DESIGN LOAD RATING SUMMARY TABLES

Load Rating Summary Tables must be completed by the designer and included in the contract plans in accordance with the Structures Manual (Topic No. 625-020-018). See the “FDOT Structures Bar Menu” included with the FDOT CADD Software for the Microstation CADD Cell Summary Tables. Updates to the Summary Tables from Structures Manual revisions are available on the Structures Design Office website at http://www.dot.state.fl.us/structures/CADD/standards/CurrentStandards/MicrostationDrawings.shtm

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<td>7.</td>
<td>Reinforced Concrete Bridge Culverts</td>
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### Load Rating Summary Details for Reinforced Concrete Bridges

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**Comments:**
- Interior/exterior beam DF method if other than Standard Spec.
- Other appropriate comments

#### Table 2 - LFR

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**Comments:**
- Interior/exterior beam DF method if other than LRFD.
- Other appropriate comments

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**General Notes:**
1. This table is based on the requirements established in the January 2xxx "Structures Manual."

**Table 2 Notes:**
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes | No

**Notes to Designer:**
1. Modify or replace the Rating Location sketch showing Span Length(s) to resemble the bridge being rated.
2. Fill in the date in General Note number 1 above.
4. Provide name, version #, and date of release of software used for rating.

**Abbreviations:**
- Inv - Inventory
- Op - Operating

---

**RATING LOCATIONS**

![Diagram of bridge sections](attachment:image.png)
## Load Rating Summary Details for Prestressed Concrete Bridges (Flat Slab and Deck/Girder)

### Table 1 - LFR

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</table>

### Abbreviations:

- Inv - Inventory
- Op - Operating

### Notes to Designer:
1. Modify or replace the Rating Location sketch Showing Span Lengths to resemble the bridge being rated.
2. Fill in the date in General Note number 1 above.
4. Provide name, version #, and date of software used for rating.

### General Notes:
1. This table is based on the requirements established in the January 2xxx "Structures Manual".
2. Permit capacity is determined by using the permit vehicle in all lanes.
3. Has the AASHTO LRFD Specifications stress limits = 3√f'c or 6√f'c.
4. Max the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? Yes No

### Load Rating Summary Details for Prestressed Concrete Bridges (Flat Slab and Deck/Girder)

**RATING LOCATIONS**
### Table 1 - LRFR

<table>
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<tr>
<th>Pier</th>
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**Abbreviations:**
- **Inv** - Inventory
- **Op** - Operating

**NOTES**

1. This table is based on the requirements established in the January 2xxx "Structures Manual".
2. Permit capacity is determined by using the permit vehicle in all lanes.
3. Service III Design Inventory tensile stress limit = 3√f'c or 6√f'c; Service III Design Operating, Legal, and Permit tensile stress limit = 7.5√f'c.
4. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcement been satisfied? **Yes** **No**

**General Notes:**
- 1. Modify or replace the Rating Location sketch showing Span Lengths to resemble the bridge being rated.
- 2. Fill in the date in General Note number 1 above.
- 3. Provide name, version#, and date of release of software used in rating.

**Abbreviations:**
- **DC** - Dead Load
- **CR** - Live Load
- **SM** - Truck Loading
- **DW** - Wind Load
- **EL** - Earthquake Load
- **PS** - Seismic Load
- **FR** - Fire Load
- **TU** - Trolley Load
- **TG** - Trolley Load
- **LL** - Live Load
- **DF** - Distribution Factor

**Load Factors:**
- **Rating Factor**
- **Tons**
- **Location**
- **Dimension**
- **Distribution Factor (DF)**
- **Rating Factor**
- **Tons**
- **Location**
- **Dimension**

**Comments:**
- Interior/exterior beam DF method if other than LRFD. Other appropriate comments.
### Load Rating Summary Details for Post-Tensioned Concrete Box Girder Bridges

#### Table 1 - LRFR

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<td>Strength II</td>
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<td>1.25</td>
<td>0.9</td>
<td>1.50</td>
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<td>1.00</td>
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</tr>
</tbody>
</table>

* CR, SH not applicable

**Notes to Designer:**
1. Modify or place the Rating Location sketch Showing Span Length(s) to resemble the bridge being rated.
2. Fill in the date in General Note number 1 above.
3. In the comments section for Service Limit III, state whether the rating is for principal tension stress or bending stress.
4. Provide Name, Version #, and Date of Release of Software used for rating.

**Abbreviations:**

- **SH** - Striped Lanes
- **CR** - Permitted
- **SM** - Temporary
- **DC** - Direct
- **CC** - Combined
- **DC** - Direct
- **TM** - Transverse
- **LL** - Longitudinal
- **SH** - Striped Lanes
- **CR** - Permitted
- **SM** - Temporary
- **DC** - Direct
- **CC** - Combined
- **TM** - Transverse
- **LL** - Longitudinal

**NOTES**

**General Notes:**
1. This table is based on the requirements established in the January 2xxx "Structures Manual”.
2. Load rating is determined by using the permit vehicle in all lanes.
3. Service III tensile stress limit = 3√f’c or 6√f’c; Service III Principal Tension Limit = 3.5√f’c.
4. Service I Transverse Design Inventory tensile stress limit = 3√f’c or 6√f’c; Service I Transverse Design Operating tensile stress limit = 6√f’c.

**SL - Striped Lanes**

1. Modify or place the Rating Location sketch Showing Span Length(s) to resemble the bridge being rated.
2. Fill in the date in General Note number 1 above.
3. In the comments section for Service Limit III, state whether the rating is for principal tension stress or bending stress.
4. Provide Name, Version #, and Date of Release of Software used for rating.
### Table 1 - LFR

<table>
<thead>
<tr>
<th>Level</th>
<th>Vehicle</th>
<th>Load Factors</th>
<th>Moment (Strength)</th>
<th>Shear (Strength)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Weight (tons)</td>
<td>Distribution Factor</td>
<td>Rating Factor</td>
<td>Location</td>
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<tr>
<td>Inventory</td>
<td>HS-20</td>
<td>36.0</td>
<td>1.75</td>
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### Table 2 - LRFR

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<th>Limit State</th>
<th>Vehicle</th>
<th>Weight (tons)</th>
<th>Load Factors</th>
<th>Moment (Strength) or Stress (Service)</th>
<th>Shear (Strength)</th>
<th>Comments</th>
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</thead>
<tbody>
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<td>Rating Factor</td>
<td>Location</td>
<td>Dimension</td>
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<tr>
<td>Strength II</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Service I</td>
<td>HL-93</td>
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<td>N/A</td>
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<td>Service II</td>
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<td>60.0</td>
<td>1.35</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Abbreviations:
- Inv – Inventory
- Op – Operating
- DL – Dead Load
- LL – Live Load
- DC – Design Condition
- DW – Driving Weight
- DF – Distribution Factor
- R – Rating
- P – Permit

**General Notes:**
1. This table is based on the requirements established in the January 2xxx “Structures Manual.”
2. For Girder, Floorbeam, Stringer Bridges, use one Summary sheet for each member type.
3. Modify or replace the Rating Location sketch showing Span Lengths to resemble the bridge being rated.
4. Fill in the date in General Note number 1 above.
5. Design Service Limit State ratings are only required for compact members.
7. Provide name, version #, and date of software used in rating.
### Load Rating Summary Details for Reinforced Concrete Bridge Culverts (Box and Three-Sided Culvert)

#### Table 1 - LFR

<table>
<thead>
<tr>
<th>Level</th>
<th>Vehicle</th>
<th>Weight (tons)</th>
<th>Load Factors</th>
<th>Moment (Strength)</th>
<th>Shear (Strength)</th>
<th>Comments</th>
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</thead>
<tbody>
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<td></td>
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<td>LL</td>
<td>DL</td>
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<tr>
<td>Inventory</td>
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<td>36.0</td>
<td>1.30</td>
<td>1.30</td>
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<td></td>
</tr>
</tbody>
</table>

#### Table 2 Notes:
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. Does the depth of fill above the top slab exceed the span length between the inside faces of the end walls (Bridge Culvert Total Span Length)?
3. General Notes:
4. Provide name, version #, and date of release of software used in rating.

#### Abbreviations:
- **DL** - Dead Load (LFR)
- **DC** - Component Dead Load (LFR)
- **DW** - Wearing Surface & Utility Dead Load (LFR)
- **LL** - Live Load
- **Inv** - Inventory
- **Op** - Operating

#### Diagram:
- *Dim 1*
- *Dim 2*
- *XX' - X* (Perpendicular Distance)
- *XX' - X* (Perpendicular Distance)
- *X* (Design Depth of Fill)
- Roadway Surface
- Begin Bridge Culvert End Wall
- End Bridge Culvert End Wall
- Direction of Stationing
- Location C
- Location B
- Location E
- Location F
- Location E'
- 1st Interior Wall
- XX' - X* (Perpendicular Distance)

#### Notes to Designer:
1. Modify or replace the Rating Location sketch showing Span Length(s) to resemble the bridge culvert being rated.
2. Fill in the date in General Note number 1 above.
4. Provide name, version #, and date of release of software used in rating.