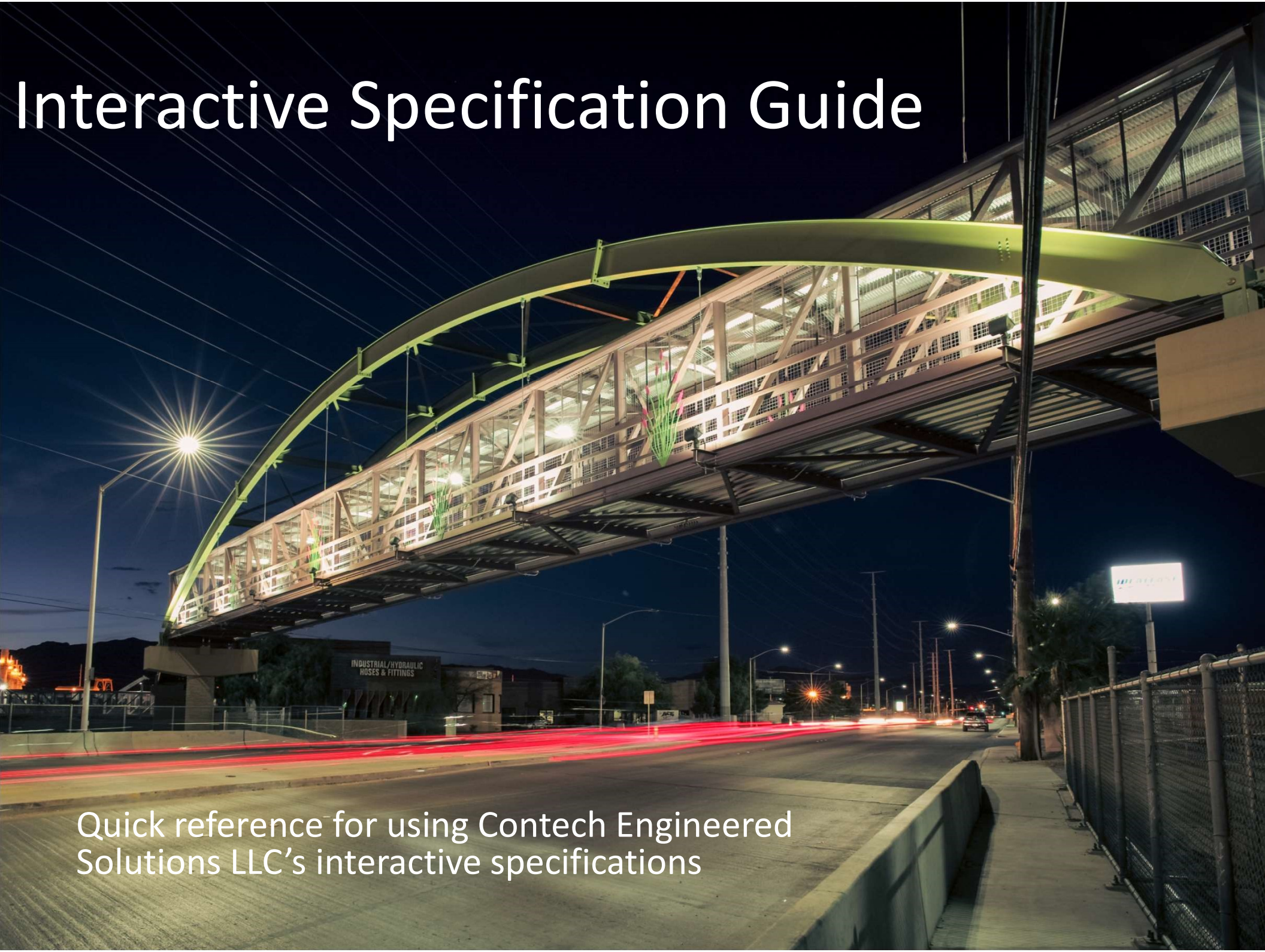
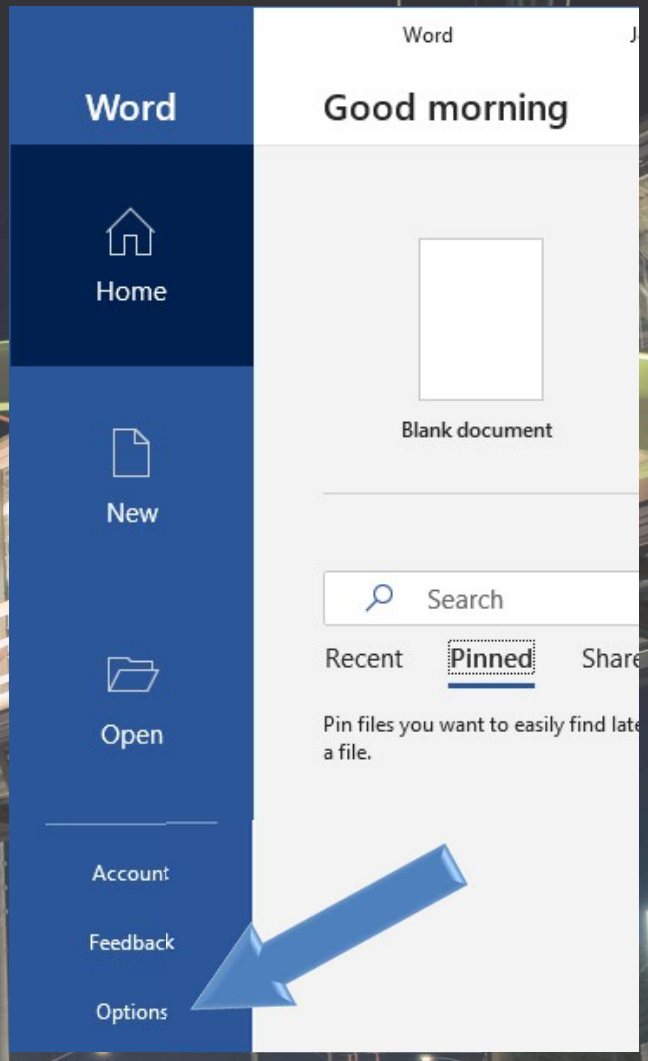
Interactive Specification Guide

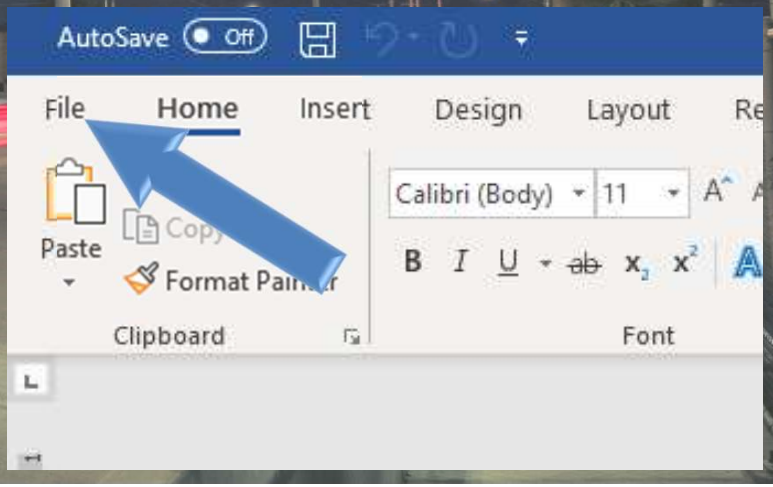


Quick reference for using Contech Engineered Solutions LLC's interactive specifications

Display Hidden Content

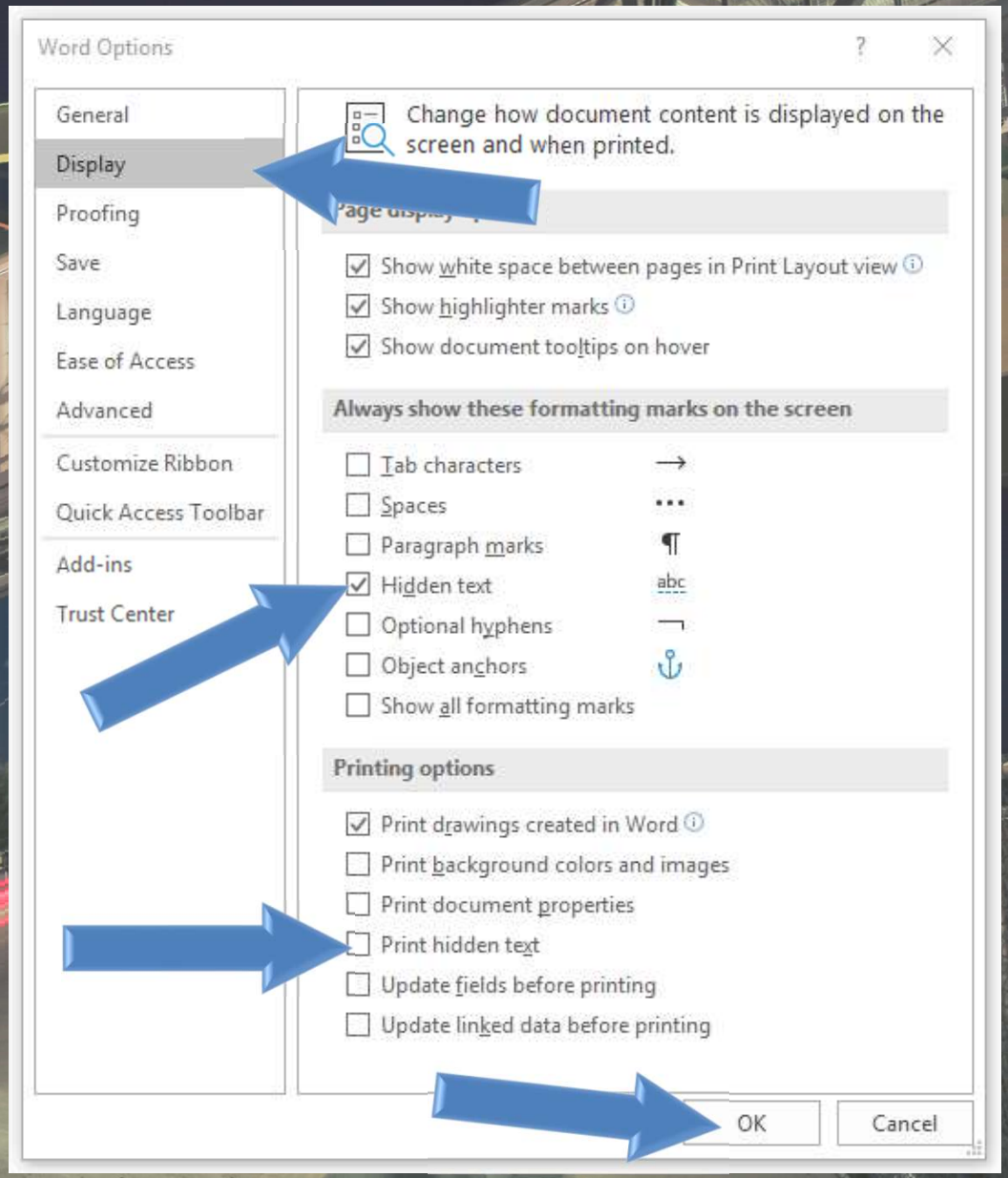
1. When opening Word, click on Options.
2. If Word is already started, you can always click on File to get back to the home screen with Options.





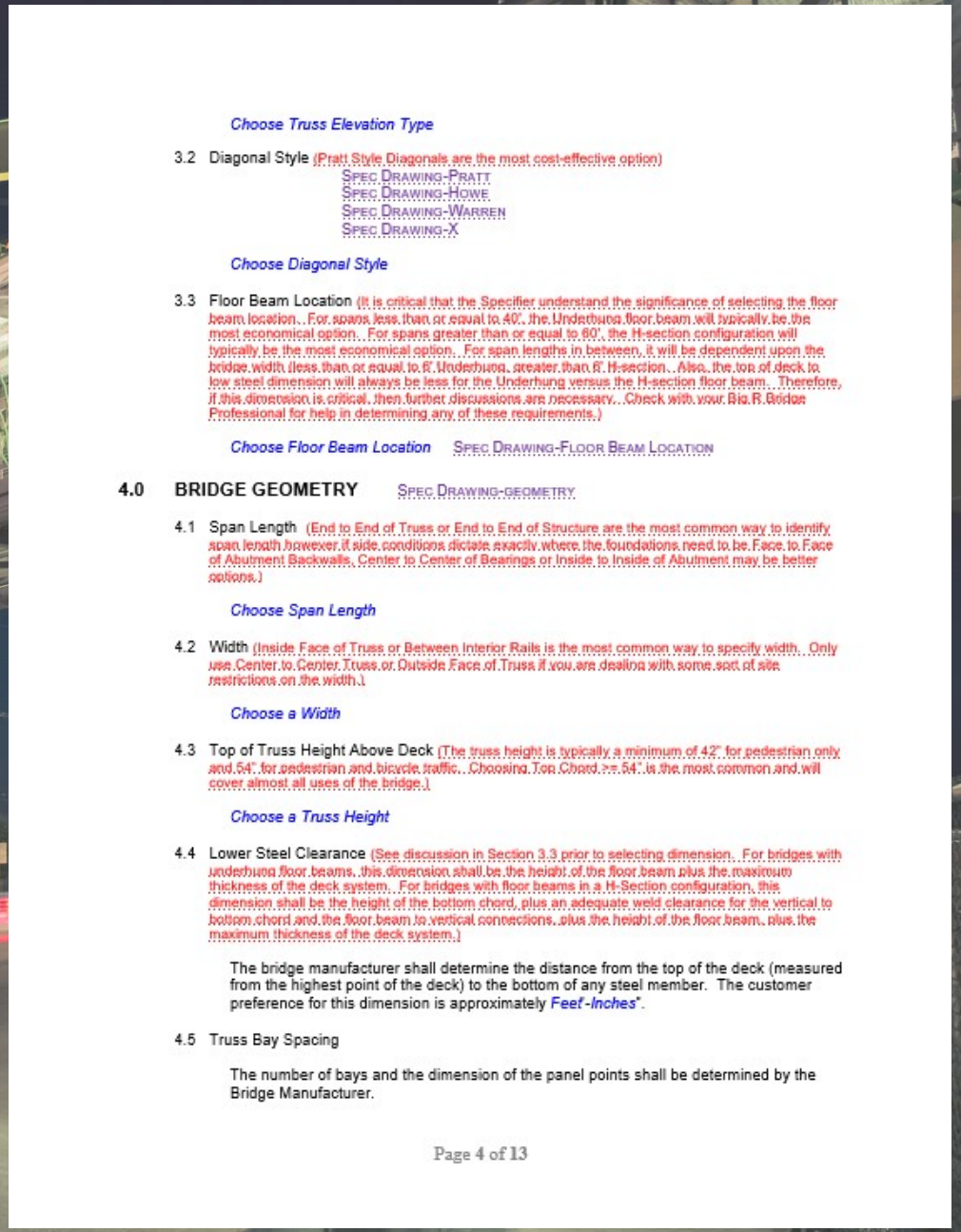
Display Hidden Content

3. Choose “Display"
4. Select “Hidden text” and make sure it is checked
5. “Print hidden text” should not be checked
6. Click “OK” at the bottom of the window



Display Hidden Content

- You will now be able to see the hidden content
- Hidden text is shown in red and gives additional information to the user
- Hidden content will not be printed



Choose Truss Elevation Type

3.2 Diagonal Style (Pratt Style Diagonals are the most cost-effective option)
SPEC DRAWING-PRATT
SPEC DRAWING-HOWE
SPEC DRAWING-WARREN
SPEC DRAWING-X

Choose Diagonal Style

3.3 Floor Beam Location (It is critical that the Specifier understand the significance of selecting the floor beam location. For spans less than or equal to 40', the Underhung floor beam will typically be the most economical option. For spans greater than or equal to 60', the H-section configuration will typically be the most economical option. For span lengths in between, it will be dependent upon the bridge width (less than or equal to 8' Underhung, greater than 8' H-section). Also, the top of deck to low steel dimension will always be less for the Underhung versus the H-section floor beam. Therefore, if this dimension is critical, then further discussions are necessary. Check with your Big R Bridge Professional for help in determining any of these requirements.)

Choose Floor Beam Location SPEC DRAWING-FLOOR BEAM LOCATION

4.0 BRIDGE GEOMETRY SPEC DRAWING-GEOMETRY

4.1 Span Length (End to End of Truss or End to End of Structure are the most common way to identify span length however if site conditions dictate exactly where the foundations need to be Face to Face of Abutment Backwalls, Center to Center of Bearings or Inside to Inside of Abutment may be better options.)

Choose Span Length

4.2 Width (Inside Face of Truss or Between Interior Rails is the most common way to specify width. Only use Center to Center Truss or Outside Face of Truss if you are dealing with some sort of site restrictions on the width.)

Choose a Width

4.3 Top of Truss Height Above Deck (The truss height is typically a minimum of 42" for pedestrian only and 54" for pedestrian and bicycle traffic. Choosing Top Chord >= 54" is the most common and will cover almost all uses of the bridge.)

Choose a Truss Height

4.4 Lower Steel Clearance (See discussion in Section 3.3 prior to selecting dimension. For bridges with underhung floor beams, this dimension shall be the height of the floor beam plus the maximum thickness of the deck system. For bridges with floor beams in a H-Section configuration, this dimension shall be the height of the bottom chord, plus an adequate weld clearance for the vertical to bottom chord and the floor beam to vertical connections, plus the height of the floor beam, plus the maximum thickness of the deck system.)

The bridge manufacturer shall determine the distance from the top of the deck (measured from the highest point of the deck) to the bottom of any steel member. The customer preference for this dimension is approximately *Feet'-Inches"*.

4.5 Truss Bay Spacing

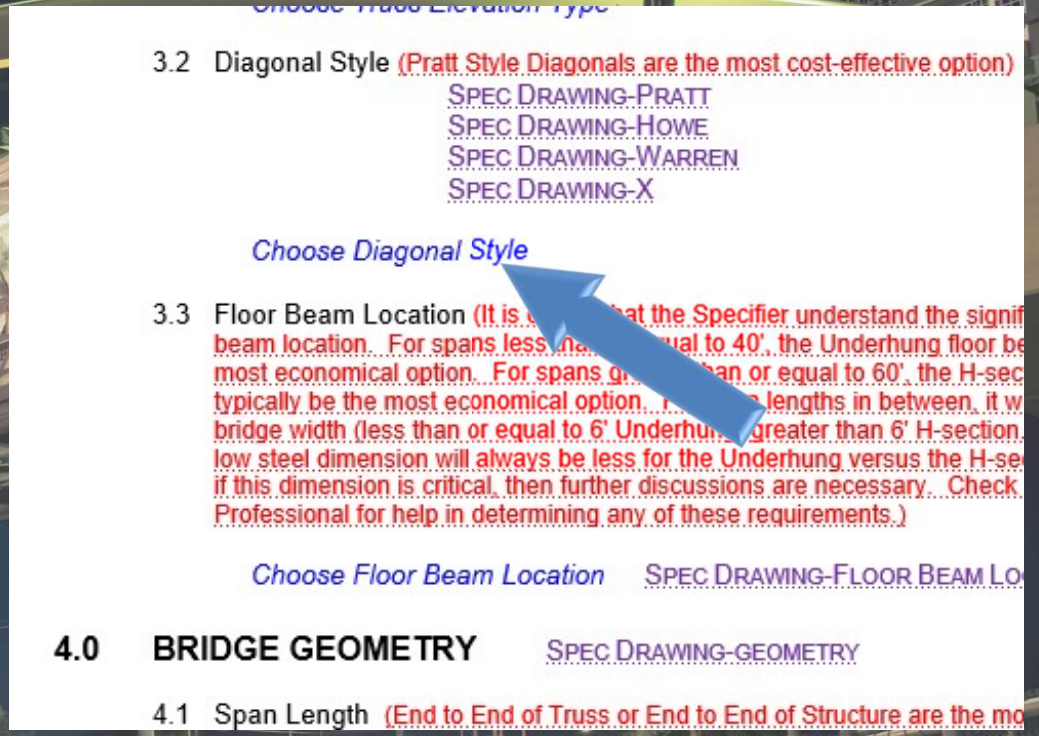
The number of bays and the dimension of the panel points shall be determined by the Bridge Manufacturer.

Online Assistance

- Web links are provided throughout the document in purple
- Use CTRL + Click to follow the link
- Uses these links to view drawings and additional information

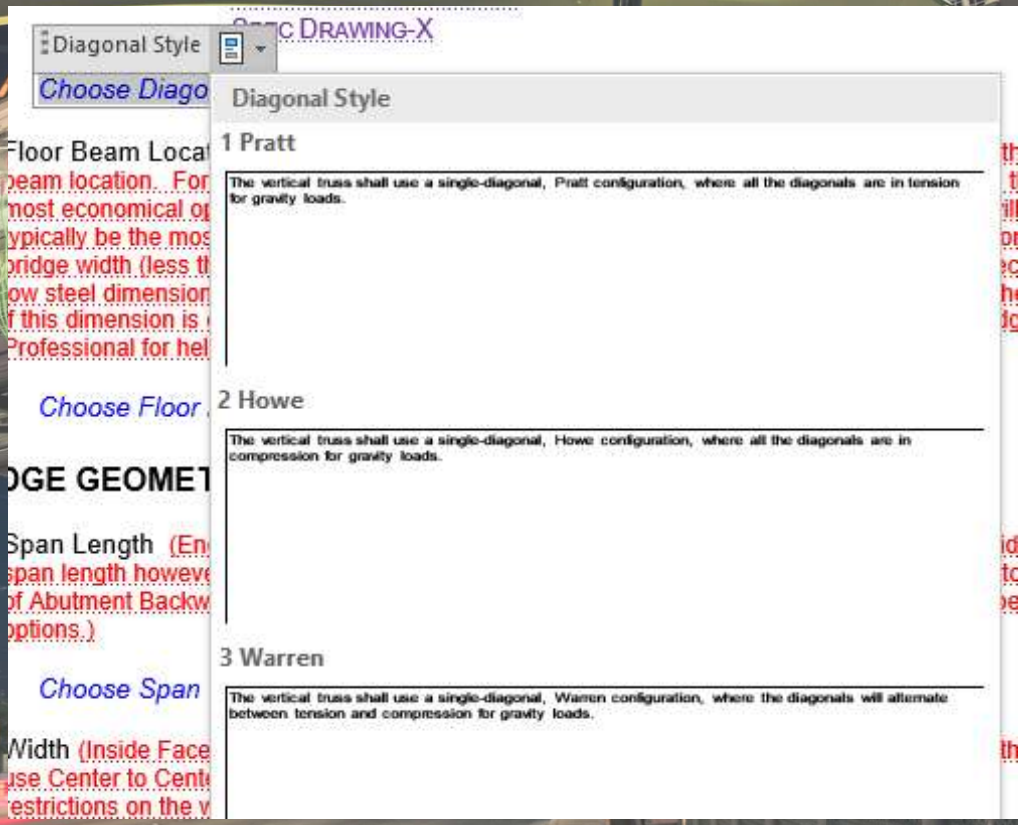
Building Blocks

- Interactive parts are shown in blue italics
- Click these sections to interact with them



Building Blocks

- To use building blocks
  1. Click blue italics
  2. Click the top right corner of the box
  3. Select the desired option



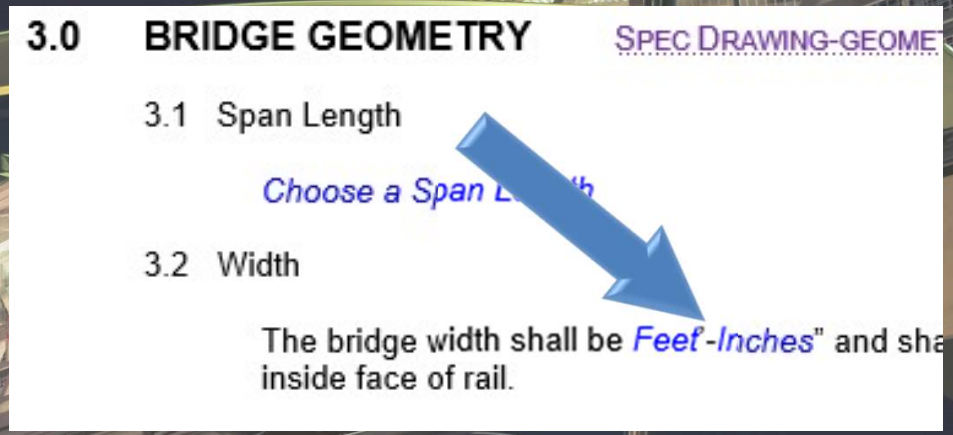
3.2 Diagonal Style (Pratt Style Diagonals are the most cost-effective option)

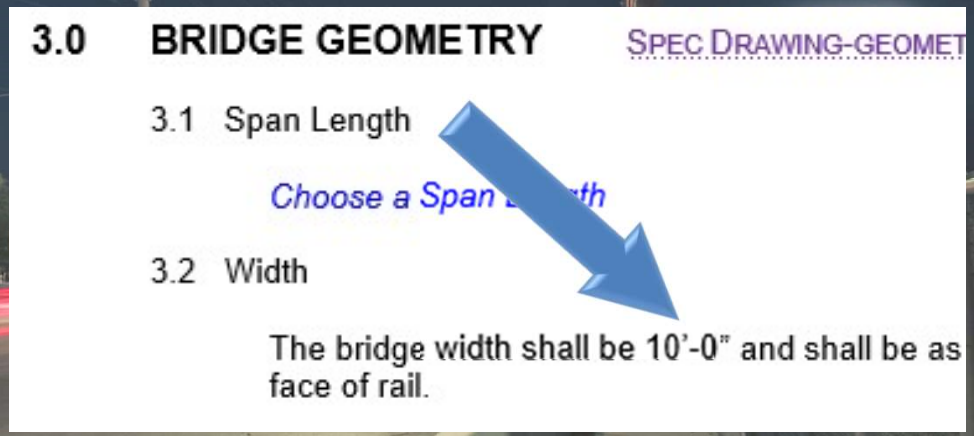
SPEC DRAWING-PRATT
SPEC DRAWING-HOWE
SPEC DRAWING-WARREN
SPEC DRAWING-X

The vertical truss shall use a single-diagonal, Pratt configuration, where all the diagonals are in tension for gravity loads.

Text Boxes

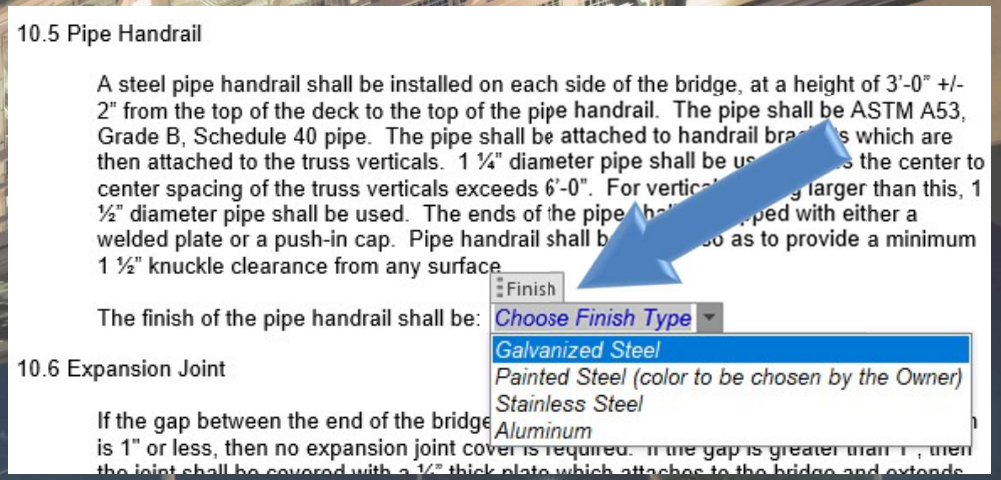
- Text boxes are imbedded within the text
- To use the text boxes click on them and input the desired text





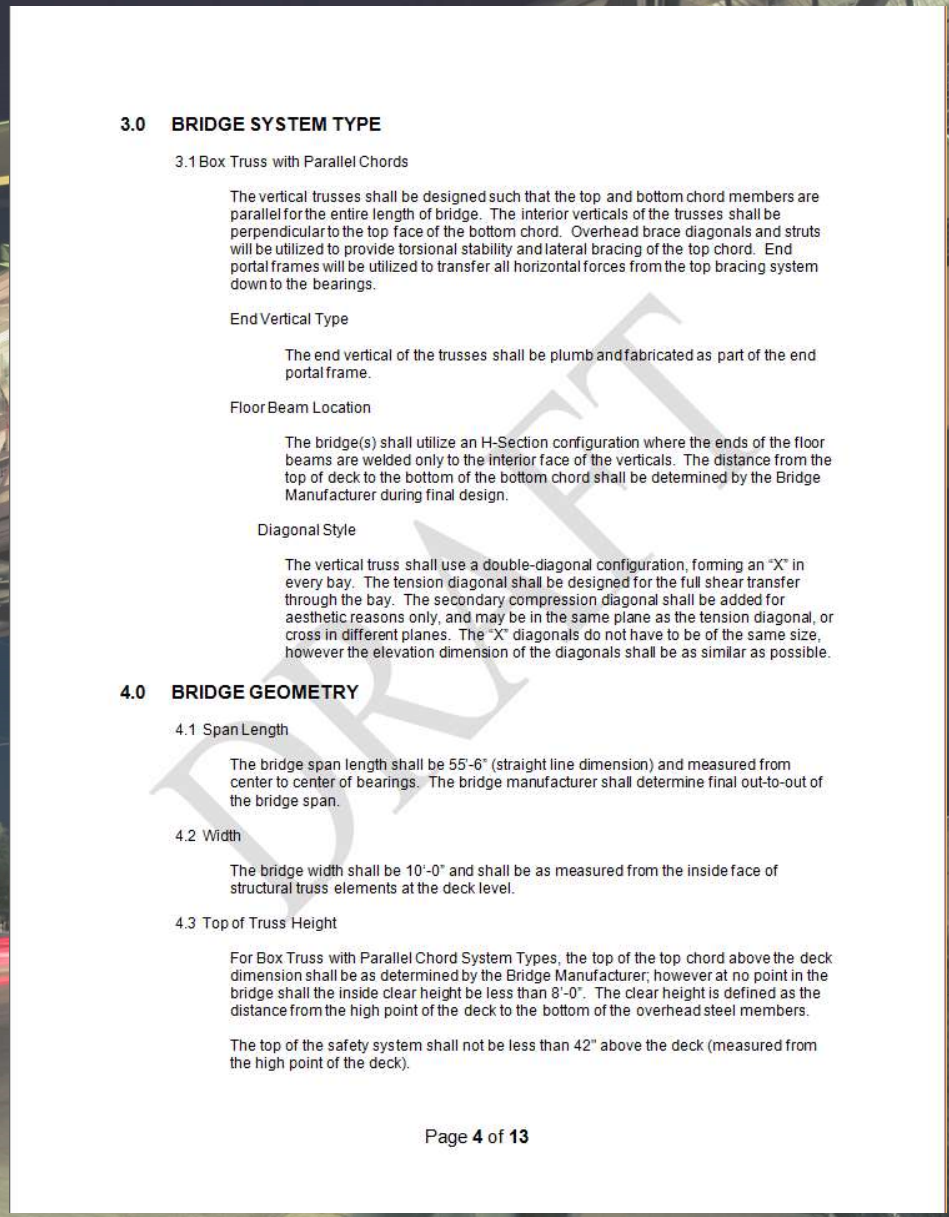
Drop Down Boxes

- To use a drop down box:
  1. Click the blue italics
  2. Click the arrow to the right of the box
  3. Select the desired field



Printing

- After all fields have been filled, print the document with the normal settings
- Red hidden text and purple Online assistance links will not be printed
- Any fields that were missed will be printed in blue



3.0 BRIDGE SYSTEM TYPE

3.1 Box Truss with Parallel Chords

The vertical trusses shall be designed such that the top and bottom chord members are parallel for the entire length of bridge. The interior verticals of the trusses shall be perpendicular to the top face of the bottom chord. Overhead brace diagonals and struts will be utilized to provide torsional stability and lateral bracing of the top chord. End portal frames will be utilized to transfer all horizontal forces from the top bracing system down to the bearings.

End Vertical Type

The end vertical of the trusses shall be plumb and fabricated as part of the end portal frame.

Floor Beam Location

The bridge(s) shall utilize an H-Section configuration where the ends of the floor beams are welded only to the interior face of the verticals. The distance from the top of deck to the bottom of the bottom chord shall be determined by the Bridge Manufacturer during final design.

Diagonal Style

The vertical truss shall use a double-diagonal configuration, forming an "X" in every bay. The tension diagonal shall be designed for the full shear transfer through the bay. The secondary compression diagonal shall be added for aesthetic reasons only, and may be in the same plane as the tension diagonal, or cross in different planes. The "X" diagonals do not have to be of the same size, however the elevation dimension of the diagonals shall be as similar as possible.

4.0 BRIDGE GEOMETRY

4.1 Span Length

The bridge span length shall be 55'-6" (straight line dimension) and measured from center to center of bearings. The bridge manufacturer shall determine final out-to-out of the bridge span.

4.2 Width

The bridge width shall be 10'-0" and shall be as measured from the inside face of structural truss elements at the deck level.

4.3 Top of Truss Height

For Box Truss with Parallel Chord System Types, the top of the top chord above the deck dimension shall be as determined by the Bridge Manufacturer; however at no point in the bridge shall the inside clear height be less than 8'-0". The clear height is defined as the distance from the high point of the deck to the bottom of the overhead steel members.

The top of the safety system shall not be less than 42" above the deck (measured from the high point of the deck).