  - Skew
- Bent/Pier Wall Types
  - Number of Column/Bent
  - Drop Cap/Integral Cap
  - Column Fixity
  - Superstructure Fixity
  - Outrigger/C Bent
  - Skew
- Railing and Barriers
  - Type
  - Rail Replacement Requirements
- Corrosion Issues
- Signs and Lighting
- Joints Seals
- Deck Surfacing
  - Additional Thickness for Quiet Deck Retrofit
  - Recommended surfacing (Polyester concrete, Multi-Layer Polymer, or AC)
  - Removal of existing surfacing (AC and deck membrane protective system)
  - Condition of existing deck (have cores been taken and evaluated by Translab?)
- Sidewalks/Medians
- Hinge Access
- Bearing Systems
- Deck Drainage
  - Design Rainfall Intensity
  - Inlet/Piping/Outlet Locations
  - Access openings
- Retaining Walls and Soundwalls
  - Construction Materials
  - Special Design Required
- Utilities
  - Type and location of utilities carried by structure
  - Future Utility Opening requirements
  - Interfering Underground and Overhead Utilities
  - Soffit openings
- Permits and Agreements Required
- Railroad Requirements
- Structure Type Recommendations
  - Construction Costs
  - User-delay Costs

DISTRICT ISSUES
- ADA Compliance
- Presentations required for Outside Agencies
- Commitments to outside Agencies
- Environmental Constraints
  - EIR Requirements
  - Protected species
  - Mitigation measures
  - Monitoring requirements
  - Construction Windows
  - Hazardous Waste
- Complete Streets
- Context Sensitive Solutions
- Construction Noise Issue
- Noise Sensitive Area
AESTHETICS ISSUES
- Requirements of EIR, District, or other Agencies
- Sketches of architectural treatment

FOUNDATION ISSUES (Bridge and Earth Retaining Structures)
- Preliminary Report
- Groundwater
- Soil Profile
- Foundation Testing Requirements
- Foundation and Pile Types
- Risks and Potential Construction Issues

SEISMIC ISSUES
- Seismic Performance Criteria
- Seismic Analysis Methods
- Fault Magnitude and Distance from structure
- PGA & ARS
- Liquefaction Potential and Design methods
- Retrofit requirements
- Isolation Systems
- Critical Seismic Issues
- Peer Review Requirements
- Proposed New Criteria

MAINTENANCE ISSUES
- Utilities
- Widen ability of existing bridges
- Repair/Rehabilitation
  - Deck Condition
  - Deck Seals
  - Joint Seals
  - Approach Slabs
  - Bearing Systems
- Hydraulics/Hydrology
  - Final Hydraulic Report
  - Waterway Area requirements
  - Scour depths and protection
  - Bank Protection
  - Construction Methods in Waterway
  - Pier Shapes, location and skew
  - Sea level Rise or Tsunami
- Special Railing Requirements
- Life-cycle Analysis

CONSTRUCTION ISSUES
- Constructability
- Stage Construction
- Storage Facilities
- Distance to Nearest Batch Plant
- Construction Sequence Access
Falsework
Temporary Vertical Clearances
Temporary Opening Widths
Temporary Support Locations

Traffic Control Issues
Detours
Lane Reductions and Closures
Column/Footing Construction Requirements
K-Rail and Crash Cushions
Stage Construction

Bridge Construction Impact
(See Attachment 3)

Possible Risk with Proposed Structure Type

Risk Register

Update Project Risk Register (from APS Phase)
Identify New Risk from All Aforementioned Issues
Include Updated Project Risk Register During General Plan Distribution