AASHTOWare Bridge 3D Capabilities

Vision and Direction

AASHTO SCOBS

T – 19 Committee

Portland – June 2013
AASHTOWare Bridge Design/Rating

Current 3D Capabilities

- R/C Pier analysis
- Multi-girder live load analysis of straight concrete superstructures for standard gage and non-standard gage vehicles
- Multi-girder dead load analysis of straight concrete superstructures
- Multi-girder live load analysis of straight and curved steel superstructures for standard gage and non-standard gage vehicles
- Multi-girder dead load analysis of straight and curved steel superstructures
- Nonlinear analysis of drilled shafts considering nonlinear soil models and cracked MOI of the shaft
Future 3D Capabilities

• Frame structures
• Trusses
• Floor systems
• Abutments
• R/C slab system
• Multi-cell concrete box – straight and curved
AASHTOWare Bridge 3D Methodology

RC T-beam

- Beam elements for the web, shell elements for the top flange/deck, rigid links or master-slave to connect the deck to the web.
• Beam elements for the beam, shell elements for the deck, rigid links or master-slave to connect the deck to the beam.
Steel beam

- Beam elements for the flanges, shell elements for the web and deck, rigid links or master-slave to connect the deck to the top flange.
• Beam elements for the cap and columns, rigid links for the pedestals and from centerline of the column to the face of column in the cap.