3 *Connections* Tutorial 3 – Screw Lap Splice (US)

3.1 Software Version and Standard

This tutorial was completed using WoodWorks® US 2019, and NDS 2018.

3.2 Introduction

This tutorial goes over the design of a screw lap splice connection between OSB and a solid sawn member. Due to the lack of screw penetration into the third member in the splice, the problem must be considered as a single shear connection.

Click here to download the Connections file (.con) created from going through this tutorial.

3.3 Connection Type

1. Click the ***New*** button on the toolbar.
2. Select the connection type ***Lapped Shear, wood-to-wood, Splice two-member***.
3. Select ***Wood Screws***.

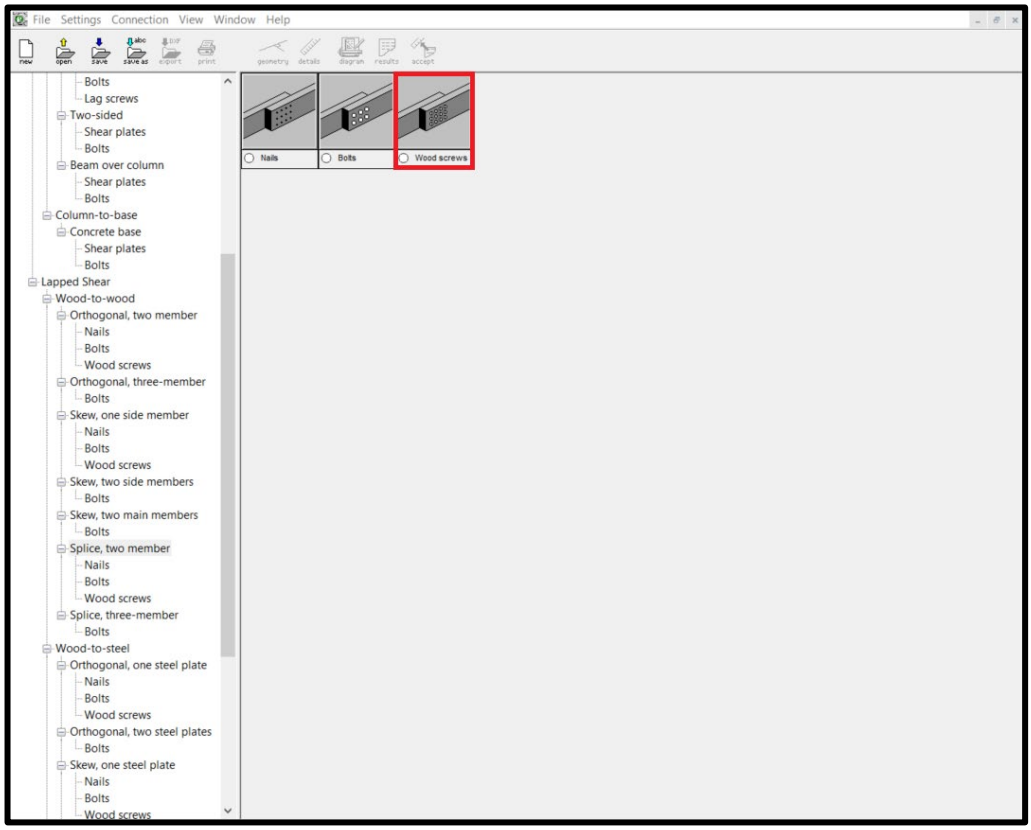

Figure 1: *Connections Tutorial 3 – Selecting Screw Splice Connection*

3.4 Connection Details

3.4.1 Main Member

1. Specify ***Material*** to ***Lumber-soft***.
2. Specify ***Species*** as ***S-P-F***.
3. Specify ***Grade*** as ***No.1/No.2***.
4. Specify ***Thickness*** as ***2 (in.)***.
5. Specify ***Width*** as ***6 (in.)***.

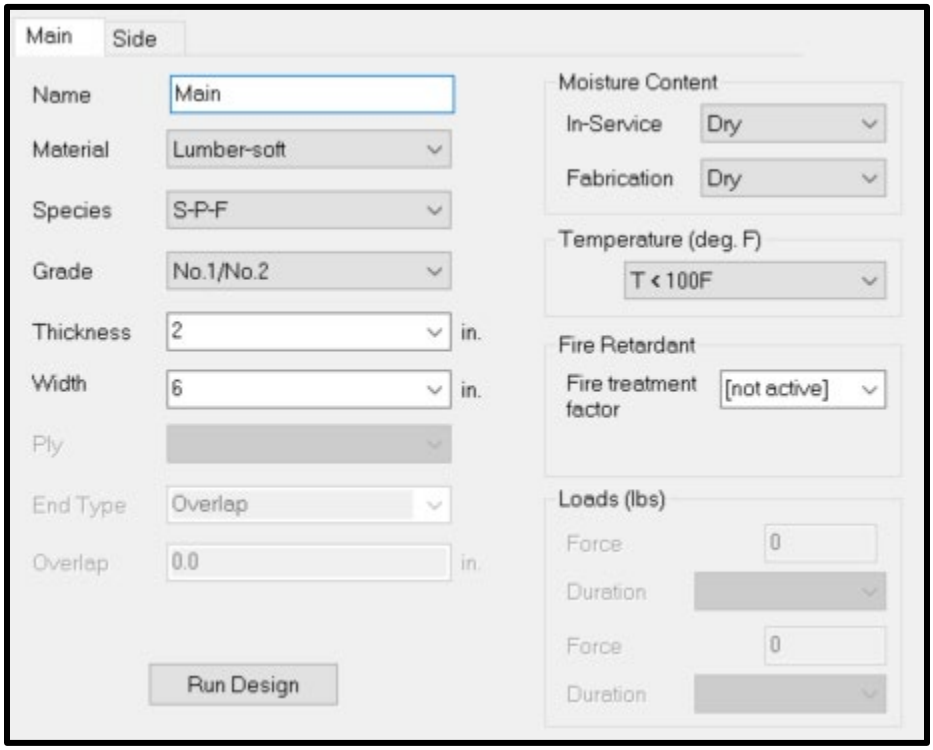

Figure 2: *Connections Tutorial 3 – Main Member Details*

3.4.2 Side Member

1. Specify ***Material*** to ***Lumber-soft***.
2. Specify ***Species*** as ***S-P-F.***
3. Specify ***Grade*** as ***No.1/No.2.***
4. Specify ***Thickness*** as ***2 (in.)***.
5. Specify ***Width*** as ***6 (in.)***.
6. Specify ***End Type*** as ***Unknown***.
7. Specify ***Overlap*** as ***0.0 (in.).***
8. Specify a ***Force*** of ***2000 (lbs)***.

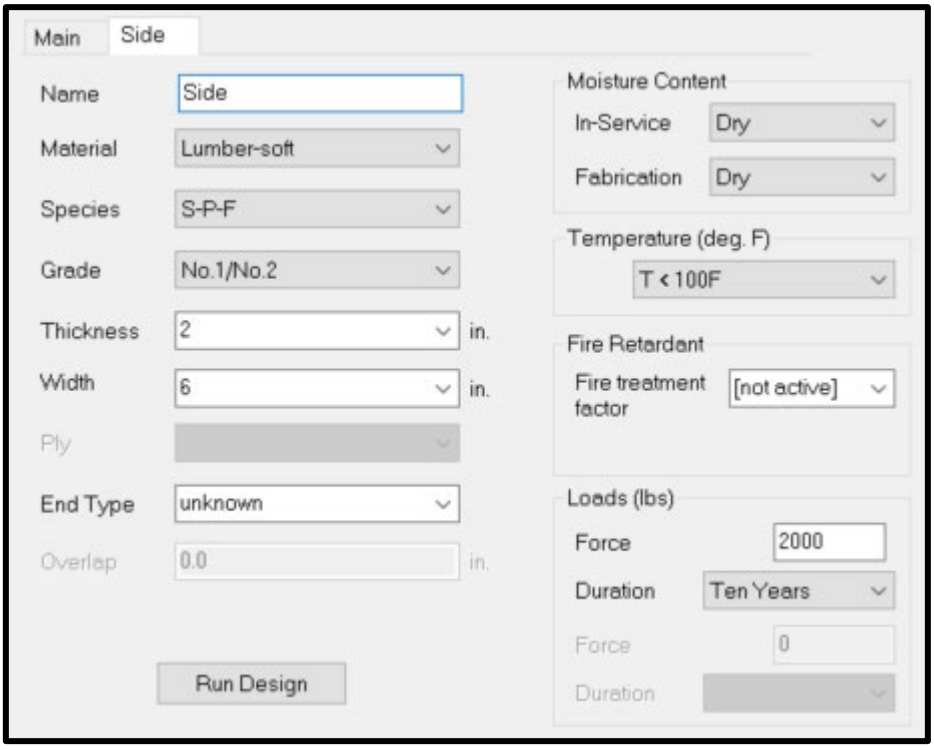

Figure 3: *Connections Tutorial 3 – Side Member Details*

3.4.3 Screw Details

1. Specify a ***Wood Screw Gauge Number*** of ***8***.
2. Specify a ***Wood Screw Length*** of ***2-1/2 (in.)***.
3. Select the ***Add Staggered Screws Between Rows*** check box.
4. Leave all other parameters as ***(unknown).***
5. Click ***Run*** Design.

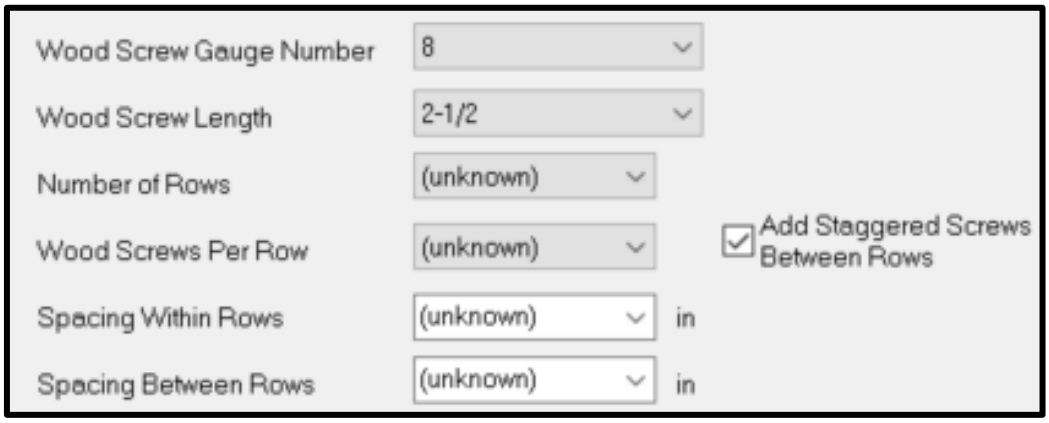

Figure 4: *Connections Tutorial 3 – Screw Details*

3.5 Review and Accept Design Results

Once the design has been run, it is possible to review the ***Diagram***, ***Results*** and ***Accept*** the design. For this example, thirty-two 2-1/2-inch screws were found to be adequate in resisting the specified load. Both the ***Diagram*** and ***Results*** can quickly be printed using the ***Print*** icon.

Click here to download a PDF of the design results.

Click here to download a PDF of the diagram.

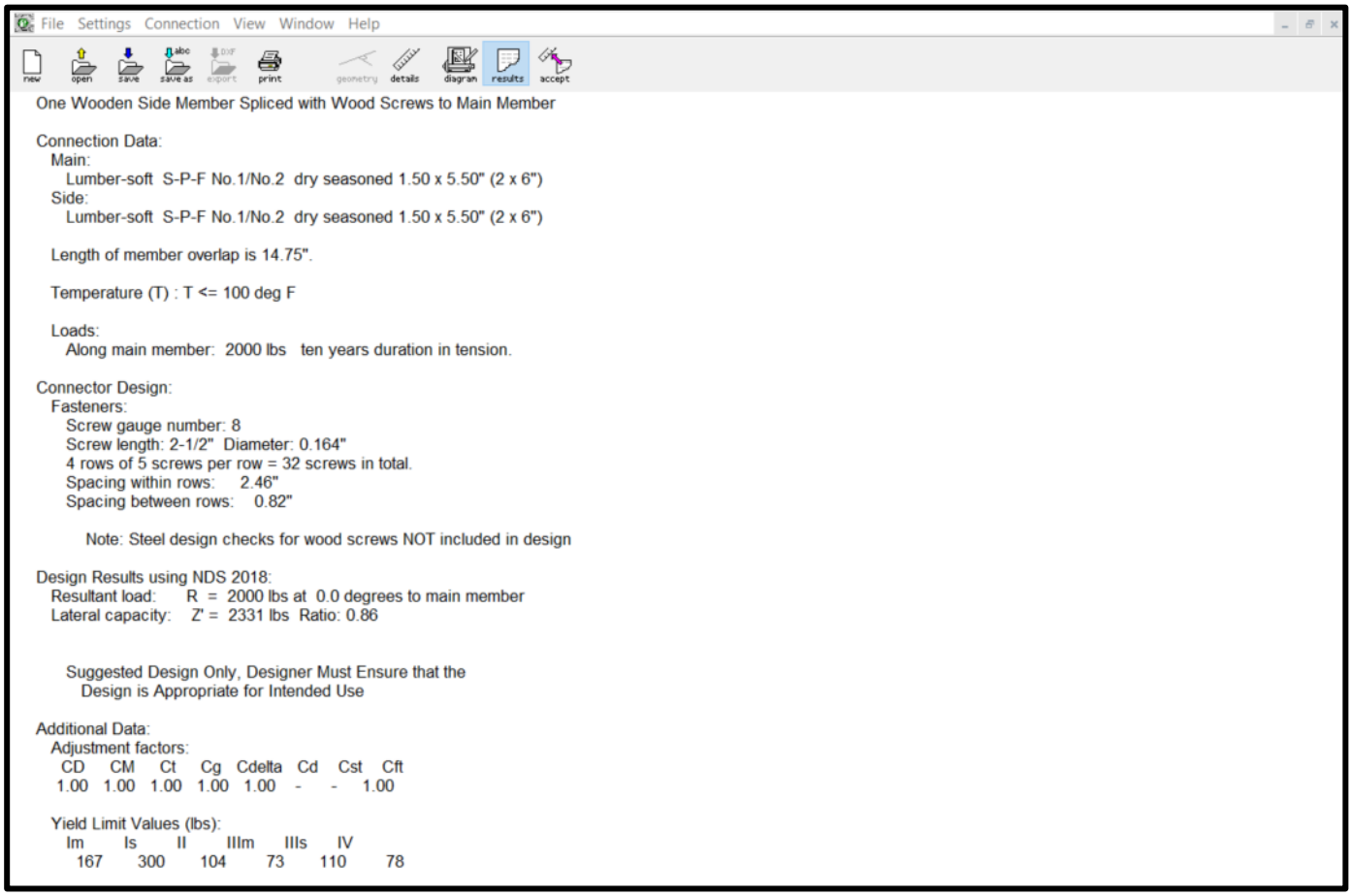

Figure 5: *Connections Tutorial 3 – Review Results*