

19-OCT-09
17:03:58

GEORGIA DEPARTMENT OF TRANSPORTATION
PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
LIVE LOAD CASE PROGRAM
REVISED: JUNE 26, 2008

PROB. NO. LL01

63.14' CURB-TO-CURB; 10 BEAMS; 140.00' AVERAGE SPAN

BRIDGE WIDTH	X1	X2	CENTER LINE DISTANCE	# OF BEAMS	REACTION FORCE	MAXIMUM # OF TRUCKS	# OF COLUMNS	COLUMN WIDTH	SKEW ANGLE
66.395	3.625	3.625	33.197	10	68.706	5	3	6.000	5

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20
4.125	6.461	6.461	6.461	6.461	6.461	6.461	6.461	6.461	6.461										

XCOL1	XCOL2	XCOL3	XCOL4	XCOL5
10.038	23.286	23.286		

LIVE LOAD CASE # 1 1 TRUCKS

* *
* *
* *
*** **
* *

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	0.8513		58.487
3	0.0000		0.000
4	0.0000		0.000
5	0.0000		0.000
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.0000		0.000
10	0.0000		0.000

LIVE LOAD CASE # 2 2 TRUCKS

* * * *
* * * *
* * * *
*** ** * *
* * * *

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	0.3990		27.414
5	0.0000		0.000
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.0000		0.000
10	0.0000		0.000

LIVE LOAD CASE # 3 3 TRUCKS

* * * * *
* * * * *
* * * * *
*** ** * *
* * * *

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	1.4341		98.534
5	0.9649		66.292
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.0000		0.000
10	0.0000		0.000

LIVE LOAD CASE # 4 4 TRUCKS

```

*   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *
*** ** ** ** ** ** ** ** ** ** ** ** ** ** ** **
*   *   *   *   *   *   *   *

```

```

-----
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	1.4341		98.534
5	1.3990		96.120
6	1.0714		73.608
7	0.4945		33.975
8	0.0000		0.000
9	0.0000		0.000
10	0.0000		0.000

□

LIVE LOAD CASE # 5 5 TRUCKS

```

*   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *
*** ** ** ** ** ** ** ** ** ** ** ** ** **
*   *   *   *   *   *   *   *

```

```

-----
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	1.4341		98.534
5	1.3990		96.120
6	1.0714		73.608
7	1.3809		94.876
8	1.0714		73.608
9	0.0423		2.903
10	0.0000		0.000

LIVE LOAD CASE # 6 1 TRUCKS

```

*   *
*   *
*   *
*** **
*   *

```

```

-----
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0000		0.000
3	0.0000		0.000
4	0.0000		0.000
5	0.0000		0.000
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.8519		58.529
10	1.1481		78.883

□

LIVE LOAD CASE # 7 2 TRUCKS

```

*   *   *   *
*   *   *   *
*   *   *   *
*** ** ** **
*   *   *   *

```

```

-----
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I
I   I   I   I   I   I   I   I   I   I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0000		0.000
3	0.0000		0.000
4	0.0000		0.000
5	0.0000		0.000
6	0.0000		0.000
7	0.3996		27.457
8	1.0714		73.608
9	1.3809		94.876

10 1.1481 78.883

LIVE LOAD CASE # 8 3 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** ** **
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0000		0.000
3	0.0000		0.000
4	0.0000		0.000
5	0.0000		0.000
6	0.9661		66.377
7	1.4335		98.492
8	1.0714		73.608
9	1.3809		94.876
10	1.1481		78.883

LIVE LOAD CASE # 9 4 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** **^
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0000		0.000
3	0.0000		0.000
4	0.4951		34.018
5	1.0714		73.608
6	1.3996		96.163
7	1.4335		98.492
8	1.0714		73.608
9	1.3809		94.876
10	1.1481		78.883

LIVE LOAD CASE # 10 5 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** **^
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0429		2.946
3	1.0714		73.608
4	1.3809		94.876
5	1.0714		73.608
6	1.3996		96.163
7	1.4335		98.492
8	1.0714		73.608
9	1.3809		94.876
10	1.1481		78.883

LIVE LOAD CASE # 11 1 TRUCKS

```

* *
* *
* *
*** **^
* *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.0000		0.000
2	0.0000		0.000
3	0.0000		0.000
4	0.4643		31.902
5	1.0714		73.608

6	0.4643	31.902
7	0.0000	0.000
8	0.0000	0.000
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 12 2 TRUCKS

```

* * * *
* * * *
* * * *
*** ** ** **
* * * *
    
```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
    
```

BEAM	WHEEL FRACTION	P-LOAD
1	0.0000	0.000
2	0.0121	0.829
3	1.0714	73.608
4	1.3809	94.876
5	1.0714	73.608
6	0.4643	31.902
7	0.0000	0.000
8	0.0000	0.000
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 13 3 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** ** ** ** ** **
* * * * *
    
```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
    
```

BEAM	WHEEL FRACTION	P-LOAD
1	0.0000	0.000
2	0.0121	0.829
3	1.0714	73.608
4	1.3809	94.876
5	1.0714	73.608
6	1.3809	94.876
7	1.0714	73.608
8	0.0121	0.829
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 14 4 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** ** *
* * * * *
    
```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
    
```

BEAM	WHEEL FRACTION	P-LOAD
1	0.5598	38.463
2	1.0834	74.438
3	1.4402	98.949
4	1.3809	94.876
5	1.0714	73.608
6	1.3809	94.876
7	1.0714	73.608
8	0.0121	0.829
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 15 5 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** ** ** *
* * * * *
    
```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
    
```

BEAM	WHEEL FRACTION	P-LOAD
1	0.5598	38.463

2	1.0834	74.438
3	1.4402	98.949
4	1.3809	94.876
5	1.0714	73.608
6	1.3809	94.876
7	1.4402	98.949
8	1.0834	74.438
9	0.5598	38.463
10	0.0000	0.000

LIVE LOAD CASE # 16 2 TRUCKS

```

* * * *
* * * *
* * * *
*** ** **
* * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL FRACTION	P-LOAD
1	0.0000	0.000
2	0.0000	0.000
3	0.0000	0.000
4	0.7386	50.745
5	1.2622	86.720
6	1.2614	86.667
7	0.7378	50.692
8	0.0000	0.000
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 17 3 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** **
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL FRACTION	P-LOAD
1	0.0000	0.000
2	0.2863	19.673
3	1.0714	73.608
4	1.3809	94.876
5	1.2622	86.720
6	1.2614	86.667
7	0.7378	50.692
8	0.0000	0.000
9	0.0000	0.000
10	0.0000	0.000

LIVE LOAD CASE # 18 4 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** **
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL FRACTION	P-LOAD
1	0.0000	0.000
2	0.2863	19.673
3	1.0714	73.608
4	1.3809	94.876
5	1.2622	86.720
6	1.2614	86.667
7	1.3809	94.876
8	1.0714	73.608
9	0.2856	19.620
10	0.0000	0.000

LIVE LOAD CASE # 19 5 TRUCKS

```

* * * * *
* * * * *
* * * * *
*** ** **
* * * * *

```

```

-----
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I
I I I I I I I I I I

```

BEAM	WHEEL	FRACTION	P-LOAD
1	0.8341		57.306
2	1.3577		93.281
3	1.1659		80.106
4	1.3809		94.876
5	1.2622		86.720
6	1.2614		86.667
7	1.3809		94.876
8	1.0714		73.608
9	0.2856		19.620
10	0.0000		0.000

LIVE LOAD CASE # 20 2 TRUCKS

```

*      *
*      *
*      *
***   ***
*      *

```

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	0.8513		58.487
3	0.0000		0.000
4	0.0000		0.000
5	0.0000		0.000
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.8519		58.529
10	1.1481		78.883

LIVE LOAD CASE # 21 3 TRUCKS

```

*      * * *
*      * * *
*      * * *
***   *** *
*      * *

```

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	0.3990		27.414
5	0.0000		0.000
6	0.0000		0.000
7	0.0000		0.000
8	0.0000		0.000
9	0.8519		58.529
10	1.1481		78.883

LIVE LOAD CASE # 22 4 TRUCKS

```

*      * * * *
*      * * * *
*      * * * *
***   *** *
*      * * *

```

I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I
I	I	I	I	I	I	I	I	I	I

BEAM	WHEEL	FRACTION	P-LOAD
1	1.1487		78.925
2	1.3809		94.876
3	1.0714		73.608
4	0.3990		27.414
5	0.0000		0.000
6	0.0000		0.000
7	0.3996		27.457
8	1.0714		73.608
9	1.3809		94.876
10	1.1481		78.883

LIVE LOAD CASE # 23 5 TRUCKS

```

*      * * * * *
*      * * * * *
*      * * * * *
***   *** *
*      * * *

```

I I I I I I I I I I
 I I I I I I I I I I
 I I I I I I I I I I
 I I I I I I I I I I

BEAM	WHEEL	FRACTION	P-LOAD
1		1.1487	78.925
2		1.3809	94.876
3		1.0714	73.608
4		1.4341	98.534
5		0.9649	66.292
6		0.0000	0.000
7		0.3996	27.457
8		1.0714	73.608
9		1.3809	94.876
10		1.1481	78.883

19-OCT-09
 17:03:58

GEORGIA DEPARTMENT OF TRANSPORTATION
 PRECONSTRUCTION DIVISION - OFFICE OF BRIDGE & STRUCTURAL DESIGN
 SUMMARY OF THE LIVE LOAD CASE PROGRAM
 REVISED: JUNE 26, 2008

PROB. NO. LL01

63.14' CURB-TO-CURB; 10 BEAMS; 140.00' AVERAGE SPAN

BRIDGE WIDTH	X1	X2	CENTER LINE DISTANCE	# OF BEAMS	REACTION FORCE	MAXIMUM # OF TRUCKS	# OF COLUMNS	COLUMN WIDTH	SKEW ANGLE
66.395	3.625	3.625	33.197	10	68.706	5	3	6.000	5

D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20
4.125	6.461	6.461	6.461	6.461	6.461	6.461	6.461	6.461	6.461										

XCOLD	XCOLD	XCOLD	XCOLD	XCOLD	NO. OF TRUCKS									
10.038	23.286	23.286			BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5	BEAM 6	BEAM 7	BEAM 8	BEAM 9	BEAM 10
LL CASE 1	1	1	78.925	58.487	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 2	2	2	78.925	94.876	73.608	27.414	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 3	3	3	78.925	94.876	73.608	98.534	66.292	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 4	4	4	78.925	94.876	73.608	98.534	96.120	73.608	33.975	0.000	0.000	0.000	0.000	0.000
LL CASE 5	5	5	78.925	94.876	73.608	98.534	96.120	73.608	94.876	73.608	2.903	0.000	0.000	0.000
LL CASE 6	1	1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	58.529	78.883	78.883
LL CASE 7	2	2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.457	73.608	94.876	78.883	78.883
LL CASE 8	3	3	0.000	0.000	0.000	0.000	0.000	0.000	66.377	98.492	73.608	94.876	78.883	78.883
LL CASE 9	4	4	0.000	0.000	0.000	34.018	73.608	96.163	98.492	73.608	94.876	78.883	78.883	78.883
LL CASE 10	5	5	0.000	2.946	73.608	94.876	73.608	96.163	98.492	73.608	94.876	78.883	78.883	78.883
LL CASE 11	1	1	0.000	0.000	0.000	31.902	73.608	31.902	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 12	2	2	0.000	0.829	73.608	94.876	73.608	31.902	0.000	0.000	0.000	0.000	0.000	0.000
LL CASE 13	3	3	0.000	0.829	73.608	94.876	73.608	94.876	73.608	0.829	0.000	0.000	0.000	0.000
LL CASE 14	4	4	38.463	74.438	98.949	94.876	73.608	94.876	73.608	0.829	0.000	0.000	0.000	0.000
LL CASE 15	5	5	38.463	74.438	98.949	94.876	73.608	94.876	98.949	74.438	38.463	0.000	0.000	0.000
LL CASE 16	2	2	0.000	0.000	0.000	50.745	86.720	86.667	50.692	0.000	0.000	0.000	0.000	0.000
LL CASE 17	3	3	0.000	19.673	73.608	94.876	86.720	86.667	50.692	0.000	0.000	0.000	0.000	0.000
LL CASE 18	4	4	0.000	19.673	73.608	94.876	86.720	86.667	94.876	73.608	19.620	0.000	0.000	0.000
LL CASE 19	5	5	57.306	93.281	80.106	94.876	86.720	86.667	94.876	73.608	19.620	0.000	0.000	0.000
LL CASE 20	2	2	78.925	58.487	0.000	0.000	0.000	0.000	0.000	0.000	58.529	78.883	78.883	78.883
LL CASE 21	3	3	78.925	94.876	73.608	27.414	0.000	0.000	0.000	0.000	58.529	78.883	78.883	78.883
LL CASE 22	4	4	78.925	94.876	73.608	27.414	0.000	0.000	27.457	73.608	94.876	78.883	78.883	78.883
LL CASE 23	5	5	78.925	94.876	73.608	98.534	66.292	0.000	27.457	73.608	94.876	78.883	78.883	78.883

FOR PIER PROGRAM INPUT

61LL 1 1 78925	0	58486	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61LL 2 2 78925	0	94876	0	73608	27414	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61LL 3 3 78925	0	94876	0	73608	98534	66292	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61LL 4 4 78925	0	94876	0	73608	98534	96120	0	0	73608	33975	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0	0	0
61LL 5 5 78925	0	94876	0	73608	98534	96120	0	0	73608	94876	73608	0	0	0
62	0	2903	0	0	0	0	0	0	0	0	0	0	0	0
61LL 6 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
62	0	58529	0	78882	0	0	0	0	0	0	0	0	0	0

LL-63-10-140.OUT										
61LL 7 2	0	0	0	0	0	0	0	0	0	0 27456 73608
62	0	94876	0	78882						
61LL 8 3	0	0	0	0	0	0	0	0	0	0 66377 98491 73608
62	0	94876	0	78882						
61LL 9 4	0	0	0	0	0	34018	73608	0	0	0 96162 98491 73608
62	0	94876	0	78882						
61LL10 5	0	0	2945	0	73608	94876	73608	0	0	0 96162 98491 73608
62	0	94876	0	78882						
61LL11 1	0	0	0	0	0	31901	73608	0	0	0 31901 0 0
62	0	0	0	0						
61LL12 2	0	0	829	0	73608	94876	73608	0	0	0 31901 0 0
62	0	0	0	0						
61LL13 3	0	0	829	0	73608	94876	73608	0	0	0 94876 73608 829
62	0	0	0	0						
61LL14 4 38463	0	74437	0	98949	94876	73608		0	0	0 94876 73608 829
62	0	0	0	0						
61LL15 5 38463	0	74437	0	98949	94876	73608		0	0	0 94876 98948 74437
62	0	38463	0	0						
61LL16 2	0	0	0	0	0	50745	86719	0	0	0 86666 50692 0
62	0	0	0	0						
61LL17 3	0	0	19672	0	73608	94876	86719	0	0	0 86666 50692 0
62	0	0	0	0						
61LL18 4	0	0	19672	0	73608	94876	86719	0	0	0 86666 94876 73608
62	0	19619	0	0						
61LL19 5 57306	0	93281	0	80105	94876	86719		0	0	0 86666 94876 73608
62	0	19619	0	0						
61LL20 2 78925	0	58486	0	0	0	0	0	0	0	0 0 0 0
62	0	58529	0	78882						
61LL21 3 78925	0	94876	0	73608	27414	0		0	0	0 0 0 0
62	0	58529	0	78882						
61LL22 4 78925	0	94876	0	73608	27414	0		0	0	0 27456 73608
62	0	94876	0	78882						
61LL23 5 78925	0	94876	0	73608	98534	66292		0	0	0 27456 73608
62	0	94876	0	78882						