OpenBridge Plans Production Tools

Sye Chakraborty

Sr. Consultant, Bridges Services, Americas

1. Drawing Workflow without 3D Models

2. Plan and Elevation Views from 3D Model

3. Pier Drawings from 3D BIM Model

4. Plans Production – OpenBridge Tools

Bentley

1. Drawing Workflow without 3D Models

2D Drawing Generation – No 3D Model

- Design, Drawing and Sheet Models
  - Draw detail in a 2D design model Full Scale
  - Reference to Drawing Model
  - Dimension in Drawing model
  - Reference Drawing Model to Sheet Model

  - Primarily need to have text and dimension styles configured along with needed sheet models

Bentley®
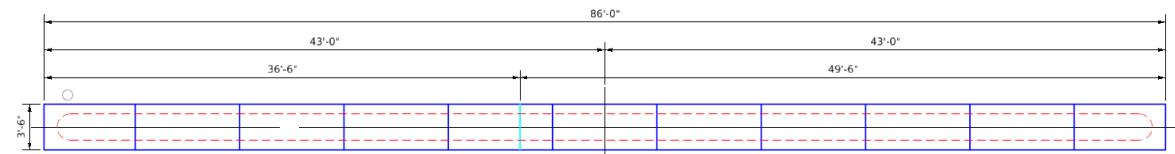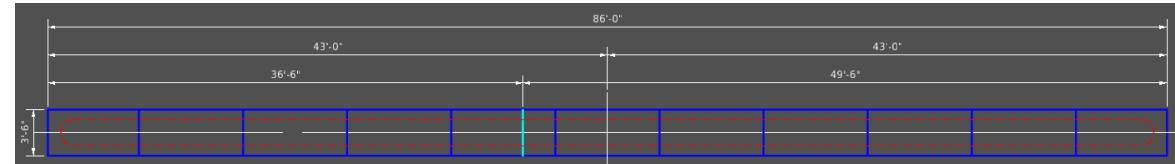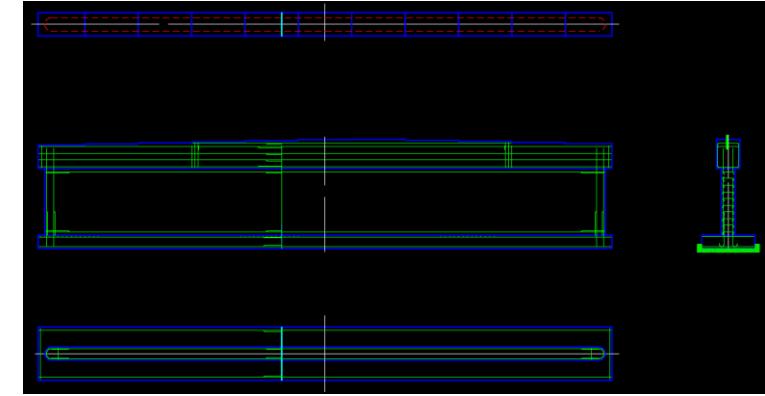
2D Workflow – Design to Drawing to Sheet Models
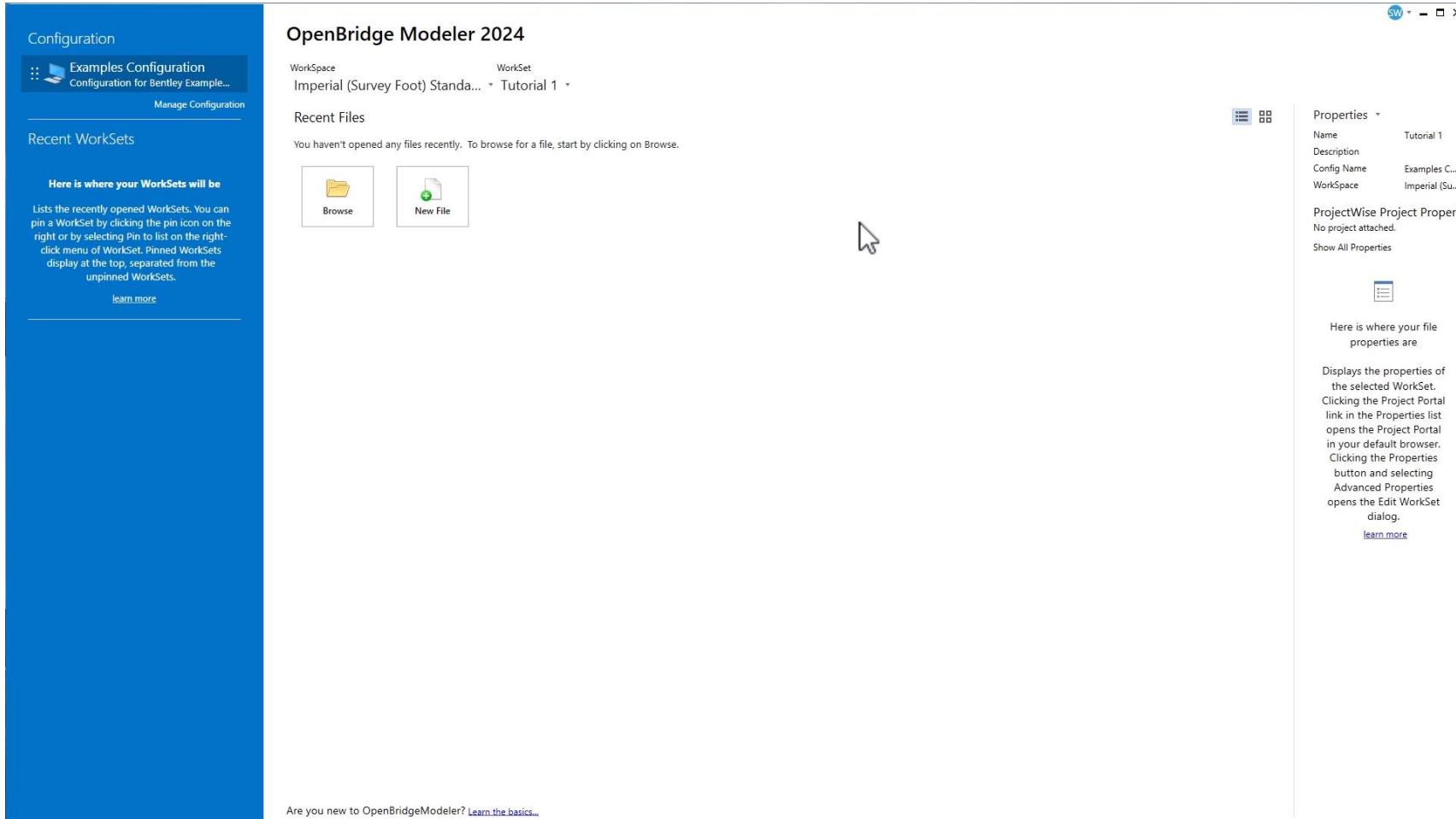
2D Workflow – Add Dimensions to the Drawing Model

2. Plan and Elevation Views from 3D Model

Bentley®
Advancing Infrastructure
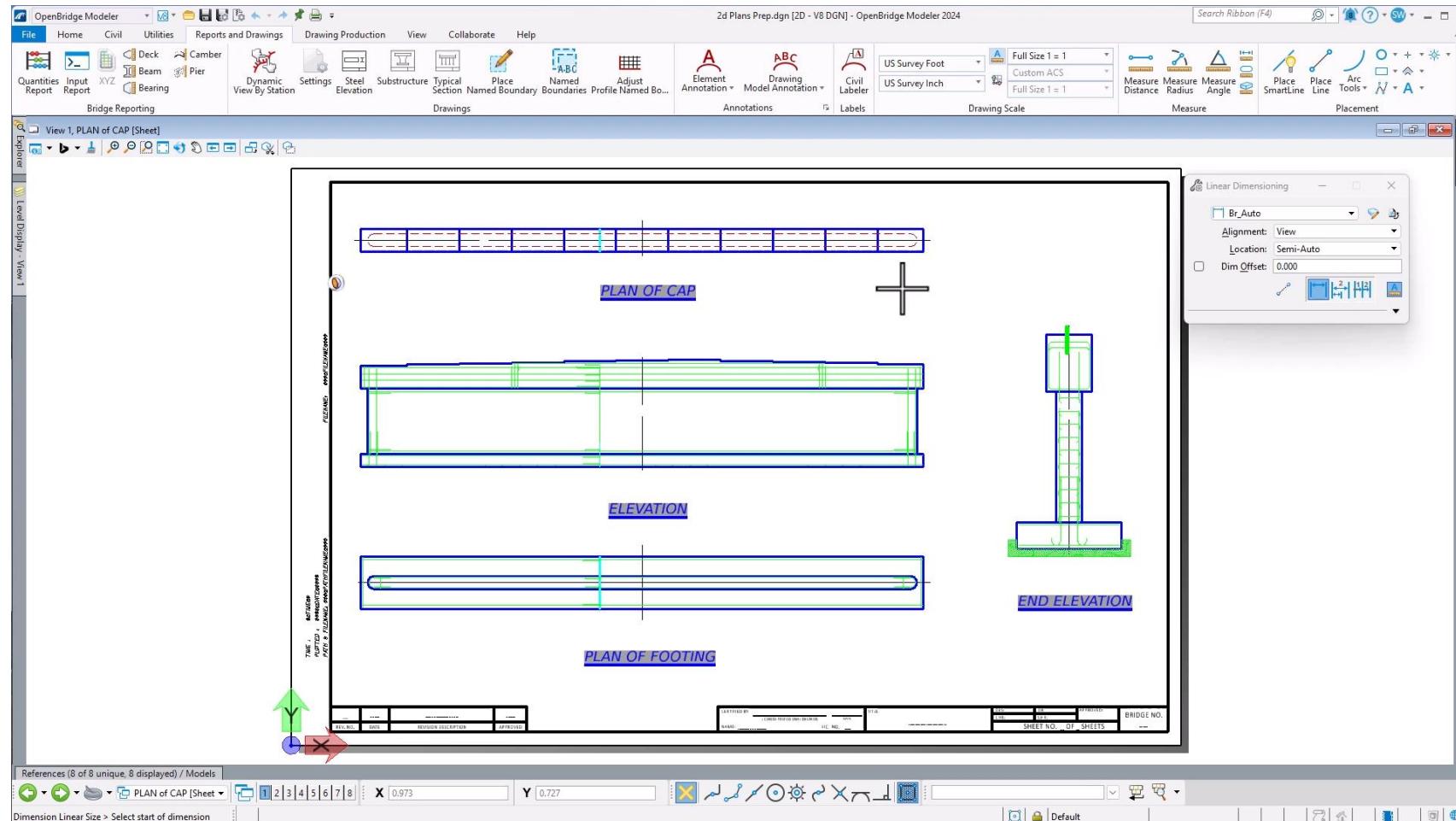
Dynamic Views

- Quick section cut using Callout tools
- Sections, plan, elevation and detail callouts
- Links between model and 2D views
- Creates drawing and/or sheet models
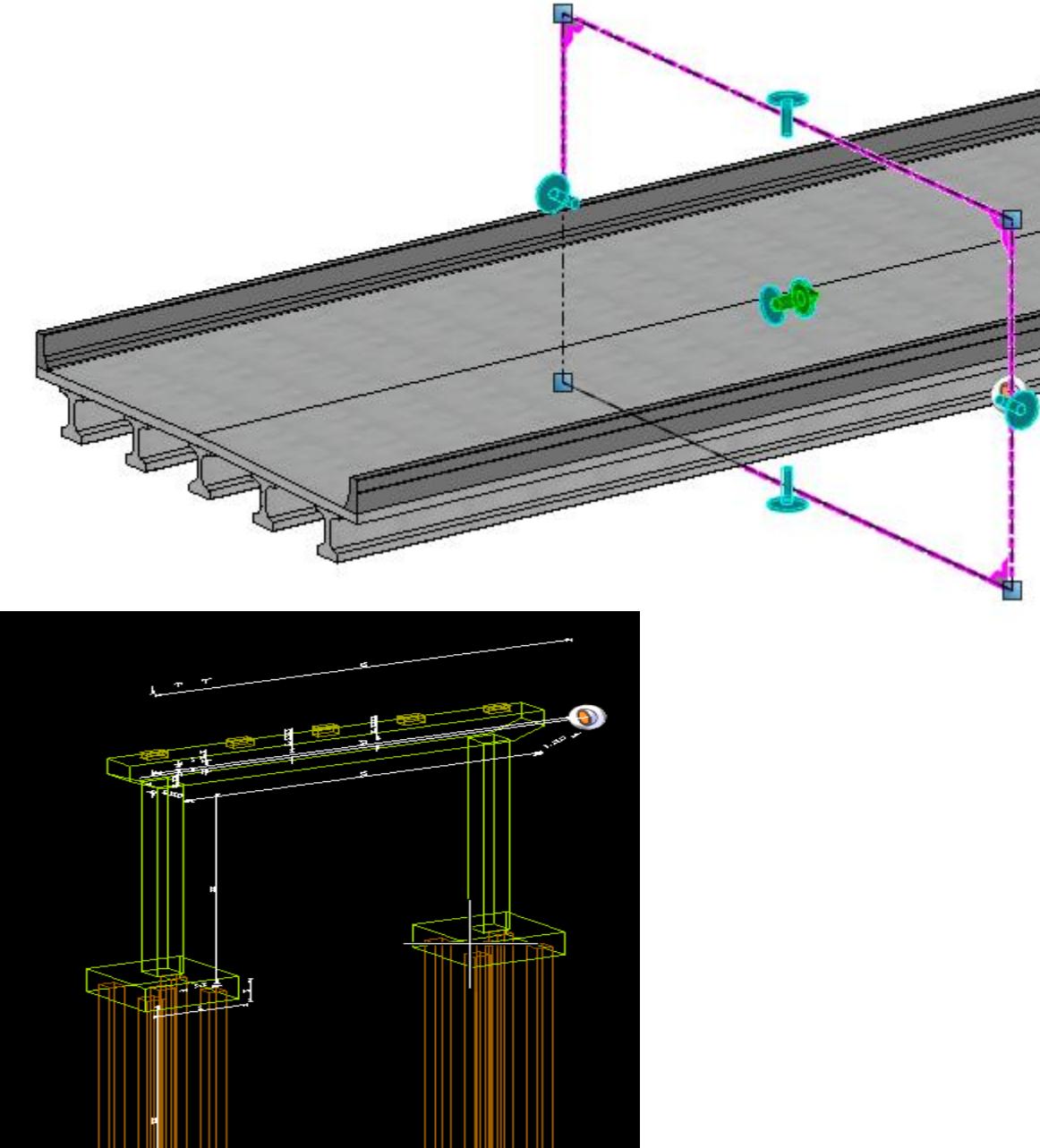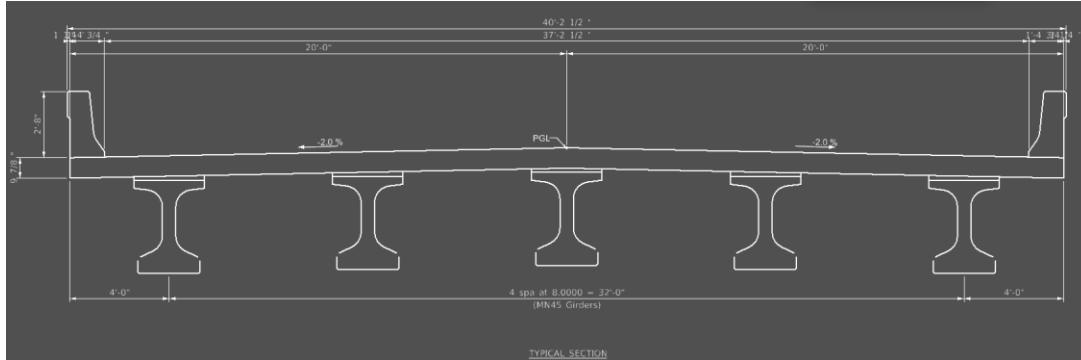
Dynamic View Workflow
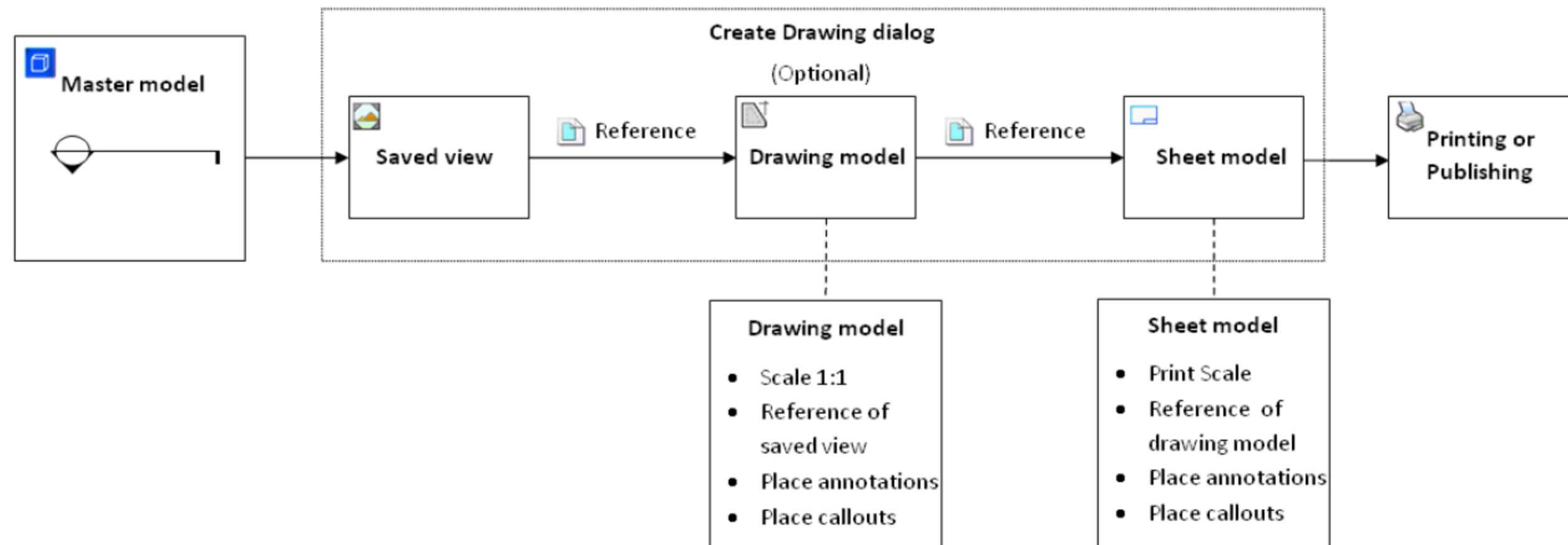
3D Plan Elevation Getting Started
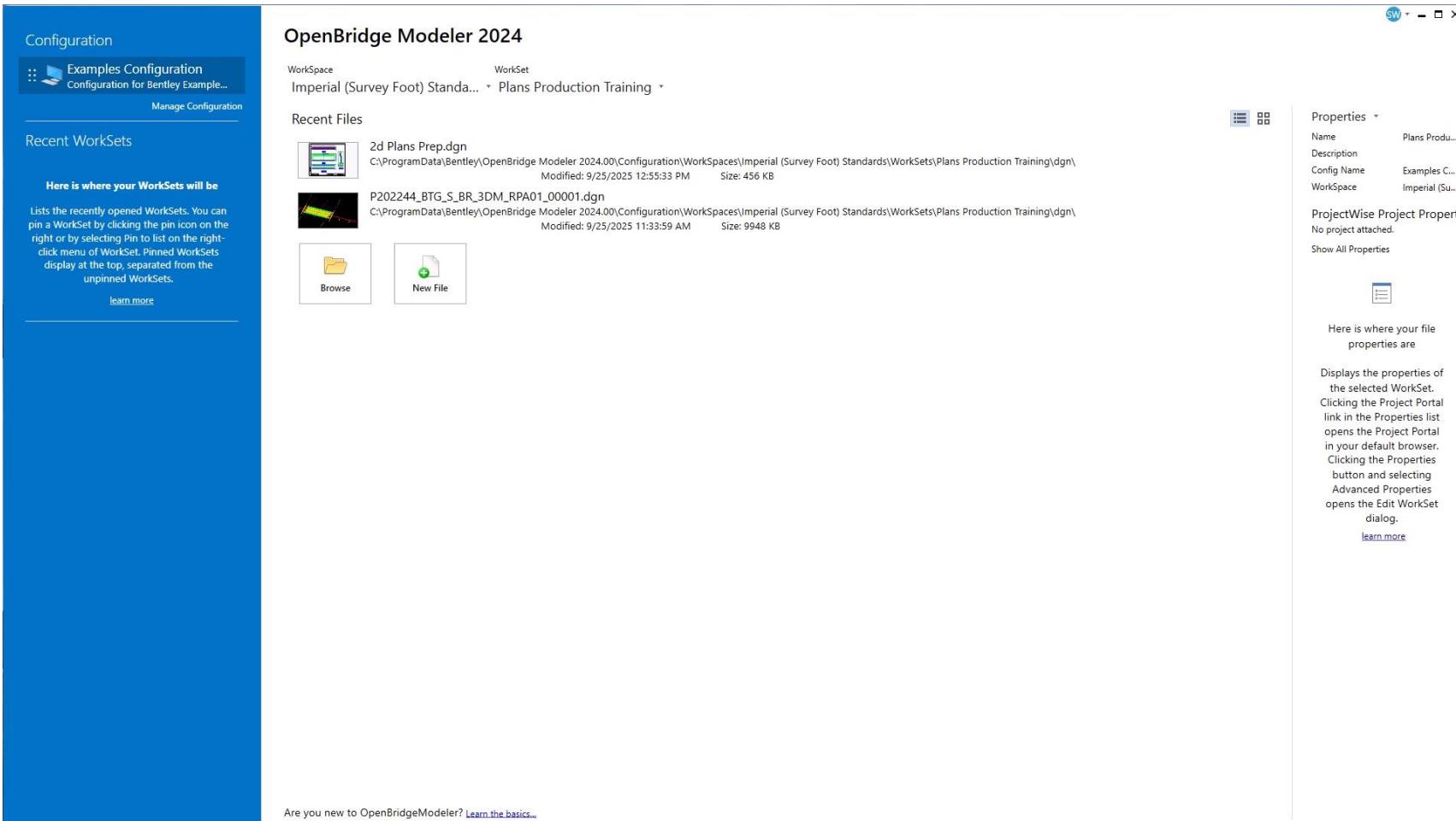
Plan View

Depends on what's configured in the workspace:

- Place Named Boundary > Civil Plan
  - Best if multiple plan sheets needed
- Place Named Boundary > By Two Points
- Create Saved View > By Two Points

Bentley®

# Plan and Elevation View – Place Named Boundary
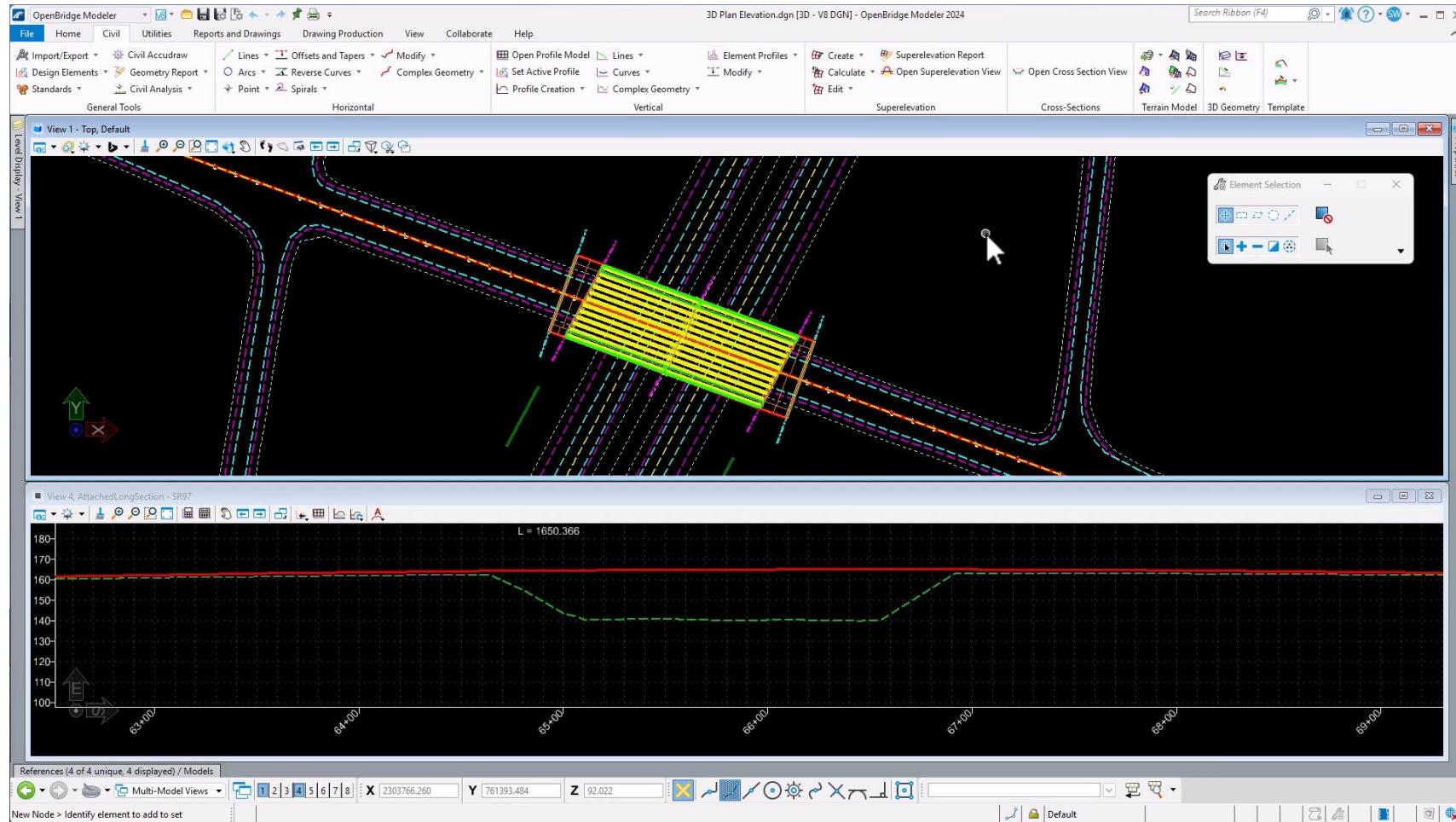
Elevation View (Profile View)

- Differs from agency to agency
- Straight Bridges
  - Section Callout along CL
  - Section Callout parallel to structure
- Curved or Straight Bridges with/without Profile Grid
  - Profile View 3D Section Cut

# Elevation View – Section Callout along CL

3. Pier Drawings from 3D BIM Model

Bentley®
Advancing Infrastructure

© 2021 Bentley Systems, Incorporated
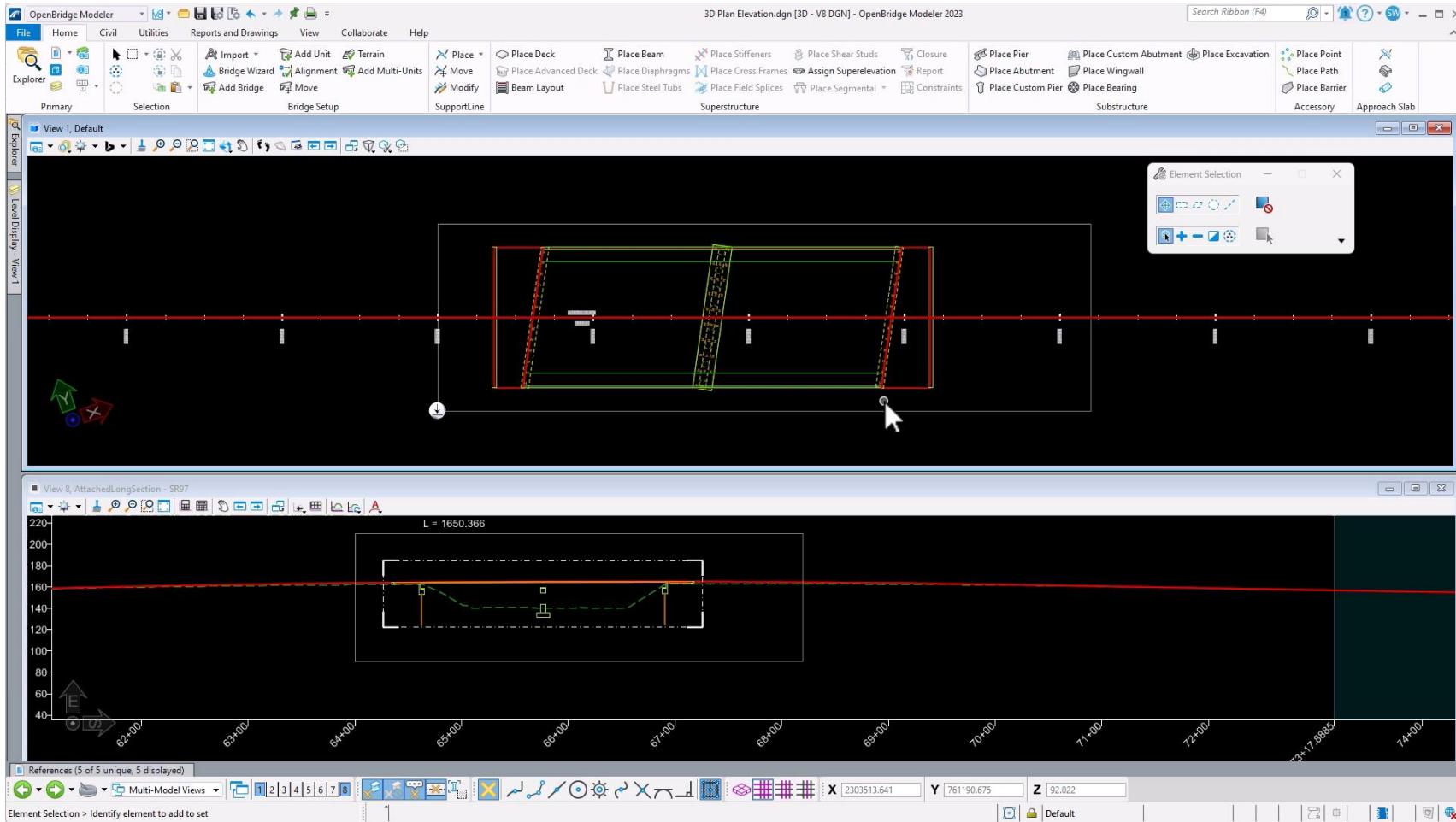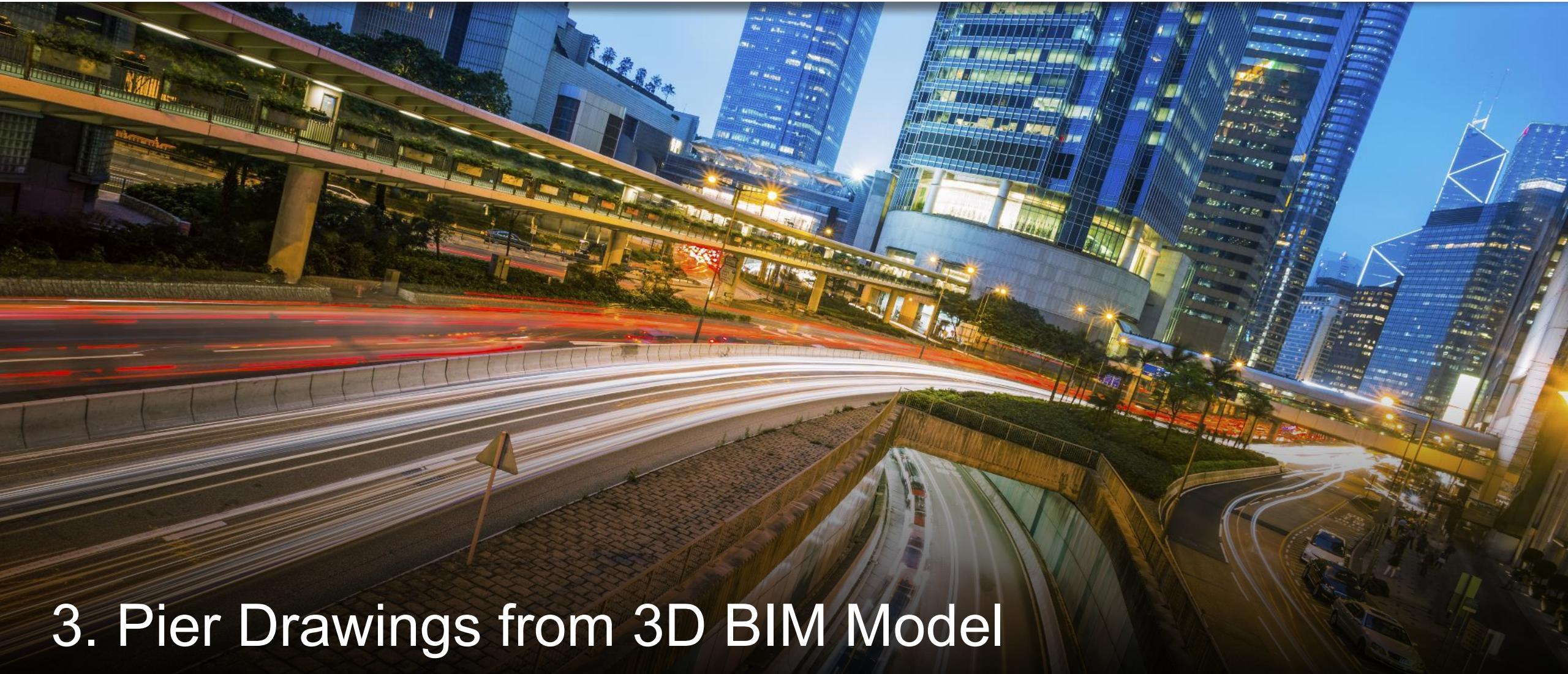
Dynamic View Workflow – BIM Model
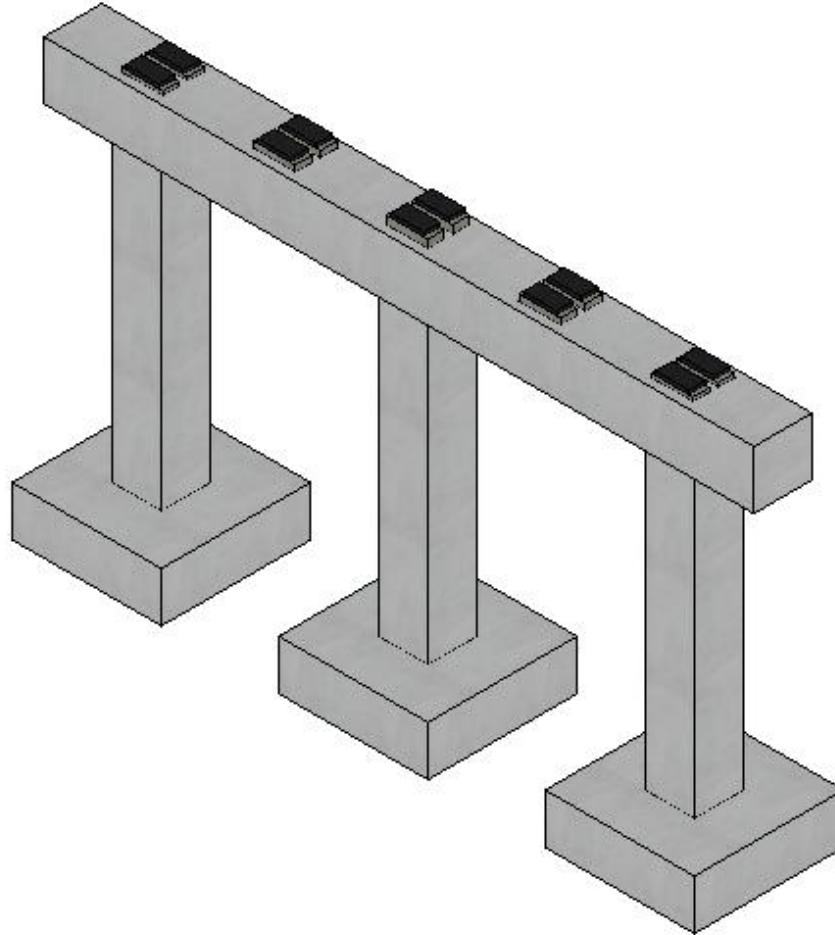
- Create New 3D Model
- Reference Bridge Model
- Turn levels on/off
- Use Section Callout from Top view to create elevation view

Bentley®

Dynamic View Workflow – BIM Model

Place Section Callout

Drawing Seed: Br_SectionVertical

Detailing Symbol Style: BR_SectionVert

Height: From View

☑ Create Drawing

Bentley®

Dynamic View Workflow – BIM Model

| WWW.BENTLEY.COM | © 2021 Bentley Systems, Incorporated
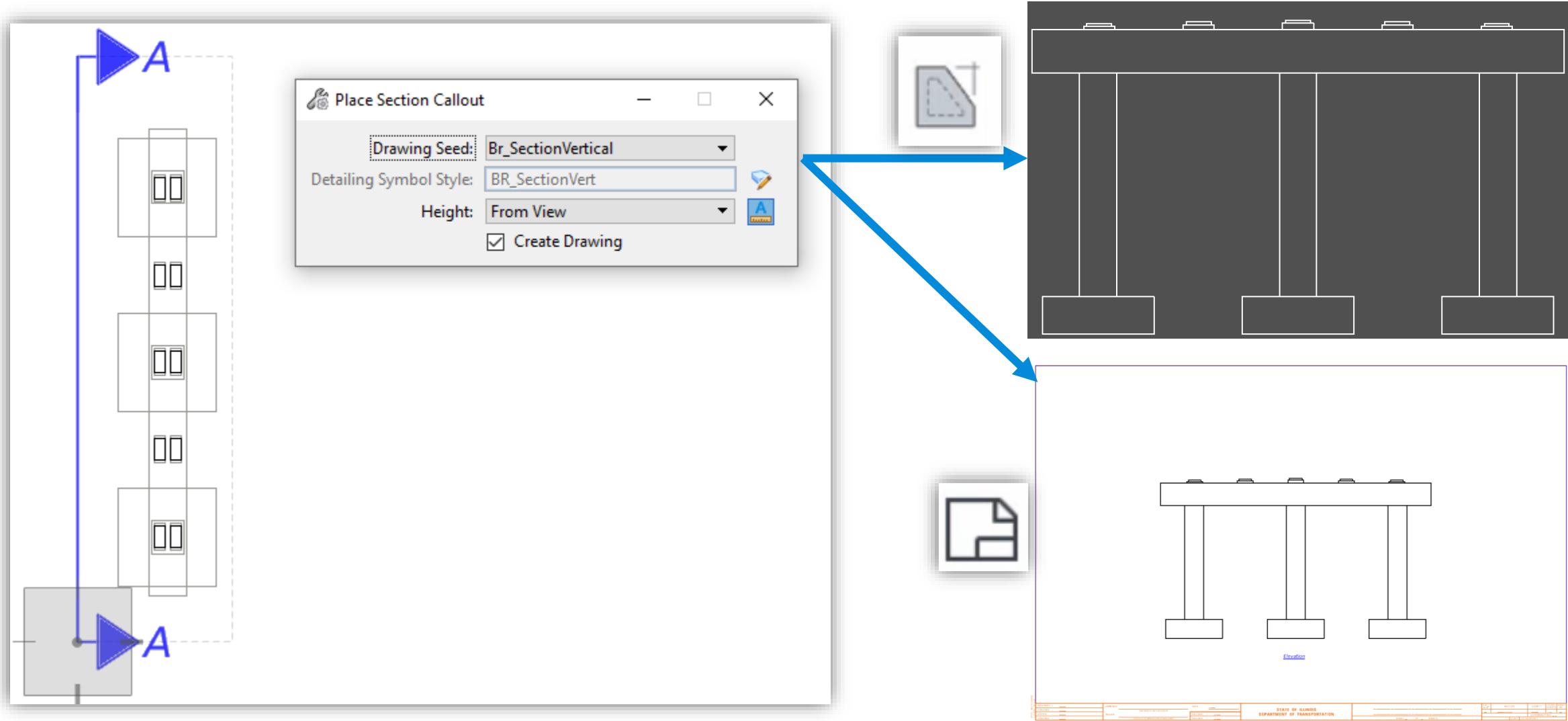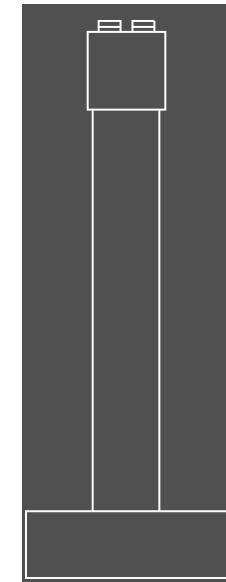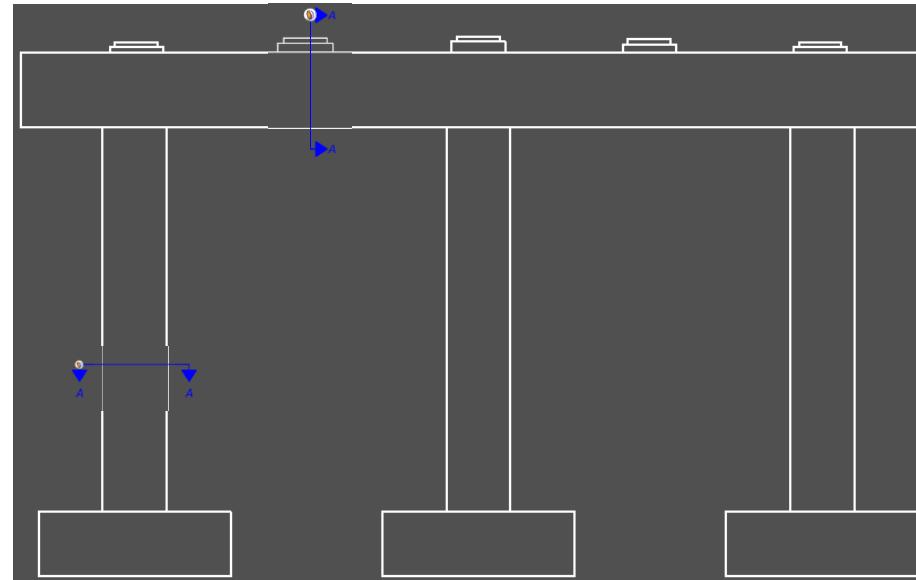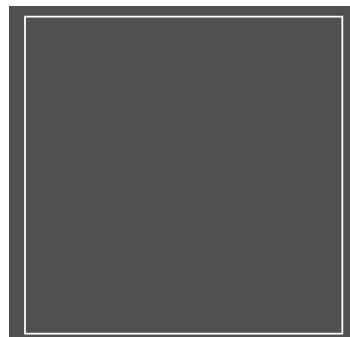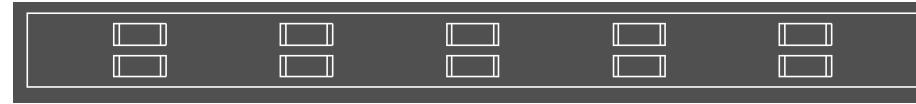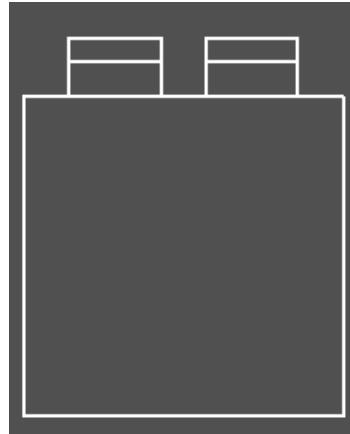
Pier Sheet from Bridge Model
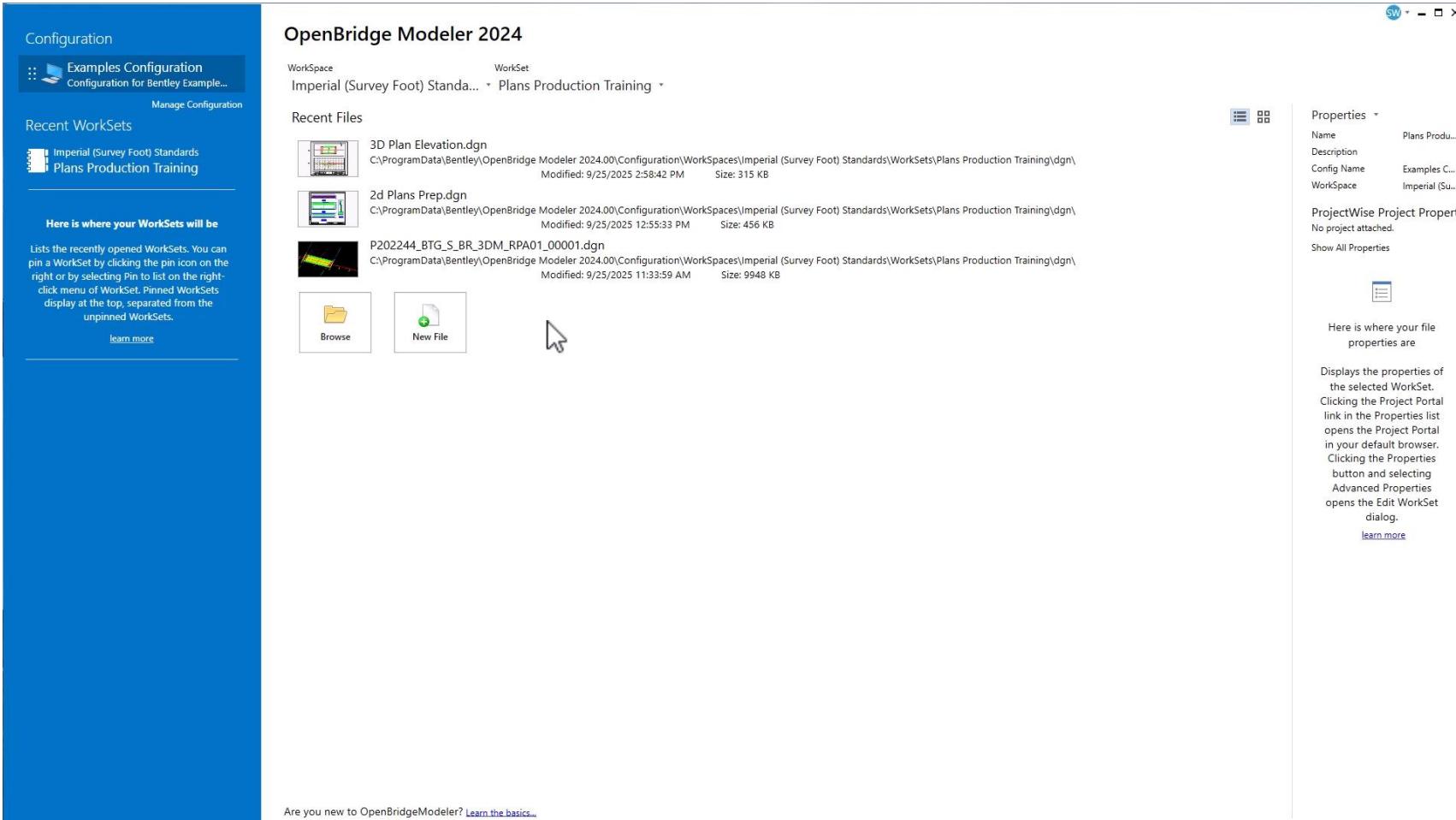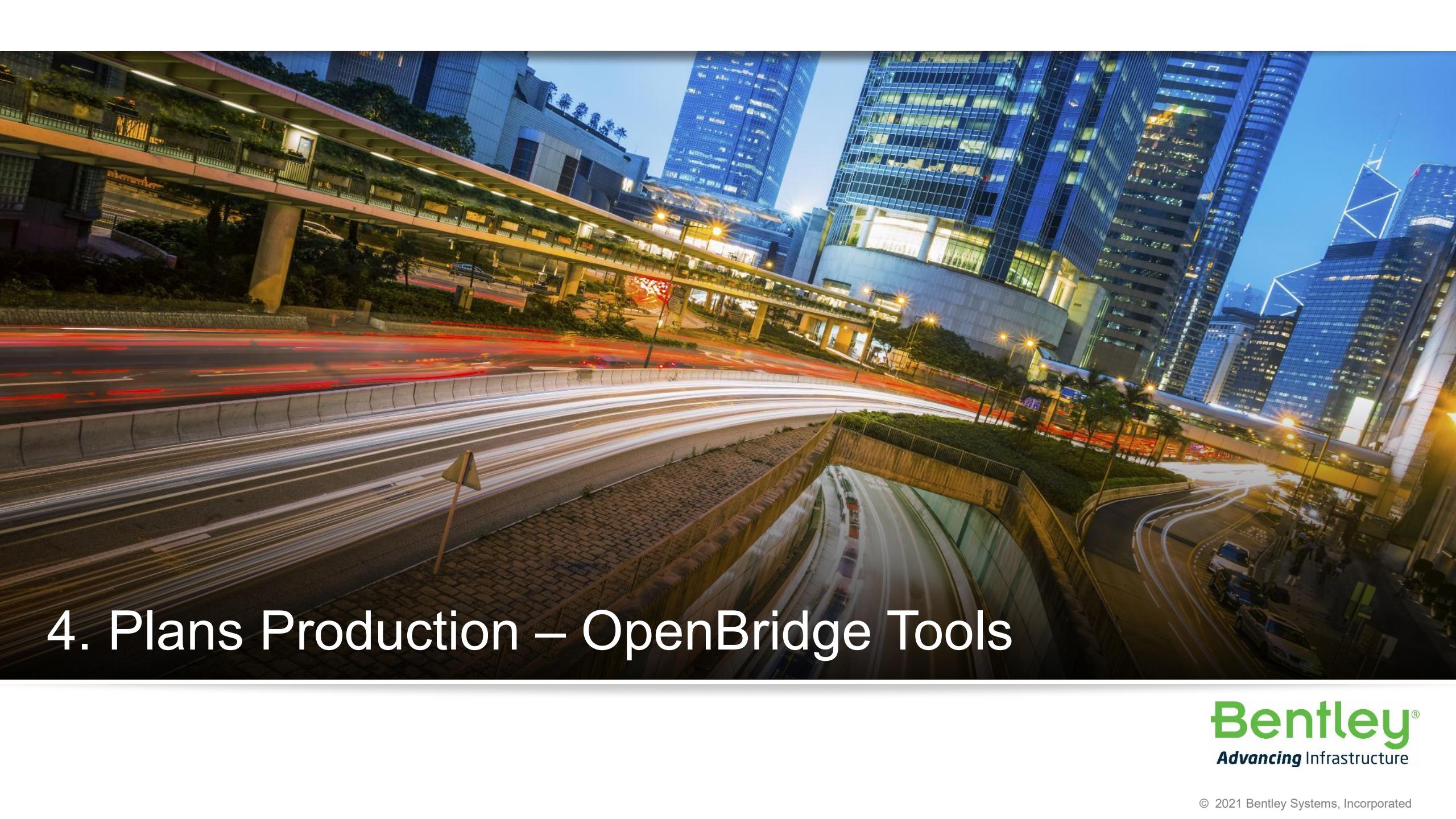
# 4. Plans Production – OpenBridge Tools

Plans Production

- Efficient workflows for 2D view generation from 3D models

- Model annotation by Civil tools

- Allows for rapid creation of section, plan and elevation views

- Dynamically updates 2D views based on 3D Model updates
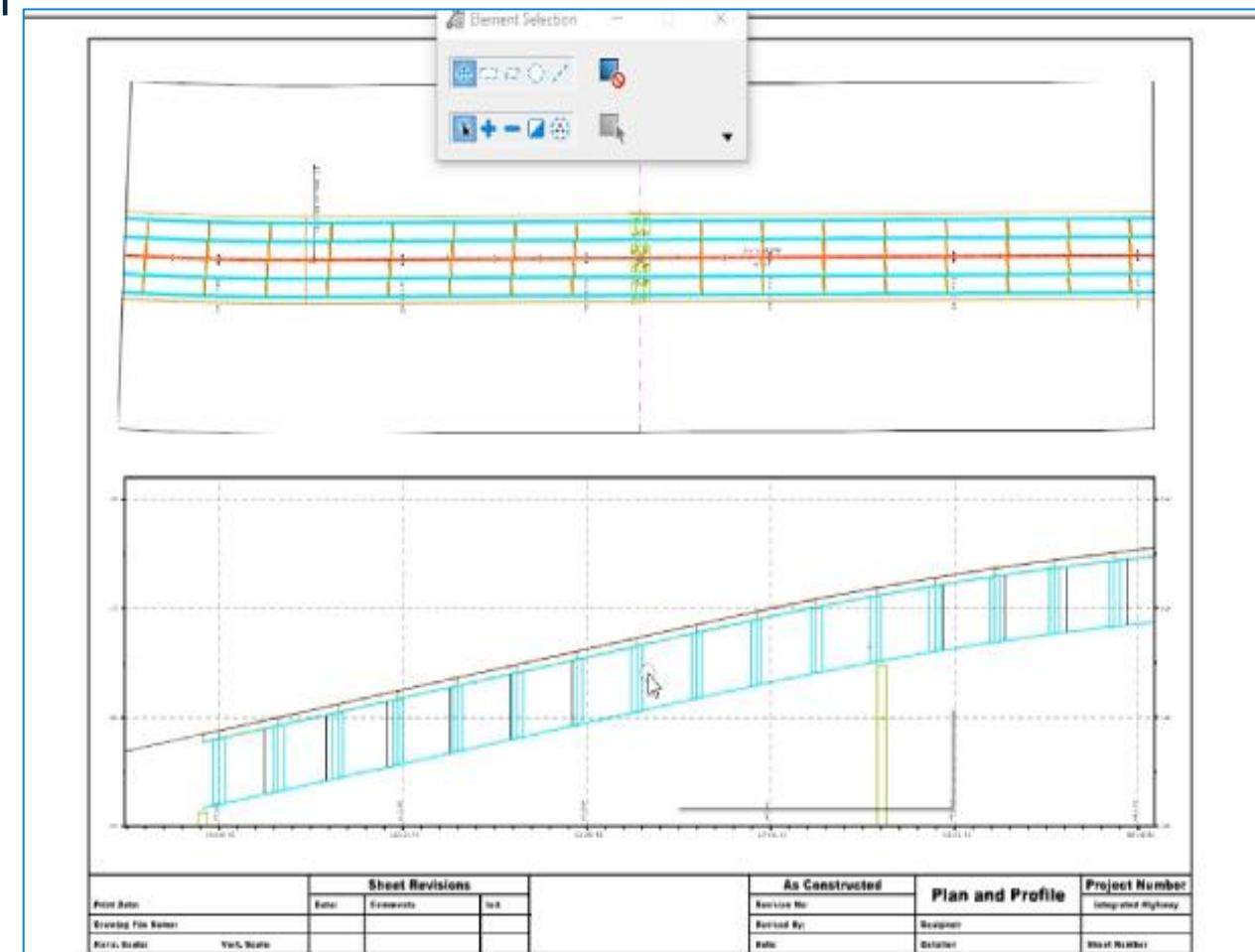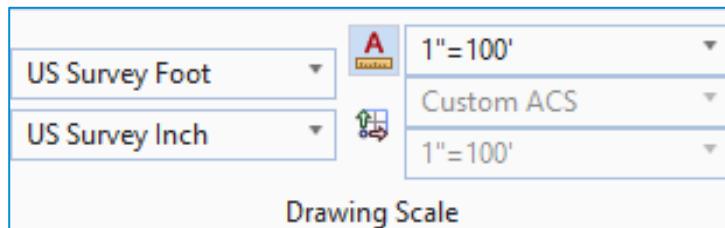
Dynamic View by Station
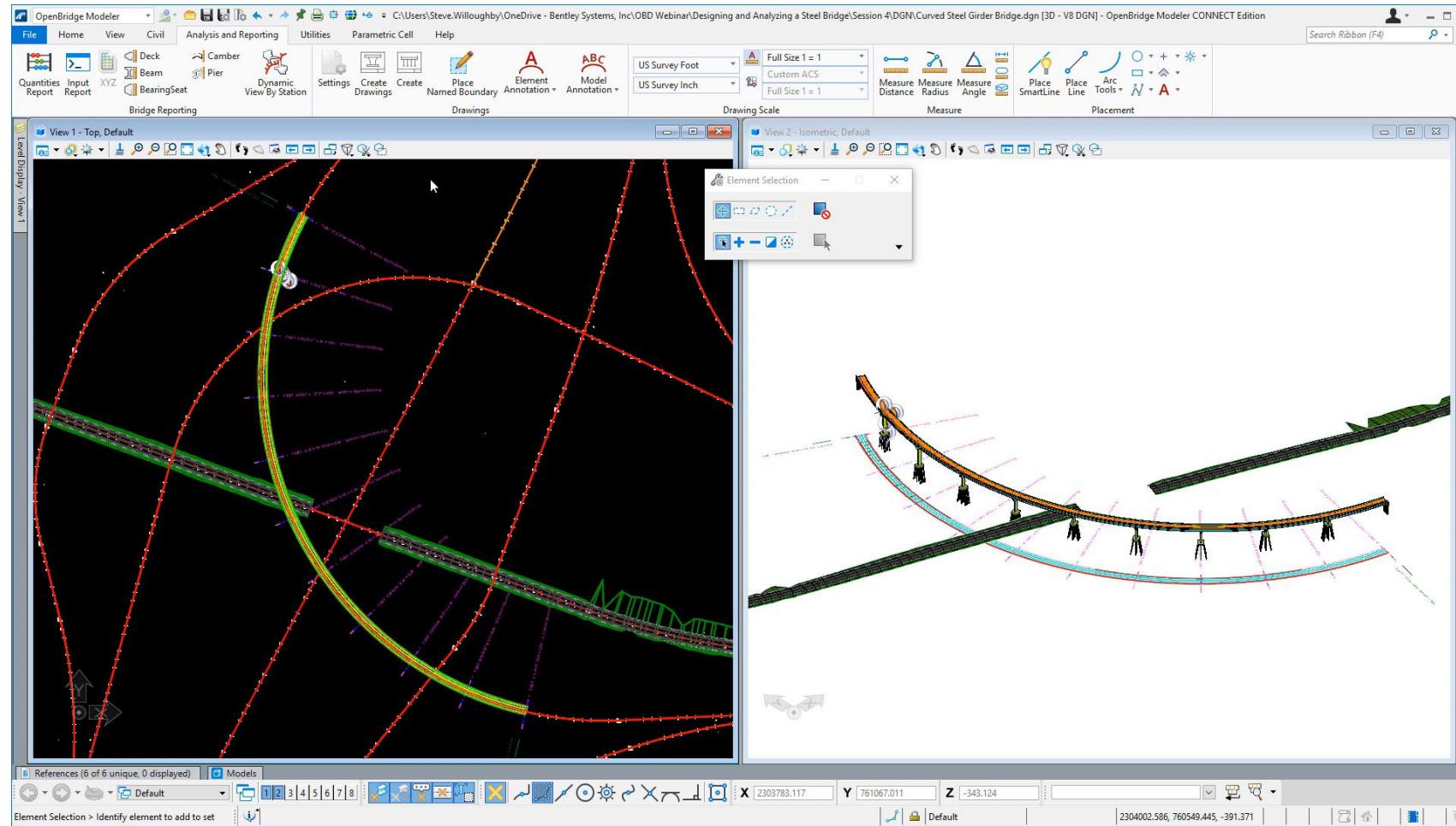
Drawing Generation

- Predetermined "cuts" for bridge typical section and substructure views

- User-defined settings for dimensioning styles

- Pre-defined clipping for Top, Right and Bottom views

- Creates drawings and sheet models

Bentley
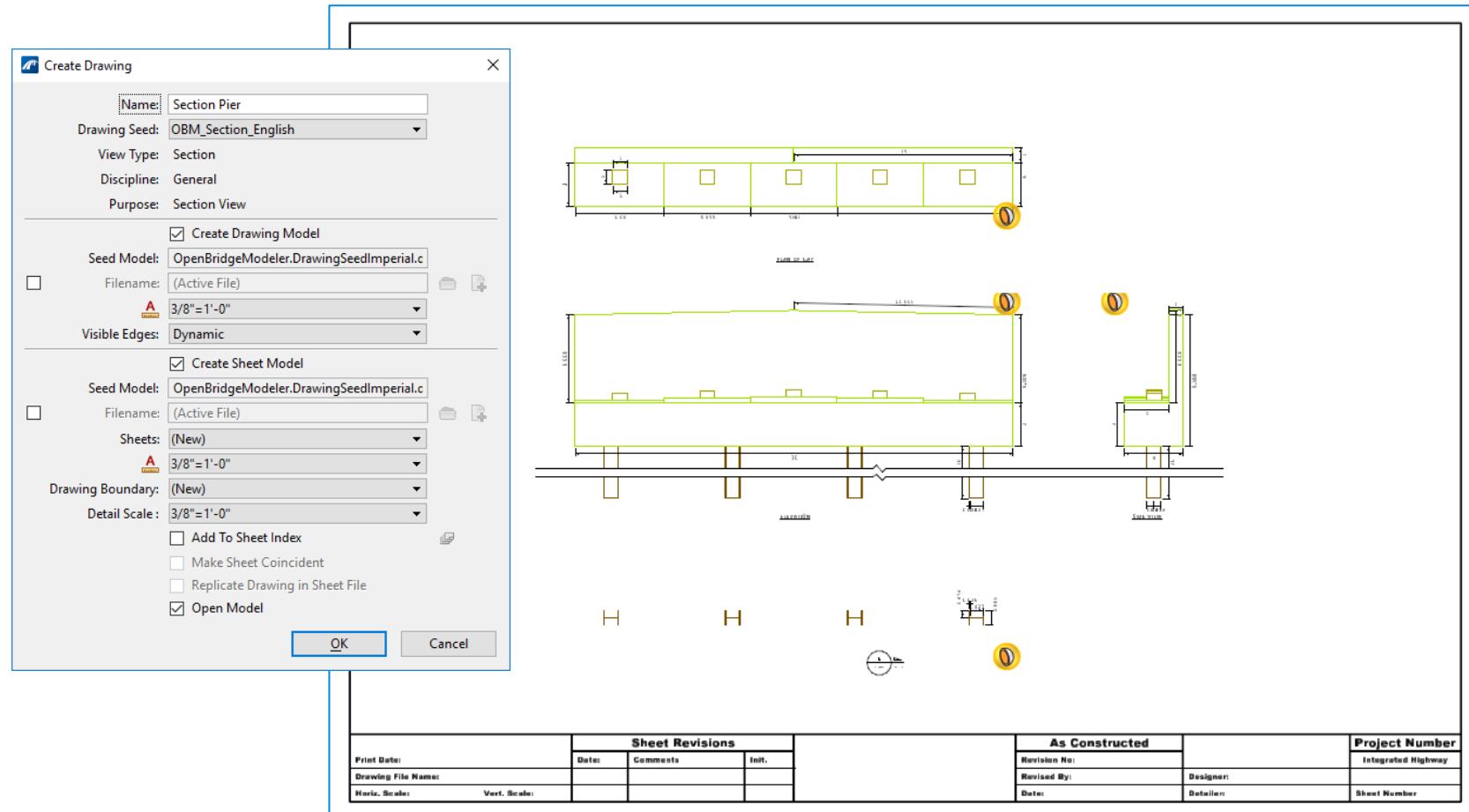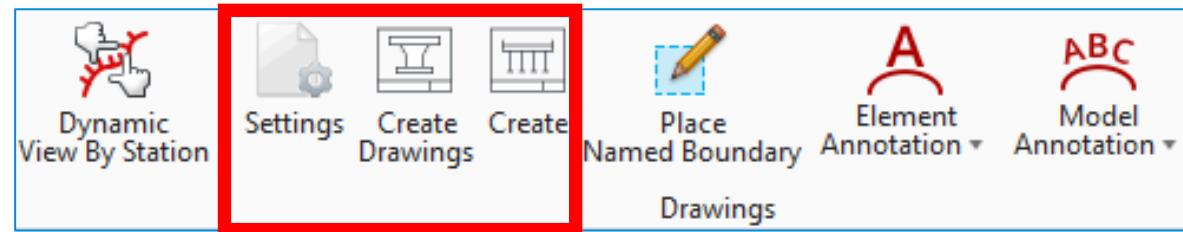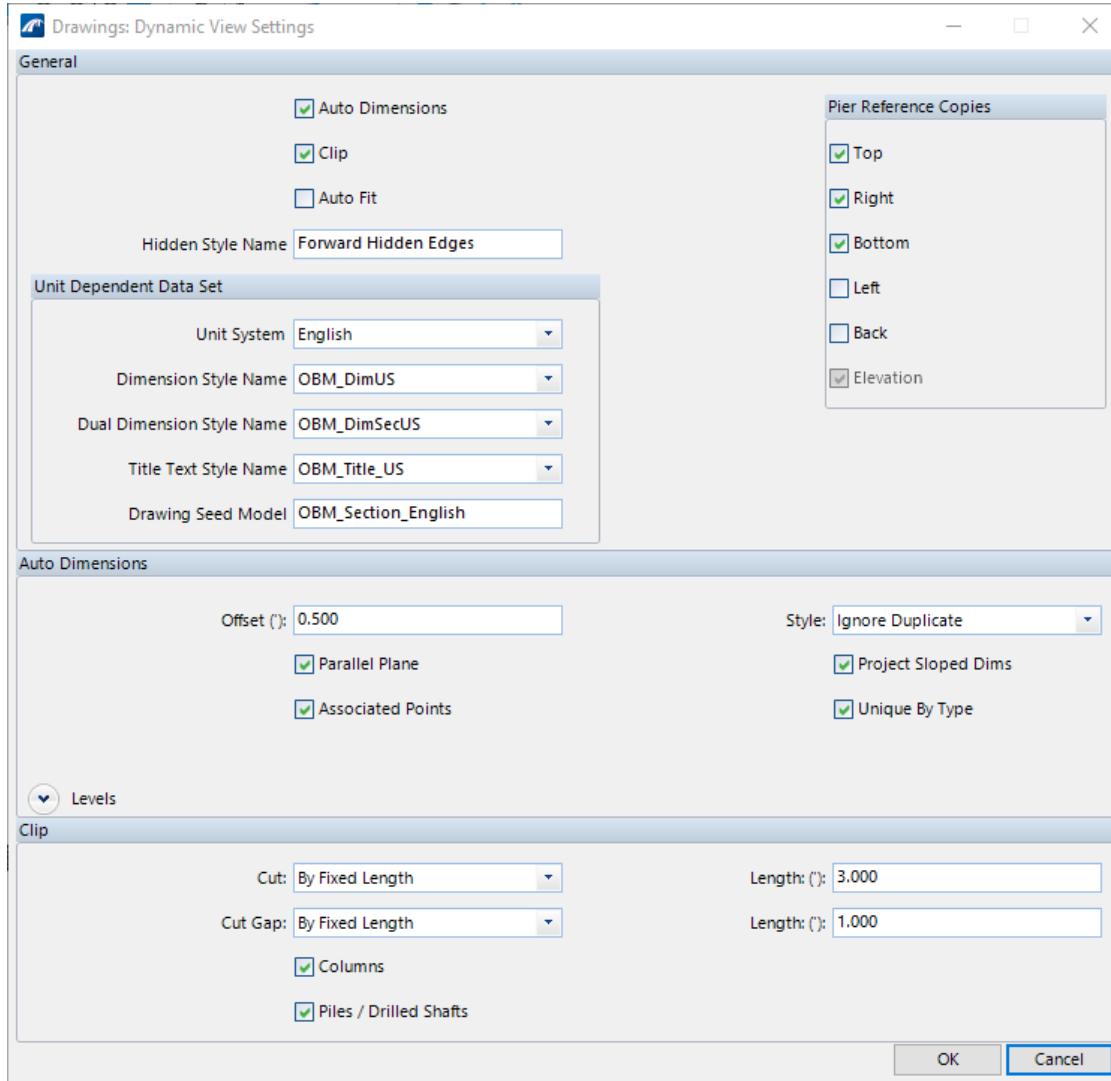
Settings

- **Auto Dimension**
  - Specify your dimension styles
  - Ignore Duplicate
  - Parallel Plane

- **Clip**
  - By Percent or Fixed Distance
  - Columns
  - Piles/Drilled Shafts
  - Only Applies to the Sheet Model

Bentley®

Settings – Pier Reference Copies
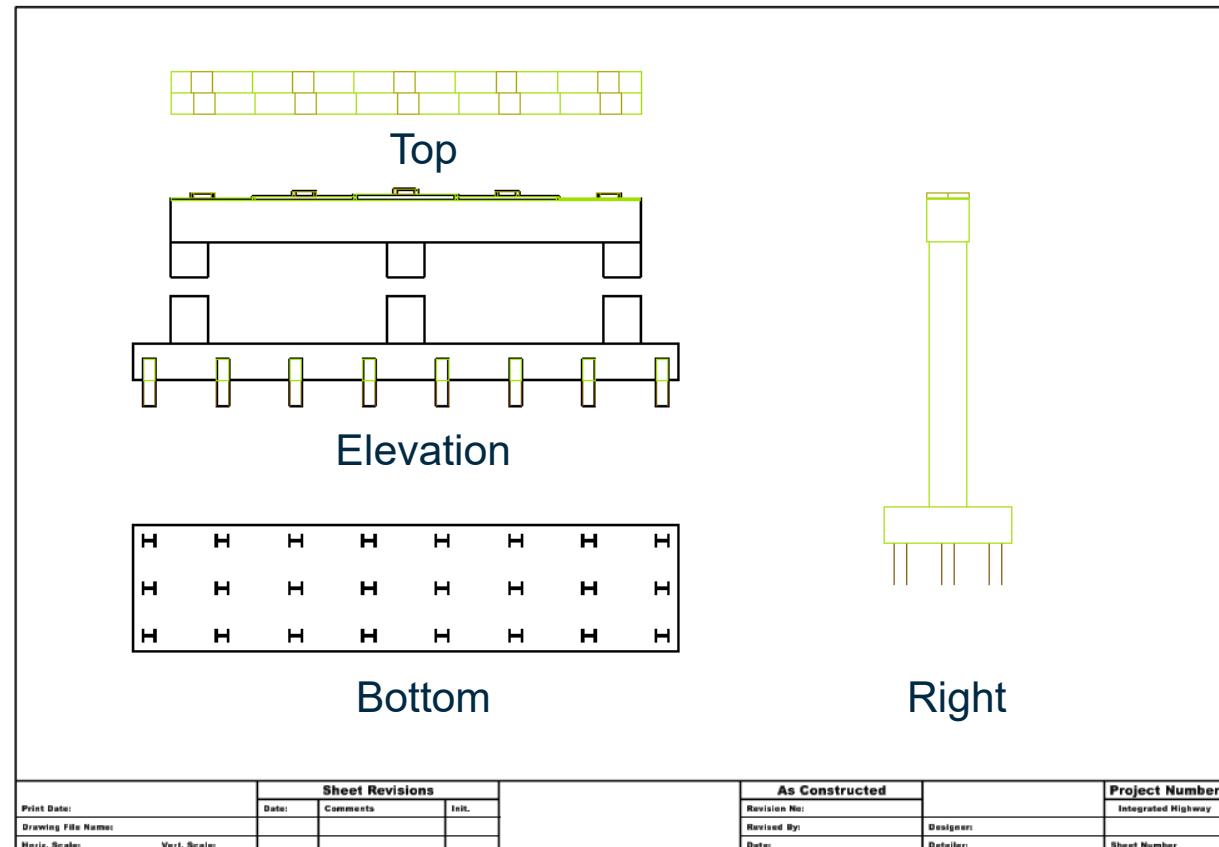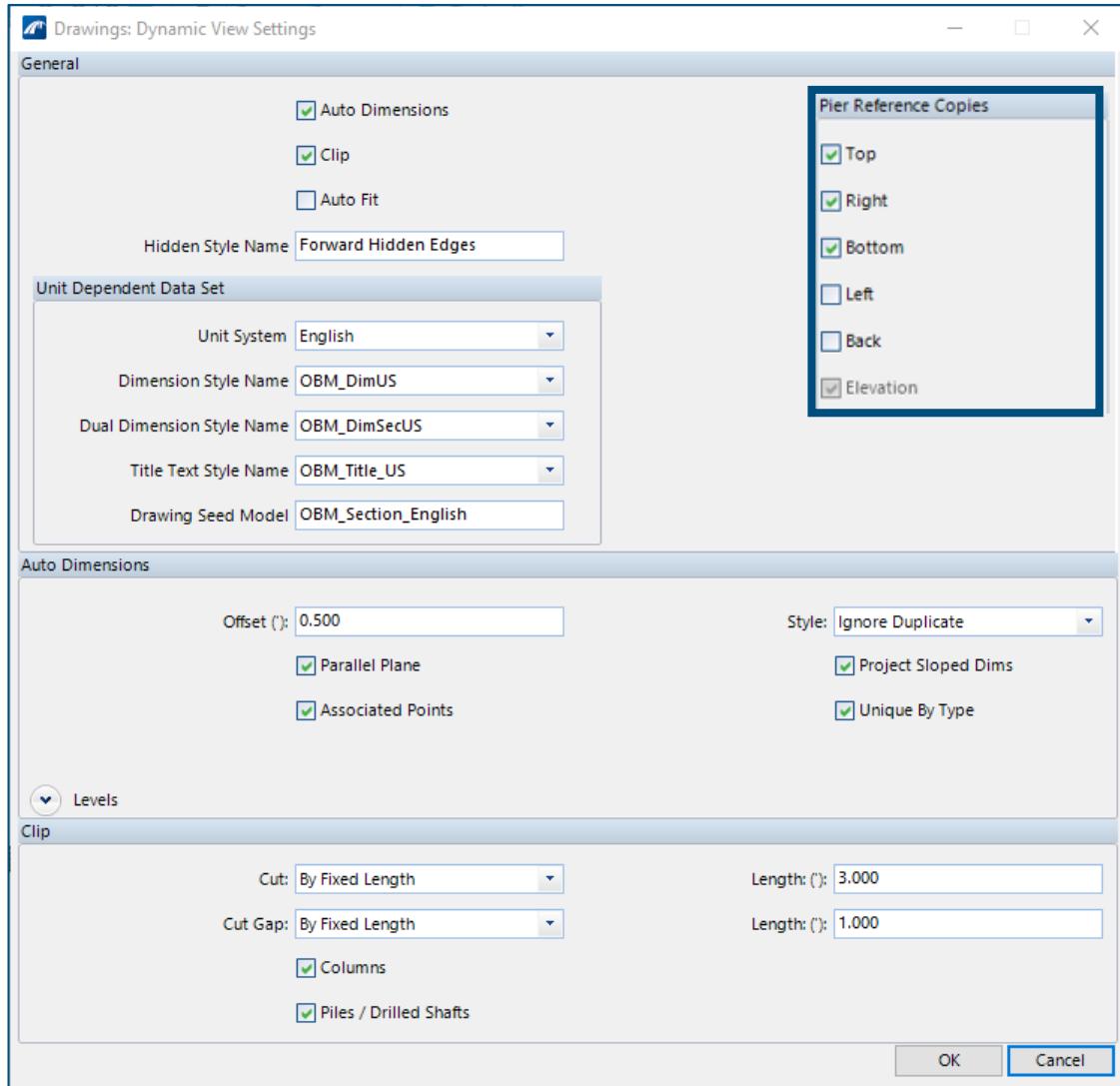
Create Drawing Tools – Substructure and Superstructure
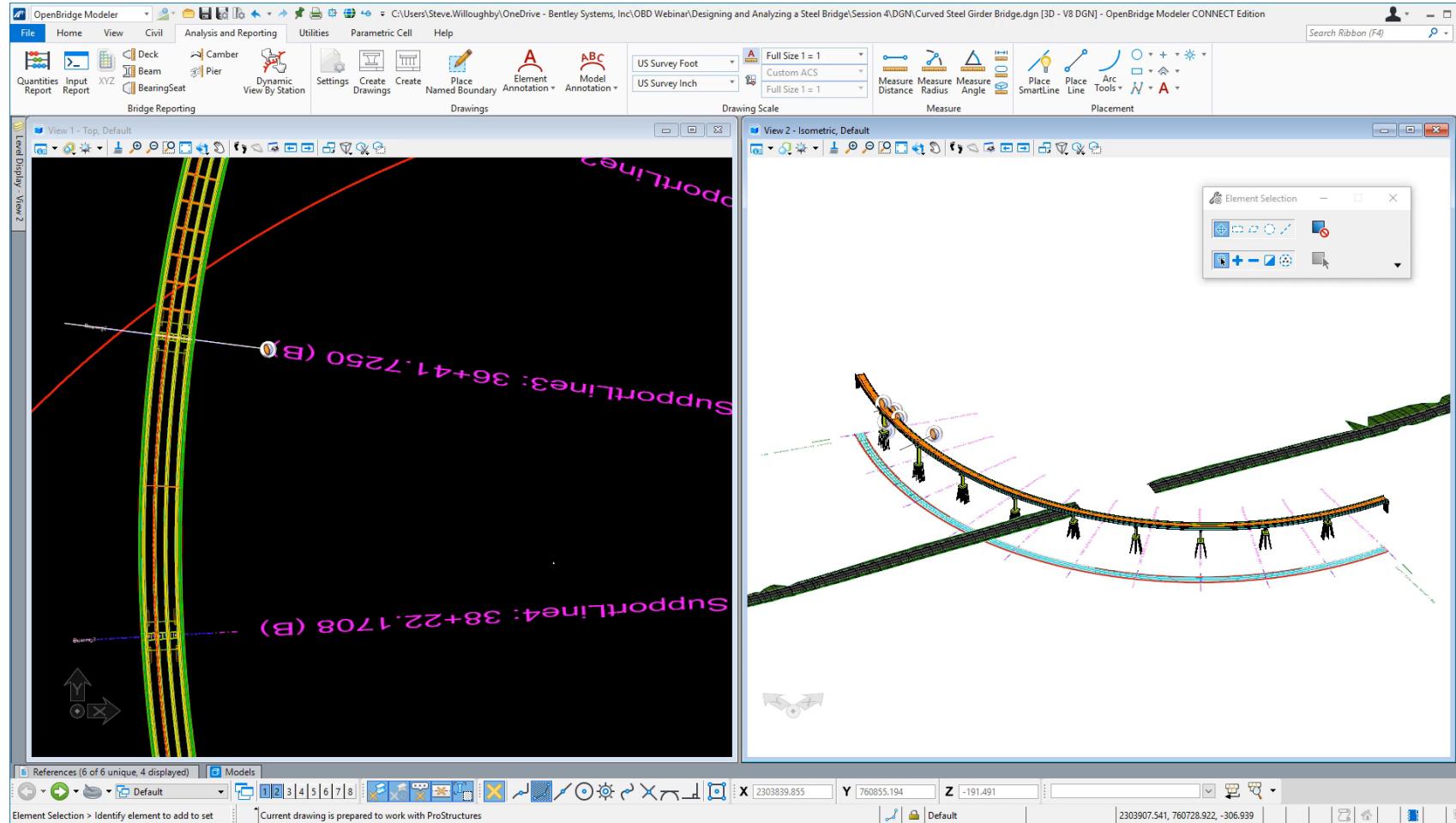
Create Drawing Tools - Abutment

| © 2021 Bentley Systems, Incorporated

Thank You!